

Chemical Analysis Report

SO-DIST-2020-08-28-01

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

Event Description: **Hatchee Cricks pt 2+ drainage + metals blank**
Request ID: **RQ-2020-08-24-34**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Nicole Reistad

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

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

Date Certified: 17-SEP-2020 17:33



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: Metals, 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: Bee Branch @ Loblolly Bay Rd

Collection Date/Time: 08/27/2020 08:50

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2193011	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P386704	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P387061	
		Sulfate	3.2		mg SO4/L	P387066	
	SM 2120 B-2011	Color (true)	460		PCU	P386711	
	SM 2320 B-2011	Total Alkalinity	7.7		mg CaCO3/L	P386763	
	SM 2540 C-2011	TDS	108		mg/L	P387160	
	SM 2540 D-2011	TSS	2	I	mg/L	P387002	
	SM 4500 F-C-2011	Fluoride	0.058	I	mg F/L	P386902	
2193012	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P387023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P386867	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P386781	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P386759	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P386768	
2193013	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.075		mg P/L	P386706	
2193053	EPA 8321B	2,4-D	0.0020	U	ug/L	P386628	
		Acesulfame K**	0.10	U	ug/L	P386702	
		AMPA**	0.10	U	ug/L	P386702	
		Sucralose**	0.010	U	ug/L	P386702	
		Acetaminophen**	0.0080	U	ug/L	P386628	
		Acetamiprid**	0.0020	U	ug/L	P386628	
		Endothall**	0.25	U	ug/L	P386702	
		Glufosinate**	0.10	U	ug/L	P386702	
		Glyphosate**	0.10	U	ug/L	P386702	
		Afidopyropen**	0.0020	U	ug/L	P386628	
		Bentazon	8.0E-04	U	ug/L	P386628	
		Benzovindiflupyr**	0.0020	U	ug/L	P386628	
		Carbamazepine**	8.0E-04	U	ug/L	P386628	
		Clothianidin**	0.0020	U	ug/L	P386628	
		Dinotefuran**	0.0020	U	ug/L	P386628	
		Diuron	0.0020	U	ug/L	P386628	
		Fenuron	0.030	I	ug/L	P386628	
		Fluridone**	8.0E-04	U	ug/L	P386628	
		Imazapyr**	0.0040	U	ug/L	P386628	
		Hydrocodone**	0.0020	U	ug/L	P386628	
		Ibuprofen**	0.020	U	ug/L	P386628	
		Imidacloprid	0.032		ug/L	P386628	
		Linuron	0.0040	U	ug/L	P386628	
		Mandestrobin**	0.0020	U	ug/L	P386628	
		MCP	0.0020	U	ug/L	P386628	
		Naproxen**	0.0080	U	ug/L	P386628	
		Primidone**	0.0040	U	ug/L	P386628	
		Pyraclostrobin**	0.0020	U	ug/L	P386628	
		Thiamethoxam**	0.0020	U	ug/L	P386628	

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2193053	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P386628	
		Triclopyr**	0.0040	U	ug/L	P386628	

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

Sample Location: Cypress Creek @ N River Rd

Collection Date/Time: 08/27/2020 09:50

Field ID: G3SD0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2193054	EPA 8321B	2,4-D	0.022		ug/L	P386628	
		Acesulfame K**	0.10	U	ug/L	P386702	
		AMPA**	0.10	U	ug/L	P386702	
		Sucralose**	0.010	U	ug/L	P386702	
		Acetaminophen**	0.0080	U	ug/L	P386628	
		Acetamiprid**	0.0020	U	ug/L	P386628	
		Endothall**	0.25	U	ug/L	P386702	
		Glufosinate**	0.10	U	ug/L	P386702	
		Glyphosate**	0.10	U	ug/L	P386702	
		Afidopyropen**	0.0020	U	ug/L	P386628	
		Bentazon	8.0E-04	U	ug/L	P386628	
		Benzovindiflupyr**	0.0020	U	ug/L	P386628	
		Carbamazepine**	8.0E-04	U	ug/L	P386628	
		Clothianidin**	0.0061	I	ug/L	P386628	
		Dinotefuran**	0.0020	U	ug/L	P386628	
		Diuron	0.0020	U	ug/L	P386628	
		Fenuron	0.10		ug/L	P386628	
		Fluridone**	8.0E-04	U	ug/L	P386628	
		Imazapyr**	0.0057	I	ug/L	P386628	
		Hydrocodone**	0.0020	U	ug/L	P386628	
		Ibuprofen**	0.020	U	ug/L	P386628	
		Imidacloprid	0.016		ug/L	P386628	
		Linuron	0.0040	U	ug/L	P386628	
		Mandestrobin**	0.0020	U	ug/L	P386628	
		MCPP	0.0020	U	ug/L	P386628	
		Naproxen**	0.0080	U	ug/L	P386628	
		Primidone**	0.0040	U	ug/L	P386628	
		Pyraclostrobin**	0.0020	U	ug/L	P386628	
		Thiamethoxam**	0.0085		ug/L	P386628	
		Tolfenpyrad**	0.0020	U	ug/L	P386628	
		Triclopyr**	0.0040	U	ug/L	P386628	

Sample Location: Owl Creek @ N River Rd

Collection Date/Time: 08/27/2020 10:25

Field ID: G3SD0166

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2193055	EPA 8321B	2,4-D	0.021		ug/L	P386810	
		Acesulfame K**	0.10	U	ug/L	P386702	
		AMPA**	0.35	I	ug/L	P386702	
		Sucralose**	0.13		ug/L	P386702	
		Acetaminophen**	0.0080	U	ug/L	P386810	
		Acetamiprid**	0.0020	U	ug/L	P386810	
		Endothall**	0.25	U	ug/L	P386702	
		Glufosinate**	0.10	U	ug/L	P386702	
		Glyphosate**	0.60		ug/L	P386702	
		Afidopyropen**	0.0020	U	ug/L	P386810	
		Bentazon	8.0E-04	U	ug/L	P386810	
		Benzovindiflupyr**	0.0020	U	ug/L	P386810	
		Carbamazepine**	8.0E-04	U	ug/L	P386810	
		Clothianidin**	0.0020	U	ug/L	P386810	
		Dinotefuran**	0.0020	U	ug/L	P386810	
		Diuron	0.0020	U	ug/L	P386810	
		Fenuron	0.016	U	ug/L	P386810	
		Fluridone**	8.0E-04	U	ug/L	P386810	
		Imazapyr**	0.022		ug/L	P386810	
		Hydrocodone**	0.0020	U	ug/L	P386810	
		Ibuprofen**	0.020	U	ug/L	P386810	
		Imidacloprid	0.0020	U	ug/L	P386810	
		Linuron	0.0040	U	ug/L	P386810	
		Mandestrobin**	0.0020	U	ug/L	P386810	
		MCPP	0.0020	U	ug/L	P386810	
		Naproxen**	0.0080	U	ug/L	P386810	
		Primidone**	0.0040	U	ug/L	P386810	
		Pyraclostrobin**	0.0020	U	ug/L	P386810	
		Thiamethoxam**	0.0020	U	ug/L	P386810	
		Tolfenpyrad**	0.0020	U	ug/L	P386810	
		Triclopyr**	0.0040	U	ug/L	P386810	

Ref. Method and Comment:

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

Sample Location: Drainage Ditch @ Cr 850

Collection Date/Time: 08/27/2020 11:20

Field ID: G1SD0061

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2193014	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P386704	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P387061	
		Sulfate	28		mg SO4/L	P387066	
		Color (true)	130		PCU	P386711	
	SM 2320 B-2011	Total Alkalinity	173		mg CaCO3/L	P386763	
	SM 2540 C-2011	TDS	270		mg/L	P387160	
	SM 2540 D-2011	TSS	2	I	mg/L	P387002	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P386902	
2193015	EPA 350.1 Rev. 2.0	Ammonia-N	0.077		mg N/L	P387024	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P386867	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P386781	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P386759	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P386768	
2193016	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.029		mg P/L	P386706	
2193063	EPA 200.7 Rev. 4.4	Barium	22.9		ug/L	P386749	
		Calcium	79.6		mg/L	P386749	
		Iron	1.05E+03		ug/L	P386749	
		Magnesium	5.52		mg/L	P386749	
		Potassium	6.6		mg/L	P386749	
		Sodium	9.6		mg/L	P386749	
		Zinc	5.0	U	ug/L	P386749	
	EPA 200.8 Rev. 5.4	Aluminum	64		ug/L	P386749	
		Antimony	0.11	I	ug/L	P386749	
		Arsenic	1.00		ug/L	P386749	
		Boron**	45.9		ug/L	P386749	
		Cadmium	0.020	U	ug/L	P386749	
		Chromium	0.89	I	ug/L	P386749	
		Copper	0.42	I	ug/L	P386749	
		Lead	0.20	U	ug/L	P386749	
		Nickel	0.96	I	ug/L	P386749	
		Selenium	0.24	I	ug/L	P386749	
		Silver	0.010	U	ug/L	P386749	
		Thallium	0.10	U	ug/L	P386749	
	SM 2340B	Hardness	222		mg/L	P386749	

Ref. Method and Comment:

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

Sample Location: FB_O08272020

Collection Date/Time: 08/27/2020 11:25

Field ID: FB 08272020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2193017	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P386705	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P387062	
		Sulfate	0.20	U	mg SO4/L	P387067	
		Color (true)	2.5	U	PCU	P386711	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P386763	
	SM 2540 C-2011	TDS	15	U	mg/L	P387159	
	SM 2540 D-2011	TSS	2	U	mg/L	P387001	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P386902	
2193018	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P387024	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P386867	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P386781	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P386759	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P386768	
2193019	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P386706	
2193064	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P386749	
		Calcium	0.075	U	mg/L	P386749	
		Iron	30	U	ug/L	P386749	
		Magnesium	0.040	U	mg/L	P386749	
		Potassium	0.30	U	mg/L	P386749	
		Sodium	0.50	U	mg/L	P386749	
		Zinc	5.0	U	ug/L	P386749	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P386749	
		Antimony	0.050	U	ug/L	P386749	
		Arsenic	0.050	U	ug/L	P386749	
		Boron**	6.3	I	ug/L	P386749	
		Cadmium	0.020	U	ug/L	P386749	
		Chromium	0.40	U	ug/L	P386749	
		Copper	0.40	U	ug/L	P386749	
		Lead	0.20	U	ug/L	P386749	
		Nickel	0.50	U	ug/L	P386749	
		Selenium	0.20	U	ug/L	P386749	
		Silver	0.010	U	ug/L	P386749	
		Thallium	0.10	U	ug/L	P386749	
		Hardness	0.35	U	mg/L	P386749	
	SM 2340B						

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The boron result was confirmed in the undigested sample on 09/10/2020.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386704

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386705

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387062

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387067

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387023

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387024

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386867

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386781

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386759

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386706

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

Reference Method: EPA 8321B
Batch ID: P386628

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
 Batch ID: P386628

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

Reference Method: EPA 8321B
 Batch ID: P386702

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: P386810

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P386810

Component	Result	Code	Units
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: P386711

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P386763

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

Reference Method: SM 2540 C-2011
Batch ID: P387159

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P387160

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387001

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387002

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P386902

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P386768

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	97.9		P	85 - 115
Calcium	103		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	101		P	85 - 115
Sodium	100		P	85 - 115
Zinc	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	99.5		P	85 - 115
Boron	94.3		P	85 - 115
Cadmium	96.1		P	85 - 115
Chromium	103		P	85 - 115
Copper	96.8		P	85 - 115
Lead	98.1		P	85 - 115
Nickel	95.6		P	85 - 115
Selenium	97.6		P	85 - 115
Silver	107		P	85 - 115
Thallium	99.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387062

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387067

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387023

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387024

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386867

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386781

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386759

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386706

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

Reference Method: EPA 8321B
Batch ID: P386628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	120		P	30 - 160
Acetaminophen	79.4		P	30 - 160
Acetamiprid	67.8		P	30 - 160
Afidopyropen	41.3		P	30 - 160
Bentazon	81.7		P	30 - 160
Benzovindiflupyr	66.7		P	30 - 160
Carbamazepine	57.6		P	30 - 160
Clothianidin	75.5		P	30 - 160
Dinotefuran	87.3		P	30 - 160
Diuron	56.0		P	30 - 160
Fenuron	87.4		P	30 - 160
Fluridone	85.9		P	30 - 160
Hydrocodone	78.3		P	30 - 160
Ibuprofen	93.7		P	30 - 160
Imazapyr	115		P	30 - 160
Imidacloprid	88.9		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P386628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	64.9		P	30 - 160
Mandestrobin	70.1		P	30 - 160
MCP	120		P	30 - 160
Naproxen	68.7		P	30 - 160
Primidone	84.7		P	30 - 160
Pyraclostrobin	59.9		P	30 - 160
Thiamethoxam	91.2		P	30 - 160
Tolfenpyrad	44.4		P	30 - 160
Triclopyr	92.4		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P386702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	72.0		P	40 - 150
AMPA	70.2		P	40 - 150
Endothall	109		P	40 - 150
Glufosinate	95.9		P	40 - 150
Glyphosate	116		P	40 - 140
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P386810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.1		P	30 - 160
Acetaminophen	92.7		P	30 - 160
Acetamiprid	75.6		P	30 - 160
Afidopyropen	56.9		P	30 - 160
Bentazon	75.0		P	30 - 160
Benzovindiflupyr	71.8		P	30 - 160
Carbamazepine	64.1		P	30 - 160
Clothianidin	89.3		P	30 - 160
Dinotefuran	100		P	30 - 160
Diuron	66.9		P	30 - 160
Fenuron	105		P	30 - 160
Fluridone	77.3		P	30 - 160
Hydrocodone	93.4		P	30 - 160
Ibuprofen	77.7		P	30 - 160
Imazapyr	80.5		P	30 - 160
Imidacloprid	105		P	30 - 160
Linuron	75.9		P	30 - 160
Mandestrobin	77.5		P	30 - 160
MCP	101		P	30 - 160
Naproxen	47.6		P	30 - 160
Primidone	87.0		P	30 - 160
Pyraclostrobin	57.6		P	30 - 160
Thiamethoxam	90.6		P	30 - 160
Tolfenpyrad	44.7		P	30 - 160
Triclopyr	63.1		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P386711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.1		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P386763

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

Reference Method: SM 4500 F-C-2011
Batch ID: P386902

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P386768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192874	Barium	104	102	P/P	80 - 120
2192874	Calcium	105	106	P/P	80 - 120
2192874	Iron	108	110	P/P	80 - 120
2192874	Magnesium	109	110	P/P	80 - 120
2192874	Potassium	104	105	P/P	80 - 120
2192874	Sodium	99.9	98.4	P/P	80 - 120
2192874	Zinc	108	106	P/P	80 - 120
2192988	Barium	99.0		P	80 - 120
2192988	Calcium	104		P	80 - 120
2192988	Iron	105		P	80 - 120
2192988	Magnesium	98.9		P	80 - 120
2192988	Potassium	103		P	80 - 120
2192988	Sodium	102		P	80 - 120
2192988	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192874	Aluminum	94.7	93.5	P/P	80 - 120
2192874	Antimony	100	98.9	P/P	80 - 120
2192874	Arsenic	100	97.9	P/P	80 - 120
2192874	Boron	99.0	97.3	P/P	80 - 120
2192874	Cadmium	98.1	97.3	P/P	80 - 120
2192874	Chromium	103	102	P/P	80 - 120
2192874	Copper	97.5	95.7	P/P	80 - 120
2192874	Lead	101	101	P/P	80 - 120
2192874	Nickel	97.2	95.7	P/P	80 - 120
2192874	Selenium	98.0	96.1	P/P	80 - 120
2192874	Silver	106	107	P/P	80 - 120
2192874	Thallium	101	103	P/P	80 - 120
2192988	Aluminum	93.2		P	80 - 120
2192988	Antimony	105		P	80 - 120
2192988	Arsenic	107		P	80 - 120
2192988	Boron	97.8		P	80 - 120
2192988	Cadmium	101		P	80 - 120
2192988	Chromium	105		P	80 - 120
2192988	Copper	99.0		P	80 - 120
2192988	Lead	102		P	80 - 120
2192988	Nickel	99.2		P	80 - 120
2192988	Selenium	104		P	80 - 120
2192988	Silver	106		P	80 - 120
2192988	Thallium	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192838	Chloride	99.8		P	90 - 110
2193005	Chloride	99.7		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387062

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193266	Chloride	102		P	90 - 110
2193466	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192838	Sulfate	98.8		P	90 - 110
2193005	Sulfate	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193266	Sulfate	100		P	90 - 110
2193466	Sulfate	97.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193006	Ammonia-N	98.0	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193045	Ammonia-N	106	109	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192998	Kjeldahl Nitrogen	93.0	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193006	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386759

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192982	Total-P	106	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192954	O-Phosphate-P	100	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P386628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192762	2,4-D	109	101	P/P	30 - 160
2192762	Acetaminophen	98.0	97.9	P/P	30 - 160
2192762	Acetamiprid	75.2	76.2	P/P	30 - 160
2192762	Afidopyropen	51.8	50.0	P/P	30 - 160
2192762	Bentazon	49.0	46.4	P/P	30 - 160
2192762	Benzovindiflupyr	68.0	67.2	P/P	30 - 160
2192762	Carbamazepine	44.4	44.8	P/P	30 - 160
2192762	Clothianidin	77.0	84.7	P/P	30 - 160
2192762	Dinotefuran	103	103	P/P	30 - 160
2192762	Diuron	51.9	51.7	P/P	30 - 160
2192762	Fenuron	85.5	82.7	P/P	30 - 160
2192762	Fluridone	72.5	82.1	P/P	30 - 160
2192762	Hydrocodone	79.0	78.9	P/P	30 - 160
2192762	Ibuprofen	78.2	67.8	P/P	30 - 160
2192762	Imazapyr	72.7	74.5	P/P	30 - 160
2192762	Imidacloprid	123	134	P/P	30 - 160
2192762	Linuron	59.7	65.1	P/P	30 - 160
2192762	Mandestrobin	67.6	67.9	P/P	30 - 160
2192762	MCP	118	109	P/P	30 - 160
2192762	Naproxen	62.5	43.6	P/P	30 - 160
2192762	Primidone	90.4	89.0	P/P	30 - 160
2192762	Pyraclostrobin	59.4	57.8	P/P	30 - 160
2192762	Thiamethoxam	108	112	P/P	30 - 160
2192762	Tolfenpyrad	50.2	47.4	P/P	30 - 160
2192762	Triclopyr	90.6	95.8	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P386702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193053	Acesulfame K	78.9	85.6	P/P	40 - 150
2193053	AMPA	92.9	97.4	P/P	40 - 150
2193053	Endothall	113	124	P/P	40 - 150
2193053	Glufosinate	120	115	P/P	40 - 150
2193053	Glyphosate	96.1	98.4	P/P	40 - 140
2193053	Sucralose	101	103	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P386810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193354	2,4-D	91.3	88.1	P/P	30 - 160
2193354	Acetaminophen	77.5	81.7	P/P	30 - 160
2193354	Acetamiprid	67.1	68.2	P/P	30 - 160
2193354	Afidopyropen	53.5	53.1	P/P	30 - 160
2193354	Bentazon	39.6	46.3	P/P	30 - 160
2193354	Benzovindiflupyr	64.8	63.2	P/P	30 - 160
2193354	Carbamazepine	53.9	56.6	P/P	30 - 160
2193354	Clothianidin	59.9	61.4	P/P	30 - 160
2193354	Dinotefuran	78.8	83.2	P/P	30 - 160
2193354	Diuron	54.1	52.8	P/P	30 - 160
2193354	Fenuron	68.2	72.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P386810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193354	Fluridone	75.4	94.7	P/P	30 - 160
2193354	Hydrocodone	64.7	70.3	P/P	30 - 160
2193354	Ibuprofen	83.5	71.2	P/P	30 - 160
2193354	Imidacloprid	109	118	P/P	30 - 160
2193354	Linuron	67.1	68.9	P/P	30 - 160
2193354	Mandestrobin	70.5	75.6	P/P	30 - 160
2193354	MCP	111	110	P/P	30 - 160
2193354	Naproxen	49.2	63.2	P/P	30 - 160
2193354	Primidone	76.8	79.3	P/P	30 - 160
2193354	Pyraclostrobin	59.1	60.2	P/P	30 - 160
2193354	Thiamethoxam	72.7	71.8	P/P	30 - 160
2193354	Tolfenpyrad	51.7	48.2	P/P	30 - 160
2193354	Triclopyr	87.5	87.4	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P386902

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192997	Fluoride	102	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P386768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192839	Organic Carbon	99.0	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192939	Turbidity	0.422	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193035	Turbidity	0.984	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192874	Barium	1.73	Spike	P	0 - 20
2192874	Calcium	0.712	Spike	P	0 - 20
2192874	Iron	1.61	Spike	P	0 - 20
2192874	Magnesium	0.587	Spike	P	0 - 20
2192874	Potassium	1.16	Spike	P	0 - 20
2192874	Sodium	0.934	Spike	P	0 - 20
2192874	Zinc	1.50	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192874	Aluminum	1.03	Spike	P	0 - 20
2192874	Antimony	1.49	Spike	P	0 - 20
2192874	Arsenic	2.51	Spike	P	0 - 20
2192874	Boron	1.61	Spike	P	0 - 20
2192874	Cadmium	0.872	Spike	P	0 - 20
2192874	Chromium	0.742	Spike	P	0 - 20
2192874	Copper	1.88	Spike	P	0 - 20
2192874	Lead	0.404	Spike	P	0 - 20
2192874	Nickel	1.48	Spike	P	0 - 20
2192874	Selenium	1.97	Spike	P	0 - 20
2192874	Silver	0.701	Spike	P	0 - 20
2192874	Thallium	2.03	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193005	Chloride	0.302	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193266	Chloride	1.74	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193005	Sulfate	0.678	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193266	Sulfate	1.16	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193006	Ammonia-N	1.58	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193045	Ammonia-N	2.11	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192998	Kjeldahl Nitrogen	4.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193006	NO2NO3-N	1.49	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192982	Total-P	0.404	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192954	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P386628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192762	2,4-D	7.20	Spike	P	0 - 30
2192762	Acetaminophen	0.0857	Spike	P	0 - 30
2192762	Acetamiprid	1.33	Spike	P	0 - 30
2192762	Afidopyropen	3.67	Spike	P	0 - 30
2192762	Bentazon	1.50	Spike	P	0 - 30
2192762	Benzovindiflupyr	1.18	Spike	P	0 - 30
2192762	Carbamazepine	0.601	Spike	P	0 - 30
2192762	Clothianidin	9.44	Spike	P	0 - 30
2192762	Dinotefuran	0.0268	Spike	P	0 - 30
2192762	Diuron	0.231	Spike	P	0 - 30
2192762	Fenuron	3.35	Spike	P	0 - 30
2192762	Fluridone	10.4	Spike	P	0 - 30
2192762	Hydrocodone	0.0358	Spike	P	0 - 30
2192762	Ibuprofen	14.3	Spike	P	0 - 30
2192762	Imazapyr	1.62	Spike	P	0 - 30
2192762	Imidacloprid	8.34	Spike	P	0 - 30
2192762	Linuron	8.66	Spike	P	0 - 30
2192762	Mandestrobin	0.505	Spike	P	0 - 30
2192762	MCP	8.29	Spike	P	0 - 30
2192762	Naproxen	28.7	Spike	P	0 - 30
2192762	Primidone	1.55	Spike	P	0 - 30
2192762	Pyraclostrobin	2.58	Spike	P	0 - 30
2192762	Thiamethoxam	3.04	Spike	P	0 - 30
2192762	Tolfenpyrad	5.85	Spike	P	0 - 30
2192762	Triclopyr	5.62	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P386702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193053	Acesulfame K	8.11	Spike	P	0 - 30
2193053	AMPA	4.71	Spike	P	0 - 30
2193053	Endothall	9.19	Spike	P	0 - 30
2193053	Glufosinate	4.71	Spike	P	0 - 30
2193053	Glyphosate	2.31	Spike	P	0 - 30
2193053	Sucralose	2.12	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P386810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193354	2,4-D	3.11	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P386810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193354	Acetaminophen	5.28	Spike	P	0 - 30
2193354	Acetamiprid	1.62	Spike	P	0 - 30
2193354	Afidopyropen	0.775	Spike	P	0 - 30
2193354	Bentazon	4.84	Spike	P	0 - 30
2193354	Benzovindiflupyr	2.40	Spike	P	0 - 30
2193354	Carbamazepine	4.85	Spike	P	0 - 30
2193354	Clothianidin	2.53	Spike	P	0 - 30
2193354	Dinotefuran	4.79	Spike	P	0 - 30
2193354	Diuron	2.22	Spike	P	0 - 30
2193354	Fenuron	5.91	Spike	P	0 - 30
2193354	Fluridone	17.2	Spike	P	0 - 30
2193354	Hydrocodone	8.37	Spike	P	0 - 30
2193354	Ibuprofen	15.8	Spike	P	0 - 30
2193354	Imazapyr	7.74	Spike	P	0 - 30
2193354	Imidacloprid	6.78	Spike	P	0 - 30
2193354	Linuron	2.58	Spike	P	0 - 30
2193354	Mandestrobin	7.03	Spike	P	0 - 30
2193354	MCPP	0.860	Spike	P	0 - 30
2193354	Naproxen	24.9	Spike	P	0 - 30
2193354	Primidone	3.13	Spike	P	0 - 30
2193354	Pyraclostrobin	1.77	Spike	P	0 - 30
2193354	Thiamethoxam	1.14	Spike	P	0 - 30
2193354	Tolfenpyrad	6.96	Spike	P	0 - 30
2193354	Triclopyr	0.124	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P386711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193005	Color (true)	2.17	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P386763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192997	Total Alkalinity	0.323	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P387159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192352	TDS	5.83	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
 Batch ID: P387160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P387160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192975	TDS	3.94	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P386902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192997	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P386768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192839	Organic Carbon	1.61	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2193053
Field Sample ID: G3SD0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.9	P	30 - 160
EPA 8321B	Diuron-d6	44.9	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.9	P	30 - 160
EPA 8321B	Primidone-d5	67.7	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2193054
Field Sample ID: G3SD0084

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.5	P	30 - 160
EPA 8321B	Diuron-d6	55.6	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	103	P	30 - 160
EPA 8321B	Primidone-d5	89.1	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2193055
Field Sample ID: G3SD0166

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.8	P	30 - 160
EPA 8321B	Diuron-d6	52.1	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.7	P	30 - 160
EPA 8321B	Primidone-d5	69.2	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: EPA 180.1 Rev. 2.0

Run ID: A100711

Included Lab Sample IDs: 2193011, 2193014, 2193017

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100712

Included Lab Sample IDs: 2193013, 2193016, 2193019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.6	99.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A100713

Included Lab Sample IDs: 2193011, 2193014, 2193017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.0	99.2	P/P	90 - 115

Reference Method: EPA 8321B

Run ID: A100723

Included Lab Sample IDs: 2193053, 2193054, 2193055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	103	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A100734

Included Lab Sample IDs: 2193011, 2193014, 2193017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	98.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100736

Included Lab Sample IDs: 2193012, 2193015, 2193018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	99.2	P/P	90 - 110
Organic Carbon	99.2	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100738

Included Lab Sample IDs: 2193053, 2193054, 2193055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	72.6	71.0	P/P	60 - 160
Endothall	108	106	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100742

Included Lab Sample IDs: 2193012, 2193015, 2193018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100742

Included Lab Sample IDs: 2193012, 2193015, 2193018

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100757

Included Lab Sample IDs: 2193012, 2193015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100758

Included Lab Sample IDs: 2193053, 2193054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	143	122	P/P	50 - 150
Acetaminophen	123	118	P/P	60 - 160
Acetamiprid	134	134	P/P	50 - 150
Afidopyropen	85.8	78.0	P/P	50 - 150
Benzovindiflupyr	112	120	P/P	50 - 150
Carbamazepine	111	104	P/P	60 - 150
Clothianidin	106	107	P/P	60 - 150
Dinotefuran	108	111	P/P	50 - 150
Diuron	109	107	P/P	60 - 160
Fenuron	131	131	P/P	60 - 150
Hydrocodone	114	113	P/P	60 - 150
Ibuprofen	125	106	P/P	50 - 160
Imidacloprid	101	99.4	P/P	60 - 150
Linuron	127	114	P/P	60 - 150
Mandestrobin	124	123	P/P	50 - 150
MCPP	129	132	P/P	50 - 150
Naproxen	109	104	P/P	50 - 160
Primidone	118	118	P/P	60 - 150
Pyraclostrobin	119	125	P/P	60 - 150
Thiamethoxam	123	123	P/P	50 - 150
Tolfenpyrad	114	109	P/P	60 - 150
Triclopyr	107	116	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100778

Included Lab Sample IDs: 2193018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100779

Included Lab Sample IDs: 2193053, 2193054, 2193055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	82.7	80.4	P/P	60 - 160
Glufosinate	91.6	89.7	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100779

Included Lab Sample IDs: 2193053, 2193054, 2193055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	111	112	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100781

Included Lab Sample IDs: 2193053, 2193054, 2193055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	140	109	P/P	50 - 150
Acetaminophen	136	142	P/P	60 - 160
Acetamiprid	141	142	P/P	50 - 150
Afidopyropen	101	123	P/P	50 - 150
Bentazon	113	125	P/P	50 - 160
Bentazon	151	157	P/P	50 - 160
Benzovindiflupyr	133	116	P/P	50 - 150
Carbamazepine	132	135	P/P	60 - 150
Clothianidin	131	134	P/P	60 - 150
Dinotefuran	118	124	P/P	50 - 150
Diuron	134	137	P/P	60 - 160
Fenuron	129	127	P/P	60 - 150
Fluridone	102	110	P/P	60 - 160
Fluridone	111	124	P/P	60 - 160
Hydrocodone	129	132	P/P	60 - 150
Ibuprofen	123	103	P/P	50 - 160
Imazapyr	106	102	P/P	50 - 160
Imazapyr	145	155	P/P	50 - 160
Imidacloprid	132	138	P/P	60 - 150
Linuron	135	131	P/P	60 - 150
Mandestrobin	136	128	P/P	50 - 150
MCP	122	123	P/P	50 - 150
Naproxen	103	80.8	P/P	50 - 160
Primidone	133	135	P/P	60 - 150
Pyraclostrobin	117	117	P/P	60 - 150
Thiamethoxam	140	137	P/P	50 - 150
Tolfenpyrad	121	117	P/P	60 - 150
Triclopyr	118	111	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100789

Included Lab Sample IDs: 2193063, 2193064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	98.0	P/P	90 - 110
Barium	97.9	101	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Calcium	102	101	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Iron	105	105	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Magnesium	104	104	P/P	90 - 110
Potassium	100	100	P/P	90 - 110
Potassium	101	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100789

Included Lab Sample IDs: 2193063, 2193064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	101	101	P/P	90 - 110
Sodium	100	99.6	P/P	90 - 110
Zinc	102	99.2	P/P	90 - 110
Zinc	99.4	104	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100801

Included Lab Sample IDs: 2193011, 2193014, 2193017

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100807

Included Lab Sample IDs: 2193012, 2193015, 2193018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100833

Included Lab Sample IDs: 2193012

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100834

Included Lab Sample IDs: 2193015, 2193018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100843

Included Lab Sample IDs: 2193011, 2193014, 2193017

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100913

Included Lab Sample IDs: 2193063, 2193064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	94.8	96.0	P/P	90 - 110
Aluminum	95.8	95.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100913

Included Lab Sample IDs: 2193063, 2193064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	102	103	P/P	90 - 110
Antimony	103	103	P/P	90 - 110
Arsenic	96.1	98.2	P/P	90 - 110
Arsenic	97.1	97.3	P/P	90 - 110
Boron	93.5	96.0	P/P	90 - 110
Boron	97.9	97.1	P/P	90 - 110
Cadmium	94.5	95.4	P/P	90 - 110
Cadmium	95.1	96.1	P/P	90 - 110
Chromium	98.2	99.8	P/P	90 - 110
Chromium	98.8	99.4	P/P	90 - 110
Copper	93.6	92.4	P/P	90 - 110
Copper	96.7	94.5	P/P	90 - 110
Lead	95.8	96.1	P/P	90 - 110
Lead	96.7	95.6	P/P	90 - 110
Nickel	94.8	94.3	P/P	90 - 110
Nickel	95.9	95.6	P/P	90 - 110
Selenium	94.0	99.6	P/P	90 - 110
Selenium	97.6	98.5	P/P	90 - 110
Thallium	95.3	95.5	P/P	90 - 110
Thallium	95.4	94.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100945

Included Lab Sample IDs: 2193063, 2193064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	104	103	P/P	90 - 110
Silver	106	105	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					0.422	
	Turbidity					0.984	
EPA 200.7 Rev. 4.4	Barium	97.9	104	102	99.0		1.73
	Calcium	103	105	106	104		0.712
	Iron	104	108	110	105		1.61
	Magnesium	104	109	110	98.9		0.587
	Potassium	101	104	105	103		1.16
	Sodium	100	99.9	98.4	102		0.934
	Zinc	99.8	108	106	103		1.50
EPA 200.8 Rev. 5.4	Aluminum	93.4	93.2	94.7	93.5		1.03
	Antimony	100	105	100	98.9		1.49
	Arsenic	99.5	107	100	97.9		2.51
	Boron	94.3	97.8	99.0	97.3		1.61
	Cadmium	96.1	101	98.1	97.3		0.872
	Chromium	103	105	103	102		0.742
	Copper	96.8	99.0	97.5	95.7		1.88
	Lead	98.1	101	102	101		0.404
	Nickel	95.6	99.2	97.2	95.7		1.48
	Selenium	97.6	104	98.0	96.1		1.97
	Silver	107	106	106	107		0.701
	Thallium	99.4	107	101	103		2.03
EPA 300.0 Rev. 2.1	Chloride	99.6	99.7	99.8		0.302	
	Chloride	101	102	99.7		1.74	
	Sulfate	98.0	96.4	98.8		0.678	
	Sulfate	99.0	100	97.9		1.16	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6	98.0	101			1.58
	Ammonia-N	102	106	109			2.11
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.2	93.0	100			4.01
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	102	100			1.49
EPA 365.1 Rev. 2.0	Total-P	106	106	107			0.404
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	100	100			0.0
EPA 8321B	2,4-D	120	109	101			7.20
	2,4-D	89.1	88.1	91.3			3.11
	Acesulfame K	72.0	78.9	85.6			8.11
	Acetaminophen	79.4	98.0	97.9			0.0857
	Acetaminophen	92.7	77.5	81.7			5.28
	Acetamiprid	67.8	75.2	76.2			1.33
	Acetamiprid	75.6	67.1	68.2			1.62
	Afidopyropen	41.3	51.8	50.0			3.67
	Afidopyropen	56.9	53.5	53.1			0.775
	AMPA	70.2	92.9	97.4			4.71
	Bentazon	81.7	49.0	46.4			1.50
	Bentazon	75.0	46.3	39.6			4.84
	Benzovindiflupyr	66.7	68.0	67.2			1.18
	Benzovindiflupyr	71.8	64.8	63.2			2.40
	Carbamazepine	57.6	44.4	44.8			0.601
	Carbamazepine	64.1	53.9	56.6			4.85
	Clothianidin	75.5	77.0	84.7			9.44
	Clothianidin	89.3	59.9	61.4			2.53
	Dinotefuran	87.3	103	103			0.0268
	Dinotefuran	100	78.8	83.2			4.79
	Diuron	56.0	51.9	51.7			0.231
	Diuron	66.9	54.1	52.8			2.22
	Endothall	109	113	124			9.19

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Fenuron	87.4	85.5	82.7			3.35
	Fenuron	105	68.2	72.4			5.91
	Fluridone	85.9	72.5	82.1			10.4
	Fluridone	77.3	75.4	94.7			17.2
	Glufosinate	95.9	120	115			4.71
	Glyphosate	116	96.1	98.4			2.31
	Hydrocodone	78.3	79.0	78.9			0.0358
	Hydrocodone	93.4	64.7	70.3			8.37
	Ibuprofen	93.7	78.2	67.8			14.3
	Ibuprofen	77.7	71.2	83.5			15.8
	Imazapyr	115	72.7	74.5			1.62
	Imazapyr	80.5					7.74
	Imidacloprid	88.9	123	134			8.34
	Imidacloprid	105	109	118			6.78
	Linuron	64.9	59.7	65.1			8.66
	Linuron	75.9	67.1	68.9			2.58
	Mandestrobin	70.1	67.6	67.9			0.505
	Mandestrobin	77.5	70.5	75.6			7.03
	MCPP	120	118	109			8.29
	MCPP	101	110	111			0.860
	Naproxen	68.7	62.5	43.6			28.7
	Naproxen	47.6	63.2	49.2			24.9
	Primidone	84.7	90.4	89.0			1.55
	Primidone	87.0	76.8	79.3			3.13
	Pyraclostrobin	59.9	59.4	57.8			2.58
	Pyraclostrobin	57.6	60.2	59.1			1.77
	Sucralose	100	101	103			2.12
	Thiamethoxam	91.2	108	112			3.04
	Thiamethoxam	90.6	72.7	71.8			1.14
	Tolfenpyrad	44.4	50.2	47.4			5.85
	Tolfenpyrad	44.7	48.2	51.7			6.96
	Triclopyr	92.4	90.6	95.8			5.62
	Triclopyr	63.1	87.4	87.5			0.124
SM 2120 B-2011	Color (true)	97.1				2.17	
SM 2320 B-2011	Total Alkalinity	100				0.323	
SM 2540 C-2011	TDS					5.83	
	TDS					3.94	
SM 4500 F-C-2011	Fluoride	102	102	102			0.0
SM 5310 B-2011	Organic Carbon	99.6	99.0	101			1.61

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2193011, 2193014, 2193017
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2193063, 2193064
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2193063, 2193064
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2193011, 2193014, 2193017
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2193011, 2193014, 2193017
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2193012, 2193015, 2193018
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2193012, 2193015, 2193018
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2193012, 2193015, 2193018

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2193012, 2193015, 2193018
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2193013, 2193016, 2193019
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2193053, 2193054, 2193055
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2193053, 2193054, 2193055
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2193011, 2193014, 2193017
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2193011, 2193014, 2193017
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2193063, 2193064
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2193011, 2193014, 2193017
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2193011, 2193014, 2193017
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2193011, 2193014, 2193017
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2193012, 2193015, 2193018

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	08/28/2020			08/28/2020 14:51	Yen Ta	2193011, 2193014, 2193017
EPA 200.7 Rev. 4.4	08/28/2020	08/31/2020 13:30	Elliott D. Healy	09/02/2020 15:45	Betina Topolski	2193064
	08/28/2020	08/31/2020 13:30	Elliott D. Healy	09/02/2020 20:10	Betina Topolski	2193063
EPA 200.8 Rev. 5.4	08/28/2020	08/31/2020 13:30	Elliott D. Healy	09/10/2020 18:11	Alexander Thompson	2193064
	08/28/2020	08/31/2020 13:30	Elliott D. Healy	09/10/2020 21:44	Alexander Thompson	2193063
	08/28/2020	08/31/2020 13:30	Elliott D. Healy	09/11/2020 13:05	Alexander Thompson	2193064
	08/28/2020	08/31/2020 13:30	Elliott D. Healy	09/11/2020 16:33	Alexander Thompson	2193063
EPA 300.0 Rev. 2.1	08/28/2020			09/05/2020 09:30	Julia Storbeck	2193011
	08/28/2020			09/05/2020 09:42	Julia Storbeck	2193014
	08/28/2020			09/05/2020 11:55	Julia Storbeck	2193017
EPA 350.1 Rev. 2.0	08/28/2020			09/05/2020 16:58	Ping Hua	2193012
	08/28/2020			09/06/2020 10:21	Ping Hua	2193015
	08/28/2020			09/06/2020 13:44	Ping Hua	2193018
EPA 351.2 Rev. 2.0	08/28/2020	09/02/2020 12:20	David Boose	09/03/2020 13:46	Virginia P. Brown	2193012
	08/28/2020	09/02/2020 12:20	David Boose	09/03/2020 13:47	Virginia P. Brown	2193015
	08/28/2020	09/02/2020 12:20	David Boose	09/03/2020 13:49	Virginia P. Brown	2193018
EPA 353.2 Rev. 2.0	08/28/2020			09/01/2020 11:32	Beverly Y. Sanders	2193012
	08/28/2020			09/01/2020 11:33	Beverly Y. Sanders	2193015
	08/28/2020			09/01/2020 11:34	Beverly Y. Sanders	2193018
EPA 365.1 Rev. 2.0	08/28/2020	08/31/2020 15:00	Yen Ta	09/01/2020 13:33	Benjamin T. Nordmann	2193012
	08/28/2020	08/31/2020 15:00	Yen Ta	09/01/2020 13:34	Benjamin T. Nordmann	2193015
	08/28/2020	08/31/2020 15:00	Yen Ta	09/02/2020 12:18	Lipi Saha	2193018
EPA 365.1 Rev. 2.0 dissolved	08/28/2020			08/28/2020 15:28	Samantha Davila	2193013
	08/28/2020			08/28/2020 15:29	Samantha Davila	2193016
	08/28/2020			08/28/2020 15:30	Samantha Davila	2193019
EPA 8321B	08/28/2020	08/28/2020 13:20	Hoor Shaik	08/30/2020 13:09	Juyoung Kim	2193053
	08/28/2020	08/28/2020 13:20	Hoor Shaik	08/30/2020 13:44	Juyoung Kim	2193054
	08/28/2020	08/28/2020 13:20	Hoor Shaik	09/02/2020 09:28	Juyoung Kim	2193053
	08/28/2020	08/28/2020 13:20	Hoor Shaik	09/02/2020 10:03	Juyoung Kim	2193054
	08/28/2020	08/28/2020 16:15	Rebecca Ware	08/28/2020 17:30	Rebecca Ware	2193053
	08/28/2020	08/28/2020 16:15	Rebecca Ware	08/28/2020 17:42	Rebecca Ware	2193054
	08/28/2020	08/28/2020 16:15	Rebecca Ware	08/28/2020 17:54	Rebecca Ware	2193055
	08/28/2020	08/28/2020 16:15	Rebecca Ware	08/31/2020 21:36	Rebecca Ware	2193053
	08/28/2020	08/28/2020 16:15	Rebecca Ware	08/31/2020 21:50	Rebecca Ware	2193054
	08/28/2020	08/28/2020 16:15	Rebecca Ware	08/31/2020 22:04	Rebecca Ware	2193055
	08/28/2020	08/28/2020 16:15	Rebecca Ware	09/01/2020 18:02	Rebecca Ware	2193053
	08/28/2020	08/28/2020 16:15	Rebecca Ware	09/01/2020 18:13	Rebecca Ware	2193054
	08/28/2020	08/28/2020 16:15	Rebecca Ware	09/01/2020 18:24	Rebecca Ware	2193055
	08/28/2020	09/02/2020 14:30	Hoor Shaik	09/02/2020 22:10	Mohammad Ghaffari	2193055
SM 2120 B-2011	08/28/2020			08/28/2020 15:58	Benjamin T. Nordmann	2193014

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B-2011	08/28/2020			08/28/2020 15:59	Benjamin T. Nordmann	2193017
	08/28/2020			08/28/2020 16:01	Benjamin T. Nordmann	2193011
SM 2320 B-2011	08/28/2020			08/31/2020 19:07	Dale L. Simmons	2193011
	08/28/2020			08/31/2020 19:20	Dale L. Simmons	2193014
	08/28/2020			08/31/2020 19:29	Dale L. Simmons	2193017
SM 2340B	08/28/2020			09/02/2020 15:45	Betina Topolski	2193064
	08/28/2020			09/02/2020 20:10	Betina Topolski	2193063
SM 2540 C-2011	08/28/2020			08/31/2020 14:51	Yijie Li	2193011, 2193014, 2193017
SM 2540 D-2011	08/28/2020			08/31/2020 14:39	Yijie Li	2193011, 2193014, 2193017
SM 4500 F-C-2011	08/28/2020			09/03/2020 04:26	Dale L. Simmons	2193011
	08/28/2020			09/03/2020 04:31	Dale L. Simmons	2193014
	08/28/2020			09/03/2020 04:37	Dale L. Simmons	2193017
SM 5310 B-2011	08/28/2020			08/31/2020 18:29	David Boose	2193012
	08/28/2020			08/31/2020 18:41	David Boose	2193015
	08/28/2020			08/31/2020 19:22	David Boose	2193018