

Chemical Analysis Report

NE-DIST-2020-09-18-02

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

Event Description: **Nassau North 2**
Request ID: **RQ-2020-09-14-26**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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

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

Date Certified: 12-OCT-2020 12:36

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: Egan Creek At Atlantic

Collection Date/Time: 09/17/2020 11:30

Field ID: G4NE0285

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196975	EPA 180.1 Rev. 2.0	Turbidity	7.6		NTU	P387557	
	EPA 300.0 Rev. 2.1	Bromide	58		mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	115		mg CaCO3/L	P387738	
	SM 2540 D-2011	TSS	13		mg/L	P387963	
	SM 4500 F-C-2011	Fluoride	1.1		mg F/L	P387740	
2196977	EPA 350.1 Rev. 2.0	Ammonia-N	0.066		mg N/L	P387582	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P387771	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P387603	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P387918	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P387838	
2196979	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P387570	

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: Egans Creek At N. 14th

Collection Date/Time: 09/17/2020 11:10

Field ID: G4NE0290

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196976	EPA 180.1 Rev. 2.0	Turbidity	34		NTU	P387557	
	EPA 300.0 Rev. 2.1	Bromide	68		mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	112		mg CaCO3/L	P387738	
	SM 2540 D-2011	TSS	67		mg/L	P387963	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P387740	
2196978	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P387582	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P387771	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P387603	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P387918	
	SM 5310 B-2011	Organic Carbon	3.6		mg C/L	P387838	
2196980	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P387570	

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: Escambia Slough At Escambia St.

Collection Date/Time: 09/17/2020 11:45

Field ID: G4NE0287

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196981	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P387557	
	EPA 300.0 Rev. 2.1	Bromide	67		mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P387738	
	SM 2540 D-2011	TSS	8	IA	mg/L	P387963	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P387740	
2196982	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P387582	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	I	mg N/L	P387771	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P387603	
	EPA 365.1 Rev. 2.0	Total-P	0.068		mg P/L	P387918	
	SM 5310 B-2011	Organic Carbon	3.9		mg C/L	P387838	
2196983	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P387570	
2196997	EPA 8321B	2,4-D	0.0020	U	ug/L	P387502	
		Acesulfame K**	0.10	UJ	ug/L	P387598	MS, SUR
		AMPA**	1.0	U	ug/L	P387598	MS
		Sucralose**	0.010	I	ug/L	P387598	MS
		Acetaminophen**	0.0080	U	ug/L	P387502	
		Acetamiprid**	0.0020	U	ug/L	P387502	
		Endothall**	0.25	UJ	ug/L	P387598	SUR
		Glufosinate**	1.0	U	ug/L	P387598	MS
		Glyphosate**	1.0	U	ug/L	P387598	
		Afidopyropen**	0.0020	U	ug/L	P387502	
		Bentazon	0.0022	I	ug/L	P387502	
		Benzovindiflupyr**	0.0020	U	ug/L	P387502	
		Carbamazepine**	8.0E-04	U	ug/L	P387502	
		Clothianidin**	0.0020	U	ug/L	P387502	
		Dinotefuran**	0.0020	U	ug/L	P387502	
		Diuron	0.0020	U	ug/L	P387502	
		Fenuron	0.016	U	ug/L	P387502	
		Fluridone**	8.0E-04	U	ug/L	P387502	
		Imazapyr**	0.013	I	ug/L	P387502	
		Hydrocodone**	0.0020	U	ug/L	P387502	
		Ibuprofen**	0.020	U	ug/L	P387502	
		Imidacloprid	0.0020	U	ug/L	P387502	
		Linuron	0.0040	U	ug/L	P387502	
		Mandestrobin**	0.0020	U	ug/L	P387502	
		MCP	0.0020	U	ug/L	P387502	
		Naproxen**	0.0080	U	ug/L	P387502	RPD
		Primidone**	0.0040	U	ug/L	P387502	
		Pyraclostrobin**	0.0020	U	ug/L	P387502	
		Thiamethoxam**	0.0020	U	ug/L	P387502	
		Tolfenpyrad**	0.0020	U	ug/L	P387502	
		Triclopyr**	0.0040	U	ug/L	P387502	

Field ID: G4NE0287

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: FB091720

Collection Date/Time: 09/17/2020 11:53

Field ID: FB091720

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196984	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P387557	
	EPA 300.0 Rev. 2.1	Bromide	0.013	U	mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P387737	
	SM 2540 D-2011	TSS	2	U	mg/L	P387961	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P387739	
2196985	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P387588	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P387687	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P387650	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P387859	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P387836	
2196986	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P387569	
2196998	EPA 8321B	2,4-D	0.0020	U	ug/L	P387502	
		Acesulfame K**	0.10	U	ug/L	P387598	MS
		AMPA**	0.10	U	ug/L	P387598	MS
		Sucralose**	0.010	U	ug/L	P387598	MS
		Acetaminophen**	0.0080	U	ug/L	P387502	
		Acetamiprid**	0.0020	U	ug/L	P387502	
		Endothall**	0.25	U	ug/L	P387598	
		Glufosinate**	0.10	U	ug/L	P387598	MS
		Glyphosate**	0.10	U	ug/L	P387598	
		Afidopyropen**	0.0020	U	ug/L	P387502	
		Bentazon	8.0E-04	U	ug/L	P387502	
		Benzovindiflupyr**	0.0020	U	ug/L	P387502	
		Carbamazepine**	8.0E-04	U	ug/L	P387502	
		Clothianidin**	0.0020	U	ug/L	P387502	
		Dinotefuran**	0.0020	U	ug/L	P387502	
		Diuron	0.0020	U	ug/L	P387502	
		Fenuron	0.016	U	ug/L	P387502	
		Fluridone**	8.0E-04	U	ug/L	P387502	
		Imazapyr**	0.0040	U	ug/L	P387502	
		Hydrocodone**	0.0020	U	ug/L	P387502	
		Ibuprofen**	0.020	U	ug/L	P387502	
		Imidacloprid	0.0020	U	ug/L	P387502	
		Linuron	0.0040	U	ug/L	P387502	
		Mandestrobin**	0.0020	U	ug/L	P387502	
		MCPP	0.0020	U	ug/L	P387502	
		Naproxen**	0.0080	U	ug/L	P387502	RPD
		Primidone**	0.0040	U	ug/L	P387502	
		Pyraclostrobin**	0.0020	U	ug/L	P387502	
		Thiamethoxam**	0.0020	U	ug/L	P387502	
		Tolfenpyrad**	0.0020	U	ug/L	P387502	
		Triclopyr**	0.0040	U	ug/L	P387502	

Field ID: FB091720

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387557

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387582

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387588

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387687

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387650

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387859

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387569

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387570

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

Reference Method: EPA 8321B
Batch ID: P387502

Component	Result	Code	Units
2,4-D	0.0020	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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P387598

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: P387598

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

Reference Method: SM 2320 B-2011
Batch ID: P387737

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

Reference Method: SM 2320 B-2011
Batch ID: P387738

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

Reference Method: SM 2540 D-2011
Batch ID: P387961

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387963

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387739

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387740

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387836

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

Reference Method: SM 5310 B-2011
Batch ID: P387838

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387582

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387588

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387687

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387650

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: P387859

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387569

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387570

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

Reference Method: EPA 8321B
 Batch ID: P387502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	129		P	30 - 160
Acetaminophen	85.7		P	30 - 160
Acetamiprid	68.4		P	30 - 160
Afidopyropen	60.5		P	30 - 160
Bentazon	56.0		P	30 - 160
Benzovindiflupyr	64.6		P	30 - 160
Carbamazepine	57.3		P	30 - 160
Clothianidin	78.9		P	30 - 160
Dinotefuran	88.9		P	30 - 160
Diuron	50.5		P	30 - 160
Fenuron	89.3		P	30 - 160
Fluridone	70.0		P	30 - 160
Hydrocodone	83.3		P	30 - 160
Ibuprofen	71.2		P	30 - 160
Imazapyr	99.5		P	30 - 160
Imidacloprid	96.1		P	30 - 160
Linuron	63.5		P	30 - 160
Mandestrobin	77.6		P	30 - 160
MCPP	108		P	30 - 160
Naproxen	105		P	30 - 160
Primidone	71.9		P	30 - 160
Pyraclostrobin	55.2		P	30 - 160
Thiamethoxam	80.1		P	30 - 160
Tolfenpyrad	36.5		P	30 - 160
Triclopyr	104		P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P387598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	75.3		P	40 - 150
AMPA	86.3		P	40 - 150
Endothall	104		P	40 - 150
Glufosinate	92.5		P	40 - 150
Glyphosate	105		P	40 - 140
Sucralose	105		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P387737

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	93 - 104

Reference Method: SM 2320 B-2011
Batch ID: P387738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P387739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P387740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P387836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387838

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: P388432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196936	Bromide	99.0	101	P/P	90 - 110
2197633	Bromide	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P387582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196248	Ammonia-N	97.9	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P387588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196961	Ammonia-N	99.2	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P387687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197017	Kjeldahl Nitrogen	106	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P387771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197450	Kjeldahl Nitrogen	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P387603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196642	NO2NO3-N	100	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P387650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196639	NO2NO3-N	98.3	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196931	Total-P	107	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196642	Total-P	101	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196963	O-Phosphate-P	99.8	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387570

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196980	O-Phosphate-P	98.6	100	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P387502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196584	Acetaminophen	64.4	70.3	P/P	30 - 160
2196584	Acetamiprid	60.4	62.3	P/P	30 - 160
2196584	Afidopyropen	52.4	52.5	P/P	30 - 160
2196584	Benzovindiflupyr	49.7	49.3	P/P	30 - 160
2196584	Carbamazepine	43.5	45.9	P/P	30 - 160
2196584	Clothianidin	62.7	61.1	P/P	30 - 160
2196584	Dinotefuran	72.0	78.1	P/P	30 - 160
2196584	Diuron	37.9	40.5	P/P	30 - 160
2196584	Fenuron	66.7	69.0	P/P	30 - 160
2196584	Hydrocodone	61.3	66.2	P/P	30 - 160
2196584	Ibuprofen	45.2	52.3	P/P	30 - 160
2196584	Linuron	43.5	47.8	P/P	30 - 160
2196584	Mandestrobin	58.9	60.1	P/P	30 - 160
2196584	MCP	86.9	85.5	P/P	30 - 160
2196584	Naproxen	83.7	58.6	P/P	30 - 160
2196584	Primidone	66.5	63.0	P/P	30 - 160
2196584	Pyraclostrobin	48.0	50.9	P/P	30 - 160
2196584	Thiamethoxam	72.4	75.9	P/P	30 - 160
2196584	Tolfenpyrad	33.9	31.9	P/P	30 - 160
2196584	Triclopyr	91.3	88.1	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P387598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196261	Acesulfame K	34.2	35.1	F/F	40 - 150
2196261	AMPA	6.76	7.01	F/F	40 - 150
2196261	Endothall	110	128	P/P	40 - 150
2196261	Glufosinate	37.8	39.4	F/F	40 - 150
2196261	Glyphosate	72.6	73.3	P/P	40 - 140
2196261	Sucralose	29.5	32.1	F/F	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P387739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196930	Fluoride	94.0	95.0	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P387740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197010	Fluoride	98.5	101	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196931	Organic Carbon	98.8	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197570	Organic Carbon	96.3	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196936	Turbidity	2.17	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196936	Bromide	1.83	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196248	Ammonia-N	0.612	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196961	Ammonia-N	0.466	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197017	Kjeldahl Nitrogen	0.984	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197450	Kjeldahl Nitrogen	1.98	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196642	NO2NO3-N	0.477	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196639	NO2NO3-N	0.494	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196931	Total-P	3.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196642	Total-P	0.0247	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196963	O-Phosphate-P	0.100	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196980	O-Phosphate-P	1.52	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P387502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196584	2,4-D	0.746	Spike	P	0 - 30
2196584	Acetaminophen	5.99	Spike	P	0 - 30
2196584	Acetamiprid	3.09	Spike	P	0 - 30
2196584	Afidopyropen	0.0707	Spike	P	0 - 30
2196584	Bentazon	5.75	Spike	P	0 - 30
2196584	Benzovindiflupyr	0.915	Spike	P	0 - 30
2196584	Carbamazepine	4.60	Spike	P	0 - 30
2196584	Clothianidin	1.92	Spike	P	0 - 30
2196584	Dinotefuran	7.70	Spike	P	0 - 30
2196584	Diuron	5.30	Spike	P	0 - 30
2196584	Fenuron	3.37	Spike	P	0 - 30
2196584	Fluridone	5.80	Spike	P	0 - 30
2196584	Hydrocodone	7.77	Spike	P	0 - 30
2196584	Ibuprofen	14.6	Spike	P	0 - 30
2196584	Imazapyr	1.78	Spike	P	0 - 30
2196584	Imidacloprid	2.89	Spike	P	0 - 30
2196584	Linuron	9.41	Spike	P	0 - 30
2196584	Mandestrobin	1.89	Spike	P	0 - 30
2196584	MCPP	1.56	Spike	P	0 - 30
2196584	Naproxen	35.3	Spike	F	0 - 30
2196584	Primidone	4.56	Spike	P	0 - 30
2196584	Pyraclostrobin	5.86	Spike	P	0 - 30
2196584	Thiamethoxam	4.33	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P387502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196584	Tolfenpyrad	5.93	Spike	P	0 - 30
2196584	Triclopyr	3.58	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196261	Acesulfame K	2.58	Spike	P	0 - 30
2196261	AMPA	3.67	Spike	P	0 - 30
2196261	Endothall	15.0	Spike	P	0 - 30
2196261	Glufosinate	4.11	Spike	P	0 - 30
2196261	Glyphosate	0.902	Spike	P	0 - 30
2196261	Sucralose	8.26	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P387737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196930	Total Alkalinity	2.21	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P387738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197010	Total Alkalinity	0.0259	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P387739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196930	Fluoride	0.948	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P387740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197010	Fluoride	1.42	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P387836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196931	Organic Carbon	2.20	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P387838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197570	Organic Carbon	0.655	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2196997
Field Sample ID: G4NE0287

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	100	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.8	P	30 - 160
EPA 8321B	Diuron-d6	57.8	P	30 - 160
EPA 8321B	Endothall-d6	311	F	30 - 160
EPA 8321B	Endothall-d6	311	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	36.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	36.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.4	P	30 - 160
EPA 8321B	Primidone-d5	76.5	P	30 - 160
EPA 8321B	Sucralose-d6	33.8	P	30 - 160
EPA 8321B	Sucralose-d6	33.8	P	30 - 160

Lab Sample ID: 2196998
Field Sample ID: FB091720

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.0	P	30 - 160
EPA 8321B	Diuron-d6	57.7	P	30 - 160
EPA 8321B	Endothall-d6	125	P	30 - 160
EPA 8321B	Endothall-d6	125	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	69.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	69.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.3	P	30 - 160
EPA 8321B	Primidone-d5	69.2	P	30 - 160
EPA 8321B	Sucralose-d6	92.6	P	30 - 160
EPA 8321B	Sucralose-d6	92.6	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A101044

Included Lab Sample IDs: 2196997, 2196998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	120	102	P/P	50 - 150
Acetaminophen	108	116	P/P	60 - 160
Acetamiprid	114	112	P/P	50 - 150
Afidopyropen	92.4	90.4	P/P	50 - 150
Bentazon	116	114	P/P	50 - 160
Benzovindiflupyr	108	103	P/P	50 - 150
Carbamazepine	99.6	100	P/P	60 - 150
Clothianidin	91.7	91.3	P/P	60 - 150
Dinotefuran	92.8	90.3	P/P	50 - 150
Diuron	98.9	102	P/P	60 - 160
Fenuron	111	104	P/P	60 - 150
Fluridone	112	107	P/P	60 - 160
Hydrocodone	107	110	P/P	60 - 150
Ibuprofen	93.7	85.5	P/P	50 - 160
Imazapyr	111	105	P/P	50 - 160
Imidacloprid	80.0	92.7	P/P	60 - 150
Linuron	97.1	84.5	P/P	60 - 150
Mandestrobin	103	97.7	P/P	50 - 150
MCPP	102	114	P/P	50 - 150
Naproxen	76.5	127	P/P	50 - 160
Primidone	90.7	84.1	P/P	60 - 150
Pyraclostrobin	90.6	90.3	P/P	60 - 150
Thiamethoxam	102	92.5	P/P	50 - 150
Tolfenpyrad	91.1	93.7	P/P	60 - 150
Triclopyr	122	104	P/P	50 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101082

Included Lab Sample IDs: 2196975, 2196976, 2196981, 2196984

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101084

Included Lab Sample IDs: 2196979, 2196980, 2196983, 2196986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	98.4	P/P	90 - 110
O-Phosphate-P	98.4	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101085

Included Lab Sample IDs: 2196977, 2196978, 2196982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	93.8	93.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101088

Included Lab Sample IDs: 2196985

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101096

Included Lab Sample IDs: 2196977, 2196978, 2196982

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

Reference Method: EPA 8321B

Run ID: A101113

Included Lab Sample IDs: 2196997, 2196998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	71.7	81.0	P/P	60 - 160
AMPA	81.0	77.0	P/P	60 - 160
Glufosinate	83.2	92.0	P/P	60 - 160
Glufosinate	85.5	83.2	P/P	60 - 160
Glyphosate	120	130	P/P	60 - 160
Glyphosate	130	121	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101119

Included Lab Sample IDs: 2196985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101124

Included Lab Sample IDs: 2196997, 2196998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	68.0	67.2	P/P	60 - 160
Endothall	119	116	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A101158

Included Lab Sample IDs: 2196975, 2196976, 2196981, 2196984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.1	P/P	90 - 110
Total Alkalinity	97.7	101	P/P	90 - 110
Total Alkalinity	99.1	98.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101158

Included Lab Sample IDs: 2196975, 2196976, 2196981, 2196984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A101158

Included Lab Sample IDs: 2196975, 2196976, 2196981, 2196984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101182

Included Lab Sample IDs: 2196997, 2196998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	113	117	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101190

Included Lab Sample IDs: 2196985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.5	96.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A101194

Included Lab Sample IDs: 2196977, 2196978, 2196982, 2196985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	99.8	P/P	90 - 110
Organic Carbon	99.3	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101216

Included Lab Sample IDs: 2196977, 2196978, 2196982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.0	93.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101257

Included Lab Sample IDs: 2196985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.5	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101274

Included Lab Sample IDs: 2196977, 2196978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101310

Included Lab Sample IDs: 2196982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	93.8	93.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101391

Included Lab Sample IDs: 2196975, 2196976, 2196981, 2196984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	98.0	102	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.17	
EPA 300.0 Rev. 2.1	Bromide	106	99.0	101	95.7			1.83
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	97.9	98.7				0.612
	Ammonia-N	105	99.2	98.7				0.466
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	106	105				0.984
	Kjeldahl Nitrogen	107	100	102				1.98
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	99.8				0.477
	NO2NO3-N	99.0	98.3	98.8				0.494
EPA 365.1 Rev. 2.0	Total-P	106	107	103				3.18
	Total-P	106	101	101				0.0247
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.8	99.8	99.9				0.100
	O-Phosphate-P	101	98.6	100				1.52
EPA 8321B	2,4-D	129						0.746
	Acesulfame K	75.3	34.2	35.1				2.58
	Acetaminophen	85.7	64.4	70.3				5.99
	Acetamiprid	68.4	60.4	62.3				3.09
	Afidopyropen	60.5	52.4	52.5				0.0707
	AMPA	86.3	6.76	7.01				3.67
	Bentazon	56.0						5.75
	Benzovindiflupyr	64.6	49.7	49.3				0.915
	Carbamazepine	57.3	43.5	45.9				4.60
	Clothianidin	78.9	62.7	61.1				1.92
	Dinotefuran	88.9	72.0	78.1				7.70
	Diuron	50.5	37.9	40.5				5.30
	Endothall	104	110	128				15.0
	Fenuron	89.3	66.7	69.0				3.37
	Fluridone	70.0						5.80
	Glufosinate	92.5	37.8	39.4				4.11
	Glyphosate	105	72.6	73.3				0.902
	Hydrocodone	83.3	61.3	66.2				7.77
	Ibuprofen	71.2	45.2	52.3				14.6
	Imazapyr	99.5						1.78
	Imidacloprid	96.1						2.89
	Linuron	63.5	43.5	47.8				9.41
	Mandestrobin	77.6	58.9	60.1				1.89
	MCPP	108	86.9	85.5				1.56
	Naproxen	105	83.7	58.6				35.3
	Primidone	71.9	66.5	63.0				4.56
	Pyraclostrobin	55.2	48.0	50.9				5.86
	Sucralose	105	29.5	32.1				8.26
	Thiamethoxam	80.1	72.4	75.9				4.33
	Tolfenpyrad	36.5	33.9	31.9				5.93
	Triclopyr	104	91.3	88.1				3.58
SM 2320 B-2011	Total Alkalinity	100					2.21	
	Total Alkalinity	99.3					0.0259	
SM 4500 F-C-2011	Fluoride	97.8	94.0	95.0				0.948
	Fluoride	96.8	98.5	101				1.42
SM 5310 B-2011	Organic Carbon	94.8	98.8	102				2.20
	Organic Carbon	97.8	96.3	97.0				0.655

Reference Method Descriptions

Method	Description	Associated Samples
--------	-------------	--------------------

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2196975, 2196976, 2196981, 2196984
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2196975, 2196976, 2196981, 2196984
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2196977, 2196978, 2196982, 2196985
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2196977, 2196978, 2196982, 2196985
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2196977, 2196978, 2196982, 2196985
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2196977, 2196978, 2196982, 2196985
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2196979, 2196980, 2196983, 2196986
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2196997, 2196998
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2196997, 2196998
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2196975, 2196976, 2196981, 2196984
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2196975, 2196976, 2196981, 2196984
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2196975, 2196976, 2196981, 2196984
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2196977, 2196978, 2196982, 2196985

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/18/2020			09/18/2020 15:12	Yen Ta	2196975, 2196976, 2196981, 2196984
EPA 300.0 Rev. 2.1	09/18/2020			10/08/2020 12:51	Lipi Saha	2196975
	09/18/2020			10/08/2020 13:08	Lipi Saha	2196976
	09/18/2020			10/08/2020 13:25	Lipi Saha	2196981
	09/18/2020			10/08/2020 13:42	Lipi Saha	2196984
EPA 350.1 Rev. 2.0	09/18/2020			09/19/2020 15:42	Ping Hua	2196978
	09/18/2020			09/19/2020 15:43	Ping Hua	2196982
	09/18/2020			09/19/2020 15:46	Ping Hua	2196977
	09/18/2020			09/20/2020 10:25	Ping Hua	2196985
EPA 351.2 Rev. 2.0	09/18/2020	09/22/2020 11:40	David Boose	09/24/2020 19:28	Elliott Rodriguez	2196985
	09/18/2020	09/23/2020 19:10	David Boose	09/25/2020 16:58	Elliott Rodriguez	2196977
	09/18/2020	09/23/2020 19:10	David Boose	09/25/2020 16:59	Elliott Rodriguez	2196978
	09/18/2020	09/23/2020 19:10	David Boose	09/25/2020 17:01	Elliott Rodriguez	2196982
EPA 353.2 Rev. 2.0	09/18/2020			09/21/2020 10:07	Beverly Y. Sanders	2196977
	09/18/2020			09/21/2020 10:08	Beverly Y. Sanders	2196978
	09/18/2020			09/21/2020 10:09	Beverly Y. Sanders	2196982
	09/18/2020			09/22/2020 09:02	Beverly Y. Sanders	2196985
EPA 365.1 Rev. 2.0	09/18/2020	09/25/2020 12:17	Yen Ta	09/29/2020 14:14	Lipi Saha	2196985
	09/18/2020	09/28/2020 12:44	Yen Ta	09/29/2020 13:04	Benjamin T. Nordmann	2196977
	09/18/2020	09/28/2020 12:44	Yen Ta	09/29/2020 13:05	Benjamin T. Nordmann	2196978
	09/18/2020	09/28/2020 12:44	Yen Ta	10/01/2020 12:37	Lipi Saha	2196982
EPA 365.1 Rev. 2.0 dissolved	09/18/2020			09/18/2020 16:21	Julia Storbeck	2196986
	09/18/2020			09/18/2020 16:23	Julia Storbeck	2196980
	09/18/2020			09/18/2020 16:26	Julia Storbeck	2196983
	09/18/2020			09/18/2020 16:31	Julia Storbeck	2196979
EPA 8321B	09/18/2020	09/18/2020 13:00	Hoor Shaik	09/20/2020 02:25	Juyoung Kim	2196997
	09/18/2020	09/18/2020 13:00	Hoor Shaik	09/20/2020 03:00	Juyoung Kim	2196998
	09/18/2020	09/21/2020 10:00	Rebecca Ware	09/21/2020 12:24	Rebecca Ware	2196998
	09/18/2020	09/21/2020 10:00	Rebecca Ware	09/21/2020 13:59	Rebecca Ware	2196997
	09/18/2020	09/21/2020 10:00	Rebecca Ware	09/21/2020 18:19	Rebecca Ware	2196997
	09/18/2020	09/21/2020 10:00	Rebecca Ware	09/21/2020 18:32	Rebecca Ware	2196998
	09/18/2020	09/21/2020 10:00	Rebecca Ware	09/23/2020 12:44	Rebecca Ware	2196997
	09/18/2020	09/21/2020 10:00	Rebecca Ware	09/23/2020 12:55	Rebecca Ware	2196998
SM 2320 B-2011	09/18/2020			09/22/2020 12:52	Dale L. Simmons	2196984
	09/18/2020			09/22/2020 17:51	Dale L. Simmons	2196975
	09/18/2020			09/22/2020 18:45	Dale L. Simmons	2196976
	09/18/2020			09/22/2020 18:57	Dale L. Simmons	2196981
SM 2540 D-2011	09/18/2020			09/23/2020 14:41	Yijie Li	2196975, 2196976, 2196981, 2196984
SM 4500 F-C-2011	09/18/2020			09/22/2020 12:52	Dale L. Simmons	2196984
	09/18/2020			09/22/2020 17:03	Dale L. Simmons	2196975

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	09/18/2020			09/22/2020 17:08	Dale L. Simmons	2196976
	09/18/2020			09/22/2020 17:14	Dale L. Simmons	2196981
SM 5310 B-2011	09/18/2020			09/24/2020 20:10	Madeline Gruver	2196985
	09/18/2020			09/25/2020 06:34	Madeline Gruver	2196977
	09/18/2020			09/25/2020 06:46	Madeline Gruver	2196978
	09/18/2020			09/25/2020 06:59	Madeline Gruver	2196982