

Chemical Analysis Report

WAS-SECT-2020-01-23-01

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

Event Description: **Wakulla BMAP**
Request ID: **RQ-2020-01-20-09**
Customer: **WAS-SECT**
Project ID: **BMAP**

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2600 Blair Stone Rd
Tallahassee, FL 32399
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Certified by: Colin Wright, Program Administrator

Date Certified: 12-FEB-2020 10:35

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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: Wakulla River at boat tram

Collection Date/Time: 01/23/2020 12:34

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151433	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P377645	
	EPA 300.0 Rev. 2.1	Chloride	89		mg Cl/L	P378150	
		Sulfate	23		mg SO4/L	P378155	
	SM 2120 B-2011	Color (true)	4.8	I	PCU	P377638	
	SM 2320 B-2011	Total Alkalinity	143		mg CaCO3/L	P377765	
	SM 2540 C-2011	TDS	316	A	mg/L	P378245	
	SM 2540 D-2011	TSS	2	UA	mg/L	P377863	
2151434	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P377768	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P378391	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P378169	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P377935	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P378026	
2151435	SM 5310 B-2011	Organic Carbon	0.84	I	mg C/L	P377836	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P377647	
2151451	EPA 8321B	2,4-D	0.0020	U	ug/L	P377677	
		Acesulfame K**	0.10	UJ	ug/L	P377655	MS
		AMPA**	0.10	U	ug/L	P377655	
		Sucralose**	0.010	U	ug/L	P377655	
		Acetaminophen**	0.0080	U	ug/L	P377677	
		Acetamiprid**	0.0020	U	ug/L	P377677	
		Endothall**	0.25	U	ug/L	P377655	
		Glufosinate**	0.10	U	ug/L	P377655	
		Glyphosate**	0.10	U	ug/L	P377655	
		Afidopyropen**	0.0020	UJ	ug/L	P377677	
		Bentazon	8.0E-04	U	ug/L	P377677	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377677	
		Carbamazepine**	8.0E-04	U	ug/L	P377677	
		Clothianidin**	0.0020	U	ug/L	P377677	
		Dinotefuran**	0.0020	U	ug/L	P377677	
		Diuron	0.0020	U	ug/L	P377677	
		Fenuron	0.016	U	ug/L	P377677	
		Fluridone**	8.0E-04	U	ug/L	P377677	
		Imazapyr**	0.0040	U	ug/L	P377677	
		Hydrocodone**	0.0020	U	ug/L	P377677	
		Ibuprofen**	0.020	U	ug/L	P377677	
		Imidacloprid	0.0020	U	ug/L	P377677	
		Linuron	0.0040	U	ug/L	P377677	
		Mandestrobin**	0.0020	UJ	ug/L	P377677	
		MCPD	0.0020	U	ug/L	P377677	
		Naproxen**	0.0080	U	ug/L	P377677	
		Primidone**	0.0040	U	ug/L	P377677	
		Pyraclostrobin**	0.0020	U	ug/L	P377677	
		Thiamethoxam**	0.0020	U	ug/L	P377677	

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151451	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377677	
		Triclopyr**	0.0040	U	ug/L	P377677	
2151456	EPA 200.7 Rev. 4.4	Barium	13.0		ug/L	P377724	
		Calcium	48.4		mg/L	P377724	
		Iron	47	I	ug/L	P377724	
		Magnesium	15.4		mg/L	P377724	
		Potassium	2.1		mg/L	P377724	
		Sodium	50.9		mg/L	P377724	
		Zinc	5.0	U	ug/L	P377724	
	EPA 200.8 Rev. 5.4	Aluminum	9.6	I	ug/L	P377724	
		Antimony	0.050	U	ug/L	P377724	
		Arsenic	0.78		ug/L	P377724	
		Boron**	31.2		ug/L	P377724	
		Cadmium	0.020	U	ug/L	P377724	
		Chromium	0.79	I	ug/L	P377724	
		Copper	0.40	U	ug/L	P377724	
		Lead	0.20	U	ug/L	P377724	
		Nickel	0.50	U	ug/L	P377724	
		Selenium	0.53	I	ug/L	P377724	
		Silver	0.010	U	ug/L	P377724	
		Thallium	0.10	U	ug/L	P377724	
	SM 2340B	Hardness	184		mg/L	P377724	
2151461	EPA 8270E	Acetochlor	0.24	U	ng/L	P377534	
		Alachlor	0.24	U	ng/L	P377534	
		Ametryn	0.57	U	ng/L	P377534	
		Atrazine	0.48	I	ng/L	P377534	
		Atrazine Desethyl	1.8	IJ	ng/L	P377534	CCV
		Azinphos Methyl	1.9	U	ng/L	P377534	
		Bromacil	0.47	U	ng/L	P377534	
		Butylate	0.38	U	ng/L	P377534	
		Carbophenothion	0.47	U	ng/L	P377534	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P377534	
		Chlorpyrifos Methyl	0.047	U	ng/L	P377534	
		Cyanazine	3.1	U	ng/L	P377534	
		Demeton	1.4	U	ng/L	P377534	
		Diazinon	0.12	U	ng/L	P377534	
		Dimethenamid**	0.095	U	ng/L	P377534	
		Disulfoton	0.47	U	ng/L	P377534	
		Dithiopyr**	0.095	U	ng/L	P377534	
		EPTC	1.2	U	ng/L	P377534	
		Ethion	0.14	U	ng/L	P377534	
		Ethoprop	0.095	U	ng/L	P377534	
		Fenamiphos	0.47	U	ng/L	P377534	
		Fipronil	0.24	U	ng/L	P377534	MS
		Fipronil Desulfinyl**	0.12	U	ng/L	P377534	

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151461	EPA 8270E	Fipronil Sulfide	0.14	U	ng/L	P377534	
		Fipronil Sulfone	0.14	U	ng/L	P377534	
		Flumioxazin**	1.7	U	ng/L	P377534	
		Fonofos	0.19	U	ng/L	P377534	
		Hexazinone	2.0		ng/L	P377534	
		Imazalil**	0.71	U	ng/L	P377534	
		Malathion	0.33	UJ	ng/L	P377534	LCS
		Metalaxyl	0.71	U	ng/L	P377534	
		Metolachlor	0.47	U	ng/L	P377534	MS
		Metribuzin	3.1	U	ng/L	P377534	
		Mevinphos	0.47	U	ng/L	P377534	
		Molinate	0.28	U	ng/L	P377534	
		Norflurazon	0.47	U	ng/L	P377534	
		Oxadiazon**	0.095	U	ng/L	P377534	
		Parathion Ethyl	0.24	U	ng/L	P377534	
		Parathion Methyl	0.52	U	ng/L	P377534	
		Pendimethalin	0.95	U	ng/L	P377534	
		Phorate	0.24	U	ng/L	P377534	
		Prodiamine**	0.17	U	ng/L	P377534	
		Prometon	0.85	UJ	ng/L	P377534	CCV, LCS, MS
		Prometryn	0.19	UJ	ng/L	P377534	LCS, MS
		Pronamide**	0.14	U	ng/L	P377534	
		Propiconazole**	0.47	U	ng/L	P377534	
		Simazine	1.3	I	ng/L	P377534	
		Sulfentrazone**	0.47	U	ng/L	P377534	
		Tebuconazole**	0.47	U	ng/L	P377534	
		Terbufos	0.095	U	ng/L	P377534	
		Terbuthylazine	0.40	U	ng/L	P377534	

Ref. Method and Comment:

SM 2540 D-2011: 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.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377645

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377724

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: P377724

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: P378150

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378391

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P378169

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377935

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P378026

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377647

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

Reference Method: EPA 8270E
 Batch ID: P377534

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Flumioxazin	1.8	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P377534

Component	Result	Code	Units
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8321B

Batch ID: P377655

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: P377677

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P377677

Component	Result	Code	Units
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P377638

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P377765

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

Reference Method: SM 2540 C-2011
Batch ID: P378245

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377863

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377768

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377836

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: P377724

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	100		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	101		P	85 - 115
Sodium	99.8		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P377724

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	80 - 120
Antimony	106		P	80 - 120
Arsenic	104		P	80 - 120
Boron	98.5		P	80 - 120
Cadmium	104		P	80 - 120
Chromium	103		P	80 - 120
Copper	105		P	80 - 120
Lead	107		P	80 - 120
Nickel	103		P	80 - 120
Selenium	103		P	80 - 120
Silver	104		P	80 - 120
Thallium	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P378150

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P378155

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P378391

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: P378169

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.4		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377935

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P378026

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: P377647

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

Reference Method: EPA 8270E
 Batch ID: P377534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	109	108	P/P	71 - 122
Alachlor	111	106	P/P	70 - 121
Ametryn	131	122	P/P	49 - 137
Atrazine	98.2	92.1	P/P	76 - 125
Atrazine Desethyl	67.2	64.8	P/P	31 - 144
Azinphos Methyl	105	100	P/P	67 - 150
Bromacil	88.3	88.9	P/P	36 - 121
Butylate	68.1	70.5	P/P	33 - 88.0
Carbophenothion	77.0	75.7	P/P	50 - 150
Chlorpyrifos Ethyl	77.0	79.2	P/P	73 - 117
Chlorpyrifos Methyl	80.2	82.6	P/P	68 - 121
Cyanazine	171	159	P/P	20 - 250
Demeton	80.1	78.9	P/P	30 - 123
Diazinon	107	103	P/P	70 - 128
Dimethenamid	107	105	P/P	66 - 122
Disulfoton	72.6	70.9	P/P	46 - 124
Dithiopyr	99.8	95.4	P/P	69 - 122
EPTC	56.4	59.0	P/P	31 - 90.0
Ethion	70.8	74.4	P/P	45 - 135
Ethoprop	71.4	78.9	P/P	59 - 118
Fenamiphos	98.1	88.5	P/P	30 - 136
Fipronil	113	109	P/P	57 - 127
Fipronil Desulfinyl	104	98.4	P/P	51 - 122
Fipronil Sulfide	81.7	81.0	P/P	57 - 119
Fipronil Sulfone	89.5	85.9	P/P	51 - 119
Flumioxazin	149	142	P/P	70 - 200
Fonofos	77.6	82.7	P/P	60 - 120
Hexazinone	99.2	96.7	P/P	57 - 142
Imazalil	94.5	90.4	P/P	50 - 150
Malathion	63.9	71.8	F/P	67 - 128
Metaxyl	103	97.6	P/P	21 - 148
Metolachlor	113	111	P/P	70 - 120
Metribuzin	101	104	P/P	20 - 253
Mevinphos	71.5	69.9	P/P	47 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P377534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	67.4	70.4	P/P	41 - 99.0
Norflurazon	106	105	P/P	54 - 127
Oxadiazon	90.1	89.0	P/P	65 - 122
Parathion Ethyl	81.6	88.1	P/P	71 - 113
Parathion Methyl	93.6	94.6	P/P	73 - 129
Pendimethalin	87.7	93.3	P/P	63 - 130
Phorate	80.8	80.1	P/P	48 - 118
Prodiamine	43.8	43.1	P/P	20 - 144
Prometon	128	123	F/F	53 - 120
Prometryn	126	118	F/P	63 - 119
Pronamide	108	106	P/P	50 - 150
Propiconazole	113	111	P/P	50 - 150
Simazine	99.0	97.7	P/P	77 - 129
Sulfentrazone	87.6	89.4	P/P	50 - 150
Tebuconazole	88.4	74.9	P/P	20 - 118
Terbufos	81.0	82.6	P/P	61 - 119
Terbutylazine	92.8	88.7	P/P	75 - 119

Reference Method: EPA 8321B

Batch ID: P377655

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	89.6		P	40 - 150
AMPA	122		P	40 - 150
Endothall	108		P	40 - 150
Glufosinate	72.5		P	40 - 150
Glyphosate	71.3		P	40 - 140
Sucralose	81.0		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P377677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	99.8		P	30 - 160
Acetaminophen	73.6		P	30 - 160
Acetamiprid	82.6		P	30 - 160
Afidopyropen	85.3		P	30 - 160
Bentazon	80.1		P	30 - 160
Benzovindiflupyr	87.1		P	30 - 160
Carbamazepine	98.4		P	30 - 160
Clothianidin	77.8		P	30 - 160
Dinotefuran	93.1		P	30 - 160
Diuron	77.5		P	30 - 160
Fenuron	102		P	30 - 160
Fluridone	92.4		P	30 - 160
Hydrocodone	83.2		P	30 - 160
Ibuprofen	81.9		P	30 - 160
Imazapyr	100		P	30 - 160
Imidacloprid	90.5		P	30 - 160
Linuron	80.0		P	30 - 160
Mandestrobin	91.2		P	30 - 160
MCPP	103		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Naproxen	78.3		P	30 - 160
Primidone	76.8		P	30 - 160
Pyraclostrobin	98.8		P	30 - 160
Thiamethoxam	88.1		P	30 - 160
Tolfenpyrad	69.8		P	30 - 160
Triclopyr	76.7		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P377638

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

Reference Method: SM 2320 B-2011
Batch ID: P377765

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P377768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P377724

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151147	Barium	102	102	P/P	80 - 120
2151147	Calcium	101		P	80 - 120
2151147	Iron	103	103	P/P	80 - 120
2151147	Magnesium	97.8	96.5	P/P	80 - 120
2151147	Potassium	95.2	96.1	P/P	80 - 120
2151147	Sodium	98.4		P	80 - 120
2151147	Zinc	103	103	P/P	80 - 120
2151559	Barium	105		P	80 - 120
2151559	Calcium	105		P	80 - 120
2151559	Iron	106		P	80 - 120
2151559	Magnesium	108		P	80 - 120
2151559	Potassium	111		P	80 - 120
2151559	Sodium	103		P	80 - 120
2151559	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P377724

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151147	Aluminum	104	102	P/P	80 - 120
2151147	Antimony	108	107	P/P	80 - 120
2151147	Arsenic	106	106	P/P	80 - 120
2151147	Boron	101	100	P/P	80 - 120
2151147	Cadmium	106	106	P/P	80 - 120
2151147	Chromium	107	106	P/P	80 - 120
2151147	Copper	105	105	P/P	80 - 120
2151147	Lead	110	109	P/P	80 - 120
2151147	Nickel	104	103	P/P	80 - 120
2151147	Selenium	102	101	P/P	80 - 120
2151147	Silver	103	101	P/P	80 - 120
2151147	Thallium	105	105	P/P	80 - 120
2151559	Aluminum	100		P	80 - 120
2151559	Antimony	102		P	80 - 120
2151559	Arsenic	104		P	80 - 120
2151559	Boron	100		P	80 - 120
2151559	Cadmium	102		P	80 - 120
2151559	Chromium	103		P	80 - 120
2151559	Copper	106		P	80 - 120
2151559	Lead	108		P	80 - 120
2151559	Nickel	104		P	80 - 120
2151559	Selenium	99.8		P	80 - 120
2151559	Silver	102		P	80 - 120
2151559	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P378150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151408	Chloride	99.8		P	90 - 110
2151539	Chloride	101		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151408	Sulfate	101		P	90 - 110
2151539	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151434	Ammonia-N	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378169

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151415	Kjeldahl Nitrogen	98.8	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150778	NO2NO3-N	97.9	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378026

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151418	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151173	O-Phosphate-P	98.0	97.9	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P377534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151501	Acetochlor	122	111	P/P	68 - 126
2151501	Alachlor	121	110	P/P	66 - 125
2151501	Ametryn	148	127	P/P	31 - 182
2151501	Atrazine	118	101	P/P	68 - 137
2151501	Atrazine Desethyl	94.8	76.8	P/P	13 - 161
2151501	Azinphos Methyl	110	95.8	P/P	54 - 162
2151501	Bromacil	113	105	P/P	34 - 144
2151501	Butylate	71.4	58.6	P/P	16 - 92.0
2151501	Carbophenothion	93.0	81.0	P/P	50 - 150
2151501	Chlorpyrifos Ethyl	94.0	78.1	P/P	63 - 124
2151501	Chlorpyrifos Methyl	103	89.2	P/P	64 - 125
2151501	Cyanazine	165	143	P/P	13 - 245
2151501	Demeton	96.4	89.5	P/P	20 - 154
2151501	Diazinon	121	108	P/P	66 - 141
2151501	Dimethenamid	115	105	P/P	50 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P377534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151501	Disulfoton	90.1	83.1	P/P	55 - 130
2151501	Dithiopyr	111	101	P/P	66 - 122
2151501	EPTC	69.2	59.8	P/P	15 - 93.0
2151501	Ethion	45.2	41.3	P/P	15 - 148
2151501	Ethoprop	87.6	85.2	P/P	59 - 126
2151501	Fenamiphos	106	106	P/P	39 - 137
2151501	Fipronil	132	118	F/P	47 - 131
2151501	Fipronil Desulfinyl	121	106	P/P	43 - 121
2151501	Fipronil Sulfide	99.0	90.3	P/P	29 - 134
2151501	Fipronil Sulfone	83.3	85.2	P/P	19 - 131
2151501	Flumioxazin	142	134	P/P	70 - 200
2151501	Fonofos	104	93.2	P/P	62 - 128
2151501	Hexazinone	113	93.4	P/P	58 - 154
2151501	Imazalil	120	149	P/P	50 - 150
2151501	Malathion	73.1	74.9	P/P	54 - 135
2151501	Metalaxyl	113	103	P/P	46 - 136
2151501	Metolachlor	127	112	F/P	62 - 126
2151501	Metribuzin	173	142	P/P	44 - 277
2151501	Mevinphos	89.8	80.0	P/P	44 - 135
2151501	Molinate	86.7	75.0	P/P	31 - 104
2151501	Norflurazon	112	98.4	P/P	32 - 134
2151501	Oxadiazon	105	91.9	P/P	55 - 123
2151501	Parathion Ethyl	112	93.3	P/P	67 - 120
2151501	Parathion Methyl	119	97.6	P/P	70 - 140
2151501	Pendimethalin	113	93.9	P/P	59 - 145
2151501	Phorate	102	89.8	P/P	52 - 127
2151501	Prodiamine	53.3	43.7	P/P	11 - 157
2151501	Prometon	140	128	F/P	55 - 130
2151501	Prometryn	150	130	F/F	55 - 127
2151501	Pronamide	118	107	P/P	50 - 150
2151501	Propiconazole	123	105	P/P	50 - 150
2151501	Simazine	123	103	P/P	58 - 159
2151501	Sulfentrazone	91.1	86.2	P/P	50 - 150
2151501	Tebuconazole	64.8	59.1	P/P	10 - 122
2151501	Terbufos	105	92.2	P/P	65 - 131
2151501	Terbutylazine	107	94.2	P/P	63 - 131

Reference Method: EPA 8321B

Batch ID: P377655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151451	Acesulfame K	28.4	29.0	F/F	40 - 150
2151451	AMPA	81.8	81.0	P/P	40 - 150
2151451	Endothall	119	114	P/P	40 - 150
2151451	Glufosinate	63.8	60.6	P/P	40 - 150
2151451	Glyphosate	54.9	56.3	P/P	40 - 140
2151451	Sucralose	98.6	75.0	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P377677

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

Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P377677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151184	2,4-D	120	101	P/P	30 - 160
2151184	Acetaminophen	87.9	76.0	P/P	30 - 160
2151184	Acetamiprid	92.7	86.4	P/P	30 - 160
2151184	Afidopyropen	102	92.1	P/P	30 - 160
2151184	Bentazon	49.3	48.2	P/P	30 - 160
2151184	Benzovindiflupyr	94.6	85.3	P/P	30 - 160
2151184	Carbamazepine	95.5	84.0	P/P	30 - 160
2151184	Clothianidin	87.4	84.6	P/P	30 - 160
2151184	Dinotefuran	120	102	P/P	30 - 160
2151184	Diuron	72.0	59.2	P/P	30 - 160
2151184	Fenuron	100	90.9	P/P	30 - 160
2151184	Fluridone	95.8	84.6	P/P	30 - 160
2151184	Hydrocodone	110	96.3	P/P	30 - 160
2151184	Ibuprofen	61.2	70.9	P/P	30 - 160
2151184	Imazapyr	112	103	P/P	30 - 160
2151184	Imidacloprid	146	132	P/P	30 - 160
2151184	Linuron	76.2	60.3	P/P	30 - 160
2151184	Mandestrobin	95.6	84.0	P/P	30 - 160
2151184	MCP	117	106	P/P	30 - 160
2151184	Naproxen	65.8	76.3	P/P	30 - 160
2151184	Primidone	109	93.1	P/P	30 - 160
2151184	Pyraclostrobin	105	94.0	P/P	30 - 160
2151184	Thiamethoxam	126	117	P/P	30 - 160
2151184	Tolfenpyrad	81.5	68.5	P/P	30 - 160
2151184	Triclopyr	110	88.2	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P37768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151043	Fluoride	98.6	98.6	P/P	89 - 106

Reference Method: SM 5310 B-2011

Batch ID: P377836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151410	Organic Carbon	98.6	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151195	Turbidity	13.2	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377724

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151147	Barium	0.00280	Spike	P	0 - 20
2151147	Calcium	0.113	Spike	P	0 - 20
2151147	Iron	0.403	Spike	P	0 - 20
2151147	Magnesium	0.690	Spike	P	0 - 20
2151147	Potassium	0.554	Spike	P	0 - 20
2151147	Sodium	0.783	Spike	P	0 - 20
2151147	Zinc	0.550	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377724

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151147	Aluminum	1.70	Spike	P	0 - 20
2151147	Antimony	1.40	Spike	P	0 - 20
2151147	Arsenic	0.173	Spike	P	0 - 20
2151147	Boron	0.593	Spike	P	0 - 20
2151147	Cadmium	0.0883	Spike	P	0 - 20
2151147	Chromium	0.716	Spike	P	0 - 20
2151147	Copper	0.225	Spike	P	0 - 20
2151147	Lead	1.07	Spike	P	0 - 20
2151147	Nickel	0.490	Spike	P	0 - 20
2151147	Selenium	0.830	Spike	P	0 - 20
2151147	Silver	1.40	Spike	P	0 - 20
2151147	Thallium	0.451	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151408	Chloride	0.701	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151408	Sulfate	0.930	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151434	Ammonia-N	2.44	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P378169

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151415	Kjeldahl Nitrogen	3.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150778	NO2NO3-N	0.402	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P378026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151418	Total-P	0.853	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151173	O-Phosphate-P	0.102	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P377534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151501	Acetochlor	8.94	Spike	P	0 - 30
2151501	Alachlor	9.80	Spike	P	0 - 30
2151501	Ametryn	15.2	Spike	P	0 - 30
2151501	Atrazine	14.3	Spike	P	0 - 30
2151501	Atrazine Desethyl	18.9	Spike	P	0 - 30
2151501	Azinphos Methyl	13.7	Spike	P	0 - 30
2151501	Bromacil	7.90	Spike	P	0 - 30
2151501	Butylate	19.8	Spike	P	0 - 30
2151501	Carbophenothion	13.8	Spike	P	0 - 30
2151501	Chlorpyrifos Ethyl	18.5	Spike	P	0 - 30
2151501	Chlorpyrifos Methyl	14.5	Spike	P	0 - 30
2151501	Cyanazine	14.2	Spike	P	0 - 30
2151501	Demeton	7.47	Spike	P	0 - 30
2151501	Diazinon	11.8	Spike	P	0 - 30
2151501	Dimethenamid	9.57	Spike	P	0 - 30
2151501	Disulfoton	8.12	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P377534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151501	Dithiopyr	9.88	Spike	P	0 - 30
2151501	EPTC	14.6	Spike	P	0 - 30
2151501	Ethion	9.00	Spike	P	0 - 30
2151501	Ethoprop	2.75	Spike	P	0 - 30
2151501	Fenamiphos	0.0353	Spike	P	0 - 30
2151501	Fipronil	11.1	Spike	P	0 - 30
2151501	Fipronil Desulfinyl	13.4	Spike	P	0 - 30
2151501	Fipronil Sulfide	9.10	Spike	P	0 - 30
2151501	Fipronil Sulfone	2.16	Spike	P	0 - 30
2151501	Flumioxazin	5.90	Spike	P	0 - 30
2151501	Fonofos	11.2	Spike	P	0 - 30
2151501	Hexazinone	16.8	Spike	P	0 - 30
2151501	Imazalil	21.2	Spike	P	0 - 30
2151501	Malathion	2.44	Spike	P	0 - 30
2151501	Metalaxyl	9.54	Spike	P	0 - 30
2151501	Metolachlor	12.0	Spike	P	0 - 30
2151501	Metribuzin	19.9	Spike	P	0 - 30
2151501	Mevinphos	11.6	Spike	P	0 - 30
2151501	Molinate	14.4	Spike	P	0 - 30
2151501	Norflurazon	13.1	Spike	P	0 - 30
2151501	Oxadiazon	12.9	Spike	P	0 - 30
2151501	Parathion Ethyl	18.4	Spike	P	0 - 30
2151501	Parathion Methyl	19.6	Spike	P	0 - 30
2151501	Pendimethalin	18.6	Spike	P	0 - 30
2151501	Phorate	12.8	Spike	P	0 - 30
2151501	Prodiamine	19.8	Spike	P	0 - 30
2151501	Prometon	8.62	Spike	P	0 - 30
2151501	Prometryn	13.9	Spike	P	0 - 30
2151501	Pronamide	10.4	Spike	P	0 - 30
2151501	Propiconazole	15.8	Spike	P	0 - 30
2151501	Simazine	14.2	Spike	P	0 - 30
2151501	Sulfentrazone	5.49	Spike	P	0 - 30
2151501	Tebuconazole	9.21	Spike	P	0 - 30
2151501	Terbufos	12.6	Spike	P	0 - 30
2151501	Terbuthylazine	12.4	Spike	P	0 - 30
LFB	Acetochlor	0.848	LCS	P	0 - 30
LFB	Alachlor	4.78	LCS	P	0 - 30
LFB	Ametryn	7.01	LCS	P	0 - 30
LFB	Atrazine	6.38	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.58	LCS	P	0 - 30
LFB	Azinphos Methyl	4.64	LCS	P	0 - 30
LFB	Bromacil	0.639	LCS	P	0 - 30
LFB	Butylate	3.44	LCS	P	0 - 30
LFB	Carbophenothion	1.70	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.84	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.91	LCS	P	0 - 30
LFB	Cyanazine	7.20	LCS	P	0 - 30
LFB	Demeton	1.45	LCS	P	0 - 30
LFB	Diazinon	3.33	LCS	P	0 - 30
LFB	Dimethenamid	1.72	LCS	P	0 - 30
LFB	Disulfoton	2.30	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P377534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dithiopyr	4.51	LCS	P	0 - 30
LFB	EPTC	4.50	LCS	P	0 - 30
LFB	Ethion	4.97	LCS	P	0 - 30
LFB	Ethoprop	10.1	LCS	P	0 - 30
LFB	Fenamiphos	10.3	LCS	P	0 - 30
LFB	Fipronil	3.96	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	5.46	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.845	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.09	LCS	P	0 - 30
LFB	Flumioxazin	4.59	LCS	P	0 - 30
LFB	Fonofos	6.26	LCS	P	0 - 30
LFB	Hexazinone	2.48	LCS	P	0 - 30
LFB	Imazalil	4.49	LCS	P	0 - 30
LFB	Malathion	11.7	LCS	P	0 - 30
LFB	Metalaxyl	5.35	LCS	P	0 - 30
LFB	Metolachlor	1.72	LCS	P	0 - 30
LFB	Metribuzin	2.93	LCS	P	0 - 30
LFB	Mevinphos	2.24	LCS	P	0 - 30
LFB	Molinate	4.46	LCS	P	0 - 30
LFB	Norflurazon	1.29	LCS	P	0 - 30
LFB	Oxadiazon	1.22	LCS	P	0 - 30
LFB	Parathion Ethyl	7.65	LCS	P	0 - 30
LFB	Parathion Methyl	0.997	LCS	P	0 - 30
LFB	Pendimethalin	6.23	LCS	P	0 - 30
LFB	Phorate	0.846	LCS	P	0 - 30
LFB	Prodiamine	1.64	LCS	P	0 - 30
LFB	Prometon	3.57	LCS	P	0 - 30
LFB	Prometryn	6.52	LCS	P	0 - 30
LFB	Pronamide	2.58	LCS	P	0 - 30
LFB	Propiconazole	1.85	LCS	P	0 - 30
LFB	Simazine	1.40	LCS	P	0 - 30
LFB	Sulfentrazone	2.03	LCS	P	0 - 30
LFB	Tebuconazole	16.5	LCS	P	0 - 30
LFB	Terbufos	2.05	LCS	P	0 - 30
LFB	Terbutylazine	4.52	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P377655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151451	Acesulfame K	2.12	Spike	P	0 - 30
2151451	AMPA	1.07	Spike	P	0 - 30
2151451	Endothall	3.91	Spike	P	0 - 30
2151451	Glufosinate	5.08	Spike	P	0 - 30
2151451	Glyphosate	2.68	Spike	P	0 - 30
2151451	Sucralose	27.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P377677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151184	2,4-D	17.2	Spike	P	0 - 30
2151184	Acetaminophen	14.4	Spike	P	0 - 30
2151184	Acetamiprid	7.04	Spike	P	0 - 30
2151184	Afidopyropen	10.6	Spike	P	0 - 30
2151184	Bentazon	2.15	Spike	P	0 - 30
2151184	Benzovindiflupyr	10.4	Spike	P	0 - 30
2151184	Carbamazepine	12.8	Spike	P	0 - 30
2151184	Clothianidin	3.36	Spike	P	0 - 30
2151184	Dinotefuran	16.1	Spike	P	0 - 30
2151184	Diuron	19.5	Spike	P	0 - 30
2151184	Fenuron	9.68	Spike	P	0 - 30
2151184	Fluridone	12.4	Spike	P	0 - 30
2151184	Hydrocodone	13.5	Spike	P	0 - 30
2151184	Ibuprofen	14.7	Spike	P	0 - 30
2151184	Imazapyr	8.31	Spike	P	0 - 30
2151184	Imidacloprid	10.0	Spike	P	0 - 30
2151184	Linuron	23.3	Spike	P	0 - 30
2151184	Mandestrobin	13.0	Spike	P	0 - 30
2151184	MCPP	9.78	Spike	P	0 - 30
2151184	Naproxen	14.8	Spike	P	0 - 30
2151184	Primidone	15.7	Spike	P	0 - 30
2151184	Pyraclostrobin	11.0	Spike	P	0 - 30
2151184	Thiamethoxam	7.01	Spike	P	0 - 30
2151184	Tolfenpyrad	17.3	Spike	P	0 - 30
2151184	Triclopyr	21.9	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P377638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151414	Color (true)	1.76	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P377765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151043	Total Alkalinity	0.451	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011

Batch ID: P378245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151433	TDS	0.317	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P377768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151043	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P377836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151410	Organic Carbon	0.642	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2151451

Field Sample ID: 44059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	70.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.4	P	30 - 160
EPA 8321B	Diuron-d6	67.9	P	30 - 160
EPA 8321B	Endothall-d6	135	P	30 - 160
EPA 8321B	Endothall-d6	135	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.8	P	30 - 160
EPA 8321B	Primidone-d5	94.3	P	30 - 160
EPA 8321B	Sucralose-d6	41.7	P	30 - 160
EPA 8321B	Sucralose-d6	41.7	P	30 - 160

Lab Sample ID: 2151461

Field Sample ID: 44059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	105	P	72 - 135
EPA 8270E	Terbufos-d10	106	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97076

Included Lab Sample IDs: 2151435

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	97.5	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A97077

Included Lab Sample IDs: 2151433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	99.7	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97078

Included Lab Sample IDs: 2151433

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

Reference Method: EPA 8321B

Run ID: A97116

Included Lab Sample IDs: 2151451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	85.3	83.5	P/P	60 - 160
Endothall	105	112	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A97134

Included Lab Sample IDs: 2151433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A97134

Included Lab Sample IDs: 2151433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97137

Included Lab Sample IDs: 2151451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	121	118	P/P	60 - 160
Glufosinate	65.1	68.9	P/P	60 - 160
Glyphosate	73.5	72.1	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A97159

Included Lab Sample IDs: 2151434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97170

Included Lab Sample IDs: 2151433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.2	99.1	P/P	90 - 110
Sulfate	99.9	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97177

Included Lab Sample IDs: 2151456

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	105	103	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	107	107	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97178

Included Lab Sample IDs: 2151451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	79.6	92.7	P/P	50 - 150
Acetaminophen	84.7	81.4	P/P	60 - 160
Acetamiprid	89.1	103	P/P	50 - 150
Afidopyropen	110	107	P/P	50 - 150
Bentazon	92.5	88.9	P/P	50 - 160
Benzovindiflupyr	118	115	P/P	50 - 150
Carbamazepine	100	95.1	P/P	60 - 150
Clothianidin	105	84.6	P/P	60 - 150
Dinotefuran	83.1	98.6	P/P	50 - 150
Diuron	96.8	97.3	P/P	60 - 150
Fenuron	111	111	P/P	60 - 150
Fluridone	111	118	P/P	60 - 160
Hydrocodone	104	97.3	P/P	60 - 150
Ibuprofen	81.5	88.6	P/P	50 - 160
Imazapyr	97.6	108	P/P	50 - 150
Imidacloprid	99.6	95.3	P/P	60 - 150
Linuron	112	106	P/P	60 - 150
Mandestrobin	109	107	P/P	50 - 150
MCPP	101	108	P/P	50 - 150
Naproxen	86.5	124	P/P	50 - 160
Primidone	102	101	P/P	60 - 150
Pyraclostrobin	125	124	P/P	60 - 150
Thiamethoxam	101	94.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97178

Included Lab Sample IDs: 2151451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	133	128	P/P	60 - 150
Triclopyr	93.9	98.4	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97186

Included Lab Sample IDs: 2151434

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97264

Included Lab Sample IDs: 2151456

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.7	97.8	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Arsenic	100	101	P/P	90 - 110
Boron	104	103	P/P	90 - 110
Cadmium	97.9	98.1	P/P	90 - 110
Chromium	96.0	97.0	P/P	90 - 110
Copper	97.2	98.6	P/P	90 - 110
Lead	103	102	P/P	90 - 110
Nickel	97.9	98.3	P/P	90 - 110
Selenium	98.0	102	P/P	90 - 110
Silver	98.3	98.8	P/P	90 - 110
Thallium	99.7	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97273

Included Lab Sample IDs: 2151451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	88.6	83.1	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97282

Included Lab Sample IDs: 2151434

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

Reference Method: EPA 8270E

Run ID: A97284

Included Lab Sample IDs: 2151461

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	108		P	80 - 120
Atrazine	105		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A97284

Included Lab Sample IDs: 2151461

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine Desethyl	77.4*		F	80 - 120
Azinphos Methyl	95.4		P	80 - 120
Bromacil	105		P	80 - 120
Butylate	104		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorpyrifos Ethyl	90.8		P	80 - 120
Chlorpyrifos Methyl	97.4		P	80 - 120
Cyanazine	102		P	80 - 120
Demeton	97.4		P	80 - 120
Diazinon	109		P	80 - 120
Dimethenamid	105		P	80 - 120
Disulfoton	83.7		P	80 - 120
Dithiopyr	105		P	80 - 120
EPTC	102		P	80 - 120
Ethion	91.5		P	80 - 120
Ethoprop	80.9		P	80 - 120
Fenamiphos	102		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	96.4		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Flumioxazin	98.1		P	80 - 120
Fonofos	99.2		P	80 - 120
Hexazinone	98.2		P	80 - 120
Imazalil	96.8		P	80 - 120
Malathion	102		P	80 - 120
Metaxyl	104		P	80 - 120
Metolachlor	111		P	80 - 120
Metribuzin	85.8		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	105		P	80 - 120
Norflurazon	108		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	104		P	80 - 120
Parathion Methyl	99.2		P	80 - 120
Pendimethalin	99.8		P	80 - 120
Phorate	98.4		P	80 - 120
Prodiamine	100		P	80 - 120
Prometon	129*		F	80 - 120
Prometryn	112		P	80 - 120
Pronamide	106		P	80 - 120
Propiconazole	111		P	80 - 120
Simazine	105		P	80 - 120
Sulfentrazone	96.9		P	80 - 120
Tebuconazole	108		P	80 - 120
Terbufos	98.6		P	80 - 120
Terbuthylazine	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97298

Included Lab Sample IDs: 2151434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.5	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97349

Included Lab Sample IDs: 2151434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	101	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						13.2	
EPA 200.7 Rev. 4.4	Barium	102		102	102	105		0.0028
	Calcium	100		101	105			0.113
	Iron	103		103	103	106		0.403
	Magnesium	104		97.8	96.5	108		0.690
	Potassium	101		95.2	96.1	111		0.554
	Sodium	99.8		98.4	103			0.783
	Zinc	102		103	103	103		0.550
EPA 200.8 Rev. 5.4	Aluminum	102		104	102	100		1.70
	Antimony	106		108	107	102		1.40
	Arsenic	104		106	106	104		0.173
	Boron	98.5		101	100	100		0.593
	Cadmium	104		106	106	102		0.0883
	Chromium	103		107	106	103		0.716
	Copper	105		105	105	106		0.225
	Lead	107		110	109	108		1.07
	Nickel	103		104	103	104		0.490
	Selenium	103		99.8	102	101		0.830
	Silver	104		103	101	102		1.40
	Thallium	102		105	105	103		0.451
EPA 300.0 Rev. 2.1	Chloride	99.4		99.8	101		0.701	
	Sulfate	101		101	101		0.930	
EPA 350.1 Rev. 2.0	Ammonia-N	102		101	104			2.44
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4		98.8	102			3.06
EPA 353.2 Rev. 2.0	NO2NO3-N	101		97.9	98.4			0.402
EPA 365.1 Rev. 2.0	Total-P	106		106	107			0.853
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		98.0	97.9			0.102
EPA 8270E	Acetochlor	109	108	111	122	0.848		8.94
	Alachlor	111	106	121	110	4.78		9.80
	Ametryn	131	122	148	127	7.01		15.2
	Atrazine	98.2	92.1	118	101	6.38		14.3
	Atrazine Desethyl	67.2	64.8	94.8	76.8	3.58		18.9
	Azinphos Methyl	105	100	110	95.8	4.64		13.7
	Bromacil	88.3	88.9	105	113	0.639		7.90
	Butylate	68.1	70.5	71.4	58.6	3.44		19.8
	Carbophenothion	75.7	77.0	81.0	93.0	1.70		13.8
	Chlorpyrifos Ethyl	77.0	79.2	94.0	78.1	2.84		18.5
	Chlorpyrifos Methyl	80.2	82.6	103	89.2	2.91		14.5
	Cyanazine	171	159	143	165	7.20		14.2
	Demeton	80.1	78.9	89.5	96.4	1.45		7.47
	Diazinon	107	103	108	121	3.33		11.8
	Dimethenamid	107	105	105	115	1.72		9.57
	Disulfoton	72.6	70.9	83.1	90.1	2.30		8.12
	Dithiopyr	99.8	95.4	111	101	4.51		9.88
	EPTC	56.4	59.0	69.2	59.8	4.50		14.6
	Ethion	70.8	74.4	41.3	45.2	4.97		9.00
	Ethoprop	71.4	78.9	85.2	87.6	10.1		2.75
	Fenamiphos	98.1	88.5	106	106	10.3		0.0353
	Fipronil	113	109	118	132	3.96		11.1
	Fipronil Desulfanyl	104	98.4	106	121	5.46		13.4
	Fipronil Sulfide	81.7	81.0	90.3	99.0	0.845		9.10
	Fipronil Sulfone	89.5	85.9	85.2	83.3	4.09		2.16
	Flumioxazin	149	142	134	142	4.59		5.90
	Fonofos	77.6	82.7	104	93.2	6.26		11.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Hexazinone	99.2	96.7	113	93.4	2.48		16.8
	Imazalil	94.5	90.4	120	149	4.49		21.2
	Malathion	63.9	71.8	73.1	74.9	11.7		2.44
	Metalaxyl	103	97.6	113	103	5.35		9.54
	Metolachlor	113	111	127	112	1.72		12.0
	Metribuzin	101	104	173	142	2.93		19.9
	Mevinphos	71.5	69.9	89.8	80.0	2.24		11.6
	Molinate	67.4	70.4	86.7	75.0	4.46		14.4
	Norflurazon	106	105	112	98.4	1.29		13.1
	Oxadiazon	90.1	89.0	105	91.9	1.22		12.9
	Parathion Ethyl	81.6	88.1	112	93.3	7.65		18.4
	Parathion Methyl	93.6	94.6	119	97.6	0.997		19.6
	Pendimethalin	87.7	93.3	113	93.9	6.23		18.6
	Phorate	80.8	80.1	102	89.8	0.846		12.8
	Prodiamine	43.8	43.1	53.3	43.7	1.64		19.8
	Prometon	128	123	140	128	3.57		8.62
	Prometryn	126	118	150	130	6.52		13.9
	Pronamide	108	106	118	107	2.58		10.4
	Propiconazole	113	111	123	105	1.85		15.8
	Simazine	99.0	97.7	123	103	1.40		14.2
	Sulfentrazone	87.6	89.4	91.1	86.2	2.03		5.49
	Tebuconazole	88.4	74.9	64.8	59.1	16.5		9.21
	Terbufos	81.0	82.6	105	92.2	2.05		12.6
	Terbutylazine	92.8	88.7	107	94.2	4.52		12.4
EPA 8321B	2,4-D	99.8		120	101			17.2
	Acesulfame K	89.6		28.4	29.0			2.12
	Acetaminophen	73.6		76.0	87.9			14.4
	Acetamiprid	82.6		86.4	92.7			7.04
	Afidopyropen	85.3		92.1	102			10.6
	AMPA	122		81.8	81.0			1.07
	Bentazon	80.1		49.3	48.2			2.15
	Benzovindiflupyr	87.1		85.3	94.6			10.4
	Carbamazepine	98.4		84.0	95.5			12.8
	Clothianidin	77.8		84.6	87.4			3.36
	Dinotefuran	93.1		102	120			16.1
	Diuron	77.5		59.2	72.0			19.5
	Endothall	108		119	114			3.91
	Fenuron	102		90.9	100			9.68
	Fluridone	92.4		84.6	95.8			12.4
	Glufosinate	72.5		63.8	60.6			5.08
	Glyphosate	71.3		54.9	56.3			2.68
	Hydrocodone	83.2		96.3	110			13.5
	Ibuprofen	81.9		61.2	70.9			14.7
	Imazapyr	100		112	103			8.31
	Imidacloprid	90.5		132	146			10.0
	Linuron	80.0		60.3	76.2			23.3
	Mandestrobin	91.2		84.0	95.6			13.0
	MCPP	103		117	106			9.78
	Naproxen	78.3		65.8	76.3			14.8
	Primidone	76.8		93.1	109			15.7
	Pyraclostrobin	98.8		94.0	105			11.0
	Sucralose	81.0		98.6	75.0			27.2
	Thiamethoxam	88.1		117	126			7.01
	Tolfenpyrad	69.8		68.5	81.5			17.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Triclopyr	76.7	110	88.2			21.9
SM 2120 B-2011	Color (true)	103				1.76	
SM 2320 B-2011	Total Alkalinity	102				0.451	
SM 2540 C-2011	TDS					0.317	
SM 4500 F-C-2011	Fluoride	97.0	98.6	98.6			0.0
SM 5310 B-2011	Organic Carbon	96.4	97.8	98.6			0.642

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2151433
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2151456
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2151456
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2151433
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2151433
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2151434
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2151434
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2151434
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2151434
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2151435
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2151461
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2151451
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2151451
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2151433
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2151433
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2151456
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2151433
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2151433
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2151433
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2151434

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	01/23/2020			01/23/2020 16:14	Samantha Davila	2151433
EPA 200.7 Rev. 4.4	01/23/2020	01/27/2020 14:00	Elliott D. Healy	01/29/2020 15:58	Betina Topolski	2151456
EPA 200.8 Rev. 5.4	01/23/2020	01/27/2020 14:00	Elliott D. Healy	02/01/2020 04:23	Alexander Thompson	2151456
EPA 300.0 Rev. 2.1	01/23/2020			01/30/2020 17:32	Lipi Saha	2151433
EPA 350.1 Rev. 2.0	01/23/2020			02/04/2020 12:01	Ping Hua	2151434
EPA 351.2 Rev. 2.0	01/23/2020	02/03/2020 11:45	Jhamieka S. Greenwood	02/04/2020 10:49	Jhamieka S. Greenwood	2151434
EPA 353.2 Rev. 2.0	01/23/2020			01/29/2020 09:35	Beverly Y. Sanders	2151434
EPA 365.1 Rev. 2.0	01/23/2020	01/30/2020 14:58	Yen Ta	02/03/2020 12:02	Benjamin T. Nordmann	2151434
EPA 365.1 Rev. 2.0 dissolved	01/23/2020			01/23/2020 16:25	Carlos Miranda	2151435
EPA 8270E	01/23/2020	01/24/2020 09:30	Rasheda Ghaffari	01/28/2020 18:23	Vandana T. Nagar	2151461
EPA 8321B	01/23/2020	01/24/2020 10:30	Rebecca Ware	01/24/2020 19:56	Rebecca Ware	2151451
	01/23/2020	01/24/2020 10:30	Rebecca Ware	01/27/2020 15:31	Rebecca Ware	2151451
	01/23/2020	01/24/2020 10:30	Rebecca Ware	01/30/2020 10:18	Rebecca Ware	2151451
	01/23/2020	01/27/2020 09:00	Hoor Shaik	01/29/2020 19:47	Juyoung Kim	2151451
SM 2120 B-2011	01/23/2020			01/23/2020 16:33	Madeline Funaro	2151433
SM 2320 B-2011	01/23/2020			01/28/2020 04:05	Dale L. Simmons	2151433
SM 2340B	01/23/2020			01/29/2020 15:58	Betina Topolski	2151456
SM 2540 C-2011	01/23/2020			01/27/2020 16:10	Sima Feizi	2151433
SM 2540 D-2011	01/23/2020			01/27/2020 16:10	Sima Feizi	2151433
SM 4500 F-C-2011	01/23/2020			01/28/2020 04:05	Dale L. Simmons	2151433
SM 5310 B-2011	01/23/2020			01/29/2020 12:35	Madeline Funaro	2151434