

Chemical Analysis Report

TLH-ROC-2022-03-07-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Run 11**
Request ID: **RQ-2022-03-07-32**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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

Date Certified: 30-MAR-2022 08:39

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first 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: Sandy Creek @ Mouth

Collection Date/Time: 03/07/2022 11:30

Field ID: G3TLHR0051

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2310497	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P410820	
	SM 2320 B-2011	Total Alkalinity	54	A	mg CaCO3/L	P410982	
	SM 2540 D-2011	TSS	18		mg/L	P411347	
	SM 4500 F-C-2011	Fluoride	0.35		mg F/L	P410985	
2310498	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P410786	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P411104	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P411085	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P411017	MS
	SM 5310 B-2011	Organic Carbon	3.6		mg C/L	P411058	
2310499	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P410810	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Sandy Creek

Collection Date/Time: 03/07/2022 10:35

Field ID: G3TLHR0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2310494	DEP SOP: NU-094-1	Color (true)**	30	A	PCU	P410813	
	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P410817	
	EPA 300.0 Rev. 2.1	Chloride	4.0		mg Cl/L	P411049	
		Sulfate	0.79		mg SO4/L	P411053	
	SM 2320 B-2011	Total Alkalinity	7.0		mg CaCO3/L	P410981	
	SM 2540 C-2011	TDS	29		mg/L	P411341	
	SM 2540 D-2011	TSS	2	I	mg/L	P411345	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P410984	
2310495	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P410790	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P410763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P410990	
	EPA 365.1 Rev. 2.0	Total-P	0.005		mg P/L	P411071	
	SM 5310 B-2011	Organic Carbon	2.1		mg C/L	P411058	
2310496	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P410808	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Mule Creek @ Alvie Holmes Rd

Collection Date/Time: 03/07/2022 11:00

Field ID: G3TLHR0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2310500	DEP SOP: NU-094-1	Color (true)**	21		PCU	P410813	
	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P410817	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P411049	
		Sulfate	3.1		mg SO4/L	P411053	
	SM 2320 B-2011	Total Alkalinity	3.8		mg CaCO3/L	P410981	
	SM 2540 C-2011	TDS	52		mg/L	P411341	
	SM 2540 D-2011	TSS	3	I	mg/L	P411345	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P410984	
2310501	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P410790	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20		mg N/L	P410763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P410991	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P411071	
	SM 5310 B-2011	Organic Carbon	1.8		mg C/L	P411058	
2310502	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P410808	
2310519	EPA 8321B	2,4-D	0.0020	U	ug/L	P410795	
		Acesulfame K	0.10	U	ug/L	P410753	
		2,4,5-T	0.0040	U	ug/L	P410795	
		AMPA	0.10	U	ug/L	P410753	
		Sucralose	0.010	U	ug/L	P410753	
		Acetaminophen	0.0080	U	ug/L	P410795	
		Acetamiprid	0.0020	U	ug/L	P410795	
		Endothall	0.25	U	ug/L	P410753	
		Glufosinate	0.10	U	ug/L	P410753	
		Glyphosate	0.10	U	ug/L	P410753	
		Afidopyropen	0.0020	U	ug/L	P410795	
		Bentazon	8.0E-04	U	ug/L	P410795	
		Benzovindiflupyr	0.0020	U	ug/L	P410795	
		Carbamazepine	8.0E-04	U	ug/L	P410795	
		Clothianidin	0.0020	U	ug/L	P410795	
		Dinotefuran	0.0020	U	ug/L	P410795	MS
		Diuron	0.0020	U	ug/L	P410795	
		Fenuron	0.016	U	ug/L	P410795	
		Fluridone	8.0E-04	U	ug/L	P410795	
		Imazapyr	0.0040	U	ug/L	P410795	
		Hydrocodone	0.0020	U	ug/L	P410795	
		Ibuprofen	0.020	U	ug/L	P410795	
		Imidacloprid	0.0020	U	ug/L	P410795	MS
		Linuron	0.0040	U	ug/L	P410795	
		Mandestrobin	0.0020	U	ug/L	P410795	
		MCPP	0.0040	U	ug/L	P410795	
		Naproxen	0.0080	U	ug/L	P410795	
		Primidone	0.0040	U	ug/L	P410795	
		Pyraclostrobin	0.0020	U	ug/L	P410795	

Field ID: G3TLHR0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2310519	EPA 8321B	Silvex	0.0040	U	ug/L	P410795	
		Thiamethoxam	0.0020	U	ug/L	P410795	
		Tolfenpyrad	0.0020	U	ug/L	P410795	
		Triclopyr	0.0040	U	ug/L	P410795	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Eagle Nest Continuous Monitoring

Collection Date/Time: 03/07/2022 12:05

Field ID: G3TLHR0019

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2310503	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P410820	
	SM 2320 B-2011	Total Alkalinity	53		mg CaCO3/L	P410982	
	SM 2540 D-2011	TSS	14		mg/L	P411347	
	SM 4500 F-C-2011	Fluoride	0.35		mg F/L	P410985	
2310504	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P410786	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I	mg N/L	P411104	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.086		mg N/L	P411085	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P411072	
	SM 5310 B-2011	Organic Carbon	4.5		mg C/L	P411058	
2310505	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P410810	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P410813

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410817

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410820

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411049

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411053

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410786

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410790

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410763

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411104

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410990

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410991

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411085

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411017

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411071

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411072

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410808

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410810

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

Reference Method: EPA 8321B
Batch ID: P410753

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: P410753

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

Reference Method: EPA 8321B

Batch ID: P410795

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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	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: P410981

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

Reference Method: SM 2320 B-2011

Batch ID: P410982

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

Reference Method: SM 2540 C-2011

Batch ID: P411341

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P411345

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P411347

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P410984

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P410985

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P411058

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: P410813

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410817

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.7		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410820

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411053

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410786

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410763

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411104

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410990

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410991

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411085

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411017

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411071

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411072

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410808

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410810

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

Reference Method: EPA 8321B
Batch ID: P410753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	96.9		P	40 - 150
AMPA	87.3		P	40 - 150
Endothall	96.5		P	40 - 150
Glufosinate	87.5		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P410753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	87.1		P	40 - 150
Sucralose	63.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P410795

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.0		P	40 - 150
2,4,5-T	45.7		P	40 - 150
Acetaminophen	95.9		P	30 - 150
Acetamiprid	75.3		P	40 - 150
Afidopyropen	47.8		P	40 - 150
Bentazon	84.3		P	30 - 150
Benzovindiflupyr	94.8		P	40 - 150
Carbamazepine	106		P	40 - 150
Clothianidin	113		P	40 - 150
Dinotefuran	95.5		P	40 - 150
Diuron	103		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	112		P	40 - 150
Hydrocodone	97.5		P	40 - 150
Ibuprofen	74.2		P	40 - 150
Imazapyr	74.0		P	40 - 150
Imidacloprid	83.9		P	40 - 150
Linuron	123		P	40 - 150
Mandestrobin	82.8		P	40 - 150
MCPP	78.1		P	40 - 150
Naproxen	70.7		P	40 - 150
Primidone	64.0		P	40 - 150
Pyraclostrobin	84.5		P	40 - 150
Silvex	61.5		P	40 - 150
Thiamethoxam	93.8		P	40 - 150
Tolfenpyrad	39.2		P	30 - 150
Triclopyr	49.9		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P410981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.8		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P410982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.4		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P410984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.2		P	93 - 104

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P410985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P411058

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310103	Chloride	96.8		P	90 - 110
2310484	Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310103	Sulfate	97.4		P	90 - 110
2310484	Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310143	Ammonia-N	95.4	96.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310495	Ammonia-N	97.0	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310261	Kjeldahl Nitrogen	96.8	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411104

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2309410	Kjeldahl Nitrogen	97.0	95.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310121	NO2NO3-N	103	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410991

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310501	NO2NO3-N	99.6	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310167	NO2NO3-N	101	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310166	Total-P	90.7	89.8	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310652	Total-P	105	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411072

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2309790	Total-P	94.4	95.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310663	O-Phosphate-P	97.8	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310505	O-Phosphate-P	102	104	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P410753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310519	Acesulfame K	105	109	P/P	40 - 150
2310519	AMPA	112	116	P/P	40 - 150
2310519	Endothall	69.4	69.9	P/P	40 - 150
2310519	Glufosinate	89.6	92.6	P/P	40 - 150
2310519	Glyphosate	87.4	89.3	P/P	40 - 150
2310519	Sucralose	68.9	92.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P410795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310610	2,4-D	120	112	P/P	40 - 150
2310610	2,4,5-T	62.1	67.1	P/P	40 - 150
2310610	Acetaminophen	58.3	63.0	P/P	30 - 150
2310610	Acetamiprid	133	101	P/P	40 - 150
2310610	Afidopyrophen	87.7	73.9	P/P	40 - 150
2310610	Bentazon	33.4	61.5	P/P	30 - 150
2310610	Benzovindiflupyr	98.4	98.7	P/P	40 - 150
2310610	Carbamazepine	99.8	105	P/P	40 - 150
2310610	Clothianidin	99.2	124	P/P	40 - 150
2310610	Dinotefuran	133	169	P/F	40 - 150
2310610	Diuron	66.6	88.9	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P410795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310610	Fenuron	104	121	P/P	40 - 150
2310610	Fluridone	105	106	P/P	40 - 150
2310610	Hydrocodone	111	106	P/P	40 - 150
2310610	Ibuprofen	45.3	47.9	P/P	40 - 150
2310610	Imazapyr	150	129	P/P	40 - 150
2310610	Imidacloprid	182	174	F/F	40 - 150
2310610	Linuron	80.4	76.9	P/P	40 - 150
2310610	Mandestrobin	104	97.4	P/P	40 - 150
2310610	MCP	95.7	92.9	P/P	40 - 150
2310610	Naproxen	60.4	53.0	P/P	40 - 150
2310610	Primidone	131	105	P/P	40 - 150
2310610	Pyraclostrobin	96.9	107	P/P	40 - 150
2310610	Silvex	68.9	57.2	P/P	40 - 150
2310610	Thiamethoxam	136	143	P/P	40 - 150
2310610	Tolfenpyrad	48.9	53.1	P/P	30 - 150
2310610	Triclopyr	60.6	50.1	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P410985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310497	Fluoride	101	102	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P411058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2310730	Organic Carbon	102		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P410813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310494	Color (true)	6.53	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310648	Turbidity	13.9	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311104	Turbidity	3.17	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310103	Chloride	0.0180	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310103	Sulfate	0.331	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310143	Ammonia-N	1.08	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310495	Ammonia-N	0.380	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310261	Kjeldahl Nitrogen	5.94	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411104

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2309410	Kjeldahl Nitrogen	1.32	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310121	NO2NO3-N	3.38	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310501	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310167	NO2NO3-N	1.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310166	Total-P	0.927	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310652	Total-P	3.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2309790	Total-P	0.721	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310663	O-Phosphate-P	1.32	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310505	O-Phosphate-P	2.24	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P410753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310519	Acesulfame K	3.53	Spike	P	0 - 30
2310519	AMPA	3.84	Spike	P	0 - 30
2310519	Endothall	0.702	Spike	P	0 - 30
2310519	Glufosinate	3.22	Spike	P	0 - 30
2310519	Glyphosate	2.21	Spike	P	0 - 30
2310519	Sucralose	29.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P410795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310610	2,4-D	7.09	Spike	P	0 - 30
2310610	2,4,5-T	7.80	Spike	P	0 - 30
2310610	Acetaminophen	7.76	Spike	P	0 - 30
2310610	Acetamiprid	27.3	Spike	P	0 - 30
2310610	Afidopyropen	17.0	Spike	P	0 - 30
2310610	Bentazon	24.1	Spike	P	0 - 30
2310610	Benzovindiflupyr	0.266	Spike	P	0 - 30
2310610	Carbamazepine	5.14	Spike	P	0 - 30
2310610	Clothianidin	22.1	Spike	P	0 - 30
2310610	Dinotefuran	15.3	Spike	P	0 - 30
2310610	Diuron	28.7	Spike	P	0 - 30
2310610	Fenuron	15.6	Spike	P	0 - 30
2310610	Fluridone	0.605	Spike	P	0 - 30
2310610	Hydrocodone	5.13	Spike	P	0 - 30
2310610	Ibuprofen	5.40	Spike	P	0 - 30
2310610	Imazapyr	9.18	Spike	P	0 - 30
2310610	Imidacloprid	4.33	Spike	P	0 - 30
2310610	Linuron	4.46	Spike	P	0 - 30
2310610	Mandestrobin	6.64	Spike	P	0 - 30
2310610	MCPP	2.93	Spike	P	0 - 30
2310610	Naproxen	13.0	Spike	P	0 - 30
2310610	Primidone	22.0	Spike	P	0 - 30
2310610	Pyraclostrobin	9.46	Spike	P	0 - 30
2310610	Silvex	18.6	Spike	P	0 - 30
2310610	Thiamethoxam	4.58	Spike	P	0 - 30
2310610	Tolfenpyrad	8.24	Spike	P	0 - 30
2310610	Triclopyr	19.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P410981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310485	Total Alkalinity	4.61	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P410982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310497	Total Alkalinity	2.58	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P411341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310260	TDS	4.65	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P410984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310485	Fluoride	0.483	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P410985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310497	Fluoride	0.483	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P411058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2310730	Organic Carbon	0.438	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2310519

Field Sample ID: G3TLHR0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	61.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.1	P	30 - 160
EPA 8321B	Diuron-d6	123	P	30 - 160
EPA 8321B	Endothall-d6	72.1	P	30 - 160
EPA 8321B	Endothall-d6	72.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	45.8	P	30 - 160
EPA 8321B	Primidone-d5	66.0	P	30 - 160
EPA 8321B	Sucralose-d6	134	P	30 - 160
EPA 8321B	Sucralose-d6	134	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110803

Included Lab Sample IDs: 2310495, 2310501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	98.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110808

Included Lab Sample IDs: 2310498, 2310504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A110813

Included Lab Sample IDs: 2310496, 2310499, 2310502, 2310505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.9	P/P	90 - 110
O-Phosphate-P	99.2	99.8	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A110815

Included Lab Sample IDs: 2310494, 2310500

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110816

Included Lab Sample IDs: 2310494, 2310497, 2310500, 2310503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110831

Included Lab Sample IDs: 2310494, 2310500

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

Reference Method: SM 2320 B-2011

Run ID: A110877

Included Lab Sample IDs: 2310494, 2310497, 2310500, 2310503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.6	94.8	P/P	90 - 110
Total Alkalinity	96.9	94.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A110877

Included Lab Sample IDs: 2310494, 2310497, 2310500, 2310503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	104	P/P	90 - 110
Fluoride	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110883

Included Lab Sample IDs: 2310495, 2310501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110891

Included Lab Sample IDs: 2310495, 2310501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.9	95.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110893

Included Lab Sample IDs: 2310519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.9	102	P/P	50 - 150
2,4,5-T	103	90.7	P/P	50 - 150
Acetaminophen	114	112	P/P	60 - 160
Acetamiprid	115	125	P/P	50 - 150
Afidopyropen	98.1	116	P/P	50 - 150
Bentazon	98.4	98.2	P/P	50 - 160
Benzovindiflupyr	124	83.3	P/P	50 - 150
Carbamazepine	108	109	P/P	60 - 150
Clothianidin	122	139	P/P	60 - 150
Dinotefuran	91.5	104	P/P	50 - 150
Diuron	123	130	P/P	60 - 160
Fenuron	98.1	93.1	P/P	60 - 150
Fluridone	120	122	P/P	60 - 160
Hydrocodone	105	108	P/P	60 - 150
Ibuprofen	115	89.6	P/P	50 - 160
Imazapyr	124	114	P/P	50 - 150
Imidacloprid	104	89.2	P/P	60 - 150
Linuron	115	99.7	P/P	60 - 150
Mandestrobin	106	110	P/P	50 - 150
MCPP	115	98.1	P/P	50 - 150
Naproxen	138	101	P/P	50 - 160
Primidone	118	106	P/P	60 - 150
Pyraclostrobin	115	102	P/P	60 - 150
Silvex	97.0	87.7	P/P	50 - 150
Thiamethoxam	93.8	105	P/P	50 - 150
Tolfenpyrad	103	123	P/P	60 - 150
Triclopyr	94.1	79.9	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A110902
Included Lab Sample IDs: 2310519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.3	98.3	P/P	60 - 160
Glufosinate	89.3	85.6	P/P	60 - 160
Glyphosate	88.5	86.0	P/P	60 - 160

Reference Method: SM 5310 B-2011
Run ID: A110920
Included Lab Sample IDs: 2310495, 2310498, 2310501, 2310504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	97.6	P/P	90 - 110
Organic Carbon	97.6	99.5	P/P	90 - 110
Organic Carbon	99.5	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A110928
Included Lab Sample IDs: 2310498, 2310504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A110938
Included Lab Sample IDs: 2310519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	97.9	102	P/P	60 - 160
Endothall	113	80.2	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A110962
Included Lab Sample IDs: 2310519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.2	86.3	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111000
Included Lab Sample IDs: 2310498

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111001
Included Lab Sample IDs: 2310495, 2310501

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111065

Included Lab Sample IDs: 2310504

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111085

Included Lab Sample IDs: 2310498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111125

Included Lab Sample IDs: 2310504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.6	95.3	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				6.53	
EPA 180.1 Rev. 2.0	Turbidity	97.7				13.9	
	Turbidity	96.7				3.17	
EPA 300.0 Rev. 2.1	Chloride	99.7	96.8	99.2		0.0180	
	Sulfate	99.6	97.4	97.1		0.331	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	95.4	96.6			1.08
	Ammonia-N	99.6	97.0	97.4			0.380
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	96.8	106			5.94
	Kjeldahl Nitrogen	102	97.0	95.2			1.32
EPA 353.2 Rev. 2.0	NO2NO3-N	100	103	99.0			3.38
	NO2NO3-N	100	99.6	99.6			0.0
	NO2NO3-N	102	101	103			1.43
EPA 365.1 Rev. 2.0	Total-P	100	90.7	89.8			0.927
	Total-P	100	105	101			3.13
	Total-P	101	94.4	95.1			0.721
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.8	99.1			1.32
	O-Phosphate-P	100	102	104			2.24
EPA 8321B	2,4-D	77.0	120	112			7.09
	2,4,5-T	45.7	62.1	67.1			7.80
	Acesulfame K	96.9	105	109			3.53
	Acetaminophen	95.9	58.3	63.0			7.76
	Acetamiprid	75.3	133	101			27.3
	Afidopyropen	47.8	87.7	73.9			17.0
	AMPA	87.3	112	116			3.84
	Bentazon	84.3	33.4	61.5			24.1
	Benzovindiflupyr	94.8	98.4	98.7			0.266
	Carbamazepine	106	99.8	105			5.14
	Clothianidin	113	99.2	124			22.1
	Dinotefuran	95.5	133	169			15.3
	Diuron	103	66.6	88.9			28.7
	Endothall	96.5	69.4	69.9			0.702
	Fenuron	111	104	121			15.6
	Fluridone	112	105	106			0.605
	Glufosinate	87.5	89.6	92.6			3.22
	Glyphosate	87.1	87.4	89.3			2.21
	Hydrocodone	97.5	111	106			5.13
	Ibuprofen	74.2	45.3	47.9			5.40
	Imazapyr	74.0	150	129			9.18
	Imidacloprid	83.9	182	174			4.33
	Linuron	123	80.4	76.9			4.46
	Mandestrobin	82.8	104	97.4			6.64
	MCPP	78.1	95.7	92.9			2.93
	Naproxen	70.7	60.4	53.0			13.0
	Primidone	64.0	131	105			22.0
	Pyraclostrobin	84.5	96.9	107			9.46
	Silvex	61.5	68.9	57.2			18.6
	Sucralose	63.4	68.9	92.6			29.4
	Thiamethoxam	93.8	136	143			4.58
	Tolfenpyrad	39.2	48.9	53.1			8.24
	Triclopyr	49.9	60.6	50.1			19.0
SM 2320 B-2011	Total Alkalinity	98.8				4.61	
	Total Alkalinity	96.4				2.58	
SM 2540 C-2011	TDS					4.65	
SM 4500 F-C-2011	Fluoride	99.2					0.483

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 4500 F-C-2011	Fluoride	101	101	102		0.483
SM 5310 B-2011	Organic Carbon	97.8	102			0.438

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2310494, 2310500
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2310494, 2310497, 2310500, 2310503
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2310494, 2310500
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2310494, 2310500
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2310495, 2310498, 2310501, 2310504
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2310495, 2310498, 2310501, 2310504
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2310495, 2310498, 2310501, 2310504
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2310495, 2310498, 2310501, 2310504
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2310496, 2310499, 2310502, 2310505
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2310519
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2310519
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2310494, 2310497, 2310500, 2310503
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2310494, 2310500
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2310494, 2310497, 2310500, 2310503
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2310494, 2310497, 2310500, 2310503
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2310495, 2310498, 2310501, 2310504

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	03/07/2022			03/08/2022 16:25	Samantha L Bates	2310494
	03/07/2022			03/08/2022 16:26	Samantha L Bates	2310500
EPA 180.1 Rev. 2.0	03/07/2022			03/08/2022 14:20	Khloe J Berg	2310494
	03/07/2022			03/08/2022 14:21	Khloe J Berg	2310500
	03/07/2022			03/08/2022 16:15	Khloe J Berg	2310497
	03/07/2022			03/08/2022 16:16	Khloe J Berg	2310503
	03/07/2022			03/11/2022 19:48	Anna M. Plaviak	2310494
EPA 300.0 Rev. 2.1	03/07/2022			03/11/2022 20:00	Anna M. Plaviak	2310500
	03/07/2022			03/08/2022 12:25	Judith K. Clark	2310498
EPA 350.1 Rev. 2.0	03/07/2022			03/08/2022 12:27	Judith K. Clark	2310504
	03/07/2022			03/08/2022 12:49	Ping Hua	2310495
	03/07/2022			03/08/2022 12:54	Ping Hua	2310501
	03/07/2022			03/10/2022 15:11	Alexandra J Mattheus	2310495
EPA 351.2 Rev. 2.0	03/07/2022	03/09/2022 11:27	Samantha L Bates	03/10/2022 15:12	Alexandra J Mattheus	2310501
	03/07/2022	03/09/2022 11:27	Samantha L Bates	03/22/2022 13:35	Alexandra J Mattheus	2310498
	03/07/2022	03/17/2022 10:56	Samantha L Bates	03/23/2022 15:58	Alexandra J Mattheus	2310504
	03/07/2022	03/17/2022 10:56	Samantha L Bates	03/11/2022 10:24	Beverly Y. Sanders	2310495
EPA 353.2 Rev. 2.0	03/07/2022			03/11/2022 10:31	Beverly Y. Sanders	2310501
	03/07/2022			03/14/2022 17:25	Nathaniel J Jones	2310498
	03/07/2022			03/14/2022 17:26	Nathaniel J Jones	2310504
	03/07/2022			03/16/2022 14:38	James L Waggeberby	2310498
EPA 365.1 Rev. 2.0	03/07/2022	03/14/2022 15:55	Simonne.V. Calhoun	03/17/2022 11:33	James L Waggeberby	2310495
	03/07/2022	03/15/2022 14:55	Simonne.V. Calhoun	03/17/2022 11:34	James L Waggeberby	2310501
	03/07/2022	03/15/2022 14:55	Simonne.V. Calhoun	03/18/2022 12:00	James L Waggeberby	2310504
	03/07/2022	03/15/2022 14:55	Simonne.V. Calhoun	03/08/2022 14:37	James L Waggeberby	2310496, 2310502
EPA 365.1 Rev. 2.0 dissolved	03/07/2022			03/08/2022 15:11	James L Waggeberby	2310505
	03/07/2022			03/08/2022 15:14	James L Waggeberby	2310499
	03/07/2022	03/09/2022 10:00	Manjita Shrestha	03/09/2022 11:30	Manjita Shrestha	2310519
	03/07/2022	03/09/2022 10:00	Manjita Shrestha	03/09/2022 22:24	Manjita Shrestha	2310519
EPA 8321B	03/07/2022	03/09/2022 10:00	Manjita Shrestha	03/15/2022 16:12	Manjita Shrestha	2310519
	03/07/2022	03/09/2022 11:00	June Rhew	03/10/2022 23:35	Juyoung Kim	2310519
	03/07/2022			03/10/2022 01:46	Dale L. Simmons	2310494
	03/07/2022			03/10/2022 01:55	Dale L. Simmons	2310500
SM 2320 B-2011	03/07/2022			03/10/2022 08:10	Dale L. Simmons	2310497
	03/07/2022			03/10/2022 08:23	Dale L. Simmons	2310503
	03/07/2022			03/09/2022 14:26	Yijie Li	2310494, 2310500
	03/07/2022			03/09/2022 14:26	Yijie Li	2310494, 2310497, 2310500, 2310503
SM 2540 C-2011	03/07/2022			03/10/2022 01:46	Dale L. Simmons	2310494
SM 2540 D-2011	03/07/2022			03/10/2022 01:55	Dale L. Simmons	2310500
SM 4500 F-C-2011	03/07/2022			03/10/2022 06:32	Dale L. Simmons	2310497

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-2011	03/07/2022			03/10/2022 06:46	Dale L. Simmons	2310503
SM 5310 B-2011	03/07/2022			03/11/2022 01:31	Khloe J Berg	2310495
	03/07/2022			03/11/2022 03:33	Khloe J Berg	2310501
	03/07/2022			03/11/2022 05:00	Khloe J Berg	2310498
	03/07/2022			03/11/2022 06:02	Khloe J Berg	2310504