

Chemical Analysis Report

TLH-ROC-2022-08-30-01

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

Event Description: **Run 14**
Request ID: **RQ-2022-07-18-47**
Customer: **TLH-ROC**
Project ID: **SMP**

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

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

Date Certified: 16-SEP-2022 17:50



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: N Bay @ S Anderson Bayou

Collection Date/Time: 08/30/2022 12:20

Field ID: G3TLHR0033

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353114	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P418945	
	SM 2320 B-2011	Total Alkalinity	71		mg CaCO3/L	P419034	
	SM 2540 D-2011	TSS	3	I	mg/L	P419323	RPD
	SM 4500-F- C-2011	Fluoride	0.50		mg F/L	P419280	
2353119	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P419005	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P419095	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418995	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P418985	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P419189	

Sample Location: FB

Collection Date/Time: 08/30/2022 12:00

Field ID: FB_08302022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353124	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P418945	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P419034	
	SM 2540 D-2011	TSS	2	U	mg/L	P419320	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P419622	
2353125	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P419144	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P418962	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P419212	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P419037	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P419185	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: N Bay @ S Lynn Haven Bayou

Collection Date/Time: 08/30/2022 12:50

Field ID: G3TLHR0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353115	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P418945	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P419034	
	SM 2540 D-2011	TSS	3	U	mg/L	P419323	RPD
	SM 4500-F- C-2011	Fluoride	0.67		mg F/L	P419280	
2353120	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P419005	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I	mg N/L	P419095	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418995	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P419038	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P419189	

Sample Location: N Bay @ N Lynn Haven Bayou

Collection Date/Time: 08/30/2022 12:40

Field ID: G3TLHR0029

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353116	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P418945	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P419034	
	SM 2540 D-2011	TSS	3	U	mg/L	P419323	RPD
	SM 4500-F- C-2011	Fluoride	0.68		mg F/L	P419280	
2353121	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P419155	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P419095	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418995	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P419038	
	SM 5310 B-2011	Organic Carbon	5.7		mg C/L	P419189	

Sample Location: Parker Bayou Continuous Monitoring

Collection Date/Time: 08/30/2022 10:50

Field ID: G3TLHR0018

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353117	EPA 180.1 Rev. 2.0	Turbidity	2.8	A	NTU	P418945	
	SM 2320 B-2011	Total Alkalinity	44		mg CaCO3/L	P419034	
	SM 2540 D-2011	TSS	4	I	mg/L	P419320	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P419391	
2353122	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P419155	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P419095	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P418995	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P419038	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P419185	

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: Parker Bayou @ Mouth

Collection Date/Time: 08/30/2022 11:00

Field ID: G3TLHR0043

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353118	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P418945	
	SM 2320 B-2011	Total Alkalinity	36		mg CaCO3/L	P419034	
	SM 2540 D-2011	TSS	3	U	mg/L	P419323	RPD
	SM 4500-F- C-2011	Fluoride	0.21		mg F/L	P419391	
2353123	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P419155	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P419095	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P418995	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P419038	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P419189	
2353156	EPA 8321B	Acesulfame K	0.10	U	ug/L	P418802	
		2,4-D	0.040		ug/L	P418839	
		AMPA	1.0	U	ug/L	P418802	
		2,4,5-T	0.0040	U	ug/L	P418839	
		Acetaminophen	0.0080	U	ug/L	P418839	
		Endothall	0.25	U	ug/L	P418802	
		Acetamiprid	0.0020	U	ug/L	P418839	
		Glufosinate	1.0	I	ug/L	P418802	
		Glyphosate	1.0	U	ug/L	P418802	
		Afidopyropen	0.0038	I	ug/L	P418839	
		Sucralose	0.081		ug/L	P418802	
		Bentazon	0.0035		ug/L	P418839	
		Benzovindiflupyr	0.0020	U	ug/L	P418839	
		Carbamazepine	8.0E-04	U	ug/L	P418839	
		Clothianidin	0.0020	U	ug/L	P418839	
		Dinotefuran	0.0020	U	ug/L	P418839	
		Diuron	0.0020	U	ug/L	P418839	
		Fenuron	0.032	U	ug/L	P418839	
		Fluridone	8.0E-04	U	ug/L	P418839	
		Imazapyr	0.26		ug/L	P418839	
		Hydrocodone	0.0020	U	ug/L	P418839	
		Ibuprofen	0.080	U	ug/L	P418839	
		Imidacloprid	0.010		ug/L	P418839	
		Linuron	0.0040	U	ug/L	P418839	
		Mandestrobin	0.0020	U	ug/L	P418839	
		MCPP	0.0040	U	ug/L	P418839	
		Naproxen	0.0080	U	ug/L	P418839	
		Primidone	0.0040	U	ug/L	P418839	MS
		Pyraclostrobin	0.0020	U	ug/L	P418839	
		Silvex	0.0040	U	ug/L	P418839	
		Thiamethoxam	0.0020	U	ug/L	P418839	
		Tolfenpyrad	0.0020	U	ug/L	P418839	
		Triclopyr	0.0040	U	ug/L	P418839	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418945

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419005

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419144

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419155

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418962

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419095

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418995

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419212

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418985

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: P419037

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419038

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

Reference Method: EPA 8321B
Batch ID: P418802

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

Reference Method: EPA 8321B
Batch ID: P418839

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	0.0040	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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P419034

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011
Batch ID: P419320

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419323

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419280

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419391

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419622

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P419185

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

Reference Method: SM 5310 B-2011
Batch ID: P419189

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418945

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419005

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419155

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418962

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419095

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418995

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418985

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419037

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419038

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

Reference Method: EPA 8321B
Batch ID: P418802

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	104		P	40 - 150
Endothall	97.1		P	40 - 150
Glufosinate	103		P	40 - 150
Glyphosate	99.6		P	40 - 150
Sucralose	97.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P418839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	72.6		P	40 - 150
2,4,5-T	67.1		P	40 - 150
Acetaminophen	108		P	30 - 150
Acetamiprid	72.1		P	40 - 150
Afidopyropen	62.7		P	30 - 150
Bentazon	82.1		P	30 - 150
Benzovindiflupyr	70.1		P	40 - 150
Carbamazepine	81.4		P	40 - 150
Clothianidin	77.8		P	40 - 150
Dinotefuran	73.6		P	40 - 150
Diuron	89.0		P	40 - 150
Fenuron	99.5		P	40 - 150
Fluridone	84.5		P	40 - 150
Hydrocodone	112		P	40 - 150
Ibuprofen	59.2		P	40 - 150
Imazapyr	73.8		P	40 - 150
Imidacloprid	93.3		P	40 - 150
Linuron	90.9		P	40 - 150
Mandestrobin	86.3		P	40 - 150
MCPP	75.2		P	40 - 150
Naproxen	84.3		P	40 - 150
Primidone	70.9		P	40 - 150
Pyraclostrobin	83.0		P	40 - 150
Silvex	59.1		P	40 - 150
Thiamethoxam	97.2		P	40 - 150
Tolfenpyrad	44.1		P	30 - 150
Triclopyr	54.9		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P419034

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P419280

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

Reference Method: SM 4500-F- C-2011
Batch ID: P419391

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

Reference Method: SM 4500-F- C-2011
Batch ID: P419622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P419185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P419189

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352652	Ammonia-N	101	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353616	Ammonia-N	98.2	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353121	Ammonia-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353259	Kjeldahl Nitrogen	97.3	95.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353121	NO2NO3-N	101	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353106	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352345	Total-P	97.0	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353169	Total-P	95.4	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353260	Total-P	92.6	92.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P418802

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352891	Acesulfame K	99.6	98.9	P/P	40 - 150
2352891	AMPA	105	108	P/P	40 - 150
2352891	Endothall	92.9	96.0	P/P	40 - 150
2352891	Glufosinate	96.5	94.1	P/P	40 - 150
2352891	Glyphosate	87.9	83.3	P/P	40 - 150
2352891	Sucralose	95.8	95.0	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P418839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352724	2,4-D	77.7	80.5	P/P	40 - 150
2352724	2,4,5-T	81.7	83.6	P/P	40 - 150
2352724	Acetaminophen	74.0	83.6	P/P	30 - 150
2352724	Acetamiprid	47.7	45.5	P/P	40 - 150
2352724	Afidopyropen	55.7	67.7	P/P	30 - 150
2352724	Bentazon	124	121	P/P	30 - 150
2352724	Benzovindiflupyr	78.3	83.5	P/P	40 - 150
2352724	Carbamazepine	74.1	76.9	P/P	40 - 150
2352724	Clothianidin	49.8	54.6	P/P	40 - 150
2352724	Dinotefuran	94.1	108	P/P	40 - 150
2352724	Diuron	85.6	80.7	P/P	40 - 150
2352724	Fenuron	97.5	97.1	P/P	40 - 150
2352724	Fluridone	105	106	P/P	40 - 150
2352724	Hydrocodone	104	113	P/P	40 - 150
2352724	Ibuprofen	67.1	81.2	P/P	40 - 150
2352724	Imazapyr	83.1	96.8	P/P	40 - 150
2352724	Imidacloprid	66.1	74.2	P/P	40 - 150
2352724	Linuron	91.8	99.3	P/P	40 - 150
2352724	Mandestrobin	98.0	93.3	P/P	40 - 150
2352724	MCP	88.9	95.3	P/P	40 - 150
2352724	Naproxen	125	117	P/P	40 - 150
2352724	Primidone	44.9	35.3	P/F	40 - 150
2352724	Pyraclostrobin	92.5	94.9	P/P	40 - 150
2352724	Silvex	73.9	79.1	P/P	40 - 150
2352724	Thiamethoxam	82.0	89.7	P/P	40 - 150
2352724	Tolfenpyrad	57.1	61.2	P/P	30 - 150
2352724	Triclopyr	73.3	81.5	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P419280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353473	Fluoride	97.8	98.5	P/P	94 - 104

Reference Method: SM 4500-F- C-2011

Batch ID: P419391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352507	Fluoride	97.9	98.7	P/P	94 - 104

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P419622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355112	Fluoride	99.7	98.5	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P419185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353034	Organic Carbon	89.1	93.6	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P419189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353610	Organic Carbon	91.2	89.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353117	Turbidity	2.13	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352652	Ammonia-N	2.48	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353616	Ammonia-N	0.347	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353121	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352954	Kjeldahl Nitrogen	2.67	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353259	Kjeldahl Nitrogen	1.52	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353121	NO2NO3-N	1.96	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353106	NO2NO3-N	0.477	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P418985

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352345	Total-P	0.116	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419037

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353169	Total-P	2.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419038

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353260	Total-P	0.162	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P418802

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352891	Acesulfame K	0.674	Spike	P	0 - 30
2352891	AMPA	2.20	Spike	P	0 - 30
2352891	Endothall	3.24	Spike	P	0 - 30
2352891	Glufosinate	2.45	Spike	P	0 - 30
2352891	Glyphosate	5.37	Spike	P	0 - 30
2352891	Sucralose	0.783	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P418839

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352724	2,4-D	3.61	Spike	P	0 - 30
2352724	2,4,5-T	2.26	Spike	P	0 - 30
2352724	Acetaminophen	12.1	Spike	P	0 - 30
2352724	Acetamiprid	4.64	Spike	P	0 - 30
2352724	Afidopyropen	19.4	Spike	P	0 - 30
2352724	Bentazon	1.98	Spike	P	0 - 30
2352724	Benzovindiflupyr	6.34	Spike	P	0 - 30
2352724	Carbamazepine	3.75	Spike	P	0 - 30
2352724	Clothianidin	9.25	Spike	P	0 - 30
2352724	Dinotefuran	13.7	Spike	P	0 - 30
2352724	Diuron	6.01	Spike	P	0 - 30
2352724	Fenuron	0.455	Spike	P	0 - 30
2352724	Fluridone	1.59	Spike	P	0 - 30
2352724	Hydrocodone	8.10	Spike	P	0 - 30
2352724	Ibuprofen	19.0	Spike	P	0 - 30
2352724	Imazapyr	15.2	Spike	P	0 - 30
2352724	Imidacloprid	11.5	Spike	P	0 - 30
2352724	Linuron	7.90	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P418839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352724	Mandestrobin	4.93	Spike	P	0 - 30
2352724	MCCP	6.97	Spike	P	0 - 30
2352724	Naproxen	6.99	Spike	P	0 - 30
2352724	Primidone	24.0	Spike	P	0 - 30
2352724	Pyraclostrobin	2.62	Spike	P	0 - 30
2352724	Silvex	6.75	Spike	P	0 - 30
2352724	Thiamethoxam	9.02	Spike	P	0 - 30
2352724	Tolfenpyrad	6.89	Spike	P	0 - 30
2352724	Triclopyr	10.5	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P419034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353215	Total Alkalinity	1.95	Sample	P	0 - 3.8

Reference Method: SM 2540 D-2011
Batch ID: P419323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352962	TSS	10.9	Sample	F	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P419280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353473	Fluoride	0.470	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P419391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352507	Fluoride	0.509	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P419622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355112	Fluoride	0.953	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353034	Organic Carbon	3.09	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P419189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353610	Organic Carbon	1.65	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2353156

Field Sample ID: G3TLHR0043

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	59.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.8	P	30 - 160
EPA 8321B	Diuron-d6	84.2	P	30 - 160
EPA 8321B	Endothall-d6	74.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	112	P	30 - 160
EPA 8321B	Primidone-d5	41.2	P	30 - 160
EPA 8321B	Sucralose-d6	78.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114462

Included Lab Sample IDs: 2353114, 2353115, 2353116, 2353117, 2353118, 2353124

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114483

Included Lab Sample IDs: 2353119, 2353120, 2353121, 2353122, 2353123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114487

Included Lab Sample IDs: 2353119, 2353120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	99.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A114506

Included Lab Sample IDs: 2353114, 2353115, 2353116, 2353117, 2353118, 2353124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	105	98.0	P/P	90 - 110
Total Alkalinity	98.0	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114523

Included Lab Sample IDs: 2353119

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114548

Included Lab Sample IDs: 2353120, 2353121, 2353122, 2353123, 2353125

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114549

Included Lab Sample IDs: 2353125

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

Reference Method: EPA 8321B

Run ID: A114551

Included Lab Sample IDs: 2353156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	100	104	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A114551
Included Lab Sample IDs: 2353156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	97.8	97.6	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A114552
Included Lab Sample IDs: 2353156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	101	P/P	60 - 160
Endothall	98.0	88.2	P/P	60 - 160
Glufosinate	92.7	95.7	P/P	60 - 160
Glyphosate	105	105	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114553
Included Lab Sample IDs: 2353121, 2353122, 2353123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114561
Included Lab Sample IDs: 2353125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114569
Included Lab Sample IDs: 2353119, 2353120, 2353121, 2353122, 2353123

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

Reference Method: SM 5310 B-2011
Run ID: A114570
Included Lab Sample IDs: 2353122, 2353125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	95.1	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A114572
Included Lab Sample IDs: 2353119, 2353120, 2353121, 2353123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	90.2	95.0	P/P	90 - 110
Organic Carbon	96.6	90.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114574

Included Lab Sample IDs: 2353125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A114599

Included Lab Sample IDs: 2353114, 2353115, 2353116

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

Reference Method: EPA 8321B

Run ID: A114605

Included Lab Sample IDs: 2353156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	89.8	P/P	50 - 150
2,4,5-T	99.4	106	P/P	50 - 150
Acetaminophen	103	92.2	P/P	60 - 160
Acetamiprid	109	85.7	P/P	50 - 150
Afidopyropen	107	95.0	P/P	50 - 150
Bentazon	87.3	92.5	P/P	50 - 160
Benzovindiflupyr	101	99.0	P/P	50 - 150
Carbamazepine	110	117	P/P	60 - 150
Clothianidin	102	104	P/P	60 - 150
Dinotefuran	108	115	P/P	50 - 150
Diuron	98.4	91.4	P/P	60 - 160
Fenuron	101	83.1	P/P	60 - 150
Fluridone	115	109	P/P	60 - 160
Hydrocodone	105	106	P/P	60 - 150
Ibuprofen	69.1	142	P/P	50 - 160
Imazapyr	81.5	97.6	P/P	50 - 150
Imidacloprid	112	103	P/P	60 - 150
Linuron	117	106	P/P	60 - 150
Mandestrobin	104	97.1	P/P	50 - 150
MCPP	90.9	94.8	P/P	50 - 150
Naproxen	129	132	P/P	50 - 160
Primidone	64.6	111	P/P	60 - 150
Pyraclostrobin	112	104	P/P	60 - 150
Silvex	87.0	85.6	P/P	50 - 150
Thiamethoxam	91.6	96.8	P/P	50 - 150
Tolfenpyrad	104	104	P/P	60 - 150
Triclopyr	93.5	95.1	P/P	50 - 150

Reference Method: SM 4500-F- C-2011

Run ID: A114660

Included Lab Sample IDs: 2353117, 2353118

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

Quality Assurance Report

Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A114739

Included Lab Sample IDs: 2353124

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

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity	96.3				2.13	
EPA 350.1 Rev. 2.0	Ammonia-N	95.4	101	105			2.48
	Ammonia-N	96.0	98.2	98.8			0.347
	Ammonia-N	97.8	98.0	98.0			0.0
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.5					2.67
	Kjeldahl Nitrogen	101	97.3	95.2			1.52
EPA 353.2 Rev. 2.0	NO2NO3-N	106	101	103			1.96
	NO2NO3-N	104	104	105			0.477
EPA 365.1 Rev. 2.0	Total-P	104	97.0	96.8			0.116
	Total-P	104	95.4	99.1			2.14
	Total-P	103	92.6	92.7			0.162
EPA 8321B	2,4-D	72.6	80.5	77.7			3.61
	2,4,5-T	67.1	83.6	81.7			2.26
	Acesulfame K	101	99.6	98.9			0.674
	Acetaminophen	108	74.0	83.6			12.1
	Acetamiprid	72.1	47.7	45.5			4.64
	Afidopyropen	62.7	55.7	67.7			19.4
	AMPA	104	105	108			2.20
	Bentazon	82.1	121	124			1.98
	Benzovindiflupyr	70.1	78.3	83.5			6.34
	Carbamazepine	81.4	74.1	76.9			3.75
	Clothianidin	77.8	49.8	54.6			9.25
	Dinotefuran	73.6	94.1	108			13.7
	Diuron	89.0	85.6	80.7			6.01
	Endothall	97.1	92.9	96.0			3.24
	Fenuron	99.5	97.5	97.1			0.455
	Fluridone	84.5	105	106			1.59
	Glufosinate	103	96.5	94.1			2.45
	Glyphosate	99.6	87.9	83.3			5.37
	Hydrocodone	112	104	113			8.10
	Ibuprofen	59.2	81.2	67.1			19.0
	Imazapyr	73.8	96.8	83.1			15.2
	Imidacloprid	93.3	66.1	74.2			11.5
	Linuron	90.9	91.8	99.3			7.90
	Mandestrobin	86.3	98.0	93.3			4.93
	MCPP	75.2	95.3	88.9			6.97
	Naproxen	84.3	117	125			6.99
	Primidone	70.9	44.9	35.3			24.0
	Pyraclostrobin	83.0	92.5	94.9			2.62
	Silvex	59.1	79.1	73.9			6.75
	Sucralose	97.7	95.8	95.0			0.783
	Thiamethoxam	97.2	82.0	89.7			9.02
	Tolfenpyrad	44.1	57.1	61.2			6.89
	Triclopyr	54.9	81.5	73.3			10.5
SM 2320 B-2011	Total Alkalinity	104				1.95	
SM 2540 D-2011	TSS					10.9	
SM 4500-F- C-2011	Fluoride	102	97.8	98.5			0.470
	Fluoride	101	97.9	98.7			0.509
	Fluoride	99.6	99.7	98.5			0.953
SM 5310 B-2011	Organic Carbon	95.6	89.1	93.6			3.09
	Organic Carbon	96.6	91.2	89.3			1.65

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2353114, 2353115, 2353116, 2353117, 2353118, 2353124
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2353119, 2353120, 2353121, 2353122, 2353123, 2353125
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2353119, 2353120, 2353121, 2353122, 2353123, 2353125
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2353119, 2353120, 2353121, 2353122, 2353123, 2353125
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2353119, 2353120, 2353121, 2353122, 2353123, 2353125
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2353156
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2353114, 2353115, 2353116, 2353117, 2353118, 2353124
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2353114, 2353115, 2353116, 2353117, 2353118, 2353124
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2353114, 2353115, 2353116, 2353117, 2353118, 2353124
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2353119, 2353120, 2353121, 2353122, 2353123, 2353125

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	08/30/2022			08/31/2022 13:05	Chandler E Cox	2353117
	08/30/2022			08/31/2022 13:06	Chandler E Cox	2353114
	08/30/2022			08/31/2022 13:07	Chandler E Cox	2353115
	08/30/2022			08/31/2022 13:08	Chandler E Cox	2353116
	08/30/2022			08/31/2022 13:12	Chandler E Cox	2353118
	08/30/2022			08/31/2022 13:13	Chandler E Cox	2353124
EPA 350.1 Rev. 2.0	08/30/2022			09/01/2022 13:42	Ping Hua	2353119
	08/30/2022			09/01/2022 13:43	Ping Hua	2353120
	08/30/2022			09/06/2022 12:45	Ping Hua	2353125
	08/30/2022			09/06/2022 13:33	Judith K. Clark	2353121
	08/30/2022			09/06/2022 13:37	Judith K. Clark	2353122
	08/30/2022			09/06/2022 13:39	Judith K. Clark	2353123
EPA 351.2 Rev. 2.0	08/30/2022	09/02/2022 08:53	Samantha L Bates	09/06/2022 14:39	Samantha L Bates	2353125
	08/30/2022	09/06/2022 14:30	Alexandra J Mattheus	09/07/2022 10:14	Alexandra J Mattheus	2353119
	08/30/2022	09/06/2022 14:30	Alexandra J Mattheus	09/07/2022 10:16	Alexandra J Mattheus	2353120
	08/30/2022	09/06/2022 14:30	Alexandra J Mattheus	09/07/2022 10:18	Alexandra J Mattheus	2353121
	08/30/2022	09/06/2022 14:30	Alexandra J Mattheus	09/07/2022 10:19	Alexandra J Mattheus	2353122
	08/30/2022	09/06/2022 14:30	Alexandra J Mattheus	09/07/2022 10:21	Alexandra J Mattheus	2353123
EPA 353.2 Rev. 2.0	08/30/2022			09/01/2022 12:51	Judith K. Clark	2353121
	08/30/2022			09/01/2022 12:56	Judith K. Clark	2353119
	08/30/2022			09/01/2022 12:57	Judith K. Clark	2353120
	08/30/2022			09/01/2022 12:59	Judith K. Clark	2353122
	08/30/2022			09/01/2022 13:00	Judith K. Clark	2353123
	08/30/2022			09/07/2022 10:37	Beverly Y. Sanders	2353125
EPA 365.1 Rev. 2.0	08/30/2022	09/01/2022 15:55	Simonne.V. Calhoun	09/02/2022 14:25	James L Waggeberby	2353119
	08/30/2022	09/02/2022 10:28	Simonne.V. Calhoun	09/06/2022 12:38	James L Waggeberby	2353125
	08/30/2022	09/02/2022 10:28	Simonne.V. Calhoun	09/06/2022 12:42	James L Waggeberby	2353120
	08/30/2022	09/02/2022 10:28	Simonne.V. Calhoun	09/06/2022 12:43	James L Waggeberby	2353121
	08/30/2022	09/02/2022 10:28	Simonne.V. Calhoun	09/06/2022 12:44	James L Waggeberby	2353122
	08/30/2022	09/02/2022 10:28	Simonne.V. Calhoun	09/06/2022 12:45	James L Waggeberby	2353123
EPA 8321B	08/30/2022	09/01/2022 09:00	June Rhew	09/08/2022 01:06	Juyoung Kim	2353156
	08/30/2022	09/01/2022 14:00	Umesh Chiluwal	09/01/2022 23:22	Umesh Chiluwal	2353156
	08/30/2022	09/01/2022 14:00	Umesh Chiluwal	09/03/2022 00:42	Umesh Chiluwal	2353156
	08/30/2022	09/01/2022 14:00	Umesh Chiluwal	09/03/2022 04:36	Umesh Chiluwal	2353156
SM 2320 B-2011	08/30/2022			09/02/2022 01:09	Dale L. Simmons	2353124
	08/30/2022			09/02/2022 03:17	Dale L. Simmons	2353117
	08/30/2022			09/02/2022 03:25	Dale L. Simmons	2353114
	08/30/2022			09/02/2022 03:34	Dale L. Simmons	2353115
	08/30/2022			09/02/2022 03:44	Dale L. Simmons	2353116
	08/30/2022			09/02/2022 03:53	Dale L. Simmons	2353118

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2011	08/30/2022			09/02/2022 16:08	Yijie Li	2353114, 2353115, 2353116, 2353117, 2353118, 2353124
SM 4500-F- C-2011	08/30/2022			09/08/2022 00:35	Adam P Silver	2353114
	08/30/2022			09/08/2022 01:13	Adam P Silver	2353115
	08/30/2022			09/08/2022 01:18	Adam P Silver	2353116
	08/30/2022			09/09/2022 21:15	Dale L. Simmons	2353117
	08/30/2022			09/09/2022 21:36	Dale L. Simmons	2353118
SM 5310 B-2011	08/30/2022			09/15/2022 02:20	Dale L. Simmons	2353124
	08/30/2022			09/06/2022 21:59	Khloe J Berg	2353122
	08/30/2022			09/06/2022 22:13	Khloe J Berg	2353125
	08/30/2022			09/07/2022 02:44	Khloe J Berg	2353119
	08/30/2022			09/07/2022 03:33	Khloe J Berg	2353120
	08/30/2022			09/07/2022 03:51	Khloe J Berg	2353121
	08/30/2022			09/07/2022 04:05	Khloe J Berg	2353123