Chemical Analysis Report

NE-DIST-2019-04-12-02

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

Event Description: **LSJR East**
Request ID: **RQ-2019-04-08-16**
Customer: **NE-DIST**
Project ID: **SMP**

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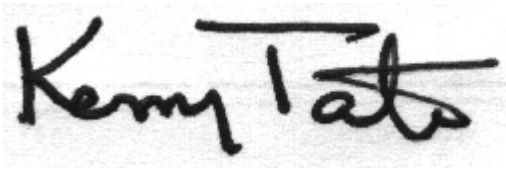
Date Certified: 03-MAY-2019 07:02



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: Miller Creek at Atlantic Blvd. **Collection Date/Time: 04/11/2019 15:50**

Field ID: G2NE0005 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077845	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P362074	
	EPA 300.0	Bromide	14		mg Br/L	P362586	
	SM 2320 B-97	Total Alkalinity	77		mg CaCO3/L	P362570	
	SM 2540 D-97	TSS	8	I	mg/L	P362659	
	SM 4500 F-C-97	Fluoride	0.33		mg F/L	P362722	
2077846	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P362566	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P362583	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P362497	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P362432	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P362315	
2077847	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.060		mg P/L	P362057	
2077894	EPA 8321B	2,4-D	0.0050	I	ug/L	P361970	
		Acesulfame K**	0.10	U	ug/L	P362188	MS
		AMPA**	1.0	U	ug/L	P362188	
		Sucralose**	0.66		ug/L	P362188	
		Endothall**	0.25	U	ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Glufosinate**	1.0	U	ug/L	P362188	
		Glyphosate**	1.0	U	ug/L	P362188	
		Bentazon	0.0084		ug/L	P361970	
		Carbamazepine**	0.0015	I	ug/L	P361970	
		Diuron	0.0083		ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	0.0033		ug/L	P361970	
		Imazapyr**	0.060		ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.031		ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0020	U	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.0040	U	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	

Ref. Method and Comment:
EPA 300.0: Bromide: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
EPA 8321B: MDL elevated due to matrix interference.

Sample Location: Puncheon above Point Meadows Dr. **Collection Date/Time: 04/11/2019 10:15**

Field ID: G2NE1181 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077848	EPA 180.1 Rev. 2.0	Turbidity	7.8		NTU	P362074	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P362382	
		Sulfate	46		mg SO4/L	P362384	
	SM 2120 B	Color (true)	68		PCU	P362066	
	SM 2320 B-97	Total Alkalinity	62		mg CaCO3/L	P362570	
	SM 2540 C-97	TDS	238	A	mg/L	P362665	
	SM 2540 D-97	TSS	10	IA	mg/L	P362656	
	SM 4500 F-C-97	Fluoride	0.076	I	mg F/L	P362575	
2077849	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P362566	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P362584	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P362497	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P362432	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P362315	
2077850	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P362057	
2077895	EPA 8321B	2,4-D	0.019		ug/L	P361970	
		Acesulfame K**	0.21	I	ug/L	P362188	MS
		AMPA**	0.21	I	ug/L	P362188	
		Sucralose**	0.26		ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Endothall**	0.25	U	ug/L	P362188	
		Glufosinate**	0.10	U	ug/L	P362188	
		Bentazon	0.056		ug/L	P361970	
		Glyphosate**	0.27	I	ug/L	P362188	
		Carbamazepine**	8.0E-04	U	ug/L	P361970	
		Diuron	0.0093		ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	0.054		ug/L	P361970	
		Imazapyr**	0.20		ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.0063	I	ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0072	I	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.0040	U	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	
2077897	EPA 200.7 Rev. 4.4	Barium	34.3		ug/L	P362242	
		Calcium	40.5		mg/L	P362242	
		Iron	280		ug/L	P362242	
		Magnesium	8.15		mg/L	P362242	
		Potassium	2.4		mg/L	P362242	
		Sodium	17.6		mg/L	P362242	

Field ID: G2NE1181 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077897	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P362242	
	EPA 200.8 Rev. 5.4	Aluminum	321		ug/L	P362242	
		Antimony	0.065	I	ug/L	P362242	
		Arsenic	0.72		ug/L	P362242	
		Boron**	30.0		ug/L	P362242	
		Cadmium	0.020	U	ug/L	P362242	
		Chromium	0.49	I	ug/L	P362242	
		Copper	3.48		ug/L	P362242	
		Lead	0.25	I	ug/L	P362242	
		Nickel	0.50	U	ug/L	P362242	
		Selenium	0.20	U	ug/L	P362242	
		Silver	0.010	U	ug/L	P362242	
		Thallium	0.10	U	ug/L	P362242	
2077898	EPA 8270D	Acetochlor	0.24	U	ng/L	P362087	
		Alachlor	0.24	U	ng/L	P362087	
		Ametryn	0.56	U	ng/L	P362087	
		Atrazine	52		ng/L	P362087	
		Atrazine Desethyl	9.9		ng/L	P362087	
		Azinphos Methyl	4.7	U	ng/L	P362087	
		Bromacil	0.47	U	ng/L	P362087	
		Butylate	0.38	U	ng/L	P362087	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P362087	
		Chlorpyrifos Methyl	0.094	U	ng/L	P362087	
		Cyanazine	3.1	U	ng/L	P362087	
		Demeton	6.6	U	ng/L	P362087	
		Diazinon	0.12	U	ng/L	P362087	
		Dimethenamid**	0.094	U	ng/L	P362087	
		Disulfoton	0.47	U	ng/L	P362087	
		Dithiopyr**	0.30	I	ng/L	P362087	
		EPTC	1.2	U	ng/L	P362087	RPD
		Ethion	0.14	UJ	ng/L	P362087	LCS
		Ethoprop	0.094	U	ng/L	P362087	
		Fenamiphos	0.47	U	ng/L	P362087	
		Fipronil	0.54	I	ng/L	P362087	
		Fipronil Desulfinyl**	0.58		ng/L	P362087	
		Fipronil Sulfide	1.4		ng/L	P362087	
		Fipronil Sulfone	2.5		ng/L	P362087	
		Fonofos	0.19	U	ng/L	P362087	
		Hexazinone	0.47	U	ng/L	P362087	
		Malathion	0.33	U	ng/L	P362087	
		Metalaxyl	0.28	U	ng/L	P362087	
		Metolachlor	0.47	U	ng/L	P362087	
		Metribuzin	0.71	UJ	ng/L	P362087	LCS, MS
		Mevinphos	0.47	U	ng/L	P362087	
		Molinate	0.28	U	ng/L	P362087	

Field ID: G2NE1181 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077898	EPA 8270D	Norflurazon	0.47	U	ng/L	P362087	
		Oxadiazon**	7.5		ng/L	P362087	
		Parathion Ethyl	0.24	U	ng/L	P362087	
		Parathion Methyl	0.52	U	ng/L	P362087	
		Pendimethalin	3.5	I	ng/L	P362087	MS
		Phorate	0.24	U	ng/L	P362087	
		Prodiamine**	0.16	UJ	ng/L	P362087	LCS, MS
		Prometon	0.85	U	ng/L	P362087	
		Prometryn	0.19	U	ng/L	P362087	
		Simazine	19		ng/L	P362087	
		Tebuconazole**	0.47	U	ng/L	P362087	
		Terbufos	0.094	U	ng/L	P362087	
		Terbuthylazine	0.40	U	ng/L	P362087	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270D: MS accuracy for metolachlor not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Strawberry Cr at End of Bowlan Rd. **Collection Date/Time: 04/11/2019 14:20**

Field ID: 20030579 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077851	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P362074	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P362382	
		Sulfate	29		mg SO4/L	P362384	
	SM 2120 B	Color (true)	37		PCU	P362066	
	SM 2320 B-97	Total Alkalinity	75		mg CaCO3/L	P362570	
	SM 2540 C-97	TDS	209		mg/L	P362665	
	SM 2540 D-97	TSS	3	I	mg/L	P362656	
	SM 4500 F-C-97	Fluoride	0.060	I	mg F/L	P362575	
2077853	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P362710	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P362584	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.49		mg N/L	P362497	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P362432	
	SM 5310 B-00	Organic Carbon	8.1		mg C/L	P362315	
2077855	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P362057	

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

Sample Location: Newcastle Cr @ Ft Caroline Hills Rd **Collection Date/Time: 04/11/2019 15:10**

Field ID: 20030872 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077852	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P362075	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P362382	
		Sulfate	33		mg SO4/L	P362384	
	SM 2120 B	Color (true)	11		PCU	P362066	
	SM 2320 B-97	Total Alkalinity	34		mg CaCO3/L	P362570	
	SM 2540 C-97	TDS	143		mg/L	P362665	
	SM 2540 D-97	TSS	2	I	mg/L	P362656	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P362575	
2077854	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P362710	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P362584	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.30		mg N/L	P362497	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P362432	
	SM 5310 B-00	Organic Carbon	2.7		mg C/L	P362315	
2077856	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P362058	

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362074

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362075

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362242

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: P362242

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
Batch ID: P362586

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362382

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: P362384

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362566

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362710

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362583

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362584

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362497

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362432

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362057

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362058

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P362087

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
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: P361970

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P361970

Component	Result	Code	Units
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P362188

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
Batch ID: P362066

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P362570

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

Reference Method: SM 2540 C-97
Batch ID: P362665

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P362656

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P362659

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P362575

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P362722

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P362315

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: P362242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	102		P	85 - 115
Iron	106		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	100		P	85 - 115
Sodium	98.4		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.7		P	85 - 115
Antimony	97.3		P	85 - 115
Arsenic	104		P	85 - 115
Boron	98.5		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	95.1		P	85 - 115
Copper	103		P	85 - 115
Lead	106		P	85 - 115
Nickel	102		P	85 - 115
Selenium	102		P	85 - 115
Silver	107		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P362586

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362382

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362384

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362566

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362583

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362584

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362497

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362432

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362057

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362058

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

Reference Method: EPA 8270D
Batch ID: P362087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	88.8	92.3	P/P	71 - 121
Alachlor	87.4	91.7	P/P	72 - 119
Ametryn	91.1	90.4	P/P	47 - 144
Atrazine	105	111	P/P	75 - 123
Atrazine Desethyl	112	111	P/P	45 - 133
Azinphos Methyl	93.4	93.9	P/P	66 - 165
Bromacil	73.8	74.0	P/P	43 - 123
Butylate	45.7	57.7	P/P	27 - 83.0
Chlorpyrifos Ethyl	87.8	86.0	P/P	70 - 117
Chlorpyrifos Methyl	90.9	90.9	P/P	71 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P362087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	186	194	P/P	34 - 264
Demeton	78.2	76.1	P/P	41 - 122
Diazinon	95.7	102	P/P	70 - 127
Dimethenamid	81.6	84.2	P/P	60 - 130
Disulfoton	87.0	83.9	P/P	56 - 127
Dithiopyr	90.3	94.7	P/P	60 - 130
EPTC	48.7	63.1	P/P	24 - 84.0
Ethion	56.6	44.2	P/F	53 - 132
Ethoprop	92.5	95.0	P/P	57 - 117
Fenamiphos	94.2	82.8	P/P	55 - 136
Fipronil	88.8	93.1	P/P	64 - 126
Fipronil Desulfinyl	79.2	82.1	P/P	60 - 130
Fipronil Sulfide	87.1	87.8	P/P	57 - 120
Fipronil Sulfone	80.6	77.5	P/P	52 - 115
Fonofos	94.8	101	P/P	61 - 121
Hexazinone	91.5	92.4	P/P	62 - 131
Malathion	90.5	86.5	P/P	67 - 126
Metalaxyl	92.1	94.2	P/P	54 - 128
Metolachlor	86.7	90.2	P/P	71 - 118
Metribuzin	241	242	F/F	42 - 221
Mevinphos	85.3	86.7	P/P	45 - 114
Molinate	58.5	69.9	P/P	33 - 91.0
Norflurazon	89.7	89.7	P/P	60 - 123
Oxadiazon	91.7	90.8	P/P	60 - 130
Parathion Ethyl	86.7	88.7	P/P	73 - 111
Parathion Methyl	97.2	96.3	P/P	74 - 126
Pendimethalin	95.3	98.2	P/P	63 - 131
Phorate	90.0	93.9	P/P	54 - 115
Prodiamine	51.2	52.9	F/F	60 - 130
Prometon	85.0	87.4	P/P	61 - 120
Prometryn	85.4	89.9	P/P	62 - 126
Simazine	104	107	P/P	75 - 126
Tebuconazole	37.2	32.5	P/P	30 - 100
Terbufos	94.2	104	P/P	65 - 116
Terbuthylazine	92.3	100	P/P	73 - 117

Reference Method: EPA 8321B
Batch ID: P361970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	56.2		P	40 - 150
Acetaminophen	78.8		P	30 - 150
Bentazon	98.9		P	30 - 150
Carbamazepine	90.4		P	40 - 150
Diuron	78.0		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	117		P	40 - 150
Hydrocodone	85.3		P	40 - 150
Ibuprofen	92.2		P	40 - 150
Imazapyr	75.2		P	40 - 150
Imidacloprid	96.3		P	40 - 150
Linuron	79.2		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P361970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MCPP	72.0		P	40 - 150
Naproxen	60.5		P	40 - 150
Primidone	77.1		P	40 - 150
Pyraclostrobin	72.8		P	40 - 150
Triclopyr	40.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	130		P	40 - 150
AMPA	118		P	40 - 150
Endothall	99.8		P	40 - 150
Glufosinate	122		P	40 - 150
Glyphosate	116		P	40 - 140
Sucralose	95.7		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P362066

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P362570

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.0		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P362575

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P362722

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P362315

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077739	Barium	98.7	101	P/P	80 - 120
2077739	Calcium	100		P	80 - 120
2077739	Iron	105	108	P/P	80 - 120
2077739	Magnesium	103	106	P/P	80 - 120
2077739	Potassium	95.6	98.6	P/P	80 - 120
2077739	Sodium	97.9		P	80 - 120
2077739	Zinc	102	103	P/P	80 - 120
2077809	Barium	101		P	80 - 120
2077809	Calcium	101		P	80 - 120
2077809	Iron	108		P	80 - 120
2077809	Magnesium	98.2		P	80 - 120
2077809	Potassium	95.9		P	80 - 120
2077809	Sodium	88.7		P	80 - 120
2077809	Zinc	107		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077739	Aluminum	99.2	98.2	P/P	80 - 120
2077739	Antimony	101	98.7	P/P	80 - 120
2077739	Arsenic	107	105	P/P	80 - 120
2077739	Boron	106	103	P/P	80 - 120
2077739	Cadmium	104	101	P/P	80 - 120
2077739	Chromium	97.3	95.7	P/P	80 - 120
2077739	Copper	103	101	P/P	80 - 120
2077739	Lead	109	108	P/P	80 - 120
2077739	Nickel	104	101	P/P	80 - 120
2077739	Selenium	105	101	P/P	80 - 120
2077739	Silver	107	106	P/P	80 - 120
2077739	Thallium	103	103	P/P	80 - 120
2077809	Aluminum	101		P	80 - 120
2077809	Antimony	98.8		P	80 - 120
2077809	Arsenic	104		P	80 - 120
2077809	Boron	104		P	80 - 120
2077809	Cadmium	100		P	80 - 120
2077809	Chromium	93.3		P	80 - 120
2077809	Copper	99.6		P	80 - 120
2077809	Lead	107		P	80 - 120
2077809	Nickel	101		P	80 - 120
2077809	Selenium	103		P	80 - 120
2077809	Silver	105		P	80 - 120
2077809	Thallium	103		P	80 - 120

Reference Method: EPA 300.0
Batch ID: P362586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2076447	Bromide	102	100	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077771	Chloride	101		P	90 - 110
2077863	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077771	Sulfate	101		P	90 - 110
2077863	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077814	Ammonia-N	99.7	99.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077865	Ammonia-N	106	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077764	Kjeldahl Nitrogen	106	109	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077854	Kjeldahl Nitrogen	107	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077774	NO2NO3-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077854	Total-P	95.5	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077821	O-Phosphate-P	98.8	98.6	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077872	O-Phosphate-P	91.2	92.1	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P362087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078075	Acetochlor	89.7	98.5	P/P	63 - 129
2078075	Alachlor	86.7	92.7	P/P	65 - 127
2078075	Ametryn	84.2	92.8	P/P	40 - 164
2078075	Atrazine	102	106	P/P	66 - 135
2078075	Atrazine Desethyl	110	120	P/P	14 - 157
2078075	Azinphos Methyl	86.8	91.5	P/P	49 - 180
2078075	Bromacil	92.6	104	P/P	48 - 130
2078075	Butylate	51.4	68.5	P/P	10 - 94.0
2078075	Chlorpyrifos Ethyl	83.9	91.3	P/P	58 - 123
2078075	Chlorpyrifos Methyl	87.8	93.2	P/P	58 - 125
2078075	Cyanazine	187	197	P/P	24 - 253
2078075	Demeton	73.1	87.9	P/P	25 - 149
2078075	Diazinon	95.9	102	P/P	59 - 144
2078075	Dimethenamid	72.4	77.3	P/P	60 - 130
2078075	Disulfoton	81.9	94.2	P/P	54 - 132
2078075	Dithiopyr	89.4	97.4	P/P	60 - 130
2078075	EPTC	55.6	75.8	P/P	10 - 92.0
2078075	Ethion	43.2	53.6	P/P	30 - 148
2078075	Ethoprop	85.6	96.1	P/P	50 - 130
2078075	Fenamiphos	81.4	92.9	P/P	49 - 142
2078075	Fipronil	87.3	96.7	P/P	46 - 140
2078075	Fipronil Desulfinyl	77.6	84.1	P/P	60 - 130
2078075	Fipronil Sulfide	85.9	94.0	P/P	31 - 136
2078075	Fipronil Sulfone	77.2	85.2	P/P	16 - 136
2078075	Fonofos	96.9	104	P/P	55 - 129
2078075	Hexazinone	93.6	108	P/P	56 - 141
2078075	Malathion	87.8	95.1	P/P	56 - 135
2078075	Metalaxyl	89.6	98.0	P/P	54 - 135
2078075	Metribuzin	238	273	P/F	45 - 254
2078075	Mevinphos	82.8	89.8	P/P	33 - 131
2078075	Molinate	65.0	67.6	P/P	14 - 98.0
2078075	Norflurazon	80.0	94.3	P/P	34 - 136
2078075	Oxadiazon	87.4	96.6	P/P	60 - 130
2078075	Parathion Ethyl	86.7	93.9	P/P	66 - 118
2078075	Parathion Methyl	94.3	103	P/P	64 - 136
2078075	Pendimethalin	52.2	57.6	F/F	59 - 144
2078075	Phorate	86.2	94.7	P/P	42 - 130
2078075	Prodiamine	52.6	57.9	F/F	60 - 130
2078075	Prometon	86.0	94.8	P/P	59 - 134
2078075	Prometryn	84.8	93.1	P/P	54 - 135
2078075	Simazine	104	117	P/P	53 - 156
2078075	Tebuconazole	31.7	36.6	P/P	30 - 100
2078075	Terbufos	97.2	104	P/P	57 - 131
2078075	Terbuthylazine	93.0	101	P/P	68 - 125

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P361970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077724	2,4-D	81.2	72.2	P/P	40 - 150
2077724	Acetaminophen	96.4	93.7	P/P	30 - 150
2077724	Bentazon	69.9	61.9	P/P	30 - 150
2077724	Carbamazepine	96.8	83.7	P/P	40 - 150
2077724	Diuron	80.2	75.4	P/P	40 - 150
2077724	Fenuron	115	96.6	P/P	40 - 150
2077724	Fluridone	115	95.7	P/P	40 - 150
2077724	Hydrocodone	95.2	82.9	P/P	40 - 150
2077724	Ibuprofen	99.7	97.0	P/P	40 - 150
2077724	Imazapyr	109	82.0	P/P	40 - 150
2077724	Imidacloprid	185	161	F/F	40 - 150
2077724	Linuron	84.6	74.4	P/P	40 - 150
2077724	MCPP	106	92.1	P/P	40 - 150
2077724	Naproxen	75.4	65.2	P/P	40 - 150
2077724	Primidone	64.8	75.3	P/P	40 - 150
2077724	Pyraclostrobin	80.5	84.5	P/P	40 - 150
2077724	Triclopyr	62.6	60.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077462	Acesulfame K	168	125	F/P	40 - 150
2077462	AMPA	62.2	73.4	P/P	40 - 150
2077462	Endothall	97.8	103	P/P	40 - 150
2077462	Glufosinate	103	110	P/P	40 - 150
2077462	Glyphosate	86.4	84.6	P/P	40 - 140
2077462	Sucralose	104	98.0	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P362575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077861	Fluoride	98.5	100	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P362722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2074740	Fluoride	97.8	97.8	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P362315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077772	Organic Carbon	103	103	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077816	Turbidity	1.98	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077884	Turbidity	0.217	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077739	Barium	1.90	Spike	P	0 - 20
2077739	Calcium	1.76	Spike	P	0 - 20
2077739	Iron	1.91	Spike	P	0 - 20
2077739	Magnesium	1.78	Spike	P	0 - 20
2077739	Potassium	2.15	Spike	P	0 - 20
2077739	Sodium	1.12	Spike	P	0 - 20
2077739	Zinc	1.83	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077739	Aluminum	0.918	Spike	P	0 - 20
2077739	Antimony	1.86	Spike	P	0 - 20
2077739	Arsenic	1.40	Spike	P	0 - 20
2077739	Boron	2.21	Spike	P	0 - 20
2077739	Cadmium	2.75	Spike	P	0 - 20
2077739	Chromium	1.61	Spike	P	0 - 20
2077739	Copper	1.80	Spike	P	0 - 20
2077739	Lead	1.20	Spike	P	0 - 20
2077739	Nickel	3.16	Spike	P	0 - 20
2077739	Selenium	3.70	Spike	P	0 - 20
2077739	Silver	0.930	Spike	P	0 - 20
2077739	Thallium	0.213	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P362586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2076447	Bromide	1.41	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077771	Chloride	0.0731	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077771	Sulfate	0.463	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077814	Ammonia-N	0.224	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077865	Ammonia-N	1.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077764	Kjeldahl Nitrogen	1.90	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077854	Kjeldahl Nitrogen	1.60	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077774	NO2NO3-N	0.573	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077854	Total-P	5.09	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077821	O-Phosphate-P	0.203	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077872	O-Phosphate-P	0.982	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P362087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078075	Acetochlor	9.32	Spike	P	0 - 30
2078075	Alachlor	6.78	Spike	P	0 - 30
2078075	Ametryn	9.72	Spike	P	0 - 30
2078075	Atrazine	3.16	Spike	P	0 - 30
2078075	Atrazine Desethyl	8.75	Spike	P	0 - 30
2078075	Azinphos Methyl	5.34	Spike	P	0 - 30
2078075	Bromacil	12.0	Spike	P	0 - 30
2078075	Butylate	28.5	Spike	P	0 - 30
2078075	Chlorpyrifos Ethyl	8.48	Spike	P	0 - 30
2078075	Chlorpyrifos Methyl	5.96	Spike	P	0 - 30
2078075	Cyanazine	4.73	Spike	P	0 - 30
2078075	Demeton	18.4	Spike	P	0 - 30
2078075	Diazinon	6.38	Spike	P	0 - 30
2078075	Dimethenamid	5.92	Spike	P	0 - 30
2078075	Disulfoton	14.0	Spike	P	0 - 30
2078075	Dithiopyr	8.60	Spike	P	0 - 30
2078075	EPTC	30.8	Spike	F	0 - 30
2078075	Ethion	21.5	Spike	P	0 - 30
2078075	Ethoprop	11.5	Spike	P	0 - 30
2078075	Fenamiphos	13.2	Spike	P	0 - 30
2078075	Fipronil	10.1	Spike	P	0 - 30
2078075	Fipronil Desulfinyl	7.93	Spike	P	0 - 30
2078075	Fipronil Sulfide	9.02	Spike	P	0 - 30
2078075	Fipronil Sulfone	9.89	Spike	P	0 - 30
2078075	Fonofos	6.89	Spike	P	0 - 30
2078075	Hexazinone	11.4	Spike	P	0 - 30
2078075	Malathion	7.94	Spike	P	0 - 30
2078075	Metalaxyl	8.14	Spike	P	0 - 30
2078075	Metolachlor	7.41	Spike	P	0 - 30
2078075	Metribuzin	12.8	Spike	P	0 - 30
2078075	Mevinphos	8.14	Spike	P	0 - 30
2078075	Molinate	3.90	Spike	P	0 - 30
2078075	Norflurazon	13.6	Spike	P	0 - 30
2078075	Oxadiazon	10.0	Spike	P	0 - 30
2078075	Parathion Ethyl	7.91	Spike	P	0 - 30
2078075	Parathion Methyl	9.22	Spike	P	0 - 30
2078075	Pendimethalin	5.39	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P362087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078075	Phorate	9.40	Spike	P	0 - 30
2078075	Prodiamine	9.62	Spike	P	0 - 30
2078075	Prometon	9.76	Spike	P	0 - 30
2078075	Prometryn	9.43	Spike	P	0 - 30
2078075	Simazine	11.4	Spike	P	0 - 30
2078075	Tebuconazole	14.5	Spike	P	0 - 30
2078075	Terbufos	7.15	Spike	P	0 - 30
2078075	Terbuthylazine	8.10	Spike	P	0 - 30
LFB	Acetochlor	3.90	LCS	P	0 - 30
LFB	Alachlor	4.82	LCS	P	0 - 30
LFB	Ametryn	0.717	LCS	P	0 - 30
LFB	Atrazine	5.46	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.14	LCS	P	0 - 30
LFB	Azinphos Methyl	0.529	LCS	P	0 - 30
LFB	Bromacil	0.194	LCS	P	0 - 30
LFB	Butylate	23.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.00	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.00138	LCS	P	0 - 30
LFB	Cyanazine	4.23	LCS	P	0 - 30
LFB	Demeton	2.71	LCS	P	0 - 30
LFB	Diazinon	6.84	LCS	P	0 - 30
LFB	Dimethenamid	3.07	LCS	P	0 - 30
LFB	Disulfoton	3.69	LCS	P	0 - 30
LFB	Dithiopyr	4.75	LCS	P	0 - 30
LFB	EPTC	25.7	LCS	P	0 - 30
LFB	Ethion	24.5	LCS	P	0 - 30
LFB	Ethoprop	2.71	LCS	P	0 - 30
LFB	Fenamiphos	12.9	LCS	P	0 - 30
LFB	Fipronil	4.73	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	3.57	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.850	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.93	LCS	P	0 - 30
LFB	Fonofos	6.26	LCS	P	0 - 30
LFB	Hexazinone	0.933	LCS	P	0 - 30
LFB	Malathion	4.57	LCS	P	0 - 30
LFB	Metalaxyl	2.25	LCS	P	0 - 30
LFB	Metolachlor	4.00	LCS	P	0 - 30
LFB	Metribuzin	0.398	LCS	P	0 - 30
LFB	Mevinphos	1.67	LCS	P	0 - 30
LFB	Molinate	17.6	LCS	P	0 - 30
LFB	Norflurazon	0.0193	LCS	P	0 - 30
LFB	Oxadiazon	0.959	LCS	P	0 - 30
LFB	Parathion Ethyl	2.33	LCS	P	0 - 30
LFB	Parathion Methyl	0.880	LCS	P	0 - 30
LFB	Pendimethalin	3.03	LCS	P	0 - 30
LFB	Phorate	4.27	LCS	P	0 - 30
LFB	Prodiamine	3.16	LCS	P	0 - 30
LFB	Prometon	2.77	LCS	P	0 - 30
LFB	Prometryn	5.21	LCS	P	0 - 30
LFB	Simazine	2.83	LCS	P	0 - 30
LFB	Tebuconazole	13.7	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P362087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Terbufos	9.93	LCS	P	0 - 30
LFB	Terbuthylazine	8.51	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P361970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077724	2,4-D	11.7	Spike	P	0 - 30
2077724	Acetaminophen	2.76	Spike	P	0 - 30
2077724	Bentazon	12.1	Spike	P	0 - 30
2077724	Carbamazepine	14.6	Spike	P	0 - 30
2077724	Diuron	6.06	Spike	P	0 - 30
2077724	Fenuron	17.8	Spike	P	0 - 30
2077724	Fluridone	18.6	Spike	P	0 - 30
2077724	Hydrocodone	13.8	Spike	P	0 - 30
2077724	Ibuprofen	2.73	Spike	P	0 - 30
2077724	Imazapyr	28.5	Spike	P	0 - 30
2077724	Imidacloprid	13.7	Spike	P	0 - 30
2077724	Linuron	12.8	Spike	P	0 - 30
2077724	MCPP	13.8	Spike	P	0 - 30
2077724	Naproxen	14.5	Spike	P	0 - 30
2077724	Primidone	15.1	Spike	P	0 - 30
2077724	Pyraclostrobin	4.89	Spike	P	0 - 30
2077724	Triclopyr	3.40	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077462	Acesulfame K	25.8	Spike	P	0 - 30
2077462	AMPA	4.51	Spike	P	0 - 30
2077462	Endothall	5.45	Spike	P	0 - 30
2077462	Glufosinate	6.91	Spike	P	0 - 30
2077462	Glyphosate	0.537	Spike	P	0 - 30
2077462	Sucralose	4.33	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P362066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077813	Color (true)	0.566	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P362570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077861	Total Alkalinity	0.219	Sample	P	0 - 2.8

Quality Assurance Report
Precision

Reference Method: SM 2540 C-97
Batch ID: P362665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077848	TDS	2.95	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P362659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078351	TSS	7.50	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P362575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077861	Fluoride	1.44	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P362722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2074740	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P362315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077772	Organic Carbon	0.0	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Surrogates

Lab Sample ID: 2077894
Field Sample ID: G2NE0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.2	P	30 - 160
EPA 8321B	Diuron-d6	78.7	P	30 - 160
EPA 8321B	Endothall-d6	81.1	P	30 - 160
EPA 8321B	Endothall-d6	81.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	30 - 160
EPA 8321B	Ibuprofen-d3	101	P	30 - 160
EPA 8321B	Primidone-d5	64.4	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160

Lab Sample ID: 2077895
Field Sample ID: G2NE1181

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.0	P	30 - 160
EPA 8321B	Diuron-d6	76.5	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	119	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.2	P	30 - 160
EPA 8321B	Primidone-d5	69.3	P	30 - 160
EPA 8321B	Sucralose-d6	91.8	P	30 - 160
EPA 8321B	Sucralose-d6	91.8	P	30 - 160

Lab Sample ID: 2077898
Field Sample ID: G2NE1181

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	99.0	P	68 - 130
EPA 8270D	Terbufos-d10	106	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A90670
Included Lab Sample IDs: 2077847, 2077850, 2077855, 2077856

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	94.6	94.1	P/P	90 - 110
O-Phosphate-P	96.6	95.1	P/P	90 - 110
O-Phosphate-P	97.0	96.6	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A90677
Included Lab Sample IDs: 2077848, 2077851, 2077852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A90679
Included Lab Sample IDs: 2077845, 2077848, 2077851, 2077852

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A90760
Included Lab Sample IDs: 2077848, 2077851, 2077852

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

Reference Method: SM 5310 B-00
Run ID: A90771
Included Lab Sample IDs: 2077846, 2077849, 2077853, 2077854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	106	109	P/P	90 - 110
Organic Carbon	106	106	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A90788
Included Lab Sample IDs: 2077894, 2077895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	114	129	P/P	60 - 160
AMPA	132	96.6	P/P	60 - 160
Glufosinate	114	112	P/P	60 - 160
Glufosinate	123	127	P/P	60 - 160
Glyphosate	115	118	P/P	60 - 160
Glyphosate	131	126	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A90802
Included Lab Sample IDs: 2077897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	99.5	P/P	90 - 110
Antimony	97.9	95.4	P/P	90 - 110
Arsenic	100	100	P/P	90 - 110
Boron	104	102	P/P	90 - 110
Cadmium	101	98.5	P/P	90 - 110
Chromium	100	101	P/P	90 - 110
Copper	99.9	100	P/P	90 - 110
Lead	107	106	P/P	90 - 110
Nickel	100	100	P/P	90 - 110
Selenium	99.1	101	P/P	90 - 110
Silver	107	105	P/P	90 - 110
Thallium	95.4	93.2	P/P	90 - 110

Reference Method: EPA 300.0
Run ID: A90809
Included Lab Sample IDs: 2077845

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

Reference Method: EPA 8321B
Run ID: A90825
Included Lab Sample IDs: 2077894, 2077895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	143	113	P/P	60 - 160
Endothall	112	105	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A90845
Included Lab Sample IDs: 2077846, 2077849, 2077853, 2077854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A90847
Included Lab Sample IDs: 2077846, 2077849

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

Reference Method: EPA 8321B
Run ID: A90848
Included Lab Sample IDs: 2077894, 2077895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.8	82.8	P/P	50 - 150
Acetaminophen	98.3	90.0	P/P	60 - 160
Bentazon	112	119	P/P	50 - 160
Carbamazepine	105	103	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A90848
Included Lab Sample IDs: 2077894, 2077895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	98.1	101	P/P	60 - 150
Fenuron	104	99.3	P/P	60 - 150
Fluridone	98.5	90.4	P/P	60 - 160
Hydrocodone	92.5	82.1	P/P	60 - 150
Ibuprofen	155	151	P/P	50 - 160
Imazapyr	119	109	P/P	50 - 150
Imidacloprid	99.6	92.0	P/P	60 - 150
Linuron	97.7	105	P/P	60 - 150
MCPP	89.4	96.0	P/P	50 - 150
Naproxen	78.3	75.0	P/P	50 - 160
Primidone	99.0	86.2	P/P	60 - 150
Pyraclostrobin	104	83.9	P/P	60 - 150
Triclopyr	98.8	98.7	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A90865
Included Lab Sample IDs: 2077853, 2077854

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A90870
Included Lab Sample IDs: 2077846, 2077849

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

Reference Method: SM 2320 B-97
Run ID: A90871
Included Lab Sample IDs: 2077845, 2077848, 2077851, 2077852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.7	99.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A90871
Included Lab Sample IDs: 2077848, 2077851, 2077852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A90892
Included Lab Sample IDs: 2077897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	105	101	P/P	90 - 110
Calcium	105	108	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	103	104	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A90892
Included Lab Sample IDs: 2077897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	94.1	94.3	P/P	90 - 110
Sodium	91.3	90.2	P/P	90 - 110
Zinc	106	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A90919
Included Lab Sample IDs: 2077846, 2077849, 2077853, 2077854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	101	P/P	90 - 110
Kjeldahl Nitrogen	107	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A90946
Included Lab Sample IDs: 2077853, 2077854

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

Reference Method: SM 4500 F-C-97
Run ID: A90948
Included Lab Sample IDs: 2077845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.0	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A90967
Included Lab Sample IDs: 2077898

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	107		P	80 - 120
Ametryn	105		P	80 - 120
Atrazine Desethyl	89.1		P	80 - 120
Azinphos Methyl	97.7		P	80 - 120
Bromacil	98.0		P	80 - 120
Butylate	95.1		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	98.9		P	80 - 120
Cyanazine	95.0		P	80 - 120
Demeton	98.2		P	80 - 120
Diazinon	102		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	94.6		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	99.7		P	80 - 120
Ethion	96.4		P	80 - 120
Ethoprop	96.8		P	80 - 120
Fenamiphos	95.4		P	80 - 120
Fipronil	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A90967
Included Lab Sample IDs: 2077898

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	96.5		P	80 - 120
Fipronil Sulfone	98.3		P	80 - 120
Fonofos	99.3		P	80 - 120
Hexazinone	99.4		P	80 - 120
Malathion	97.4		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	108		P	80 - 120
Metribuzin	89.7		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	98.8		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	107		P	80 - 120
Parathion Ethyl	93.2		P	80 - 120
Parathion Methyl	94.1		P	80 - 120
Pendimethalin	99.4		P	80 - 120
Phorate	96.5		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	97.1		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	96.9		P	80 - 120
Terbuthylazine	100		P	80 - 120

Reference Method: EPA 8321B
Run ID: A90984
Included Lab Sample IDs: 2077894, 2077895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.7	102	P/P	60 - 160

Reference Method: EPA 8270D
Run ID: A91018
Included Lab Sample IDs: 2077898

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	96.6		P	80 - 120

* 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							1.98	
	Turbidity							0.217	
EPA 200.7 Rev. 4.4	Barium	101		98.7	101	101			1.90
	Calcium	102		100	101				1.76
	Iron	106		105	108	108			1.91
	Magnesium	107		103	106	98.2			1.78
	Potassium	100		95.6	98.6	95.9			2.15
	Sodium	98.4		97.9	88.7				1.12
	Zinc	100		102	103	107			1.83
EPA 200.8 Rev. 5.4	Aluminum	98.7		99.2	98.2	101			0.918
	Antimony	97.3		101	98.7	98.8			1.86
	Arsenic	104		107	105	104			1.40
	Boron	98.5		106	103	104			2.21
	Cadmium	102		104	101	100			2.75
	Chromium	95.1		97.3	95.7	93.3			1.61
	Copper	103		103	101	99.6			1.80
	Lead	106		109	108	107			1.20
	Nickel	102		104	101	101			3.16
	Selenium	102		105	101	103			3.70
	Silver	107		107	106	105			0.930
	Thallium	100		103	103	103			0.213
EPA 300.0	Bromide	103		102	100				1.41
EPA 300.0 Rev. 2.1	Chloride	101		101	103			0.0731	
	Sulfate	101		101	103			0.463	
EPA 350.1 Rev. 2.0	Ammonia-N	101		99.7	99.9				0.224
	Ammonia-N	98.2		106	108				1.94
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		106	109				1.90
	Kjeldahl Nitrogen	108		107	105				1.60
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		98.0	99.0				0.573
EPA 365.1 Rev. 2.0	Total-P	100		95.5	101				5.09
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5		98.8	98.6				0.203
	O-Phosphate-P	99.6		91.2	92.1				0.982
EPA 8270D	Acetochlor	88.8	92.3	89.7	98.5		3.90		9.32
	Alachlor	87.4	91.7	86.7	92.7		4.82		6.78
	Ametryn	91.1	90.4	92.8	84.2		0.717		9.72
	Atrazine	105	111	106	102		5.46		3.16
	Atrazine Desethyl	112	111	120	110		1.14		8.75
	Azinphos Methyl	93.4	93.9	91.5	86.8		0.529		5.34
	Bromacil	73.8	74.0	104	92.6		0.194		12.0
	Butylate	45.7	57.7	68.5	51.4		23.3		28.5
	Chlorpyrifos Ethyl	87.8	86.0	91.3	83.9		2.00		8.48
	Chlorpyrifos Methyl	90.9	90.9	87.8	93.2		0.0013		5.96
	Cyanazine	186	194	187	197		4.23		4.73
	Demeton	78.2	76.1	73.1	87.9		2.71		18.4
	Diazinon	95.7	102	95.9	102		6.84		6.38
	Dimethenamid	81.6	84.2	72.4	77.3		3.07		5.92
	Disulfoton	87.0	83.9	81.9	94.2		3.69		14.0
	Dithiopyr	90.3	94.7	89.4	97.4		4.75		8.60
	EPTC	48.7	63.1	55.6	75.8		25.7		30.8
	Ethion	56.6	44.2	43.2	53.6		24.5		21.5
	Ethoprop	92.5	95.0	85.6	96.1		2.71		11.5
	Fenamiphos	94.2	82.8	92.9	81.4		12.9		13.2
	Fipronil	88.8	93.1	96.7	87.3		4.73		10.1
	Fipronil Desulfinyl	79.2	82.1	84.1	77.6		3.57		7.93

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Fipronil Sulfide	87.1	87.8	94.0	85.9	0.850		9.02
	Fipronil Sulfone	80.6	77.5	85.2	77.2	3.93		9.89
	Fonofos	94.8	101	104	96.9	6.26		6.89
	Hexazinone	91.5	92.4	108	93.6	0.933		11.4
	Malathion	90.5	86.5	95.1	87.8	4.57		7.94
	Metalaxyl	92.1	94.2	98.0	89.6	2.25		8.14
	Metolachlor	86.7	90.2			4.00		7.41
	Metribuzin	241	242	273	238	0.398		12.8
	Mevinphos	85.3	86.7	89.8	82.8	1.67		8.14
	Molinate	58.5	69.9	67.6	65.0	17.6		3.90
	Norflurazon	89.7	89.7	94.3	80.0	0.0193		13.6
	Oxadiazon	91.7	90.8	96.6	87.4	0.959		10.0
	Parathion Ethyl	86.7	88.7	93.9	86.7	2.33		7.91
	Parathion Methyl	97.2	96.3	103	94.3	0.880		9.22
	Pendimethalin	95.3	98.2	57.6	52.2	3.03		5.39
	Phorate	90.0	93.9	94.7	86.2	4.27		9.40
	Prodiamine	51.2	52.9	57.9	52.6	3.16		9.62
	Prometon	85.0	87.4	94.8	86.0	2.77		9.76
	Prometryn	85.4	89.9	93.1	84.8	5.21		9.43
	Simazine	104	107	117	104	2.83		11.4
	Tebuconazole	37.2	32.5	36.6	31.7	13.7		14.5
	Terbufos	94.2	104	104	97.2	9.93		7.15
	Terbuthylazine	92.3	100	101	93.0	8.51		8.10
EPA 8321B	2,4-D	56.2		81.2	72.2			11.7
	Acesulfame K	130		168	125			25.8
	Acetaminophen	78.8		96.4	93.7			2.76
	AMPA	118		62.2	73.4			4.51
	Bentazon	98.9		69.9	61.9			12.1
	Carbamazepine	90.4		96.8	83.7			14.6
	Diuron	78.0		80.2	75.4			6.06
	Endothall	99.8		97.8	103			5.45
	Fenuron	107		115	96.6			17.8
	Fluridone	117		115	95.7			18.6
	Glufosinate	122		103	110			6.91
	Glyphosate	116		86.4	84.6			0.537
	Hydrocodone	85.3		95.2	82.9			13.8
	Ibuprofen	92.2		99.7	97.0			2.73
	Imazapyr	75.2		109	82.0			28.5
	Imidacloprid	96.3		185	161			13.7
	Linuron	79.2		84.6	74.4			12.8
	MCPP	72.0		106	92.1			13.8
	Naproxen	60.5		75.4	65.2			14.5
	Primidone	77.1		64.8	75.3			15.1
	Pyraclostrobin	72.8		80.5	84.5			4.89
	Sucralose	95.7		104	98.0			4.33
	Triclopyr	40.5		62.6	60.5			3.40
SM 2120 B	Color (true)	101					0.566	
SM 2320 B-97	Total Alkalinity	98.0					0.219	
SM 2540 C-97	TDS						2.95	
SM 2540 D-97	TSS						7.50	
SM 4500 F-C-97	Fluoride	97.8		98.5	100			1.44
	Fluoride	97.2		97.8	97.8			0.0
SM 5310 B-00	Organic Carbon	101		103	103			0.0

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2077845, 2077848, 2077851, 2077852
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2077897
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2077897
EPA 300.0 / E31780	Bromide in aqueous matrices	2077845
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2077848, 2077851, 2077852
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2077848, 2077851, 2077852
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2077846, 2077849, 2077853, 2077854
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2077846, 2077849, 2077853, 2077854
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2077846, 2077849, 2077853, 2077854
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2077846, 2077849, 2077853, 2077854
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2077847, 2077850, 2077855, 2077856
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2077898
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2077894, 2077895
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2077894, 2077895
SM 2120 B / E31780	True Color measured at 450 nm	2077848, 2077851, 2077852
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2077845, 2077848, 2077851, 2077852
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2077848, 2077851, 2077852
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2077845, 2077848, 2077851, 2077852
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2077845, 2077848, 2077851, 2077852
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2077846, 2077849, 2077853, 2077854

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	04/12/2019			04/12/2019 16:21	Adrian Shelby	2077845, 2077848, 2077851, 2077852
EPA 200.7 Rev. 4.4	04/12/2019	04/16/2019 15:05	Elliott D. Healy	04/22/2019 14:22	Betina Topolski	2077897
EPA 200.8 Rev. 5.4	04/12/2019	04/16/2019 15:05	Elliott D. Healy	04/18/2019 05:03	Robert K Palmer	2077897
EPA 300.0	04/12/2019			04/18/2019 19:13	Lipi Saha	2077845
EPA 300.0 Rev. 2.1	04/12/2019			04/17/2019 22:41	Lipi Saha	2077848
	04/12/2019			04/17/2019 23:17	Lipi Saha	2077851
	04/12/2019			04/17/2019 23:29	Lipi Saha	2077852
EPA 350.1 Rev. 2.0	04/12/2019			04/18/2019 13:47	Ping Hua	2077846
	04/12/2019			04/18/2019 13:49	Ping Hua	2077849
	04/12/2019			04/22/2019 10:22	Ping Hua	2077853
	04/12/2019			04/22/2019 10:27	Ping Hua	2077854
EPA 351.2 Rev. 2.0	04/12/2019	04/22/2019 11:30	Adrian Shelby	04/23/2019 10:21	Joseph Suarez	2077846
	04/12/2019	04/22/2019 11:30	Adrian Shelby	04/23/2019 10:28	Joseph Suarez	2077849
	04/12/2019	04/22/2019 11:30	Adrian Shelby	04/23/2019 10:30	Joseph Suarez	2077853
	04/12/2019	04/22/2019 11:30	Adrian Shelby	04/23/2019 10:32	Joseph Suarez	2077854
EPA 353.2 Rev. 2.0	04/12/2019			04/19/2019 11:34	Beverly Y. Sanders	2077846
	04/12/2019			04/19/2019 11:35	Beverly Y. Sanders	2077849
	04/12/2019			04/19/2019 11:36	Beverly Y. Sanders	2077853
	04/12/2019			04/19/2019 11:37	Beverly Y. Sanders	2077854
EPA 365.1 Rev. 2.0	04/12/2019	04/18/2019 13:40	Sima Feizi	04/19/2019 13:26	Rosalyn Ballman	2077846
	04/12/2019	04/18/2019 13:40	Sima Feizi	04/19/2019 13:27	Rosalyn Ballman	2077849
	04/12/2019	04/18/2019 13:40	Sima Feizi	04/19/2019 18:23	Rosalyn Ballman	2077853
	04/12/2019	04/18/2019 13:40	Sima Feizi	04/19/2019 18:24	Rosalyn Ballman	2077854
EPA 365.1 Rev. 2.0 dissolved	04/12/2019			04/12/2019 13:42	Jhamieka S. Greenwood	2077847
	04/12/2019			04/12/2019 13:43	Jhamieka S. Greenwood	2077850
	04/12/2019			04/12/2019 13:51	Jhamieka S. Greenwood	2077855
	04/12/2019			04/12/2019 14:18	Jhamieka S. Greenwood	2077856
EPA 8270D	04/12/2019	04/15/2019 08:30	Rasheda Ghaffari	04/16/2019 23:13	Vandana T. Nagar	2077898
	04/12/2019	04/15/2019 08:30	Rasheda Ghaffari	04/17/2019 16:16	Vandana T. Nagar	2077898
EPA 8321B	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 15:33	Juyoung Kim	2077894
	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 16:08	Juyoung Kim	2077895
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/16/2019 16:47	Rebecca Ware	2077894
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/16/2019 17:01	Rebecca Ware	2077895
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 10:39	Rebecca Ware	2077895
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 14:06	Rebecca Ware	2077894
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 02:21	Rebecca Ware	2077894
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 02:33	Rebecca Ware	2077895
SM 2120 B	04/12/2019			04/12/2019 15:29	Blanca Fach	2077848
	04/12/2019			04/12/2019 15:30	Blanca Fach	2077851
	04/12/2019			04/12/2019 15:31	Blanca Fach	2077852

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	04/12/2019			04/19/2019 00:03	Samantha Davila	2077845
	04/12/2019			04/19/2019 00:15	Samantha Davila	2077848
	04/12/2019			04/19/2019 00:28	Samantha Davila	2077851
	04/12/2019			04/19/2019 00:41	Samantha Davila	2077852
SM 2540 C-97	04/12/2019			04/17/2019 15:19	Yijie Li	2077848, 2077851, 2077852
SM 2540 D-97	04/12/2019			04/17/2019 15:19	Yijie Li	2077845, 2077848, 2077851, 2077852
SM 4500 F-C-97	04/12/2019			04/19/2019 00:15	Samantha Davila	2077848
	04/12/2019			04/19/2019 00:28	Samantha Davila	2077851
	04/12/2019			04/19/2019 00:41	Samantha Davila	2077852
	04/12/2019			04/23/2019 23:07	Dale L. Simmons	2077845
SM 5310 B-00	04/12/2019			04/17/2019 06:12	Julia Storbeck	2077846
	04/12/2019			04/17/2019 06:48	Julia Storbeck	2077849
	04/12/2019			04/17/2019 07:01	Julia Storbeck	2077853
	04/12/2019			04/17/2019 07:13	Julia Storbeck	2077854