

Chemical Analysis Report

CEN-DIST-2020-09-04-01

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

Event Description: **Shingle Creek Headwaters**
Request ID: **RQ-2020-09-07-47**
Customer: **CEN-DIST**
Project ID: **SMP**

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Date Certified: 25-SEP-2020 10:50



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: Shingle Creek Headwaters @ 370m from McLeod Rd

Collection Date/Time: 09/03/2020 12:49

Field ID: G4CE0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194410	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P386998	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P387330	
		Sulfate	5.9		mg SO4/L	P387333	
	SM 2120 B-2011	Color (true)	56	A	PCU	P387009	
	SM 2320 B-2011	Total Alkalinity	69		mg CaCO3/L	P387126	
	SM 2540 C-2011	TDS	120	A	mg/L	P387384	
	SM 2540 D-2011	TSS	3	IA	mg/L	P387377	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P387130	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P387045	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P387198	
2194411	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P387136	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P387615	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P387239	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.047		mg P/L	P387011	
	EPA 8321B	2,4-D	0.16		ug/L	P386980	
2194415		Acesulfame K**	0.10	UJ	ug/L	P386984	MS
		AMPA**	0.55		ug/L	P386984	
		Sucralose**	0.080		ug/L	P386984	
		Acetaminophen**	0.0080	U	ug/L	P386980	
		Endothall**	600		ug/L	P386984	
		Acetamiprid**	0.0020	U	ug/L	P386980	
		Glufosinate**	0.10	U	ug/L	P386984	
		Glyphosate**	3.7		ug/L	P386984	
		Afidopyropen**	0.0020	U	ug/L	P386980	
		Bentazon	0.0041		ug/L	P386980	
		Benzovindiflupyr**	0.0020	U	ug/L	P386980	
		Carbamazepine**	8.0E-04	U	ug/L	P386980	
		Clothianidin**	0.0020	U	ug/L	P386980	
		Dinotefuran**	0.0020	U	ug/L	P386980	
		Diuron	0.0073	I	ug/L	P386980	
		Fenuron	0.016	U	ug/L	P386980	
		Fluridone**	0.18		ug/L	P386980	
		Imazapyr**	0.029		ug/L	P386980	
		Hydrocodone**	0.0020	U	ug/L	P386980	
		Ibuprofen**	0.020	U	ug/L	P386980	
		Imidacloprid	0.0045	I	ug/L	P386980	MS
		Linuron	0.0040	U	ug/L	P386980	
		Mandestrobin**	0.0020	U	ug/L	P386980	
		MCP	0.0057	I	ug/L	P386980	
		Naproxen**	0.0080	U	ug/L	P386980	
		Primidone**	0.0040	U	ug/L	P386980	
		Pyraclostrobin**	0.0020	U	ug/L	P386980	

Field ID: G4CE0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194415	EPA 8321B	Thiamethoxam**	0.0020	U	ug/L	P386980	
		Tolfenpyrad**	0.0020	U	ug/L	P386980	
		Triclopyr**	0.0040	U	ug/L	P386980	
2194416	EPA 200.7 Rev. 4.4	Iron	350		ug/L	P387083	
		Manganese	15.3		ug/L	P387083	
		Zinc	5.0	U	ug/L	P387083	
	EPA 200.8 Rev. 5.4	Aluminum	45		ug/L	P387083	
		Antimony	0.26		ug/L	P387083	
		Arsenic	1.03		ug/L	P387083	
		Beryllium	0.010	U	ug/L	P387083	
		Cadmium	0.020	U	ug/L	P387083	
		Chromium	0.40	U	ug/L	P387083	
		Copper	70.6		ug/L	P387083	
		Lead	0.20	U	ug/L	P387083	
		Nickel	0.50	U	ug/L	P387083	
		Selenium	0.20	U	ug/L	P387083	
		Silver	0.010	U	ug/L	P387083	
		Thallium	0.10	U	ug/L	P387083	
		Hardness	76.2		mg/L	P387083	
2194417	SM 2340B						
	EPA 8270E	Acetochlor	0.25	U	ng/L	P386897	MS
		Alachlor	0.25	U	ng/L	P386897	
		Ametryn	0.59	U	ng/L	P386897	
		Atrazine	31	J	ng/L	P386897	LCS, MS, RPD
		Atrazine Desethyl	2.8	IJ	ng/L	P386897	RPD
		Azinphos Methyl	2.0	U	ng/L	P386897	
		Bromacil	0.49	UJ	ng/L	P386897	RPD
		Butylate	0.39	U	ng/L	P386897	
		Carbophenothion	0.49	UJ	ng/L	P386897	LCS
		Chlorpyrifos Ethyl	0.25	UJ	ng/L	P386897	LCS
		Chlorpyrifos Methyl	0.049	UJ	ng/L	P386897	LCS, MS
		Cyanazine	3.2	U	ng/L	P386897	
		Demeton	1.5	UJ	ng/L	P386897	LCS
		Diazinon	0.12	U	ng/L	P386897	MS
		Dimethenamid**	0.099	U	ng/L	P386897	
		Disulfoton	0.49	UJ	ng/L	P386897	MS, RPD
		Dithiopyr**	0.13	IJ	ng/L	P386897	LCS, MS
		EPTC	1.2	U	ng/L	P386897	
		Ethion	0.15	U	ng/L	P386897	
		Ethoprop	0.099	UJ	ng/L	P386897	LCS, MS
		Fenamiphos	0.49	UJ	ng/L	P386897	LCS
		Fipronil	1.1		ng/L	P386897	
		Fipronil Desulfinyl**	1.7		ng/L	P386897	
		Fipronil Sulfide	1.1	J	ng/L	P386897	RPD
		Fipronil Sulfone	1.5		ng/L	P386897	

Field ID: G4CE0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194417	EPA 8270E	Flumioxazin**	790		ng/L	P386897	
		Fonofos	0.20	UJ	ng/L	P386897	LCS
		Hexazinone	0.49	U	ng/L	P386897	
		Imazalil**	0.74	U	ng/L	P386897	MS
		Malathion	0.35	UJ	ng/L	P386897	LCS, MS
		Metalaxyl	0.74	U	ng/L	P386897	
		Metolachlor	0.49	UJ	ng/L	P386897	LCS, MS
		Metribuzin	3.2	U	ng/L	P386897	
		Mevinphos	0.49	UJ	ng/L	P386897	LCS, MS, RPD
		Molinate	0.30	U	ng/L	P386897	
		Naled**	1.5	U	ng/L	P386897	
		Norflurazon	0.49	U	ng/L	P386897	
		Oxadiazon	0.56		ng/L	P386897	MS
		Parathion Ethyl	0.25	U	ng/L	P386897	
		Parathion Methyl	0.54	U	ng/L	P386897	
		Pendimethalin	0.99	UJ	ng/L	P386897	LCS, MS, RPD
		Phorate	0.25	U	ng/L	P386897	
		Prodiamine**	0.17	UJ	ng/L	P386897	RPD
		Prometon	0.89	UJ	ng/L	P386897	RPD
		Prometryn	0.20	U	ng/L	P386897	
		Pronamide**	0.15	U	ng/L	P386897	RPD
		Propiconazole**	1.1	I	ng/L	P386897	
		Simazine	2.8	J	ng/L	P386897	LCS, MS, RPD
		Sulfentrazone**	1.4	I	ng/L	P386897	
		Tebuconazole**	0.82	I	ng/L	P386897	
		Terbufos	0.099	UJ	ng/L	P386897	LCS, MS
		Terbuthylazine	0.42	UJ	ng/L	P386897	LCS, RPD

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: MS accuracy for endothall could not be assessed due to a high concentration in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 09/15/2020.

EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameters in the sample spiked. 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: P386998

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387083

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	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: P387330

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387333

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387198

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P387136

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387615

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387011

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

Reference Method: EPA 8270E
 Batch ID: P386897

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P386897

Component	Result	Code	Units
Molinate	0.30	U	ng/L
Naled	1.5	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: P386980

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P386984

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: SM 2120 B-2011
Batch ID: P387009

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P387126

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

Reference Method: SM 2540 C-2011
Batch ID: P387384

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387377

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387239

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: P387083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	102		P	85 - 115
Manganese	103		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.5		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	94.7		P	85 - 115
Beryllium	107		P	85 - 115
Cadmium	99.0		P	85 - 115
Chromium	105		P	85 - 115
Copper	93.5		P	85 - 115
Lead	100		P	85 - 115
Nickel	93.1		P	85 - 115
Selenium	92.5		P	85 - 115
Silver	101		P	85 - 115
Thallium	99.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387198

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387136

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P387615

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: P387011

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

Reference Method: EPA 8270E

Batch ID: P386897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	99.1	77.0	P/P	71 - 122
Alachlor	102	77.7	P/P	70 - 121
Ametryn	101	91.5	P/P	49 - 137
Atrazine	104	74.0	P/F	76 - 125
Atrazine Desethyl	90.0	60.4	P/P	31 - 144
Azinphos Methyl	109	99.9	P/P	67 - 150
Bromacil	99.0	67.3	P/P	36 - 121
Butylate	74.2	60.0	P/P	33 - 88.0
Carbophenothion	146	109	F/P	66 - 116
Chlorpyrifos Ethyl	142	108	F/P	73 - 117
Chlorpyrifos Methyl	145	111	F/P	68 - 121
Cyanazine	133	98.5	P/P	20 - 250
Demeton	138	108	F/P	30 - 123
Diazinon	96.3	71.8	P/P	70 - 128
Dimethenamid	100	75.5	P/P	66 - 122
Disulfoton	122	83.9	P/P	46 - 124
Dithiopyr	87.1	66.2	P/F	69 - 122
EPTC	68.1	57.3	P/P	31 - 90.0
Ethion	117	90.5	P/P	45 - 135
Ethoprop	134	101	F/P	59 - 118
Fenamiphos	150	120	F/P	30 - 136
Fipronil	104	78.9	P/P	57 - 127
Fipronil Desulfinyl	103	77.5	P/P	51 - 122
Fipronil Sulfide	96.6	70.6	P/P	57 - 119
Fipronil Sulfone	116	87.9	P/P	51 - 119
Flumioxazin	201	156	P/P	20 - 250
Fonofos	120	92.1	F/P	60 - 120
Hexazinone	102	76.8	P/P	57 - 142
Imazalil	122	98.2	P/P	30 - 139
Malathion	184	142	F/F	67 - 128
Metaxyl	96.2	72.2	P/P	21 - 148
Metolachlor	89.0	66.6	P/F	70 - 120
Metribuzin	112	84.5	P/P	20 - 250
Mevinphos	123	93.8	F/P	47 - 116
Molinate	80.2	65.0	P/P	41 - 99.0
Naled	92.6	77.5	P/P	38 - 97.0
Norflurazon	95.4	72.5	P/P	54 - 127
Oxadiazon	89.8	67.6	P/P	65 - 122
Parathion Ethyl	98.1	75.7	P/P	71 - 113
Parathion Methyl	114	85.2	P/P	73 - 129

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P386897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pendimethalin	60.8	42.4	F/F	63 - 130
Phorate	115	85.6	P/P	48 - 118
Prodiamine	52.0	37.0	P/P	20 - 144
Prometon	90.6	63.2	P/P	53 - 120
Prometryn	110	81.2	P/P	63 - 119
Pronamide	121	92.0	P/P	81 - 122
Propiconazole	89.7	70.4	P/P	62 - 124
Simazine	85.5	57.1	P/F	77 - 129
Sulfentrazone	96.1	72.9	P/P	20 - 137
Tebuconazole	57.0	45.1	P/P	20 - 118
Terbufos	120	91.9	F/P	61 - 119
Terbuthylazine	99.4	70.6	P/F	75 - 119

Reference Method: EPA 8321B

Batch ID: P386980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	115		P	30 - 160
Acetaminophen	70.4		P	30 - 160
Acetamiprid	75.9		P	30 - 160
Afidopyropen	56.7		P	30 - 160
Bentazon	64.0		P	30 - 160
Benzovindiflupyr	49.7		P	30 - 160
Carbamazepine	58.3		P	30 - 160
Clothianidin	76.1		P	30 - 160
Dinotefuran	87.3		P	30 - 160
Diuron	52.1		P	30 - 160
Fenuron	86.0		P	30 - 160
Fluridone	70.5		P	30 - 160
Hydrocodone	73.4		P	30 - 160
Ibuprofen	93.3		P	30 - 160
Imazapyr	121		P	30 - 160
Imidacloprid	96.9		P	30 - 160
Linuron	55.4		P	30 - 160
Mandestrobin	68.5		P	30 - 160
MCPP	126		P	30 - 160
Naproxen	61.8		P	30 - 160
Primidone	74.1		P	30 - 160
Pyraclostrobin	58.4		P	30 - 160
Thiamethoxam	75.4		P	30 - 160
Tolfenpyrad	45.3		P	30 - 160
Triclopyr	86.3		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P386984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	50.5		P	40 - 150
AMPA	41.0		P	40 - 150
Endothall	114		P	40 - 150
Glufosinate	89.8		P	40 - 150
Glyphosate	112		P	40 - 140

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P386984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	106		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P387009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P387126

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

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P387239

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194273	Iron	105	104	P/P	80 - 120
2194273	Manganese	105	103	P/P	80 - 120
2194273	Zinc	109	106	P/P	80 - 120
2194439	Iron	101		P	80 - 120
2194439	Manganese	103		P	80 - 120
2194439	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194273	Aluminum	92.9	92.9	P/P	80 - 120
2194273	Antimony	105	105	P/P	80 - 120
2194273	Arsenic	97.3	97.4	P/P	80 - 120
2194273	Beryllium	109	106	P/P	80 - 120
2194273	Cadmium	101	102	P/P	80 - 120
2194273	Chromium	107	107	P/P	80 - 120
2194273	Copper	95.7	95.4	P/P	80 - 120
2194273	Lead	102	102	P/P	80 - 120
2194273	Nickel	94.4	94.2	P/P	80 - 120
2194273	Selenium	94.1	94.5	P/P	80 - 120
2194273	Silver	100	100	P/P	80 - 120
2194273	Thallium	104	105	P/P	80 - 120
2194439	Aluminum	94.7		P	80 - 120
2194439	Antimony	104		P	80 - 120
2194439	Arsenic	95.2		P	80 - 120
2194439	Beryllium	107		P	80 - 120
2194439	Cadmium	101		P	80 - 120
2194439	Chromium	105		P	80 - 120
2194439	Copper	96.5		P	80 - 120
2194439	Lead	103		P	80 - 120
2194439	Nickel	97.7		P	80 - 120
2194439	Selenium	90.4		P	80 - 120
2194439	Silver	100		P	80 - 120
2194439	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194039	Chloride	97.7		P	90 - 110
2194132	Chloride	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194039	Sulfate	95.8		P	90 - 110
2194132	Sulfate	96.1		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P387045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194479	Ammonia-N	95.1	93.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P387198

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194411	Kjeldahl Nitrogen	105	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P387136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194411	NO2NO3-N	99.2	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194142	Total-P	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194434	O-Phosphate-P	98.5	99.1	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P386897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193323	Acetochlor	67.3	88.8	F/P	68 - 126
2193323	Alachlor	80.5	92.7	P/P	66 - 125
2193323	Ametryn	147	150	P/P	31 - 182
2193323	Atrazine	64.7	109	F/P	68 - 137
2193323	Atrazine Desethyl	59.1	81.4	P/P	13 - 161
2193323	Azinphos Methyl	80.4	89.0	P/P	54 - 162
2193323	Bromacil	53.9	88.8	P/P	34 - 144
2193323	Butylate	52.0	62.2	P/P	16 - 92.0
2193323	Carbophenothion	97.7	120	P/P	30 - 131
2193323	Chlorpyrifos Ethyl	93.0	117	P/P	63 - 124
2193323	Chlorpyrifos Methyl	97.7	132	P/F	64 - 125
2193323	Cyanazine	84.0	101	P/P	13 - 245
2193323	Demeton	108	128	P/P	20 - 154
2193323	Diazinon	66.0	88.4	F/P	66 - 141
2193323	Dimethenamid	68.3	88.4	P/P	50 - 130
2193323	Disulfoton	114	158	P/F	55 - 130
2193323	Dithiopyr	46.6	48.2	F/F	66 - 122
2193323	EPTC	49.5	59.3	P/P	15 - 93.0
2193323	Ethion	78.2	93.4	P/P	15 - 148
2193323	Ethoprop	104	141	P/F	59 - 126
2193323	Fenamiphos	102	117	P/P	39 - 137
2193323	Fipronil Desulfiny	65.0	87.7	P/P	43 - 121

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P386897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193323	Flumioxazin	154	210	P/P	10 - 300
2193323	Fonofos	91.0	118	P/P	62 - 128
2193323	Hexazinone	66.2	88.6	P/P	58 - 154
2193323	Imazalil	212	267	P/F	10 - 215
2193323	Malathion	127	164	P/F	54 - 135
2193323	Metalaxyl	65.3	86.8	P/P	46 - 136
2193323	Metolachlor	56.5	75.0	F/P	62 - 126
2193323	Metribuzin	80.3	106	P/P	44 - 277
2193323	Mevinphos	108	155	P/F	44 - 135
2193323	Molinate	63.1	79.1	P/P	31 - 104
2193323	Naled	74.7	96.4	P/P	33 - 113
2193323	Norflurazon	62.0	79.1	P/P	32 - 134
2193323	Oxadiazon	45.1	55.2	F/P	55 - 123
2193323	Parathion Ethyl	76.1	100	P/P	67 - 120
2193323	Parathion Methyl	91.0	120	P/P	70 - 140
2193323	Pendimethalin	51.3	71.6	F/P	59 - 145
2193323	Phorate	109	82.4	P/P	52 - 127
2193323	Prodiamine	50.2	69.0	P/P	11 - 157
2193323	Prometon	70.9	96.5	P/P	55 - 130
2193323	Prometryn	64.3	79.8	P/P	55 - 127
2193323	Pronamide	83.0	127	P/P	66 - 150
2193323	Propiconazole	50.0	80.8	P/P	14 - 178
2193323	Simazine	51.2	69.4	F/P	58 - 159
2193323	Sulfentrazone	54.3	87.9	P/P	21 - 144
2193323	Terbufos	99.6	133	P/F	65 - 131
2193323	Terbutylazine	67.8	93.2	P/P	63 - 131

Reference Method: EPA 8321B
Batch ID: P386980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194244	2,4-D	111	117	P/P	30 - 160
2194244	Acetaminophen	71.2	92.4	P/P	30 - 160
2194244	Acetamiprid	83.6	93.2	P/P	30 - 160
2194244	Afidopyropen	59.3	66.3	P/P	30 - 160
2194244	Bentazon	57.0	63.6	P/P	30 - 160
2194244	Benzovindiflupyr	49.0	53.9	P/P	30 - 160
2194244	Carbamazepine	61.3	65.4	P/P	30 - 160
2194244	Clothianidin	79.2	98.3	P/P	30 - 160
2194244	Dinotefuran	98.0	117	P/P	30 - 160
2194244	Diuron	52.3	58.3	P/P	30 - 160
2194244	Fenuron	82.4	92.1	P/P	30 - 160
2194244	Fluridone	76.3	87.9	P/P	30 - 160
2194244	Hydrocodone	72.0	82.2	P/P	30 - 160
2194244	Ibuprofen	88.2	84.7	P/P	30 - 160
2194244	Imazapyr	106	100	P/P	30 - 160
2194244	Imidacloprid	134	162	P/F	30 - 160
2194244	Linuron	58.8	64.5	P/P	30 - 160
2194244	Mandestrobin	74.1	88.3	P/P	30 - 160
2194244	MCP	123	126	P/P	30 - 160
2194244	Naproxen	57.2	53.6	P/P	30 - 160
2194244	Primidone	78.7	97.9	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P386980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194244	Pyraclostrobin	59.2	61.1	P/P	30 - 160
2194244	Thiamethoxam	91.1	108	P/P	30 - 160
2194244	Tolfenpyrad	40.8	49.4	P/P	30 - 160
2194244	Triclopyr	98.0	93.0	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P386984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194415	Acesulfame K	30.4	33.8	F/F	40 - 150
2194415	AMPA	72.1	72.4	P/P	40 - 150
2194415	Glufosinate	71.6	82.0	P/P	40 - 150
2194415	Glyphosate	64.5	94.7	P/P	40 - 140
2194415	Sucralose	51.5	58.2	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194618	Fluoride	98.5	99.6	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194433	Organic Carbon	99.4	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194432	Turbidity	1.35	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194273	Iron	0.697	Spike	P	0 - 20
2194273	Manganese	1.58	Spike	P	0 - 20
2194273	Zinc	2.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194273	Aluminum	0.0430	Spike	P	0 - 20
2194273	Antimony	0.0302	Spike	P	0 - 20
2194273	Arsenic	0.0480	Spike	P	0 - 20
2194273	Beryllium	2.64	Spike	P	0 - 20
2194273	Cadmium	0.827	Spike	P	0 - 20
2194273	Chromium	0.159	Spike	P	0 - 20
2194273	Copper	0.374	Spike	P	0 - 20
2194273	Lead	0.0788	Spike	P	0 - 20
2194273	Nickel	0.197	Spike	P	0 - 20
2194273	Selenium	0.510	Spike	P	0 - 20
2194273	Silver	0.114	Spike	P	0 - 20
2194273	Thallium	0.536	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194039	Chloride	0.680	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194039	Sulfate	0.689	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194479	Ammonia-N	1.41	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194411	Kjeldahl Nitrogen	1.71	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194411	NO2NO3-N	0.797	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194142	Total-P	0.109	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194434	O-Phosphate-P	0.607	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P386897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193323	Acetochlor	27.5	Spike	P	0 - 30
2193323	Alachlor	14.0	Spike	P	0 - 30
2193323	Ametryn	2.35	Spike	P	0 - 30
2193323	Atrazine	33.0	Spike	F	0 - 30
2193323	Atrazine Desethyl	31.7	Spike	F	0 - 30
2193323	Azinphos Methyl	10.1	Spike	P	0 - 30
2193323	Bromacil	25.9	Spike	P	0 - 30
2193323	Butylate	17.9	Spike	P	0 - 30
2193323	Carbophenothion	20.5	Spike	P	0 - 30
2193323	Chlorpyrifos Ethyl	22.9	Spike	P	0 - 30
2193323	Chlorpyrifos Methyl	29.7	Spike	P	0 - 30
2193323	Cyanazine	18.2	Spike	P	0 - 30
2193323	Demeton	17.4	Spike	P	0 - 30
2193323	Diazinon	29.1	Spike	P	0 - 30
2193323	Dimethenamid	25.6	Spike	P	0 - 30
2193323	Disulfoton	32.6	Spike	F	0 - 30
2193323	Dithiopyr	3.48	Spike	P	0 - 30
2193323	EPTC	17.9	Spike	P	0 - 30
2193323	Ethion	17.6	Spike	P	0 - 30
2193323	Ethoprop	29.9	Spike	P	0 - 30
2193323	Fenamiphos	14.2	Spike	P	0 - 30
2193323	Fipronil	29.2	Spike	P	0 - 30
2193323	Fipronil Desulfinyl	25.1	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P386897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193323	Fipronil Sulfide	29.0	Spike	P	0 - 30
2193323	Fipronil Sulfone	25.8	Spike	P	0 - 30
2193323	Flumioxazin	28.2	Spike	P	0 - 30
2193323	Fonofos	25.9	Spike	P	0 - 30
2193323	Hexazinone	26.6	Spike	P	0 - 30
2193323	Imazalil	23.1	Spike	P	0 - 30
2193323	Malathion	25.1	Spike	P	0 - 30
2193323	Metalaxyl	28.3	Spike	P	0 - 30
2193323	Metolachlor	28.1	Spike	P	0 - 30
2193323	Metribuzin	27.8	Spike	P	0 - 30
2193323	Mevinphos	35.3	Spike	F	0 - 30
2193323	Molinate	22.5	Spike	P	0 - 30
2193323	Naled	25.4	Spike	P	0 - 30
2193323	Norflurazon	24.2	Spike	P	0 - 30
2193323	Oxadiazon	20.1	Spike	P	0 - 30
2193323	Parathion Ethyl	27.4	Spike	P	0 - 30
2193323	Parathion Methyl	27.3	Spike	P	0 - 30
2193323	Pendimethalin	33.0	Spike	F	0 - 30
2193323	Phorate	27.3	Spike	P	0 - 30
2193323	Prodiamine	31.6	Spike	F	0 - 30
2193323	Prometon	30.5	Spike	F	0 - 30
2193323	Prometryn	21.6	Spike	P	0 - 30
2193323	Pronamide	41.7	Spike	F	0 - 30
2193323	Propiconazole	25.6	Spike	P	0 - 30
2193323	Simazine	30.2	Spike	F	0 - 30
2193323	Sulfentrazone	28.9	Spike	P	0 - 30
2193323	Tebuconazole	18.8	Spike	P	0 - 30
2193323	Terbufos	28.8	Spike	P	0 - 30
2193323	Terbutylazine	31.5	Spike	F	0 - 30
LFB	Acetochlor	25.1	LCS	P	0 - 30
LFB	Alachlor	26.6	LCS	P	0 - 30
LFB	Ametryn	10.3	LCS	P	0 - 30
LFB	Atrazine	34.0	LCS	F	0 - 30
LFB	Atrazine Desethyl	39.3	LCS	F	0 - 30
LFB	Azinphos Methyl	8.54	LCS	P	0 - 30
LFB	Bromacil	38.2	LCS	F	0 - 30
LFB	Butylate	21.1	LCS	P	0 - 30
LFB	Carbophenothion	28.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	26.6	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	26.7	LCS	P	0 - 30
LFB	Cyanazine	29.5	LCS	P	0 - 30
LFB	Demeton	24.6	LCS	P	0 - 30
LFB	Diazinon	29.2	LCS	P	0 - 30
LFB	Dimethenamid	28.2	LCS	P	0 - 30
LFB	Disulfoton	36.7	LCS	F	0 - 30
LFB	Dithiopyr	27.2	LCS	P	0 - 30
LFB	EPTC	17.2	LCS	P	0 - 30
LFB	Ethion	25.6	LCS	P	0 - 30
LFB	Ethoprop	27.8	LCS	P	0 - 30
LFB	Fenamiphos	22.3	LCS	P	0 - 30
LFB	Fipronil	27.7	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P386897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Desulfinyl	28.4	LCS	P	0 - 30
LFB	Fipronil Sulfide	31.1	LCS	F	0 - 30
LFB	Fipronil Sulfone	27.7	LCS	P	0 - 30
LFB	Flumioxazin	25.3	LCS	P	0 - 30
LFB	Fonofos	26.6	LCS	P	0 - 30
LFB	Hexazinone	28.1	LCS	P	0 - 30
LFB	Imazalil	21.8	LCS	P	0 - 30
LFB	Malathion	25.8	LCS	P	0 - 30
LFB	Metalaxyl	28.4	LCS	P	0 - 30
LFB	Metolachlor	28.8	LCS	P	0 - 30
LFB	Metribuzin	27.8	LCS	P	0 - 30
LFB	Mevinphos	26.7	LCS	P	0 - 30
LFB	Molinate	20.9	LCS	P	0 - 30
LFB	Naled	17.8	LCS	P	0 - 30
LFB	Norflurazon	27.3	LCS	P	0 - 30
LFB	Oxadiazon	28.1	LCS	P	0 - 30
LFB	Parathion Ethyl	25.7	LCS	P	0 - 30
LFB	Parathion Methyl	28.9	LCS	P	0 - 30
LFB	Pendimethalin	35.7	LCS	F	0 - 30
LFB	Phorate	29.0	LCS	P	0 - 30
LFB	Prodiamine	33.9	LCS	F	0 - 30
LFB	Prometon	35.7	LCS	F	0 - 30
LFB	Prometryn	29.9	LCS	P	0 - 30
LFB	Pronamide	27.4	LCS	P	0 - 30
LFB	Propiconazole	24.2	LCS	P	0 - 30
LFB	Simazine	39.8	LCS	F	0 - 30
LFB	Sulfentrazone	27.4	LCS	P	0 - 30
LFB	Tebuconazole	23.4	LCS	P	0 - 30
LFB	Terbufos	26.4	LCS	P	0 - 30
LFB	Terbutylazine	33.9	LCS	F	0 - 30

Reference Method: EPA 8321B

Batch ID: P386980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194244	2,4-D	4.98	Spike	P	0 - 30
2194244	Acetaminophen	25.9	Spike	P	0 - 30
2194244	Acetamiprid	10.8	Spike	P	0 - 30
2194244	Afidopyropen	11.2	Spike	P	0 - 30
2194244	Bentazon	8.98	Spike	P	0 - 30
2194244	Benzovindiflupyr	9.50	Spike	P	0 - 30
2194244	Carbamazepine	6.49	Spike	P	0 - 30
2194244	Clothianidin	21.5	Spike	P	0 - 30
2194244	Dinotefuran	17.3	Spike	P	0 - 30
2194244	Diuron	10.8	Spike	P	0 - 30
2194244	Fenuron	11.2	Spike	P	0 - 30
2194244	Fluridone	14.2	Spike	P	0 - 30
2194244	Hydrocodone	13.2	Spike	P	0 - 30
2194244	Ibuprofen	3.95	Spike	P	0 - 30
2194244	Imazapyr	5.67	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P386980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194244	Imidacloprid	18.8	Spike	P	0 - 30
2194244	Linuron	9.25	Spike	P	0 - 30
2194244	Mandestrobin	17.4	Spike	P	0 - 30
2194244	MCP	1.91	Spike	P	0 - 30
2194244	Naproxen	6.44	Spike	P	0 - 30
2194244	Primidone	21.8	Spike	P	0 - 30
2194244	Pyraclostrobin	3.11	Spike	P	0 - 30
2194244	Thiamethoxam	17.2	Spike	P	0 - 30
2194244	Tolfenpyrad	19.0	Spike	P	0 - 30
2194244	Triclopyr	5.23	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P386984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194415	Acesulfame K	10.6	Spike	P	0 - 30
2194415	AMPA	0.198	Spike	P	0 - 30
2194415	Endothall	2.72	Spike	P	0 - 30
2194415	Glufosinate	13.6	Spike	P	0 - 30
2194415	Glyphosate	6.72	Spike	P	0 - 30
2194415	Sucralose	11.6	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P387009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194410	Color (true)	7.21	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P387126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194618	Total Alkalinity	3.90	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P387384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194410	TDS	2.51	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194618	Fluoride	0.921	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P387239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194433	Organic Carbon	1.17	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2194415
Field Sample ID: G4CE0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	48.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	51.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.4	P	30 - 160
EPA 8321B	Diuron-d6	68.7	P	30 - 160
EPA 8321B	Endothall-d6	141	P	30 - 160
EPA 8321B	Endothall-d6	141	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	40.8	P	30 - 160
EPA 8321B	Primidone-d5	78.4	P	30 - 160
EPA 8321B	Sucralose-d6	57.0	P	30 - 160
EPA 8321B	Sucralose-d6	57.0	P	30 - 160

Lab Sample ID: 2194417
Field Sample ID: G4CE0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	80.1	P	72 - 135
EPA 8270E	Terbufos-d10	94.7	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100828

Included Lab Sample IDs: 2194410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A100830

Included Lab Sample IDs: 2194410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.5	97.7	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100831

Included Lab Sample IDs: 2194412

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	96.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100836

Included Lab Sample IDs: 2194411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	94.8	96.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100873

Included Lab Sample IDs: 2194410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.2	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100873

Included Lab Sample IDs: 2194410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	96.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100874

Included Lab Sample IDs: 2194411

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100889

Included Lab Sample IDs: 2194416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	99.8	98.4	P/P	90 - 110
Manganese	102	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100889

Included Lab Sample IDs: 2194416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	99.8	99.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100901

Included Lab Sample IDs: 2194415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	61.0	60.0	P/P	60 - 160
Endothall	112	109	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100905

Included Lab Sample IDs: 2194415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	82.0	79.9	P/P	60 - 160
Glufosinate	92.8	99.7	P/P	60 - 160
Glyphosate	146	148	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A100921

Included Lab Sample IDs: 2194411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100938

Included Lab Sample IDs: 2194411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.8	98.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100956

Included Lab Sample IDs: 2194415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.2	106	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100958

Included Lab Sample IDs: 2194410

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100965

Included Lab Sample IDs: 2194416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.4	94.7	P/P	90 - 110
Antimony	107	106	P/P	90 - 110
Arsenic	94.3	94.6	P/P	90 - 110
Cadmium	98.5	98.3	P/P	90 - 110
Chromium	103	102	P/P	90 - 110
Copper	94.1	94.1	P/P	90 - 110
Lead	99.4	98.6	P/P	90 - 110
Nickel	95.6	95.7	P/P	90 - 110
Selenium	96.1	95.2	P/P	90 - 110
Silver	103	102	P/P	90 - 110
Thallium	97.3	96.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100992

Included Lab Sample IDs: 2194416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	102	99.6	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A100994

Included Lab Sample IDs: 2194417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.4		P	80 - 120
Alachlor	94.5		P	80 - 120
Ametryn	93.7		P	80 - 120
Atrazine	98.3		P	80 - 120
Atrazine Desethyl	92.9		P	80 - 120
Azinphos Methyl	97.0		P	80 - 120
Bromacil	98.8		P	80 - 120
Butylate	97.7		P	80 - 120
Carbophenothion	100		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	98.0		P	80 - 120
Cyanazine	104		P	80 - 120
Demeton	98.8		P	80 - 120
Diazinon	97.3		P	80 - 120
Dimethenamid	96.1		P	80 - 120
Disulfoton	101		P	80 - 120
Dithiopyr	97.4		P	80 - 120
EPTC	98.1		P	80 - 120
Ethion	97.1		P	80 - 120
Ethoprop	95.6		P	80 - 120
Fenamiphos	96.8		P	80 - 120
Fipronil	96.3		P	80 - 120
Fipronil Desulfinyl	97.8		P	80 - 120
Fipronil Sulfide	96.5		P	80 - 120
Fipronil Sulfone	95.3		P	80 - 120
Fonofos	99.2		P	80 - 120
Hexazinone	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A100994
Included Lab Sample IDs: 2194417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazalil	109		P	80 - 120
Malathion	92.6		P	80 - 120
Metalaxyl	99.7		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	95.4		P	80 - 120
Mevinphos	92.6		P	80 - 120
Molinate	96.3		P	80 - 120
Naled	95.4		P	80 - 120
Norflurazon	96.4		P	80 - 120
Oxadiazon	100		P	80 - 120
Parathion Ethyl	98.8		P	80 - 120
Parathion Methyl	95.9		P	80 - 120
Pendimethalin	99.8		P	80 - 120
Phorate	94.6		P	80 - 120
Prodiamine	111		P	80 - 120
Prometon	95.3		P	80 - 120
Prometryn	99.5		P	80 - 120
Pronamide	96.6		P	80 - 120
Propiconazole	101		P	80 - 120
Simazine	109		P	80 - 120
Sulfentrazone	91.5		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	97.4		P	80 - 120
Terbutylazine	99.0		P	80 - 120

Reference Method: EPA 8321B
Run ID: A101015
Included Lab Sample IDs: 2194415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	66.3	62.0	P/P	50 - 150
Acetaminophen	112	110	P/P	60 - 160
Acetamiprid	132	134	P/P	50 - 150
Afidopyropen	112	101	P/P	50 - 150
Bentazon	69.0	73.0	P/P	50 - 160
Benzovindiflupyr	96.5	106	P/P	50 - 150
Carbamazepine	104	110	P/P	60 - 150
Clothianidin	108	104	P/P	60 - 150
Dinotefuran	103	99.4	P/P	50 - 150
Diuron	122	119	P/P	60 - 160
Fenuron	123	126	P/P	60 - 150
Fluridone	131	128	P/P	60 - 160
Hydrocodone	108	113	P/P	60 - 150
Ibuprofen	113	118	P/P	50 - 160
Imazapyr	67.1	78.1	P/P	50 - 160
Imidacloprid	108	96.0	P/P	60 - 150
Linuron	121	125	P/P	60 - 150
Mandestrobin	111	113	P/P	50 - 150
MCPP	70.8	64.7	P/P	50 - 150
Naproxen	91.0	110	P/P	50 - 160
Primidone	109	89.7	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A101015

Included Lab Sample IDs: 2194415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	107	101	P/P	60 - 150
Thiamethoxam	105	105	P/P	50 - 150
Tolfenpyrad	101	105	P/P	60 - 150
Triclopyr	86.1	83.9	P/P	50 - 150

Reference Method: EPA 8270E

Run ID: A101078

Included Lab Sample IDs: 2194417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Flumioxazin	95.1		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101148

Included Lab Sample IDs: 2194411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	102	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							1.35	
EPA 200.7 Rev. 4.4	Iron	102		105	104	101			0.697
	Manganese	103		105	103	103			1.58
	Zinc	103		109	106	104			2.47
EPA 200.8 Rev. 5.4	Aluminum	93.5		92.9	92.9	94.7			0.0430
	Antimony	103		105	105	104			0.0302
	Arsenic	94.7		97.3	97.4	95.2			0.0480
	Beryllium	107		109	106	107			2.64
	Cadmium	99.0		101	102	101			0.827
	Chromium	105		107	107	105			0.159
	Copper	93.5		95.7	95.4	96.5			0.374
	Lead	100		102	102	103			0.0788
	Nickel	93.1		94.4	94.2	97.7			0.197
	Selenium	92.5		94.1	94.5	90.4			0.510
	Silver	101		100	100	100			0.114
	Thallium	99.3		104	105	104			0.536
EPA 300.0 Rev. 2.1	Chloride	99.1		97.7	96.6			0.680	
	Sulfate	97.6		95.8	96.1			0.689	
EPA 350.1 Rev. 2.0	Ammonia-N	94.0		95.1	93.4				1.41
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		105	101				1.71
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		99.2	98.2				0.797
EPA 365.1 Rev. 2.0	Total-P	104		108	108				0.109
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9		98.5	99.1				0.607
EPA 8270E	Acetochlor	99.1	77.0	67.3	88.8		25.1		27.5
	Alachlor	102	77.7	80.5	92.7		26.6		14.0
	Ametryn	101	91.5	147	150		10.3		2.35
	Atrazine	104	74.0	64.7	109		34.0		33.0
	Atrazine Desethyl	90.0	60.4	59.1	81.4		39.3		31.7
	Azinphos Methyl	109	99.9	80.4	89.0		8.54		10.1
	Bromacil	99.0	67.3	53.9	88.8		38.2		25.9
	Butylate	74.2	60.0	52.0	62.2		21.1		17.9
	Carbophenothion	146	109	97.7	120		28.4		20.5
	Chlorpyrifos Ethyl	142	108	93.0	117		26.6		22.9
	Chlorpyrifos Methyl	145	111	97.7	132		26.7		29.7
	Cyanazine	133	98.5	84.0	101		29.5		18.2
	Demeton	138	108	108	128		24.6		17.4
	Diazinon	96.3	71.8	66.0	88.4		29.2		29.1
	Dimethenamid	100	75.5	68.3	88.4		28.2		25.6
	Disulfoton	122	83.9	114	158		36.7		32.6
	Dithiopyr	87.1	66.2	46.6	48.2		27.2		3.48
	EPTC	68.1	57.3	49.5	59.3		17.2		17.9
	Ethion	117	90.5	78.2	93.4		25.6		17.6
	Ethoprop	134	101	104	141		27.8		29.9
	Fenamiphos	150	120	102	117		22.3		14.2
	Fipronil	104	78.9				27.7		29.2
	Fipronil Desulfinyl	103	77.5	65.0	87.7		28.4		25.1
	Fipronil Sulfide	96.6	70.6				31.1		29.0
	Fipronil Sulfone	116	87.9				27.7		25.8
	Flumioxazin	201	156	154	210		25.3		28.2
	Fonofos	120	92.1	91.0	118		26.6		25.9
	Hexazinone	102	76.8	66.2	88.6		28.1		26.6
	Imazalil	122	98.2	212	267		21.8		23.1
	Malathion	184	142	127	164		25.8		25.1
	Metalaxyl	96.2	72.2	65.3	86.8		28.4		28.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Metolachlor	89.0	66.6	56.5	75.0	28.8	28.1
	Metribuzin	112	84.5	80.3	106	27.8	27.8
	Mevinphos	123	93.8	108	155	26.7	35.3
	Molinate	80.2	65.0	63.1	79.1	20.9	22.5
	Naled	92.6	77.5	74.7	96.4	17.8	25.4
	Norflurazon	95.4	72.5	62.0	79.1	27.3	24.2
	Oxadiazon	89.8	67.6	45.1	55.2	28.1	20.1
	Parathion Ethyl	98.1	75.7	76.1	100	25.7	27.4
	Parathion Methyl	114	85.2	91.0	120	28.9	27.3
	Pendimethalin	60.8	42.4	51.3	71.6	35.7	33.0
	Phorate	115	85.6	109	82.4	29.0	27.3
	Prodiamine	52.0	37.0	50.2	69.0	33.9	31.6
	Prometon	90.6	63.2	70.9	96.5	35.7	30.5
	Prometryn	110	81.2	64.3	79.8	29.9	21.6
	Pronamide	121	92.0	83.0	127	27.4	41.7
	Propiconazole	89.7	70.4	50.0	80.8	24.2	25.6
	Simazine	85.5	57.1	51.2	69.4	39.8	30.2
	Sulfentrazone	96.1	72.9	54.3	87.9	27.4	28.9
	Tebuconazole	57.0	45.1			23.4	18.8
	Terbufos	120	91.9	99.6	133	26.4	28.8
	Terbuthylazine	99.4	70.6	67.8	93.2	33.9	31.5
EPA 8321B	2,4-D	115		111	117		4.98
	Acesulfame K	50.5		30.4	33.8		10.6
	Acetaminophen	70.4		71.2	92.4		25.9
	Acetamiprid	75.9		83.6	93.2		10.8
	Afidopyropen	56.7		59.3	66.3		11.2
	AMPA	41.0		72.1	72.4		0.198
	Bentazon	64.0		57.0	63.6		8.98
	Benzovindiflupyr	49.7		49.0	53.9		9.50
	Carbamazepine	58.3		61.3	65.4		6.49
	Clothianidin	76.1		79.2	98.3		21.5
	Dinotefuran	87.3		98.0	117		17.3
	Diuron	52.1		52.3	58.3		10.8
	Endothall	114					2.72
	Fenuron	86.0		82.4	92.1		11.2
	Fluridone	70.5		76.3	87.9		14.2
	Glufosinate	89.8		71.6	82.0		13.6
	Glyphosate	112		64.5	94.7		6.72
	Hydrocodone	73.4		72.0	82.2		13.2
	Ibuprofen	93.3		88.2	84.7		3.95
	Imazapyr	121		106	100		5.67
	Imidacloprid	96.9		134	162		18.8
	Linuron	55.4		58.8	64.5		9.25
	Mandestrobin	68.5		74.1	88.3		17.4
	MCPP	126		123	126		1.91
	Naproxen	61.8		57.2	53.6		6.44
	Primidone	74.1		78.7	97.9		21.8
	Pyraclostrobin	58.4		59.2	61.1		3.11
	Sucralose	106		51.5	58.2		11.6
	Thiamethoxam	75.4		91.1	108		17.2
	Tolfenpyrad	45.3		40.8	49.4		19.0
	Triclopyr	86.3		98.0	93.0		5.23
SM 2120 B-2011	Color (true)	98.2				7.21	
SM 2320 B-2011	Total Alkalinity	99.4				3.90	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 2540 C-2011	TDS				2.51	
SM 4500 F-C-2011	Fluoride	98.8	98.5 99.6			0.921
SM 5310 B-2011	Organic Carbon	99.6	99.4 101			1.17

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2194410
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2194416
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2194416
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2194410
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2194410
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2194411
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2194411
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2194411
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2194411
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2194412
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2194417
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2194415
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2194415
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2194410
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2194410
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2194416
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2194410
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2194410
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2194410
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2194411

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	09/04/2020			09/04/2020 15:07	Yen Ta	2194410
EPA 200.7 Rev. 4.4	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/09/2020 16:10	Betina Topolski	2194416
EPA 200.8 Rev. 5.4	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/14/2020 21:24	Alexander Thompson	2194416
	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/15/2020 22:05	Alexander Thompson	2194416
EPA 300.0 Rev. 2.1	09/04/2020			09/11/2020 07:00	Elliott Rodriguez	2194410
EPA 350.1 Rev. 2.0	09/04/2020			09/07/2020 18:59	Ping Hua	2194411
EPA 351.2 Rev. 2.0	09/04/2020	09/10/2020 09:57	Sima Feizi	09/11/2020 10:13	Elliott Rodriguez	2194411
EPA 353.2 Rev. 2.0	09/04/2020			09/09/2020 10:30	Beverly Y. Sanders	2194411
EPA 365.1 Rev. 2.0	09/04/2020	09/21/2020 14:08	Yen Ta	09/22/2020 16:09	Benjamin T. Nordmann	2194411
EPA 365.1 Rev. 2.0 dissolved	09/04/2020			09/04/2020 14:51	Samantha Davila	2194412
EPA 8270E	09/04/2020	09/04/2020 13:00	Rasheda Ghaffari	09/11/2020 18:52	Vandana T. Nagar	2194417
	09/04/2020	09/04/2020 13:00	Rasheda Ghaffari	09/16/2020 14:35	Vandana T. Nagar	2194417
EPA 8321B	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/08/2020 16:01	Rebecca Ware	2194415
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/09/2020 10:47	Rebecca Ware	2194415
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 10:09	Rebecca Ware	2194415
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 21:18	Rebecca Ware	2194415
	09/04/2020	09/08/2020 09:00	Hoor Shaik	09/16/2020 08:50	Juyoung Kim	2194415
SM 2120 B-2011	09/04/2020			09/04/2020 15:48	Samantha Davila	2194410
SM 2320 B-2011	09/04/2020			09/08/2020 17:41	Dale L. Simmons	2194410
SM 2340B	09/04/2020			09/09/2020 16:10	Betina Topolski	2194416
SM 2540 C-2011	09/04/2020			09/08/2020 15:01	Yijie Li	2194410
SM 2540 D-2011	09/04/2020			09/08/2020 15:26	Yijie Li	2194410
SM 4500 F-C-2011	09/04/2020			09/08/2020 17:41	Dale L. Simmons	2194410
SM 5310 B-2011	09/04/2020			09/11/2020 00:05	David Boose	2194411