

Chemical Analysis Report

CEN-DIST-2018-05-04-02

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

Event Description: **Kasey / Gear / Park / Dot**
Request ID: **RQ-2018-04-30-37**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Colin Wright, Program Administrator

Date Certified: 11-JUN-2018 12:17

A handwritten signature in black ink, appearing to read "Colin Wright", is shown on a light-colored background.

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 GEAR @ CENTER (3023D)

Collection Date/Time: 05/03/2018 10:32

Field ID: G2CE0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990360	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P344728	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P345209	
		Sulfate	7.2		mg SO4/L	P345212	
	SM 2120 B	Color (true)	26		PCU	P344722	
	SM 2320 B-97	Total Alkalinity	69		mg CaCO3/L	P345177	
	SM 2540 C-97	TDS	133		mg/L	P345316	
	SM 2540 D-97	TSS	3	I	mg/L	P345305	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P345180	
1990362	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P345294	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P344943	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345046	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P344895	
	SM 5310 B-00	Organic Carbon	9.5		mg C/L	P345196	
1990364	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P344715	

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: LAKE DOT @ CENTER (2997U)

Collection Date/Time: 05/03/2018 11:03

Field ID: G2CE0067

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990366	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P344728	
	EPA 300.0 Rev. 2.1	Chloride	8.5		mg Cl/L	P345209	
		Sulfate	12		mg SO4/L	P345212	
	SM 2120 B	Color (true)	10		PCU	P344722	
	SM 2320 B-97	Total Alkalinity	61		mg CaCO3/L	P345177	
	SM 2540 C-97	TDS	99		mg/L	P345316	
	SM 2540 D-97	TSS	2	I	mg/L	P345305	
	SM 4500 F-C-97	Fluoride	0.058	I	mg F/L	P345180	
1990367	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P345294	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P344943	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345047	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P344895	
	SM 5310 B-00	Organic Carbon	4.5		mg C/L	P345196	
1990368	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P344715	
1990380	EPA 8321B	2,4-D	0.0048	I	ug/L	P344670	MS
		Bentazon	0.0069		ug/L	P344670	
		MCP	0.0020	U	ug/L	P344670	
		Triclopyr**	0.0040	U	ug/L	P344670	
		Imidacloprid	0.013		ug/L	P344670	
		Diuron	0.0061	I	ug/L	P344670	
		Pyraclostrobin**	0.0020	U	ug/L	P344670	
		Primidone**	0.0040	U	ug/L	P344670	
		Linuron	0.0040	U	ug/L	P344670	

Field ID: G2CE0067

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990380	EPA 8321B	Acetaminophen**	0.0097	I	ug/L	P344670	
		Fenuron	0.0080	U	ug/L	P344670	MS
		Imazapyr**	0.011	I	ug/L	P344670	
		Carbamazepine**	4.0E-04	U	ug/L	P344670	
		Fluridone**	0.0028		ug/L	P344670	
		Hydrocodone**	0.0015	I	ug/L	P344670	
		Sucralose**	0.11	I	ug/L	P344930	
		Glyphosate**	2.2		ug/L	P344930	
		AMPA**	0.47		ug/L	P344930	MS
		Endothall**	0.10	U	ug/L	P344930	MS
		Glufosinate**	0.10	U	ug/L	P344930	MS

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: KASEY LAKE @ CENTER (3002Q)

Collection Date/Time: 05/03/2018 11:42

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990357	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P344728	
	EPA 300.0 Rev. 2.1	Chloride	8.8		mg Cl/L	P345209	
		Sulfate	4.7		mg SO4/L	P345212	
	SM 2120 B	Color (true)	34		PCU	P344722	
	SM 2320 B-97	Total Alkalinity	25		mg CaCO3/L	P345177	
	SM 2540 C-97	TDS	70		mg/L	P345316	
	SM 2540 D-97	TSS	8	I	mg/L	P345305	
	SM 4500 F-C-97	Fluoride	0.051	I	mg F/L	P345180	
1990358	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P345294	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P344943	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345046	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P344894	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P345196	
1990359	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P344715	
1990383	EPA 200.7 Rev. 4.4	Calcium	9.98		mg/L	P344756	
		Iron	45	I	ug/L	P344756	
		Magnesium	1.73		mg/L	P344756	
		Potassium	2.0		mg/L	P344756	
		Sodium	5.6		mg/L	P344756	
		Zinc	5.0	U	ug/L	P344756	
	EPA 200.8 Rev. 5.4	Arsenic	0.20		ug/L	P344756	
		Cadmium	0.020	U	ug/L	P344756	
		Chromium	0.40	U	ug/L	P344756	
		Copper	0.47	I	ug/L	P344756	
		Lead	0.050	U	ug/L	P344756	
		Nickel	0.20	U	ug/L	P344756	
		Silver	0.010	U	ug/L	P344756	

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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: KASEY LAKE @ CENTER (3002Q)

Collection Date/Time: 05/03/2018 11:42

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990378	EPA 8321B	Aldicarb	0.040	U	ug/L	P344670	
		Aldicarb Sulfone	0.0040	U	ug/L	P344670	
		Aldicarb Sulfoxide	0.0040	U	ug/L	P344670	
		Carbaryl	0.0040	U	ug/L	P344670	MS
		Carbofuran	0.0040	U	ug/L	P344670	
		3-Hydroxycarbofuran	0.0040	U	ug/L	P344670	
		Methiocarb	0.0040	U	ug/L	P344670	
		Methomyl	0.0040	U	ug/L	P344670	
		Oxamyl	0.0080	U	ug/L	P344670	
		Propoxur	0.0040	U	ug/L	P344670	MS
1990379		2,4-D	0.019	J	ug/L	P344670	MS
		Bentazon	0.018		ug/L	P344670	
		MCP	0.0093		ug/L	P344670	
		Triclopyr**	0.0040	U	ug/L	P344670	
		Imidacloprid	0.0020	U	ug/L	P344670	
		Diuron	0.0020	U	ug/L	P344670	
		Pyraclostrobin**	0.0020	U	ug/L	P344670	
		Primidone**	0.0040	U	ug/L	P344670	
		Linuron	0.0040	U	ug/L	P344670	
		Acetaminophen**	0.0080	U	ug/L	P344670	
		Fenuron	0.059	J	ug/L	P344670	MS
		Imazapyr**	0.0040	U	ug/L	P344670	
		Carbamazepine**	4.0E-04	U	ug/L	P344670	
		Fluridone**	4.0E-04	U	ug/L	P344670	
		Hydrocodone**	8.0E-04	U	ug/L	P344670	
		Sucralose**	0.18	I	ug/L	P344930	
		Glyphosate**	0.10	U	ug/L	P344930	
		AMPA**	0.10	U	ug/L	P344930	MS
		Endothal**	0.10	U	ug/L	P344930	MS
		Glufosinate**	0.10	U	ug/L	P344930	MS
1990381	EPA 8270D	Aldrin	4.6	UJ	ng/L	P344730	LCS
		Alpha-BHC	2.3	U	ng/L	P344730	
		Beta-BHC	4.6	U	ng/L	P344730	
		Delta-BHC	4.6	UJ	ng/L	P344730	RPD
		Gamma-BHC	4.6	UJ	ng/L	P344730	RPD
		Carbophenothion	4.6	U	ng/L	P344730	
		Chlorothalonil	2.3	U	ng/L	P344730	MS
		Cypermethrin	23	U	ng/L	P344730	
		DDD-p,p'	3.4	U	ng/L	P344730	

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990381	EPA 8270D	DDE-p,p'	3.4	U	ng/L	P344730	
		DDT-p,p'	3.4	U	ng/L	P344730	
		Dieldrin	4.6	U	ng/L	P344730	
		Endosulfan I	4.6	U	ng/L	P344730	
		Endosulfan II	4.6	UJ	ng/L	P344730	RPD
		Endosulfan Sulfate	2.3	U	ng/L	P344730	
		Endrin	2.3	U	ng/L	P344730	
		Endrin Aldehyde	2.3	U	ng/L	P344730	
		Heptachlor	1.7	U	ng/L	P344730	
		Heptachlor Epoxide	2.3	U	ng/L	P344730	
		Methoxychlor	4.6	U	ng/L	P344730	
		Mirex	2.3	U	ng/L	P344730	
		Permethrin	11	U	ng/L	P344730	
		Trifluralin	1.1	U	ng/L	P344730	
		Alpha-Chlordane	1.1	U	ng/L	P344730	
		Gamma-Chlordane	1.1	U	ng/L	P344730	
		Endrin Ketone	2.3	U	ng/L	P344730	
		Dicofol	34	U	ng/L	P344730	
	EPA 8276	Chlordane**	2.9	U	ng/L	P344730	
		Toxaphene**	34	U	ng/L	P344730	
1990382	EPA 8270D	Alachlor	0.25	U	ng/L	P344703	
		Ametryn	5.1		ng/L	P344703	
		Atrazine	180		ng/L	P344703	
		Atrazine Desethyl	21	J	ng/L	P344703	RPD
		Azinphos Methyl	2.3	UJ	ng/L	P344703	RPD
		Bromacil	0.50	UJ	ng/L	P344703	RPD
		Butylate	0.40	U	ng/L	P344703	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P344703	
		Chlorpyrifos Methyl	0.10	U	ng/L	P344703	
		Demeton	2.0	U	ng/L	P344703	RPD
		Diazinon	0.13	U	ng/L	P344703	
		Disulfoton	0.50	U	ng/L	P344703	RPD
		EPTC	1.3	U	ng/L	P344703	RPD
		Ethion	0.15	U	ng/L	P344703	
		Ethoprop	0.10	U	ng/L	P344703	
		Fenamiphos	0.25	UJ	ng/L	P344703	RPD
		Fipronil	0.27	I	ng/L	P344703	
		Fipronil Sulfide	1.0		ng/L	P344703	
		Fipronil Sulfone	3.7		ng/L	P344703	RPD
		Hexazinone	0.50	UJ	ng/L	P344703	LCS, RPD
		Malathion	0.35	U	ng/L	P344703	
		Metribuzin	0.20	UJ	ng/L	P344703	RPD
		Mevinphos	0.50	U	ng/L	P344703	RPD
		Molinate	0.30	U	ng/L	P344703	
		Norflurazon	0.50	UJ	ng/L	P344703	LCS, RPD

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990382	EPA 8270D	Pendimethalin	1.0	U	ng/L	P344703	
		Phorate	0.25	U	ng/L	P344703	RPD
		Prometon	0.90	U	ng/L	P344703	
		Prometryn	0.20	U	ng/L	P344703	
		Simazine	1.5	I	ng/L	P344703	
		Terbufos	0.10	U	ng/L	P344703	RPD
		Terbutylazine	0.43	U	ng/L	P344703	
		Fonofos	0.20	U	ng/L	P344703	RPD
		Metalaxyl	0.25	UJ	ng/L	P344703	RPD
		Metolachlor	0.59	I	ng/L	P344703	
		Acetochlor	0.25	U	ng/L	P344703	
		Cyanazine	0.50	UJ	ng/L	P344703	RPD
		Parathion Ethyl	0.25	U	ng/L	P344703	
		Parathion Methyl	0.25	U	ng/L	P344703	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes. Precision could not be assessed for Chlorothalonil due to no recovery in the matrix spikes.

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 PARK @ CENTER (2997U)

Collection Date/Time: 05/03/2018 13:17

Field ID: G2CE0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1990361	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P344728	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P345209	
		Sulfate	12		mg SO4/L	P345212	
	SM 2120 B	Color (true)	19		PCU	P344722	
	SM 2320 B-97	Total Alkalinity	69		mg CaCO3/L	P345177	
	SM 2540 C-97	TDS	134		mg/L	P345316	
	SM 2540 D-97	TSS	5	I	mg/L	P345305	
	SM 4500 F-C-97	Fluoride	0.066	I	mg F/L	P345180	
1990363	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P345294	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P344943	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345046	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P344895	
	SM 5310 B-00	Organic Carbon	7.7		mg C/L	P345196	
1990365	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P344715	
	dissolved						

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P344728

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344756

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: P344756

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	1.6		ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.74	I	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345209

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345212

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345294

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344943

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345046

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345047

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344894

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344895

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P344715

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/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
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P344703

Component	Result	Code	Units
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	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 8270D

Batch ID: P344730

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276

Batch ID: P344730

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

Reference Method: EPA 8321B

Batch ID: P344670

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.040	U	ug/L
Aldicarb Sulfone	0.0040	U	ug/L
Aldicarb Sulfoxide	0.0040	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0040	U	ug/L
Carbofuran	0.0040	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-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	0.0040	U	ug/L
Methomyl	0.0040	U	ug/L
Oxamyl	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P344930

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: SM 2120 B

Batch ID: P344722

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P345177

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P345316

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P345305

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345180

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P345196

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: P344756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	105		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	99.9		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	96.8		P	85 - 115
Cadmium	95.4		P	85 - 115
Chromium	94.9		P	85 - 115
Copper	96.3		P	85 - 115
Lead	92.4		P	85 - 115
Nickel	97.5		P	85 - 115
Silver	97.8		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P345209

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P345212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P345294

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P344943

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345046

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344894

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344895

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: P344715

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

Quality Assurance Report

Laboratory Control Sample Accuracy

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
Terbutylazine	98.6	85.3	P/P	76 - 113

Reference Method: EPA 8270D

Batch ID: P344730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	13.8	12.2	F/F	24 - 89.0
Alpha-BHC	89.2	67.1	P/P	58 - 117
Alpha-Chlordane	78.1	64.1	P/P	56 - 115
Beta-BHC	89.7	73.2	P/P	55 - 137
Carbophenothion	125	101	P/P	37 - 145
Chlorothalonil	79.1	68.7	P/P	26 - 163
Cypermethrin	82.8	62.5	P/P	42 - 156
DDD-p,p'	91.8	72.5	P/P	59 - 129

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P344730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDE-p,p'	77.8	63.2	P/P	52 - 117
DDT-p,p'	88.7	69.5	P/P	48 - 128
Delta-BHC	110	80.0	P/P	59 - 158
Dicofol	83.9	65.4	P/P	19 - 124
Dieldrin	87.6	74.0	P/P	57 - 126
Endosulfan I	86.8	72.2	P/P	59 - 133
Endosulfan II	87.4	62.3	P/P	58 - 148
Endosulfan Sulfate	95.5	71.0	P/P	56 - 135
Endrin	90.4	77.1	P/P	50 - 140
Endrin Aldehyde	81.5	68.5	P/P	47 - 141
Endrin Ketone	88.2	66.4	P/P	63 - 123
Gamma-BHC	102	73.9	P/P	59 - 132
Gamma-Chlordane	74.2	58.7	P/P	55 - 112
Heptachlor	64.1	53.4	P/P	45 - 102
Heptachlor Epoxide	79.7	65.5	P/P	61 - 116
Methoxychlor	97.4	75.5	P/P	60 - 133
Mirex	62.0	49.0	P/P	40 - 98.0
Permethrin	78.0	60.4	P/P	45 - 131
Trifluralin	79.2	59.6	P/P	38 - 179

Reference Method: EPA 8276

Batch ID: P344730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.8	77.7	P/P	47 - 125
Toxaphene	70.8	64.1	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P344670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	61.4		P	40 - 150
3-Hydroxycarbofuran	82.0		P	40 - 150
Acetaminophen	109		P	30 - 150
Aldicarb	68.6		P	30 - 150
Aldicarb Sulfone	97.0		P	40 - 150
Aldicarb Sulfoxide	123		P	40 - 150
Bentazon	72.8		P	30 - 150
Carbamazepine	85.7		P	40 - 150
Carbaryl	77.7		P	40 - 150
Carbofuran	100		P	40 - 150
Diuron	83.9		P	40 - 150
Fenuron	105		P	40 - 150
Fluridone	117		P	40 - 150
Hydrocodone	108		P	40 - 150
Imazapyr	93.6		P	40 - 150
Imidacloprid	108		P	40 - 160
Linuron	95.8		P	40 - 150
MCPP	94.5		P	40 - 150
Methiocarb	77.1		P	40 - 150
Methomyl	105		P	40 - 150
Oxamyl	91.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P344670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Primidone	92.9		P	40 - 150
Propoxur	98.0		P	40 - 150
Pyraclostrobin	87.5		P	40 - 150
Triclopyr	94.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P344930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	93.2		P	40 - 140
Endothall	97.3		P	40 - 140
Glufosinate	95.9		P	40 - 140
Glyphosate	98.5		P	40 - 140
Sucralose	118		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P345177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P345180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345196

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989441	Calcium	101		P	80 - 120
1989441	Iron	103	103	P/P	80 - 120
1989441	Magnesium	101		P	80 - 120
1989441	Potassium	100	99.8	P/P	80 - 120
1989441	Sodium	101	101	P/P	80 - 120
1989441	Zinc	99.4	99.3	P/P	80 - 120
1990383	Calcium	101		P	80 - 120
1990383	Iron	103		P	80 - 120
1990383	Magnesium	104		P	80 - 120
1990383	Potassium	97.6		P	80 - 120
1990383	Sodium	97.7		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990383	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989441	Arsenic	97.6	99.1	P/P	80 - 120
1989441	Cadmium	96.3	100	P/P	80 - 120
1989441	Chromium	98.4	98.2	P/P	80 - 120
1989441	Copper	96.4	96.1	P/P	80 - 120
1989441	Lead	93.9	96.2	P/P	80 - 120
1989441	Nickel	98.9	98.9	P/P	80 - 120
1989441	Silver	98.9	101	P/P	80 - 120
1990383	Arsenic	99.9		P	80 - 120
1990383	Cadmium	99.6		P	80 - 120
1990383	Chromium	101		P	80 - 120
1990383	Copper	102		P	80 - 120
1990383	Lead	97.8		P	80 - 120
1990383	Nickel	103		P	80 - 120
1990383	Silver	100		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990231	Chloride	97.3		P	90 - 110
1990422	Chloride	91.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990231	Sulfate	96.8		P	90 - 110
1990422	Sulfate	91.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990358	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344943

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990367	Kjeldahl Nitrogen	97.1	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990235	NO2NO3-N	96.4	96.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990424	NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990299	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990367	Total-P	99.2	94.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990306	O-Phosphate-P	94.2	91.7	P/P	90 - 110

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
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

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	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	Terbuthylazine	94.4	94.6	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P344730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990289	Aldrin	43.7	46.9	P/P	26 - 96.0
1990289	Alpha-BHC	87.2	86.8	P/P	51 - 123
1990289	Alpha-Chlordane	75.5	72.5	P/P	45 - 120
1990289	Beta-BHC	100	92.5	P/P	43 - 146
1990289	Carbophenothion	164	168	P/P	26 - 179
1990289	Chlorothalonil	0.0	0.0	F/F	10 - 215
1990289	Cypermethrin	99.1	101	P/P	35 - 169
1990289	DDD-p,p'	84.6	79.6	P/P	49 - 131
1990289	DDE-p,p'	74.1	75.5	P/P	39 - 127
1990289	DDT-p,p'	83.5	85.8	P/P	49 - 120
1990289	Delta-BHC	129	119	P/P	49 - 187
1990289	Dicofol	89.4	86.7	P/P	10 - 129
1990289	Dieldrin	79.2	73.9	P/P	46 - 132
1990289	Endosulfan I	107	86.4	P/P	57 - 130
1990289	Endosulfan II	81.3	68.0	P/P	52 - 148
1990289	Endosulfan Sulfate	83.0	77.8	P/P	55 - 129
1990289	Endrin	86.5	78.2	P/P	45 - 133
1990289	Endrin Aldehyde	59.3	54.8	P/P	26 - 140
1990289	Endrin Ketone	120	121	P/P	60 - 125
1990289	Gamma-BHC	90.5	96.3	P/P	50 - 145
1990289	Gamma-Chlordane	72.8	70.0	P/P	44 - 118
1990289	Heptachlor	62.1	62.8	P/P	35 - 106
1990289	Heptachlor Epoxide	76.5	74.2	P/P	52 - 123
1990289	Methoxychlor	90.7	86.7	P/P	54 - 132
1990289	Mirex	68.1	70.0	P/P	36 - 107
1990289	Permethrin	83.2	86.3	P/P	47 - 135
1990289	Trifluralin	74.1	77.3	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P344730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990471	Chlordane	77.7	83.3	P/P	41 - 134
1990471	Toxaphene	70.6	72.7	P/P	39 - 158

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P344670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990379	2,4-D	35.2	52.4	F/P	40 - 150
1990379	3-Hydroxycarbofuran	65.6	74.5	P/P	40 - 150
1990379	Acetaminophen	70.6	76.6	P/P	30 - 150
1990379	Aldicarb	37.8	42.6	P/P	30 - 150
1990379	Aldicarb Sulfone	86.2	85.5	P/P	40 - 150
1990379	Aldicarb Sulfoxide	77.3	75.4	P/P	40 - 150
1990379	Bentazon	77.2	92.0	P/P	30 - 150
1990379	Carbamazepine	54.3	53.2	P/P	40 - 150
1990379	Carbaryl	38.1	38.6	F/F	40 - 150
1990379	Carbofuran	44.2	56.7	P/P	40 - 150
1990379	Diuron	51.7	45.5	P/P	40 - 150
1990379	Fenuron	21.1	19.3	F/F	40 - 150
1990379	Fluridone	82.7	85.1	P/P	40 - 150
1990379	Hydrocodone	96.3	91.6	P/P	40 - 150
1990379	Imazapyr	87.7	88.4	P/P	40 - 150
1990379	Imidacloprid	132	135	P/P	40 - 160
1990379	Linuron	71.9	75.0	P/P	40 - 150
1990379	MCP	68.5	72.5	P/P	40 - 150
1990379	Methiocarb	57.9	56.5	P/P	40 - 150
1990379	Methomyl	77.5	78.1	P/P	40 - 150
1990379	Oxamyl	68.8	71.3	P/P	40 - 150
1990379	Primidone	80.6	77.0	P/P	40 - 150
1990379	Propoxur	39.2	49.7	F/P	40 - 150
1990379	Pyraclostrobin	70.8	78.0	P/P	40 - 150
1990379	Triclopyr	69.0	74.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P344930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990331	AMPA	36.9	34.5	F/F	40 - 140
1990331	Endothall	169	160	F/F	40 - 140
1990331	Glufosinate	183	139	F/P	40 - 140
1990331	Glyphosate	51.9	59.6	P/P	40 - 140
1990331	Sucralose	77.9	77.2	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P345180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990422	Fluoride	95.9	96.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990298	Organic Carbon	98.0	100	P/P	85 - 115

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P344728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990296	Turbidity	2.93	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989441	Calcium	0.751	Spike	P	0 - 20
1989441	Iron	0.0636	Spike	P	0 - 20
1989441	Magnesium	0.0807	Spike	P	0 - 20
1989441	Potassium	0.377	Spike	P	0 - 20
1989441	Sodium	0.225	Spike	P	0 - 20
1989441	Zinc	0.0369	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989441	Arsenic	1.51	Spike	P	0 - 20
1989441	Cadmium	3.80	Spike	P	0 - 20
1989441	Chromium	0.251	Spike	P	0 - 20
1989441	Copper	0.261	Spike	P	0 - 20
1989441	Lead	2.42	Spike	P	0 - 20
1989441	Nickel	0.0564	Spike	P	0 - 20
1989441	Silver	2.40	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990231	Chloride	0.919	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990231	Sulfate	0.456	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990358	Ammonia-N	0.661	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P344943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990367	Kjeldahl Nitrogen	0.0828	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990235	NO2NO3-N	0.476	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990424	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990299	Total-P	0.440	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990367	Total-P	4.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P344715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990306	O-Phosphate-P	2.09	Spike	P	0 - 20

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

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	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
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	Terbuthylazine	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

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	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
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 8270D
Batch ID: P344730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990289	Aldrin	7.23	Spike	P	0 - 30
1990289	Alpha-BHC	0.448	Spike	P	0 - 30
1990289	Alpha-Chlordane	4.13	Spike	P	0 - 30
1990289	Beta-BHC	7.76	Spike	P	0 - 30
1990289	Carbophenothion	2.34	Spike	P	0 - 30
1990289	Cypermethrin	2.12	Spike	P	0 - 30
1990289	DDD-p,p'	6.05	Spike	P	0 - 30
1990289	DDE-p,p'	1.85	Spike	P	0 - 30
1990289	DDT-p,p'	2.73	Spike	P	0 - 30
1990289	Delta-BHC	8.08	Spike	P	0 - 30
1990289	Dicofol	3.05	Spike	P	0 - 30
1990289	Dieldrin	6.90	Spike	P	0 - 30
1990289	Endosulfan I	20.9	Spike	P	0 - 30
1990289	Endosulfan II	17.8	Spike	P	0 - 30
1990289	Endosulfan Sulfate	6.54	Spike	P	0 - 30
1990289	Endrin	10.1	Spike	P	0 - 30
1990289	Endrin Aldehyde	7.78	Spike	P	0 - 30
1990289	Endrin Ketone	0.842	Spike	P	0 - 30
1990289	Gamma-BHC	6.19	Spike	P	0 - 30
1990289	Gamma-Chlordane	3.98	Spike	P	0 - 30
1990289	Heptachlor	1.14	Spike	P	0 - 30
1990289	Heptachlor Epoxide	3.04	Spike	P	0 - 30
1990289	Methoxychlor	4.50	Spike	P	0 - 30
1990289	Mirex	2.70	Spike	P	0 - 30
1990289	Permethrin	3.68	Spike	P	0 - 30
1990289	Trifluralin	4.21	Spike	P	0 - 30
LFB	Aldrin	12.9	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P344730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Alpha-BHC	28.3	LCS	P	0 - 30
LFB	Alpha-Chlordane	19.7	LCS	P	0 - 30
LFB	Beta-BHC	20.3	LCS	P	0 - 30
LFB	Carbophenothion	21.0	LCS	P	0 - 30
LFB	Chlorothalonil	14.1	LCS	P	0 - 30
LFB	Cypermethrin	28.0	LCS	P	0 - 30
LFB	DDD-p,p'	23.4	LCS	P	0 - 30
LFB	DDE-p,p'	20.8	LCS	P	0 - 30
LFB	DDT-p,p'	24.3	LCS	P	0 - 30
LFB	Delta-BHC	31.5	LCS	F	0 - 30
LFB	Dicofol	24.7	LCS	P	0 - 30
LFB	Dieldrin	16.9	LCS	P	0 - 30
LFB	Endosulfan I	18.4	LCS	P	0 - 30
LFB	Endosulfan II	33.6	LCS	F	0 - 30
LFB	Endosulfan Sulfate	29.4	LCS	P	0 - 30
LFB	Endrin	15.9	LCS	P	0 - 30
LFB	Endrin Aldehyde	17.3	LCS	P	0 - 30
LFB	Endrin Ketone	28.2	LCS	P	0 - 30
LFB	Gamma-BHC	32.2	LCS	F	0 - 30
LFB	Gamma-Chlordane	23.4	LCS	P	0 - 30
LFB	Heptachlor	18.2	LCS	P	0 - 30
LFB	Heptachlor Epoxide	19.6	LCS	P	0 - 30
LFB	Methoxychlor	25.3	LCS	P	0 - 30
LFB	Mirex	23.5	LCS	P	0 - 30
LFB	Permethrin	25.3	LCS	P	0 - 30
LFB	Trifluralin	28.4	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P344730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990471	Chlordane	7.01	Spike	P	0 - 30
1990471	Toxaphene	2.97	Spike	P	0 - 30
LFB	Chlordane	2.64	LCS	P	0 - 30
LFB	Toxaphene	10.0	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P344670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990379	2,4-D	25.7	Spike	P	0 - 30
1990379	3-Hydroxycarbofuran	12.7	Spike	P	0 - 30
1990379	Acetaminophen	8.16	Spike	P	0 - 30
1990379	Aldicarb	11.9	Spike	P	0 - 30
1990379	Aldicarb Sulfone	0.775	Spike	P	0 - 30
1990379	Aldicarb Sulfoxide	2.58	Spike	P	0 - 30
1990379	Bentazon	13.8	Spike	P	0 - 30
1990379	Carbamazepine	2.06	Spike	P	0 - 30
1990379	Carbaryl	1.17	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P344670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990379	Carbofuran	24.6	Spike	P	0 - 30
1990379	Diuron	12.8	Spike	P	0 - 30
1990379	Fenuron	1.90	Spike	P	0 - 30
1990379	Fluridone	2.89	Spike	P	0 - 30
1990379	Hydrocodone	5.03	Spike	P	0 - 30
1990379	Imazapyr	0.833	Spike	P	0 - 30
1990379	Imidacloprid	1.87	Spike	P	0 - 30
1990379	Linuron	4.18	Spike	P	0 - 30
1990379	MCPP	4.83	Spike	P	0 - 30
1990379	Methiocarb	2.52	Spike	P	0 - 30
1990379	Methomyl	0.786	Spike	P	0 - 30
1990379	Oxamyl	3.63	Spike	P	0 - 30
1990379	Primidone	4.55	Spike	P	0 - 30
1990379	Propoxur	23.6	Spike	P	0 - 30
1990379	Pyraclostrobin	9.63	Spike	P	0 - 30
1990379	Triclopyr	7.81	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P344930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990331	AMPA	4.14	Spike	P	0 - 30
1990331	Endothall	5.17	Spike	P	0 - 30
1990331	Glufosinate	27.7	Spike	P	0 - 30
1990331	Glyphosate	7.12	Spike	P	0 - 30
1990331	Sucralose	0.843	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P344722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990285	Color (true)	9.06	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P345177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990422	Total Alkalinity	0.141	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97

Batch ID: P345316

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990297	TDS	7.77	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P345180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990422	Fluoride	0.473	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P345196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990298	Organic Carbon	1.46	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: 1990378
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	36.9	P	30 - 160

Lab Sample ID: 1990379
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	64.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.7	P	30 - 160
EPA 8321B	Diuron-d6	55.8	P	30 - 160
EPA 8321B	Endothall-d6	123	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	69.9	P	40 - 160
EPA 8321B	Primidone-d5	88.3	P	30 - 160
EPA 8321B	Sucralose-d6	76.1	P	40 - 160

Lab Sample ID: 1990380
Field Sample ID: G2CE0067

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.0	P	30 - 160
EPA 8321B	Diuron-d6	51.6	P	30 - 160
EPA 8321B	Endothall-d6	118	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	54.7	P	40 - 160
EPA 8321B	Primidone-d5	145	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1990381
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	57.8	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	44.5	P	34 - 101
EPA 8276	Decachlorobiphenyl	48.6	P	31 - 108
EPA 8276	PCNB	76.2	P	62 - 142

Lab Sample ID: 1990382
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	101	P	71 - 126
EPA 8270D	Terbufos-d10	106	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A83676
Included Lab Sample IDs: 1990359, 1990364, 1990365, 1990368

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.6	99.9	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A83677
Included Lab Sample IDs: 1990357, 1990360, 1990361, 1990366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83678
Included Lab Sample IDs: 1990357, 1990360, 1990361, 1990366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A83732
Included Lab Sample IDs: 1990357, 1990360, 1990361, 1990366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	94.1	96.8	P/P	90 - 110
Chloride	96.8	98.7	P/P	90 - 110
Sulfate	95.1	95.9	P/P	90 - 110
Sulfate	95.9	99.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A83752
Included Lab Sample IDs: 1990383

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83752

Included Lab Sample IDs: 1990383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.6	98.4	P/P	90 - 110
Iron	98.8	98.8	P/P	90 - 110
Magnesium	99.8	100	P/P	90 - 110
Potassium	97.3	96.6	P/P	90 - 110
Sodium	96.3	95.6	P/P	90 - 110
Zinc	98.6	98.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83755

Included Lab Sample IDs: 1990383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.4	97.8	P/P	90 - 110
Cadmium	98.3	97.9	P/P	90 - 110
Lead	97.8	97.8	P/P	90 - 110
Silver	100	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83783

Included Lab Sample IDs: 1990383

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83792

Included Lab Sample IDs: 1990358

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83806

Included Lab Sample IDs: 1990358, 1990362, 1990363, 1990367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	P/P	90 - 110
NO2NO3-N	99.5	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83824

Included Lab Sample IDs: 1990358, 1990362, 1990363, 1990367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.5	P/P	90 - 110
Kjeldahl Nitrogen	99.5	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A83837

Included Lab Sample IDs: 1990357, 1990360, 1990361, 1990366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83837

Included Lab Sample IDs: 1990357, 1990360, 1990361, 1990366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	97.1	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A83843

Included Lab Sample IDs: 1990358, 1990362, 1990363, 1990367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	97.2	P/P	90 - 110
Organic Carbon	97.4	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83863

Included Lab Sample IDs: 1990362, 1990363, 1990367

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

Reference Method: EPA 8270D

Run ID: A83881

Included Lab Sample IDs: 1990381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.5		P	80 - 120
Alpha-BHC	105		P	80 - 120
Alpha-Chlordane	99.1		P	80 - 120
Beta-BHC	90.7		P	80 - 120
Carbophenothion	113		P	80 - 120
Chlorothalonil	101		P	80 - 120
Cypermethrin	98.3		P	80 - 120
DDD-p,p'	100		P	80 - 120
DDE-p,p'	99.6		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	97.4		P	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	104		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	96.9		P	80 - 120
Endrin	98.5		P	80 - 120
Endrin Aldehyde	86.9		P	80 - 120
Endrin Ketone	91.9		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	95.8		P	80 - 120
Heptachlor	98.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A83881

Included Lab Sample IDs: 1990381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Heptachlor Epoxide	98.4		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	94.3		P	80 - 120
Permethrin	94.6		P	80 - 120
Trifluralin	98.9		P	80 - 120

Reference Method: EPA 8321B

Run ID: A83883

Included Lab Sample IDs: 1990378

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	109	109	P/P	50 - 150
Acetaminophen	141	128	P/P	60 - 150
Aldicarb	83.2	85.1	P/P	60 - 150
Aldicarb Sulfone	106	105	P/P	50 - 150
Aldicarb Sulfoxide	102	105	P/P	50 - 150
Carbamazepine	123	113	P/P	60 - 150
Carbaryl	121	110	P/P	60 - 150
Carbofuran	147	140	P/P	50 - 150
Diuron	128	125	P/P	60 - 150
Fenuron	109	113	P/P	60 - 150
Fluridone	122	127	P/P	60 - 160
Hydrocodone	124	120	P/P	60 - 150
Imazapyr	105	103	P/P	50 - 150
Imidacloprid	97.4	103	P/P	60 - 150
Linuron	107	112	P/P	60 - 150
Methiocarb	113	110	P/P	50 - 150
Methomyl	108	111	P/P	50 - 150
Oxamyl	107	105	P/P	50 - 150
Primidone	93.6	101	P/P	60 - 150
Propoxur	131	121	P/P	50 - 150
Pyraclostrobin	103	96.3	P/P	60 - 150

Reference Method: EPA 8276

Run ID: A83884

Included Lab Sample IDs: 1990381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.0		P	80 - 120
Toxaphene	94.1		P	80 - 120

Reference Method: EPA 8321B

Run ID: A83887

Included Lab Sample IDs: 1990379, 1990380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	106	P/P	50 - 150
2,4-D	106	104	P/P	50 - 150
Bentazon	107	109	P/P	50 - 150
Bentazon	113	107	P/P	50 - 150
MCPP	105	106	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A83887

Included Lab Sample IDs: 1990379, 1990380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCPP	106	105	P/P	50 - 150
Triclopyr	111	111	P/P	50 - 160
Triclopyr	111	104	P/P	50 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83889

Included Lab Sample IDs: 1990358, 1990362, 1990363, 1990367

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

Reference Method: EPA 8321B

Run ID: A83892

Included Lab Sample IDs: 1990380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	113	116	P/P	60 - 150
Carbamazepine	116	125	P/P	60 - 150
Diuron	108	117	P/P	60 - 150
Fenuron	109	110	P/P	60 - 150
Fluridone	103	110	P/P	60 - 160
Hydrocodone	93.4	96.1	P/P	60 - 150
Imazapyr	105	106	P/P	50 - 150
Imidacloprid	101	108	P/P	60 - 150
Linuron	108	109	P/P	60 - 150
Primidone	101	102	P/P	60 - 150
Pyraclostrobin	103	99.7	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A83982

Included Lab Sample IDs: 1990379, 1990380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.2	109	P/P	60 - 160
Endothall	110	105	P/P	60 - 160
Glufosinate	98.2	108	P/P	60 - 160
Glyphosate	86.8	155	P/P	60 - 160
Sucralose	135	142	P/P	60 - 160

Reference Method: EPA 8270D

Run ID: A84167

Included Lab Sample IDs: 1990382

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 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: 1990382

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

Reference Method: EPA 8270D
Run ID: A84203
Included Lab Sample IDs: 1990382

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	95.3		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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity			2.93	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 200.7 Rev. 4.4	Calcium	102		101	101			0.751
	Iron	105		103	103	103		0.0636
	Magnesium	102		101	104			0.0807
	Potassium	99.9		100	99.8	97.6		0.377
	Sodium	103		101	101	97.7		0.225
	Zinc	101		99.4	99.3	101		0.0369
EPA 200.8 Rev. 5.4	Arsenic	96.8		97.6	99.1	99.9		1.51
	Cadmium	95.4		96.3	100	99.6		3.80
	Chromium	94.9		98.4	98.2	101		0.251
	Copper	96.3		96.4	96.1	102		0.261
	Lead	92.4		93.9	96.2	97.8		2.42
	Nickel	97.5		98.9	98.9	103		0.0564
	Silver	97.8		98.9	101	100		2.40
EPA 300.0 Rev. 2.1	Chloride	96.2		97.3	91.2		0.919	
	Sulfate	95.9		96.8	91.0		0.456	
EPA 350.1 Rev. 2.0	Ammonia-N	102		101	102			0.661
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		97.1	97.0			0.0828
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101		96.4	96.0			0.476
	NO ₂ NO ₃ -N	98.5		99.0	99.5			0.504
EPA 365.1 Rev. 2.0	Total-P	99.0		103	102			0.440
	Total-P	100		99.2	94.2			4.75
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		94.2	91.7			2.09
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	13.8	12.2	46.9	43.7	12.9		7.23
	Alpha-BHC	89.2	67.1	86.8	87.2	28.3		0.448
	Alpha-Chlordane	78.1	64.1	72.5	75.5	19.7		4.13
	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	89.7	73.2	92.5	100	20.3		7.76
	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	125	101	168	164	21.0		2.34
	Chlorothalonil	79.1	68.7	0.0	0.0	14.1		
	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	82.8	62.5	99.1	101	28.0		2.12
	DDD-p,p'	91.8	72.5	84.6	79.6	23.4		6.05
	DDE-p,p'	77.8	63.2	75.5	74.1	20.8		1.85
	DDT-p,p'	88.7	69.5	85.8	83.5	24.3		2.73
	Delta-BHC	110	80.0	119	129	31.5		8.08
	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	83.9	65.4	86.7	89.4	24.7		3.05
	Dieldrin	87.6	74.0	79.2	73.9	16.9		6.90
	Disulfoton	92.6	93.3	74.4	109	0.789		37.4
	Endosulfan I	86.8	72.2	86.4	107	18.4		20.9
	Endosulfan II	87.4	62.3	68.0	81.3	33.6		17.8
	Endosulfan Sulfate	95.5	71.0	77.8	83.0	29.4		6.54
	Endrin	90.4	77.1	78.2	86.5	15.9		10.1
	Endrin Aldehyde	81.5	68.5	54.8	59.3	17.3		7.78

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Endrin Ketone	88.2	66.4	121	120	28.2	0.842
	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
	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	102	73.9	96.3	90.5	32.2	6.19
	Gamma-Chlordane	74.2	58.7	70.0	72.8	23.4	3.98
	Heptachlor	64.1	53.4	62.8	62.1	18.2	1.14
	Heptachlor Epoxide	79.7	65.5	74.2	76.5	19.6	3.04
	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	97.4	75.5	86.7	90.7	25.3	4.50
	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	62.0	49.0	70.0	68.1	23.5	2.70
	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	78.0	60.4	86.3	83.2	25.3	3.68
	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	79.2	59.6	77.3	74.1	28.4	4.21
EPA 8276	Chlordane	79.8	77.7	77.7	83.3	2.64	7.01
	Toxaphene	70.8	64.1	70.6	72.7	10.0	2.97
EPA 8321B	2,4-D	61.4		35.2	52.4		25.7
	3-Hydroxycarbofuran	82.0		65.6	74.5		12.7
	Acetaminophen	109		70.6	76.6		8.16
	Aldicarb	68.6		37.8	42.6		11.9
	Aldicarb Sulfone	97.0		86.2	85.5		0.775
	Aldicarb Sulfoxide	123		77.3	75.4		2.58
	AMPA	93.2		36.9	34.5		4.14
	Bentazon	72.8		77.2	92.0		13.8
	Carbamazepine	85.7		54.3	53.2		2.06
	Carbaryl	77.7		38.1	38.6		1.17
	Carbofuran	100		44.2	56.7		24.6
	Diuron	83.9		51.7	45.5		12.8
	Endothall	97.3		169	160		5.17
	Fenuron	105		21.1	19.3		1.90
	Fluridone	117		82.7	85.1		2.89
	Glufosinate	95.9		183	139		27.7
	Glyphosate	98.5		51.9	59.6		7.12
	Hydrocodone	108		96.3	91.6		5.03

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imazapyr	93.6	87.7	88.4		0.833
	Imidacloprid	108	132	135		1.87
	Linuron	95.8	71.9	75.0		4.18
	MCPP	94.5	68.5	72.5		4.83
	Methiocarb	77.1	57.9	56.5		2.52
	Methomyl	105	77.5	78.1		0.786
	Oxamyl	91.8	68.8	71.3		3.63
	Primidone	92.9	80.6	77.0		4.55
	Propoxur	98.0	39.2	49.7		23.6
	Pyraclostrobin	87.5	70.8	78.0		9.63
	Sucralose	118	77.9	77.2		0.843
	Triclopyr	94.6	69.0	74.6		7.81
SM 2120 B	Color (true)				9.06	
SM 2320 B-97	Total Alkalinity	101			0.141	
SM 2540 C-97	TDS				7.77	
SM 4500 F-C-97	Fluoride	95.1	95.9	96.5		0.473
SM 5310 B-00	Organic Carbon	100	98.0	100		1.46

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1990357, 1990360, 1990361, 1990366
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1990383
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1990383
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1990357, 1990360, 1990361, 1990366
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1990357, 1990360, 1990361, 1990366
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1990358, 1990362, 1990363, 1990367
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1990358, 1990362, 1990363, 1990367
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1990358, 1990362, 1990363, 1990367
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1990358, 1990362, 1990363, 1990367
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1990359, 1990364, 1990365, 1990368
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1990381
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1990382
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1990381
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1990378
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1990379, 1990380
SM 2120 B / E31780	True Color measured at 450 nm	1990357, 1990360, 1990361, 1990366
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1990357, 1990360, 1990361, 1990366
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1990357, 1990360, 1990361, 1990366
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1990357, 1990360, 1990361, 1990366
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1990357, 1990360, 1990361, 1990366
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1990358, 1990362, 1990363, 1990367

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	05/04/2018			05/04/2018 15:24	Tanya Welborn	1990357, 1990360, 1990361, 1990366
EPA 200.7 Rev. 4.4	05/04/2018	05/07/2018 13:19	Allison Taylor	05/08/2018 14:43	Betina Topolski	1990383
EPA 200.8 Rev. 5.4	05/04/2018	05/07/2018 13:19	Allison Taylor	05/08/2018 20:15	Robert K Palmer	1990383
	05/04/2018	05/07/2018 13:19	Allison Taylor	05/09/2018 18:36	Robert K Palmer	1990383
EPA 300.0 Rev. 2.1	05/04/2018			05/10/2018 16:10	Lipi Saha	1990357
	05/04/2018			05/10/2018 16:46	Lipi Saha	1990360
	05/04/2018			05/10/2018 16:58	Lipi Saha	1990361
	05/04/2018			05/10/2018 17:10	Lipi Saha	1990366
EPA 350.1 Rev. 2.0	05/04/2018			05/11/2018 10:16	Ping Hua	1990358
	05/04/2018			05/11/2018 10:22	Ping Hua	1990362
	05/04/2018			05/11/2018 10:29	Ping Hua	1990363
	05/04/2018			05/11/2018 10:31	Ping Hua	1990367
EPA 351.2 Rev. 2.0	05/04/2018	05/09/2018 11:30	Adrian Shelby	05/11/2018 11:23	Joseph Suarez	1990358
	05/04/2018	05/09/2018 11:30	Adrian Shelby	05/11/2018 11:25	Joseph Suarez	1990362
	05/04/2018	05/09/2018 11:30	Adrian Shelby	05/11/2018 11:30	Joseph Suarez	1990363
	05/04/2018	05/09/2018 11:30	Adrian Shelby	05/11/2018 11:31	Joseph Suarez	1990367
EPA 353.2 Rev. 2.0	05/04/2018			05/10/2018 12:29	Lauren Bottorf	1990358
	05/04/2018			05/10/2018 12:31	Lauren Bottorf	1990362
	05/04/2018			05/10/2018 12:32	Lauren Bottorf	1990363
	05/04/2018			05/10/2018 12:46	Lauren Bottorf	1990367
EPA 365.1 Rev. 2.0	05/04/2018	05/08/2018 12:00	Sima Feizi	05/10/2018 09:27	Beverly Y. Sanders	1990358
	05/04/2018	05/08/2018 12:00	Sima Feizi	05/14/2018 10:55	Beverly Y. Sanders	1990362
	05/04/2018	05/08/2018 12:00	Sima Feizi	05/14/2018 10:56	Beverly Y. Sanders	1990363
	05/04/2018	05/08/2018 12:00	Sima Feizi	05/14/2018 10:57	Beverly Y. Sanders	1990367
EPA 365.1 Rev. 2.0 dissolved	05/04/2018			05/04/2018 15:21	Megan Treadwell	1990359, 1990364
	05/04/2018			05/04/2018 15:22	Megan Treadwell	1990365
	05/04/2018			05/04/2018 15:23	Megan Treadwell	1990368
EPA 8270D	05/04/2018	05/04/2018 11:00	Dinesh Mishra	05/16/2018 23:02	Marek Topolski	1990382
	05/04/2018	05/04/2018 11:00	Dinesh Mishra	05/17/2018 23:07	Marek Topolski	1990382
	05/04/2018	05/08/2018 09:00	Fe-Val Siddell	05/11/2018 21:05	Dinesh Mishra	1990381
EPA 8276	05/04/2018	05/08/2018 09:00	Fe-Val Siddell	05/11/2018 00:36	John P. Burgos	1990381
EPA 8321B	05/04/2018	05/09/2018 09:00	Hoor Shaik	05/10/2018 07:43	Juyoung Kim	1990379
	05/04/2018	05/09/2018 09:00	Hoor Shaik	05/10/2018 08:17	Juyoung Kim	1990378
	05/04/2018	05/09/2018 09:00	Hoor Shaik	05/11/2018 09:04	Juyoung Kim	1990379
	05/04/2018	05/09/2018 09:00	Hoor Shaik	05/11/2018 14:50	Juyoung Kim	1990380
	05/04/2018	05/09/2018 09:00	Hoor Shaik	05/15/2018 04:11	Juyoung Kim	1990380
	05/04/2018	05/09/2018 13:00	Mohammad Ghaffari	05/10/2018 09:57	Juyoung Kim	1990380
	05/04/2018	05/09/2018 13:00	Mohammad Ghaffari	05/10/2018 10:16	Juyoung Kim	1990379
SM 2120 B	05/04/2018			05/04/2018 17:03	Tanya Welborn	1990357
	05/04/2018			05/04/2018 17:04	Tanya Welborn	1990360

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B	05/04/2018			05/04/2018 17:05	Tanya Welborn	1990361
	05/04/2018			05/04/2018 17:06	Tanya Welborn	1990366
SM 2320 B-97	05/04/2018			05/12/2018 03:09	Dale L. Simmons	1990357
	05/04/2018			05/12/2018 03:21	Dale L. Simmons	1990360
	05/04/2018			05/12/2018 03:31	Dale L. Simmons	1990361
	05/04/2018			05/12/2018 03:40	Dale L. Simmons	1990366
SM 2540 C-97	05/04/2018			05/09/2018 15:08	Yijie Li	1990357, 1990360, 1990361, 1990366
SM 2540 D-97	05/04/2018			05/09/2018 15:08	Yijie Li	1990357, 1990360, 1990361, 1990366
SM 4500 F-C-97	05/04/2018			05/12/2018 03:09	Dale L. Simmons	1990357
	05/04/2018			05/12/2018 03:21	Dale L. Simmons	1990360
	05/04/2018			05/12/2018 03:31	Dale L. Simmons	1990361
	05/04/2018			05/12/2018 03:40	Dale L. Simmons	1990366
SM 5310 B-00	05/04/2018			05/11/2018 23:26	Julia Storbeck	1990358
	05/04/2018			05/11/2018 23:38	Julia Storbeck	1990362
	05/04/2018			05/12/2018 00:15	Julia Storbeck	1990363
	05/04/2018			05/12/2018 00:27	Julia Storbeck	1990367