

Chemical Analysis Report

SE-DIST-2018-09-11-01

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

Event Description: **SMP- Broward**
Request ID: **RQ-2018-09-10-26**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 24-OCT-2018 15:06



NON-CONFORMANCE REPORT INCLUDED

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: West Lake @ Sheridan

Collection Date/Time: 09/10/2018 11:55

Field ID: G4SE0037

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023745	EPA 180.1 Rev. 2.0	Turbidity	8.1	YA	NTU	P351497	
	SM 2320 B-97	Total Alkalinity	143	Y	mg CaCO3/L	P351707	
	SM 2540 D-97	TSS	6	IY	mg/L	P351733	
	SM 4500 F-C-97	Fluoride	0.97		mg F/L	P351710	
2023746	EPA 350.1 Rev. 2.0	Ammonia-N	0.015	Y	mg N/L	P351627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34	IY	mg N/L	P351743	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.062	Y	mg N/L	P351507	
	EPA 365.1 Rev. 2.0	Total-P	0.017	Y	mg P/L	P351503	
	SM 5310 B-00	Organic Carbon	4.5	Y	mg C/L	P351877	
2023747	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UY	mg P/L	P351444	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2320 B-97: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample temperature was outside the acceptable range when received at the laboratory.

EPA 350.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 351.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 353.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0: Total-P: Sample temperature was outside the acceptable range when received at the laboratory.

SM 5310 B-00: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Sample temperature was outside the acceptable range when received at the laboratory.

Sample Location: Dania Cutoff @ US 1

Collection Date/Time: 09/10/2018 12:30

Field ID: G4SE0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023751	EPA 180.1 Rev. 2.0	Turbidity	2.9	Y	NTU	P351497	
	SM 2320 B-97	Total Alkalinity	144	Y	mg CaCO3/L	P351707	
	SM 2540 D-97	TSS	4	IY	mg/L	P351733	
	SM 4500 F-C-97	Fluoride	0.96		mg F/L	P351710	
2023752	EPA 350.1 Rev. 2.0	Ammonia-N	0.064	Y	mg N/L	P351627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	IY	mg N/L	P351743	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14	Y	mg N/L	P351507	
	EPA 365.1 Rev. 2.0	Total-P	0.026	Y	mg P/L	P351603	
	SM 5310 B-00	Organic Carbon	3.8	Y	mg C/L	P351877	
2023753	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.015	Y	mg P/L	P351444	
2023772	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P351838	
		Zinc	15	U	ug/L	P351838	
	EPA 200.8 Rev. 5.4	Arsenic	2.01		ug/L	P325215	
		Cadmium	0.060	U	ug/L	P325215	
		Chromium	1.2	U	ug/L	P352215	
		Copper	3.9		ug/L	P352215	
		Lead	0.50	U	ug/L	P352215	
		Nickel	0.60	U	ug/L	P352215	
		Silver	0.030	U	ug/L	P351838	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2320 B-97: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample temperature was outside the acceptable range when received at the laboratory.

EPA 350.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 351.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 353.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0: Total-P: Sample temperature was outside the acceptable range when received at the laboratory.

SM 5310 B-00: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 200.8 Rev. 5.4: The copper result was confirmed on 09/22/2018

Sample Location: North New River Canal (NNR-3)

Collection Date/Time: 09/10/2018 12:00

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023748	EPA 180.1 Rev. 2.0	Turbidity	1.3	Y	NTU	P351497	
	EPA 300.0 Rev. 2.1	Chloride	64		mg Cl/L	P351984	
		Sulfate	19	Y	mg SO4/L	P351988	
	SM 2120 B	Color (true)	58	Y	PCU	P351433	
	SM 2320 B-97	Total Alkalinity	157	Y	mg CaCO3/L	P351706	
	SM 2540 C-97	TDS	342	AY	mg/L	P351798	
	SM 2540 D-97	TSS	3	IAY	mg/L	P351731	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P351709	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.099	Y	mg N/L	P351628	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2	Y	mg N/L	P351570	
2023749	EPA 353.2 Rev. 2.0	NO2NO3-N	0.037	Y	mg N/L	P351590	
	EPA 365.1 Rev. 2.0	Total-P	0.01	Y	mg P/L	P351502	
	SM 5310 B-00	Organic Carbon	20	Y	mg C/L	P351876	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UY	mg P/L	P351445	
	EPA 8321B	Aldicarb	0.020	UY	ug/L	P351415	
2023750		Aldicarb Sulfone	0.0020	UY	ug/L	P351415	
		Aldicarb Sulfoxide	0.0020	UYJ	ug/L	P351415	MS
		Carbaryl	0.0020	UY	ug/L	P351415	
		Carbofuran	0.0020	UYJ	ug/L	P351415	MS
		3-Hydroxycarbofuran	0.0020	UY	ug/L	P351415	
		Methiocarb	0.0020	UY	ug/L	P351415	
		Methomyl	0.0020	UY	ug/L	P351415	
		Oxamyl	0.0020	UY	ug/L	P351415	
		Propoxur	0.0020	UYJ	ug/L	P351415	MS
		2,4-D	0.0070	IY	ug/L	P351416	
2023766		Bentazon	0.040	Y	ug/L	P351416	
		MCP	0.0020	UYJ	ug/L	P351416	MS
		Triclopyr**	0.0040	UYJ	ug/L	P351416	MS
		Imidacloprid	0.0024	IY	ug/L	P351416	
		Diuron	0.0020	UY	ug/L	P351416	
		Pyraclostrobin**	0.0020	UY	ug/L	P351416	
		Primidone**	0.0040	UY	ug/L	P351416	
		Linuron	0.0040	UY	ug/L	P351416	
		Acetaminophen**	0.0080	UY	ug/L	P351416	
		Fenuron	0.016	UY	ug/L	P351416	
		Imazapyr**	0.050	Y	ug/L	P351416	
		Carbamazepine**	8.0E-04	UY	ug/L	P351416	
		Fluridone**	0.0019	Y	ug/L	P351416	
		Hydrocodone**	8.0E-04	UY	ug/L	P351416	
		Naproxen**	0.0080	UY	ug/L	P351416	
		Ibuprofen**	0.020	UY	ug/L	P351416	
		Sucralose**	0.010	UY	ug/L	P351382	
		Glyphosate**	0.10	UY	ug/L	P351382	

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023766	EPA 8321B	AMPA**	0.10	UY	ug/L	P351382	
		Endothall**	0.10	UY	ug/L	P351382	
		Glufosinate**	0.10	UY	ug/L	P351382	
		Acesulfame K**	0.10	UY	ug/L	P351382	
2023767	EPA 8270D	Aldrin	4.2	UY	ng/L	P351495	
		Alpha-BHC	2.1	UY	ng/L	P351495	
		Beta-BHC	4.2	UY	ng/L	P351495	MS
		Delta-BHC	4.2	UY	ng/L	P351495	
		Gamma-BHC	4.2	UY	ng/L	P351495	
		Carbophenothion	4.2	UY	ng/L	P351495	
		Chlorothalonil	2.1	UY	ng/L	P351495	
		Cypermethrin	30	IY	ng/L	P351495	
		DDD-p,p'	3.1	UY	ng/L	P351495	
		DDE-p,p'	3.1	UY	ng/L	P351495	
		DDT-p,p'	3.1	UY	ng/L	P351495	
		Dieldrin	4.2	UY	ng/L	P351495	
		Endosulfan I	4.2	UY	ng/L	P351495	
		Endosulfan II	4.2	UY	ng/L	P351495	
		Endosulfan Sulfate	2.1	UY	ng/L	P351495	
		Endrin	2.1	UY	ng/L	P351495	
		Endrin Aldehyde	2.1	UY	ng/L	P351495	
		Heptachlor	1.6	UY	ng/L	P351495	
		Heptachlor Epoxide	2.1	UY	ng/L	P351495	
		Methoxychlor	4.2	UY	ng/L	P351495	
		Mirex	2.1	UY	ng/L	P351495	
		Permethrin	10	UY	ng/L	P351495	
		Trifluralin	1.0	UY	ng/L	P351495	
		Alpha-Chlordane	1.2	IY	ng/L	P351495	
		Gamma-Chlordane	1.2	IY	ng/L	P351495	
		Endrin Ketone	2.1	UY	ng/L	P351495	
		Dicofol	31	UY	ng/L	P351495	
	EPA 8276	Chlordane	44	Y	ng/L	P351495	
		Toxaphene	31	UY	ng/L	P351495	
2023768	EPA 8270D	Alachlor	0.25	UY	ng/L	P351662	
		Ametryn	5.3	Y	ng/L	P351662	
		Atrazine	8.4	Y	ng/L	P351662	
		Atrazine Desethyl	1.5	UY	ng/L	P351662	
		Azinphos Methyl	2.2	UY	ng/L	P351662	
		Bromacil	0.49	UY	ng/L	P351662	
		Butylate	0.39	UY	ng/L	P351662	
		Chlorpyrifos Ethyl	0.25	UY	ng/L	P351662	
		Chlorpyrifos Methyl	0.098	UY	ng/L	P351662	
		Demeton	2.0	UYJ	ng/L	P351662	MS, RPD
		Diazinon	0.12	UY	ng/L	P351662	
		Disulfoton	0.49	UY	ng/L	P351662	

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023768	EPA 8270D	EPTC	1.2	UY	ng/L	P351662	
		Ethion	0.15	UY	ng/L	P351662	
		Ethoprop	0.098	UY	ng/L	P351662	
		Fenamiphos	0.25	UY	ng/L	P351662	
		Fipronil	0.25	UY	ng/L	P351662	
		Fipronil Sulfide	0.15	UY	ng/L	P351662	
		Fipronil Sulfone	0.15	UY	ng/L	P351662	
		Hexazinone	3.8	Y	ng/L	P351662	
		Malathion	0.34	UY	ng/L	P351662	
		Metribuzin	0.20	UY	ng/L	P351662	
		Mevinphos	0.49	UY	ng/L	P351662	
		Molinate	0.29	UY	ng/L	P351662	
		Norflurazon	0.49	UY	ng/L	P351662	
		Pendimethalin	0.98	UY	ng/L	P351662	
		Phorate	0.25	UYJ	ng/L	P351662	LCS
		Prometon	0.88	UY	ng/L	P351662	
		Prometryn	0.20	UY	ng/L	P351662	
		Simazine	0.49	UY	ng/L	P351662	
		Terbufos	0.098	UY	ng/L	P351662	
		Terbutylazine	0.42	UY	ng/L	P351662	
		Fonofos	0.20	UY	ng/L	P351662	
		Metalaxyl	0.67	IY	ng/L	P351662	
		Metolachlor	0.25	UY	ng/L	P351662	
		Acetochlor	0.25	UY	ng/L	P351662	
		Cyanazine	0.49	UY	ng/L	P351662	
		Parathion Ethyl	0.25	UY	ng/L	P351662	
		Parathion Methyl	0.25	UY	ng/L	P351662	
2023771	EPA 200.7 Rev. 4.4	Calcium	49.4		mg/L	P351526	
		Iron	81	I	ug/L	P351526	
		Magnesium	13.7		mg/L	P351526	
		Potassium	3.8		mg/L	P351526	
		Sodium	45.1		mg/L	P351526	
	EPA 200.8 Rev. 5.4	Zinc	11	I	ug/L	P351526	
		Arsenic	0.84		ug/L	P351526	
		Cadmium	0.020	U	ug/L	P351526	
		Chromium	0.40	U	ug/L	P351526	
		Copper	0.29	I	ug/L	P351526	
		Lead	0.087	I	ug/L	P351526	
		Nickel	0.20	U	ug/L	P352390	
		Silver	0.010	U	ug/L	P351526	

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
EPA 180.1 Rev. 2.0:	Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 300.0 Rev. 2.1:	Sulfate: Sample temperature was outside the acceptable range when received at the laboratory.						
SM 2120 B:	Sample temperature was outside the acceptable range when received at the laboratory.						
SM 2320 B-97:	Sample temperature was outside the acceptable range when received at the laboratory.						
SM 2540 C-97:	Sample temperature was outside the acceptable range when received at the laboratory.						
SM 2540 D-97:	Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 350.1 Rev. 2.0:	Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 351.2 Rev. 2.0:	Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 353.2 Rev. 2.0:	Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 365.1 Rev. 2.0:	Total-P: Sample temperature was outside the acceptable range when received at the laboratory.						
SM 5310 B-00:	Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 365.1 Rev. 2.0 dissolved:	O-Phosphate-P: Sample temperature was outside the acceptable range when received at the laboratory.						
EPA 8321B:	Y - Sample was received with inadequate sample preservation; see NCR report. Refer to the narrative for an explanation of QC Codes.						
EPA 8270D:	Y - Due to improper preservation; see NCR report.						
EPA 8276:	MS accuracy for Chlordane not assessed due to high content of this parameter in the sample spiked. Y - Due to improper preservation; see NCR report.						
EPA 8270D:	MS accuracy for Atrazine and Ametryn not assessed due to high content of these parameters in the sample spiked. Y - Due to improper preservation; see NCR report. Refer to the narrative for an explanation of QC Codes.						

Sample Location: C-13 East (Middle River Canal)/NW 21st Ave Bridge

Collection Date/Time: 09/10/2018 13:20

Field ID: G4SEB011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023742	EPA 180.1 Rev. 2.0	Turbidity	1.9	Y	NTU	P351497	
	SM 2320 B-97	Total Alkalinity	174	Y	mg CaCO3/L	P351705	
	SM 2540 D-97	TSS	2	IY	mg/L	P351732	
	SM 4500 F-C-97	Fluoride	0.22		mg F/L	P351708	
2023743	EPA 350.1 Rev. 2.0	Ammonia-N	0.19	Y	mg N/L	P351628	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97	Y	mg N/L	P351570	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12	Y	mg N/L	P351589	
	EPA 365.1 Rev. 2.0	Total-P	0.012	Y	mg P/L	P351502	
	SM 5310 B-00	Organic Carbon	9.4	Y	mg C/L	P351876	
2023744	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UY	mg P/L	P351445	
2023770	EPA 200.7 Rev. 4.4	Iron	210		ug/L	P351526	
		Zinc	5.0	U	ug/L	P351526	
	EPA 200.8 Rev. 5.4	Arsenic	1.38		ug/L	P351526	
		Cadmium	0.020	U	ug/L	P351526	
		Chromium	0.40	U	ug/L	P351526	
		Copper	1.73		ug/L	P351526	
		Lead	0.064	I	ug/L	P351526	
		Nickel	0.20	U	ug/L	P351526	
		Silver	0.010	U	ug/L	P351526	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2320 B-97: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample temperature was outside the acceptable range when received at the laboratory.

EPA 350.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 351.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 353.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0: Total-P: Sample temperature was outside the acceptable range when received at the laboratory.

SM 5310 B-00: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Sample temperature was outside the acceptable range when received at the laboratory.

Sample Location: Sospiro @ Las Olas

Collection Date/Time: 09/10/2018 13:50

Field ID: G4SE0032

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023739	EPA 180.1 Rev. 2.0	Turbidity	1.2	Y	NTU	P351496	
	SM 2320 B-97	Total Alkalinity	150	Y	mg CaCO3/L	P351707	
	SM 2540 D-97	TSS	3	UY	mg/L	P351733	
	SM 4500 F-C-97	Fluoride	0.64		mg F/L	P351710	
2023740	EPA 350.1 Rev. 2.0	Ammonia-N	0.037	Y	mg N/L	P351627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62	Y	mg N/L	P351743	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19	Y	mg N/L	P351507	
	EPA 365.1 Rev. 2.0	Total-P	0.025	Y	mg P/L	P351503	
	SM 5310 B-00	Organic Carbon	7.6	Y	mg C/L	P351877	
2023741	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016	Y	mg P/L	P351444	
2023769	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P351838	
		Zinc	16	I	ug/L	P351838	
	EPA 200.8 Rev. 5.4	Arsenic	2.43		ug/L	P325215	
		Cadmium	0.060	U	ug/L	P325215	
		Chromium	1.2	U	ug/L	P352215	
		Copper	7.7		ug/L	P352215	
		Lead	0.21	I	ug/L	P352215	
		Nickel	0.60	U	ug/L	P352215	
		Silver	0.030	U	ug/L	P351838	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2320 B-97: Sample temperature was outside the acceptable range when received at the laboratory.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample temperature was outside the acceptable range when received at the laboratory.

EPA 350.1 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 351.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 353.2 Rev. 2.0: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0: Total-P: Sample temperature was outside the acceptable range when received at the laboratory.

SM 5310 B-00: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Sample temperature was outside the acceptable range when received at the laboratory.

EPA 200.8 Rev. 5.4: The copper result was confirmed on 09/24/2018.

Non-Conformance Report

NCR ID: 7204

Event(s)

SE-DIST-2018-09-11-01

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Samples received outside the acceptable temperature range.

Samples received at 6.3 degrees C.

Resolution: Matthew Sewell was contacted by email. Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 9/12/2018

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

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351496

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351497

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351526

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 200.7 Rev. 4.4
Batch ID: P351838

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351526

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351838

Component	Result	Code	Units
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Component	Result	Code	Units
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352390

Component	Result	Code	Units
Nickel	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351984

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351988

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351627

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351628

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351570

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351743

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351507

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351590

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351502

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351503

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351603

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351444

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351445

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

Reference Method: EPA 8270D
Batch ID: P351495

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D
Batch ID: P351495

Component	Result	Code	Units
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: P351662

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P351662

Component	Result	Code	Units
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: P351495

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

Reference Method: EPA 8321B
Batch ID: P351382

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
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	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P351415

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P351416

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Diuron	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P351416

Component	Result	Code	Units
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P351433

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P351705

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

Reference Method: SM 2320 B-97
Batch ID: P351706

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

Reference Method: SM 2320 B-97
Batch ID: P351707

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

Reference Method: SM 2540 C-97
Batch ID: P351798

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P351731

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P351732

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P351733

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P351709

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P351710

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P351876

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

Reference Method: SM 5310 B-00
Batch ID: P351877

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: P351526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	100		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	99.4		P	85 - 115
Sodium	101		P	85 - 115
Zinc	98.2		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	102		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	90.8		P	85 - 115
Cadmium	87.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	104		P	85 - 115
Copper	98.1		P	85 - 115
Lead	103		P	85 - 115
Nickel	97.1		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	112		P	85 - 115
Copper	110		P	85 - 115
Lead	104		P	85 - 115
Nickel	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352390

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352390

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351984

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351988

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351628

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351570

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351743

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351507

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351503

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351603

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351444

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351445

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

Reference Method: EPA 8270D
Batch ID: P351495

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	69.0	56.5	P/P	26 - 96.0
Alpha-BHC	81.6	63.7	P/P	51 - 123
Alpha-Chlordane	91.9	80.2	P/P	45 - 120
Beta-BHC	112	110	P/P	43 - 146
Carbophenothion	95.9	82.0	P/P	26 - 179
Chlorothalonil	89.1	89.9	P/P	10 - 215
Cypermethrin	110	93.4	P/P	35 - 169
DDD-p,p'	102	91.1	P/P	49 - 131
DDE-p,p'	92.5	80.0	P/P	39 - 127
DDT-p,p'	91.0	77.7	P/P	49 - 120
Delta-BHC	112	106	P/P	49 - 187
Dicofol	88.2	88.2	P/P	10 - 129
Dieldrin	101	88.9	P/P	46 - 132
Endosulfan I	97.0	89.7	P/P	57 - 130
Endosulfan II	104	94.7	P/P	52 - 148
Endosulfan Sulfate	103	92.3	P/P	55 - 129

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P351495

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	104	90.6	P/P	45 - 133
Endrin Aldehyde	114	105	P/P	26 - 140
Endrin Ketone	104	96.3	P/P	60 - 125
Gamma-BHC	103	98.8	P/P	50 - 145
Gamma-Chlordane	87.5	76.5	P/P	44 - 118
Heptachlor	73.0	62.6	P/P	35 - 106
Heptachlor Epoxide	93.5	85.4	P/P	52 - 123
Methoxychlor	102	94.5	P/P	54 - 132
Mirex	78.1	61.7	P/P	36 - 107
Permethrin	86.9	73.0	P/P	47 - 135
Trifluralin	84.4	74.6	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P351662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	105	98.8	P/P	74 - 119
Alachlor	98.6	93.4	P/P	75 - 118
Ametryn	118	110	P/P	59 - 137
Atrazine	88.6	77.8	P/P	73 - 120
Atrazine Desethyl	70.2	70.3	P/P	19 - 129
Azinphos Methyl	124	120	P/P	65 - 181
Bromacil	81.8	72.1	P/P	43 - 123
Butylate	59.6	65.2	P/P	28 - 85.0
Chlorpyrifos Ethyl	94.0	92.8	P/P	55 - 112
Chlorpyrifos Methyl	94.3	92.6	P/P	35 - 124
Cyanazine	121	121	P/P	26 - 262
Demeton	78.4	80.0	P/P	43 - 122
Diazinon	92.3	87.9	P/P	72 - 120
Disulfoton	82.4	91.5	P/P	45 - 137
EPTC	60.9	66.1	P/P	28 - 95.0
Ethion	79.4	76.8	P/P	63 - 127
Ethoprop	70.5	82.9	P/P	63 - 109
Fenamiphos	98.9	105	P/P	66 - 136
Fipronil	89.8	92.7	P/P	63 - 126
Fipronil Sulfide	89.4	95.3	P/P	59 - 123
Fipronil Sulfone	87.6	93.1	P/P	56 - 122
Fonofos	75.7	71.6	P/P	64 - 114
Hexazinone	87.9	92.1	P/P	49 - 144
Malathion	97.1	95.1	P/P	68 - 131
Metaxyl	95.0	90.3	P/P	57 - 126
Metolachlor	99.6	93.3	P/P	75 - 118
Metribuzin	143	140	P/P	46 - 169
Mevinphos	77.1	73.0	P/P	34 - 126
Molinate	72.1	73.6	P/P	37 - 101
Norflurazon	102	97.0	P/P	63 - 127
Parathion Ethyl	86.9	89.9	P/P	78 - 109
Parathion Methyl	112	122	P/P	74 - 123
Pendimethalin	91.0	107	P/P	51 - 130
Phorate	58.4	53.0	P/F	53 - 116
Prometon	92.1	86.0	P/P	66 - 124
Prometryn	85.5	83.7	P/P	66 - 124

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P351662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	92.8	98.2	P/P	62 - 134
Terbufos	78.5	77.9	P/P	59 - 115
Terbutylazine	86.8	81.4	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P351495

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.1	88.5	P/P	47 - 125
Toxaphene	64.2	71.7	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P351382

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.3		P	40 - 150
AMPA	126		P	40 - 150
Endothall	114		P	40 - 150
Glufosinate	87.8		P	40 - 150
Glyphosate	81.5		P	40 - 140
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351415

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	76.9		P	40 - 150
Aldicarb	80.2		P	30 - 150
Aldicarb Sulfone	88.4		P	40 - 150
Aldicarb Sulfoxide	97.1		P	40 - 150
Carbaryl	69.1		P	40 - 150
Carbofuran	74.2		P	40 - 150
Methiocarb	61.4		P	40 - 150
Methomyl	89.6		P	40 - 150
Oxamyl	86.7		P	40 - 150
Propoxur	73.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.8		P	40 - 150
Acetaminophen	83.5		P	30 - 150
Bentazon	87.4		P	30 - 150
Carbamazepine	89.2		P	40 - 150
Diuron	79.5		P	40 - 150
Fenuron	95.9		P	40 - 150
Fluridone	79.3		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	109		P	40 - 150
Imazapyr	77.5		P	40 - 150
Imidacloprid	85.6		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P351416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	69.1		P	40 - 150
MCPP	96.5		P	40 - 150
Naproxen	102		P	40 - 150
Primidone	69.6		P	40 - 150
Pyraclostrobin	80.5		P	40 - 150
Triclopyr	95.0		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P351433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P351705

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

Reference Method: SM 2320 B-97
Batch ID: P351706

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

Reference Method: SM 2320 B-97
Batch ID: P351707

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

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P351709

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P351710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	91 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P351876

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

Reference Method: SM 5310 B-00
Batch ID: P351877

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023697	Calcium	103		P	80 - 120
2023697	Iron	101		P	80 - 120
2023697	Magnesium	105		P	80 - 120
2023697	Potassium	104		P	80 - 120
2023697	Sodium	101		P	80 - 120
2023697	Zinc	98.5		P	80 - 120
2024444	Calcium	104	104	P/P	80 - 120
2024444	Iron	103	102	P/P	80 - 120
2024444	Magnesium	107	107	P/P	80 - 120
2024444	Potassium	105	104	P/P	80 - 120
2024444	Sodium	104		P	80 - 120
2024444	Zinc	103	101	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024957	Iron	94.7	97.8	P/P	80 - 120
2024957	Zinc	91.7	96.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027454	Arsenic	116	115	P/P	70 - 130
2027454	Cadmium	98.4	96.6	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023697	Arsenic	103		P	80 - 120
2023697	Cadmium	102		P	80 - 120
2023697	Chromium	105		P	80 - 120
2023697	Copper	97.0		P	80 - 120
2023697	Lead	103		P	80 - 120
2023697	Nickel	96.9		P	80 - 120
2023697	Silver	103		P	80 - 120
2024444	Arsenic	104	104	P/P	80 - 120
2024444	Cadmium	104	104	P/P	80 - 120
2024444	Chromium	107	108	P/P	80 - 120
2024444	Copper	100	99.7	P/P	80 - 120
2024444	Lead	105	105	P/P	80 - 120
2024444	Nickel	96.1	96.6	P/P	80 - 120
2024444	Silver	104	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024957	Silver	95.8	78.5	P/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027454	Chromium	104	104	P/P	80 - 120
2027454	Copper	104	103	P/P	80 - 120
2027454	Lead	105	105	P/P	80 - 120
2027454	Nickel	96.3	96.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352390

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028316	Nickel	99.7		P	80 - 120
2028580	Nickel	101	98.3	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023174	Chloride	98.2		P	90 - 110
2023721	Chloride	99.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023174	Sulfate	98.3		P	90 - 110
2023721	Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023608	Ammonia-N	101	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023724	Ammonia-N	98.9	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351570

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023854	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023752	Kjeldahl Nitrogen	96.8	95.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351507

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023740	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023618	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023749	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023743	Total-P	97.0	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023608	Total-P	95.9	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023975	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023609	O-Phosphate-P	98.5	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023728	O-Phosphate-P	98.9	96.3	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P351495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023243	Aldrin	60.7	64.7	P/P	26 - 96.0
2023243	Alpha-BHC	104	98.8	P/P	51 - 123
2023243	Alpha-Chlordane	90.7	87.8	P/P	45 - 120
2023243	Beta-BHC	150	145	F/P	43 - 146

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P351495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023243	Carbophenothion	93.8	102	P/P	26 - 179
2023243	Chlorothalonil	117	89.3	P/P	10 - 215
2023243	Cypermethrin	124	136	P/P	35 - 169
2023243	DDD-p,p'	103	101	P/P	49 - 131
2023243	DDE-p,p'	88.0	87.5	P/P	39 - 127
2023243	DDT-p,p'	84.4	91.4	P/P	49 - 120
2023243	Delta-BHC	157	131	P/P	49 - 187
2023243	Dicofol	87.8	94.0	P/P	10 - 129
2023243	Dieldrin	93.0	94.1	P/P	46 - 132
2023243	Endosulfan I	94.8	96.2	P/P	57 - 130
2023243	Endosulfan II	109	112	P/P	52 - 148
2023243	Endosulfan Sulfate	103	109	P/P	55 - 129
2023243	Endrin	97.4	97.4	P/P	45 - 133
2023243	Endrin Aldehyde	103	102	P/P	26 - 140
2023243	Endrin Ketone	106	117	P/P	60 - 125
2023243	Gamma-BHC	125	141	P/P	50 - 145
2023243	Gamma-Chlordane	86.6	85.6	P/P	44 - 118
2023243	Heptachlor	65.4	67.7	P/P	35 - 106
2023243	Heptachlor Epoxide	87.5	90.6	P/P	52 - 123
2023243	Methoxychlor	102	107	P/P	54 - 132
2023243	Mirex	67.4	78.0	P/P	36 - 107
2023243	Permethrin	81.5	94.6	P/P	47 - 135
2023243	Trifluralin	75.2	75.3	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P351662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023768	Acetochlor	88.6	95.9	P/P	67 - 125
2023768	Alachlor	87.9	92.8	P/P	69 - 123
2023768	Atrazine Desethyl	60.8	74.3	P/P	10 - 129
2023768	Azinphos Methyl	137	133	P/P	48 - 200
2023768	Bromacil	90.5	85.8	P/P	46 - 130
2023768	Butylate	63.7	62.5	P/P	10 - 85.0
2023768	Chlorpyrifos Ethyl	82.9	85.7	P/P	54 - 115
2023768	Chlorpyrifos Methyl	85.3	90.8	P/P	44 - 117
2023768	Cyanazine	106	107	P/P	10 - 262
2023768	Demeton	84.0	159	P/F	24 - 145
2023768	Diazinon	96.8	99.1	P/P	66 - 129
2023768	Disulfoton	90.1	85.5	P/P	45 - 139
2023768	EPTC	64.5	60.1	P/P	10 - 86.0
2023768	Ethion	81.0	70.4	P/P	59 - 133
2023768	Ethoprop	87.6	78.6	P/P	54 - 116
2023768	Fenamiphos	129	115	P/P	55 - 140
2023768	Fipronil	92.5	91.9	P/P	37 - 142
2023768	Fipronil Sulfide	94.1	89.5	P/P	37 - 130
2023768	Fipronil Sulfone	99.9	94.2	P/P	18 - 143
2023768	Fonofos	84.9	74.8	P/P	55 - 118
2023768	Hexazinone	88.8	86.9	P/P	62 - 140
2023768	Malathion	90.3	85.0	P/P	64 - 132
2023768	Metalaxyl	79.8	85.2	P/P	55 - 129
2023768	Metolachlor	80.8	86.8	P/P	56 - 137

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P351662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023768	Metribuzin	143	145	P/P	16 - 218
2023768	Mevinphos	69.8	69.4	P/P	34 - 129
2023768	Molinate	75.4	74.3	P/P	16 - 99.0
2023768	Norflurazon	103	90.6	P/P	43 - 135
2023768	Parathion Ethyl	72.7	73.3	P/P	71 - 112
2023768	Parathion Methyl	115	122	P/P	65 - 127
2023768	Pendimethalin	103	101	P/P	35 - 159
2023768	Phorate	88.3	98.2	P/P	41 - 129
2023768	Prometon	87.7	77.7	P/P	56 - 140
2023768	Prometryn	83.5	86.8	P/P	65 - 130
2023768	Simazine	92.1	76.3	P/P	54 - 148
2023768	Terbufos	88.7	81.7	P/P	53 - 126
2023768	Terbutylazine	87.5	93.8	P/P	73 - 114

Reference Method: EPA 8276
Batch ID: P351495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023767	Toxaphene	55.4	57.4	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P351382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	Acesulfame K	68.6	81.6	P/P	40 - 150
2023766	AMPA	90.6	88.2	P/P	40 - 150
2023766	Endothall	146	139	P/P	40 - 150
2023766	Glufosinate	68.4	63.7	P/P	40 - 150
2023766	Glyphosate	63.7	69.7	P/P	40 - 140
2023766	Sucralose	117	114	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351415

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023765	3-Hydroxycarbofuran	51.5	57.6	P/P	40 - 150
2023765	Aldicarb	54.9	48.9	P/P	30 - 150
2023765	Aldicarb Sulfone	64.1	77.9	P/P	40 - 150
2023765	Aldicarb Sulfoxide	22.2	23.9	F/F	40 - 150
2023765	Carbaryl	51.1	55.6	P/P	40 - 150
2023765	Carbofuran	45.0	39.7	P/F	40 - 150
2023765	Methiocarb	53.3	53.3	P/P	40 - 150
2023765	Methomyl	56.0	58.1	P/P	40 - 150
2023765	Oxamyl	55.6	55.0	P/P	40 - 150
2023765	Propoxur	44.0	35.1	P/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P351416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	2,4-D	139	144	P/P	40 - 150
2023766	Acetaminophen	76.4	69.6	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P351416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	Bentazon	68.5	80.6	P/P	30 - 150
2023766	Carbamazepine	65.8	60.9	P/P	40 - 150
2023766	Diuron	57.8	51.6	P/P	40 - 150
2023766	Fenuron	53.6	52.1	P/P	40 - 150
2023766	Fluridone	83.4	77.5	P/P	40 - 150
2023766	Hydrocodone	77.8	73.3	P/P	40 - 150
2023766	Ibuprofen	102	103	P/P	40 - 150
2023766	Imazapyr	89.4	86.9	P/P	40 - 150
2023766	Imidacloprid	113	112	P/P	40 - 160
2023766	Linuron	59.2	58.8	P/P	40 - 150
2023766	MCPP	148	176	P/F	40 - 150
2023766	Naproxen	137	142	P/P	40 - 150
2023766	Primidone	62.7	61.4	P/P	40 - 150
2023766	Pyraclostrobin	81.5	80.8	P/P	40 - 150
2023766	Triclopyr	167	178	F/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024161	Fluoride	96.3	96.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P351709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024195	Fluoride	97.9	97.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P351710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023220	Fluoride	95.6	96.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P351876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023654	Organic Carbon	101	102	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P351877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023138	Organic Carbon	99.3	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023541	Turbidity	6.88	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023745	Turbidity	3.10	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024444	Calcium	0.294	Spike	P	0 - 20
2024444	Iron	0.613	Spike	P	0 - 20
2024444	Magnesium	0.0656	Spike	P	0 - 20
2024444	Potassium	1.08	Spike	P	0 - 20
2024444	Sodium	0.406	Spike	P	0 - 20
2024444	Zinc	1.64	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024957	Iron	3.12	Spike	P	0 - 20
2024957	Zinc	5.44	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027454	Arsenic	1.05	Spike	P	0 - 20
2027454	Cadmium	1.84	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024444	Arsenic	0.199	Spike	P	0 - 20
2024444	Cadmium	0.0846	Spike	P	0 - 20
2024444	Chromium	0.454	Spike	P	0 - 20
2024444	Copper	0.281	Spike	P	0 - 20
2024444	Lead	0.0488	Spike	P	0 - 20
2024444	Nickel	0.491	Spike	P	0 - 20
2024444	Silver	0.216	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024957	Silver	19.8	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027454	Chromium	0.0567	Spike	P	0 - 20
2027454	Copper	1.04	Spike	P	0 - 20
2027454	Lead	0.0601	Spike	P	0 - 20
2027454	Nickel	0.303	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028580	Nickel	2.52	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023174	Chloride	0.135	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023174	Sulfate	0.0848	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023608	Ammonia-N	0.325	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023724	Ammonia-N	1.25	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023854	Kjeldahl Nitrogen	0.187	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023752	Kjeldahl Nitrogen	0.790	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023740	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023618	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023749	NO2NO3-N	0.411	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023743	Total-P	0.425	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023608	Total-P	1.38	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023975	Total-P	0.287	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023609	O-Phosphate-P	0.349	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023728	O-Phosphate-P	2.38	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P351495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023243	Aldrin	6.26	Spike	P	0 - 30
2023243	Alpha-BHC	5.19	Spike	P	0 - 30
2023243	Alpha-Chlordane	3.20	Spike	P	0 - 30
2023243	Beta-BHC	3.36	Spike	P	0 - 30
2023243	Carbophenothion	8.22	Spike	P	0 - 30
2023243	Chlorothalonil	26.8	Spike	P	0 - 30
2023243	Cypermethrin	9.05	Spike	P	0 - 30
2023243	DDD-p,p'	1.63	Spike	P	0 - 30
2023243	DDE-p,p'	0.600	Spike	P	0 - 30
2023243	DDT-p,p'	7.94	Spike	P	0 - 30
2023243	Delta-BHC	18.0	Spike	P	0 - 30
2023243	Dicofol	6.85	Spike	P	0 - 30
2023243	Dieldrin	1.16	Spike	P	0 - 30
2023243	Endosulfan I	1.42	Spike	P	0 - 30
2023243	Endosulfan II	2.85	Spike	P	0 - 30
2023243	Endosulfan Sulfate	5.99	Spike	P	0 - 30
2023243	Endrin	0.0649	Spike	P	0 - 30
2023243	Endrin Aldehyde	0.904	Spike	P	0 - 30
2023243	Endrin Ketone	9.96	Spike	P	0 - 30
2023243	Gamma-BHC	12.1	Spike	P	0 - 30
2023243	Gamma-Chlordane	1.25	Spike	P	0 - 30
2023243	Heptachlor	3.44	Spike	P	0 - 30
2023243	Heptachlor Epoxide	3.54	Spike	P	0 - 30
2023243	Methoxychlor	4.67	Spike	P	0 - 30
2023243	Mirex	14.7	Spike	P	0 - 30
2023243	Permethrin	14.9	Spike	P	0 - 30
2023243	Trifluralin	0.0625	Spike	P	0 - 30
LFB	Aldrin	19.8	LCS	P	0 - 30
LFB	Alpha-BHC	24.7	LCS	P	0 - 30
LFB	Alpha-Chlordane	13.6	LCS	P	0 - 30
LFB	Beta-BHC	2.01	LCS	P	0 - 30
LFB	Carbophenothion	15.6	LCS	P	0 - 30
LFB	Chlorothalonil	0.853	LCS	P	0 - 30
LFB	Cypermethrin	15.9	LCS	P	0 - 30
LFB	DDD-p,p'	11.7	LCS	P	0 - 30
LFB	DDE-p,p'	14.5	LCS	P	0 - 30
LFB	DDT-p,p'	15.8	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P351495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Delta-BHC	5.54	LCS	P	0 - 30
LFB	Dicofol	0.0114	LCS	P	0 - 30
LFB	Dieldrin	12.4	LCS	P	0 - 30
LFB	Endosulfan I	7.82	LCS	P	0 - 30
LFB	Endosulfan II	9.40	LCS	P	0 - 30
LFB	Endosulfan Sulfate	11.1	LCS	P	0 - 30
LFB	Endrin	13.9	LCS	P	0 - 30
LFB	Endrin Aldehyde	7.98	LCS	P	0 - 30
LFB	Endrin Ketone	7.36	LCS	P	0 - 30
LFB	Gamma-BHC	4.31	LCS	P	0 - 30
LFB	Gamma-Chlordane	13.5	LCS	P	0 - 30
LFB	Heptachlor	15.4	LCS	P	0 - 30
LFB	Heptachlor Epoxide	9.02	LCS	P	0 - 30
LFB	Methoxychlor	7.54	LCS	P	0 - 30
LFB	Mirex	23.4	LCS	P	0 - 30
LFB	Permethrin	17.4	LCS	P	0 - 30
LFB	Trifluralin	12.4	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P351662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023768	Acetochlor	7.86	Spike	P	0 - 30
2023768	Alachlor	5.38	Spike	P	0 - 30
2023768	Ametryn	12.1	Spike	P	0 - 30
2023768	Atrazine	9.94	Spike	P	0 - 30
2023768	Atrazine Desethyl	19.9	Spike	P	0 - 30
2023768	Azinphos Methyl	2.83	Spike	P	0 - 30
2023768	Bromacil	5.34	Spike	P	0 - 30
2023768	Butylate	1.87	Spike	P	0 - 30
2023768	Chlorpyrifos Ethyl	3.32	Spike	P	0 - 30
2023768	Chlorpyrifos Methyl	6.26	Spike	P	0 - 30
2023768	Cyanazine	0.707	Spike	P	0 - 30
2023768	Demeton	61.5	Spike	F	0 - 30
2023768	Diazinon	2.36	Spike	P	0 - 30
2023768	Disulfoton	5.23	Spike	P	0 - 30
2023768	EPTC	7.09	Spike	P	0 - 30
2023768	Ethion	14.0	Spike	P	0 - 30
2023768	Ethoprop	10.9	Spike	P	0 - 30
2023768	Fenamiphos	11.5	Spike	P	0 - 30
2023768	Fipronil	0.721	Spike	P	0 - 30
2023768	Fipronil Sulfide	5.04	Spike	P	0 - 30
2023768	Fipronil Sulfone	5.85	Spike	P	0 - 30
2023768	Fonofos	12.6	Spike	P	0 - 30
2023768	Hexazinone	1.55	Spike	P	0 - 30
2023768	Malathion	6.13	Spike	P	0 - 30
2023768	Metalaxyl	6.25	Spike	P	0 - 30
2023768	Metolachlor	7.09	Spike	P	0 - 30
2023768	Metribuzin	1.57	Spike	P	0 - 30
2023768	Mevinphos	0.619	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P351662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023768	Molinate	1.51	Spike	P	0 - 30
2023768	Norflurazon	13.3	Spike	P	0 - 30
2023768	Parathion Ethyl	0.635	Spike	P	0 - 30
2023768	Parathion Methyl	5.93	Spike	P	0 - 30
2023768	Pendimethalin	2.19	Spike	P	0 - 30
2023768	Phorate	10.6	Spike	P	0 - 30
2023768	Prometon	12.1	Spike	P	0 - 30
2023768	Prometryn	3.87	Spike	P	0 - 30
2023768	Simazine	18.8	Spike	P	0 - 30
2023768	Terbufos	8.26	Spike	P	0 - 30
2023768	Terbuthylazine	7.04	Spike	P	0 - 30
LFB	Acetochlor	6.01	LCS	P	0 - 30
LFB	Alachlor	5.40	LCS	P	0 - 30
LFB	Ametryn	6.81	LCS	P	0 - 30
LFB	Atrazine	13.0	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.175	LCS	P	0 - 30
LFB	Azinphos Methyl	3.49	LCS	P	0 - 30
LFB	Bromacil	12.5	LCS	P	0 - 30
LFB	Butylate	8.98	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.22	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.77	LCS	P	0 - 30
LFB	Cyanazine	0.225	LCS	P	0 - 30
LFB	Demeton	2.01	LCS	P	0 - 30
LFB	Diazinon	4.79	LCS	P	0 - 30
LFB	Disulfoton	10.5	LCS	P	0 - 30
LFB	EPTC	8.23	LCS	P	0 - 30
LFB	Ethion	3.35	LCS	P	0 - 30
LFB	Ethoprop	16.3	LCS	P	0 - 30
LFB	Fenamiphos	6.25	LCS	P	0 - 30
LFB	Fipronil	3.17	LCS	P	0 - 30
LFB	Fipronil Sulfide	6.33	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.09	LCS	P	0 - 30
LFB	Fonofos	5.50	LCS	P	0 - 30
LFB	Hexazinone	4.66	LCS	P	0 - 30
LFB	Malathion	2.06	LCS	P	0 - 30
LFB	Metalaxyl	5.14	LCS	P	0 - 30
LFB	Metolachlor	6.54	LCS	P	0 - 30
LFB	Metribuzin	2.09	LCS	P	0 - 30
LFB	Mevinphos	5.45	LCS	P	0 - 30
LFB	Molinate	2.05	LCS	P	0 - 30
LFB	Norflurazon	4.89	LCS	P	0 - 30
LFB	Parathion Ethyl	3.36	LCS	P	0 - 30
LFB	Parathion Methyl	8.62	LCS	P	0 - 30
LFB	Pendimethalin	16.4	LCS	P	0 - 30
LFB	Phorate	9.73	LCS	P	0 - 30
LFB	Prometon	6.89	LCS	P	0 - 30
LFB	Prometryn	2.15	LCS	P	0 - 30
LFB	Simazine	5.63	LCS	P	0 - 30
LFB	Terbufos	0.887	LCS	P	0 - 30
LFB	Terbuthylazine	6.38	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P351495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023767	Chlordane	7.78	Spike	P	0 - 30
2023767	Toxaphene	3.53	Spike	P	0 - 30
LFB	Chlordane	15.1	LCS	P	0 - 30
LFB	Toxaphene	11.2	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P351382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	Acesulfame K	17.2	Spike	P	0 - 30
2023766	AMPA	2.66	Spike	P	0 - 30
2023766	Endothall	4.97	Spike	P	0 - 30
2023766	Glufosinate	7.16	Spike	P	0 - 30
2023766	Glyphosate	9.04	Spike	P	0 - 30
2023766	Sucralose	2.41	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P351415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023765	3-Hydroxycarbofuran	11.2	Spike	P	0 - 30
2023765	Aldicarb	11.6	Spike	P	0 - 30
2023765	Aldicarb Sulfone	19.5	Spike	P	0 - 30
2023765	Aldicarb Sulfoxide	7.55	Spike	P	0 - 30
2023765	Carbaryl	8.46	Spike	P	0 - 30
2023765	Carbofuran	12.4	Spike	P	0 - 30
2023765	Methiocarb	0.0340	Spike	P	0 - 30
2023765	Methomyl	3.84	Spike	P	0 - 30
2023765	Oxamyl	1.18	Spike	P	0 - 30
2023765	Propoxur	22.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P351416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	2,4-D	3.06	Spike	P	0 - 30
2023766	Acetaminophen	9.28	Spike	P	0 - 30
2023766	Bentazon	9.75	Spike	P	0 - 30
2023766	Carbamazepine	7.80	Spike	P	0 - 30
2023766	Diuron	11.3	Spike	P	0 - 30
2023766	Fenuron	2.94	Spike	P	0 - 30
2023766	Fluridone	7.11	Spike	P	0 - 30
2023766	Hydrocodone	5.84	Spike	P	0 - 30
2023766	Ibuprofen	1.39	Spike	P	0 - 30
2023766	Imazapyr	1.67	Spike	P	0 - 30
2023766	Imidacloprid	1.43	Spike	P	0 - 30
2023766	Linuron	0.627	Spike	P	0 - 30
2023766	MCP	17.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P351416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	Naproxen	3.24	Spike	P	0 - 30
2023766	Primidone	2.18	Spike	P	0 - 30
2023766	Pyraclostrobin	0.821	Spike	P	0 - 30
2023766	Triclopyr	6.32	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P351433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023807	Color (true)	2.81	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P351705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024161	Total Alkalinity	1.46	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P351706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024195	Total Alkalinity	1.10	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P351707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023220	Total Alkalinity	0.204	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P351798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023748	TDS	4.68	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024161	Fluoride	0.0	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P351709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024195	Fluoride	0.480	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P351710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023220	Fluoride	0.480	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P351876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023654	Organic Carbon	0.403	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P351877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023138	Organic Carbon	1.03	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: 2023765
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	46.4	P	30 - 160

Lab Sample ID: 2023766
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	133	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.8	P	30 - 160
EPA 8321B	Diuron-d6	63.7	P	30 - 160
EPA 8321B	Endothall-d6	143	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	70.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	110	P	30 - 160
EPA 8321B	Primidone-d5	68.1	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	40 - 160

Lab Sample ID: 2023767
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	77.9	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	35.8	P	34 - 101
EPA 8276	Decachlorobiphenyl	58.6	P	31 - 108
EPA 8276	PCNB	70.5	P	62 - 142

Lab Sample ID: 2023768
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	92.0	P	71 - 126
EPA 8270D	Terbufos-d10	92.3	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A86405

Included Lab Sample IDs: 2023748

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	99.7	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86408

Included Lab Sample IDs: 2023741, 2023744, 2023747, 2023750, 2023753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	97.3	P/P	90 - 110
O-Phosphate-P	97.3	99.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86432

Included Lab Sample IDs: 2023739, 2023742, 2023745, 2023748, 2023751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105
Turbidity	104	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86436

Included Lab Sample IDs: 2023740, 2023746, 2023752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86449

Included Lab Sample IDs: 2023765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	89.7	99.3	P/P	50 - 150
Aldicarb	91.5	107	P/P	60 - 150
Aldicarb Sulfone	90.4	90.2	P/P	50 - 150
Aldicarb Sulfoxide	99.3	90.8	P/P	50 - 150
Carbaryl	92.3	97.0	P/P	60 - 150
Carbofuran	105	101	P/P	50 - 150
Methiocarb	93.3	91.4	P/P	50 - 150
Methomyl	101	98.9	P/P	50 - 150
Oxamyl	93.1	93.5	P/P	50 - 150
Propoxur	100	99.4	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86459

Included Lab Sample IDs: 2023740, 2023743, 2023746, 2023749

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86460

Included Lab Sample IDs: 2023743, 2023749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	104	P/P	90 - 110
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86466

Included Lab Sample IDs: 2023770, 2023771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.0	97.8	P/P	90 - 110
Iron	98.4	99.3	P/P	90 - 110
Magnesium	98.3	99.1	P/P	90 - 110
Potassium	99.3	99.6	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Zinc	99.6	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86472

Included Lab Sample IDs: 2023740, 2023743, 2023746, 2023749, 2023752

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: A86482

Included Lab Sample IDs: 2023766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	68.6	111	P/P	60 - 160
Endothall	96.2	99.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86496

Included Lab Sample IDs: 2023766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	118	149	P/P	60 - 160
Glufosinate	89.2	110	P/P	60 - 160
Glyphosate	99.0	105	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A86511

Included Lab Sample IDs: 2023739, 2023742, 2023745, 2023748, 2023751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	100	104	P/P	90 - 110
Total Alkalinity	102	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A86511

Included Lab Sample IDs: 2023739, 2023742, 2023745, 2023748, 2023751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.1	P/P	90 - 110
Fluoride	98.5	100	P/P	90 - 110
Fluoride	99.5	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86516

Included Lab Sample IDs: 2023752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.8	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86520

Included Lab Sample IDs: 2023766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	100	109	P/P	60 - 160

Reference Method: EPA 8270D

Run ID: A86521

Included Lab Sample IDs: 2023767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.3		P	80 - 120
Alpha-BHC	91.3		P	80 - 120
Alpha-Chlordane	97.6		P	80 - 120
Beta-BHC	107		P	80 - 120
Carbophenothion	103		P	80 - 120
Chlorothalonil	95.8		P	80 - 120
Cypermethrin	104		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	97.9		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	115		P	80 - 120
Dicofol	94.1		P	80 - 120
Dieldrin	100		P	80 - 120
Endosulfan I	97.8		P	80 - 120
Endosulfan II	91.5		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	97.5		P	80 - 120
Endrin Aldehyde	99.3		P	80 - 120
Endrin Ketone	102		P	80 - 120
Gamma-BHC	115		P	80 - 120
Gamma-Chlordane	98.1		P	80 - 120
Heptachlor	95.5		P	80 - 120
Heptachlor Epoxide	99.0		P	80 - 120
Methoxychlor	98.6		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	92.2		P	80 - 120
Trifluralin	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86527

Included Lab Sample IDs: 2023743, 2023749

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

Reference Method: EPA 8321B

Run ID: A86528

Included Lab Sample IDs: 2023766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.2	97.7	P/P	50 - 150
Bentazon	125	66.2	P/P	50 - 160
Ibuprofen	118	122	P/P	50 - 160
MCP	95.9	92.0	P/P	50 - 150
Naproxen	86.7	96.6	P/P	50 - 160
Triclopyr	94.1	87.7	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86542

Included Lab Sample IDs: 2023740, 2023746, 2023752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	94.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86563

Included Lab Sample IDs: 2023770, 2023771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.3	97.3	P/P	90 - 110
Cadmium	95.9	97.1	P/P	90 - 110
Chromium	99.3	101	P/P	90 - 110
Copper	95.5	95.1	P/P	90 - 110
Lead	106	105	P/P	90 - 110
Silver	101	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A86566

Included Lab Sample IDs: 2023748

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

Reference Method: SM 5310 B-00

Run ID: A86572

Included Lab Sample IDs: 2023740, 2023743, 2023746, 2023749, 2023752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	98.3	P/P	90 - 110
Organic Carbon	98.8	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276
Run ID: A86614
Included Lab Sample IDs: 2023767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.5		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A86620
Included Lab Sample IDs: 2023769, 2023772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	97.8	95.9	P/P	90 - 110
Zinc	95.8	98.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A86628
Included Lab Sample IDs: 2023770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	95.0	93.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A86668
Included Lab Sample IDs: 2023769, 2023772

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

Reference Method: EPA 8321B
Run ID: A86696
Included Lab Sample IDs: 2023766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	69.1	71.1	P/P	60 - 160
Carbamazepine	110	110	P/P	60 - 160
Diuron	111	107	P/P	60 - 150
Fenuron	103	99.3	P/P	60 - 150
Fluridone	95.7	104	P/P	60 - 160
Hydrocodone	92.9	91.4	P/P	60 - 150
Imazapyr	76.8	82.9	P/P	50 - 150
Imidacloprid	88.8	80.7	P/P	60 - 150
Linuron	103	96.2	P/P	60 - 150
Primidone	83.5	86.3	P/P	60 - 150
Pyraclostrobin	100	103	P/P	60 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A86804
Included Lab Sample IDs: 2023771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	101	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A86820
 Included Lab Sample IDs: 2023768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	92.8		P	80 - 120
Alachlor	94.5		P	80 - 120
Ametryn	91.3		P	80 - 120
Atrazine	97.7		P	80 - 120
Atrazine Desethyl	99.1		P	80 - 120
Azinphos Methyl	95.0		P	80 - 120
Bromacil	96.4		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	93.9		P	80 - 120
Chlorpyrifos Methyl	87.1		P	80 - 120
Cyanazine	90.6		P	80 - 120
Demeton	87.8		P	80 - 120
Diazinon	106		P	80 - 120
Disulfoton	101		P	80 - 120
EPTC	97.6		P	80 - 120
Ethion	88.0		P	80 - 120
Ethoprop	89.6		P	80 - 120
Fenamiphos	101		P	80 - 120
Fipronil	98.1		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	96.8		P	80 - 120
Fonofos	90.8		P	80 - 120
Hexazinone	95.8		P	80 - 120
Malathion	83.9		P	80 - 120
Metaxyl	95.9		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	89.8		P	80 - 120
Molinate	100		P	80 - 120
Norflurazon	90.5		P	80 - 120
Parathion Ethyl	89.4		P	80 - 120
Parathion Methyl	95.5		P	80 - 120
Pendimethalin	103		P	80 - 120
Phorate	88.7		P	80 - 120
Prometon	97.5		P	80 - 120
Prometryn	94.1		P	80 - 120
Simazine	105		P	80 - 120
Terbufos	92.0		P	80 - 120
Terbutylazine	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A86832
 Included Lab Sample IDs: 2023769, 2023772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	103	P/P	90 - 110
Cadmium	96.7	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87140

Included Lab Sample IDs: 2023769, 2023772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	98.2	97.5	P/P	90 - 110
Nickel	96.4	94.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87191

Included Lab Sample IDs: 2023769, 2023772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	105	105	P/P	90 - 110
Copper	106	106	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	MS
								SMP	
EPA 180.1 Rev. 2.0	Turbidity							6.88	
	Turbidity							3.10	
EPA 200.7 Rev. 4.4	Calcium	104		103	104	104			0.294
	Iron	100		101	103	102			0.613
	Iron	102		94.7	97.8				3.12
	Magnesium	106		105	107	107			0.0656
	Potassium	99.4		104	105	104			1.08
	Sodium	101		101	104				0.406
	Zinc	98.2		98.5	103	101			1.64
	Zinc	100		91.7	96.8				5.44
EPA 200.8 Rev. 5.4	Arsenic	90.8		116	115				1.05
	Arsenic	102		103	104	104			0.199
	Cadmium	87.8		98.4	96.6				1.84
	Cadmium	102		102	104	104			0.0846
	Chromium	104		105	107	108			0.454
	Chromium	112		104	104				0.0567
	Copper	98.1		97.0	100	99.7			0.281
	Copper	110		104	103				1.04
	Lead	103		103	105	105			0.0488
	Lead	104		105	105				0.0601
	Nickel	97.1		96.1	96.6	96.9			0.491
	Nickel	103		96.3	96.6				0.303
	Nickel	101		99.7	101	98.3			2.52
	Silver	101		103	104	104			0.216
	Silver	106		95.8	78.5				19.8
EPA 300.0 Rev. 2.1	Chloride	100		98.2	99.5			0.135	
	Sulfate	99.2		98.3	98.1			0.0848	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8		101	100				0.325
	Ammonia-N	99.5		98.9	101				1.25
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		102	102				0.187
	Kjeldahl Nitrogen	98.6		96.8	95.9				0.790
EPA 353.2 Rev. 2.0	NO2NO3-N	104		103	103				0.0
	NO2NO3-N	102		102	102				0.0
	NO2NO3-N	102		103	104				0.411
EPA 365.1 Rev. 2.0	Total-P	96.6		97.0	97.4				0.425
	Total-P	98.1		95.9	97.3				1.38
	Total-P	104		102	102				0.287
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		98.5	98.1				0.349
	O-Phosphate-P	98.2		98.9	96.3				2.38
EPA 8270D	Acetochlor	105	98.8	88.6	95.9		6.01		7.86
	Alachlor	93.4	98.6	87.9	92.8		5.40		5.38
	Aldrin	69.0	56.5	60.7	64.7		19.8		6.26
	Alpha-BHC	81.6	63.7	104	98.8		24.7		5.19
	Alpha-Chlordane	91.9	80.2	90.7	87.8		13.6		3.20
	Ametryn	118	110				6.81		12.1
	Atrazine	88.6	77.8				13.0		9.94
	Atrazine Desethyl	70.2	70.3	60.8	74.3		0.175		19.9
	Azinphos Methyl	124	120	137	133		3.49		2.83
	Beta-BHC	112	110	150	145		2.01		3.36
	Bromacil	81.8	72.1	90.5	85.8		12.5		5.34
	Butylate	59.6	65.2	63.7	62.5		8.98		1.87
	Carbophenothion	95.9	82.0	93.8	102		15.6		8.22
	Chlorothalonil	89.1	89.9	89.3	117		0.853		26.8
	Chlorpyrifos Ethyl	94.0	92.8	82.9	85.7		1.22		3.32

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270D	Chlorpyrifos Methyl	94.3	92.6	85.3	90.8	1.77		6.26
	Cyanazine	121	121	106	107	0.225		0.707
	Cypermethrin	110	93.4	136	124	15.9		9.05
	DDD-p,p'	102	91.1	101	103	11.7		1.63
	DDE-p,p'	92.5	80.0	88.0	87.5	14.5		0.600
	DDT-p,p'	91.0	77.7	84.4	91.4	15.8		7.94
	Delta-BHC	112	106	157	131	5.54		18.0
	Demeton	80.0	78.4	84.0	159	2.01		61.5
	Diazinon	87.9	92.3	96.8	99.1	4.79		2.36
	Dicofol	88.2	88.2	87.8	94.0	0.0114		6.85
	Dieldrin	101	88.9	93.0	94.1	12.4		1.16
	Disulfoton	82.4	91.5	90.1	85.5	10.5		5.23
	Endosulfan I	97.0	89.7	94.8	96.2	7.82		1.42
	Endosulfan II	104	94.7	109	112	9.40		2.85
	Endosulfan Sulfate	103	92.3	103	109	11.1		5.99
	Endrin	104	90.6	97.4	97.4	13.9		0.0649
	Endrin Aldehyde	114	105	103	102	7.98		0.904
	Endrin Ketone	104	96.3	106	117	7.36		9.96
	EPTC	60.9	66.1	64.5	60.1	8.23		7.09
	Ethion	79.4	76.8	81.0	70.4	3.35		14.0
	Ethoprop	70.5	82.9	87.6	78.6	16.3		10.9
	Fenamiphos	98.9	105	129	115	6.25		11.5
	Fipronil	89.8	92.7	92.5	91.9	3.17		0.721
	Fipronil Sulfide	89.4	95.3	94.1	89.5	6.33		5.04
	Fipronil Sulfone	87.6	93.1	99.9	94.2	6.09		5.85
	Fonofos	75.7	71.6	84.9	74.8	5.50		12.6
	Gamma-BHC	103	98.8	125	141	4.31		12.1
	Gamma-Chlordane	87.5	76.5	86.6	85.6	13.5		1.25
	Heptachlor	73.0	62.6	65.4	67.7	15.4		3.44
	Heptachlor Epoxide	93.5	85.4	87.5	90.6	9.02		3.54
	Hexazinone	87.9	92.1	88.8	86.9	4.66		1.55
	Malathion	97.1	95.1	90.3	85.0	2.06		6.13
	Metalaxyl	95.0	90.3	79.8	85.2	5.14		6.25
	Methoxychlor	102	94.5	102	107	7.54		4.67
	Metolachlor	99.6	93.3	80.8	86.8	6.54		7.09
	Metribuzin	143	140	143	145	2.09		1.57
	Mevinphos	77.1	73.0	69.8	69.4	5.45		0.619
	Mirex	78.1	61.7	67.4	78.0	23.4		14.7
	Molinate	72.1	73.6	75.4	74.3	2.05		1.51
	Norflurazon	102	97.0	103	90.6	4.89		13.3
	Parathion Ethyl	86.9	89.9	72.7	73.3	3.36		0.635
	Parathion Methyl	112	122	115	122	8.62		5.93
	Pendimethalin	91.0	107	103	101	16.4		2.19
	Permethrin	86.9	73.0	81.5	94.6	17.4		14.9
	Phorate	58.4	53.0	88.3	98.2	9.73		10.6
	Prometon	92.1	86.0	87.7	77.7	6.89		12.1
	Prometryn	85.5	83.7	83.5	86.8	2.15		3.87
	Simazine	92.8	98.2	92.1	76.3	5.63		18.8
	Terbufos	78.5	77.9	88.7	81.7	0.887		8.26
	Terbutylazine	86.8	81.4	87.5	93.8	6.38		7.04
	Trifluralin	84.4	74.6	75.2	75.3	12.4		0.0625
EPA 8276	Chlordane	76.1	88.5			15.1		7.78
	Toxaphene	64.2	71.7	55.4	57.4	11.2		3.53
EPA 8321B	2,4-D	95.8		139	144			3.06

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	3-Hydroxycarbofuran	76.9	51.5	57.6			11.2
	Acesulfame K	78.3	68.6	81.6			17.2
	Acetaminophen	83.5	76.4	69.6			9.28
	Aldicarb	80.2	54.9	48.9			11.6
	Aldicarb Sulfone	88.4	64.1	77.9			19.5
	Aldicarb Sulfoxide	97.1	22.2	23.9			7.55
	AMPA	126	90.6	88.2			2.66
	Bentazon	87.4	68.5	80.6			9.75
	Carbamazepine	89.2	65.8	60.9			7.80
	Carbaryl	69.1	51.1	55.6			8.46
	Carbofuran	74.2	45.0	39.7			12.4
	Diuron	79.5	57.8	51.6			11.3
	Endothall	114	146	139			4.97
	Fenuron	95.9	53.6	52.1			2.94
	Fluridone	79.3	83.4	77.5			7.11
	Glufosinate	87.8	68.4	63.7			7.16
	Glyphosate	81.5	63.7	69.7			9.04
	Hydrocodone	105	77.8	73.3			5.84
	Ibuprofen	109	102	103			1.39
	Imazapyr	77.5	89.4	86.9			1.67
	Imidacloprid	85.6	113	112			1.43
	Linuron	69.1	59.2	58.8			0.627
	MCPP	96.5	148	176			17.4
	Methiocarb	61.4	53.3	53.3			0.0340
	Methomyl	89.6	56.0	58.1			3.84
	Naproxen	102	137	142			3.24
	Oxamyl	86.7	55.6	55.0			1.18
	Primidone	69.6	62.7	61.4			2.18
	Propoxur	73.9	44.0	35.1			22.5
	Pyraclostrobin	80.5	81.5	80.8			0.821
	Sucralose	100	117	114			2.41
	Triclopyr	95.0	167	178			6.32
SM 2120 B	Color (true)	99.3				2.81	
SM 2320 B-97	Total Alkalinity	102				1.46	
	Total Alkalinity	102				1.10	
	Total Alkalinity	103				0.204	
SM 2540 C-97	TDS					4.68	
SM 4500 F-C-97	Fluoride	96.9	96.3	96.3			0.0
	Fluoride	97.9	97.9	97.3			0.480
	Fluoride	97.9	95.6	96.4			0.480
SM 5310 B-00	Organic Carbon	100	101	102			0.403
	Organic Carbon	99.4	99.3	100			1.03

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2023739, 2023742, 2023745, 2023748, 2023751
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2023769, 2023770, 2023771, 2023772
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2023769, 2023770, 2023771, 2023772
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2023748

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2023748
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2023740, 2023743, 2023746, 2023749, 2023752
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2023740, 2023743, 2023746, 2023749, 2023752
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2023740, 2023743, 2023746, 2023749, 2023752
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2023740, 2023743, 2023746, 2023749, 2023752
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2023741, 2023744, 2023747, 2023750, 2023753
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2023767
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2023768
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2023767
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2023765
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2023766
SM 2120 B / E31780	True Color measured at 450 nm	2023748
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2023739, 2023742, 2023745, 2023748, 2023751
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2023748
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2023739, 2023742, 2023745, 2023748, 2023751
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2023739, 2023742, 2023745, 2023748, 2023751
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2023740, 2023743, 2023746, 2023749, 2023752

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	09/11/2018			09/11/2018 15:38	Megan Treadwell	2023739, 2023742, 2023745, 2023748, 2023751
EPA 200.7 Rev. 4.4	09/11/2018	09/12/2018 17:50	Elliott D. Healy	09/13/2018 14:00	Betina Topolski	2023770
	09/11/2018	09/12/2018 17:50	Elliott D. Healy	09/13/2018 14:08	Betina Topolski	2023771
	09/11/2018	09/18/2018 16:40	Elliott D. Healy	09/20/2018 17:04	Betina Topolski	2023769
	09/11/2018	09/18/2018 16:40	Elliott D. Healy	09/20/2018 17:12	Betina Topolski	2023772
EPA 200.8 Rev. 5.4	09/11/2018	09/12/2018 17:50	Elliott D. Healy	09/18/2018 20:28	Allison Taylor	2023770
	09/11/2018	09/12/2018 17:50	Elliott D. Healy	09/18/2018 20:37	Allison Taylor	2023771
	09/11/2018	09/12/2018 17:50	Elliott D. Healy	09/20/2018 15:44	Allison Taylor	2023770
	09/11/2018	09/18/2018 16:40	Elliott D. Healy	09/22/2018 13:48	Allison Taylor	2023769
	09/11/2018	09/18/2018 16:40	Elliott D. Healy	09/22/2018 13:58	Allison Taylor	2023772
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/02/2018 05:59	Robert K Palmer	2023769
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/02/2018 06:09	Robert K Palmer	2023772
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/19/2018 06:50	Allison Taylor	2023772
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/19/2018 07:19	Allison Taylor	2023769
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/19/2018 07:29	Allison Taylor	2023772
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/20/2018 01:59	Allison Taylor	2023769
	09/11/2018	09/25/2018 16:00	Elliott D. Healy	10/20/2018 02:07	Allison Taylor	2023772
	09/11/2018	09/27/2018 16:45	Elliott D. Healy	09/30/2018 21:07	Robert K Palmer	2023771
EPA 300.0 Rev. 2.1	09/11/2018			09/18/2018 20:20	Lipi Saha	2023748
EPA 350.1 Rev. 2.0	09/11/2018			09/13/2018 10:52	Ping Hua	2023740
	09/11/2018			09/13/2018 10:54	Ping Hua	2023746
	09/11/2018			09/13/2018 10:55	Ping Hua	2023752
	09/11/2018			09/13/2018 11:18	Ping Hua	2023743
	09/11/2018			09/13/2018 11:19	Ping Hua	2023749
EPA 351.2 Rev. 2.0	09/11/2018	09/13/2018 10:50	Adrian Shelby	09/17/2018 12:07	Joseph Suarez	2023743
	09/11/2018	09/13/2018 10:50	Adrian Shelby	09/17/2018 12:08	Joseph Suarez	2023749
	09/11/2018	09/17/2018 11:05	Adrian Shelby	09/18/2018 09:01	Joseph Suarez	2023740
	09/11/2018	09/17/2018 11:05	Adrian Shelby	09/18/2018 09:02	Joseph Suarez	2023746
	09/11/2018	09/17/2018 11:05	Adrian Shelby	09/18/2018 09:04	Joseph Suarez	2023752
EPA 353.2 Rev. 2.0	09/11/2018			09/12/2018 12:03	Lauren Bottorf	2023740
	09/11/2018			09/12/2018 12:11	Lauren Bottorf	2023746
	09/11/2018			09/12/2018 12:12	Lauren Bottorf	2023752
	09/11/2018			09/13/2018 13:40	Lauren Bottorf	2023743
	09/11/2018			09/13/2018 13:47	Lauren Bottorf	2023749
EPA 365.1 Rev. 2.0	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 13:26	Beverly Y. Sanders	2023743
	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 13:27	Beverly Y. Sanders	2023749
	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 13:40	Beverly Y. Sanders	2023740
	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 13:41	Beverly Y. Sanders	2023746
	09/11/2018	09/13/2018 15:36	Sima Feizi	09/14/2018 13:28	Beverly Y. Sanders	2023752

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	09/11/2018			09/11/2018 14:44	Lipi Saha	2023741
	09/11/2018			09/11/2018 14:45	Lipi Saha	2023744
	09/11/2018			09/11/2018 14:50	Lipi Saha	2023747
	09/11/2018			09/11/2018 14:51	Lipi Saha	2023750
	09/11/2018			09/11/2018 14:52	Lipi Saha	2023753
EPA 8270D	09/11/2018	09/12/2018 10:11	Rasheda Ghaffari	09/14/2018 22:30	Dinesh Mishra	2023767
	09/11/2018	09/14/2018 10:00	Rasheda Ghaffari	09/24/2018 17:10	Vandana T. Nagar	2023768
EPA 8276	09/11/2018	09/12/2018 10:11	Rasheda Ghaffari	09/15/2018 04:21	Arthur Maknenko	2023767
EPA 8321B	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/13/2018 01:17	Juyoung Kim	2023765
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 14:17	Mohammad Ghaffari	2023766
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 12:43	Mohammad Ghaffari	2023766
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 16:17	Mohammad Ghaffari	2023766
	09/11/2018	09/13/2018 14:00	Hoor Shaik	09/15/2018 16:24	Juyoung Kim	2023766
	09/11/2018	09/13/2018 14:00	Hoor Shaik	09/22/2018 20:02	Mohammad Ghaffari	2023766
SM 2120 B	09/11/2018			09/11/2018 15:34	DeAsia Armster	2023748
SM 2320 B-97	09/11/2018			09/13/2018 21:08	Dale L. Simmons	2023742
	09/11/2018			09/13/2018 22:40	Dale L. Simmons	2023748
	09/11/2018			09/14/2018 04:50	Dale L. Simmons	2023739
	09/11/2018			09/14/2018 05:00	Dale L. Simmons	2023745
	09/11/2018			09/14/2018 05:11	Dale L. Simmons	2023751
SM 2540 C-97	09/11/2018			09/12/2018 15:16	Yijie Li	2023748
SM 2540 D-97	09/11/2018			09/12/2018 15:16	Yijie Li	2023739, 2023742, 2023745, 2023748, 2023751
SM 4500 F-C-97	09/11/2018			09/13/2018 21:08	Dale L. Simmons	2023742
	09/11/2018			09/13/2018 22:40	Dale L. Simmons	2023748
	09/11/2018			09/14/2018 03:18	Dale L. Simmons	2023739
	09/11/2018			09/14/2018 03:22	Dale L. Simmons	2023745
	09/11/2018			09/14/2018 03:26	Dale L. Simmons	2023751
SM 5310 B-00	09/11/2018			09/18/2018 04:54	Megan Treadwell	2023743
	09/11/2018			09/18/2018 05:06	Megan Treadwell	2023749
	09/11/2018			09/18/2018 10:50	Megan Treadwell	2023740
	09/11/2018			09/18/2018 11:02	Megan Treadwell	2023746
	09/11/2018			09/18/2018 11:15	Megan Treadwell	2023752