Chemical Analysis Report

SO-DIST-2019-12-19-03

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

Event Description: **SMP : Peace River Above Horse Creek**
Request ID: **RQ-2019-12-02-47**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
2295 Victoria Ave. Suite 364
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 14-JAN-2020 09:31

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: PeaceRiver HorseCreek2 **Collection Date/Time: 12/18/2019 11:00**

Field ID: G3SD0154 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2145512	EPA 180.1 Rev. 2.0	Turbidity	5.2		NTU	P376171	
	EPA 300.0 Rev. 2.1	Chloride	27	A	mg Cl/L	P376608	
		Sulfate	62	A	mg SO4/L	P376609	
	SM 2120 B-2011	Color (true)	66	A	PCU	P376196	
	SM 2320 B-2011	Total Alkalinity	95		mg CaCO3/L	P376377	
	SM 2540 C-2011	TDS	256		mg/L	P376547	
	SM 2540 D-2011	TSS	8	I	mg/L	P376536	
	SM 4500 F-C-2011	Fluoride	0.74		mg F/L	P376381	
2145513	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P376468	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P376753	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.91		mg N/L	P376476	
	EPA 365.1 Rev. 2.0	Total-P	0.90		mg P/L	P376307	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P376455	
2145514	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.67		mg P/L	P376180	
2145521	EPA 8321B	2,4-D	0.020		ug/L	P376238	
		Acesulfame K**	0.10	U	ug/L	P376159	
		AMPA**	0.57		ug/L	P376159	
		Sucralose**	0.68		ug/L	P376159	
		Acetaminophen**	0.0080	U	ug/L	P376238	
		Acetamiprid**	0.0020	U	ug/L	P376238	
		Endothall**	0.25	U	ug/L	P376159	
		Glufosinate**	0.10	U	ug/L	P376159	
		Glyphosate**	0.42		ug/L	P376159	
		Afidopyropen**	0.0020	I J	ug/L	P376238	RPD
		Bentazon	0.0061		ug/L	P376238	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P376238	
		Carbamazepine**	0.0018	I	ug/L	P376238	
		Clothianidin**	0.038		ug/L	P376238	
		Dinotefuran**	0.0021	I	ug/L	P376238	
		Diuron	0.0089		ug/L	P376238	
		Fenuron	0.016	U	ug/L	P376238	
		Fluridone**	0.0010	I	ug/L	P376238	
		Imazapyr**	0.046		ug/L	P376238	
		Hydrocodone**	0.0020	U	ug/L	P376238	
		Ibuprofen**	0.020	U	ug/L	P376238	
		Imidacloprid	0.13		ug/L	P376238	
		Linuron	0.0040	U	ug/L	P376238	
		Mandestrobin**	0.0020	UJ	ug/L	P376238	
		MCPP	0.0020	U	ug/L	P376238	
		Naproxen**	0.0080	U	ug/L	P376238	
		Primidone**	0.0049	I	ug/L	P376238	
		Pyraclostrobin**	0.0020	U	ug/L	P376238	
		Thiamethoxam**	0.11		ug/L	P376238	

Field ID: G3SD0154 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2145521	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P376238	
		Triclopyr**	0.0040	U	ug/L	P376238	
2145522	EPA 200.7 Rev. 4.4	Barium	13.7		ug/L	P376573	
		Calcium	38.1		mg/L	P376573	
		Iron	380		ug/L	P376573	
		Magnesium	16.2		mg/L	P376573	
		Potassium	6.0		mg/L	P376573	
		Sodium	23.1		mg/L	P376573	
		Zinc	5.0	U	ug/L	P376573	
	EPA 200.8 Rev. 5.4	Aluminum	296		ug/L	P376573	
		Antimony	0.18	I	ug/L	P376573	
		Arsenic	1.44		ug/L	P376573	
		Boron**	42.9		ug/L	P376573	
		Cadmium	0.043	I	ug/L	P376573	
		Chromium	0.87	I	ug/L	P376573	
		Copper	0.66	I	ug/L	P376573	
		Lead	0.35	I	ug/L	P376573	
		Nickel	1.8	I	ug/L	P376573	
		Selenium	0.32	I	ug/L	P376573	
		Silver	0.010	U	ug/L	P376573	
		Thallium	0.10	U	ug/L	P376573	
2145523	EPA 8270E	Acetochlor	0.24	U	ng/L	P376287	
		Alachlor	0.24	U	ng/L	P376287	
		Ametryn	0.58	U	ng/L	P376287	
		Atrazine	5.9		ng/L	P376287	
		Atrazine Desethyl	1.5	U	ng/L	P376287	
		Azinphos Methyl	4.9	U	ng/L	P376287	
		Bromacil	210		ng/L	P376287	MS, RPD
		Butylate	0.39	U	ng/L	P376287	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P376287	
		Chlorpyrifos Methyl	0.097	U	ng/L	P376287	
		Cyanazine	3.2	U	ng/L	P376287	
		Demeton	6.8	U	ng/L	P376287	
		Diazinon	0.12	U	ng/L	P376287	
		Dimethenamid**	0.097	U	ng/L	P376287	
		Disulfoton	0.49	U	ng/L	P376287	
		Dithiopyr**	0.097	U	ng/L	P376287	
		EPTC	1.2	U	ng/L	P376287	
		Ethion	0.15	U	ng/L	P376287	
		Ethoprop	0.097	U	ng/L	P376287	
		Fenamiphos	0.49	U	ng/L	P376287	
		Fipronil	0.24	U	ng/L	P376287	
		Fipronil Desulfinyl**	0.12	U	ng/L	P376287	
		Fipronil Sulfide	0.15	U	ng/L	P376287	
		Fipronil Sulfone	0.15	U	ng/L	P376287	

Field ID: G3SD0154 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2145523	EPA 8270E	Fonofos	0.19	U	ng/L	P376287	
		Hexazinone	8.8		ng/L	P376287	
		Malathion	0.34	U	ng/L	P376287	
		Metalaxyl	21		ng/L	P376287	
		Metolachlor	1.7	I	ng/L	P376287	
		Metribuzin	0.73	UJ	ng/L	P376287	RPD
		Mevinphos	0.49	U	ng/L	P376287	
		Molinate	0.29	U	ng/L	P376287	
		Norflurazon	190		ng/L	P376287	
		Oxadiazon**	0.10	I	ng/L	P376287	MS
		Parathion Ethyl	0.24	U	ng/L	P376287	
		Parathion Methyl	0.54	U	ng/L	P376287	
		Pendimethalin	0.97	U	ng/L	P376287	
		Phorate	0.24	U	ng/L	P376287	
		Prodiamine**	0.17	UJ	ng/L	P376287	RPD
		Prometon	0.88	U	ng/L	P376287	
		Prometryn	0.19	U	ng/L	P376287	
		Simazine	2.9		ng/L	P376287	
		Tebuconazole**	0.49	UJ	ng/L	P376287	RPD
		Terbufos	0.097	U	ng/L	P376287	
		Terbuthylazine	0.41	U	ng/L	P376287	MS

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample.
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.

Sample Location: PeaceRiver HorseCreek2 **Collection Date/Time: 12/18/2019 11:03**

Field ID: G3SD0154_DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2145515	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P376171	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P376811	
		Sulfate	63		mg SO4/L	P376815	
	SM 2120 B-2011	Color (true)	66		PCU	P376196	
	SM 2320 B-2011	Total Alkalinity	93		mg CaCO3/L	P376377	
	SM 2540 C-2011	TDS	248		mg/L	P376547	
	SM 2540 D-2011	TSS	9	I	mg/L	P376536	
	SM 4500 F-C-2011	Fluoride	0.73		mg F/L	P376381	
2145516	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P376468	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P376753	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.92		mg N/L	P376476	
	EPA 365.1 Rev. 2.0	Total-P	0.90		mg P/L	P376307	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P376455	
2145517	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.67		mg P/L	P376180	
2145524	EPA 8270E	Acetochlor	0.25	U	ng/L	P376287	
		Alachlor	0.25	U	ng/L	P376287	
		Ametryn	0.60	U	ng/L	P376287	
		Atrazine	5.7		ng/L	P376287	
		Atrazine Desethyl	1.5	U	ng/L	P376287	
		Azinphos Methyl	5.0	U	ng/L	P376287	
		Bromacil	170		ng/L	P376287	MS, RPD
		Butylate	0.40	U	ng/L	P376287	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P376287	
		Chlorpyrifos Methyl	0.10	U	ng/L	P376287	
		Cyanazine	3.3	U	ng/L	P376287	
		Demeton	7.0	U	ng/L	P376287	
		Diazinon	0.13	U	ng/L	P376287	
		Dimethenamid**	0.10	U	ng/L	P376287	
		Disulfoton	0.50	U	ng/L	P376287	
		Dithiopyr**	0.10	U	ng/L	P376287	
		EPTC	1.3	U	ng/L	P376287	
		Ethion	0.15	U	ng/L	P376287	
		Ethoprop	0.10	U	ng/L	P376287	
		Fenamiphos	0.50	U	ng/L	P376287	
		Fipronil	0.25	U	ng/L	P376287	
		Fipronil Desulfinyl**	0.13	U	ng/L	P376287	
		Fipronil Sulfide	0.15	U	ng/L	P376287	
		Fipronil Sulfone	0.15	U	ng/L	P376287	
		Fonofos	0.20	U	ng/L	P376287	
		Hexazinone	7.7		ng/L	P376287	
		Malathion	0.35	U	ng/L	P376287	
		Metalaxyl	23		ng/L	P376287	
		Metolachlor	2.0	I	ng/L	P376287	

Field ID: G3SD0154_DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2145524	EPA 8270E	Metribuzin	0.76	UJ	ng/L	P376287	RPD
		Mevinphos	0.50	U	ng/L	P376287	
		Molinate	0.30	U	ng/L	P376287	
		Norflurazon	150		ng/L	P376287	
		Oxadiazon**	0.11	I	ng/L	P376287	MS
		Parathion Ethyl	0.25	U	ng/L	P376287	
		Parathion Methyl	0.55	U	ng/L	P376287	
		Pendimethalin	1.0	U	ng/L	P376287	
		Phorate	0.25	U	ng/L	P376287	
		Prodiamine**	0.18	UJ	ng/L	P376287	RPD
		Prometon	0.91	U	ng/L	P376287	
		Prometryn	0.20	U	ng/L	P376287	
		Simazine	3.0		ng/L	P376287	
		Tebuconazole**	0.50	UJ	ng/L	P376287	RPD
		Terbufos	0.10	U	ng/L	P376287	
		Terbuthylazine	0.43	U	ng/L	P376287	MS

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
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: P376171

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376573

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: P376573

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: P376608

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376609

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376811

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376815

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376468

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376753

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376476

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P376307

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376180

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

Reference Method: EPA 8270E
Batch ID: P376287

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
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P376287

Component	Result	Code	Units
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
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P376159

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P376238

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P376238

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

Reference Method: SM 2120 B-2011
Batch ID: P376196

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P376377

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

Reference Method: SM 2540 C-2011
Batch ID: P376547

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P376536

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P376381

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P376455

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: P376573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.6		P	85 - 115
Calcium	102		P	85 - 115
Iron	106		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	102		P	85 - 115
Sodium	103		P	85 - 115
Zinc	97.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.6		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	98.8		P	85 - 115
Boron	97.3		P	85 - 115
Cadmium	97.7		P	85 - 115
Chromium	98.8		P	85 - 115
Copper	97.7		P	85 - 115
Lead	101		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	98.3		P	85 - 115
Silver	106		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376608

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376609

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376811

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376815

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376468

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376753

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376476

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P376307

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: P376180

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

Reference Method: EPA 8270E
Batch ID: P376287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.2	96.7	P/P	69 - 122
Alachlor	95.1	96.3	P/P	71 - 120
Ametryn	108	100	P/P	47 - 138
Atrazine	94.9	98.7	P/P	74 - 124
Atrazine Desethyl	93.5	84.9	P/P	38 - 138
Azinphos Methyl	112	95.3	P/P	69 - 154
Bromacil	90.3	92.9	P/P	39 - 121
Butylate	53.4	55.4	P/P	27 - 87.0
Chlorpyrifos Ethyl	100	98.3	P/P	69 - 118
Chlorpyrifos Methyl	96.0	93.1	P/P	70 - 120
Cyanazine	111	93.9	P/P	20 - 250
Demeton	85.9	78.1	P/P	39 - 118
Diazinon	97.6	95.9	P/P	68 - 127
Dimethenamid	94.6	97.5	P/P	66 - 125
Disulfoton	93.5	88.8	P/P	52 - 126
Dithiopyr	93.4	97.4	P/P	67 - 127
EPTC	53.9	60.8	P/P	24 - 88.0
Ethion	90.3	101	P/P	51 - 132
Ethoprop	76.2	72.7	P/P	58 - 117
Fenamiphos	95.0	99.1	P/P	38 - 139
Fipronil	99.5	101	P/P	61 - 124
Fipronil Desulfinyl	94.6	101	P/P	47 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P376287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Sulfide	84.4	87.7	P/P	56 - 119
Fipronil Sulfone	83.6	92.4	P/P	50 - 117
Fonofos	82.6	76.3	P/P	60 - 121
Hexazinone	98.2	106	P/P	55 - 137
Malathion	85.6	104	P/P	66 - 126
Metalaxyl	93.7	99.4	P/P	33 - 140
Metolachlor	90.4	98.5	P/P	69 - 119
Metribuzin	132	93.4	P/P	31 - 238
Mevinphos	78.7	72.1	P/P	42 - 113
Molinate	66.1	66.5	P/P	32 - 96.0
Norflurazon	88.3	96.7	P/P	54 - 123
Oxadiazon	82.1	90.4	P/P	63 - 128
Parathion Ethyl	89.5	89.3	P/P	72 - 111
Parathion Methyl	101	93.3	P/P	74 - 126
Pendimethalin	88.0	91.6	P/P	61 - 131
Phorate	92.7	87.5	P/P	51 - 115
Prodiamine	45.6	103	P/P	38 - 144
Prometon	96.0	96.9	P/P	54 - 119
Prometryn	101	107	P/P	63 - 120
Simazine	94.4	97.6	P/P	75 - 126
Tebuconazole	50.9	89.7	P/P	20 - 119
Terbufos	93.6	85.8	P/P	64 - 116
Terbuthylazine	90.7	97.7	P/P	73 - 117

Reference Method: EPA 8321B
Batch ID: P376159

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	114		P	40 - 150
AMPA	96.6		P	40 - 150
Endothall	92.6		P	40 - 150
Glufosinate	92.9		P	40 - 150
Glyphosate	118		P	40 - 140
Sucralose	95.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P376238

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	74.2		P	30 - 160
Acetamiprid	79.0		P	40 - 160
Afidopyropen	77.2		P	40 - 160
Bentazon	66.7		P	30 - 160
Benzovindiflupyr	102		P	40 - 160
Carbamazepine	88.7		P	40 - 160
Clothianidin	85.9		P	40 - 160
Dinotefuran	76.7		P	40 - 160
Diuron	62.9		P	40 - 160
Fenuron	93.6		P	40 - 160
Fluridone	84.8		P	40 - 160
Hydrocodone	73.3		P	40 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P376238

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ibuprofen	68.9		P	30 - 160
Imazapyr	87.9		P	40 - 160
Imidacloprid	92.7		P	40 - 160
Linuron	50.1		P	40 - 160
Mandestrobin	86.8		P	40 - 160
MCPP	157		P	40 - 160
Naproxen	74.2		P	40 - 160
Primidone	70.3		P	40 - 160
Pyraclostrobin	94.6		P	30 - 160
Thiamethoxam	88.9		P	40 - 160
Tolfenpyrad	68.7		P	40 - 160
Triclopyr	98.1		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P376196

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

Reference Method: SM 2320 B-2011
Batch ID: P376377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P376381

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P376455

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145468	Barium	96.8	95.5	P/P	80 - 120
2145468	Iron	103	103	P/P	80 - 120
2145468	Magnesium	103		P	80 - 120
2145468	Potassium	99.1	101	P/P	80 - 120
2145468	Sodium	104		P	80 - 120
2145468	Zinc	96.3	95.1	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145468	Aluminum	95.3	98.0	P/P	80 - 120
2145468	Antimony	103	106	P/P	80 - 120
2145468	Arsenic	99.7	102	P/P	80 - 120
2145468	Boron	95.7	98.4	P/P	80 - 120
2145468	Cadmium	99.6	103	P/P	80 - 120
2145468	Chromium	97.8	99.1	P/P	80 - 120
2145468	Copper	92.2	94.6	P/P	80 - 120
2145468	Lead	102	105	P/P	80 - 120
2145468	Nickel	93.0	96.6	P/P	80 - 120
2145468	Selenium	96.2	98.9	P/P	80 - 120
2145468	Silver	106	106	P/P	80 - 120
2145468	Thallium	110	114	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376608

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145491	Chloride	98.4		P	90 - 110
2145512	Chloride	94.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376609

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145491	Sulfate	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145829	Chloride	99.7		P	90 - 110
2145968	Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145829	Sulfate	101		P	90 - 110
2145968	Sulfate	100		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145513	Ammonia-N	97.5	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145513	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145456	NO2NO3-N	99.4	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145335	O-Phosphate-P	99.8	96.1	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P376287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145488	Acetochlor	92.6	87.4	P/P	63 - 129
2145488	Alachlor	104	94.7	P/P	65 - 127
2145488	Ametryn	135	129	P/P	40 - 164
2145488	Azinphos Methyl	108	129	P/P	49 - 180
2145488	Bromacil	89.8	151	P/F	48 - 130
2145488	Butylate	50.9	52.9	P/P	10 - 94.0
2145488	Chlorpyrifos Ethyl	101	86.3	P/P	58 - 123
2145488	Chlorpyrifos Methyl	93.5	93.2	P/P	58 - 125
2145488	Cyanazine	105	102	P/P	24 - 253
2145488	Demeton	94.0	95.5	P/P	25 - 149
2145488	Diazinon	108	101	P/P	59 - 144
2145488	Dimethenamid	97.3	91.3	P/P	46 - 139
2145488	Disulfoton	90.9	90.3	P/P	54 - 132
2145488	Dithiopyr	88.5	80.7	P/P	64 - 130
2145488	EPTC	50.5	54.6	P/P	10 - 92.0
2145488	Ethion	92.5	90.6	P/P	30 - 148
2145488	Ethoprop	74.6	69.9	P/P	50 - 130
2145488	Fenamiphos	95.8	96.8	P/P	49 - 142
2145488	Fipronil	92.1	91.1	P/P	46 - 140
2145488	Fipronil Desulfinyl	98.3	98.0	P/P	30 - 121
2145488	Fipronil Sulfide	92.5	82.7	P/P	31 - 136
2145488	Fipronil Sulfone	86.9	81.9	P/P	16 - 136
2145488	Fonofos	90.9	90.5	P/P	55 - 129
2145488	Malathion	88.4	83.4	P/P	56 - 135
2145488	Metalaxyl	85.5	75.7	P/P	54 - 135
2145488	Mevinphos	92.4	93.1	P/P	33 - 131
2145488	Molinate	71.5	73.3	P/P	14 - 98.0
2145488	Oxadiazon	70.1	65.5	P/F	67 - 116

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P376287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145488	Parathion Ethyl	100	96.1	P/P	66 - 118
2145488	Parathion Methyl	112	113	P/P	64 - 136
2145488	Pendimethalin	100	93.8	P/P	59 - 144
2145488	Phorate	93.2	97.6	P/P	42 - 130
2145488	Prodiamine	60.2	54.3	P/P	42 - 148
2145488	Prometon	93.9	83.1	P/P	59 - 134
2145488	Prometryn	99.8	92.1	P/P	54 - 135
2145488	Tebuconazole	84.3	56.9	P/P	10 - 131
2145488	Terbufos	98.9	101	P/P	57 - 131
2145488	Terbuthylazine	12.4	8.61	F/F	68 - 125

Reference Method: EPA 8321B
Batch ID: P376159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145196	Acesulfame K	67.4	69.8	P/P	40 - 150
2145196	AMPA	108	116	P/P	40 - 150
2145196	Endothall	100	100	P/P	40 - 150
2145196	Glufosinate	88.9	105	P/P	40 - 150
2145196	Glyphosate	110	114	P/P	40 - 140
2145196	Sucralose	85.6	84.1	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P376238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145486	2,4-D	134	127	P/P	40 - 160
2145486	Acetaminophen	92.4	98.6	P/P	30 - 160
2145486	Acetamiprid	66.7	61.7	P/P	40 - 160
2145486	Afidopyropen	88.5	48.9	P/P	40 - 160
2145486	Bentazon	42.9	44.1	P/P	30 - 160
2145486	Benzovindiflupyr	104	96.9	P/P	40 - 160
2145486	Carbamazepine	78.1	68.2	P/P	40 - 160
2145486	Clothianidin	90.8	86.7	P/P	40 - 160
2145486	Dinotefuran	99.3	95.1	P/P	40 - 160
2145486	Diuron	59.8	56.3	P/P	40 - 160
2145486	Fenuron	76.8	80.8	P/P	40 - 160
2145486	Fluridone	78.1	75.2	P/P	40 - 160
2145486	Hydrocodone	100	81.7	P/P	40 - 160
2145486	Ibuprofen	61.0	62.0	P/P	30 - 160
2145486	Imidacloprid	149	145	P/P	40 - 160
2145486	Linuron	52.2	48.7	P/P	40 - 160
2145486	Mandestrobin	82.6	74.8	P/P	40 - 160
2145486	MCPP	147	139	P/P	40 - 160
2145486	Naproxen	66.7	60.7	P/P	40 - 160
2145486	Primidone	93.1	98.3	P/P	40 - 160
2145486	Pyraclostrobin	88.7	86.8	P/P	30 - 160
2145486	Thiamethoxam	104	106	P/P	40 - 160
2145486	Tolfenpyrad	61.5	62.8	P/P	40 - 160
2145486	Triclopyr	88.9	91.7	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P376381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145832	Fluoride	102	102	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P376455

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145834	Organic Carbon	95.8	97.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145333	Turbidity	4.06	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145468	Barium	1.27	Spike	P	0 - 20
2145468	Calcium	1.23	Spike	P	0 - 20
2145468	Iron	0.554	Spike	P	0 - 20
2145468	Magnesium	2.33	Spike	P	0 - 20
2145468	Potassium	1.30	Spike	P	0 - 20
2145468	Sodium	1.85	Spike	P	0 - 20
2145468	Zinc	1.30	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145468	Aluminum	2.81	Spike	P	0 - 20
2145468	Antimony	2.85	Spike	P	0 - 20
2145468	Arsenic	2.57	Spike	P	0 - 20
2145468	Boron	1.95	Spike	P	0 - 20
2145468	Cadmium	2.88	Spike	P	0 - 20
2145468	Chromium	1.31	Spike	P	0 - 20
2145468	Copper	2.47	Spike	P	0 - 20
2145468	Lead	2.64	Spike	P	0 - 20
2145468	Nickel	3.70	Spike	P	0 - 20
2145468	Selenium	2.73	Spike	P	0 - 20
2145468	Silver	0.0133	Spike	P	0 - 20
2145468	Thallium	3.31	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145512	Chloride	0.0460	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145512	Sulfate	0.548	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145829	Chloride	0.325	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145829	Sulfate	0.123	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145513	Ammonia-N	0.503	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145513	Kjeldahl Nitrogen	0.0647	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145456	NO2NO3-N	0.456	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P376307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145417	Total-P	0.375	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145335	O-Phosphate-P	2.91	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P376287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145488	Acetochlor	5.79	Spike	P	0 - 30
2145488	Alachlor	9.62	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P376287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145488	Ametryn	4.16	Spike	P	0 - 30
2145488	Atrazine	0.0330	Spike	P	0 - 30
2145488	Atrazine Desethyl	1.39	Spike	P	0 - 30
2145488	Azinphos Methyl	18.1	Spike	P	0 - 30
2145488	Bromacil	50.8	Spike	F	0 - 30
2145488	Butylate	3.94	Spike	P	0 - 30
2145488	Chlorpyrifos Ethyl	15.4	Spike	P	0 - 30
2145488	Chlorpyrifos Methyl	0.321	Spike	P	0 - 30
2145488	Cyanazine	2.92	Spike	P	0 - 30
2145488	Demeton	1.64	Spike	P	0 - 30
2145488	Diazinon	6.69	Spike	P	0 - 30
2145488	Dimethenamid	6.31	Spike	P	0 - 30
2145488	Disulfoton	0.608	Spike	P	0 - 30
2145488	Dithiopyr	9.17	Spike	P	0 - 30
2145488	EPTC	7.75	Spike	P	0 - 30
2145488	Ethion	2.03	Spike	P	0 - 30
2145488	Ethoprop	6.48	Spike	P	0 - 30
2145488	Fenamiphos	1.08	Spike	P	0 - 30
2145488	Fipronil	1.04	Spike	P	0 - 30
2145488	Fipronil Desulfinyl	0.317	Spike	P	0 - 30
2145488	Fipronil Sulfide	11.3	Spike	P	0 - 30
2145488	Fipronil Sulfone	5.93	Spike	P	0 - 30
2145488	Fonofos	0.452	Spike	P	0 - 30
2145488	Hexazinone	4.37	Spike	P	0 - 30
2145488	Malathion	5.74	Spike	P	0 - 30
2145488	Metalaxyl	7.66	Spike	P	0 - 30
2145488	Metolachlor	3.13	Spike	P	0 - 30
2145488	Metribuzin	3.16	Spike	P	0 - 30
2145488	Mevinphos	0.759	Spike	P	0 - 30
2145488	Molinate	2.47	Spike	P	0 - 30
2145488	Norflurazon	6.19	Spike	P	0 - 30
2145488	Oxadiazon	6.00	Spike	P	0 - 30
2145488	Parathion Ethyl	4.24	Spike	P	0 - 30
2145488	Parathion Methyl	0.878	Spike	P	0 - 30
2145488	Pendimethalin	6.78	Spike	P	0 - 30
2145488	Phorate	4.55	Spike	P	0 - 30
2145488	Prodiamine	10.2	Spike	P	0 - 30
2145488	Prometon	12.1	Spike	P	0 - 30
2145488	Prometryn	8.02	Spike	P	0 - 30
2145488	Simazine	0.375	Spike	P	0 - 30
2145488	Tebuconazole	38.8	Spike	F	0 - 30
2145488	Terbufos	1.89	Spike	P	0 - 30
2145488	Terbuthylazine	4.34	Spike	P	0 - 30
LFB	Acetochlor	1.53	LCS	P	0 - 30
LFB	Alachlor	1.18	LCS	P	0 - 30
LFB	Ametryn	7.78	LCS	P	0 - 30
LFB	Atrazine	3.91	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.65	LCS	P	0 - 30
LFB	Azinphos Methyl	15.7	LCS	P	0 - 30
LFB	Bromacil	2.85	LCS	P	0 - 30
LFB	Butylate	3.69	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P376287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorpyrifos Ethyl	1.66	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.05	LCS	P	0 - 30
LFB	Cyanazine	16.9	LCS	P	0 - 30
LFB	Demeton	9.49	LCS	P	0 - 30
LFB	Diazinon	1.81	LCS	P	0 - 30
LFB	Dimethenamid	3.04	LCS	P	0 - 30
LFB	Disulfoton	5.13	LCS	P	0 - 30
LFB	Dithiopyr	4.17	LCS	P	0 - 30
LFB	EPTC	12.2	LCS	P	0 - 30
LFB	Ethion	11.0	LCS	P	0 - 30
LFB	Ethoprop	4.67	LCS	P	0 - 30
LFB	Fenamiphos	4.13	LCS	P	0 - 30
LFB	Fipronil	1.19	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	6.18	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.80	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.98	LCS	P	0 - 30
LFB	Fonofos	7.93	LCS	P	0 - 30
LFB	Hexazinone	7.90	LCS	P	0 - 30
LFB	Malathion	19.7	LCS	P	0 - 30
LFB	Metalaxyl	5.86	LCS	P	0 - 30
LFB	Metolachlor	8.64	LCS	P	0 - 30
LFB	Metribuzin	34.5	LCS	F	0 - 30
LFB	Mevinphos	8.87	LCS	P	0 - 30
LFB	Molinate	0.583	LCS	P	0 - 30
LFB	Norflurazon	9.13	LCS	P	0 - 30
LFB	Oxadiazon	9.71	LCS	P	0 - 30
LFB	Parathion Ethyl	0.323	LCS	P	0 - 30
LFB	Parathion Methyl	7.88	LCS	P	0 - 30
LFB	Pendimethalin	3.98	LCS	P	0 - 30
LFB	Phorate	5.70	LCS	P	0 - 30
LFB	Prodiamine	77.3	LCS	F	0 - 30
LFB	Prometon	0.933	LCS	P	0 - 30
LFB	Prometryn	5.77	LCS	P	0 - 30
LFB	Simazine	3.35	LCS	P	0 - 30
LFB	Tebuconazole	55.3	LCS	F	0 - 30
LFB	Terbufos	8.68	LCS	P	0 - 30
LFB	Terbuthylazine	7.43	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P376159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145196	Acesulfame K	3.56	Spike	P	0 - 30
2145196	AMPA	6.95	Spike	P	0 - 30
2145196	Endothall	0.169	Spike	P	0 - 30
2145196	Glufosinate	16.6	Spike	P	0 - 30
2145196	Glyphosate	3.81	Spike	P	0 - 30
2145196	Sucralose	1.71	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P376238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145486	2,4-D	4.51	Spike	P	0 - 30
2145486	Acetaminophen	6.51	Spike	P	0 - 30
2145486	Acetamiprid	7.73	Spike	P	0 - 30
2145486	Afidopyropen	57.7	Spike	F	0 - 30
2145486	Bentazon	2.60	Spike	P	0 - 30
2145486	Benzovindiflupyr	7.14	Spike	P	0 - 30
2145486	Carbamazepine	13.4	Spike	P	0 - 30
2145486	Clothianidin	4.65	Spike	P	0 - 30
2145486	Dinotefuran	4.35	Spike	P	0 - 30
2145486	Diuron	5.60	Spike	P	0 - 30
2145486	Fenuron	5.20	Spike	P	0 - 30
2145486	Fluridone	1.98	Spike	P	0 - 30
2145486	Hydrocodone	20.3	Spike	P	0 - 30
2145486	Ibuprofen	1.70	Spike	P	0 - 30
2145486	Imazapyr	6.76	Spike	P	0 - 30
2145486	Imidacloprid	2.58	Spike	P	0 - 30
2145486	Linuron	6.91	Spike	P	0 - 30
2145486	Mandestrobin	9.90	Spike	P	0 - 30
2145486	MCPP	5.89	Spike	P	0 - 30
2145486	Naproxen	9.41	Spike	P	0 - 30
2145486	Primidone	5.43	Spike	P	0 - 30
2145486	Pyraclostrobin	2.11	Spike	P	0 - 30
2145486	Thiamethoxam	2.33	Spike	P	0 - 30
2145486	Tolfenpyrad	2.13	Spike	P	0 - 30
2145486	Triclopyr	3.17	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P376196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145512	Color (true)	1.95	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P376377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145832	Total Alkalinity	0.0199	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P376547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145251	TDS	5.24	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P376381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145832	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P376455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145834	Organic Carbon	0.835	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2145521
Field Sample ID: G3SD0154

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.2	P	30 - 160
EPA 8321B	Diuron-d6	79.2	P	30 - 160
EPA 8321B	Endothall-d6	49.7	P	30 - 160
EPA 8321B	Endothall-d6	49.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	131	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.9	P	30 - 160
EPA 8321B	Primidone-d5	95.6	P	30 - 160
EPA 8321B	Sucralose-d6	99.6	P	30 - 160
EPA 8321B	Sucralose-d6	99.6	P	30 - 160

Lab Sample ID: 2145523
Field Sample ID: G3SD0154

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	116	P	68 - 130
EPA 8270E	Terbufos-d10	113	P	61 - 136

Lab Sample ID: 2145524
Field Sample ID: G3SD0154_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	112	P	68 - 130
EPA 8270E	Terbufos-d10	103	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A96471
Included Lab Sample IDs: 2145512, 2145515

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A96476
Included Lab Sample IDs: 2145514, 2145517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.8	96.8	P/P	90 - 110

Reference Method: SM 2120 B-2011
Run ID: A96487
Included Lab Sample IDs: 2145512, 2145515

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

Reference Method: EPA 8321B
Run ID: A96502
Included Lab Sample IDs: 2145521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.7	91.5	P/P	60 - 160
Endothall	99.7	91.3	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A96534
Included Lab Sample IDs: 2145521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	99.1	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A96559
Included Lab Sample IDs: 2145512, 2145515

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

Reference Method: SM 4500 F-C-2011
Run ID: A96559
Included Lab Sample IDs: 2145512, 2145515

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

Reference Method: SM 5310 B-2011
Run ID: A96584
Included Lab Sample IDs: 2145513, 2145516

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A96586
Included Lab Sample IDs: 2145513, 2145516

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	97.7	P/P	90 - 110
Ammonia-N	97.7	98.9	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A96588
Included Lab Sample IDs: 2145521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	125	P/P	50 - 150
Acetaminophen	104	98.0	P/P	60 - 160
Acetamiprid	114	115	P/P	50 - 150
Afidopyropen	116	123	P/P	50 - 150
Bentazon	90.1	78.6	P/P	50 - 160
Benzovindiflupyr	119	121	P/P	50 - 150
Carbamazepine	98.3	111	P/P	60 - 150
Clothianidin	105	93.1	P/P	60 - 150
Dinotefuran	99.1	107	P/P	50 - 150
Diuron	111	97.6	P/P	60 - 150
Fenuron	114	111	P/P	60 - 150
Fluridone	116	116	P/P	60 - 160
Hydrocodone	113	110	P/P	60 - 150
Ibuprofen	120	134	P/P	50 - 160
Imazapyr	120	122	P/P	50 - 150
Imidacloprid	110	106	P/P	60 - 150
Linuron	101	97.1	P/P	60 - 150
Mandestrobin	120	118	P/P	50 - 150
MCPP	120	125	P/P	50 - 150
Naproxen	92.8	127	P/P	50 - 160
Primidone	101	116	P/P	60 - 150
Pyraclostrobin	125	127	P/P	60 - 150
Thiamethoxam	124	106	P/P	50 - 150
Tolfenpyrad	123	129	P/P	60 - 150
Triclopyr	125	116	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A96590
Included Lab Sample IDs: 2145513, 2145516

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96634
Included Lab Sample IDs: 2145512

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.6	P/P	90 - 110
Sulfate	101	99.6	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A96642
Included Lab Sample IDs: 2145513, 2145516

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

Reference Method: EPA 8321B
Run ID: A96650
Included Lab Sample IDs: 2145521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	88.7	93.6	P/P	60 - 160
Glufosinate	92.2	92.8	P/P	60 - 160
Glyphosate	114	101	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A96710
Included Lab Sample IDs: 2145522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.0	99.7	P/P	90 - 110
Calcium	101	102	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	102	104	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	99.6	101	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A96741
Included Lab Sample IDs: 2145523, 2145524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.7		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	97.2		P	80 - 120
Atrazine Desethyl	97.4		P	80 - 120
Azinphos Methyl	95.1		P	80 - 120
Butylate	105		P	80 - 120
Chlorpyrifos Ethyl	98.1		P	80 - 120
Chlorpyrifos Methyl	102		P	80 - 120
Cyanazine	90.2		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	101		P	80 - 120
Dimethenamid	101		P	80 - 120
Disulfoton	94.8		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	104		P	80 - 120
Ethion	99.7		P	80 - 120
Ethoprop	97.7		P	80 - 120
Fenamiphos	102		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	97.4		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A96741
Included Lab Sample IDs: 2145523, 2145524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Sulfone	99.9		P	80 - 120
Fonofos	97.7		P	80 - 120
Hexazinone	99.6		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	91.4		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	104		P	80 - 120
Oxadiazon	98.7		P	80 - 120
Parathion Ethyl	96.0		P	80 - 120
Parathion Methyl	98.2		P	80 - 120
Pendimethalin	95.8		P	80 - 120
Phorate	100		P	80 - 120
Prodiamine	96.2		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	90.9		P	80 - 120
Tebuconazole	93.5		P	80 - 120
Terbufos	98.8		P	80 - 120
Terbuthylazine	99.8		P	80 - 120

Reference Method: EPA 8270E
Run ID: A96744
Included Lab Sample IDs: 2145523, 2145524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	98.8		P	80 - 120
Norflurazon	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96767
Included Lab Sample IDs: 2145522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Boron	103	101	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	104	104	P/P	90 - 110
Copper	102	104	P/P	90 - 110
Lead	102	104	P/P	90 - 110
Nickel	103	104	P/P	90 - 110
Selenium	101	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96770
Included Lab Sample IDs: 2145515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96770
Included Lab Sample IDs: 2145515

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A96789
Included Lab Sample IDs: 2145513, 2145516

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	109	P/P	90 - 110
Kjeldahl Nitrogen	99.8	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96794
Included Lab Sample IDs: 2145522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	103	101	P/P	90 - 110
Thallium	95.2	92.6	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						4.06	
EPA 200.7 Rev. 4.4	Barium	98.6		96.8	95.5			1.27
	Calcium	102						1.23
	Iron	106		103	103			0.554
	Magnesium	102		103				2.33
	Potassium	102		99.1	101			1.30
	Sodium	103		104				1.85
	Zinc	97.3		96.3	95.1			1.30
EPA 200.8 Rev. 5.4	Aluminum	99.6		95.3	98.0			2.81
	Antimony	102		103	106			2.85
	Arsenic	98.8		99.7	102			2.57
	Boron	97.3		95.7	98.4			1.95
	Cadmium	97.7		99.6	103			2.88
	Chromium	98.8		97.8	99.1			1.31
	Copper	97.7		92.2	94.6			2.47
	Lead	101		102	105			2.64
	Nickel	99.4		93.0	96.6			3.70
	Selenium	98.3		96.2	98.9			2.73
	Silver	106		106	106			0.0133
	Thallium	107		110	114			3.31
EPA 300.0 Rev. 2.1	Chloride	99.5		94.4	98.4		0.0460	
	Chloride	103		99.7	99.3		0.325	
	Sulfate	98.7		96.3			0.548	
	Sulfate	103		101	100		0.123	
EPA 350.1 Rev. 2.0	Ammonia-N	98.7		97.5	96.8			0.503
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100		106	106			0.0647
EPA 353.2 Rev. 2.0	NO2NO3-N	101		99.4	98.8			0.456
EPA 365.1 Rev. 2.0	Total-P	104						0.375
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		99.8	96.1			2.91
EPA 8270E	Acetochlor	98.2	96.7	92.6	87.4	1.53		5.79
	Alachlor	95.1	96.3	104	94.7	1.18		9.62
	Ametryn	108	100	135	129	7.78		4.16
	Atrazine	94.9	98.7			3.91		0.0330
	Atrazine Desethyl	93.5	84.9			9.65		1.39
	Azinphos Methyl	112	95.3	108	129	15.7		18.1
	Bromacil	90.3	92.9	89.8	151	2.85		50.8
	Butylate	53.4	55.4	50.9	52.9	3.69		3.94
	Chlorpyrifos Ethyl	100	98.3	101	86.3	1.66		15.4
	Chlorpyrifos Methyl	96.0	93.1	93.5	93.2	3.05		0.321
	Cyanazine	111	93.9	105	102	16.9		2.92
	Demeton	85.9	78.1	94.0	95.5	9.49		1.64
	Diazinon	97.6	95.9	108	101	1.81		6.69
	Dimethenamid	94.6	97.5	97.3	91.3	3.04		6.31
	Disulfoton	93.5	88.8	90.9	90.3	5.13		0.608
	Dithiopyr	93.4	97.4	88.5	80.7	4.17		9.17
	EPTC	53.9	60.8	50.5	54.6	12.2		7.75
	Ethion	90.3	101	92.5	90.6	11.0		2.03
	Ethoprop	76.2	72.7	74.6	69.9	4.67		6.48
	Fenamiphos	95.0	99.1	95.8	96.8	4.13		1.08
	Fipronil	99.5	101	92.1	91.1	1.19		1.04
	Fipronil Desulfinyl	94.6	101	98.3	98.0	6.18		0.317
	Fipronil Sulfide	84.4	87.7	92.5	82.7	3.80		11.3
	Fipronil Sulfone	83.6	92.4	86.9	81.9	9.98		5.93
	Fonofos	82.6	76.3	90.9	90.5	7.93		0.452

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Hexazinone	98.2	106			7.90		4.37
	Malathion	85.6	104	88.4	83.4	19.7		5.74
	Metalaxyl	93.7	99.4	85.5	75.7	5.86		7.66
	Metolachlor	90.4	98.5			8.64		3.13
	Metribuzin	132	93.4			34.5		3.16
	Mevinphos	78.7	72.1	92.4	93.1	8.87		0.759
	Molinate	66.1	66.5	71.5	73.3	0.583		2.47
	Norflurazon	88.3	96.7			9.13		6.19
	Oxadiazon	82.1	90.4	70.1	65.5	9.71		6.00
	Parathion Ethyl	89.5	89.3	100	96.1	0.323		4.24
	Parathion Methyl	101	93.3	112	113	7.88		0.878
	Pendimethalin	88.0	91.6	100	93.8	3.98		6.78
	Phorate	92.7	87.5	93.2	97.6	5.70		4.55
	Prodiamine	45.6	103	60.2	54.3	77.3		10.2
	Prometon	96.0	96.9	93.9	83.1	0.933		12.1
	Prometryn	101	107	99.8	92.1	5.77		8.02
	Simazine	94.4	97.6			3.35		0.375
	Tebuconazole	50.9	89.7	84.3	56.9	55.3		38.8
	Terbufos	93.6	85.8	98.9	101	8.68		1.89
	Terbuthylazine	90.7	97.7	12.4	8.61	7.43		4.34
EPA 8321B	2,4-D	133		134	127			4.51
	Acesulfame K	114		67.4	69.8			3.56
	Acetaminophen	74.2		92.4	98.6			6.51
	Acetamiprid	79.0		66.7	61.7			7.73
	Afidopyropen	77.2		88.5	48.9			57.7
	AMPA	96.6		108	116			6.95
	Bentazon	66.7		42.9	44.1			2.60
	Benzovindiflupyr	102		104	96.9			7.14
	Carbamazepine	88.7		78.1	68.2			13.4
	Clothianidin	85.9		90.8	86.7			4.65
	Dinotefuran	76.7		99.3	95.1			4.35
	Diuron	62.9		59.8	56.3			5.60
	Endothall	92.6		100	100			0.169
	Fenuron	93.6		76.8	80.8			5.20
	Fluridone	84.8		78.1	75.2			1.98
	Glufosinate	92.9		88.9	105			16.6
	Glyphosate	118		110	114			3.81
	Hydrocodone	73.3		100	81.7			20.3
	Ibuprofen	68.9		61.0	62.0			1.70
	Imazapyr	87.9						6.76
	Imidacloprid	92.7		149	145			2.58
	Linuron	50.1		52.2	48.7			6.91
	Mandestrobin	86.8		82.6	74.8			9.90
	MCPP	157		147	139			5.89
	Naproxen	74.2		66.7	60.7			9.41
	Primidone	70.3		93.1	98.3			5.43
	Pyraclostrobin	94.6		88.7	86.8			2.11
	Sucralose	95.2		85.6	84.1			1.71
	Thiamethoxam	88.9		104	106			2.33
	Tolfenpyrad	68.7		61.5	62.8			2.13
	Triclopyr	98.1		88.9	91.7			3.17
SM 2120 B-2011	Color (true)	100					1.95	
SM 2320 B-2011	Total Alkalinity	104					0.0199	
SM 2540 C-2011	TDS						5.24	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 4500 F-C-2011	Fluoride	101	102	102			0.0
SM 5310 B-2011	Organic Carbon	97.6	95.8	97.4			0.835

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2145512, 2145515
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2145522
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2145522
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2145512, 2145515
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2145512, 2145515
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2145513, 2145516
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2145513, 2145516
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2145513, 2145516
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2145513, 2145516
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2145514, 2145517
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2145523, 2145524
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2145521
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2145521
SM 2120 B-2011 / E31780	True Color measured at 450 nm	2145512, 2145515
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2145512, 2145515
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2145512, 2145515
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2145512, 2145515
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2145512, 2145515
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2145513, 2145516

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	12/19/2019			12/19/2019 14:53	Yen Ta	2145512, 2145515
EPA 200.7 Rev. 4.4	12/19/2019	01/02/2020 13:10	Elliott D. Healy	01/06/2020 13:26	Betina Topolski	2145522
EPA 200.8 Rev. 5.4	12/19/2019	01/02/2020 13:10	Elliott D. Healy	01/09/2020 04:35	Alexander Thompson	2145522
	12/19/2019	01/02/2020 13:10	Elliott D. Healy	01/09/2020 23:47	Alexander Thompson	2145522
EPA 300.0 Rev. 2.1	12/19/2019			01/02/2020 16:37	Jhamieka S. Greenwood	2145512
	12/19/2019			01/08/2020 07:45	Jhamieka S. Greenwood	2145515
EPA 350.1 Rev. 2.0	12/19/2019			12/26/2019 18:49	Ping Hua	2145513
	12/19/2019			12/26/2019 19:14	Ping Hua	2145516
EPA 351.2 Rev. 2.0	12/19/2019	01/08/2020 13:00	Sima Feizi	01/09/2020 14:51	Virginia P. Brown	2145513
	12/19/2019	01/08/2020 13:00	Sima Feizi	01/09/2020 14:58	Virginia P. Brown	2145516
EPA 353.2 Rev. 2.0	12/19/2019			12/27/2019 12:08	Beverly Y. Sanders	2145513
	12/19/2019			12/27/2019 12:09	Beverly Y. Sanders	2145516
EPA 365.1 Rev. 2.0	12/19/2019	12/23/2019 11:37	Yen Ta	12/30/2019 12:12	Benjamin T. Nordmann	2145513
	12/19/2019	12/23/2019 11:37	Yen Ta	12/30/2019 12:13	Benjamin T. Nordmann	2145516
EPA 365.1 Rev. 2.0 dissolved	12/19/2019			12/19/2019 16:18	Samantha Davila	2145514
	12/19/2019			12/19/2019 16:19	Samantha Davila	2145517
EPA 8270E	12/19/2019	12/23/2019 08:00	Fe-Val Siddell	12/26/2019 23:45	Vandana T. Nagar	2145523
	12/19/2019	12/23/2019 08:00	Fe-Val Siddell	12/27/2019 00:11	Vandana T. Nagar	2145524
	12/19/2019	12/23/2019 08:00	Fe-Val Siddell	12/27/2019 18:46	Vandana T. Nagar	2145523
	12/19/2019	12/23/2019 08:00	Fe-Val Siddell	12/27/2019 19:13	Vandana T. Nagar	2145524
EPA 8321B	12/19/2019	12/19/2019 16:00	Rebecca Ware	12/19/2019 21:47	Rebecca Ware	2145521
	12/19/2019	12/19/2019 16:00	Rebecca Ware	12/20/2019 19:15	Rebecca Ware	2145521
	12/19/2019	12/19/2019 16:00	Rebecca Ware	12/24/2019 08:53	Mohammad Ghaffari	2145521
	12/19/2019	12/23/2019 10:00	Hoor Shaik	12/28/2019 10:39	Juyoung Kim	2145521
SM 2120 B-2011	12/19/2019			12/19/2019 17:21	Madeline Funaro	2145512, 2145515
SM 2320 B-2011	12/19/2019			12/24/2019 21:29	Dale L. Simmons	2145512
	12/19/2019			12/24/2019 21:40	Dale L. Simmons	2145515
SM 2540 C-2011	12/19/2019			12/23/2019 16:45	Yijie Li	2145512, 2145515
SM 2540 D-2011	12/19/2019			12/23/2019 16:45	Yijie Li	2145512, 2145515
SM 4500 F-C-2011	12/19/2019			12/24/2019 21:29	Dale L. Simmons	2145512
	12/19/2019			12/24/2019 21:40	Dale L. Simmons	2145515
SM 5310 B-2011	12/19/2019			12/27/2019 00:46	Madeline Funaro	2145513
	12/19/2019			12/27/2019 00:59	Madeline Funaro	2145516