

Chemical Analysis Report

WAS-SECT-2019-11-19-01

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

Event Description: **NWQI - Alligator Creek**
Request ID: **RQ-2019-06-03-27**
Customer: **WAS-SECT**
Project ID: **SMP**

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

Date Certified: 09-DEC-2019 16:42



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: Alligator Creek Upstream of SR 273

Collection Date/Time: 11/19/2019 09:41

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137212	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P374539	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P375157	
		Sulfate	7.2		mg SO4/L	P375161	
	SM 2120 B	Color (true)	57		PCU	P374544	
	SM 2320 B-97	Total Alkalinity	9.1		mg CaCO3/L	P374899	
	SM 2540 C-97	TDS	66		mg/L	P375014	
	SM 2540 D-97	TSS	3	I	mg/L	P375105	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374903	
2137215	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P374723	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P374784	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374697	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P374913	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P374887	
2137218	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P374574	
2137230	EPA 8321B	2,4-D	0.0020	U	ug/L	P374219	
		Acesulfame K**	0.10	U	ug/L	P374431	
		AMPA**	0.10	U	ug/L	P374431	
		Sucralose**	0.010	U	ug/L	P374431	MS
		Acetaminophen**	0.0080	U	ug/L	P374219	
		Acetamiprid**	0.0020	U	ug/L	P374219	
		Endothall**	0.25	U	ug/L	P374431	
		Glufosinate**	0.10	U	ug/L	P374431	
		Glyphosate**	0.10	U	ug/L	P374431	
		Afidopyrophen**	0.0020	UJ	ug/L	P374219	
		Bentazon	8.0E-04	U	ug/L	P374219	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P374219	
		Carbamazepine**	8.0E-04	U	ug/L	P374219	
		Clothianidin**	0.0020	U	ug/L	P374219	
		Dinotefuran**	0.0020	U	ug/L	P374219	
		Diuron	0.0020	U	ug/L	P374219	
		Fenuron	0.016	U	ug/L	P374219	
		Fluridone**	8.0E-04	U	ug/L	P374219	
		Imazapyr**	0.011	I	ug/L	P374219	
		Hydrocodone**	0.0020	U	ug/L	P374219	
		Ibuprofen**	0.020	U	ug/L	P374219	
		Imidacloprid	0.022		ug/L	P374219	
		Linuron	0.0040	U	ug/L	P374219	
		Mandestrobin**	0.0020	UJ	ug/L	P374219	
		MCP	0.0020	U	ug/L	P374219	
		Naproxen**	0.0080	U	ug/L	P374219	
		Primidone**	0.0040	U	ug/L	P374219	
		Pyraclostrobin**	0.0020	U	ug/L	P374219	
		Thiamethoxam**	0.0020	U	ug/L	P374219	

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137230	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P374219	
		Triclopyr**	0.0040	U	ug/L	P374219	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Unnamed Creek at Woodrest Rd

Collection Date/Time: 11/19/2019 10:39

Field ID: G3WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137213	EPA 180.1 Rev. 2.0	Turbidity	3.1	A	NTU	P374539	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P375157	
		Sulfate	17		mg SO4/L	P375161	
	SM 2120 B	Color (true)	49		PCU	P374544	
	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P374899	
	SM 2540 C-97	TDS	94		mg/L	P375014	
	SM 2540 D-97	TSS	2	I	mg/L	P375105	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374903	
2137216	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P374723	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P374784	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374697	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P374913	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P374887	
2137219	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P374574	
2137231	EPA 8321B	2,4-D	0.0064	I	ug/L	P374481	
		Acesulfame K**	0.10	U	ug/L	P374431	
		AMPA**	0.10	U	ug/L	P374431	
		Sucralose**	0.064		ug/L	P374431	MS
		Acetaminophen**	0.0080	U	ug/L	P374481	
		Acetamiprid**	0.0020	U	ug/L	P374481	
		Endothall**	0.25	U	ug/L	P374431	
		Glufosinate**	0.10	U	ug/L	P374431	
		Glyphosate**	0.10	U	ug/L	P374431	
		Afidopyrophen**	0.0020	UJ	ug/L	P374481	
		Bentazon	8.0E-04	U	ug/L	P374481	
		Benzovindiflupyr**	0.0023	IJ	ug/L	P374481	
		Carbamazepine**	8.0E-04	U	ug/L	P374481	
		Clothianidin**	0.0020	U	ug/L	P374481	
		Dinotefuran**	0.0020	U	ug/L	P374481	
		Diuron	0.0020	U	ug/L	P374481	
		Fenuron	0.016	U	ug/L	P374481	
		Fluridone**	8.0E-04	U	ug/L	P374481	
		Imazapyr**	0.012	I	ug/L	P374481	
		Hydrocodone**	0.0020	U	ug/L	P374481	
		Ibuprofen**	0.020	U	ug/L	P374481	
		Imidacloprid	0.012		ug/L	P374481	
		Linuron	0.0040	U	ug/L	P374481	
		Mandestrobin**	0.0020	UJ	ug/L	P374481	
		MCP	0.0020	U	ug/L	P374481	
		Naproxen**	0.0080	U	ug/L	P374481	
		Primidone**	0.0040	U	ug/L	P374481	
		Pyraclostrobin**	0.0020	U	ug/L	P374481	
		Thiamethoxam**	0.0020	U	ug/L	P374481	

Field ID: G3WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137231	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P374481	
		Triclopyr**	0.0040	U	ug/L	P374481	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Stone Mill Creek upstream of Diana St

Collection Date/Time: 11/19/2019 12:33

Field ID: G2WA0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137214	EPA 180.1 Rev. 2.0	Turbidity	2.5	A	NTU	P374538	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P375157	
		Sulfate	2.9		mg SO4/L	P375161	
	SM 2120 B	Color (true)	61		PCU	P374544	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P374899	
	SM 2540 C-97	TDS	45		mg/L	P375014	
	SM 2540 D-97	TSS	2	I	mg/L	P375105	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374903	
2137217	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P374723	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P374784	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P374697	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P374914	
	SM 5310 B-00	Organic Carbon	6.0		mg C/L	P374887	
2137220	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374574	
2137232	EPA 8321B	2,4-D	0.0020	U	ug/L	P374481	
		Acesulfame K**	0.10	U	ug/L	P374431	
		AMPA**	0.10	U	ug/L	P374431	
		Sucralose**	0.096		ug/L	P374431	MS
		Acetaminophen**	0.0080	U	ug/L	P374481	
		Acetamiprid**	0.0020	U	ug/L	P374481	
		Endothall**	0.25	U	ug/L	P374431	
		Glufosinate**	0.10	U	ug/L	P374431	
		Glyphosate**	0.10	U	ug/L	P374431	
		Afidopyrophen**	0.0020	UJ	ug/L	P374481	
		Bentazon	8.0E-04	U	ug/L	P374481	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P374481	
		Carbamazepine**	8.0E-04	U	ug/L	P374481	
		Clothianidin**	0.0020	U	ug/L	P374481	
		Dinotefuran**	0.0020	U	ug/L	P374481	
		Diuron	0.0020	U	ug/L	P374481	
		Fenuron	0.016	U	ug/L	P374481	
		Fluridone**	8.0E-04	U	ug/L	P374481	
		Imazapyr**	0.018		ug/L	P374481	
		Hydrocodone**	0.0020	U	ug/L	P374481	
		Ibuprofen**	0.020	U	ug/L	P374481	
		Imidacloprid	0.0020	U	ug/L	P374481	
		Linuron	0.0040	U	ug/L	P374481	
		Mandestrobin**	0.0020	UJ	ug/L	P374481	
		MCP	0.0030	I	ug/L	P374481	
		Naproxen**	0.0080	U	ug/L	P374481	
		Primidone**	0.0040	U	ug/L	P374481	
		Pyraclostrobin**	0.0020	U	ug/L	P374481	
		Thiamethoxam**	0.0020	U	ug/L	P374481	

Field ID: G2WA0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137232	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P374481	
		Triclopyr**	0.0040	U	ug/L	P374481	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374538

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374539

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375157

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375161

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374723

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374784

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374697

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374913

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374914

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P374574

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

Reference Method: EPA 8321B

Batch ID: P374219

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: EPA 8321B

Batch ID: P374431

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: P374481

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B**Batch ID: P374481**

Component	Result	Code	Units
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**Batch ID: P374544**

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97**Batch ID: P374899**

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

Reference Method: SM 2540 C-97**Batch ID: P375014**

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97**Batch ID: P375105**

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97**Batch ID: P374903**

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P374887

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: P375157

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375161

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374784

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374697

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374913

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374914

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374574

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

Reference Method: EPA 8321B
Batch ID: P374219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	111		P	40 - 160
Acetaminophen	84.7		P	30 - 160
Acetamiprid	100		P	40 - 160
Afidopyropen	89.8		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P374219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	82.3		P	30 - 160
Benzovindiflupyr	83.2		P	40 - 160
Carbamazepine	112		P	40 - 160
Clothianidin	83.9		P	40 - 160
Dinotefuran	83.6		P	40 - 160
Diuron	85.9		P	40 - 160
Fenuron	110		P	40 - 160
Fluridone	97.7		P	40 - 160
Hydrocodone	102		P	40 - 160
Ibuprofen	75.0		P	30 - 160
Imazapyr	77.4		P	40 - 160
Imidacloprid	111		P	40 - 160
Linuron	71.3		P	40 - 160
Mandestrobin	91.9		P	40 - 160
MCPP	106		P	40 - 160
Naproxen	99.8		P	40 - 160
Primidone	84.8		P	40 - 160
Pyraclostrobin	80.0		P	30 - 160
Thiamethoxam	103		P	40 - 160
Tolfenpyrad	51.7		P	40 - 160
Triclopyr	88.1		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P374431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	95.8		P	40 - 150
AMPA	144		P	40 - 150
Endothall	97.7		P	40 - 150
Glufosinate	98.8		P	40 - 150
Glyphosate	117		P	40 - 140
Sucralose	123		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P374481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	82.9		P	40 - 160
Acetaminophen	79.0		P	30 - 160
Acetamiprid	95.5		P	40 - 160
Afidopyrophen	87.2		P	40 - 160
Bentazon	77.1		P	30 - 160
Benzovindiflupyr	85.7		P	40 - 160
Carbamazepine	111		P	40 - 160
Clothianidin	78.7		P	40 - 160
Dinotefuran	75.2		P	40 - 160
Diuron	84.5		P	40 - 160
Fenuron	107		P	40 - 160
Fluridone	98.9		P	40 - 160
Hydrocodone	94.6		P	40 - 160
Ibuprofen	51.2		P	30 - 160
Imazapyr	53.8		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P374481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	103		P	40 - 160
Linuron	79.0		P	40 - 160
Mandestrobin	100		P	40 - 160
MCPP	80.5		P	40 - 160
Naproxen	60.3		P	40 - 160
Primidone	80.1		P	40 - 160
Pyraclostrobin	85.4		P	30 - 160
Thiamethoxam	98.1		P	40 - 160
Tolfenpyrad	62.2		P	40 - 160
Triclopyr	68.2		P	30 - 160

Reference Method: SM 2120 B

Batch ID: P374544

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Reference Method: SM 2320 B-97

Batch ID: P374899

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-97

Batch ID: P374903

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	92 - 103

Reference Method: SM 5310 B-00

Batch ID: P374887

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137195	Chloride	95.8		P	90 - 110
2137255	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375161

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137195	Sulfate	99.5		P	90 - 110
2137255	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137239	Ammonia-N	98.9	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137215	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137215	NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137153	Total-P	96.9	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137217	Total-P	103	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137218	O-Phosphate-P	95.9	96.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P374219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136201	2,4-D	93.1	68.8	P/P	40 - 160
2136201	Acetaminophen	93.7	77.5	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P374219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136201	Acetamiprid	107	98.5	P/P	40 - 160
2136201	Afidopyropen	92.8	85.9	P/P	40 - 160
2136201	Bentazon	47.4	40.4	P/P	30 - 160
2136201	Benzovindiflupyr	86.8	77.6	P/P	40 - 160
2136201	Carbamazepine	98.5	88.7	P/P	40 - 160
2136201	Clothianidin	91.4	76.6	P/P	40 - 160
2136201	Dinotefuran	112	96.9	P/P	40 - 160
2136201	Diuron	73.3	63.5	P/P	40 - 160
2136201	Fenuron	93.7	81.8	P/P	40 - 160
2136201	Fluridone	99.5	88.4	P/P	40 - 160
2136201	Hydrocodone	110	90.2	P/P	40 - 160
2136201	Ibuprofen	68.9	56.5	P/P	30 - 160
2136201	Imazapyr	64.6	50.9	P/P	40 - 160
2136201	Linuron	75.9	69.6	P/P	40 - 160
2136201	Mandestrobin	102	89.4	P/P	40 - 160
2136201	MCCP	100	80.2	P/P	40 - 160
2136201	Naproxen	102	87.1	P/P	40 - 160
2136201	Primidone	95.0	74.9	P/P	40 - 160
2136201	Pyraclostrobin	91.4	80.1	P/P	30 - 160
2136201	Thiamethoxam	130	114	P/P	40 - 160
2136201	Tolfenpyrad	68.4	57.9	P/P	40 - 160
2136201	Triclopyr	94.2	77.6	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P374431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136497	Acesulfame K	104	109	P/P	40 - 150
2136497	AMPA	121	120	P/P	40 - 150
2136497	Endothall	90.7	83.8	P/P	40 - 150
2136497	Glufosinate	103	111	P/P	40 - 150
2136497	Glyphosate	101	94.1	P/P	40 - 140
2136497	Sucralose	38.7	48.3	F/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P374481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137170	2,4-D	74.5	72.2	P/P	40 - 160
2137170	Acetaminophen	76.1	69.7	P/P	30 - 160
2137170	Acetamiprid	115	103	P/P	40 - 160
2137170	Afidopyropen	108	87.1	P/P	40 - 160
2137170	Benzovindiflupyr	85.5	78.4	P/P	40 - 160
2137170	Carbamazepine	106	90.8	P/P	40 - 160
2137170	Clothianidin	91.8	77.9	P/P	40 - 160
2137170	Dinotefuran	97.7	86.6	P/P	40 - 160
2137170	Diuron	72.1	65.5	P/P	40 - 160
2137170	Fenuron	102	92.8	P/P	40 - 160
2137170	Hydrocodone	98.4	88.5	P/P	40 - 160
2137170	Ibuprofen	54.9	46.9	P/P	30 - 160
2137170	Imazapyr	68.7	50.6	P/P	40 - 160
2137170	Linuron	72.8	62.8	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P374481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137170	Mandestrobin	99.8	88.6	P/P	40 - 160
2137170	MCCP	74.1	67.9	P/P	40 - 160
2137170	Naproxen	54.7	64.1	P/P	40 - 160
2137170	Primidone	91.8	81.3	P/P	40 - 160
2137170	Pyraclostrobin	90.2	79.8	P/P	30 - 160
2137170	Thiamethoxam	140	123	P/P	40 - 160
2137170	Tolfenpyrad	60.3	51.2	P/P	40 - 160
2137170	Triclopyr	63.6	62.6	P/P	30 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P374903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137401	Fluoride	105	104	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P374887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137153	Organic Carbon	103	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137214	Turbidity	1.60	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137213	Turbidity	5.75	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137195	Chloride	0.682	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137195	Sulfate	1.10	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137239	Ammonia-N	0.505	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137215	Kjeldahl Nitrogen	0.277	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137215	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137153	Total-P	2.24	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P374914

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137217	Total-P	2.96	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P374574

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137218	O-Phosphate-P	0.583	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P374219

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136201	2,4-D	19.2	Spike	P	0 - 30
2136201	Acetaminophen	18.9	Spike	P	0 - 30
2136201	Acetamiprid	8.41	Spike	P	0 - 30
2136201	Afidopyropen	7.68	Spike	P	0 - 30
2136201	Bentazon	15.9	Spike	P	0 - 30
2136201	Benzovindiflupyr	11.2	Spike	P	0 - 30
2136201	Carbamazepine	10.5	Spike	P	0 - 30
2136201	Clothianidin	11.0	Spike	P	0 - 30
2136201	Dinotefuran	14.8	Spike	P	0 - 30
2136201	Diuron	8.64	Spike	P	0 - 30
2136201	Fenuron	13.6	Spike	P	0 - 30
2136201	Fluridone	11.8	Spike	P	0 - 30
2136201	Hydrocodone	19.6	Spike	P	0 - 30
2136201	Ibuprofen	19.7	Spike	P	0 - 30
2136201	Imazapyr	18.6	Spike	P	0 - 30
2136201	Imidacloprid	6.98	Spike	P	0 - 30
2136201	Linuron	8.71	Spike	P	0 - 30
2136201	Mandestrobin	13.1	Spike	P	0 - 30
2136201	MCPP	22.3	Spike	P	0 - 30
2136201	Naproxen	15.8	Spike	P	0 - 30
2136201	Primidone	23.7	Spike	P	0 - 30
2136201	Pyraclostrobin	13.1	Spike	P	0 - 30
2136201	Thiamethoxam	8.45	Spike	P	0 - 30
2136201	Tolfenpyrad	16.7	Spike	P	0 - 30
2136201	Triclopyr	19.3	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P374431

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136497	Acesulfame K	3.73	Spike	P	0 - 30
2136497	AMPA	1.14	Spike	P	0 - 30
2136497	Endothall	7.91	Spike	P	0 - 30
2136497	Glufosinate	6.89	Spike	P	0 - 30
2136497	Glyphosate	6.75	Spike	P	0 - 30
2136497	Sucralose	17.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P374481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137170	2,4-D	2.35	Spike	P	0 - 30
2137170	Acetaminophen	8.71	Spike	P	0 - 30
2137170	Acetamiprid	11.5	Spike	P	0 - 30
2137170	Afidopyropen	21.7	Spike	P	0 - 30
2137170	Bentazon	9.06	Spike	P	0 - 30
2137170	Benzovindiflupyr	8.59	Spike	P	0 - 30
2137170	Carbamazepine	13.5	Spike	P	0 - 30
2137170	Clothianidin	16.4	Spike	P	0 - 30
2137170	Dinotefuran	11.5	Spike	P	0 - 30
2137170	Diuron	8.75	Spike	P	0 - 30
2137170	Fenuron	9.47	Spike	P	0 - 30
2137170	Fluridone	12.1	Spike	P	0 - 30
2137170	Hydrocodone	10.6	Spike	P	0 - 30
2137170	Ibuprofen	15.8	Spike	P	0 - 30
2137170	Imazapyr	7.21	Spike	P	0 - 30
2137170	Imidacloprid	11.2	Spike	P	0 - 30
2137170	Linuron	14.7	Spike	P	0 - 30
2137170	Mandestrobin	11.9	Spike	P	0 - 30
2137170	MCPP	7.96	Spike	P	0 - 30
2137170	Naproxen	15.7	Spike	P	0 - 30
2137170	Primidone	12.1	Spike	P	0 - 30
2137170	Pyraclostrobin	12.2	Spike	P	0 - 30
2137170	Thiamethoxam	12.9	Spike	P	0 - 30
2137170	Tolfenpyrad	16.4	Spike	P	0 - 30
2137170	Triclopyr	1.52	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P374544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137236	Color (true)	0.369	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P374899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137401	Total Alkalinity	0.214	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97

Batch ID: P375014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137152	TDS	1.65	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P374903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137401	Fluoride	0.984	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137153	Organic Carbon	0.234	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2137230

Field Sample ID: G3WA0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.6	P	30 - 160
EPA 8321B	Diuron-d6	59.7	P	30 - 160
EPA 8321B	Endothall-d6	123	P	30 - 160
EPA 8321B	Endothall-d6	123	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.0	P	30 - 160
EPA 8321B	Primidone-d5	76.4	P	30 - 160
EPA 8321B	Sucralose-d6	76.1	P	30 - 160
EPA 8321B	Sucralose-d6	76.1	P	30 - 160

Lab Sample ID: 2137231

Field Sample ID: G3WA0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.0	P	30 - 160
EPA 8321B	Diuron-d6	60.3	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.9	P	30 - 160
EPA 8321B	Primidone-d5	76.5	P	30 - 160
EPA 8321B	Sucralose-d6	66.3	P	30 - 160
EPA 8321B	Sucralose-d6	66.3	P	30 - 160

Lab Sample ID: 2137232

Field Sample ID: G2WA0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	76.7	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.0	P	30 - 160
EPA 8321B	Primidone-d5	87.3	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95857

Included Lab Sample IDs: 2137212, 2137213, 2137214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105
Turbidity	101	101	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A95858

Included Lab Sample IDs: 2137212, 2137213, 2137214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95869

Included Lab Sample IDs: 2137218, 2137219, 2137220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.8	P/P	90 - 110
O-Phosphate-P	99.6	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95909

Included Lab Sample IDs: 2137215, 2137216, 2137217

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

Reference Method: EPA 8321B

Run ID: A95917

Included Lab Sample IDs: 2137230, 2137231, 2137232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	96.0	93.5	P/P	60 - 160
Endothall	107	98.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95918

Included Lab Sample IDs: 2137230, 2137231, 2137232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	126	105	P/P	60 - 160
Glufosinate	118	106	P/P	60 - 160
Glyphosate	97.1	105	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95920

Included Lab Sample IDs: 2137215, 2137216, 2137217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	99.1	P/P	90 - 110
Ammonia-N	100	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95927

Included Lab Sample IDs: 2137230, 2137231, 2137232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	79.5	83.7	P/P	50 - 150
2,4-D	80.3	78.8	P/P	50 - 150
Acetaminophen	94.6	98.3	P/P	60 - 160
Acetaminophen	95.1	90.7	P/P	60 - 160
Acetamiprid	101	104	P/P	50 - 150
Acetamiprid	104	99.1	P/P	50 - 150
Afidopyropen	106	92.9	P/P	50 - 150
Afidopyropen	96.9	91.0	P/P	50 - 150
Bentazon	74.8	73.6	P/P	50 - 160
Bentazon	75.3	76.4	P/P	50 - 160
Benzovindiflupyr	102	104	P/P	50 - 150
Benzovindiflupyr	109	105	P/P	50 - 150
Carbamazepine	106	109	P/P	60 - 150
Carbamazepine	107	107	P/P	60 - 150
Clothianidin	91.3	89.9	P/P	60 - 150
Clothianidin	95.9	84.3	P/P	60 - 150
Dinotefuran	84.5	83.2	P/P	50 - 150
Dinotefuran	88.2	90.2	P/P	50 - 150
Diuron	92.1	90.5	P/P	60 - 150
Diuron	99.1	95.3	P/P	60 - 150
Fenuron	104	102	P/P	60 - 150
Fenuron	104	108	P/P	60 - 150
Fluridone	109	113	P/P	60 - 160
Fluridone	115	104	P/P	60 - 160
Hydrocodone	103	105	P/P	60 - 150
Hydrocodone	112	105	P/P	60 - 150
Ibuprofen	87.2	88.0	P/P	50 - 160
Ibuprofen	89.9	86.0	P/P	50 - 160
Imazapyr	84.7	85.3	P/P	50 - 150
Imazapyr	90.9	91.1	P/P	50 - 150
Imidacloprid	103	99.3	P/P	60 - 150
Imidacloprid	98.9	99.8	P/P	60 - 150
Linuron	91.7	88.9	P/P	60 - 150
Linuron	95.4	86.9	P/P	60 - 150
Mandestrobin	109	111	P/P	50 - 150
Mandestrobin	111	112	P/P	50 - 150
MCPP	78.1	74.4	P/P	50 - 150
MCPP	79.4	75.9	P/P	50 - 150
Naproxen	109	100	P/P	50 - 160
Naproxen	114	125	P/P	50 - 160
Primidone	84.9	84.1	P/P	60 - 150
Primidone	85.5	92.5	P/P	60 - 150
Pyraclostrobin	100	99.5	P/P	60 - 150
Pyraclostrobin	97.8	100	P/P	60 - 150
Thiamethoxam	102	103	P/P	50 - 150
Thiamethoxam	106	102	P/P	50 - 150
Tolfenpyrad	75.1	78.8	P/P	60 - 150
Tolfenpyrad	80.9	75.2	P/P	60 - 150
Triclopyr	85.2	90.7	P/P	50 - 150
Triclopyr	91.8	90.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A95973

Included Lab Sample IDs: 2137215, 2137216, 2137217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	104	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A95978

Included Lab Sample IDs: 2137212, 2137213, 2137214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	98.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95978

Included Lab Sample IDs: 2137212, 2137213, 2137214

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95999

Included Lab Sample IDs: 2137215, 2137216, 2137217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	109	P/P	90 - 110
Kjeldahl Nitrogen	109	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96030

Included Lab Sample IDs: 2137215, 2137216, 2137217

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

Reference Method: EPA 8321B

Run ID: A96055

Included Lab Sample IDs: 2137230, 2137231, 2137232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	130	117	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96087

Included Lab Sample IDs: 2137212, 2137213, 2137214

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

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					1.60	
	Turbidity					5.75	
EPA 300.0 Rev. 2.1	Chloride	103	95.8	102		0.682	
	Sulfate	102	99.5	100		1.10	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	98.9	99.5			0.505
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	102	103			0.277
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	98.0	98.0			0.0
EPA 365.1 Rev. 2.0	Total-P	103	96.9	99.3			2.24
	Total-P	104	103	106			2.96
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8	95.9	96.5			0.583
EPA 8321B	2,4-D	111	93.1	68.8			19.2
	2,4-D	82.9	74.5	72.2			2.35
	Acesulfame K	95.8	104	109			3.73
	Acetaminophen	84.7	93.7	77.5			18.9
	Acetaminophen	79.0	76.1	69.7			8.71
	Acetamiprid	100	107	98.5			8.41
	Acetamiprid	95.5	115	103			11.5
	Afidopyropen	89.8	92.8	85.9			7.68
	Afidopyropen	87.2	108	87.1			21.7
	AMPA	144	121	120			1.14
	Bentazon	82.3	47.4	40.4			15.9
	Bentazon	77.1					9.06
	Benzovindiflupyr	83.2	86.8	77.6			11.2
	Benzovindiflupyr	85.7	85.5	78.4			8.59
	Carbamazepine	112	98.5	88.7			10.5
	Carbamazepine	111	106	90.8			13.5
	Clothianidin	83.9	91.4	76.6			11.0
	Clothianidin	78.7	91.8	77.9			16.4
	Dinotefuran	83.6	112	96.9			14.8
	Dinotefuran	75.2	97.7	86.6			11.5
	Diuron	85.9	73.3	63.5			8.64
	Diuron	84.5	72.1	65.5			8.75
	Endothall	97.7	90.7	83.8			7.91
	Fenuron	110	93.7	81.8			13.6
	Fenuron	107	102	92.8			9.47
	Fluridone	97.7	99.5	88.4			11.8
	Fluridone	98.9					12.1
	Glufosinate	98.8	103	111			6.89
	Glyphosate	117	101	94.1			6.75
	Hydrocodone	102	110	90.2			19.6
	Hydrocodone	94.6	98.4	88.5			10.6
	Ibuprofen	75.0	68.9	56.5			19.7
	Ibuprofen	51.2	54.9	46.9			15.8
	Imazapyr	77.4	64.6	50.9			18.6
	Imazapyr	53.8	68.7	50.6			7.21
	Imidacloprid	111					6.98
	Imidacloprid	103					11.2
	Linuron	71.3	75.9	69.6			8.71
	Linuron	79.0	72.8	62.8			14.7
	Mandestrobin	91.9	102	89.4			13.1
	Mandestrobin	100	99.8	88.6			11.9
	MCPP	106	100	80.2			22.3
	MCPP	80.5	74.1	67.9			7.96
	Naproxen	99.8	102	87.1			15.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Naproxen	60.3	54.7	64.1		15.7
	Primidone	84.8	95.0	74.9		23.7
	Primidone	80.1	91.8	81.3		12.1
	Pyraclostrobin	80.0	91.4	80.1		13.1
	Pyraclostrobin	85.4	90.2	79.8		12.2
	Sucralose	123	38.7	48.3		17.7
	Thiamethoxam	103	130	114		8.45
	Thiamethoxam	98.1	140	123		12.9
	Tolfenpyrad	51.7	68.4	57.9		16.7
	Tolfenpyrad	62.2	60.3	51.2		16.4
	Triclopyr	88.1	94.2	77.6		19.3
	Triclopyr	68.2	63.6	62.6		1.52
SM 2120 B	Color (true)	103			0.369	
SM 2320 B-97	Total Alkalinity	101			0.214	
SM 2540 C-97	TDS				1.65	
SM 4500 F-C-97	Fluoride	98.3	105	104		0.984
SM 5310 B-00	Organic Carbon	102	103	103		0.234

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2137212, 2137213, 2137214
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2137212, 2137213, 2137214
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2137212, 2137213, 2137214
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2137215, 2137216, 2137217
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2137215, 2137216, 2137217
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2137215, 2137216, 2137217
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2137215, 2137216, 2137217
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2137218, 2137219, 2137220
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2137230, 2137231, 2137232
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2137230, 2137231, 2137232
SM 2120 B / E31780	True Color measured at 450 nm	2137212, 2137213, 2137214
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2137212, 2137213, 2137214
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2137212, 2137213, 2137214
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2137212, 2137213, 2137214
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2137212, 2137213, 2137214
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2137215, 2137216, 2137217

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	11/19/2019			11/20/2019 16:28	Samantha Davila	2137212, 2137213, 2137214
EPA 300.0 Rev. 2.1	11/19/2019			12/03/2019 07:58	Lipi Saha	2137212
	11/19/2019			12/03/2019 08:10	Lipi Saha	2137213
	11/19/2019			12/03/2019 08:22	Lipi Saha	2137214
EPA 350.1 Rev. 2.0	11/19/2019			11/22/2019 12:33	Ping Hua	2137215
	11/19/2019			11/22/2019 12:34	Ping Hua	2137216
	11/19/2019			11/22/2019 12:42	Ping Hua	2137217
EPA 351.2 Rev. 2.0	11/19/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 17:58	Jhamieka S. Greenwood	2137215
	11/19/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 18:12	Jhamieka S. Greenwood	2137216
	11/19/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 18:14	Jhamieka S. Greenwood	2137217
EPA 353.2 Rev. 2.0	11/19/2019			11/22/2019 10:08	Beverly Y. Sanders	2137215
	11/19/2019			11/22/2019 10:14	Beverly Y. Sanders	2137216
	11/19/2019			11/22/2019 10:15	Beverly Y. Sanders	2137217
EPA 365.1 Rev. 2.0	11/19/2019	11/26/2019 14:09	Yen Ta	11/27/2019 14:40	Benjamin T. Nordmann	2137215
	11/19/2019	11/26/2019 14:09	Yen Ta	11/27/2019 14:41	Benjamin T. Nordmann	2137216
	11/19/2019	11/26/2019 14:09	Yen Ta	11/27/2019 14:43	Benjamin T. Nordmann	2137217
EPA 365.1 Rev. 2.0 dissolved	11/19/2019			11/20/2019 14:31	Ping Hua	2137218
	11/19/2019			11/20/2019 14:59	Ping Hua	2137219
	11/19/2019			11/20/2019 15:00	Ping Hua	2137220
EPA 8321B	11/19/2019	11/20/2019 09:00	Hoor Shaik	11/24/2019 10:42	Juyoung Kim	2137230
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/20/2019 17:00	Rebecca Ware	2137230
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/20/2019 17:11	Rebecca Ware	2137231
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/20/2019 17:22	Rebecca Ware	2137232
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/21/2019 10:23	Rebecca Ware	2137230
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/21/2019 10:37	Rebecca Ware	2137231
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/21/2019 10:51	Rebecca Ware	2137232
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/26/2019 07:14	Rebecca Ware	2137230
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/26/2019 07:26	Rebecca Ware	2137231
	11/19/2019	11/20/2019 10:00	Rebecca Ware	11/26/2019 07:38	Rebecca Ware	2137232
	11/19/2019	11/21/2019 09:00	Hoor Shaik	11/24/2019 19:21	Juyoung Kim	2137231
	11/19/2019	11/21/2019 09:00	Hoor Shaik	11/24/2019 19:56	Juyoung Kim	2137232
SM 2120 B	11/19/2019			11/20/2019 17:50	Julia Storbeck	2137212
	11/19/2019			11/20/2019 17:51	Julia Storbeck	2137213
	11/19/2019			11/20/2019 17:52	Julia Storbeck	2137214
SM 2320 B-97	11/19/2019			11/26/2019 03:58	Dale L. Simmons	2137212
	11/19/2019			11/26/2019 04:09	Dale L. Simmons	2137213
	11/19/2019			11/26/2019 04:21	Dale L. Simmons	2137214
SM 2540 C-97	11/19/2019			11/22/2019 15:46	Yijie Li	2137212, 2137213, 2137214
SM 2540 D-97	11/19/2019			11/22/2019 15:21	Yijie Li	2137212, 2137213, 2137214
SM 4500 F-C-97	11/19/2019			11/26/2019 03:58	Dale L. Simmons	2137212

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	11/19/2019			11/26/2019 04:09	Dale L. Simmons	2137213
	11/19/2019			11/26/2019 04:21	Dale L. Simmons	2137214
SM 5310 B-00	11/19/2019			11/25/2019 23:04	Lauren Lees	2137215
	11/19/2019			11/25/2019 23:19	Lauren Lees	2137216
	11/19/2019			11/25/2019 23:33	Lauren Lees	2137217