

Chemical Analysis Report

CEN-DIST-2019-11-26-01

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

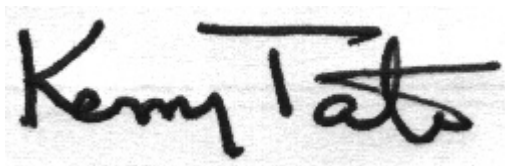
Event Description: **Minnie + D&B / Yvonne**
Request ID: **RQ-2019-11-25-24**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Michael Linger

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Phone (850) 245-8085

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

Date Certified: 18-DEC-2019 09:21

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.

NON-CONFORMANCE REPORT INCLUDED

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: Lake Yvonne at center

Collection Date/Time: 11/25/2019 11:45

Field ID: G2CE0095

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139357	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P375073	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P375404	
		Sulfate	7.5	Y	mg SO4/L	P375408	
	SM 2120 B	Color (true)	50		PCU	P374892	
	SM 2320 B-97	Total Alkalinity	48	Y	mg CaCO3/L	P375172	
	SM 2540 C-97	TDS	100	Y	mg/L	P375510	
	SM 2540 D-97	TSS	2	UY	mg/L	P375495	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P375180	
2139358	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P375098	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P375135	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374950	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P375269	
	SM 5310 B-00	Organic Carbon	8.4		mg C/L	P375004	
2139359	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374909	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

Sample Location: Lake Minnie @ Center

Collection Date/Time: 11/25/2019 10:25

Field ID: G2CE0108_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139360	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P375073	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P375404	
		Sulfate	2.3	Y	mg SO4/L	P375408	
	SM 2120 B	Color (true)	230		PCU	P374892	
	SM 2320 B-97	Total Alkalinity	43	Y	mg CaCO3/L	P375172	
	SM 2540 C-97	TDS	136	Y	mg/L	P375510	
	SM 2540 D-97	TSS	2	IY	mg/L	P375495	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P375180	
2139362	EPA 350.1 Rev. 2.0	Ammonia-N	0.062		mg N/L	P375098	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P375136	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P374950	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P375269	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P375004	
2139364	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P374909	
2139372	EPA 8321B	2,4-D	0.050		ug/L	P374966	
		Acesulfame K**	0.10	U	ug/L	P374800	
		AMPA**	0.48		ug/L	P374800	
		Sucralose**	0.25		ug/L	P374800	
		Acetaminophen**	0.0080	U	ug/L	P374966	
		Acetamiprid**	0.0020	U	ug/L	P374966	
		Endothall**	0.25	U	ug/L	P374800	
		Glufosinate**	0.10	U	ug/L	P374800	
		Glyphosate**	1.9		ug/L	P374800	
		Afidopyropen**	0.0020	UJ	ug/L	P374966	
		Bentazon	0.011		ug/L	P374966	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P374966	
		Carbamazepine**	8.0E-04	U	ug/L	P374966	
		Clothianidin**	0.0020	U	ug/L	P374966	
		Dinotefuran**	0.0020	U	ug/L	P374966	
		Diuron	0.0020	U	ug/L	P374966	
		Fenuron	0.016	U	ug/L	P374966	
		Fluridone**	0.0077		ug/L	P374966	
		Imazapyr**	0.13		ug/L	P374966	
		Hydrocodone**	0.0020	U	ug/L	P374966	
		Ibuprofen**	0.020	U	ug/L	P374966	
		Imidacloprid	0.0026	I	ug/L	P374966	
		Linuron	0.0040	U	ug/L	P374966	
		Mandestrobin**	0.0020	UJ	ug/L	P374966	
		MCP	0.0020	U	ug/L	P374966	
		Naproxen**	0.0080	U	ug/L	P374966	
		Primidone**	0.0040	U	ug/L	P374966	
		Pyraclostrobin**	0.0020	U	ug/L	P374966	
		Thiamethoxam**	0.0020	U	ug/L	P374966	

Field ID: G2CE0108_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139372	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P374966	
		Triclopyr**	0.0040	U	ug/L	P374966	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: FB_11252019

Collection Date/Time: 11/25/2019 10:35

Field ID: FB_11252019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139361	EPA 180.1 Rev. 2.0	Turbidity	0.10	I	NTU	P375073	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P375405	
		Sulfate	0.20	UY	mg SO4/L	P375409	
	SM 2120 B	Color (true)	2.5	U	PCU	P374892	
	SM 2320 B-97	Total Alkalinity	0.65	UY	mg CaCO3/L	P375172	
	SM 2540 C-97	TDS	15	UY	mg/L	P375507	
	SM 2540 D-97	TSS	2	UY	mg/L	P375492	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P375180	
2139363	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P375098	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P375136	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374950	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P375269	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P375004	
2139365	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374909	
2139373	EPA 8321B	2,4-D	0.0020	U	ug/L	P374966	
		Acesulfame K**	0.10	U	ug/L	P374800	
		AMPA**	0.10	U	ug/L	P374800	
		Sucralose**	0.010	U	ug/L	P374800	
		Acetaminophen**	0.0080	U	ug/L	P374966	
		Acetamiprid**	0.0020	U	ug/L	P374966	
		Endothall**	0.25	U	ug/L	P374800	
		Glufosinate**	0.10	U	ug/L	P374800	
		Glyphosate**	0.10	U	ug/L	P374800	
		Afidopyropen**	0.0020	UJ	ug/L	P374966	
		Bentazon	8.0E-04	U	ug/L	P374966	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P374966	
		Carbamazepine**	8.0E-04	U	ug/L	P374966	
		Clothianidin**	0.0020	U	ug/L	P374966	
		Dinotefuran**	0.0020	U	ug/L	P374966	
		Diuron	0.0020	U	ug/L	P374966	
		Fenuron	0.016	U	ug/L	P374966	
		Fluridone**	8.0E-04	U	ug/L	P374966	
		Imazapyr**	0.0040	U	ug/L	P374966	
		Hydrocodone**	0.0020	U	ug/L	P374966	
		Ibuprofen**	0.020	U	ug/L	P374966	
		Imidacloprid	0.0020	U	ug/L	P374966	
		Linuron	0.0040	U	ug/L	P374966	
		Mandestrobin**	0.0020	UJ	ug/L	P374966	
		MCP	0.0020	U	ug/L	P374966	
		Naproxen**	0.0080	U	ug/L	P374966	
		Primidone**	0.0040	U	ug/L	P374966	
		Pyraclostrobin**	0.0020	U	ug/L	P374966	
		Thiamethoxam**	0.0020	U	ug/L	P374966	

Field ID: FB_11252019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139373	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P374966	
		Triclopyr**	0.0040	U	ug/L	P374966	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The result was confirmed on 11/26/2019.

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples and batch relative percent difference are unavailable because of high analyte concentration in the QC sample.

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Lake Minnie @ Center

Collection Date/Time: 11/25/2019 10:20

Field ID: G2CE0108

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139354	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P375074	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P375404	
		Sulfate	2.3	Y	mg SO4/L	P375408	
	SM 2120 B	Color (true)	240		PCU	P374892	
	SM 2320 B-97	Total Alkalinity	43	Y	mg CaCO3/L	P375172	
	SM 2540 C-97	TDS	131	Y	mg/L	P375510	
	SM 2540 D-97	TSS	2	IY	mg/L	P375495	
	SM 4500 F-C-97	Fluoride	0.061	I	mg F/L	P375180	
2139355	EPA 350.1 Rev. 2.0	Ammonia-N	0.064		mg N/L	P375098	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P375136	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P374950	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P375269	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P375004	
2139356	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P374907	
2139427	EPA 8321B	2,4-D	0.055		ug/L	P374966	
		Acesulfame K**	0.10	U	ug/L	P374800	
		AMPA**	0.46		ug/L	P374800	
		Sucralose**	0.29		ug/L	P374800	
		Acetaminophen**	0.0080	U	ug/L	P374966	
		Acetamiprid**	0.0020	U	ug/L	P374966	
		Endothall**	0.25	U	ug/L	P374800	
		Glufosinate**	0.10	U	ug/L	P374800	
		Glyphosate**	1.6		ug/L	P374800	
		Afidopyropen**	0.0020	UJ	ug/L	P374966	
		Bentazon	0.013		ug/L	P374966	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P374966	
		Carbamazepine**	8.0E-04	U	ug/L	P374966	
		Clothianidin**	0.0020	U	ug/L	P374966	
		Dinotefuran**	0.0020	U	ug/L	P374966	
		Diuron	0.0020	U	ug/L	P374966	
		Fenuron	0.016	U	ug/L	P374966	
		Fluridone**	0.0094		ug/L	P374966	
		Imazapyr**	0.15		ug/L	P374966	
		Hydrocodone**	0.0020	U	ug/L	P374966	
		Ibuprofen**	0.020	U	ug/L	P374966	
		Imidacloprid	0.0032	I	ug/L	P374966	
		Linuron	0.0040	U	ug/L	P374966	
		Mandestrobin**	0.0020	UJ	ug/L	P374966	
		MCP	0.0020	U	ug/L	P374966	
		Naproxen**	0.0080	U	ug/L	P374966	
		Primidone**	0.0040	U	ug/L	P374966	
		Pyraclostrobin**	0.0020	U	ug/L	P374966	
		Thiamethoxam**	0.0020	U	ug/L	P374966	

Field ID: G2CE0108

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2139427	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P374966	
		Triclopyr**	0.0040	U	ug/L	P374966	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Non-Conformance Report

NCR ID: 8043

<u>Event(s)</u>	<u>Job(s)</u>	<u>Sample(s)</u>	<u>Test(s)</u>
CEN-DIST-2019-11-26-01	TLH-2019-11-26-51	2139354	
CEN-DIST-2019-11-26-01	TLH-2019-11-26-51	2139357	
CEN-DIST-2019-11-26-01	TLH-2019-11-26-51	2139360	
CEN-DIST-2019-11-26-01	TLH-2019-11-26-51	2139361	

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Samples left out at room temperature overnight on 11/26/2019.

Resolution: Samples analyzed after 11/26/2019, were Y qualified for incorrect preservation.

Authorized by/Date: Peter D. Kaus 12/11/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P375073

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P375074

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375404

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375405

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375408

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375409

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375098

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375135

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375136

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P374950

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P375269

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374907

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374909

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

Reference Method: EPA 8321B
 Batch ID: P374800

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: P374966

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P374966

Component	Result	Code	Units
Mandestrobin	0.0020	U	ug/L
MCP	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: SM 2120 B
Batch ID: P374892

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P375172

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

Reference Method: SM 2540 C-97
Batch ID: P375507

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P375510

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P375492

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P375495

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P375180

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P375004

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: P375404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375405

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375408

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375409

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375098

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375135

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: P375136

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375269

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 dissolved
Batch ID: P374907

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374909

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

Reference Method: EPA 8321B
Batch ID: P374800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	136		P	40 - 150
AMPA	102		P	40 - 150
Endothall	80.9		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	114		P	40 - 140
Sucralose	120		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P374966

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	136		P	40 - 160
Acetaminophen	89.9		P	30 - 160
Acetamiprid	90.2		P	40 - 160
Afidopyropen	100		P	40 - 160
Bentazon	88.8		P	30 - 160
Benzovindiflupyr	81.7		P	40 - 160
Carbamazepine	105		P	40 - 160
Clothianidin	106		P	40 - 160
Dinotefuran	97.9		P	40 - 160
Diuron	92.7		P	40 - 160
Fenuron	95.7		P	40 - 160
Fluridone	110		P	40 - 160
Hydrocodone	81.7		P	40 - 160
Ibuprofen	81.7		P	30 - 160
Imazapyr	89.3		P	40 - 160
Imidacloprid	113		P	40 - 160
Linuron	76.0		P	40 - 160
Mandestrobin	104		P	40 - 160
MCPP	145		P	40 - 160
Naproxen	95.2		P	40 - 160
Primidone	79.8		P	40 - 160
Pyraclostrobin	90.0		P	30 - 160
Thiamethoxam	106		P	40 - 160
Tolfenpyrad	57.5		P	40 - 160
Triclopyr	100		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P374892

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

Reference Method: SM 2320 B-97
Batch ID: P375172

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P375180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P375004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	109		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139180	Chloride	97.7		P	90 - 110
2139229	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139553	Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139180	Sulfate	97.3		P	90 - 110
2139229	Sulfate	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139384	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139358	Ammonia-N	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139236	Kjeldahl Nitrogen	105	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139416	Kjeldahl Nitrogen	97.8	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139317	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139317	Total-P	103	98.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374907

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139188	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139359	O-Phosphate-P	101	101	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P374800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139106	Acesulfame K	93.0	89.3	P/P	40 - 150
2139106	AMPA	129	117	P/P	40 - 150
2139106	Endothall	83.1	73.8	P/P	40 - 150
2139106	Glufosinate	118	100	P/P	40 - 150
2139106	Glyphosate	138	129	P/P	40 - 140
2139106	Sucralose	61.1	69.1	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P374966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139261	2,4-D	107	103	P/P	40 - 160
2139261	Acetaminophen	68.9	80.1	P/P	30 - 160
2139261	Acetamiprid	86.5	88.7	P/P	40 - 160
2139261	Afidopyropen	91.3	95.9	P/P	40 - 160
2139261	Bentazon	48.9	46.4	P/P	30 - 160
2139261	Benzovindiflupyr	79.1	76.7	P/P	40 - 160
2139261	Carbamazepine	81.7	78.1	P/P	40 - 160
2139261	Clothianidin	79.2	71.7	P/P	40 - 160
2139261	Dinotefuran	118	118	P/P	40 - 160
2139261	Diuron	68.7	68.5	P/P	40 - 160
2139261	Fenuron	79.4	77.9	P/P	40 - 160
2139261	Fluridone	101	98.8	P/P	40 - 160
2139261	Hydrocodone	82.5	82.4	P/P	40 - 160
2139261	Ibuprofen	68.0	76.2	P/P	30 - 160
2139261	Imazapyr	74.5	75.7	P/P	40 - 160
2139261	Imidacloprid	155	146	P/P	40 - 160
2139261	Linuron	66.0	64.8	P/P	40 - 160
2139261	Mandestrobin	95.0	92.2	P/P	40 - 160
2139261	MCPP	121	118	P/P	40 - 160
2139261	Naproxen	87.0	74.9	P/P	40 - 160
2139261	Primidone	84.1	80.2	P/P	40 - 160
2139261	Pyraclostrobin	85.6	81.3	P/P	30 - 160
2139261	Thiamethoxam	113	110	P/P	40 - 160
2139261	Tolfenpyrad	57.3	54.5	P/P	40 - 160
2139261	Triclopyr	87.5	88.5	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P375180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139456	Fluoride	97.8	99.0	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P375004

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139191	Organic Carbon	94.6	109	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P375073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139233	Turbidity	1.71	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P375074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139384	Turbidity	13.6	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139180	Chloride	0.301	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139180	Sulfate	0.485	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139384	Sulfate	0.450	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139358	Ammonia-N	1.68	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139236	Kjeldahl Nitrogen	4.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139416	Kjeldahl Nitrogen	1.02	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139317	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139317	Total-P	3.89	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374907

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139188	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139359	O-Phosphate-P	0.296	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P374800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139106	Acesulfame K	4.07	Spike	P	0 - 30
2139106	AMPA	9.05	Spike	P	0 - 30
2139106	Endothall	11.8	Spike	P	0 - 30
2139106	Glufosinate	16.3	Spike	P	0 - 30
2139106	Glyphosate	6.63	Spike	P	0 - 30
2139106	Sucralose	12.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139261	2,4-D	3.88	Spike	P	0 - 30
2139261	Acetaminophen	15.1	Spike	P	0 - 30
2139261	Acetamiprid	2.49	Spike	P	0 - 30
2139261	Afidopyropen	4.91	Spike	P	0 - 30
2139261	Bentazon	5.30	Spike	P	0 - 30
2139261	Benzovindiflupyr	3.00	Spike	P	0 - 30
2139261	Carbamazepine	4.58	Spike	P	0 - 30
2139261	Clothianidin	9.97	Spike	P	0 - 30
2139261	Dinotefuran	0.169	Spike	P	0 - 30
2139261	Diuron	0.329	Spike	P	0 - 30
2139261	Fenuron	2.02	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P374966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139261	Fluridone	1.75	Spike	P	0 - 30
2139261	Hydrocodone	0.121	Spike	P	0 - 30
2139261	Ibuprofen	11.4	Spike	P	0 - 30
2139261	Imazapyr	1.61	Spike	P	0 - 30
2139261	Imidacloprid	5.85	Spike	P	0 - 30
2139261	Linuron	1.85	Spike	P	0 - 30
2139261	Mandestrobin	3.05	Spike	P	0 - 30
2139261	MCP	2.87	Spike	P	0 - 30
2139261	Naproxen	14.9	Spike	P	0 - 30
2139261	Primidone	4.81	Spike	P	0 - 30
2139261	Pyraclostrobin	5.16	Spike	P	0 - 30
2139261	Thiamethoxam	2.90	Spike	P	0 - 30
2139261	Tolfenpyrad	4.95	Spike	P	0 - 30
2139261	Triclopyr	1.19	Spike	P	0 - 30

Reference Method: SM 2120 B
 Batch ID: P374892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139233	Color (true)	1.59	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P375172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139456	Total Alkalinity	0.380	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P375507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138913	TDS	3.55	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P375510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139198	TDS	3.68	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P375180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139456	Fluoride	0.974	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P375004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139191	Organic Carbon	8.72	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2139372
Field Sample ID: G2CE0108_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.1	P	30 - 160
EPA 8321B	Diuron-d6	61.5	P	30 - 160
EPA 8321B	Endothall-d6	93.2	P	30 - 160
EPA 8321B	Endothall-d6	93.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.1	P	30 - 160
EPA 8321B	Primidone-d5	72.2	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2139373
Field Sample ID: FB_11252019

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	132	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.2	P	30 - 160
EPA 8321B	Diuron-d6	84.3	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	108	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.7	P	30 - 160
EPA 8321B	Primidone-d5	71.8	P	30 - 160
EPA 8321B	Sucralose-d6	132	P	30 - 160
EPA 8321B	Sucralose-d6	132	P	30 - 160

Lab Sample ID: 2139427
Field Sample ID: G2CE0108

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	142	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.4	P	30 - 160
EPA 8321B	Diuron-d6	74.1	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.7	P	30 - 160
EPA 8321B	Primidone-d5	92.8	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A95976

Included Lab Sample IDs: 2139354, 2139357, 2139360, 2139361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 115
Color (true)	103	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95979

Included Lab Sample IDs: 2139356, 2139359, 2139364, 2139365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	92.5	91.6	P/P	90 - 110
O-Phosphate-P	92.5	91.8	P/P	90 - 110
O-Phosphate-P	93.3	92.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A96002

Included Lab Sample IDs: 2139355, 2139358, 2139362, 2139363

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

Reference Method: SM 5310 B-00

Run ID: A96029

Included Lab Sample IDs: 2139355, 2139358, 2139362, 2139363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.9	96.8	P/P	90 - 110
Organic Carbon	96.4	95.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96033

Included Lab Sample IDs: 2139372, 2139373, 2139427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	95.9	98.1	P/P	60 - 160
Endothall	99.1	99.1	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A96036

Included Lab Sample IDs: 2139372, 2139373, 2139427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	139	139	P/P	60 - 160
Glufosinate	121	110	P/P	60 - 160
Glyphosate	115	115	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A96050

Included Lab Sample IDs: 2139354, 2139357, 2139360, 2139361

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96065

Included Lab Sample IDs: 2139355, 2139358, 2139362, 2139363

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

Reference Method: SM 2320 B-97

Run ID: A96084

Included Lab Sample IDs: 2139354, 2139357, 2139360, 2139361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	105	P/P	90 - 110
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A96084

Included Lab Sample IDs: 2139354, 2139357, 2139360, 2139361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	100	P/P	90 - 110
Fluoride	98.5	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96087

Included Lab Sample IDs: 2139354, 2139357, 2139360, 2139361

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

Reference Method: EPA 8321B

Run ID: A96104

Included Lab Sample IDs: 2139372, 2139373, 2139427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.0	98.6	P/P	50 - 150
2,4-D	98.6	106	P/P	50 - 150
Acetaminophen	93.4	93.9	P/P	60 - 160
Acetaminophen	93.9	85.6	P/P	60 - 160
Acetamiprid	103	94.3	P/P	50 - 150
Acetamiprid	94.3	87.4	P/P	50 - 150
Afidopyropen	100	92.4	P/P	50 - 150
Afidopyropen	92.4	104	P/P	50 - 150
Bentazon	61.3	77.2	P/P	50 - 160
Bentazon	77.2	79.7	P/P	50 - 160
Benzovindiflupyr	102	106	P/P	50 - 150
Benzovindiflupyr	107	102	P/P	50 - 150
Carbamazepine	107	99.1	P/P	60 - 150
Carbamazepine	99.1	98.0	P/P	60 - 150
Clothianidin	89.9	89.8	P/P	60 - 150
Clothianidin	96.1	89.9	P/P	60 - 150
Dinotefuran	92.1	91.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A96104

Included Lab Sample IDs: 2139372, 2139373, 2139427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dinotefuran	92.3	92.1	P/P	50 - 150
Diuron	103	106	P/P	60 - 150
Diuron	110	103	P/P	60 - 150
Fenuron	80.4	86.0	P/P	60 - 150
Fenuron	90.6	80.4	P/P	60 - 150
Fluridone	114	114	P/P	60 - 160
Fluridone	114	115	P/P	60 - 160
Hydrocodone	90.6	96.2	P/P	60 - 150
Hydrocodone	99.3	90.6	P/P	60 - 150
Ibuprofen	83.1	92.2	P/P	50 - 160
Ibuprofen	92.2	83.2	P/P	50 - 160
Imazapyr	105	110	P/P	50 - 150
Imazapyr	99.4	105	P/P	50 - 150
Imidacloprid	104	95.5	P/P	60 - 150
Imidacloprid	95.5	95.3	P/P	60 - 150
Linuron	91.0	94.1	P/P	60 - 150
Linuron	99.1	91.0	P/P	60 - 150
Mandestrobin	107	105	P/P	50 - 150
Mandestrobin	111	107	P/P	50 - 150
MCPP	101	108	P/P	50 - 150
MCPP	108	98.8	P/P	50 - 150
Naproxen	129	80.9	P/P	50 - 160
Naproxen	80.9	109	P/P	50 - 160
Primidone	77.2	84.6	P/P	60 - 150
Primidone	79.4	77.2	P/P	60 - 150
Pyraclostrobin	107	99.8	P/P	60 - 150
Pyraclostrobin	99.8	102	P/P	60 - 150
Thiamethoxam	92.9	97.3	P/P	50 - 150
Thiamethoxam	97.3	91.1	P/P	50 - 150
Tolfenpyrad	101	94.7	P/P	60 - 150
Tolfenpyrad	104	101	P/P	60 - 150
Triclopyr	106	98.2	P/P	50 - 150
Triclopyr	98.4	106	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A96111

Included Lab Sample IDs: 2139355, 2139358, 2139362, 2139363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	102	P/P	90 - 110
Kjeldahl Nitrogen	104	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96127

Included Lab Sample IDs: 2139372, 2139373, 2139427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	121	129	P/P	60 - 160
Sucralose	134	121	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96168

Included Lab Sample IDs: 2139362

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96171

Included Lab Sample IDs: 2139355, 2139363

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96197

Included Lab Sample IDs: 2139358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.2	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					1.71	
	Turbidity					13.6	
EPA 300.0 Rev. 2.1	Chloride	98.9	97.7	101		0.301	
	Chloride	102	99.2				
	Sulfate	98.5	97.3	97.5		0.485	
	Sulfate	101	98.8			0.450	
EPA 350.1 Rev. 2.0	Ammonia-N	101	102	100			1.68
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	105	97.8			4.63
	Kjeldahl Nitrogen	106	97.8	99.0			1.02
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	100	99.5			0.501
EPA 365.1 Rev. 2.0	Total-P	101	103	98.4			3.89
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	105	100	100			0.0
	O-Phosphate-P	104	101	101			0.296
EPA 8321B	2,4-D	136	107	103			3.88
	Acesulfame K	136	93.0	89.3			4.07
	Acetaminophen	89.9	68.9	80.1			15.1
	Acetamiprid	90.2	86.5	88.7			2.49
	Afidopyropen	100	91.3	95.9			4.91
	AMPA	102	129	117			9.05
	Bentazon	88.8	48.9	46.4			5.30
	Benzovindiflupyr	81.7	79.1	76.7			3.00
	Carbamazepine	105	81.7	78.1			4.58
	Clothianidin	106	79.2	71.7			9.97
	Dinotefuran	97.9	118	118			0.169
	Diuron	92.7	68.7	68.5			0.329
	Endothall	80.9	83.1	73.8			11.8
	Fenuron	95.7	79.4	77.9			2.02
	Fluridone	110	101	98.8			1.75
	Glufosinate	101	118	100			16.3
	Glyphosate	114	138	129			6.63
	Hydrocodone	81.7	82.5	82.4			0.121
	Ibuprofen	81.7	68.0	76.2			11.4
	Imazapyr	89.3	74.5	75.7			1.61
	Imidacloprid	113	155	146			5.85
	Linuron	76.0	66.0	64.8			1.85
	Mandestrobin	104	95.0	92.2			3.05
	MCPP	145	121	118			2.87
	Naproxen	95.2	87.0	74.9			14.9
	Primidone	79.8	84.1	80.2			4.81
	Pyraclostrobin	90.0	85.6	81.3			5.16
	Sucralose	120	61.1	69.1			12.2
	Thiamethoxam	106	113	110			2.90
	Tolfenpyrad	57.5	57.3	54.5			4.95
	Triclopyr	100	87.5	88.5			1.19
SM 2120 B	Color (true)	101				1.59	
SM 2320 B-97	Total Alkalinity	103				0.380	
SM 2540 C-97	TDS					3.55	
	TDS					3.68	
SM 4500 F-C-97	Fluoride	96.2	97.8	99.0			0.974
SM 5310 B-00	Organic Carbon	109	94.6	109			8.72

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2139354, 2139357, 2139360, 2139361
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2139354, 2139357, 2139360, 2139361
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2139354, 2139357, 2139360, 2139361
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2139355, 2139358, 2139362, 2139363
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2139355, 2139358, 2139362, 2139363
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2139355, 2139358, 2139362, 2139363
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2139355, 2139358, 2139362, 2139363
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2139356, 2139359, 2139364, 2139365
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2139372, 2139373, 2139427
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2139372, 2139373, 2139427
SM 2120 B / E31780	True Color measured at 450 nm	2139354, 2139357, 2139360, 2139361
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2139354, 2139357, 2139360, 2139361
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2139354, 2139357, 2139360, 2139361
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2139354, 2139357, 2139360, 2139361
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2139354, 2139357, 2139360, 2139361
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2139355, 2139358, 2139362, 2139363

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	11/26/2019			11/26/2019 18:00	Yen Ta	2139354, 2139357, 2139360, 2139361
EPA 300.0 Rev. 2.1	11/26/2019			12/06/2019 21:19	Jhamieka S. Greenwood	2139354
	11/26/2019			12/06/2019 21:31	Jhamieka S. Greenwood	2139357
	11/26/2019			12/06/2019 21:43	Jhamieka S. Greenwood	2139360
	11/26/2019			12/06/2019 23:44	Jhamieka S. Greenwood	2139361
EPA 350.1 Rev. 2.0	11/26/2019			12/02/2019 13:45	Ping Hua	2139358
	11/26/2019			12/02/2019 13:51	Ping Hua	2139355
	11/26/2019			12/02/2019 13:53	Ping Hua	2139362
	11/26/2019			12/02/2019 14:08	Ping Hua	2139363
EPA 351.2 Rev. 2.0	11/26/2019	12/03/2019 12:50	Sima Feizi	12/04/2019 14:05	Jhamieka S. Greenwood	2139358
	11/26/2019	12/03/2019 12:50	Sima Feizi	12/04/2019 14:18	Jhamieka S. Greenwood	2139355
	11/26/2019	12/03/2019 12:50	Sima Feizi	12/04/2019 14:19	Jhamieka S. Greenwood	2139362
	11/26/2019	12/03/2019 12:50	Sima Feizi	12/04/2019 14:21	Jhamieka S. Greenwood	2139363
EPA 353.2 Rev. 2.0	11/26/2019			11/27/2019 11:13	Beverly Y. Sanders	2139355
	11/26/2019			11/27/2019 11:14	Beverly Y. Sanders	2139362
	11/26/2019			11/27/2019 11:15	Beverly Y. Sanders	2139358
	11/26/2019			11/27/2019 11:16	Beverly Y. Sanders	2139363
EPA 365.1 Rev. 2.0	11/26/2019	12/05/2019 17:50	Lipi Saha	12/06/2019 15:34	Julia Storbeck	2139362
	11/26/2019	12/05/2019 17:50	Lipi Saha	12/06/2019 20:06	Julia Storbeck	2139363
	11/26/2019	12/05/2019 17:50	Lipi Saha	12/06/2019 20:09	Julia Storbeck	2139355
	11/26/2019	12/05/2019 17:50	Lipi Saha	12/09/2019 15:10	Benjamin T. Nordmann	2139358
EPA 365.1 Rev. 2.0 dissolved	11/26/2019			11/26/2019 15:45	Virginia P. Brown	2139359
	11/26/2019			11/26/2019 16:20	Virginia P. Brown	2139364
	11/26/2019			11/26/2019 16:21	Virginia P. Brown	2139365
	11/26/2019			11/26/2019 16:48	Virginia P. Brown	2139356
EPA 8321B	11/26/2019	11/26/2019 14:00	Rebecca Ware	11/26/2019 14:24	Rebecca Ware	2139372
	11/26/2019	11/26/2019 14:00	Rebecca Ware	11/26/2019 14:38	Rebecca Ware	2139373
	11/26/2019	11/26/2019 14:00	Rebecca Ware	11/26/2019 15:05	Rebecca Ware	2139427
	11/26/2019	11/26/2019 14:00	Rebecca Ware	11/26/2019 19:24	Rebecca Ware	2139372
	11/26/2019	11/26/2019 14:00	Rebecca Ware	11/26/2019 19:34	Rebecca Ware	2139373
	11/26/2019	11/26/2019 14:00	Rebecca Ware	11/26/2019 19:56	Rebecca Ware	2139427
	11/26/2019	11/26/2019 14:00	Rebecca Ware	12/03/2019 16:58	Rebecca Ware	2139373
	11/26/2019	11/26/2019 14:00	Rebecca Ware	12/04/2019 19:02	Rebecca Ware	2139372
	11/26/2019	11/26/2019 14:00	Rebecca Ware	12/04/2019 19:14	Rebecca Ware	2139427
	11/26/2019	12/02/2019 09:00	Hoor Shaik	12/04/2019 11:36	Juyoung Kim	2139372
	11/26/2019	12/02/2019 09:00	Hoor Shaik	12/04/2019 12:11	Juyoung Kim	2139427
	11/26/2019	12/02/2019 09:00	Hoor Shaik	12/04/2019 13:20	Juyoung Kim	2139373
SM 2120 B	11/26/2019			11/26/2019 16:29	Julia Storbeck	2139357
	11/26/2019			11/26/2019 16:31	Julia Storbeck	2139361
	11/26/2019			11/26/2019 16:45	Julia Storbeck	2139354, 2139360

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	11/26/2019			12/03/2019 05:14	Dale L. Simmons	2139354
	11/26/2019			12/03/2019 05:26	Dale L. Simmons	2139357
	11/26/2019			12/03/2019 05:39	Dale L. Simmons	2139360
	11/26/2019			12/03/2019 06:22	Dale L. Simmons	2139361
SM 2540 C-97	11/26/2019			11/27/2019 15:32	Yijie Li	2139354, 2139357, 2139360, 2139361
SM 2540 D-97	11/26/2019			11/27/2019 15:32	Yijie Li	2139354, 2139357, 2139360, 2139361
SM 4500 F-C-97	11/26/2019			12/03/2019 05:14	Dale L. Simmons	2139354
	11/26/2019			12/03/2019 05:26	Dale L. Simmons	2139357
	11/26/2019			12/03/2019 05:39	Dale L. Simmons	2139360
	11/26/2019			12/03/2019 06:22	Dale L. Simmons	2139361
SM 5310 B-00	11/26/2019			11/28/2019 03:20	Lauren Lees	2139355
	11/26/2019			11/28/2019 03:34	Lauren Lees	2139362
	11/26/2019			11/28/2019 03:47	Lauren Lees	2139358
	11/26/2019			11/28/2019 04:32	Lauren Lees	2139363