

Chemical Analysis Report

SW-DIST-2020-08-11-01

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

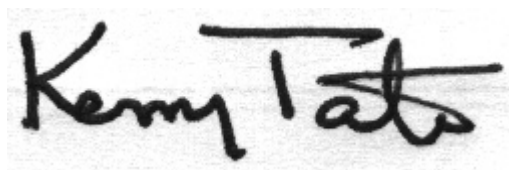
Event Description: **Mizelle, Owens, McDonald, Chito, Gilley**
Request ID: **RQ-2020-08-17-06**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Judy Ashton

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

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

Date Certified: 01-SEP-2020 11:53

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: Chito Branch in Park

Collection Date/Time: 08/10/2020 12:30

Field ID: G2SW0133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189457	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P385911	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P386273	
		Sulfate	29		mg SO4/L	P386277	
	SM 2120 B-2011	Color (true)	180		PCU	P385922	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P385989	
	SM 2540 C-2011	TDS	175		mg/L	P386182	
	SM 2540 D-2011	TSS	2	I	mg/L	P386223	
	SM 4500 F-C-2011	Fluoride	0.29		mg F/L	P385993	
2189459	EPA 350.1 Rev. 2.0	Ammonia-N	0.042	Y	mg N/L	P386085	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1	Y	mg N/L	P386141	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.097		mg N/L	P385937	
	EPA 365.1 Rev. 2.0	Total-P	0.50		mg P/L	P385941	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P385980	
2189461	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.39		mg P/L	P385918	
2189495	EPA 8321B	2,4-D	0.0025	I	ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	73		ug/L	P385904	
		Sucralose**	0.38		ug/L	P385904	
		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothall**	0.25	U	ug/L	P385904	
		Glufosinate**	0.96		ug/L	P385904	
		Glyphosate**	58		ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	0.13		ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	8.0E-04	U	ug/L	P386033	
		Clothianidin**	0.015		ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.0020	U	ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	8.0E-04	U	ug/L	P386033	
		Imazapyr**	0.027		ug/L	P386033	
		Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.075		ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCP	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0040	U	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.041		ug/L	P386033	

Field ID: G2SW0133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189495	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Mizelle Creek in Park

Collection Date/Time: 08/10/2020 10:45

Field ID: G2SW0131

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189451	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P385911	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P386273	
		Sulfate	16		mg SO4/L	P386277	
	SM 2120 B-2011	Color (true)	130		PCU	P385922	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P385989	
	SM 2540 C-2011	TDS	183		mg/L	P386181	
	SM 2540 D-2011	TSS	4	I	mg/L	P386222	
	SM 4500 F-C-2011	Fluoride	0.72		mg F/L	P385993	
2189453	EPA 350.1 Rev. 2.0	Ammonia-N	0.042	Y	mg N/L	P386085	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75	Y	mg N/L	P386141	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.46		mg N/L	P385937	
	EPA 365.1 Rev. 2.0	Total-P	0.58		mg P/L	P385941	
	SM 5310 B-2011	Organic Carbon	19		mg C/L	P385980	
2189455	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.49		mg P/L	P385918	
2189493	EPA 8321B	2,4-D	0.0020	U	ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	0.20	I	ug/L	P385904	
		Sucralose**	0.15		ug/L	P385904	
		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothall**	0.25	U	ug/L	P385904	
		Glufosinate**	0.10	U	ug/L	P385904	
		Glyphosate**	0.19	I	ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	8.0E-04	U	ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	8.0E-04	U	ug/L	P386033	
		Clothianidin**	0.0020	U	ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.021		ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	8.0E-04	U	ug/L	P386033	
		Imazapyr**	0.10		ug/L	P386033	
		Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.0027	I	ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCPP	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0040	U	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.0020	U	ug/L	P386033	

Field ID: G2SW0131

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189493	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: McDonald Branch @ Thompson Rd

Collection Date/Time: 08/10/2020 10:20

Field ID: G2SW0093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189458	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P385911	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P386273	
		Sulfate	24		mg SO4/L	P386277	
	SM 2120 B-2011	Color (true)	110		PCU	P385922	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P385989	
	SM 2540 C-2011	TDS	172	A	mg/L	P386182	
	SM 2540 D-2011	TSS	2	UA	mg/L	P386223	
	SM 4500 F-C-2011	Fluoride	0.27		mg F/L	P385993	
2189460	EPA 350.1 Rev. 2.0	Ammonia-N	0.017	Y	mg N/L	P386085	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61	Y	mg N/L	P386141	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.50		mg N/L	P385937	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P385941	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P385980	
2189462	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.20		mg P/L	P385918	
2189496	EPA 8321B	2,4-D	0.0020	U	ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	0.10	U	ug/L	P385904	
		Sucralose**	0.097		ug/L	P385904	
		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothall**	0.25	U	ug/L	P385904	
		Glufosinate**	0.10	U	ug/L	P385904	
		Glyphosate**	0.10	U	ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	8.0E-04	U	ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	8.0E-04	U	ug/L	P386033	
		Clothianidin**	0.0020	U	ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.0020	U	ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	0.0039		ug/L	P386033	
		Imazapyr**	0.0040	U	ug/L	P386033	
		Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.0020	U	ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCPD	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0040	U	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.0020	U	ug/L	P386033	

Field ID: G2SW0093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189496	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Owens Branch in Park

Collection Date/Time: 08/10/2020 11:40

Field ID: G2SW0132

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189452	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P385911	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P386273	
		Sulfate	40		mg SO4/L	P386277	
	SM 2120 B-2011	Color (true)	170		PCU	P385922	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P385989	
	SM 2540 C-2011	TDS	163		mg/L	P386181	
	SM 2540 D-2011	TSS	5	I	mg/L	P386222	
	SM 4500 F-C-2011	Fluoride	0.43		mg F/L	P385993	
2189454	EPA 350.1 Rev. 2.0	Ammonia-N	0.035	Y	mg N/L	P386085	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91	Y	mg N/L	P386141	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.92		mg N/L	P385937	
	EPA 365.1 Rev. 2.0	Total-P	0.64		mg P/L	P385941	
	SM 5310 B-2011	Organic Carbon	20		mg C/L	P385980	
2189456	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.54		mg P/L	P385918	
2189494	EPA 8321B	2,4-D	0.012		ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	0.10	U	ug/L	P385904	
		Sucralose**	0.035	I	ug/L	P385904	
		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothall**	0.25	U	ug/L	P385904	
		Glufosinate**	0.10	U	ug/L	P385904	
		Glyphosate**	0.10	U	ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	8.0E-04	U	ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	8.0E-04	U	ug/L	P386033	
		Clothianidin**	0.015		ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.0034	I	ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	8.0E-04	U	ug/L	P386033	
		Imazapyr**	0.16		ug/L	P386033	
		Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.024		ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCPP	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0040	U	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.039		ug/L	P386033	

Field ID: G2SW0132

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189494	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Non-Conformance Report

NCR ID: 8382

<u>Event(s)</u>	<u>Job(s)</u>	<u>Sample(s)</u>	<u>Test(s)</u>
SW-DIST-2020-08-11-01	TLH-2020-08-11-24	2189453	
SW-DIST-2020-08-11-01	TLH-2020-08-11-24	2189454	
SW-DIST-2020-08-11-01	TLH-2020-08-11-24	2189459	
SW-DIST-2020-08-11-01	TLH-2020-08-11-24	2189460	

NCR Type: CUSTODY

NCR Category: General

Observation: Samples were not stored in refrigerator overnight on 08/12/2020.

Resolution: Samples were returned to refrigerator at 10:15 am on 08/13/2020. Data will be qualified as appropriate.

Authorized by/Date: Irina Carbone 8/31/2020

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: P385911

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386273

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385937

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385941

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385918

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

Reference Method: EPA 8321B
Batch ID: P385904

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385904

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

Reference Method: EPA 8321B
Batch ID: P386033

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P385922

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385989

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

Reference Method: SM 2540 C-2011
Batch ID: P386181

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P386182

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386222

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386223

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385980

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: P386273

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385937

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385941

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385918

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

Reference Method: EPA 8321B
Batch ID: P385904

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	135		P	40 - 150
AMPA	78.2		P	40 - 150
Endothall	86.6		P	40 - 150
Glufosinate	84.0		P	40 - 150
Glyphosate	69.5		P	40 - 140
Sucralose	82.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P386033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	106		P	30 - 160
Acetaminophen	79.6		P	30 - 160
Acetamiprid	75.6		P	30 - 160
Afidopyropen	56.3		P	30 - 160
Bentazon	70.3		P	30 - 160
Benzovindiflupyr	65.8		P	30 - 160
Carbamazepine	64.0		P	30 - 160
Clothianidin	74.9		P	30 - 160
Dinotefuran	84.9		P	30 - 160
Diuron	55.6		P	30 - 160
Fenuron	80.9		P	30 - 160
Fluridone	70.6		P	30 - 160
Hydrocodone	79.2		P	30 - 160
Ibuprofen	86.4		P	30 - 160
Imazapyr	77.3		P	30 - 160
Imidacloprid	88.3		P	30 - 160
Linuron	64.6		P	30 - 160
Mandestrobin	73.6		P	30 - 160
MCPP	104		P	30 - 160
Naproxen	68.2		P	30 - 160
Primidone	78.2		P	30 - 160
Pyraclostrobin	60.4		P	30 - 160
Thiamethoxam	78.0		P	30 - 160
Tolfenpyrad	43.7		P	30 - 160
Triclopyr	95.8		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P385922

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	104		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P385989

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P385980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189370	Chloride	98.8		P	90 - 110
2189507	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189370	Sulfate	100		P	90 - 110
2189507	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189467	Ammonia-N	99.0	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189505	Kjeldahl Nitrogen	106	92.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189422	NO2NO3-N	97.4	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189375	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189430	O-Phosphate-P	97.8	99.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P385904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189477	Acesulfame K	77.9	83.4	P/P	40 - 150
2189477	AMPA	96.5	101	P/P	40 - 150
2189477	Endothall	96.3	101	P/P	40 - 150
2189477	Glufosinate	88.3	84.5	P/P	40 - 150
2189477	Glyphosate	64.0	64.6	P/P	40 - 140
2189477	Sucralose	52.3	67.9	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P386033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189403	2,4-D	133	110	P/P	30 - 160
2189403	Acetaminophen	80.3	79.4	P/P	30 - 160
2189403	Acetamiprid	78.1	73.9	P/P	30 - 160
2189403	Afidopyropen	56.5	51.4	P/P	30 - 160
2189403	Benzovindiflupyr	68.9	63.8	P/P	30 - 160
2189403	Carbamazepine	56.3	53.7	P/P	30 - 160
2189403	Clothianidin	69.3	66.9	P/P	30 - 160
2189403	Dinotefuran	91.7	85.6	P/P	30 - 160
2189403	Diuron	46.1	49.2	P/P	30 - 160
2189403	Fenuron	70.0	67.5	P/P	30 - 160
2189403	Fluridone	75.9	68.4	P/P	30 - 160
2189403	Hydrocodone	64.5	63.9	P/P	30 - 160
2189403	Ibuprofen	69.0	63.8	P/P	30 - 160
2189403	Imazapyr	92.4	88.4	P/P	30 - 160
2189403	Imidacloprid	114	105	P/P	30 - 160
2189403	Linuron	57.4	58.3	P/P	30 - 160
2189403	Mandestrobin	71.4	66.1	P/P	30 - 160
2189403	MCCP	117	97.7	P/P	30 - 160
2189403	Naproxen	68.4	73.8	P/P	30 - 160
2189403	Primidone	76.8	71.8	P/P	30 - 160
2189403	Pyraclostrobin	71.3	62.7	P/P	30 - 160
2189403	Thiamethoxam	79.4	78.1	P/P	30 - 160
2189403	Tolfenpyrad	42.2	43.1	P/P	30 - 160
2189403	Triclopyr	101	92.0	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189294	Fluoride	101	99.0	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189375	Organic Carbon	96.2	96.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189445	Turbidity	15.2	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189370	Chloride	0.0877	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189370	Sulfate	0.332	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189467	Ammonia-N	1.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189505	Kjeldahl Nitrogen	7.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189422	NO2NO3-N	0.917	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189375	Total-P	0.0837	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189430	O-Phosphate-P	1.22	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P385904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189477	Acesulfame K	6.77	Spike	P	0 - 30
2189477	AMPA	4.72	Spike	P	0 - 30
2189477	Endothall	4.51	Spike	P	0 - 30
2189477	Glufosinate	4.42	Spike	P	0 - 30
2189477	Glyphosate	0.985	Spike	P	0 - 30
2189477	Sucralose	22.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P386033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189403	2,4-D	18.4	Spike	P	0 - 30
2189403	Acetaminophen	1.20	Spike	P	0 - 30
2189403	Acetamiprid	5.51	Spike	P	0 - 30
2189403	Afidopyropen	9.43	Spike	P	0 - 30
2189403	Benzovindiflupyr	7.75	Spike	P	0 - 30
2189403	Carbamazepine	4.68	Spike	P	0 - 30
2189403	Clothianidin	3.50	Spike	P	0 - 30
2189403	Dinotefuran	6.95	Spike	P	0 - 30
2189403	Diuron	6.54	Spike	P	0 - 30
2189403	Fenuron	3.65	Spike	P	0 - 30
2189403	Fluridone	9.74	Spike	P	0 - 30
2189403	Hydrocodone	0.931	Spike	P	0 - 30
2189403	Ibuprofen	7.80	Spike	P	0 - 30
2189403	Imazapyr	4.49	Spike	P	0 - 30
2189403	Imidacloprid	7.93	Spike	P	0 - 30
2189403	Linuron	1.47	Spike	P	0 - 30
2189403	Mandestrobin	7.62	Spike	P	0 - 30
2189403	MCPP	18.3	Spike	P	0 - 30
2189403	Naproxen	7.50	Spike	P	0 - 30
2189403	Primidone	6.68	Spike	P	0 - 30
2189403	Pyraclostrobin	12.8	Spike	P	0 - 30
2189403	Thiamethoxam	1.66	Spike	P	0 - 30
2189403	Tolfenpyrad	2.17	Spike	P	0 - 30
2189403	Triclopyr	9.32	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P385922

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189369	Color (true)	0.725	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P385989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189294	Total Alkalinity	1.25	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P386181

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189337	TDS	3.69	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P386182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189458	TDS	0.583	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189294	Fluoride	0.972	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189375	Organic Carbon	0.0442	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2189493
Field Sample ID: G2SW0131

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	70.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.8	P	30 - 160
EPA 8321B	Diuron-d6	44.5	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.0	P	30 - 160
EPA 8321B	Primidone-d5	69.1	P	30 - 160
EPA 8321B	Sucralose-d6	97.3	P	30 - 160
EPA 8321B	Sucralose-d6	97.3	P	30 - 160

Lab Sample ID: 2189494
Field Sample ID: G2SW0132

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.5	P	30 - 160
EPA 8321B	Diuron-d6	49.9	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.7	P	30 - 160
EPA 8321B	Primidone-d5	78.8	P	30 - 160
EPA 8321B	Sucralose-d6	81.5	P	30 - 160
EPA 8321B	Sucralose-d6	81.5	P	30 - 160

Lab Sample ID: 2189495
Field Sample ID: G2SW0133

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	62.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.8	P	30 - 160
EPA 8321B	Diuron-d6	42.3	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.6	P	30 - 160
EPA 8321B	Primidone-d5	61.7	P	30 - 160
EPA 8321B	Sucralose-d6	94.1	P	30 - 160
EPA 8321B	Sucralose-d6	94.1	P	30 - 160

Lab Sample ID: 2189496
Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.0	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2189496
Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	65.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	50.4	P	30 - 160
EPA 8321B	Diuron-d6	46.5	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	62.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	62.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.6	P	30 - 160
EPA 8321B	Primidone-d5	69.7	P	30 - 160
EPA 8321B	Sucralose-d6	86.9	P	30 - 160
EPA 8321B	Sucralose-d6	86.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100393

Included Lab Sample IDs: 2189451, 2189452, 2189457, 2189458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100394

Included Lab Sample IDs: 2189455, 2189456, 2189461, 2189462

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.3	98.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A100395

Included Lab Sample IDs: 2189451, 2189452, 2189457, 2189458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	103	P/P	90 - 115
Color (true)	106	106	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100406

Included Lab Sample IDs: 2189453, 2189454, 2189459, 2189460

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100408

Included Lab Sample IDs: 2189493, 2189494, 2189495, 2189496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.1	89.6	P/P	60 - 160
AMPA	90.0	92.4	P/P	60 - 160
AMPA	98.9	87.1	P/P	60 - 160
Glufosinate	90.3	95.2	P/P	60 - 160
Glufosinate	94.7	90.3	P/P	60 - 160
Glyphosate	78.2	82.8	P/P	60 - 160
Glyphosate	84.0	85.0	P/P	60 - 160
Glyphosate	92.3	84.0	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100434

Included Lab Sample IDs: 2189493, 2189494, 2189495, 2189496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	147	152	P/P	60 - 160
Acesulfame K	152	147	P/P	60 - 160
Endothall	93.9	96.4	P/P	60 - 160
Endothall	96.4	103	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A100436

Included Lab Sample IDs: 2189453, 2189454, 2189459, 2189460

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100438

Included Lab Sample IDs: 2189453, 2189454, 2189459, 2189460

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

Reference Method: SM 2320 B-2011

Run ID: A100439

Included Lab Sample IDs: 2189451, 2189452, 2189457, 2189458

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

Reference Method: SM 4500 F-C-2011

Run ID: A100439

Included Lab Sample IDs: 2189451, 2189452, 2189457, 2189458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100461

Included Lab Sample IDs: 2189493, 2189494, 2189495, 2189496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	98.5	P/P	60 - 160
Sucralose	93.5	105	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100478

Included Lab Sample IDs: 2189453, 2189454, 2189459, 2189460

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100515

Included Lab Sample IDs: 2189453, 2189454, 2189459, 2189460

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.6	96.7	P/P	90 - 110
Kjeldahl Nitrogen	96.7	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100543

Included Lab Sample IDs: 2189451, 2189452, 2189457, 2189458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100543

Included Lab Sample IDs: 2189451, 2189452, 2189457, 2189458

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	102	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100565

Included Lab Sample IDs: 2189493, 2189494, 2189495, 2189496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.4	98.4	P/P	50 - 150
Acetaminophen	112	108	P/P	60 - 160
Acetamiprid	99.6	98.0	P/P	50 - 150
Afidopyropen	97.7	94.4	P/P	50 - 150
Bentazon	106	135	P/P	50 - 160
Bentazon	107	123	P/P	50 - 160
Benzovindiflupyr	106	96.6	P/P	50 - 150
Carbamazepine	93.5	93.7	P/P	60 - 150
Clothianidin	101	105	P/P	60 - 150
Dinotefuran	99.3	102	P/P	50 - 150
Diuron	97.6	100	P/P	60 - 160
Fenuron	109	110	P/P	60 - 150
Fluridone	104	106	P/P	60 - 160
Hydrocodone	109	103	P/P	60 - 150
Ibuprofen	87.3	77.4	P/P	50 - 160
Imazapyr	88.7	97.9	P/P	50 - 150
Imidacloprid	107	108	P/P	60 - 150
Linuron	108	103	P/P	60 - 150
Mandestrobin	113	113	P/P	50 - 150
MCPP	95.3	93.7	P/P	50 - 150
Naproxen	149	113	P/P	50 - 160
Primidone	96.0	95.1	P/P	60 - 150
Pyraclostrobin	96.1	91.4	P/P	60 - 150
Thiamethoxam	103	103	P/P	50 - 150
Tolfenpyrad	88.1	87.4	P/P	60 - 150
Triclopyr	104	98.2	P/P	50 - 150

* 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					15.2	
EPA 300.0 Rev. 2.1	Chloride	97.5	98.8	99.1		0.0877	
	Sulfate	99.2	100	101		0.332	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	99.0	103			1.81
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	106	92.2			7.01
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101	97.4	98.4			0.917
EPA 365.1 Rev. 2.0	Total-P	103	102	102			0.0837
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	97.8	99.0			1.22
EPA 8321B	2,4-D	106	133	110			18.4
	Acesulfame K	135	77.9	83.4			6.77
	Acetaminophen	79.6	80.3	79.4			1.20
	Acetamiprid	75.6	78.1	73.9			5.51
	Afidopyropen	56.3	56.5	51.4			9.43
	AMPA	78.2	96.5	101			4.72
	Bentazon	70.3					
	Benzovindiflupyr	65.8	68.9	63.8			7.75
	Carbamazepine	64.0	56.3	53.7			4.68
	Clothianidin	74.9	69.3	66.9			3.50
	Dinotefuran	84.9	91.7	85.6			6.95
	Diuron	55.6	46.1	49.2			6.54
	Endothall	86.6	96.3	101			4.51
	Fenuron	80.9	70.0	67.5			3.65
	Fluridone	70.6	75.9	68.4			9.74
	Glufosinate	84.0	88.3	84.5			4.42
	Glyphosate	69.5	64.0	64.6			0.985
	Hydrocodone	79.2	64.5	63.9			0.931
	Ibuprofen	86.4	69.0	63.8			7.80
	Imazapyr	77.3	92.4	88.4			4.49
	Imidacloprid	88.3	114	105			7.93
	Linuron	64.6	57.4	58.3			1.47
	Mandestrobin	73.6	71.4	66.1			7.62
	MCPP	104	117	97.7			18.3
	Naproxen	68.2	68.4	73.8			7.50
	Primidone	78.2	76.8	71.8			6.68
	Pyraclostrobin	60.4	71.3	62.7			12.8
	Sucralose	82.8	52.3	67.9			22.2
	Thiamethoxam	78.0	79.4	78.1			1.66
	Tolfenpyrad	43.7	42.2	43.1			2.17
	Triclopyr	95.8	101	92.0			9.32
SM 2120 B-2011	Color (true)	104				0.725	
SM 2320 B-2011	Total Alkalinity	99.4				1.25	
SM 2540 C-2011	TDS					3.69	
	TDS					0.583	
SM 4500 F-C-2011	Fluoride	98.0	99.0	101			0.972
SM 5310 B-2011	Organic Carbon	97.4	96.2	96.2			0.0442

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2189451, 2189452, 2189457, 2189458
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2189451, 2189452, 2189457, 2189458
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2189451, 2189452, 2189457, 2189458
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2189453, 2189454, 2189459, 2189460

Reference Method Descriptions

Method	Description	Associated Samples
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2189453, 2189454, 2189459, 2189460
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2189453, 2189454, 2189459, 2189460
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2189453, 2189454, 2189459, 2189460
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2189455, 2189456, 2189461, 2189462
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2189493, 2189494, 2189495, 2189496
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2189493, 2189494, 2189495, 2189496
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2189451, 2189452, 2189457, 2189458
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2189451, 2189452, 2189457, 2189458
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2189451, 2189452, 2189457, 2189458
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2189451, 2189452, 2189457, 2189458
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2189451, 2189452, 2189457, 2189458
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2189453, 2189454, 2189459, 2189460

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	08/11/2020			08/11/2020 15:24	Yen Ta	2189451, 2189452, 2189457, 2189458
EPA 300.0 Rev. 2.1	08/11/2020			08/18/2020 02:41	Julia Storbeck	2189451
	08/11/2020			08/18/2020 02:53	Julia Storbeck	2189452
	08/11/2020			08/18/2020 03:06	Julia Storbeck	2189457
	08/11/2020			08/18/2020 03:42	Julia Storbeck	2189458
EPA 350.1 Rev. 2.0	08/11/2020			08/15/2020 14:47	Ping Hua	2189453
	08/11/2020			08/15/2020 14:49	Ping Hua	2189454
	08/11/2020			08/15/2020 14:50	Ping Hua	2189459
	08/11/2020			08/15/2020 14:51	Ping Hua	2189460
EPA 351.2 Rev. 2.0	08/11/2020	08/17/2020 09:42	David Boose	08/18/2020 14:59	Jhamieka S. Greenwood	2189453
	08/11/2020	08/17/2020 09:42	David Boose	08/18/2020 15:01	Jhamieka S. Greenwood	2189454
	08/11/2020	08/17/2020 09:42	David Boose	08/18/2020 15:03	Jhamieka S. Greenwood	2189459
	08/11/2020	08/17/2020 09:42	David Boose	08/18/2020 15:07	Jhamieka S. Greenwood	2189460
EPA 353.2 Rev. 2.0	08/11/2020			08/12/2020 09:05	Beverly Y. Sanders	2189453
	08/11/2020			08/12/2020 09:09	Beverly Y. Sanders	2189460
	08/11/2020			08/12/2020 10:04	Beverly Y. Sanders	2189454
	08/11/2020			08/12/2020 10:05	Beverly Y. Sanders	2189459
EPA 365.1 Rev. 2.0	08/11/2020	08/12/2020 11:41	Yen Ta	08/13/2020 09:35	Benjamin T. Nordmann	2189453
	08/11/2020	08/12/2020 11:41	Yen Ta	08/13/2020 09:36	Benjamin T. Nordmann	2189454
	08/11/2020	08/12/2020 11:41	Yen Ta	08/13/2020 09:37	Benjamin T. Nordmann	2189459
	08/11/2020	08/12/2020 11:41	Yen Ta	08/13/2020 09:38	Benjamin T. Nordmann	2189460
EPA 365.1 Rev. 2.0 dissolved	08/11/2020			08/11/2020 16:10	Jhamieka S. Greenwood	2189462
	08/11/2020			08/11/2020 16:12	Jhamieka S. Greenwood	2189455
	08/11/2020			08/11/2020 16:14	Jhamieka S. Greenwood	2189456
	08/11/2020			08/11/2020 16:16	Jhamieka S. Greenwood	2189461
EPA 8321B	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 17:03	Rebecca Ware	2189493
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 17:24	Rebecca Ware	2189494
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 17:35	Rebecca Ware	2189495
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 17:46	Rebecca Ware	2189496
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 09:57	Rebecca Ware	2189495
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 19:32	Rebecca Ware	2189493
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 20:14	Rebecca Ware	2189494
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 20:28	Rebecca Ware	2189495
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 20:42	Rebecca Ware	2189496
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 16:33	Rebecca Ware	2189493
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 16:57	Rebecca Ware	2189494
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 17:08	Rebecca Ware	2189495
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 17:20	Rebecca Ware	2189496
	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 05:36	Juyoung Kim	2189493
	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 06:11	Juyoung Kim	2189494

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 06:46	Juyoung Kim	2189495
	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 07:20	Juyoung Kim	2189496
	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/19/2020 00:40	Juyoung Kim	2189495
SM 2120 B-2011	08/11/2020			08/11/2020 16:57	Benjamin T. Nordmann	2189451
	08/11/2020			08/11/2020 16:59	Benjamin T. Nordmann	2189458
	08/11/2020			08/11/2020 17:20	Benjamin T. Nordmann	2189452
	08/11/2020			08/11/2020 17:21	Benjamin T. Nordmann	2189457
SM 2320 B-2011	08/11/2020			08/12/2020 19:31	Dale L. Simmons	2189451
	08/11/2020			08/12/2020 19:43	Dale L. Simmons	2189452
	08/11/2020			08/12/2020 19:55	Dale L. Simmons	2189457
	08/11/2020			08/12/2020 20:08	Dale L. Simmons	2189458
SM 2540 C-2011	08/11/2020			08/12/2020 15:12	Yijie Li	2189451, 2189452, 2189457, 2189458
SM 2540 D-2011	08/11/2020			08/12/2020 15:12	Yijie Li	2189451, 2189452, 2189457, 2189458
SM 4500 F-C-2011	08/11/2020			08/12/2020 19:31	Dale L. Simmons	2189451
	08/11/2020			08/12/2020 19:43	Dale L. Simmons	2189452
	08/11/2020			08/12/2020 19:55	Dale L. Simmons	2189457
	08/11/2020			08/12/2020 20:08	Dale L. Simmons	2189458
SM 5310 B-2011	08/11/2020			08/12/2020 23:11	David Boose	2189453
	08/11/2020			08/12/2020 23:24	David Boose	2189454
	08/11/2020			08/12/2020 23:36	David Boose	2189459
	08/11/2020			08/12/2020 23:48	David Boose	2189460