

Chemical Analysis Report

NW-DIST-2023-05-17-01

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

Event Description: **Hogtown Car Run**
Request ID: **RQ-2023-05-15-37**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

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

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 08-JUN-2023 10:20



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: HOGTOWN DRAINAGE AT CHURCHILL BAYOU ROAD **Collection Date/Time: 05/15/2023 11:25**

Field ID: G3NW0038

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2410137	DEP SOP: NU-094-1	Color (true)	32		PCU	P429993	
	EPA 180.1 Rev. 2.0	Turbidity	8.4		NTU	P430008	
	EPA 300.0 Rev. 2.1	Chloride	3.0E+03		mg Cl/L	P430145	
		Sulfate	420		mg SO4/L	P430147	
	SM 2320 B-2011	Total Alkalinity	89		mg CaCO3/L	P430440	
	SM 2540 C-2015	TDS	4.93E+03		mg/L	P430683	
	SM 2540 D-2015	TSS	4	I	mg/L	P430522	RPD
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P430530	
2410138	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P430075	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51	J	mg N/L	P430051	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P430293	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P430043	
	SM 5310 B-2011	Organic Carbon	8.6		mg C/L	P430100	

Ref. Method and Comment:

SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 9890 umhos/cm.

EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: HOGTOWN DRAIN ABOVE CHAT HOLLY RD

Collection Date/Time: 05/15/2023 11:00

Field ID: G3NW0241

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2410527	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P430338	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32		mg N/L	P430089	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P430404	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P430096	
	SM 5310 B-2011	Organic Carbon	7.4		mg C/L	P430150	
2410541	DEP SOP: NU-094-1	Color (true)	44		PCU	P429993	
	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P430008	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P430367	
		Sulfate	6.2		mg SO4/L	P430370	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P430439	
	SM 2540 C-2015	TDS	85		mg/L	P430682	
	SM 2540 D-2015	TSS	3	I	mg/L	P430519	
	SM 4500-F- C-2011	Fluoride	0.040	I	mg F/L	P430531	

Ref. Method and Comment:

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

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

**Sample Location: DRAIN TO MUSSET BAYOU UPSTREAM OF
DON BISHOP RD**

Collection Date/Time: 05/15/2023 12:05

Field ID: G3NW0240

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2410135	DEP SOP: NU-094-1	Color (true)	77		PCU	P429993	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P430008	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P430145	
		Sulfate	2.9		mg SO4/L	P430147	
	SM 2320 B-2011	Total Alkalinity	26		mg CaCO3/L	P430439	
	SM 2540 C-2015	TDS	90		mg/L	P430682	
	SM 2540 D-2015	TSS	2	I	mg/L	P430519	
	SM 4500-F- C-2011	Fluoride	0.026	I	mg F/L	P430530	
2410136	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P430328	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P430050	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P430231	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P430041	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P430098	
2410172	EPA 8321B	2,4-D	0.0020	U	ug/L	P429946	
		Acesulfame K	0.10	U	ug/L	P429908	
		2,4,5-T	0.0040	U	ug/L	P429946	
		AMPA	0.10	U	ug/L	P429908	
		Acetaminophen	0.0080	U	ug/L	P429946	
		Acetamiprid	0.0020	U	ug/L	P429946	
		Endothall	0.25	U	ug/L	P429908	
		Glufosinate	0.10	U	ug/L	P429908	
		Glyphosate	0.10	U	ug/L	P429908	
		Afidopyropen	0.0020	U	ug/L	P429946	
		Bentazon	8.0E-04	U	ug/L	P429946	
		Sucralose	0.56		ug/L	P429908	
		Benzovindiflupyr	0.0020	U	ug/L	P429946	
		Carbamazepine	8.0E-04	U	ug/L	P429946	
		Clothianidin	0.0020	U	ug/L	P429946	
		Dinotefuran	0.0020	U	ug/L	P429946	
		Diuron	0.0020	U	ug/L	P429946	
		Fenuron	0.032	U	ug/L	P429946	
		Fluridone	8.0E-04	U	ug/L	P429946	
		Imazapyr	0.0052	I	ug/L	P429946	
		Hydrocodone	0.0020	U	ug/L	P429946	
		Ibuprofen	0.080	U	ug/L	P429946	
		Imidacloprid	0.0069	I	ug/L	P429946	
		Linuron	0.0040	U	ug/L	P429946	
		Mandestrobin	0.0020	U	ug/L	P429946	
		MCP	0.0020	U	ug/L	P429946	
		Naproxen	0.0080	U	ug/L	P429946	MS
		Primidone	0.0040	U	ug/L	P429946	
		Pyraclostrobin	0.0020	U	ug/L	P429946	
		Silvex	0.0040	U	ug/L	P429946	

Field ID: G3NW0240

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2410172	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P429946	
		Tolfenpyrad	0.0020	U	ug/L	P429946	
		Triclopyr	0.0040	U	ug/L	P429946	

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

Sample Location: DIRECT RUNOFF TO BAY OFF OF ROBERTS RD

Collection Date/Time: 05/15/2023 11:45

Field ID: G3NW0239

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2410139	DEP SOP: NU-094-1	Color (true)	78		PCU	P429993	
	EPA 180.1 Rev. 2.0	Turbidity	5.2		NTU	P430008	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P430145	
		Sulfate	0.55		mg SO4/L	P430147	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P430439	
	SM 2540 C-2015	TDS	33		mg/L	P430682	
	SM 2540 D-2015	TSS	11		mg/L	P430519	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P430530	
2410141	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P430328	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P430050	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430231	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P430041	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P430098	

Ref. Method and Comment:

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

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

Sample Location: Drain to Hewitt Bayou

Collection Date/Time: 05/15/2023 12:25

Field ID: G3NW0238

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2410140	DEP SOP: NU-094-1	Color (true)	160		PCU	P429993	
	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P430008	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P430145	
		Sulfate	2.5		mg SO4/L	P430147	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P430439	
	SM 2540 C-2015	TDS	89		mg/L	P430682	
	SM 2540 D-2015	TSS	14		mg/L	P430519	
2410142	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P430530	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P430342	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P430050	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P430231	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P430041	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P430098	

Ref. Method and Comment:

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

SM 2540 D-2015: 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: P429993

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430008

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430147

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430367

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430370

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430075

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430328

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430338

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430342

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430050

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430051

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430089

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430231

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430293

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430404

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430041

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430043

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: P430096

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

Reference Method: EPA 8321B
Batch ID: P429908

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: P429946

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P430439

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P430440

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

Reference Method: SM 2540 C-2015
Batch ID: P430682

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P430683

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P430519

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P430522

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P430530

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P430531

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P430098

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

Reference Method: SM 5310 B-2011
Batch ID: P430100

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P430150

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: P429993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.7		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430008

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430147

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430367

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430075

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430338

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430342

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430050

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430089

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430231

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430293

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: P430404

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430041

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430043

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P430096

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

Reference Method: EPA 8321B

Batch ID: P429908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.2		P	40 - 150
AMPA	106		P	40 - 150
Endothall	85.6		P	40 - 150
Glufosinate	84.6		P	40 - 150
Glyphosate	102		P	40 - 150
Sucralose	117		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P429946

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	96.3		P	40 - 150
2,4,5-T	90.4		P	40 - 150
Acetaminophen	82.2		P	30 - 150
Acetamiprid	69.3		P	40 - 150
Afidopyropen	80.8		P	30 - 150
Bentazon	103		P	30 - 150
Benzovindiflupyr	82.2		P	40 - 150
Carbamazepine	85.0		P	40 - 150
Clothianidin	79.4		P	40 - 150
Dinotefuran	88.5		P	40 - 150
Diuron	89.0		P	40 - 150
Fenuron	83.4		P	40 - 150
Fluridone	94.5		P	40 - 150
Hydrocodone	86.8		P	40 - 150
Ibuprofen	61.2		P	40 - 150
Imazapyr	87.8		P	40 - 150
Imidacloprid	76.6		P	40 - 150
Linuron	80.5		P	40 - 150
Mandestrobin	84.3		P	40 - 150
MCPP	81.9		P	40 - 150
Naproxen	72.9		P	40 - 150
Primidone	88.4		P	40 - 150
Pyraclostrobin	82.6		P	40 - 150
Silvex	78.0		P	40 - 150
Thiamethoxam	76.5		P	40 - 150
Tolfenpyrad	60.0		P	30 - 150
Triclopyr	85.3		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P430439

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P430440

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.8		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P430682

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

Reference Method: SM 2540 C-2015
Batch ID: P430683

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

Reference Method: SM 2540 D-2015
Batch ID: P430519

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.3		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P430522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	92.7		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P430530

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P430531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P430098

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

Reference Method: SM 5310 B-2011
Batch ID: P430100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P430150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409971	Chloride	103		P	90 - 110
2410135	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430147

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409971	Sulfate	100		P	90 - 110
2410135	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410488	Chloride	101		P	90 - 110
2410592	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410488	Sulfate	98.7		P	90 - 110
2410592	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2407779	Ammonia-N	100	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410095	Ammonia-N	95.8	94.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430338

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410490	Ammonia-N	97.4	98.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430342

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410183	Ammonia-N	96.0	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410142	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410138	Kjeldahl Nitrogen	109	111	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410234	Kjeldahl Nitrogen	101	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409991	NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409789	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410527	NO2NO3-N	102	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430041

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409991	Total-P	102	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410297	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410593	Total-P	105	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P429908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409832	Acesulfame K	80.8	81.0	P/P	40 - 150
2409832	AMPA	97.6	102	P/P	40 - 150
2409832	Endothall	95.1	92.9	P/P	40 - 150
2409832	Glufosinate	74.2	82.1	P/P	40 - 150
2409832	Glyphosate	90.3	100	P/P	40 - 150
2409832	Sucralose	119	96.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P429946

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409703	2,4-D	109	116	P/P	40 - 150
2409703	2,4,5-T	101	111	P/P	40 - 150
2409703	Acetaminophen	78.6	83.2	P/P	30 - 150
2409703	Acetamiprid	90.8	89.3	P/P	40 - 150
2409703	Afidopyropen	86.6	89.4	P/P	30 - 150
2409703	Bentazon	113	116	P/P	30 - 150
2409703	Benzovindiflupyr	79.4	82.4	P/P	40 - 150
2409703	Carbamazepine	87.9	94.3	P/P	40 - 150
2409703	Clothianidin	93.8	97.2	P/P	40 - 150
2409703	Dinotefuran	96.0	87.9	P/P	40 - 150
2409703	Diuron	93.0	96.5	P/P	40 - 150
2409703	Fenuron	80.5	81.1	P/P	40 - 150
2409703	Fluridone	93.3	95.0	P/P	40 - 150
2409703	Hydrocodone	90.4	95.7	P/P	40 - 150
2409703	Ibuprofen	67.4	72.6	P/P	40 - 150
2409703	Imazapyr	111	119	P/P	40 - 150
2409703	Imidacloprid	94.7	99.1	P/P	40 - 150
2409703	Linuron	89.9	72.9	P/P	40 - 150
2409703	Mandestrobin	85.9	91.8	P/P	40 - 150
2409703	MCP	89.0	90.9	P/P	40 - 150
2409703	Naproxen	45.8	33.8	P/F	40 - 150
2409703	Primidone	96.0	92.1	P/P	40 - 150
2409703	Pyraclostrobin	80.5	82.1	P/P	40 - 150
2409703	Silvex	85.8	92.7	P/P	40 - 150
2409703	Thiamethoxam	99.5	102	P/P	40 - 150
2409703	Tolfenpyrad	46.6	55.2	P/P	30 - 150
2409703	Triclopyr	101	115	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P430530

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410458	Fluoride	99.6	99.6	P/P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P430531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410591	Fluoride	99.2	100	P/P	94 - 106

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P430098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410363	Organic Carbon	99.3	100	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P430100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410138	Organic Carbon	94.2	93.1	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P430150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2410490	Organic Carbon	95.5	95.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P429993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410293	Color (true)	3.19	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410283	Turbidity	15.7	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409971	Chloride	3.09	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409971	Sulfate	2.73	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410488	Chloride	1.37	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410488	Sulfate	1.71	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2407779	Ammonia-N	2.06	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410095	Ammonia-N	0.866	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430338

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410490	Ammonia-N	0.598	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410183	Ammonia-N	0.671	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410142	Kjeldahl Nitrogen	0.182	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410138	Kjeldahl Nitrogen	0.872	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410234	Kjeldahl Nitrogen	5.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409991	NO2NO3-N	1.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409789	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410527	NO2NO3-N	4.72	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430041

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409991	Total-P	2.48	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410297	Total-P	0.343	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430096

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410593	Total-P	0.452	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P429908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409832	Acesulfame K	0.158	Spike	P	0 - 30
2409832	AMPA	4.23	Spike	P	0 - 30
2409832	Endothall	2.43	Spike	P	0 - 30
2409832	Glufosinate	10.1	Spike	P	0 - 30
2409832	Glyphosate	9.05	Spike	P	0 - 30
2409832	Sucralose	14.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P429946

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409703	2,4-D	5.80	Spike	P	0 - 30
2409703	2,4,5-T	10.1	Spike	P	0 - 30
2409703	Acetaminophen	5.61	Spike	P	0 - 30
2409703	Acetamiprid	1.65	Spike	P	0 - 30
2409703	Afidopyropen	3.21	Spike	P	0 - 30
2409703	Bentazon	2.28	Spike	P	0 - 30
2409703	Benzovindiflupyr	3.64	Spike	P	0 - 30
2409703	Carbamazepine	7.03	Spike	P	0 - 30
2409703	Clothianidin	3.55	Spike	P	0 - 30
2409703	Dinotefuran	8.83	Spike	P	0 - 30
2409703	Diuron	3.77	Spike	P	0 - 30
2409703	Fenuron	0.752	Spike	P	0 - 30
2409703	Fluridone	1.85	Spike	P	0 - 30
2409703	Hydrocodone	5.71	Spike	P	0 - 30
2409703	Ibuprofen	7.43	Spike	P	0 - 30
2409703	Imazapyr	7.02	Spike	P	0 - 30
2409703	Imidacloprid	4.55	Spike	P	0 - 30
2409703	Linuron	21.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P429946

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409703	Mandestrobin	6.54	Spike	P	0 - 30
2409703	MCCP	2.08	Spike	P	0 - 30
2409703	Naproxen	20.1	Spike	P	0 - 30
2409703	Primidone	4.19	Spike	P	0 - 30
2409703	Pyraclostrobin	1.93	Spike	P	0 - 30
2409703	Silvex	7.76	Spike	P	0 - 30
2409703	Thiamethoxam	2.22	Spike	P	0 - 30
2409703	Tolfenpyrad	16.9	Spike	P	0 - 30
2409703	Triclopyr	12.2	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P430439

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410458	Total Alkalinity	0.522	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P430440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410185	Total Alkalinity	0.321	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P430683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410643	TDS	3.55	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P430522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410378	TSS	11.3	Spike	F	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P430530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410458	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P430531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410591	Fluoride	0.953	Spike	P	0 - 1.9

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P430098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410363	Organic Carbon	0.703	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P430100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410138	Organic Carbon	0.956	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P430150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2410490	Organic Carbon	0.210	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2410172

Field Sample ID: G3NW0240

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.5	P	30 - 160
EPA 8321B	Diuron-d6	82.8	P	30 - 160
EPA 8321B	Endothall-d6	87.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	42.9	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	140	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119211

Included Lab Sample IDs: 2410135, 2410137, 2410139, 2410140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.3	P/P	90 - 110
Chloride	99.3	98.7	P/P	90 - 110
Sulfate	100	99.7	P/P	90 - 110
Sulfate	99.7	99.1	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A119223

Included Lab Sample IDs: 2410135, 2410137, 2410139, 2410140, 2410541

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.3	98.7	P/P	90 - 110
Color (true)	98.4	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119231

Included Lab Sample IDs: 2410135, 2410137, 2410139, 2410140, 2410541

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119259

Included Lab Sample IDs: 2410138

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

Reference Method: SM 5310 B-2011

Run ID: A119267

Included Lab Sample IDs: 2410136, 2410141, 2410142

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

Reference Method: SM 5310 B-2011

Run ID: A119268

Included Lab Sample IDs: 2410138

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.1	92.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119280

Included Lab Sample IDs: 2410136, 2410138, 2410141, 2410142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	98.7	P/P	90 - 110
Kjeldahl Nitrogen	110	105	P/P	90 - 110
Kjeldahl Nitrogen	98.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119283

Included Lab Sample IDs: 2410136, 2410138, 2410141, 2410142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	99.5	P/P	90 - 110
Total-P	97.8	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A119295

Included Lab Sample IDs: 2410172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.2	98.9	P/P	60 - 160
Sucralose	111	127	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A119300

Included Lab Sample IDs: 2410527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A119309

Included Lab Sample IDs: 2410172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	120	118	P/P	60 - 160
Endothall	89.1	87.4	P/P	60 - 160
Glufosinate	96.1	90.1	P/P	60 - 160
Glyphosate	109	114	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119340

Included Lab Sample IDs: 2410527

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119342

Included Lab Sample IDs: 2410136, 2410141, 2410142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119348

Included Lab Sample IDs: 2410527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.2	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119351

Included Lab Sample IDs: 2410541

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	98.2	P/P	90 - 110
Sulfate	97.5	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119364

Included Lab Sample IDs: 2410138

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119375

Included Lab Sample IDs: 2410136, 2410141, 2410142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	99.3	P/P	90 - 110
Ammonia-N	99.6	99.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119381

Included Lab Sample IDs: 2410527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	99.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A119395

Included Lab Sample IDs: 2410172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.4	97.1	P/P	50 - 150
2,4,5-T	101	96.1	P/P	50 - 150
Acetaminophen	82.9	80.9	P/P	60 - 160
Acetamiprid	100	104	P/P	50 - 150
Afidopyropen	86.7	92.0	P/P	50 - 150
Bentazon	125	130	P/P	50 - 160
Benzovindiflupyr	108	105	P/P	50 - 150
Carbamazepine	117	108	P/P	60 - 150
Clothianidin	102	98.1	P/P	60 - 150
Dinotefuran	114	116	P/P	50 - 150
Diuron	120	116	P/P	60 - 160
Fenuron	102	102	P/P	60 - 150
Fluridone	117	118	P/P	60 - 160
Hydrocodone	114	119	P/P	60 - 150
Ibuprofen	65.4	64.9	P/P	50 - 160
Imazapyr	95.0	92.2	P/P	50 - 150
Imidacloprid	94.7	95.0	P/P	60 - 150
Linuron	90.5	102	P/P	60 - 150
Mandestrobin	99.4	103	P/P	50 - 150
MCPP	98.1	109	P/P	50 - 150
Naproxen	64.7	74.4	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A119395
Included Lab Sample IDs: 2410172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	107	102	P/P	60 - 150
Pyraclostrobin	103	107	P/P	60 - 150
Silvex	62.4	70.2	P/P	50 - 150
Thiamethoxam	98.8	97.6	P/P	50 - 150
Tolfenpyrad	105	109	P/P	60 - 150
Triclopyr	74.3	75.1	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A119404
Included Lab Sample IDs: 2410527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	94.0	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A119421
Included Lab Sample IDs: 2410135, 2410137, 2410139, 2410140, 2410541

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.4	98.0	P/P	90 - 110
Total Alkalinity	98.0	97.9	P/P	90 - 110
Total Alkalinity	98.7	94.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A119457
Included Lab Sample IDs: 2410135, 2410137, 2410139, 2410140, 2410541

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	101	101	P/P	90 - 110
Fluoride	102	100	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP MS
DEP SOP: NU-094-1	Color (true)	96.7				3.19
EPA 180.1 Rev. 2.0	Turbidity	97.6				15.7
EPA 300.0 Rev. 2.1	Chloride	99.6	103	106		3.09
	Chloride	101	101	99.0		1.37
	Sulfate	99.6	100	102		2.73
	Sulfate	99.9	98.7	99.1		1.71
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	103	100		2.06
	Ammonia-N	95.2	95.8	94.8		0.866
	Ammonia-N	97.4	97.4	98.2		0.598
	Ammonia-N	94.4	96.0	95.2		0.671
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	101	101		0.182
	Kjeldahl Nitrogen	108	109	111		0.872
	Kjeldahl Nitrogen	100	101	109		5.59
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	100	99.0		1.01
	NO2NO3-N	99.5	103	103		0.473
	NO2NO3-N	95.5	102	96.8		4.72
EPA 365.1 Rev. 2.0	Total-P	102	102	99.3		2.48
	Total-P	101	102	102		0.343
	Total-P	99.6	105	105		0.452
EPA 8321B	2,4-D	96.3	109	116		5.80
	2,4,5-T	90.4	101	111		10.1
	Acesulfame K	92.2	80.8	81.0		0.158
	Acetaminophen	82.2	78.6	83.2		5.61
	Acetamiprid	69.3	90.8	89.3		1.65
	Afidopyropen	80.8	86.6	89.4		3.21
	AMPA	106	97.6	102		4.23
	Bentazon	103	113	116		2.28
	Benzovindiflupyr	82.2	79.4	82.4		3.64
	Carbamazepine	85.0	87.9	94.3		7.03
	Clothianidin	79.4	93.8	97.2		3.55
	Dinotefuran	88.5	96.0	87.9		8.83
	Diuron	89.0	93.0	96.5		3.77
	Endothall	85.6	95.1	92.9		2.43
	Fenuron	83.4	80.5	81.1		0.752
	Fluridone	94.5	93.3	95.0		1.85
	Glufosinate	84.6	74.2	82.1		10.1
	Glyphosate	102	90.3	100		9.05
	Hydrocodone	86.8	90.4	95.7		5.71
	Ibuprofen	61.2	67.4	72.6		7.43
	Imazapyr	87.8	111	119		7.02
	Imidacloprid	76.6	94.7	99.1		4.55
	Linuron	80.5	89.9	72.9		21.0
	Mandestrobin	84.3	85.9	91.8		6.54
	MCPP	81.9	89.0	90.9		2.08
	Naproxen	72.9	45.8	33.8		20.1
	Primidone	88.4	96.0	92.1		4.19
	Pyraclostrobin	82.6	80.5	82.1		1.93
	Silvex	78.0	85.8	92.7		7.76
	Sucralose	117	119	96.2		14.0
	Thiamethoxam	76.5	99.5	102		2.22
	Tolfenpyrad	60.0	46.6	55.2		16.9
	Triclopyr	85.3	101	115		12.2
SM 2320 B-2011	Total Alkalinity	100				0.522
	Total Alkalinity	99.8				0.321

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
SM 2540 C-2015	TDS	96.8				
	TDS	103				3.55
SM 2540 D-2015	TSS	93.3				
	TSS	92.7				11.3
SM 4500-F- C-2011	Fluoride	100	99.6	99.6		0.0
	Fluoride	99.6	99.2	100		0.953
SM 5310 B-2011	Organic Carbon	102	99.3	100		0.703
	Organic Carbon	98.2	94.2	93.1		0.956
	Organic Carbon	98.5	95.5	95.2		0.210

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2410135, 2410137, 2410139, 2410140, 2410541
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2410135, 2410137, 2410139, 2410140, 2410541
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2410135, 2410137, 2410139, 2410140, 2410541
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2410135, 2410137, 2410139, 2410140, 2410541
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2410136, 2410138, 2410141, 2410142, 2410527
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2410136, 2410138, 2410141, 2410142, 2410527
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2410136, 2410138, 2410141, 2410142, 2410527
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2410136, 2410138, 2410141, 2410142, 2410527
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2410172
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2410135, 2410137, 2410139, 2410140, 2410541
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2410135, 2410137, 2410139, 2410140, 2410541
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2410135, 2410137, 2410139, 2410140, 2410541
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2410135, 2410137, 2410139, 2410140, 2410541
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2410136, 2410138, 2410141, 2410142, 2410527

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	05/17/2023			05/17/2023 10:50	Anna M. Plaviak	2410137
	05/17/2023			05/17/2023 10:51	Anna M. Plaviak	2410541
	05/17/2023			05/17/2023 10:52	Anna M. Plaviak	2410139
	05/17/2023			05/17/2023 10:53	Anna M. Plaviak	2410135
	05/17/2023			05/17/2023 10:59	Anna M. Plaviak	2410140
EPA 180.1 Rev. 2.0	05/17/2023			05/17/2023 10:35	Khloe J Berg	2410137
	05/17/2023			05/17/2023 10:41	Khloe J Berg	2410541
	05/17/2023			05/17/2023 10:42	Khloe J Berg	2410139
	05/17/2023			05/17/2023 10:45	Khloe J Berg	2410135, 2410140
EPA 300.0 Rev. 2.1	05/17/2023			05/18/2023 19:18	James L Waggeberby	2410135
	05/17/2023			05/18/2023 22:34	James L Waggeberby	2410137
	05/17/2023			05/18/2023 22:49	James L Waggeberby	2410139
	05/17/2023			05/18/2023 23:04	James L Waggeberby	2410140
EPA 350.1 Rev. 2.0	05/17/2023			05/24/2023 22:11	James L Waggeberby	2410541
	05/17/2023			05/18/2023 14:31	Ping Hua	2410138
	05/17/2023			05/24/2023 12:17	Ping Hua	2410136
	05/17/2023			05/24/2023 12:18	Ping Hua	2410141
	05/17/2023			05/24/2023 13:30	Khloe J Berg	2410527
EPA 351.2 Rev. 2.0	05/17/2023			05/24/2023 14:52	Ping Hua	2410142
	05/17/2023	05/18/2023 11:55	Simonne.V. Calhoun	05/19/2023 13:02	Ping Hua	2410136
	05/17/2023	05/18/2023 11:55	Simonne.V. Calhoun	05/19/2023 13:04	Ping Hua	2410141
	05/17/2023	05/18/2023 11:55	Simonne.V. Calhoun	05/19/2023 13:09	Ping Hua	2410142
	05/17/2023	05/18/2023 11:55	Simonne.V. Calhoun	05/19/2023 13:33	Ping Hua	2410138
EPA 353.2 Rev. 2.0	05/17/2023	05/19/2023 08:44	Samantha L Bates	05/23/2023 12:42	Samantha L Bates	2410527
	05/17/2023			05/23/2023 11:00	Beverly Y. Sanders	2410136
	05/17/2023			05/23/2023 11:01	Beverly Y. Sanders	2410141
	05/17/2023			05/23/2023 11:02	Beverly Y. Sanders	2410142
	05/17/2023			05/24/2023 08:53	Beverly Y. Sanders	2410138
EPA 365.1 Rev. 2.0	05/17/2023			05/25/2023 10:46	Beverly Y. Sanders	2410527
	05/17/2023	05/18/2023 13:13	Adam P Silver	05/19/2023 14:19	Chandler E Cox	2410136
	05/17/2023	05/18/2023 13:13	Adam P Silver	05/19/2023 14:20	Chandler E Cox	2410141
	05/17/2023	05/18/2023 13:13	Adam P Silver	05/19/2023 14:21	Chandler E Cox	2410142
	05/17/2023	05/18/2023 13:13	Adam P Silver	05/19/2023 14:52	Chandler E Cox	2410138
EPA 8321B	05/17/2023	05/19/2023 11:40	Adam P Silver	05/23/2023 10:53	James L Waggeberby	2410527
	05/17/2023	05/19/2023 09:00	Manjita Shrestha	05/19/2023 20:35	Manjita Shrestha	2410172
	05/17/2023	05/19/2023 09:00	Manjita Shrestha	05/20/2023 21:59	Manjita Shrestha	2410172
	05/17/2023	05/22/2023 09:00	Hoor Shaik	05/25/2023 03:35	Juyoung Kim	2410172
SM 2320 B-2011	05/17/2023			05/25/2023 01:24	Dale L. Simmons	2410135
	05/17/2023			05/25/2023 01:32	Dale L. Simmons	2410139
	05/17/2023			05/25/2023 01:45	Dale L. Simmons	2410140

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	05/17/2023			05/25/2023 04:43	Dale L. Simmons	2410541
	05/17/2023			05/25/2023 10:03	Dale L. Simmons	2410137
SM 2540 C-2015	05/17/2023			05/19/2023 16:01	Yijie Li	2410135, 2410137, 2410139, 2410140, 2410541
SM 2540 D-2015	05/17/2023			05/19/2023 16:01	Yijie Li	2410135, 2410137, 2410139, 2410140, 2410541
SM 4500-F- C-2011	05/17/2023			05/27/2023 07:06	Dale L. Simmons	2410135
	05/17/2023			05/27/2023 07:11	Dale L. Simmons	2410139
	05/17/2023			05/27/2023 07:17	Dale L. Simmons	2410140
	05/17/2023			05/27/2023 08:35	Dale L. Simmons	2410137
	05/17/2023			05/27/2023 10:12	Dale L. Simmons	2410541
SM 5310 B-2011	05/17/2023			05/18/2023 22:49	Khloe J Berg	2410136
	05/17/2023			05/18/2023 23:04	Khloe J Berg	2410141
	05/17/2023			05/18/2023 23:18	Khloe J Berg	2410142
	05/17/2023			05/19/2023 00:27	Elise M. Gillis	2410138
	05/17/2023			05/19/2023 21:54	Elise M. Gillis	2410527