

Chemical Analysis Report

CEN-DIST-2018-05-01-01

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

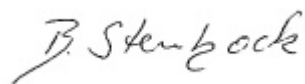
Event Description: **barber X2 / Bass / Buchanan**
Request ID: **RQ-2018-04-30-33**
Customer: **CEN-DIST**
Project ID: **SMP**

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Date Certified: 29-MAY-2018 17:08



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 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: Lake Barber West of Center (3036A1)

Collection Date/Time: 04/30/2018 11:15

Field ID: G2CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988789	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P344417	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P344848	
		Sulfate	17		mg SO4/L	P344851	
	SM 2120 B	Color (true)	11		PCU	P344396	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P345070	
	SM 2540 C-97	TDS	86		mg/L	P344885	
	SM 2540 D-97	TSS	2	I	mg/L	P344890	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P345074	
1988791	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P344868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P344424	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P344484	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P344581	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P344772	
1988793	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P344436	
1988828	EPA 200.7 Rev. 4.4	Calcium	13.3		mg/L	P344563	
		Iron	30	U	ug/L	P344563	
		Magnesium	2.72		mg/L	P344563	
		Potassium	3.2		mg/L	P344563	
		Sodium	9.8		mg/L	P344563	
		Zinc	5.0	U	ug/L	P344563	
	EPA 200.8 Rev. 5.4	Arsenic	3.00		ug/L	P344563	
		Cadmium	0.020	U	ug/L	P344563	
		Chromium	0.40	U	ug/L	P344563	
		Copper	0.84		ug/L	P344563	
		Lead	0.081	I	ug/L	P344563	
		Nickel	0.20	U	ug/L	P344563	
		Silver	0.010	U	ug/L	P344563	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-97: 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.

Sample Location: Lake Barber West of Center (3036A1)

Collection Date/Time: 04/30/2018 11:15

Field ID: G2CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988807	EPA 8321B	Aldicarb	0.020	U	ug/L	P344412	
		Aldicarb Sulfone	0.0020	U	ug/L	P344412	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P344412	
		Carbaryl	0.0020	U	ug/L	P344412	
		Carbofuran	0.0020	U	ug/L	P344412	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P344412	
		Methiocarb	0.0020	U	ug/L	P344412	
		Methomyl	0.0020	U	ug/L	P344412	
		Oxamyl	0.0020	U	ug/L	P344412	

Field ID: G2CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988807	EPA 8321B	Propoxur	0.0020	U	ug/L	P344412	
1988808		2,4-D	0.0049	I	ug/L	P344412	
		Bentazon	0.0088		ug/L	P344412	
		MCP	0.0020	U	ug/L	P344412	
		Triclopyr**	0.0040	U	ug/L	P344412	
		Imidacloprid	0.0020	U	ug/L	P344412	MS
		Diuron	0.0020	U	ug/L	P344412	
		Pyraclostrobin**	0.0020	U	ug/L	P344412	
		Primidone**	0.0040	U	ug/L	P344412	
		Linuron	0.0040	U	ug/L	P344412	
		Acetaminophen**	0.0080	U	ug/L	P344412	
		Fenuron	0.016	U	ug/L	P344412	
		Imazapyr**	0.055		ug/L	P344412	
		Carbamazepine**	4.0E-04	U	ug/L	P344412	
		Fluridone**	0.041		ug/L	P344412	
		Hydrocodone**	8.0E-04	U	ug/L	P344412	
		Sucralose**	0.22	I	ug/L	P344375	
		Glyphosate**	0.10	U	ug/L	P344375	MS
		AMPA**	0.10	U	ug/L	P344375	MS
		Endothall**	0.10	U	ug/L	P344375	
		Glufosinate**	0.10	U	ug/L	P344375	
1988812	EPA 8270D	Aldrin	4.6	UJ	ng/L	P344637	SUR
		Alpha-BHC	2.3	UJ	ng/L	P344637	SUR
		Beta-BHC	4.6	UJ	ng/L	P344637	SUR
		Delta-BHC	4.6	UJ	ng/L	P344637	SUR
		Gamma-BHC	4.6	UJ	ng/L	P344637	SUR
		Carbophenothion	4.6	UJ	ng/L	P344637	SUR
		Chlorothalonil	2.3	UJ	ng/L	P344637	RPD, SUR
		Cypermethrin	23	UJ	ng/L	P344637	SUR
		DDD-p,p'	3.5	UJ	ng/L	P344637	SUR
		DDE-p,p'	3.5	UJ	ng/L	P344637	SUR
		DDT-p,p'	3.5	UJ	ng/L	P344637	SUR
		Dieldrin	4.6	UJ	ng/L	P344637	SUR
		Endosulfan I	4.6	UJ	ng/L	P344637	SUR
		Endosulfan II	4.6	UJ	ng/L	P344637	SUR
		Endosulfan Sulfate	2.3	UJ	ng/L	P344637	SUR
		Endrin	2.3	UJ	ng/L	P344637	SUR
		Endrin Aldehyde	2.3	UJ	ng/L	P344637	SUR
		Heptachlor	1.7	UJ	ng/L	P344637	SUR
		Heptachlor Epoxide	2.3	UJ	ng/L	P344637	SUR
		Methoxychlor	4.6	UJ	ng/L	P344637	SUR
		Mirex	2.3	UJ	ng/L	P344637	SUR
		Permethrin	12	UJ	ng/L	P344637	SUR
		Trifluralin	1.2	UJ	ng/L	P344637	SUR
		Alpha-Chlordane	1.2	UJ	ng/L	P344637	SUR

Field ID: G2CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988812	EPA 8270D	Gamma-Chlordane	1.2	UJ	ng/L	P344637	SUR
		Endrin Ketone	2.3	UJ	ng/L	P344637	SUR
		Dicofol	35	UJ	ng/L	P344637	SUR
	EPA 8276	Chlordane**	3.7	IJ	ng/L	P344637	
		Toxaphene**	35	UJ	ng/L	P344637	
1988813	EPA 8270D	Alachlor	0.25	U	ng/L	P344703	
		Ametryn	1.3	I	ng/L	P344703	
		Atrazine	19		ng/L	P344703	
		Atrazine Desethyl	2.5	IJ	ng/L	P344703	RPD
		Azinphos Methyl	2.2	UJ	ng/L	P344703	RPD
		Bromacil	0.49	UJ	ng/L	P344703	RPD
		Butylate	0.39	U	ng/L	P344703	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P344703	
		Chlorpyrifos Methyl	0.098	U	ng/L	P344703	
		Demeton	2.0	UJ	ng/L	P344703	RPD
		Diazinon	0.12	U	ng/L	P344703	
		Disulfoton	0.49	UJ	ng/L	P344703	RPD
		EPTC	1.2	UJ	ng/L	P344703	RPD
		Ethion	0.15	U	ng/L	P344703	
		Ethoprop	0.098	U	ng/L	P344703	
		Fenamiphos	0.25	UJ	ng/L	P344703	RPD
		Fipronil	0.25	U	ng/L	P344703	
		Fipronil Sulfide	0.15	U	ng/L	P344703	
		Fipronil Sulfone	0.63	J	ng/L	P344703	RPD
		Hexazinone	0.49	UJ	ng/L	P344703	LCS, RPD
		Malathion	0.34	U	ng/L	P344703	
		Metribuzin	0.20	UJ	ng/L	P344703	RPD
		Mevinphos	0.49	UJ	ng/L	P344703	RPD
		Molinate	0.29	U	ng/L	P344703	
		Norflurazon	0.49	UJ	ng/L	P344703	LCS, RPD
		Pendimethalin	0.98	U	ng/L	P344703	
		Phorate	0.25	UJ	ng/L	P344703	RPD
		Prometon	0.88	U	ng/L	P344703	
		Prometryn	0.20	U	ng/L	P344703	
		Simazine	0.49	U	ng/L	P344703	
		Terbufos	0.098	UJ	ng/L	P344703	RPD
		Terbuthylazine	0.42	U	ng/L	P344703	
		Fonofos	0.20	UJ	ng/L	P344703	RPD
		Metalaxyl	0.25	UJ	ng/L	P344703	RPD
		Metolachlor	0.27	I	ng/L	P344703	
		Acetochlor	0.25	U	ng/L	P344703	
		Cyanazine	0.49	UJ	ng/L	P344703	RPD
		Parathion Ethyl	0.25	U	ng/L	P344703	
		Parathion Methyl	0.25	U	ng/L	P344703	

Field ID: G2CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed except for Dieldrin detected at 6.7 I ng/L.							
EPA 8276: Reported results qualified with J due to surrogate below control limits; the sample was subsequently re-extracted and re-analyzed (after expiration) with acceptable surrogate recovery and the same analytical results were obtained.							
EPA 8270D: MS accuracy for Atrazine 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: Lake Barber East of Center (3036A1)

Collection Date/Time: 04/30/2018 10:57

Field ID: G2CE0153

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988790	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P344417	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P344848	
		Sulfate	17		mg SO4/L	P344851	
	SM 2120 B	Color (true)	11		PCU	P344396	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P345070	
	SM 2540 C-97	TDS	92	A	mg/L	P344885	
	SM 2540 D-97	TSS	3	IA	mg/L	P344890	
1988792	SM 4500 F-C-97	Fluoride	0.041	I	mg F/L	P345074	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P344868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P344424	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P344485	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P344581	
1988794	SM 5310 B-00	Organic Carbon	6.3		mg C/L	P345023	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P344437	
1988829	EPA 200.7 Rev. 4.4	Calcium	13.9		mg/L	P344563	
		Iron	30	U	ug/L	P344563	
		Magnesium	2.87		mg/L	P344563	
		Potassium	3.3		mg/L	P344563	
		Sodium	10.2		mg/L	P344563	
		Zinc	5.0	U	ug/L	P344563	
	EPA 200.8 Rev. 5.4	Arsenic	3.44		ug/L	P344563	
		Cadmium	0.022	I	ug/L	P344563	
		Chromium	0.43	I	ug/L	P344563	
		Copper	1.05		ug/L	P344563	
		Lead	0.28		ug/L	P344563	
		Nickel	0.32	I	ug/L	P344563	
		Silver	0.029	I	ug/L	P344563	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: 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.

Sample Location: Lake Bass @ Center of Lake (3168F)

Collection Date/Time: 04/30/2018 12:15

Field ID: G4CE0147

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988795	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P344417	

Field ID: G4CE0147

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1988795	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P344848	
		Sulfate	21		mg SO4/L	P344851	
	SM 2120 B	Color (true)	13		PCU	P344396	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P345070	
	SM 2540 C-97	TDS	126		mg/L	P344885	
	SM 2540 D-97	TSS	7	I	mg/L	P344890	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P345074	
1988796	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P344868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P344424	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P344485	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P344581	
	SM 5310 B-00	Organic Carbon	6.4		mg C/L	P345023	
1988797	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P344437	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-97: 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.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P344417

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P344563

Component	Result	Code	Units
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: P344563

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344848

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344851

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344868

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344424

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344484

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344485

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344581

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344436

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344437

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: P344637

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D
Batch ID: P344703

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	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	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P344703

Component	Result	Code	Units
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	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P344637

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B

Batch ID: P344375

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.10	U	ug/L

Reference Method: EPA 8321B

Batch ID: P344412

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P344412

Component	Result	Code	Units
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P344396

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P345070

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

Reference Method: SM 2540 C-97
Batch ID: P344885

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P344890

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345074

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P344772

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P345023

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: P344563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	102		P	85 - 115
Sodium	97.7		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.4		P	85 - 115
Lead	101		P	85 - 115
Nickel	103		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344848

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344851

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344868

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344424

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344484

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344581

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344437

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.5		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.3	60.4	P/P	24 - 89.0
Alpha-BHC	75.6	74.9	P/P	58 - 117
Alpha-Chlordane	83.2	77.5	P/P	56 - 115
Beta-BHC	124	112	P/P	55 - 137
Carbophenothion	113	105	P/P	37 - 145
Chlorothalonil	27.9	63.8	P/P	26 - 163
Cypermethrin	99.4	91.9	P/P	42 - 156
DDD-p,p'	112	95.2	P/P	59 - 129
DDE-p,p'	88.6	78.7	P/P	52 - 117
DDT-p,p'	95.2	74.9	P/P	48 - 128
Delta-BHC	122	131	P/P	59 - 158
Dicofol	82.5	79.8	P/P	19 - 124
Dieldrin	88.0	76.8	P/P	57 - 126
Endosulfan I	94.0	92.2	P/P	59 - 133
Endosulfan II	105	86.8	P/P	58 - 148
Endosulfan Sulfate	101	116	P/P	56 - 135
Endrin	93.3	80.3	P/P	50 - 140
Endrin Aldehyde	113	104	P/P	47 - 141
Endrin Ketone	102	99.7	P/P	63 - 123
Gamma-BHC	93.8	93.0	P/P	59 - 132
Gamma-Chlordane	81.9	75.9	P/P	55 - 112
Heptachlor	65.0	63.7	P/P	45 - 102

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Heptachlor Epoxide	83.2	78.7	P/P	61 - 116
Methoxychlor	104	95.8	P/P	60 - 133
Mirex	75.9	67.9	P/P	40 - 98.0
Permethrin	84.8	83.4	P/P	45 - 131
Trifluralin	76.0	72.7	P/P	38 - 179

Reference Method: EPA 8270D

Batch ID: P344703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	90.6	85.5	P/P	74 - 119
Alachlor	93.4	88.1	P/P	75 - 118
Ametryn	88.7	88.3	P/P	59 - 137
Atrazine	106	94.9	P/P	73 - 120
Atrazine Desethyl	110	51.0	P/P	19 - 129
Azinphos Methyl	127	90.9	P/P	65 - 181
Bromacil	78.3	50.0	P/P	43 - 123
Butylate	41.9	46.5	P/P	28 - 85.0
Chlorpyrifos Ethyl	101	94.6	P/P	55 - 112
Chlorpyrifos Methyl	99.8	82.4	P/P	35 - 124
Cyanazine	188	93.7	P/P	26 - 262
Demeton	67.2	68.2	P/P	43 - 122
Diazinon	97.7	87.5	P/P	72 - 120
Disulfoton	92.6	93.3	P/P	45 - 137
EPTC	41.4	47.4	P/P	28 - 95.0
Ethion	97.5	88.6	P/P	63 - 127
Ethoprop	83.5	82.3	P/P	63 - 109
Fenamiphos	102	66.4	P/P	66 - 136
Fipronil	87.1	74.2	P/P	63 - 126
Fipronil Sulfide	84.3	81.2	P/P	59 - 123
Fipronil Sulfone	77.5	75.0	P/P	56 - 122
Fonofos	84.6	69.8	P/P	64 - 114
Hexazinone	101	31.3	P/F	49 - 144
Malathion	104	99.1	P/P	68 - 131
Metaxyl	95.5	60.5	P/P	57 - 126
Metolachlor	92.7	92.1	P/P	75 - 118
Metribuzin	154	109	P/P	46 - 169
Mevinphos	71.3	59.2	P/P	34 - 126
Molinate	49.5	55.1	P/P	37 - 101
Norflurazon	86.8	46.7	P/F	63 - 127
Parathion Ethyl	93.9	82.9	P/P	78 - 109
Parathion Methyl	99.6	82.6	P/P	74 - 123
Pendimethalin	116	98.9	P/P	51 - 130
Phorate	77.7	65.7	P/P	53 - 116
Prometon	88.1	79.2	P/P	66 - 124
Prometryn	90.5	85.4	P/P	66 - 124
Simazine	104	84.9	P/P	62 - 134
Terbufos	89.7	74.8	P/P	59 - 115
Terbuthylazine	98.6	85.3	P/P	76 - 113

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8276

Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.3	68.3	P/P	47 - 125
Toxaphene	81.1	78.2	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P344375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	100		P	40 - 140
Endothall	103		P	40 - 140
Glufosinate	99.2		P	40 - 140
Glyphosate	94.7		P	40 - 140
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P344412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.1		P	40 - 150
3-Hydroxycarbofuran	101		P	40 - 150
Acetaminophen	106		P	30 - 150
Aldicarb	111		P	30 - 150
Aldicarb Sulfone	109		P	40 - 150
Aldicarb Sulfoxide	117		P	40 - 150
Bentazon	95.6		P	30 - 150
Carbamazepine	109		P	40 - 150
Carbaryl	91.7		P	40 - 150
Carbofuran	91.9		P	40 - 150
Diuron	97.6		P	40 - 150
Fenuron	127		P	40 - 150
Fluridone	98.6		P	40 - 150
Hydrocodone	123		P	40 - 150
Imazapyr	118		P	40 - 150
Imidacloprid	111		P	40 - 160
Linuron	103		P	40 - 150
MCPP	104		P	40 - 150
Methiocarb	92.0		P	40 - 150
Methomyl	99.5		P	40 - 150
Oxamyl	94.0		P	40 - 150
Primidone	107		P	40 - 150
Propoxur	90.2		P	40 - 150
Pyraclostrobin	105		P	40 - 150
Triclopyr	110		P	40 - 150

Reference Method: SM 2320 B-97

Batch ID: P345070

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P345074

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P344772

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

Reference Method: SM 5310 B-00
Batch ID: P345023

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988828	Calcium	103		P	80 - 120
1988828	Iron	105		P	80 - 120
1988828	Magnesium	105		P	80 - 120
1988828	Potassium	98.1		P	80 - 120
1988828	Sodium	99.0		P	80 - 120
1988828	Zinc	100		P	80 - 120
1989433	Calcium	99.0		P	80 - 120
1989433	Iron	103	104	P/P	80 - 120
1989433	Magnesium	101		P	80 - 120
1989433	Potassium	95.9	97.3	P/P	80 - 120
1989433	Sodium	95.0		P	80 - 120
1989433	Zinc	98.0	98.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988828	Arsenic	106		P	80 - 120
1988828	Cadmium	104		P	80 - 120
1988828	Chromium	102		P	80 - 120
1988828	Copper	99.0		P	80 - 120
1988828	Lead	102		P	80 - 120
1988828	Nickel	103		P	80 - 120
1988828	Silver	104		P	80 - 120
1989433	Arsenic	103	104	P/P	80 - 120
1989433	Cadmium	104	104	P/P	80 - 120
1989433	Chromium	99.2	99.7	P/P	80 - 120
1989433	Copper	95.3	95.9	P/P	80 - 120
1989433	Lead	99.7	100	P/P	80 - 120
1989433	Nickel	98.3	99.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989433	Silver	105	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988777	Chloride	97.3		P	90 - 110
1988856	Chloride	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988782	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344424

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988792	Kjeldahl Nitrogen	106	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988731	NO2NO3-N	95.5	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988792	NO2NO3-N	96.8	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988733	O-Phosphate-P	91.7	93.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988794	O-Phosphate-P	90.6	93.7	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989939	Aldrin	59.0	56.9	P/P	26 - 96.0
1989939	Alpha-BHC	73.4	71.3	P/P	51 - 123
1989939	Alpha-Chlordane	79.9	75.6	P/P	45 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989939	Beta-BHC	114	105	P/P	43 - 146
1989939	Carbophenothion	111	124	P/P	26 - 179
1989939	Chlorothalonil	125	95.5	P/P	10 - 215
1989939	Cypermethrin	98.4	99.1	P/P	35 - 169
1989939	DDD-p,p'	95.8	93.8	P/P	49 - 131
1989939	DDE-p,p'	81.4	76.3	P/P	39 - 127
1989939	DDT-p,p'	80.5	78.2	P/P	49 - 120
1989939	Delta-BHC	130	122	P/P	49 - 187
1989939	Dicofol	74.7	73.7	P/P	10 - 129
1989939	Dieldrin	93.8	89.2	P/P	46 - 132
1989939	Endosulfan I	101	89.8	P/P	57 - 130
1989939	Endosulfan II	107	98.2	P/P	52 - 148
1989939	Endosulfan Sulfate	81.9	79.8	P/P	55 - 129
1989939	Endrin	84.8	63.0	P/P	45 - 133
1989939	Endrin Aldehyde	82.8	74.5	P/P	26 - 140
1989939	Endrin Ketone	95.1	95.9	P/P	60 - 125
1989939	Gamma-BHC	96.8	81.7	P/P	50 - 145
1989939	Gamma-Chlordane	78.5	74.2	P/P	44 - 118
1989939	Heptachlor	61.5	59.5	P/P	35 - 106
1989939	Heptachlor Epoxide	81.4	78.1	P/P	52 - 123
1989939	Methoxychlor	90.2	86.5	P/P	54 - 132
1989939	Mirex	69.1	71.6	P/P	36 - 107
1989939	Permethrin	82.6	84.3	P/P	47 - 135
1989939	Trifluralin	71.4	74.2	P/P	32 - 228

Reference Method: EPA 8270D

Batch ID: P344703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988813	Acetochlor	90.1	87.0	P/P	67 - 125
1988813	Alachlor	82.4	77.5	P/P	69 - 123
1988813	Ametryn	98.9	95.1	P/P	52 - 151
1988813	Atrazine Desethyl	57.9	103	P/P	10 - 129
1988813	Azinphos Methyl	106	123	P/P	48 - 200
1988813	Bromacil	64.3	78.7	P/P	46 - 130
1988813	Butylate	28.7	36.9	P/P	10 - 85.0
1988813	Chlorpyrifos Ethyl	101	102	P/P	54 - 115
1988813	Chlorpyrifos Methyl	94.2	105	P/P	44 - 117
1988813	Cyanazine	80.0	163	P/P	10 - 262
1988813	Demeton	56.5	82.8	P/P	24 - 145
1988813	Diazinon	93.0	102	P/P	66 - 129
1988813	Disulfoton	74.4	109	P/P	45 - 139
1988813	EPTC	27.6	37.5	P/P	10 - 86.0
1988813	Ethion	101	102	P/P	59 - 133
1988813	Ethoprop	78.1	100	P/P	54 - 116
1988813	Fenamiphos	77.2	95.9	P/P	55 - 140
1988813	Fipronil	64.4	71.9	P/P	37 - 142
1988813	Fipronil Sulfide	66.3	76.2	P/P	37 - 130
1988813	Fipronil Sulfone	30.3	65.0	P/P	18 - 143
1988813	Fonofos	78.7	108	P/P	55 - 118
1988813	Hexazinone	82.2	99.6	P/P	62 - 140
1988813	Malathion	110	109	P/P	64 - 132

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
 Batch ID: P344703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988813	Metalaxyl	88.9	91.0	P/P	55 - 129
1988813	Metolachlor	93.8	83.1	P/P	56 - 137
1988813	Metribuzin	153	190	P/P	16 - 218
1988813	Mevinphos	62.8	85.0	P/P	34 - 129
1988813	Molinate	39.9	48.7	P/P	16 - 99.0
1988813	Norflurazon	54.9	50.2	P/P	43 - 135
1988813	Parathion Ethyl	94.4	99.4	P/P	71 - 112
1988813	Parathion Methyl	99.7	111	P/P	65 - 127
1988813	Pendimethalin	118	116	P/P	35 - 159
1988813	Phorate	67.8	96.0	P/P	41 - 129
1988813	Prometon	90.7	90.3	P/P	56 - 140
1988813	Prometryn	91.6	88.4	P/P	65 - 130
1988813	Simazine	95.5	105	P/P	54 - 148
1988813	Terbufos	80.5	109	P/P	53 - 126
1988813	Terbutylazine	94.4	94.6	P/P	73 - 114

Reference Method: EPA 8276
 Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989309	Chlordane	54.4	75.6	P/P	41 - 134
1989309	Toxaphene	73.6	69.4	P/P	39 - 158

Reference Method: EPA 8321B
 Batch ID: P344375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988880	AMPA	29.7	27.5	F/F	40 - 140
1988880	Endothall	104	106	P/P	40 - 140
1988880	Glufosinate	102	102	P/P	40 - 140
1988880	Glyphosate	32.7	35.4	F/F	40 - 140
1988880	Sucralose	91.4	98.3	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P344412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989090	2,4-D	70.6	70.8	P/P	40 - 150
1989090	3-Hydroxycarbofuran	112	107	P/P	40 - 150
1989090	Acetaminophen	116	108	P/P	30 - 150
1989090	Aldicarb	105	95.3	P/P	30 - 150
1989090	Aldicarb Sulfone	126	119	P/P	40 - 150
1989090	Aldicarb Sulfoxide	104	94.6	P/P	40 - 150
1989090	Bentazon	43.6	42.0	P/P	30 - 150
1989090	Carbamazepine	106	102	P/P	40 - 150
1989090	Carbaryl	70.9	68.2	P/P	40 - 150
1989090	Carbofuran	74.9	74.3	P/P	40 - 150
1989090	Diuron	95.0	81.7	P/P	40 - 150
1989090	Fenuron	109	106	P/P	40 - 150
1989090	Fluridone	87.2	85.7	P/P	40 - 150
1989090	Hydrocodone	140	136	P/P	40 - 150
1989090	Imazapyr	130	112	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P344412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989090	Imidacloprid	216	200	F/F	40 - 160
1989090	Linuron	94.2	88.9	P/P	40 - 150
1989090	MCCP	71.6	69.1	P/P	40 - 150
1989090	Methiocarb	87.4	85.8	P/P	40 - 150
1989090	Methomyl	91.1	82.1	P/P	40 - 150
1989090	Oxamyl	85.3	79.6	P/P	40 - 150
1989090	Primidone	119	102	P/P	40 - 150
1989090	Propoxur	73.4	73.2	P/P	40 - 150
1989090	Pyraclostrobin	94.4	92.7	P/P	40 - 150
1989090	Triclopyr	80.6	75.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P345074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989207	Fluoride	95.8	98.5	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P344772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988782	Organic Carbon	99.2	98.0	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P345023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988467	Organic Carbon	100	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P344417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988758	Turbidity	1.64	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P344563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989433	Calcium	1.06	Spike	P	0 - 20
1989433	Iron	0.840	Spike	P	0 - 20
1989433	Magnesium	1.09	Spike	P	0 - 20
1989433	Potassium	0.992	Spike	P	0 - 20
1989433	Sodium	0.855	Spike	P	0 - 20
1989433	Zinc	0.883	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989433	Arsenic	0.720	Spike	P	0 - 20
1989433	Cadmium	0.157	Spike	P	0 - 20
1989433	Chromium	0.551	Spike	P	0 - 20
1989433	Copper	0.629	Spike	P	0 - 20
1989433	Lead	0.519	Spike	P	0 - 20
1989433	Nickel	1.32	Spike	P	0 - 20
1989433	Silver	0.386	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988777	Chloride	0.154	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988777	Sulfate	0.205	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988782	Ammonia-N	0.405	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988792	Kjeldahl Nitrogen	1.04	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988731	NO2NO3-N	1.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988792	NO2NO3-N	0.943	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P344581

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988858	Total-P	0.307	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P344436

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988733	O-Phosphate-P	1.84	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P344437

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988794	O-Phosphate-P	3.36	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P344637

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989939	Aldrin	3.58	Spike	P	0 - 30
1989939	Alpha-BHC	2.98	Spike	P	0 - 30
1989939	Alpha-Chlordane	5.60	Spike	P	0 - 30
1989939	Beta-BHC	8.42	Spike	P	0 - 30
1989939	Carbophenothion	11.0	Spike	P	0 - 30
1989939	Chlorothalonil	26.8	Spike	P	0 - 30
1989939	Cypermethrin	0.749	Spike	P	0 - 30
1989939	DDD-p,p'	2.17	Spike	P	0 - 30
1989939	DDE-p,p'	6.48	Spike	P	0 - 30
1989939	DDT-p,p'	2.96	Spike	P	0 - 30
1989939	Delta-BHC	6.81	Spike	P	0 - 30
1989939	Dicofol	1.32	Spike	P	0 - 30
1989939	Dieldrin	4.99	Spike	P	0 - 30
1989939	Endosulfan I	11.4	Spike	P	0 - 30
1989939	Endosulfan II	8.70	Spike	P	0 - 30
1989939	Endosulfan Sulfate	2.58	Spike	P	0 - 30
1989939	Endrin	29.5	Spike	P	0 - 30
1989939	Endrin Aldehyde	10.6	Spike	P	0 - 30
1989939	Endrin Ketone	0.857	Spike	P	0 - 30
1989939	Gamma-BHC	16.8	Spike	P	0 - 30
1989939	Gamma-Chlordane	5.54	Spike	P	0 - 30
1989939	Heptachlor	3.30	Spike	P	0 - 30
1989939	Heptachlor Epoxide	4.14	Spike	P	0 - 30
1989939	Methoxychlor	4.16	Spike	P	0 - 30
1989939	Mirex	3.62	Spike	P	0 - 30
1989939	Permethrin	2.06	Spike	P	0 - 30
1989939	Trifluralin	3.80	Spike	P	0 - 30
LFB	Aldrin	2.99	LCS	P	0 - 30
LFB	Alpha-BHC	0.887	LCS	P	0 - 30
LFB	Alpha-Chlordane	7.05	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P344637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-BHC	9.90	LCS	P	0 - 30
LFB	Carbophenothion	7.27	LCS	P	0 - 30
LFB	Chlorothalonil	78.3	LCS	F	0 - 30
LFB	Cypermethrin	7.80	LCS	P	0 - 30
LFB	DDD-p,p'	16.0	LCS	P	0 - 30
LFB	DDE-p,p'	11.9	LCS	P	0 - 30
LFB	DDT-p,p'	23.9	LCS	P	0 - 30
LFB	Delta-BHC	7.22	LCS	P	0 - 30
LFB	Dicofol	3.29	LCS	P	0 - 30
LFB	Dieldrin	13.6	LCS	P	0 - 30
LFB	Endosulfan I	1.88	LCS	P	0 - 30
LFB	Endosulfan II	19.3	LCS	P	0 - 30
LFB	Endosulfan Sulfate	14.1	LCS	P	0 - 30
LFB	Endrin	15.0	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.44	LCS	P	0 - 30
LFB	Endrin Ketone	1.97	LCS	P	0 - 30
LFB	Gamma-BHC	0.944	LCS	P	0 - 30
LFB	Gamma-Chlordane	7.55	LCS	P	0 - 30
LFB	Heptachlor	2.02	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.63	LCS	P	0 - 30
LFB	Methoxychlor	8.53	LCS	P	0 - 30
LFB	Mirex	11.2	LCS	P	0 - 30
LFB	Permethrin	1.64	LCS	P	0 - 30
LFB	Trifluralin	4.46	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988813	Acetochlor	3.49	Spike	P	0 - 30
1988813	Alachlor	6.09	Spike	P	0 - 30
1988813	Ametryn	2.95	Spike	P	0 - 30
1988813	Atrazine	8.28	Spike	P	0 - 30
1988813	Atrazine Desethyl	46.7	Spike	F	0 - 30
1988813	Azinphos Methyl	14.4	Spike	P	0 - 30
1988813	Bromacil	20.1	Spike	P	0 - 30
1988813	Butylate	25.0	Spike	P	0 - 30
1988813	Chlorpyrifos Ethyl	1.13	Spike	P	0 - 30
1988813	Chlorpyrifos Methyl	11.1	Spike	P	0 - 30
1988813	Cyanazine	68.6	Spike	F	0 - 30
1988813	Demeton	37.8	Spike	F	0 - 30
1988813	Diazinon	9.14	Spike	P	0 - 30
1988813	Disulfoton	37.4	Spike	F	0 - 30
1988813	EPTC	30.2	Spike	F	0 - 30
1988813	Ethion	0.494	Spike	P	0 - 30
1988813	Ethoprop	24.8	Spike	P	0 - 30
1988813	Fenamiphos	21.7	Spike	P	0 - 30
1988813	Fipronil	11.0	Spike	P	0 - 30
1988813	Fipronil Sulfide	13.9	Spike	P	0 - 30
1988813	Fipronil Sulfone	43.7	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988813	Fonofos	31.6	Spike	F	0 - 30
1988813	Hexazinone	19.2	Spike	P	0 - 30
1988813	Malathion	0.603	Spike	P	0 - 30
1988813	Metalaxyl	2.36	Spike	P	0 - 30
1988813	Metolachlor	11.8	Spike	P	0 - 30
1988813	Metribuzin	21.8	Spike	P	0 - 30
1988813	Mevinphos	30.1	Spike	F	0 - 30
1988813	Molinate	19.8	Spike	P	0 - 30
1988813	Norflurazon	8.91	Spike	P	0 - 30
1988813	Parathion Ethyl	5.12	Spike	P	0 - 30
1988813	Parathion Methyl	10.3	Spike	P	0 - 30
1988813	Pendimethalin	2.51	Spike	P	0 - 30
1988813	Phorate	34.4	Spike	F	0 - 30
1988813	Prometon	0.447	Spike	P	0 - 30
1988813	Prometryn	3.60	Spike	P	0 - 30
1988813	Simazine	9.03	Spike	P	0 - 30
1988813	Terbufos	30.1	Spike	F	0 - 30
1988813	Terbutylazine	0.132	Spike	P	0 - 30
LFB	Acetochlor	5.74	LCS	P	0 - 30
LFB	Alachlor	5.80	LCS	P	0 - 30
LFB	Ametryn	0.383	LCS	P	0 - 30
LFB	Atrazine	11.1	LCS	P	0 - 30
LFB	Atrazine Desethyl	73.3	LCS	F	0 - 30
LFB	Azinphos Methyl	32.7	LCS	F	0 - 30
LFB	Bromacil	44.1	LCS	F	0 - 30
LFB	Butylate	10.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.69	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	19.1	LCS	P	0 - 30
LFB	Cyanazine	66.9	LCS	F	0 - 30
LFB	Demeton	1.37	LCS	P	0 - 30
LFB	Diazinon	11.0	LCS	P	0 - 30
LFB	Disulfoton	0.789	LCS	P	0 - 30
LFB	EPTC	13.5	LCS	P	0 - 30
LFB	Ethion	9.60	LCS	P	0 - 30
LFB	Ethoprop	1.45	LCS	P	0 - 30
LFB	Fenamiphos	42.2	LCS	F	0 - 30
LFB	Fipronil	16.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.77	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.24	LCS	P	0 - 30
LFB	Fonofos	19.1	LCS	P	0 - 30
LFB	Hexazinone	105	LCS	F	0 - 30
LFB	Malathion	4.91	LCS	P	0 - 30
LFB	Metalaxyl	44.8	LCS	F	0 - 30
LFB	Metolachlor	0.654	LCS	P	0 - 30
LFB	Metribuzin	34.4	LCS	F	0 - 30
LFB	Mevinphos	18.5	LCS	P	0 - 30
LFB	Molinate	10.7	LCS	P	0 - 30
LFB	Norflurazon	60.1	LCS	F	0 - 30
LFB	Parathion Ethyl	12.5	LCS	P	0 - 30
LFB	Parathion Methyl	18.6	LCS	P	0 - 30
LFB	Pendimethalin	15.8	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	16.7	LCS	P	0 - 30
LFB	Prometon	10.7	LCS	P	0 - 30
LFB	Prometryn	5.75	LCS	P	0 - 30
LFB	Simazine	20.2	LCS	P	0 - 30
LFB	Terbufos	18.2	LCS	P	0 - 30
LFB	Terbutylazine	14.4	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P344637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989309	Chlordane	27.3	Spike	P	0 - 30
1989309	Toxaphene	5.88	Spike	P	0 - 30
LFB	Chlordane	11.1	LCS	P	0 - 30
LFB	Toxaphene	3.65	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P344375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988880	AMPA	3.64	Spike	P	0 - 30
1988880	Endothall	2.49	Spike	P	0 - 30
1988880	Glufosinate	0.166	Spike	P	0 - 30
1988880	Glyphosate	6.83	Spike	P	0 - 30
1988880	Sucralose	7.21	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P344412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989090	2,4-D	0.259	Spike	P	0 - 30
1989090	3-Hydroxycarbofuran	4.77	Spike	P	0 - 30
1989090	Acetaminophen	6.90	Spike	P	0 - 30
1989090	Aldicarb	9.83	Spike	P	0 - 30
1989090	Aldicarb Sulfone	6.01	Spike	P	0 - 30
1989090	Aldicarb Sulfoxide	9.64	Spike	P	0 - 30
1989090	Bentazon	3.30	Spike	P	0 - 30
1989090	Carbamazepine	3.47	Spike	P	0 - 30
1989090	Carbaryl	3.86	Spike	P	0 - 30
1989090	Carbofuran	0.871	Spike	P	0 - 30
1989090	Diuron	6.04	Spike	P	0 - 30
1989090	Fenuron	2.24	Spike	P	0 - 30
1989090	Fluridone	1.54	Spike	P	0 - 30
1989090	Hydrocodone	3.08	Spike	P	0 - 30
1989090	Imazapyr	7.57	Spike	P	0 - 30
1989090	Imidacloprid	7.03	Spike	P	0 - 30
1989090	Linuron	5.82	Spike	P	0 - 30
1989090	MCP	3.58	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P344412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989090	Methiocarb	1.80	Spike	P	0 - 30
1989090	Methomyl	10.4	Spike	P	0 - 30
1989090	Oxamyl	6.87	Spike	P	0 - 30
1989090	Primidone	15.0	Spike	P	0 - 30
1989090	Propoxur	0.188	Spike	P	0 - 30
1989090	Pyraclostrobin	1.79	Spike	P	0 - 30
1989090	Triclopyr	5.92	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P344396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988778	Color (true)	0.512	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P345070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989207	Total Alkalinity	0.543	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P344885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988790	TDS	5.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P345074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989207	Fluoride	1.49	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P344772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988782	Organic Carbon	0.581	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P345023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988467	Organic Carbon	0.499	Spike	P	0 - 20

Quality Assurance Report Precision

* 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: 1988807
Field Sample ID: G2CE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	78.6	P	30 - 160

Lab Sample ID: 1988808
Field Sample ID: G2CE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	87.7	P	30 - 160
EPA 8321B	Endothall-d6	96.1	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	59.7	P	40 - 160
EPA 8321B	Primidone-d5	119	P	30 - 160
EPA 8321B	Sucralose-d6	77.2	P	40 - 160

Lab Sample ID: 1988812
Field Sample ID: G2CE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	31.0	F	37 - 117
EPA 8270D	Tetrachloro-m-xylene	20.7	F	34 - 101

Lab Sample ID: 1988813
Field Sample ID: G2CE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	95.2	P	71 - 126
EPA 8270D	Terbufos-d10	98.3	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A83575
Included Lab Sample IDs: 1988789, 1988790, 1988795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83581
Included Lab Sample IDs: 1988789, 1988790, 1988795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A83588

Included Lab Sample IDs: 1988793, 1988794, 1988797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	99.2	P/P	90 - 110
O-Phosphate-P	98.9	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83601

Included Lab Sample IDs: 1988791, 1988792, 1988796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	96.0	P/P	90 - 110
NO2NO3-N	97.5	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83623

Included Lab Sample IDs: 1988791, 1988792, 1988796

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83681

Included Lab Sample IDs: 1988828, 1988829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	103	P/P	90 - 110
Arsenic	104	103	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Chromium	103	102	P/P	90 - 110
Chromium	103	103	P/P	90 - 110
Copper	101	100	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Nickel	102	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A83699

Included Lab Sample IDs: 1988791

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83715

Included Lab Sample IDs: 1988828, 1988829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.4	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	104	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83715

Included Lab Sample IDs: 1988828, 1988829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	99.6	98.5	P/P	90 - 110
Sodium	98.5	97.1	P/P	90 - 110
Zinc	99.9	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83729

Included Lab Sample IDs: 1988791, 1988792, 1988796

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A83732

Included Lab Sample IDs: 1988789, 1988790, 1988795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	104	P/P	90 - 110
Chloride	102	102	P/P	90 - 110
Sulfate	101	104	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83734

Included Lab Sample IDs: 1988791, 1988792, 1988796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A83769

Included Lab Sample IDs: 1988807

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	104	104	P/P	60 - 150
Acetaminophen	107	106	P/P	60 - 150
Aldicarb	97.9	101	P/P	60 - 150
Aldicarb Sulfone	106	104	P/P	50 - 150
Aldicarb Sulfoxide	112	116	P/P	50 - 150
Carbamazepine	105	110	P/P	60 - 150
Carbaryl	113	109	P/P	60 - 150
Carbofuran	109	109	P/P	50 - 150
Diuron	113	113	P/P	60 - 150
Fenuron	114	119	P/P	60 - 150
Fluridone	108	113	P/P	60 - 160
Hydrocodone	118	125	P/P	60 - 150
Imazapyr	103	117	P/P	50 - 150
Imidacloprid	106	111	P/P	60 - 150
Linuron	114	106	P/P	60 - 150
Methiocarb	108	115	P/P	50 - 150
Methomyl	103	108	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A83769

Included Lab Sample IDs: 1988807

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxamyl	93.5	102	P/P	50 - 150
Primidone	100	114	P/P	60 - 150
Propoxur	107	106	P/P	50 - 150
Pyraclostrobin	114	117	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A83798

Included Lab Sample IDs: 1988792, 1988796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	98.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A83812

Included Lab Sample IDs: 1988789, 1988790, 1988795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83812

Included Lab Sample IDs: 1988789, 1988790, 1988795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.7	98.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83870

Included Lab Sample IDs: 1988828, 1988829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	100	99.1	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A83873

Included Lab Sample IDs: 1988812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.7		P	80 - 120
Toxaphene	97.9		P	80 - 120

Reference Method: EPA 8321B

Run ID: A83883

Included Lab Sample IDs: 1988808

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	123	P/P	50 - 150
Bentazon	119	124	P/P	50 - 150
MCPP	117	125	P/P	50 - 150
Triclopyr	124	121	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A83902
Included Lab Sample IDs: 1988808

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.4	96.2	P/P	60 - 160
Endothall	90.6	101	P/P	60 - 160
Glufosinate	99.1	96.5	P/P	60 - 160
Glyphosate	97.7	94.8	P/P	60 - 160
Sucralose	94.8	102	P/P	60 - 160

Reference Method: EPA 8270D
Run ID: A83927
Included Lab Sample IDs: 1988812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.2		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	97.2		P	80 - 120
Beta-BHC	93.1		P	80 - 120
Carbophenothion	100		P	80 - 120
Chlorothalonil	99.5		P	80 - 120
Cypermethrin	89.8		P	80 - 120
DDD-p,p'	99.7		P	80 - 120
DDE-p,p'	97.6		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	93.7		P	80 - 120
Dicofol	106		P	80 - 120
Dieldrin	90.0		P	80 - 120
Endosulfan I	93.6		P	80 - 120
Endosulfan II	89.7		P	80 - 120
Endosulfan Sulfate	92.7		P	80 - 120
Endrin	91.2		P	80 - 120
Endrin Aldehyde	93.4		P	80 - 120
Endrin Ketone	96.9		P	80 - 120
Gamma-BHC	98.2		P	80 - 120
Gamma-Chlordane	98.6		P	80 - 120
Heptachlor	94.8		P	80 - 120
Heptachlor Epoxide	99.0		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	97.7		P	80 - 120
Permethrin	93.3		P	80 - 120
Trifluralin	99.1		P	80 - 120

Reference Method: EPA 8270D
Run ID: A84167
Included Lab Sample IDs: 1988813

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	93.7		P	80 - 120
Alachlor	97.3		P	80 - 120
Ametryn	90.0		P	80 - 120
Atrazine	94.5		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	95.1		P	80 - 120
Bromacil	94.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A84167
 Included Lab Sample IDs: 1988813

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Butylate	94.9		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	96.7		P	80 - 120
Cyanazine	87.6		P	80 - 120
Demeton	95.5		P	80 - 120
Diazinon	94.5		P	80 - 120
Disulfoton	93.2		P	80 - 120
EPTC	95.2		P	80 - 120
Ethion	94.2		P	80 - 120
Ethoprop	96.7		P	80 - 120
Fenamiphos	98.2		P	80 - 120
Fipronil	92.9		P	80 - 120
Fipronil Sulfide	96.0		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Fonofos	96.1		P	80 - 120
Hexazinone	90.3		P	80 - 120
Malathion	98.5		P	80 - 120
Metalaxyl	98.9		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	99.0		P	80 - 120
Mevinphos	94.5		P	80 - 120
Molinate	94.9		P	80 - 120
Norflurazon	95.4		P	80 - 120
Parathion Ethyl	94.0		P	80 - 120
Parathion Methyl	98.4		P	80 - 120
Pendimethalin	98.9		P	80 - 120
Phorate	91.9		P	80 - 120
Prometon	95.1		P	80 - 120
Prometryn	97.6		P	80 - 120
Simazine	91.7		P	80 - 120
Terbufos	93.6		P	80 - 120
Terbutylazine	95.1		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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.64	
EPA 200.7 Rev. 4.4	Calcium	101	103 99.0			1.06
	Iron	107	105 103 104			0.840
	Magnesium	103	105 101			1.09
	Potassium	102	98.1 95.9 97.3			0.992
	Sodium	97.7	99.0 95.0			0.855
	Zinc	102	100 98.0 98.9			0.883
EPA 200.8 Rev. 5.4	Arsenic	104	106 103 104			0.720

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	MS
								SMP	
EPA 200.8 Rev. 5.4	Cadmium	105		104	104	104			0.157
	Chromium	101		102	99.2	99.7			0.551
	Copper	99.4		99.0	95.3	95.9			0.629
	Lead	101		102	99.7	100			0.519
	Nickel	103		103	98.3	99.6			1.32
	Silver	105		104	105	105			0.386
EPA 300.0 Rev. 2.1	Chloride	101		97.3	96.6			0.154	
	Sulfate	101						0.205	
EPA 350.1 Rev. 2.0	Ammonia-N	100		102	101				0.405
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108		106	104				1.04
EPA 353.2 Rev. 2.0	NO2NO3-N	102		95.5	94.5				1.05
	NO2NO3-N	97.5		96.8	97.8				0.943
EPA 365.1 Rev. 2.0	Total-P	99.7							0.307
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.4		91.7	93.5				1.84
	O-Phosphate-P	96.5		90.6	93.7				3.36
EPA 8270D	Acetochlor	90.6	85.5	90.1	87.0		5.74		3.49
	Alachlor	93.4	88.1	82.4	77.5		5.80		6.09
	Aldrin	62.3	60.4	59.0	56.9		2.99		3.58
	Alpha-BHC	75.6	74.9	73.4	71.3		0.887		2.98
	Alpha-Chlordane	83.2	77.5	79.9	75.6		7.05		5.60
	Ametryn	88.7	88.3	98.9	95.1		0.383		2.95
	Atrazine	106	94.9				11.1		8.28
	Atrazine Desethyl	110	51.0	57.9	103		73.3		46.7
	Azinphos Methyl	127	90.9	106	123		32.7		14.4
	Beta-BHC	124	112	114	105		9.90		8.42
	Bromacil	78.3	50.0	64.3	78.7		44.1		20.1
	Butylate	41.9	46.5	28.7	36.9		10.4		25.0
	Carbophenothion	113	105	111	124		7.27		11.0
	Chlorothalonil	27.9	63.8	125	95.5		78.3		26.8
	Chlorpyrifos Ethyl	101	94.6	101	102		6.69		1.13
	Chlorpyrifos Methyl	99.8	82.4	94.2	105		19.1		11.1
	Cyanazine	188	93.7	80.0	163		66.9		68.6
	Cypermethrin	99.4	91.9	98.4	99.1		7.80		0.749
	DDD-p,p'	112	95.2	95.8	93.8		16.0		2.17
	DDE-p,p'	88.6	78.7	81.4	76.3		11.9		6.48
	DDT-p,p'	95.2	74.9	80.5	78.2		23.9		2.96
	Delta-BHC	122	131	130	122		7.22		6.81
	Demeton	67.2	68.2	56.5	82.8		1.37		37.8
	Diazinon	97.7	87.5	93.0	102		11.0		9.14
	Dicofol	82.5	79.8	74.7	73.7		3.29		1.32
	Dieldrin	88.0	76.8	93.8	89.2		13.6		4.99
	Disulfoton	92.6	93.3	74.4	109		0.789		37.4
	Endosulfan I	94.0	92.2	101	89.8		1.88		11.4
	Endosulfan II	105	86.8	107	98.2		19.3		8.70
	Endosulfan Sulfate	101	116	81.9	79.8		14.1		2.58
	Endrin	93.3	80.3	84.8	63.0		15.0		29.5
	Endrin Aldehyde	113	104	82.8	74.5		8.44		10.6
	Endrin Ketone	102	99.7	95.1	95.9		1.97		0.857
	EPTC	41.4	47.4	27.6	37.5		13.5		30.2
	Ethion	97.5	88.6	101	102		9.60		0.494
	Ethoprop	83.5	82.3	78.1	100		1.45		24.8
	Fenamiphos	102	66.4	77.2	95.9		42.2		21.7
	Fipronil	87.1	74.2	64.4	71.9		16.0		11.0
	Fipronil Sulfide	84.3	81.2	66.3	76.2		3.77		13.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Fipronil Sulfone	77.5	75.0	30.3	65.0	3.24	43.7
	Fonofos	84.6	69.8	78.7	108	19.1	31.6
	Gamma-BHC	93.8	93.0	96.8	81.7	0.944	16.8
	Gamma-Chlordane	81.9	75.9	78.5	74.2	7.55	5.54
	Heptachlor	65.0	63.7	61.5	59.5	2.02	3.30
	Heptachlor Epoxide	83.2	78.7	81.4	78.1	5.63	4.14
	Hexazinone	101	31.3	82.2	99.6	105	19.2
	Malathion	104	99.1	110	109	4.91	0.603
	Metalaxyl	95.5	60.5	88.9	91.0	44.8	2.36
	Methoxychlor	104	95.8	90.2	86.5	8.53	4.16
	Metolachlor	92.7	92.1	93.8	83.1	0.654	11.8
	Metribuzin	154	109	153	190	34.4	21.8
	Mevinphos	71.3	59.2	62.8	85.0	18.5	30.1
	Mirex	75.9	67.9	69.1	71.6	11.2	3.62
	Molinate	49.5	55.1	39.9	48.7	10.7	19.8
	Norflurazon	86.8	46.7	54.9	50.2	60.1	8.91
	Parathion Ethyl	93.9	82.9	94.4	99.4	12.5	5.12
	Parathion Methyl	99.6	82.6	99.7	111	18.6	10.3
	Pendimethalin	116	98.9	118	116	15.8	2.51
	Permethrin	84.8	83.4	82.6	84.3	1.64	2.06
	Phorate	77.7	65.7	67.8	96.0	16.7	34.4
	Prometon	88.1	79.2	90.7	90.3	10.7	0.447
	Prometryn	90.5	85.4	91.6	88.4	5.75	3.60
	Simazine	104	84.9	95.5	105	20.2	9.03
	Terbufos	89.7	74.8	80.5	109	18.2	30.1
	Terbuthylazine	98.6	85.3	94.4	94.6	14.4	0.132
	Trifluralin	76.0	72.7	71.4	74.2	4.46	3.80
EPA 8276	Chlordane	76.3	68.3	54.4	75.6	11.1	27.3
	Toxaphene	81.1	78.2	73.6	69.4	3.65	5.88
EPA 8321B	2,4-D	95.1		70.6	70.8		0.259
	3-Hydroxycarbofuran	101		112	107		4.77
	Acetaminophen	106		116	108		6.90
	Aldicarb	111		105	95.3		9.83
	Aldicarb Sulfone	109		126	119		6.01
	Aldicarb Sulfoxide	117		104	94.6		9.64
	AMPA	100		29.7	27.5		3.64
	Bentazon	95.6		43.6	42.0		3.30
	Carbamazepine	109		106	102		3.47
	Carbaryl	91.7		70.9	68.2		3.86
	Carbofuran	91.9		74.9	74.3		0.871
	Diuron	97.6		95.0	81.7		6.04
	Endothall	103		104	106		2.49
	Fenuron	127		109	106		2.24
	Fluridone	98.6		87.2	85.7		1.54
	Glufosinate	99.2		102	102		0.166
	Glyphosate	94.7		32.7	35.4		6.83
	Hydrocodone	123		140	136		3.08
	Imazapyr	118		130	112		7.57
	Imidacloprid	111		216	200		7.03
	Linuron	103		94.2	88.9		5.82
	MCPP	104		71.6	69.1		3.58
	Methiocarb	92.0		87.4	85.8		1.80
	Methomyl	99.5		91.1	82.1		10.4
	Oxamyl	94.0		85.3	79.6		6.87

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Primidone	107	119	102		15.0
	Propoxur	90.2	73.4	73.2		0.188
	Pyraclostrobin	105	94.4	92.7		1.79
	Sucralose	100	91.4	98.3		7.21
	Triclopyr	110	80.6	75.9		5.92
SM 2120 B	Color (true)				0.512	
SM 2320 B-97	Total Alkalinity	102			0.543	
SM 2540 C-97	TDS				5.41	
SM 4500 F-C-97	Fluoride	95.6	95.8	98.5		1.49
SM 5310 B-00	Organic Carbon	101	99.2	98.0		0.581
	Organic Carbon	98.6	100	100		0.499

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1988789, 1988790, 1988795
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1988828, 1988829
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1988828, 1988829
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1988789, 1988790, 1988795
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1988789, 1988790, 1988795
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1988791, 1988792, 1988796
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1988791, 1988792, 1988796
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1988791, 1988792, 1988796
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1988791, 1988792, 1988796
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1988793, 1988794, 1988797
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1988812
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1988813
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1988812
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1988807
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1988808
SM 2120 B / E31780	True Color measured at 450 nm	1988789, 1988790, 1988795
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1988789, 1988790, 1988795
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1988789, 1988790, 1988795
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1988789, 1988790, 1988795
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1988789, 1988790, 1988795
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1988791, 1988792, 1988796

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	05/01/2018			05/01/2018 16:50	William L. Brown IV	1988789, 1988790, 1988795
EPA 200.7 Rev. 4.4	05/01/2018	05/03/2018 14:30	Elliott D. Healy	05/07/2018 13:05	Betina Topolski	1988828
	05/01/2018	05/03/2018 14:30	Elliott D. Healy	05/07/2018 13:25	Betina Topolski	1988829
EPA 200.8 Rev. 5.4	05/01/2018	05/03/2018 14:30	Elliott D. Healy	05/04/2018 18:30	Nadine Brooks	1988828
	05/01/2018	05/03/2018 14:30	Elliott D. Healy	05/04/2018 19:18	Nadine Brooks	1988829
	05/01/2018	05/03/2018 14:30	Elliott D. Healy	05/14/2018 13:46	Nadine Brooks	1988828
	05/01/2018	05/03/2018 14:30	Elliott D. Healy	05/14/2018 13:53	Nadine Brooks	1988829
EPA 300.0 Rev. 2.1	05/01/2018			05/07/2018 19:50	Lipi Saha	1988789
	05/01/2018			05/07/2018 20:02	Lipi Saha	1988790
	05/01/2018			05/07/2018 20:37	Lipi Saha	1988795
EPA 350.1 Rev. 2.0	05/01/2018			05/07/2018 11:34	Ping Hua	1988791
	05/01/2018			05/07/2018 11:35	Ping Hua	1988792
	05/01/2018			05/07/2018 11:37	Ping Hua	1988796
EPA 351.2 Rev. 2.0	05/01/2018	05/02/2018 10:30	Adrian Shelby	05/03/2018 10:41	Joseph Suarez	1988791
	05/01/2018	05/02/2018 10:30	Adrian Shelby	05/03/2018 10:42	Joseph Suarez	1988792
	05/01/2018	05/02/2018 10:30	Adrian Shelby	05/03/2018 10:47	Joseph Suarez	1988796
EPA 353.2 Rev. 2.0	05/01/2018			05/02/2018 14:18	Lauren Bottorf	1988791
	05/01/2018			05/02/2018 14:25	Lauren Bottorf	1988792
	05/01/2018			05/02/2018 14:35	Lauren Bottorf	1988796
EPA 365.1 Rev. 2.0	05/01/2018	05/03/2018 13:11	Sima Feizi	05/07/2018 11:18	Beverly Y. Sanders	1988791
	05/01/2018	05/03/2018 13:11	Sima Feizi	05/07/2018 11:26	Beverly Y. Sanders	1988792
	05/01/2018	05/03/2018 13:11	Sima Feizi	05/07/2018 11:27	Beverly Y. Sanders	1988796
EPA 365.1 Rev. 2.0 dissolved	05/01/2018			05/01/2018 15:21	Megan Treadwell	1988794
	05/01/2018			05/01/2018 15:49	Megan Treadwell	1988793
	05/01/2018			05/01/2018 15:50	Megan Treadwell	1988797
EPA 8270D	05/01/2018	05/04/2018 08:42	Dinesh Mishra	05/16/2018 18:13	Marek Topolski	1988813
	05/01/2018	05/04/2018 12:51	Rasheda Ghaffari	05/08/2018 20:31	Vandana T. Nagar	1988812
EPA 8276	05/01/2018	05/04/2018 12:51	Rasheda Ghaffari	05/08/2018 17:01	John P. Burgos	1988812
EPA 8321B	05/01/2018	05/03/2018 10:00	Hoor Shaik	05/06/2018 18:22	Juyoung Kim	1988807
	05/01/2018	05/03/2018 10:00	Hoor Shaik	05/06/2018 19:31	Juyoung Kim	1988808
	05/01/2018	05/03/2018 10:00	Hoor Shaik	05/09/2018 02:53	Juyoung Kim	1988808
	05/01/2018	05/03/2018 17:00	Hoor Shaik	05/03/2018 19:43	Juyoung Kim	1988808
SM 2120 B	05/01/2018			05/01/2018 14:24	Tanya Welborn	1988789, 1988790
	05/01/2018			05/01/2018 14:25	Tanya Welborn	1988795
SM 2320 B-97	05/01/2018			05/09/2018 21:13	Dale L. Simmons	1988789
	05/01/2018			05/09/2018 21:22	Dale L. Simmons	1988790
	05/01/2018			05/09/2018 21:33	Dale L. Simmons	1988795
SM 2540 C-97	05/01/2018			05/02/2018 15:06	Yijie Li	1988789, 1988790, 1988795
SM 2540 D-97	05/01/2018			05/02/2018 15:06	Yijie Li	1988789, 1988790, 1988795
SM 4500 F-C-97	05/01/2018			05/09/2018 21:13	Dale L. Simmons	1988789

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	05/01/2018			05/09/2018 21:22	Dale L. Simmons	1988790
	05/01/2018			05/09/2018 21:33	Dale L. Simmons	1988795
SM 5310 B-00	05/01/2018			05/05/2018 01:55	Julia Storbeck	1988791
	05/01/2018			05/09/2018 17:17	Megan Treadwell	1988792
	05/01/2018			05/09/2018 18:06	Megan Treadwell	1988796