

Chemical Analysis Report

SW-DIST-2020-03-18-01

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

Event Description: **SCI**
Request ID: **RQ-2020-03-16-54**
Customer: **SW-DIST**
Project ID: **SMP**

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

For additional information please contact
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Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 09-APR-2020 14:18

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

NON-CONFORMANCE REPORT INCLUDED

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: 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: Peace River abv Troublesome Creek

Collection Date/Time: 03/16/2020 12:20

Field ID: G3SW0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2166076	EPA 180.1 Rev. 2.0	Turbidity	5.3	A	NTU	P380988	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P381007	
		Sulfate	70		mg SO4/L	P381011	
	SM 2120 B-2011	Color (true)	54		PCU	P380919	
	SM 2320 B-2011	Total Alkalinity	106		mg CaCO3/L	P381411	
	SM 2540 C-2011	TDS	270		mg/L	P381562	
	SM 2540 D-2011	TSS	8	I	mg/L	P381569	RPD
	SM 4500 F-C-2011	Fluoride	0.89		mg F/L	P381455	
2166077	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P381232	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P381178	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.61		mg N/L	P381542	
	EPA 365.1 Rev. 2.0	Total-P	0.97		mg P/L	P381280	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P381023	
2166078	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.83	Q	mg P/L	P380889	
2166086	EPA 8321B	2,4-D	0.025		ug/L	P380867	
		Acesulfame K**	0.10	U	ug/L	P380873	MS
		AMPA**	0.42		ug/L	P380873	
		Acetaminophen**	0.0080	U	ug/L	P380867	
		Acetamiprid**	0.0020	U	ug/L	P380867	
		Endothall**	0.25	U	ug/L	P380873	
		Glufosinate**	0.10	U	ug/L	P380873	
		Glyphosate**	0.50		ug/L	P380873	
		Afidopyropen**	0.0020	UJ	ug/L	P380867	
		Bentazon	0.0091		ug/L	P380867	
		Sucralose**	1.7		ug/L	P380873	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380867	
		Carbamazepine**	0.0039		ug/L	P380867	
		Clothianidin**	0.038		ug/L	P380867	
		Dinotefuran**	0.0040	I	ug/L	P380867	
		Diuron	0.0020	I	ug/L	P380867	
		Fenuron	0.016	U	ug/L	P380867	
		Fluridone**	0.0018	I	ug/L	P380867	
		Imazapyr**	0.044		ug/L	P380867	
		Hydrocodone**	0.0020	U	ug/L	P380867	
		Ibuprofen**	0.020	U	ug/L	P380867	
		Imidacloprid	0.083		ug/L	P380867	
		Linuron	0.0040	U	ug/L	P380867	
		Mandestrobin**	0.0020	UJ	ug/L	P380867	
		MCPD	0.0020	U	ug/L	P380867	
		Naproxen**	0.0080	U	ug/L	P380867	
		Primidone**	0.010	I	ug/L	P380867	
		Pyraclostrobin**	0.0020	U	ug/L	P380867	
		Thiamethoxam**	0.081		ug/L	P380867	

Field ID: G3SW0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2166086	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P380867	
		Triclopyr**	0.0040	U	ug/L	P380867	
2166087	EPA 200.7 Rev. 4.4	Barium	12.7		ug/L	P381134	
		Calcium	38.2		mg/L	P381134	
		Iron	154		ug/L	P381134	
		Magnesium	17.0		mg/L	P381134	
		Potassium	5.88		mg/L	P381134	
		Sodium	30.3		mg/L	P381134	
		Zinc	5.00	U	ug/L	P381134	
	EPA 200.8 Rev. 5.4	Aluminum	105		ug/L	P381526	
		Antimony	0.17	I	ug/L	P381526	
		Arsenic	1.49		ug/L	P381526	
		Boron**	37.7		ug/L	P381526	
		Cadmium	0.036	I	ug/L	P381526	
		Chromium	0.40	U	ug/L	P381526	
		Copper	0.57	I	ug/L	P381526	
		Lead	0.20	U	ug/L	P381526	
		Nickel	0.89	I	ug/L	P381526	
		Selenium	0.39	I	ug/L	P381526	
		Silver	0.010	U	ug/L	P381526	
		Thallium	0.11	I	ug/L	P381526	
	SM 2340B	Hardness	165		mg/L	P381134	
2166088	EPA 8270E	Acetochlor	0.24	U	ng/L	P381063	
		Alachlor	0.24	U	ng/L	P381063	
		Ametryn	0.58	U	ng/L	P381063	
		Atrazine	3.8		ng/L	P381063	RPD
		Atrazine Desethyl	1.5	U	ng/L	P381063	RPD
		Azinphos Methyl	4.8	U	ng/L	P381063	RPD
		Bromacil	90		ng/L	P381063	
		Butylate	0.39	U	ng/L	P381063	
		Carbophenothion	0.48	U	ng/L	P381063	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P381063	
		Chlorpyrifos Methyl	0.048	U	ng/L	P381063	
		Cyanazine	3.1	U	ng/L	P381063	
		Demeton	6.8	U	ng/L	P381063	RPD
		Diazinon	0.12	U	ng/L	P381063	RPD
		Dimethenamid**	0.097	U	ng/L	P381063	
		Disulfoton	0.48	U	ng/L	P381063	
		Dithiopyr**	0.097	U	ng/L	P381063	
		EPTC	1.2	U	ng/L	P381063	
		Ethion	0.15	U	ng/L	P381063	
		Ethoprop	0.097	U	ng/L	P381063	
		Fenamiphos	0.48	U	ng/L	P381063	
		Fipronil	0.24	U	ng/L	P381063	
		Fipronil Desulfinyl**	0.12	U	ng/L	P381063	

Field ID: G3SW0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2166088	EPA 8270E	Fipronil Sulfide	0.15	U	ng/L	P381063	
		Fipronil Sulfone	0.15	U	ng/L	P381063	
		Flumioxazin**	1.7	U	ng/L	P381063	
		Fonofos	0.19	U	ng/L	P381063	
		Hexazinone	0.48	U	ng/L	P381063	
		Imazalil**	0.73	U	ng/L	P381063	RPD
		Malathion	0.34	U	ng/L	P381063	
		Metaxyl	6.7		ng/L	P381063	
		Metolachlor	0.48	U	ng/L	P381063	
		Metribuzin	3.1	U	ng/L	P381063	
		Mevinphos	0.48	U	ng/L	P381063	
		Molinate	0.29	U	ng/L	P381063	
		Naled**	1.5	U	ng/L	P381063	
		Norflurazon	90		ng/L	P381063	
		Oxadiazon**	0.37	IV	ng/L	P381063	
		Parathion Ethyl	0.24	U	ng/L	P381063	
		Parathion Methyl	0.53	U	ng/L	P381063	RPD
		Pendimethalin	0.97	U	ng/L	P381063	
		Phorate	0.24	U	ng/L	P381063	
		Prodiamine**	0.17	U	ng/L	P381063	
		Prometon	0.87	U	ng/L	P381063	
		Prometryn	0.19	U	ng/L	P381063	
		Pronamide**	0.15	U	ng/L	P381063	
		Propiconazole**	0.48	U	ng/L	P381063	
		Simazine	2.3		ng/L	P381063	
		Sulfentrazone**	1.8	I	ng/L	P381063	RPD
		Tebuconazole**	0.48	U	ng/L	P381063	
		Terbufos	0.097	U	ng/L	P381063	
		Terbuthylazine	0.41	U	ng/L	P381063	

Ref. Method and Comment:

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 8270E: V - Due to the presence of oxadiazon both in the Method Blank and the sample. MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. Re-extraction and re-analysis for oxadiazon was inconclusive due to persistent Method Blank contamination.

Non-Conformance Report

NCR ID: 8239

Event(s)

SW-DIST-2020-03-18-01

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Samples arrived late

Observation: Samples arrived one or more days late by FedEx, samples received within the acceptable temperature range.

Resolution: Samples will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 3/20/2020

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380988

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P381134

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: P381526

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: P381007

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381011

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381232

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: P381178

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381542

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381280

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380889

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

Reference Method: EPA 8270E
Batch ID: P381063

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	5.0	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	7.0	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: P381063

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
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.14	I	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: P380867

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
MCP	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P380867

Component	Result	Code	Units
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P380873

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: P380919

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P381411

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

Reference Method: SM 2540 C-2011
Batch ID: P381562

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P381569

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P381455

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P381023

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: P381134

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	102		P	85 - 115
Iron	106		P	85 - 115
Magnesium	101		P	85 - 115
Potassium	104		P	85 - 115
Sodium	104		P	85 - 115
Zinc	110		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P381526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	88.8		P	85 - 115
Antimony	90.0		P	85 - 115
Arsenic	92.5		P	85 - 115
Boron	92.0		P	85 - 115
Cadmium	91.0		P	85 - 115
Chromium	92.8		P	85 - 115
Copper	91.9		P	85 - 115
Lead	86.5		P	85 - 115
Nickel	90.5		P	85 - 115
Selenium	100		P	85 - 115
Silver	92.5		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381007

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381011

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381178

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.7		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P381542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P381280

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380889

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

Reference Method: EPA 8270E
 Batch ID: P381063

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	91.1	P/P	71 - 122
Alachlor	103	89.4	P/P	70 - 121
Ametryn	107	94.0	P/P	49 - 137
Atrazine	99.5	94.8	P/P	76 - 125
Atrazine Desethyl	98.4	82.8	P/P	31 - 144
Azinphos Methyl	107	92.6	P/P	67 - 150
Bromacil	84.6	76.5	P/P	36 - 121
Butylate	56.3	53.8	P/P	33 - 88.0
Carbophenothion	96.5	83.0	P/P	50 - 150
Chlorpyrifos Ethyl	102	92.2	P/P	73 - 117
Chlorpyrifos Methyl	103	92.4	P/P	68 - 121
Cyanazine	108	92.4	P/P	20 - 250
Demeton	99.6	91.6	P/P	30 - 123
Diazinon	98.5	89.0	P/P	70 - 128
Dimethenamid	102	89.5	P/P	66 - 122
Disulfoton	102	89.2	P/P	46 - 124
Dithiopyr	97.8	86.6	P/P	69 - 122
EPTC	56.4	52.3	P/P	31 - 90.0
Ethion	73.8	66.2	P/P	45 - 135
Ethoprop	100	92.0	P/P	59 - 118
Fenamiphos	97.9	83.4	P/P	30 - 136
Fipronil	96.5	82.3	P/P	57 - 127
Fipronil Desulfinyl	101	87.4	P/P	51 - 122
Fipronil Sulfide	92.8	81.7	P/P	57 - 119
Fipronil Sulfone	88.2	76.5	P/P	51 - 119
Flumioxazin	151	127	P/P	70 - 200
Fonofos	104	91.9	P/P	60 - 120
Hexazinone	113	97.4	P/P	57 - 142
Imazalil	97.0	95.6	P/P	50 - 150
Malathion	110	98.4	P/P	67 - 128
Metaxyl	107	92.7	P/P	21 - 148
Metolachlor	97.3	85.8	P/P	70 - 120
Metribuzin	137	123	P/P	20 - 253
Mevinphos	98.5	89.0	P/P	47 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P381063

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	74.2	69.8	P/P	41 - 99.0
Naled	83.4	75.6	P/P	40 - 130
Norflurazon	99.5	80.9	P/P	54 - 127
Oxadiazon	97.1	84.1	P/P	65 - 122
Parathion Ethyl	96.6	88.3	P/P	71 - 113
Parathion Methyl	109	100	P/P	73 - 129
Pendimethalin	98.6	87.2	P/P	63 - 130
Phorate	103	90.4	P/P	48 - 118
Prodiamine	57.6	52.9	P/P	20 - 144
Prometon	98.3	85.1	P/P	53 - 120
Prometryn	97.5	85.4	P/P	63 - 119
Pronamide	110	99.4	P/P	50 - 150
Propiconazole	90.5	76.6	P/P	50 - 150
Simazine	116	102	P/P	77 - 129
Sulfentrazone	90.7	76.7	P/P	50 - 150
Tebuconazole	57.8	47.9	P/P	20 - 118
Terbufos	104	93.8	P/P	61 - 119
Terbutylazine	108	95.6	P/P	75 - 119

Reference Method: EPA 8321B
Batch ID: P380867

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	30 - 160
Acetaminophen	89.8		P	30 - 160
Acetamiprid	90.8		P	30 - 160
Afidopyropen	92.0		P	30 - 160
Bentazon	94.0		P	30 - 160
Benzovindiflupyr	78.5		P	30 - 160
Carbamazepine	107		P	30 - 160
Clothianidin	88.1		P	30 - 160
Dinotefuran	91.8		P	30 - 160
Diuron	64.2		P	30 - 160
Fenuron	94.6		P	30 - 160
Fluridone	97.0		P	30 - 160
Hydrocodone	98.8		P	30 - 160
Ibuprofen	86.4		P	30 - 160
Imazapyr	92.4		P	30 - 160
Imidacloprid	114		P	30 - 160
Linuron	80.9		P	30 - 160
Mandestrobin	91.9		P	30 - 160
MCPP	145		P	30 - 160
Naproxen	65.4		P	30 - 160
Primidone	91.8		P	30 - 160
Pyraclostrobin	85.9		P	30 - 160
Thiamethoxam	106		P	30 - 160
Tolfenpyrad	54.1		P	30 - 160
Triclopyr	96.4		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P380873

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	88.7		P	40 - 150
AMPA	126		P	40 - 150
Endothall	124		P	40 - 150
Glufosinate	127		P	40 - 150
Glyphosate	110		P	40 - 140
Sucralose	110		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P380919

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P381411

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P381455

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	92 - 104

Reference Method: SM 5310 B-2011
Batch ID: P381023

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P381134

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166236	Barium	108		P	75 - 125
2166236	Iron	105		P	75 - 125
2166236	Magnesium	104		P	75 - 125
2166236	Potassium	107		P	75 - 125
2166236	Sodium	108		P	75 - 125
2166236	Zinc	110		P	75 - 125
2166313	Barium	108	108	P/P	80 - 120
2166313	Calcium	105		P	80 - 120
2166313	Iron	107	106	P/P	80 - 120
2166313	Magnesium	105		P	80 - 120
2166313	Potassium	103	101	P/P	80 - 120
2166313	Sodium	105		P	80 - 120
2166313	Zinc	111	111	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P381526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166079	Aluminum	84.2	85.4	P/P	80 - 120
2166079	Antimony	88.1	88.3	P/P	80 - 120
2166079	Arsenic	91.7	92.0	P/P	80 - 120
2166079	Boron	86.1	88.8	P/P	80 - 120
2166079	Cadmium	87.7	88.2	P/P	80 - 120
2166079	Chromium	90.7	90.9	P/P	80 - 120
2166079	Copper	89.3	89.1	P/P	80 - 120
2166079	Lead	86.4	87.1	P/P	80 - 120
2166079	Nickel	88.7	89.2	P/P	80 - 120
2166079	Selenium	97.0	98.5	P/P	80 - 120
2166079	Silver	87.5	89.5	P/P	80 - 120
2166079	Thallium	110	109	P/P	80 - 120
2166238	Aluminum	86.8		P	75 - 125
2166238	Antimony	89.9		P	75 - 125
2166238	Arsenic	93.7		P	75 - 125
2166238	Boron	93.4		P	75 - 125
2166238	Cadmium	89.7		P	75 - 125
2166238	Chromium	93.9		P	75 - 125
2166238	Copper	90.7		P	75 - 125
2166238	Lead	88.0		P	75 - 125
2166238	Nickel	91.7		P	75 - 125
2166238	Selenium	102		P	75 - 125
2166238	Silver	90.4		P	75 - 125
2166238	Thallium	109		P	75 - 125

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165875	Chloride	99.0		P	90 - 110
2166013	Chloride	102		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165875	Sulfate	99.5		P	90 - 110
2166013	Sulfate	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166077	Ammonia-N	98.1	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381178

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166266	Kjeldahl Nitrogen	97.8	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166260	NO2NO3-N	97.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165987	O-Phosphate-P	92.8	94.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P381063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166585	Acetochlor	83.6	110	P/P	68 - 126
2166585	Alachlor	79.8	98.4	P/P	66 - 125
2166585	Ametryn	87.8	98.1	P/P	31 - 182
2166585	Atrazine Desethyl	49.1	84.4	P/P	13 - 161
2166585	Azinphos Methyl	77.4	106	P/P	54 - 162
2166585	Bromacil	65.1	85.0	P/P	34 - 144
2166585	Butylate	66.2	77.2	P/P	16 - 92.0
2166585	Carbophenothion	60.2	72.1	P/P	50 - 150
2166585	Chlorpyrifos Ethyl	76.0	83.6	P/P	63 - 124
2166585	Chlorpyrifos Methyl	76.8	99.8	P/P	64 - 125
2166585	Cyanazine	73.5	94.0	P/P	13 - 245
2166585	Demeton	83.3	119	P/P	20 - 154
2166585	Diazinon	86.2	119	P/P	66 - 141
2166585	Dimethenamid	79.9	105	P/P	50 - 130
2166585	Disulfoton	78.2	95.3	P/P	55 - 130
2166585	Dithiopyr	77.9	103	P/P	66 - 122
2166585	EPTC	55.2	61.6	P/P	15 - 93.0
2166585	Ethion	38.4	42.7	P/P	15 - 148
2166585	Ethoprop	86.5	115	P/P	59 - 126
2166585	Fenamiphos	79.2	96.4	P/P	39 - 137
2166585	Fipronil	69.5	91.1	P/P	47 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P381063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166585	Fipronil Desulfinyl	71.4	96.2	P/P	43 - 121
2166585	Fipronil Sulfide	62.9	78.7	P/P	29 - 134
2166585	Fipronil Sulfone	63.0	82.0	P/P	19 - 131
2166585	Flumioxazin	105	135	P/P	70 - 200
2166585	Fonofos	84.1	102	P/P	62 - 128
2166585	Hexazinone	92.8	125	P/P	58 - 154
2166585	Imazalil	61.6	85.7	P/P	50 - 150
2166585	Malathion	79.3	95.0	P/P	54 - 135
2166585	Metalaxyl	82.7	108	P/P	46 - 136
2166585	Metolachlor	75.5	91.3	P/P	62 - 126
2166585	Metribuzin	107	141	P/P	44 - 277
2166585	Mevinphos	80.7	104	P/P	44 - 135
2166585	Molinate	73.5	87.5	P/P	31 - 104
2166585	Naled	75.6	93.5	P/P	40 - 130
2166585	Norflurazon	67.9	91.8	P/P	32 - 134
2166585	Oxadiazon	55.7	73.2	P/P	55 - 123
2166585	Parathion Ethyl	79.2	105	P/P	67 - 120
2166585	Parathion Methyl	91.7	130	P/P	70 - 140
2166585	Pendimethalin	82.7	108	P/P	59 - 145
2166585	Phorate	93.1	122	P/P	52 - 127
2166585	Prodiamine	41.1	49.2	P/P	11 - 157
2166585	Prometon	74.2	96.8	P/P	55 - 130
2166585	Prometryn	72.5	92.9	P/P	55 - 127
2166585	Pronamide	98.7	129	P/P	50 - 150
2166585	Propiconazole	65.3	83.7	P/P	50 - 150
2166585	Simazine	84.9	115	P/P	58 - 159
2166585	Sulfentrazone	61.3	85.7	P/P	50 - 150
2166585	Tebuconazole	34.5	40.2	P/P	10 - 122
2166585	Terbufos	84.9	109	P/P	65 - 131
2166585	Terbutylazine	85.0	111	P/P	63 - 131

Reference Method: EPA 8321B
Batch ID: P380867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165908	2,4-D	121	91.7	P/P	30 - 160
2165908	Acetaminophen	92.2	76.3	P/P	30 - 160
2165908	Acetamiprid	75.6	84.8	P/P	30 - 160
2165908	Afidopyropen	98.3	92.5	P/P	30 - 160
2165908	Bentazon	48.7	46.5	P/P	30 - 160
2165908	Benzovindiflupyr	69.0	63.8	P/P	30 - 160
2165908	Carbamazepine	85.6	75.2	P/P	30 - 160
2165908	Clothianidin	97.2	81.1	P/P	30 - 160
2165908	Dinotefuran	104	96.5	P/P	30 - 160
2165908	Diuron	64.8	60.3	P/P	30 - 160
2165908	Fenuron	74.1	73.8	P/P	30 - 160
2165908	Fluridone	87.8	82.5	P/P	30 - 160
2165908	Hydrocodone	97.1	87.1	P/P	30 - 160
2165908	Ibuprofen	72.7	72.1	P/P	30 - 160
2165908	Imazapyr	106	88.9	P/P	30 - 160
2165908	Imidacloprid	154	141	P/P	30 - 160
2165908	Linuron	55.6	48.7	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P380867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165908	Mandestrobin	74.8	77.9	P/P	30 - 160
2165908	MCP	140	146	P/P	30 - 160
2165908	Naproxen	81.4	78.6	P/P	30 - 160
2165908	Primidone	81.3	84.0	P/P	30 - 160
2165908	Pyraclostrobin	78.5	73.8	P/P	30 - 160
2165908	Thiamethoxam	110	122	P/P	30 - 160
2165908	Tolfenpyrad	53.4	51.2	P/P	30 - 160
2165908	Triclopyr	135	137	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P380873

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165999	Acesulfame K	16.2	17.0	F/F	40 - 150
2165999	AMPA	98.1	101	P/P	40 - 150
2165999	Endothall	130	128	P/P	40 - 150
2165999	Glufosinate	100	115	P/P	40 - 150
2165999	Glyphosate	112	120	P/P	40 - 140
2165999	Sucralose	95.9	94.3	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P381455

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165984	Fluoride	103	103	P/P	91 - 105

Reference Method: SM 5310 B-2011
Batch ID: P381023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166033	Organic Carbon	98.5	99.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166076	Turbidity	6.82	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P381134

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166313	Barium	0.248	Spike	P	0 - 20
2166313	Calcium	2.74	Spike	P	0 - 20
2166313	Iron	1.26	Spike	P	0 - 20
2166313	Magnesium	1.40	Spike	P	0 - 20
2166313	Potassium	1.57	Spike	P	0 - 20
2166313	Sodium	2.74	Spike	P	0 - 20
2166313	Zinc	0.126	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P381526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166079	Aluminum	1.14	Spike	P	0 - 20
2166079	Antimony	0.260	Spike	P	0 - 20
2166079	Arsenic	0.322	Spike	P	0 - 20
2166079	Boron	2.09	Spike	P	0 - 20
2166079	Cadmium	0.583	Spike	P	0 - 20
2166079	Chromium	0.185	Spike	P	0 - 20
2166079	Copper	0.280	Spike	P	0 - 20
2166079	Lead	0.822	Spike	P	0 - 20
2166079	Nickel	0.592	Spike	P	0 - 20
2166079	Selenium	1.62	Spike	P	0 - 20
2166079	Silver	2.19	Spike	P	0 - 20
2166079	Thallium	0.777	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166013	Chloride	0.662	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166013	Sulfate	0.645	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166077	Ammonia-N	0.250	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381178

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166266	Kjeldahl Nitrogen	5.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166260	NO2NO3-N	0.360	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166077	Total-P	0.530	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165987	O-Phosphate-P	2.13	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P381063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166585	Acetochlor	27.6	Spike	P	0 - 30
2166585	Alachlor	20.9	Spike	P	0 - 30
2166585	Ametryn	11.1	Spike	P	0 - 30
2166585	Atrazine	30.5	Spike	F	0 - 30
2166585	Atrazine Desethyl	40.4	Spike	F	0 - 30
2166585	Azinphos Methyl	30.7	Spike	F	0 - 30
2166585	Bromacil	26.5	Spike	P	0 - 30
2166585	Butylate	15.3	Spike	P	0 - 30
2166585	Carbophenothion	18.0	Spike	P	0 - 30
2166585	Chlorpyrifos Ethyl	9.49	Spike	P	0 - 30
2166585	Chlorpyrifos Methyl	26.1	Spike	P	0 - 30
2166585	Cyanazine	24.5	Spike	P	0 - 30
2166585	Demeton	35.1	Spike	F	0 - 30
2166585	Diazinon	32.1	Spike	F	0 - 30
2166585	Dimethenamid	26.9	Spike	P	0 - 30
2166585	Disulfoton	19.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P381063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166585	Dithiopyr	28.1	Spike	P	0 - 30
2166585	EPTC	11.0	Spike	P	0 - 30
2166585	Ethion	10.7	Spike	P	0 - 30
2166585	Ethoprop	28.0	Spike	P	0 - 30
2166585	Fenamiphos	19.6	Spike	P	0 - 30
2166585	Fipronil	26.9	Spike	P	0 - 30
2166585	Fipronil Desulfinyl	29.6	Spike	P	0 - 30
2166585	Fipronil Sulfide	22.3	Spike	P	0 - 30
2166585	Fipronil Sulfone	26.3	Spike	P	0 - 30
2166585	Flumioxazin	25.5	Spike	P	0 - 30
2166585	Fonofos	19.3	Spike	P	0 - 30
2166585	Hexazinone	29.8	Spike	P	0 - 30
2166585	Imazalil	32.6	Spike	F	0 - 30
2166585	Malathion	18.0	Spike	P	0 - 30
2166585	Metalaxyl	26.5	Spike	P	0 - 30
2166585	Metolachlor	19.0	Spike	P	0 - 30
2166585	Metribuzin	26.7	Spike	P	0 - 30
2166585	Mevinphos	25.6	Spike	P	0 - 30
2166585	Molinate	17.4	Spike	P	0 - 30
2166585	Naled	21.3	Spike	P	0 - 30
2166585	Norflurazon	29.9	Spike	P	0 - 30
2166585	Oxadiazon	23.2	Spike	P	0 - 30
2166585	Parathion Ethyl	27.9	Spike	P	0 - 30
2166585	Parathion Methyl	34.3	Spike	F	0 - 30
2166585	Pendimethalin	26.5	Spike	P	0 - 30
2166585	Phorate	26.8	Spike	P	0 - 30
2166585	Prodiamine	18.0	Spike	P	0 - 30
2166585	Prometon	26.5	Spike	P	0 - 30
2166585	Prometryn	24.7	Spike	P	0 - 30
2166585	Pronamide	26.5	Spike	P	0 - 30
2166585	Propiconazole	24.7	Spike	P	0 - 30
2166585	Simazine	30.0	Spike	P	0 - 30
2166585	Sulfentrazone	33.2	Spike	F	0 - 30
2166585	Tebuconazole	15.0	Spike	P	0 - 30
2166585	Terbufos	25.1	Spike	P	0 - 30
2166585	Terbuthylazine	26.6	Spike	P	0 - 30
LFB	Acetochlor	12.4	LCS	P	0 - 30
LFB	Alachlor	13.6	LCS	P	0 - 30
LFB	Ametryn	13.0	LCS	P	0 - 30
LFB	Atrazine	4.79	LCS	P	0 - 30
LFB	Atrazine Desethyl	17.3	LCS	P	0 - 30
LFB	Azinphos Methyl	14.8	LCS	P	0 - 30
LFB	Bromacil	10.0	LCS	P	0 - 30
LFB	Butylate	4.52	LCS	P	0 - 30
LFB	Carbophenothion	15.1	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	10.1	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	11.2	LCS	P	0 - 30
LFB	Cyanazine	16.0	LCS	P	0 - 30
LFB	Demeton	8.33	LCS	P	0 - 30
LFB	Diazinon	10.2	LCS	P	0 - 30
LFB	Dimethenamid	13.3	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P381063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Disulfoton	13.4	LCS	P	0 - 30
LFB	Dithiopyr	12.2	LCS	P	0 - 30
LFB	EPTC	7.46	LCS	P	0 - 30
LFB	Ethion	10.9	LCS	P	0 - 30
LFB	Ethoprop	8.55	LCS	P	0 - 30
LFB	Fenamiphos	16.0	LCS	P	0 - 30
LFB	Fipronil	15.8	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	14.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	12.7	LCS	P	0 - 30
LFB	Fipronil Sulfone	14.2	LCS	P	0 - 30
LFB	Flumioxazin	16.6	LCS	P	0 - 30
LFB	Fonofos	12.0	LCS	P	0 - 30
LFB	Hexazinone	15.1	LCS	P	0 - 30
LFB	Imazalil	1.51	LCS	P	0 - 30
LFB	Malathion	10.8	LCS	P	0 - 30
LFB	Metalaxyl	14.1	LCS	P	0 - 30
LFB	Metolachlor	12.5	LCS	P	0 - 30
LFB	Metribuzin	10.7	LCS	P	0 - 30
LFB	Mevinphos	10.1	LCS	P	0 - 30
LFB	Molinate	6.10	LCS	P	0 - 30
LFB	Naled	9.81	LCS	P	0 - 30
LFB	Norflurazon	20.6	LCS	P	0 - 30
LFB	Oxadiazon	14.4	LCS	P	0 - 30
LFB	Parathion Ethyl	9.01	LCS	P	0 - 30
LFB	Parathion Methyl	8.45	LCS	P	0 - 30
LFB	Pendimethalin	12.3	LCS	P	0 - 30
LFB	Phorate	13.0	LCS	P	0 - 30
LFB	Prodiamine	8.64	LCS	P	0 - 30
LFB	Prometon	14.4	LCS	P	0 - 30
LFB	Prometryn	13.2	LCS	P	0 - 30
LFB	Pronamide	9.72	LCS	P	0 - 30
LFB	Propiconazole	16.5	LCS	P	0 - 30
LFB	Simazine	12.2	LCS	P	0 - 30
LFB	Sulfentrazone	16.7	LCS	P	0 - 30
LFB	Tebuconazole	18.6	LCS	P	0 - 30
LFB	Terbufos	10.1	LCS	P	0 - 30
LFB	Terbutylazine	12.5	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165908	2,4-D	26.2	Spike	P	0 - 30
2165908	Acetaminophen	18.8	Spike	P	0 - 30
2165908	Acetamiprid	11.6	Spike	P	0 - 30
2165908	Afidopyropen	6.13	Spike	P	0 - 30
2165908	Bentazon	4.66	Spike	P	0 - 30
2165908	Benzovindiflupyr	7.50	Spike	P	0 - 30
2165908	Carbamazepine	13.0	Spike	P	0 - 30
2165908	Clothianidin	18.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P380867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165908	Dinotefuran	7.10	Spike	P	0 - 30
2165908	Diuron	7.21	Spike	P	0 - 30
2165908	Fenuron	0.257	Spike	P	0 - 30
2165908	Fluridone	6.18	Spike	P	0 - 30
2165908	Hydrocodone	10.8	Spike	P	0 - 30
2165908	Ibuprofen	0.811	Spike	P	0 - 30
2165908	Imazapyr	17.3	Spike	P	0 - 30
2165908	Imidacloprid	8.49	Spike	P	0 - 30
2165908	Linuron	13.3	Spike	P	0 - 30
2165908	Mandestrobin	4.07	Spike	P	0 - 30
2165908	MCPP	4.33	Spike	P	0 - 30
2165908	Naproxen	3.49	Spike	P	0 - 30
2165908	Primidone	3.33	Spike	P	0 - 30
2165908	Pyraclostrobin	6.20	Spike	P	0 - 30
2165908	Thiamethoxam	9.96	Spike	P	0 - 30
2165908	Tolfenpyrad	4.25	Spike	P	0 - 30
2165908	Triclopyr	1.22	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165999	Acesulfame K	4.94	Spike	P	0 - 30
2165999	AMPA	2.70	Spike	P	0 - 30
2165999	Endothall	1.59	Spike	P	0 - 30
2165999	Glufosinate	13.6	Spike	P	0 - 30
2165999	Glyphosate	7.14	Spike	P	0 - 30
2165999	Sucralose	1.77	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P380919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165941	Color (true)	5.58	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P381411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165984	Total Alkalinity	0.355	Sample	P	0 - 3.3

Reference Method: SM 2540 C-2011
Batch ID: P381562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165980	TDS	5.18	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 D-2011
Batch ID: P381569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165980	TSS	13.3	Sample	F	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P381455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165984	Fluoride	0.477	Spike	P	0 - 2.0

Reference Method: SM 5310 B-2011
Batch ID: P381023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166033	Organic Carbon	0.698	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2166086
Field Sample ID: G3SW0007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.8	P	30 - 160
EPA 8321B	Diuron-d6	73.5	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	137	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.3	P	30 - 160
EPA 8321B	Primidone-d5	87.0	P	30 - 160
EPA 8321B	Sucralose-d6	81.2	P	30 - 160

Lab Sample ID: 2166088
Field Sample ID: G3SW0007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	113	P	72 - 135
EPA 8270E	Terbufos-d10	111	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98259

Included Lab Sample IDs: 2166076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.9	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A98279

Included Lab Sample IDs: 2166078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.8	98.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98286

Included Lab Sample IDs: 2166086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	95.7	P/P	60 - 160

Reference Method: SM 2120 B-2011

Run ID: A98289

Included Lab Sample IDs: 2166076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A98314

Included Lab Sample IDs: 2166076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A98321

Included Lab Sample IDs: 2166086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.7	80.7	P/P	60 - 160
Endothall	126	126	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A98330

Included Lab Sample IDs: 2166077

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

Reference Method: EPA 8321B

Run ID: A98362

Included Lab Sample IDs: 2166086

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

Reference Method: EPA 8321B
Run ID: A98362
Included Lab Sample IDs: 2166086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	103	P/P	40 - 200
Glufosinate	127	119	P/P	40 - 200
Glyphosate	125	125	P/P	40 - 200

Reference Method: EPA 8321B
Run ID: A98394
Included Lab Sample IDs: 2166086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.6	90.0	P/P	50 - 150
Acetaminophen	102	97.5	P/P	60 - 160
Acetamiprid	90.7	78.5	P/P	50 - 150
Afidopyropen	106	89.2	P/P	50 - 150
Bentazon	114	110	P/P	50 - 160
Benzovindiflupyr	101	105	P/P	50 - 150
Carbamazepine	105	115	P/P	60 - 150
Clothianidin	110	98.0	P/P	60 - 150
Dinotefuran	89.5	92.2	P/P	50 - 150
Diuron	103	106	P/P	60 - 150
Fenuron	101	92.9	P/P	60 - 150
Fluridone	110	102	P/P	60 - 160
Hydrocodone	97.0	94.0	P/P	60 - 150
Ibuprofen	104	106	P/P	50 - 160
Imazapyr	92.0	81.0	P/P	50 - 150
Imidacloprid	94.3	97.8	P/P	60 - 150
Linuron	99.4	107	P/P	60 - 150
Mandestrobin	107	106	P/P	50 - 150
MCPP	91.7	87.2	P/P	50 - 150
Naproxen	103	57.9	P/P	50 - 160
Primidone	92.6	102	P/P	60 - 150
Pyraclostrobin	111	105	P/P	60 - 150
Thiamethoxam	90.5	93.7	P/P	50 - 150
Tolfenpyrad	107	106	P/P	60 - 150
Triclopyr	89.5	81.4	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A98413
Included Lab Sample IDs: 2166077

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A98422
Included Lab Sample IDs: 2166077

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A98484
Included Lab Sample IDs: 2166088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	100		P	80 - 120
Atrazine Desethyl	92.1		P	80 - 120
Azinphos Methyl	87.6		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	99.6		P	80 - 120
Carbophenothion	97.5		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	92.6		P	80 - 120
Demeton	98.3		P	80 - 120
Diazinon	101		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	101		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	99.2		P	80 - 120
Ethion	95.3		P	80 - 120
Ethoprop	99.9		P	80 - 120
Fenamiphos	95.4		P	80 - 120
Fipronil	98.0		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	97.7		P	80 - 120
Fipronil Sulfone	96.7		P	80 - 120
Flumioxazin	86.7		P	80 - 120
Fonofos	98.9		P	80 - 120
Hexazinone	100		P	80 - 120
Imazalil	98.9		P	80 - 120
Malathion	93.8		P	80 - 120
Metalaxyl	98.3		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	89.9		P	80 - 120
Mevinphos	98.0		P	80 - 120
Molinate	98.5		P	80 - 120
Naled	98.4		P	80 - 120
Norflurazon	97.6		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	94.6		P	80 - 120
Parathion Methyl	95.4		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	101		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	102		P	80 - 120
Propiconazole	93.8		P	80 - 120
Simazine	99.8		P	80 - 120
Sulfentrazone	94.8		P	80 - 120
Tebuconazole	98.7		P	80 - 120
Terbufos	99.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A98484
Included Lab Sample IDs: 2166088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Terbutylazine	100		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A98490
Included Lab Sample IDs: 2166076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A98495
Included Lab Sample IDs: 2166076

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A98501
Included Lab Sample IDs: 2166087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	105	P/P	90 - 110
Calcium	101	105	P/P	90 - 110
Iron	101	104	P/P	90 - 110
Magnesium	100	103	P/P	90 - 110
Potassium	99.2	103	P/P	90 - 110
Sodium	100	103	P/P	90 - 110
Zinc	102	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A98517
Included Lab Sample IDs: 2166077

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A98559
Included Lab Sample IDs: 2166077

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A98671
Included Lab Sample IDs: 2166087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	92.8	92.2	P/P	90 - 110
Antimony	92.2	91.5	P/P	90 - 110
Arsenic	94.3	95.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98671

Included Lab Sample IDs: 2166087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	96.9	97.1	P/P	90 - 110
Cadmium	92.8	92.0	P/P	90 - 110
Chromium	91.1	92.4	P/P	90 - 110
Copper	91.5	92.6	P/P	90 - 110
Lead	91.3	90.8	P/P	90 - 110
Nickel	91.8	92.6	P/P	90 - 110
Silver	93.9	95.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98679

Included Lab Sample IDs: 2166087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	97.4	97.1	P/P	90 - 110
Thallium	94.1	93.1	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							6.82	
EPA 200.7 Rev. 4.4	Barium	108		108	108	108			0.248
	Calcium	102		105					2.74
	Iron	106		107	106	105			1.26
	Magnesium	101		105	104				1.40
	Potassium	104		103	101	107			1.57
	Sodium	104		105	108				2.74
	Zinc	110		111	111	110			0.126
EPA 200.8 Rev. 5.4	Aluminum	88.8		84.2	85.4	86.8			1.14
	Antimony	90.0		88.1	88.3	89.9			0.260
	Arsenic	92.5		91.7	92.0	93.7			0.322
	Boron	92.0		86.1	88.8	93.4			2.09
	Cadmium	91.0		87.7	88.2	89.7			0.583
	Chromium	92.8		90.7	90.9	93.9			0.185
	Copper	91.9		89.3	89.1	90.7			0.280
	Lead	86.5		86.4	87.1	88.0			0.822
	Nickel	90.5		88.7	89.2	91.7			0.592
	Selenium	100		97.0	98.5	102			1.62
	Silver	92.5		87.5	89.5	90.4			2.19
	Thallium	104		110	109	109			0.777
EPA 300.0 Rev. 2.1	Chloride	101		102	99.0			0.662	
	Sulfate	101		98.6	99.5			0.645	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8		98.1	98.3				0.250
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.7		97.8	105				5.59
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5		97.2					0.360
EPA 365.1 Rev. 2.0	Total-P	101							0.530
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2		92.8	94.8				2.13
EPA 8270E	Acetochlor	103	91.1	83.6	110		12.4		27.6
	Alachlor	103	89.4	79.8	98.4		13.6		20.9
	Ametryn	107	94.0	87.8	98.1		13.0		11.1
	Atrazine	99.5	94.8				4.79		30.5
	Atrazine Desethyl	98.4	82.8	49.1	84.4		17.3		40.4
	Azinphos Methyl	107	92.6	77.4	106		14.8		30.7
	Bromacil	84.6	76.5	65.1	85.0		10.0		26.5
	Butylate	56.3	53.8	66.2	77.2		4.52		15.3
	Carbophenothion	96.5	83.0	60.2	72.1		15.1		18.0
	Chlorpyrifos Ethyl	102	92.2	76.0	83.6		10.1		9.49
	Chlorpyrifos Methyl	103	92.4	76.8	99.8		11.2		26.1
	Cyanazine	108	92.4	73.5	94.0		16.0		24.5
	Demeton	99.6	91.6	83.3	119		8.33		35.1
	Diazinon	98.5	89.0	86.2	119		10.2		32.1
	Dimethenamid	102	89.5	79.9	105		13.3		26.9
	Disulfoton	102	89.2	78.2	95.3		13.4		19.7
	Dithiopyr	97.8	86.6	77.9	103		12.2		28.1
	EPTC	56.4	52.3	55.2	61.6		7.46		11.0
	Ethion	73.8	66.2	38.4	42.7		10.9		10.7
	Ethoprop	100	92.0	86.5	115		8.55		28.0
	Fenamiphos	97.9	83.4	79.2	96.4		16.0		19.6
	Fipronil	96.5	82.3	69.5	91.1		15.8		26.9
	Fipronil Desulfinyl	101	87.4	71.4	96.2		14.0		29.6
	Fipronil Sulfide	92.8	81.7	62.9	78.7		12.7		22.3
	Fipronil Sulfone	88.2	76.5	63.0	82.0		14.2		26.3
	Flumioxazin	151	127	105	135		16.6		25.5
	Fonofos	104	91.9	84.1	102		12.0		19.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Hexazinone	113	97.4	92.8	125	15.1		29.8
	Imazalil	97.0	95.6	61.6	85.7	1.51		32.6
	Malathion	110	98.4	79.3	95.0	10.8		18.0
	Metalaxyl	107	92.7	82.7	108	14.1		26.5
	Metolachlor	97.3	85.8	75.5	91.3	12.5		19.0
	Metribuzin	137	123	107	141	10.7		26.7
	Mevinphos	98.5	89.0	80.7	104	10.1		25.6
	Molinate	74.2	69.8	73.5	87.5	6.10		17.4
	Naled	83.4	75.6	75.6	93.5	9.81		21.3
	Norflurazon	99.5	80.9	67.9	91.8	20.6		29.9
	Oxadiazon	97.1	84.1	55.7	73.2	14.4		23.2
	Parathion Ethyl	96.6	88.3	79.2	105	9.01		27.9
	Parathion Methyl	109	100	91.7	130	8.45		34.3
	Pendimethalin	98.6	87.2	82.7	108	12.3		26.5
	Phorate	103	90.4	93.1	122	13.0		26.8
	Prodiamine	57.6	52.9	41.1	49.2	8.64		18.0
	Prometon	98.3	85.1	74.2	96.8	14.4		26.5
	Prometryn	97.5	85.4	72.5	92.9	13.2		24.7
	Pronamide	110	99.4	98.7	129	9.72		26.5
	Propiconazole	90.5	76.6	65.3	83.7	16.5		24.7
	Simazine	116	102	84.9	115	12.2		30.0
	Sulfentrazone	90.7	76.7	61.3	85.7	16.7		33.2
	Tebuconazole	57.8	47.9	34.5	40.2	18.6		15.0
	Terbufos	104	93.8	84.9	109	10.1		25.1
	Terbutylazine	108	95.6	85.0	111	12.5		26.6
EPA 8321B	2,4-D	133		91.7	121			26.2
	Acesulfame K	88.7		16.2	17.0			4.94
	Acetaminophen	89.8		92.2	76.3			18.8
	Acetamiprid	90.8		84.8	75.6			11.6
	Afidopyropen	92.0		92.5	98.3			6.13
	AMPA	126		98.1	101			2.70
	Bentazon	94.0		46.5	48.7			4.66
	Benzovindiflupyr	78.5		63.8	69.0			7.50
	Carbamazepine	107		75.2	85.6			13.0
	Clothianidin	88.1		81.1	97.2			18.0
	Dinotefuran	91.8		104	96.5			7.10
	Diuron	64.2		60.3	64.8			7.21
	Endothall	124		130	128			1.59
	Fenuron	94.6		73.8	74.1			0.257
	Fluridone	97.0		82.5	87.8			6.18
	Glufosinate	127		100	115			13.6
	Glyphosate	110		112	120			7.14
	Hydrocodone	98.8		97.1	87.1			10.8
	Ibuprofen	86.4		72.1	72.7			0.811
	Imazapyr	92.4		88.9	106			17.3
	Imidacloprid	114		141	154			8.49
	Linuron	80.9		48.7	55.6			13.3
	Mandestrobin	91.9		77.9	74.8			4.07
	MCPP	145		146	140			4.33
	Naproxen	65.4		78.6	81.4			3.49
	Primidone	91.8		81.3	84.0			3.33
	Pyraclostrobin	85.9		73.8	78.5			6.20
	Sucralose	110		95.9	94.3			1.77
	Thiamethoxam	106		110	122			9.96

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Tolfenpyrad	54.1	51.2	53.4		4.25
	Triclopyr	96.4	137	135		1.22
SM 2120 B-2011	Color (true)	100			5.58	
SM 2320 B-2011	Total Alkalinity	103			0.355	
SM 2540 C-2011	TDS				5.18	
SM 2540 D-2011	TSS				13.3	
SM 4500 F-C-2011	Fluoride	98.8	103	103		0.477
SM 5310 B-2011	Organic Carbon	102	98.5	99.6		0.698

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2166076
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2166087
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2166087
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2166076
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2166076
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2166077
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2166077
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2166077
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2166077
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2166078
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2166088
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2166086
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2166076
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2166076
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2166087
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2166076
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2166076
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2166076
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2166077

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	03/18/2020			03/18/2020 11:33	Yen Ta	2166076
EPA 200.7 Rev. 4.4	03/18/2020	03/23/2020 14:25	Elliott D. Healy	03/27/2020 14:37	Vijayalakshmi Reddy	2166087
EPA 200.8 Rev. 5.4	03/18/2020	03/30/2020 16:05	Elliott D. Healy	04/03/2020 17:05	Justin Cutchin	2166087
	03/18/2020	03/30/2020 16:05	Elliott D. Healy	04/07/2020 00:14	Alexander Thompson	2166087
EPA 300.0 Rev. 2.1	03/18/2020			03/20/2020 01:39	Lipi Saha	2166076
EPA 350.1 Rev. 2.0	03/18/2020			03/24/2020 15:10	Ping Hua	2166077
EPA 351.2 Rev. 2.0	03/18/2020	03/24/2020 08:00	Sima Feizi	03/25/2020 09:01	Jhamieka S. Greenwood	2166077
EPA 353.2 Rev. 2.0	03/18/2020			03/30/2020 15:45	Lauren Lees	2166077
EPA 365.1 Rev. 2.0	03/18/2020	03/25/2020 14:20	Lipi Saha	03/31/2020 17:48	Benjamin T. Nordmann	2166077
EPA 365.1 Rev. 2.0 dissolved	03/18/2020			03/18/2020 16:53	Carlos Miranda	2166078
EPA 8270E	03/18/2020	03/20/2020 08:30	Rasheda Ghaffari	03/24/2020 17:42	Vandana T. Nagar	2166088
EPA 8321B	03/18/2020	03/18/2020 14:00	Mohammad Ghaffari	03/18/2020 19:23	Mohammad Ghaffari	2166086
	03/18/2020	03/18/2020 14:00	Mohammad Ghaffari	03/19/2020 18:31	Mohammad Ghaffari	2166086
	03/18/2020	03/18/2020 14:00	Mohammad Ghaffari	03/20/2020 15:55	Mohammad Ghaffari	2166086
	03/18/2020	03/19/2020 10:00	Hoor Shaik	03/21/2020 18:27	Juyoung Kim	2166086
SM 2120 B-2011	03/18/2020			03/18/2020 12:09	Madeline Gruver	2166076
SM 2320 B-2011	03/18/2020			03/27/2020 04:30	Dale L. Simmons	2166076
SM 2340B	03/18/2020			03/27/2020 14:37	Vijayalakshmi Reddy	2166087
SM 2540 C-2011	03/18/2020			03/20/2020 15:21	Yijie Li	2166076
SM 2540 D-2011	03/18/2020			03/20/2020 15:21	Yijie Li	2166076
SM 4500 F-C-2011	03/18/2020			03/27/2020 23:37	Dale L. Simmons	2166076
SM 5310 B-2011	03/18/2020			03/19/2020 23:03	Lauren Lees	2166077