

Chemical Analysis Report

NE-DIST-2022-01-13-02

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

Event Description: **LSJR Main 2022**
Request ID: **RQ-2022-01-10-23**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 08-FEB-2022 15:59



Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Miramar at San Jose

Collection Date/Time: 01/12/2022 10:00

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299598	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P408514	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P409186	
		Sulfate	83		mg SO4/L	P409192	
	SM 2120 B-2011	Color (true)**	14		PCU	P408517	
	SM 2320 B-2011	Total Alkalinity	83		mg CaCO3/L	P408794	
	SM 2540 C-2011	TDS	580		mg/L	P408978	
	SM 2540 D-2011	TSS	2	I	mg/L	P408951	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P408797	
2299599	EPA 350.1 Rev. 2.0	Ammonia-N	0.098		mg N/L	P409023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P408851	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P408784	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P408649	
	SM 5310 B-2011	Organic Carbon	4.5		mg C/L	P408837	
2299600	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.027		mg P/L	P408504	
2299619	EPA 8270E	Aldrin	0.70	U	ng/L	P408463	
		Alpha-BHC	0.11	U	ng/L	P408463	
		Alpha-Chlordane	1.1	I	ng/L	P408463	
		Beta-BHC	0.53	I	ng/L	P408463	
		Beta-Cyfluthrin**	1.4	U	ng/L	P408463	
		Bifenthrin**	0.81	I	ng/L	P408463	
		Carbophenothion	0.97	U	ng/L	P408463	
		Chlorothalonil	1.4	U	ng/L	P408463	
		Cis-Nonachlor**	0.22	U	ng/L	P408463	
		Cypermethrin	1.6	U	ng/L	P408463	
		Dacthal**	0.16	U	ng/L	P408463	
		DDD-p,p'	0.27	U	ng/L	P408463	
		DDE-p,p'	0.22	U	ng/L	P408463	
		DDT-p,p'	0.27	U	ng/L	P408463	
		Delta-BHC	1.1	I	ng/L	P408463	
		Deltamethrin**	1.4	U	ng/L	P408463	
		Dichlobenil**	0.27	U	ng/L	P408463	RPD
		Dicofol	1.4	U	ng/L	P408463	
		Dieldrin	13		ng/L	P408463	
		Endosulfan I	0.43	U	ng/L	P408463	
		Endosulfan II	0.43	U	ng/L	P408463	
		Endosulfan Sulfate	0.32	U	ng/L	P408463	
		Endrin	0.43	U	ng/L	P408463	
		Endrin Aldehyde	0.81	U	ng/L	P408463	
		Endrin Ketone	0.43	U	ng/L	P408463	
		Esfenvalerate**	0.81	U	ng/L	P408463	
		Ethalfuralin**	0.16	U	ng/L	P408463	
		Fenpropathrin**	0.27	U	ng/L	P408463	
		Gamma-BHC	0.14	U	ng/L	P408463	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299619	EPA 8270E	Gamma-Chlordane	0.71	I	ng/L	P408463	
		Heptachlor	0.22	U	ng/L	P408463	
		Heptachlor Epoxide	4.0		ng/L	P408463	
		Hexachlorobenzene	1.1	U	ng/L	P408463	
		Kepone**	5.4	UJ	ng/L	P408463	CCV
		Lambda-Cyhalothrin**	0.81	U	ng/L	P408463	
		Methoprene**	0.81	U	ng/L	P408463	
		Methoxychlor	0.32	U	ng/L	P408463	
		MGK-264**	0.22	U	ng/L	P408463	
		Mirex	0.76	U	ng/L	P408463	
		Oxychlordane**	0.32	U	ng/L	P408463	
		Permethrin	1.7	U	ng/L	P408463	
		Phenothrin**	0.97	U	ng/L	P408463	
		Piperonyl Butoxide**	0.16	UJ	ng/L	P408463	CCV
		Prallethrin**	2.2	U	ng/L	P408463	
		Tau-Fluvalinate**	0.27	U	ng/L	P408463	
		Tetramethrin**	0.81	UJ	ng/L	P408463	CCV
		Trans-Nonachlor**	0.24	I	ng/L	P408463	
		Triclosan Methyl**	0.16	U	ng/L	P408463	
		Trifluralin	0.22	U	ng/L	P408463	
	EPA 8276	Chlordane	7.1	I	ng/L	P408463	
		Toxaphene	16	U	ng/L	P408463	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 2540 C-2011: The reported result is consistent with the conductivity measured in the laboratory, 875 umhos/cm.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Miller Creek at Atlantic Blvd.

Collection Date/Time: 01/12/2022 11:30

Field ID: G2NE0005

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299604	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P408514	
	SM 2320 B-2011	Total Alkalinity	105		mg CaCO3/L	P408794	
	SM 2540 D-2011	TSS	5	I	mg/L	P408955	
	SM 4500 F-C-2011	Fluoride	0.25		mg F/L	P408797	
2299605	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P409023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P408888	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P408784	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P408649	
	SM 5310 B-2011	Organic Carbon	7.5		mg C/L	P408839	
2299606	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P408504	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Little Pottsburg Creek at Emerson

Collection Date/Time: 01/12/2022 12:15

Field ID: 20030070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299607	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P408514	
	EPA 300.0 Rev. 2.1	Chloride	52		mg Cl/L	P409186	
		Sulfate	71		mg SO4/L	P409192	
		Color (true)**	16		PCU	P408518	
	SM 2320 B-2011	Total Alkalinity	176		mg CaCO3/L	P408610	
	SM 2540 C-2011	TDS	372	A	mg/L	P408978	
	SM 2540 D-2011	TSS	7	IA	mg/L	P408951	
	SM 4500 F-C-2011	Fluoride	0.28		mg F/L	P408613	
2299608	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P408881	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P408849	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P408680	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P408651	
	SM 5310 B-2011	Organic Carbon	7.0		mg C/L	P408958	
2299609	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.017		mg P/L	P408503	
2299622	EPA 200.7 Rev. 4.4	Calcium	78.6		mg/L	P408710	
		Iron	910		ug/L	P408710	
		Magnesium	15.5		mg/L	P408710	
		Potassium	2.9		mg/L	P408710	
		Sodium	33.2		mg/L	P408710	
		Strontium	1.15E+03		ug/L	P408710	
		Tin	3.0	U	ug/L	P408710	
	EPA 200.8 Rev. 5.4	Titanium	2.5	I	ug/L	P408710	
		Vanadium	2.0	U	ug/L	P408710	
		Zinc	8.7	I	ug/L	P408710	
		Aluminum	125		ug/L	P408710	
		Antimony	0.16	I	ug/L	P408710	
		Arsenic	0.70		ug/L	P408710	
		Barium	45.5		ug/L	P408710	
		Beryllium	0.010	I	ug/L	P408710	
		Boron**	44.3		ug/L	P408710	
		Cadmium	0.020	U	ug/L	P408710	
		Chromium	0.40	U	ug/L	P408710	
		Cobalt	0.137		ug/L	P408710	
		Copper	1.03		ug/L	P408710	
		Lead	1.55		ug/L	P408710	
		Manganese	70.9		ug/L	P408710	
		Molybdenum	0.82		ug/L	P408710	
		Nickel	0.73	I	ug/L	P408710	
		Selenium	0.20	U	ug/L	P408710	
		Silver	0.010	U	ug/L	P408710	
		Thallium	0.10	U	ug/L	P408710	
	SM 2340B	Hardness	260		mg/L	P408710	

Field ID: 20030070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable because of high analyte concentration in the QC sample.

Sample Location: Little Pottsburg Creek at Bedford Road

Collection Date/Time: 01/12/2022 13:05

Field ID: 20030756

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299623	EPA 200.7 Rev. 4.4	Calcium	76.9		mg/L	P408710	
		Iron	670		ug/L	P408710	
		Magnesium	13.3		mg/L	P408710	
		Potassium	2.3		mg/L	P408710	
		Sodium	19.9		mg/L	P408710	
		Strontium	1.15E+03		ug/L	P408710	
		Tin	3.0	U	ug/L	P408710	
		Titanium	2.0	I	ug/L	P408710	
		Vanadium	2.0	U	ug/L	P408710	
		Zinc	96		ug/L	P408710	
	EPA 200.8 Rev. 5.4	Aluminum	43		ug/L	P408710	
		Antimony	0.15	I	ug/L	P408710	
		Arsenic	0.61		ug/L	P408710	
		Barium	44.2		ug/L	P408710	
		Beryllium	0.010	U	ug/L	P408710	
		Boron**	46.1		ug/L	P408710	
		Cadmium	0.020	U	ug/L	P408710	
		Chromium	0.40	U	ug/L	P408710	
		Cobalt	0.101		ug/L	P408710	
		Copper	1.04		ug/L	P408710	
	SM 2340B	Lead	0.20	U	ug/L	P408710	
		Manganese	41.1		ug/L	P408710	
		Molybdenum	0.76		ug/L	P408710	
		Nickel	0.77	I	ug/L	P408710	
		Selenium	0.20	U	ug/L	P408710	
		Silver	0.010	U	ug/L	P408710	
		Thallium	0.10	U	ug/L	P408710	
		Hardness	247		mg/L	P408710	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable because of high analyte concentration in the QC sample.

Sample Location: Craig CR 100m Down From Footbridge in Park Collection Date/Time: 01/12/2022 10:45

Field ID: 20030958

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299601	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P408514	
	SM 2320 B-2011	Total Alkalinity	104	A	mg CaCO3/L	P408611	
	SM 2540 D-2011	TSS	6	IA	mg/L	P408955	
	SM 4500 F-C-2011	Fluoride	0.33		mg F/L	P408614	
2299602	EPA 350.1 Rev. 2.0	Ammonia-N	0.062		mg N/L	P409023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P408888	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P408784	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P408649	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P408839	
2299603	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P408504	
2299621	EPA 200.7 Rev. 4.4	Calcium	105		mg/L	P408533	
		Iron	1.04E+03		ug/L	P408533	
		Magnesium	169		mg/L	P408533	
		Strontium	1.56E+03		ug/L	P408533	
		Tin	9.0	U	ug/L	P408533	
		Vanadium	6.0	U	ug/L	P408533	
		Zinc	15	U	ug/L	P408533	
	EPA 200.8 Rev. 5.4	Aluminum	50	I	ug/L	P408533	
		Antimony	0.20	U	ug/L	P408533	
		Arsenic	1.42		ug/L	P408533	
		Beryllium	0.10	I	ug/L	P408533	
		Cadmium	0.080	U	ug/L	P408533	
		Chromium	1.6	U	ug/L	P408533	
		Cobalt	0.27	I	ug/L	P408533	
		Copper	1.6	U	ug/L	P408533	
		Lead	0.80	U	ug/L	P408533	
		Manganese	61.6		ug/L	P408533	
		Molybdenum	2.4		ug/L	P408533	
		Nickel	2.0	U	ug/L	P408533	
		Selenium	0.80	U	ug/L	P408533	
		Silver	0.040	U	ug/L	P408533	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408514

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408533

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408710

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
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408533

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408710

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408710

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409186

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409192

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408881

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409023

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408851

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408851

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408888

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408680

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408649

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408651

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408503

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408504

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

Reference Method: EPA 8270E
Batch ID: P408463

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P408463

Component	Result	Code	Units
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408463

Component	Result	Code	Units
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P408463

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P408517

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P408518

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P408610

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

Reference Method: SM 2320 B-2011
Batch ID: P408611

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

Reference Method: SM 2320 B-2011
Batch ID: P408794

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

Reference Method: SM 2540 C-2011
Batch ID: P408978

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P408951

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P408955

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

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Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P408614

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P408837

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

Reference Method: SM 5310 B-2011
Batch ID: P408839

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

Reference Method: SM 5310 B-2011
Batch ID: P408958

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: P408533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	111		P	85 - 115
Magnesium	103		P	85 - 115
Strontium	103		P	85 - 115
Tin	108		P	85 - 115
Vanadium	104		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	106		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	103		P	85 - 115
Sodium	102		P	85 - 115
Strontium	104		P	85 - 115
Tin	108		P	85 - 115
Titanium	107		P	85 - 115
Vanadium	106		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	98.8		P	85 - 115
Arsenic	96.5		P	85 - 115
Beryllium	95.8		P	85 - 115
Cadmium	99.3		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	98.0		P	85 - 115
Copper	98.3		P	85 - 115
Lead	94.9		P	85 - 115
Manganese	100		P	85 - 115
Molybdenum	98.8		P	85 - 115
Nickel	98.8		P	85 - 115
Selenium	97.6		P	85 - 115
Silver	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	99.2		P	85 - 115
Arsenic	102		P	85 - 115
Barium	105		P	85 - 115
Beryllium	102		P	85 - 115
Boron	97.6		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cadmium	100		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	99.3		P	85 - 115
Copper	102		P	85 - 115
Lead	95.5		P	85 - 115
Manganese	100		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	103		P	85 - 115
Selenium	99.7		P	85 - 115
Silver	102		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409186

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409192

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408881

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409023

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408851

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408888

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408888

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408680

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408784

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: P408649

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408503

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408504

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

Reference Method: EPA 8270E

Batch ID: P408463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	58.8		P	10 - 93.0
Alpha-BHC	94.8		P	75 - 106
Alpha-Chlordane	84.4		P	50 - 109
Beta-BHC	109		P	65 - 135
Beta-Cyfluthrin	74.1		P	23 - 167
Bifenthrin	57.6		P	11 - 123
Carbophenothion	49.4		P	18 - 96.0
Chlorothalonil	84.8		P	26 - 182
Cis-Nonachlor	76.9		P	40 - 111
Cypermethrin	83.3		P	25 - 155

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P408463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dacthal	98.1		P	73 - 112
DDD-p,p'	85.2		P	47 - 108
DDE-p,p'	77.6		P	48 - 107
DDT-p,p'	75.5		P	49 - 111
Delta-BHC	112		P	68 - 143
Deltamethrin	84.1		P	16 - 176
Dichlobenil	96.5		P	32 - 113
Dicofol	77.3		P	50 - 108
Dieldrin	84.1		P	56 - 110
Endosulfan I	84.3		P	60 - 105
Endosulfan II	89.0		P	50 - 120
Endosulfan Sulfate	95.0		P	55 - 121
Endrin	84.3		P	35 - 117
Endrin Aldehyde	84.9		P	36 - 116
Endrin Ketone	123		P	56 - 130
Esfenvalerate	66.6		P	10 - 179
Ethalfuralin	78.3		P	49 - 99.0
Fenpropathrin	76.0		P	35 - 119
Gamma-BHC	101		P	72 - 115
Gamma-Chlordane	79.1		P	45 - 107
Heptachlor	72.6		P	41 - 100
Heptachlor Epoxide	90.8		P	58 - 106
Hexachlorobenzene	78.2		P	39 - 100
Kepone	134		P	10 - 191
Lambda-Cyhalothrin	68.6		P	10 - 186
Methoprene	47.0		P	10 - 129
Methoxychlor	94.9		P	61 - 111
MGK-264	85.8		P	20 - 123
Mirex	53.1		P	10 - 182
Oxychlordane	78.1		P	39 - 110
Permethrin	75.2		P	26 - 152
Phenothrin	47.3		P	10 - 109
Piperonyl Butoxide	96.1		P	27 - 142
Prallethrin	67.7		P	14 - 109
Tau-Fluvalinate	65.0		P	16 - 134
Tetramethrin	83.6		P	10 - 125
Trans-Nonachlor	78.7		P	45 - 107
Triclosan Methyl	87.6		P	60 - 110
Trifluralin	77.6		P	49 - 98.0

Reference Method: EPA 8276
Batch ID: P408463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.0		P	61 - 118
Toxaphene	67.6		P	51 - 122

Reference Method: SM 2120 B-2011
Batch ID: P408517

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P408518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.4		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P408610

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P408611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P408794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.6		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P408614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P408837

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

Reference Method: SM 5310 B-2011
Batch ID: P408839

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P408958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298000	Iron	105	106	P/P	70 - 130
2298000	Strontium	99.1	100	P/P	70 - 130
2298000	Tin	91.7	96.3	P/P	70 - 130
2298000	Vanadium	106	107	P/P	70 - 130
2298000	Zinc	97.3	100	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299623	Calcium	99.2		P	80 - 120
2299623	Iron	105	107	P/P	80 - 120
2299623	Magnesium	103		P	80 - 120
2299623	Potassium	103	105	P/P	80 - 120
2299623	Sodium	103		P	80 - 120
2299623	Strontium	104	103	P/P	80 - 120
2299623	Tin	105	105	P/P	80 - 120
2299623	Titanium	105	106	P/P	80 - 120
2299623	Vanadium	107	107	P/P	80 - 120
2299623	Zinc	83.8	84.3	P/P	80 - 120
2299727	Calcium	112		P	80 - 120
2299727	Iron	110		P	80 - 120
2299727	Magnesium	110		P	80 - 120
2299727	Potassium	110		P	80 - 120
2299727	Sodium	107		P	80 - 120
2299727	Strontium	106		P	80 - 120
2299727	Tin	108		P	80 - 120
2299727	Titanium	108		P	80 - 120
2299727	Vanadium	107		P	80 - 120
2299727	Zinc	106		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298000	Aluminum	104	105	P/P	70 - 130
2298000	Antimony	110	109	P/P	70 - 130
2298000	Arsenic	117	115	P/P	70 - 130
2298000	Beryllium	117	112	P/P	70 - 130
2298000	Cadmium	102	103	P/P	70 - 130
2298000	Chromium	111	111	P/P	70 - 130
2298000	Cobalt	118	117	P/P	70 - 130
2298000	Copper	112	112	P/P	70 - 130
2298000	Lead	106	105	P/P	70 - 130
2298000	Manganese	106	106	P/P	70 - 130
2298000	Molybdenum	116	116	P/P	70 - 130
2298000	Nickel	119	118	P/P	70 - 130
2298000	Selenium	110	111	P/P	70 - 130
2298000	Silver	97.9	97.3	P/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299623	Aluminum	100	98.9	P/P	80 - 120
2299623	Antimony	104	103	P/P	80 - 120
2299623	Arsenic	104	102	P/P	80 - 120
2299623	Barium	106	106	P/P	80 - 120
2299623	Beryllium	104	102	P/P	80 - 120
2299623	Boron	98.6	97.2	P/P	80 - 120
2299623	Cadmium	105	102	P/P	80 - 120
2299623	Chromium	107	106	P/P	80 - 120
2299623	Cobalt	100	98.7	P/P	80 - 120
2299623	Copper	99.0	98.3	P/P	80 - 120
2299623	Lead	99.1	96.9	P/P	80 - 120
2299623	Molybdenum	106	105	P/P	80 - 120
2299623	Nickel	101	99.6	P/P	80 - 120
2299623	Selenium	102	101	P/P	80 - 120
2299623	Silver	100	100	P/P	80 - 120
2299623	Thallium	109	108	P/P	80 - 120
2299727	Aluminum	102		P	80 - 120
2299727	Antimony	99.9		P	80 - 120
2299727	Arsenic	102		P	80 - 120
2299727	Barium	106		P	80 - 120
2299727	Beryllium	103		P	80 - 120
2299727	Boron	98.6		P	80 - 120
2299727	Cadmium	102		P	80 - 120
2299727	Chromium	104		P	80 - 120
2299727	Cobalt	98.1		P	80 - 120
2299727	Copper	102		P	80 - 120
2299727	Lead	97.2		P	80 - 120
2299727	Molybdenum	101		P	80 - 120
2299727	Nickel	102		P	80 - 120
2299727	Selenium	99.0		P	80 - 120
2299727	Silver	100		P	80 - 120
2299727	Thallium	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299471	Chloride	100		P	90 - 110
2299634	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299471	Sulfate	96.3		P	90 - 110
2299634	Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P408881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299333	Ammonia-N	99.6	97.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299533	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299446	Kjeldahl Nitrogen	109	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299870	Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299910	Kjeldahl Nitrogen	94.5	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299475	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299602	NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299870	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299637	Total-P	107	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299455	O-Phosphate-P	97.5	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299600	O-Phosphate-P	98.7	98.7	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298524	Aldrin	60.8		P	10 - 93.0
2298524	Aldrin	56.9		P	10 - 89.0
2298524	Alpha-BHC	93.2		P	75 - 106
2298524	Alpha-BHC	101		P	71 - 105
2298524	Alpha-Chlordane	76.2		P	50 - 109
2298524	Alpha-Chlordane	69.5		P	43 - 107
2298524	Beta-BHC	106		P	65 - 135
2298524	Beta-BHC	79.9		P	57 - 152
2298524	Beta-Cyfluthrin	94.0		P	23 - 167
2298524	Beta-Cyfluthrin	71.4		P	29 - 186
2298524	Bifenthrin	75.1		P	11 - 123
2298524	Bifenthrin	70.5		P	19 - 119
2298524	Carbophenothion	64.0		P	18 - 96.0
2298524	Carbophenothion	62.8		P	19 - 107
2298524	Chlorothalonil	76.1		P	26 - 182
2298524	Chlorothalonil	76.6		P	10 - 245
2298524	Cis-Nonachlor	64.3		P	40 - 111
2298524	Cis-Nonachlor	55.9		P	36 - 110
2298524	Cypermethrin	99.4		P	25 - 155
2298524	Cypermethrin	80.0		P	24 - 169
2298524	Dacthal	87.2		P	73 - 112
2298524	Dacthal	78.9		P	62 - 115
2298524	DDD-p,p'	78.5		P	47 - 108
2298524	DDD-p,p'	67.7		P	36 - 109
2298524	DDE-p,p'	69.7		P	48 - 107
2298524	DDE-p,p'	69.1		P	30 - 114
2298524	DDT-p,p'	76.6		P	49 - 111
2298524	DDT-p,p'	71.9		P	42 - 108
2298524	Delta-BHC	105		P	68 - 143
2298524	Delta-BHC	92.2		P	60 - 164
2298524	Deltamethrin	114		P	16 - 176
2298524	Deltamethrin	86.4		P	10 - 210
2298524	Dichlobenil	77.2		P	32 - 113
2298524	Dichlobenil	51.5		P	23 - 108
2298524	Dicofol	81.5		P	50 - 108
2298524	Dicofol	74.8		P	44 - 109
2298524	Dieldrin	71.4		P	56 - 110
2298524	Dieldrin	63.3		P	37 - 119
2298524	Endosulfan I	74.3		P	60 - 105
2298524	Endosulfan I	69.2		P	52 - 105
2298524	Endosulfan II	72.2		P	50 - 120
2298524	Endosulfan II	56.2		P	35 - 127
2298524	Endosulfan Sulfate	80.2		P	55 - 121
2298524	Endosulfan Sulfate	54.7		P	39 - 130
2298524	Endrin	76.1		P	35 - 117
2298524	Endrin	66.9		P	30 - 116

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298524	Endrin Aldehyde	75.8		P	36 - 116
2298524	Endrin Aldehyde	55.2		P	20 - 110
2298524	Endrin Ketone	103		P	56 - 130
2298524	Endrin Ketone	76.7		P	48 - 134
2298524	Esfenvalerate	84.8		P	10 - 179
2298524	Esfenvalerate	66.0		P	10 - 199
2298524	Ethalfuralin	79.7		P	49 - 99.0
2298524	Ethalfuralin	75.3		P	48 - 95.0
2298524	Fenpropathrin	88.6		P	35 - 119
2298524	Fenpropathrin	76.3		P	37 - 121
2298524	Gamma-BHC	95.7		P	72 - 115
2298524	Gamma-BHC	92.1		P	61 - 126
2298524	Gamma-Chlordane	74.6		P	45 - 107
2298524	Gamma-Chlordane	67.5		P	39 - 105
2298524	Heptachlor	68.2		P	41 - 100
2298524	Heptachlor	63.3		P	38 - 96.0
2298524	Heptachlor Epoxide	82.3		P	58 - 106
2298524	Heptachlor Epoxide	70.4		P	42 - 114
2298524	Hexachlorobenzene	78.5		P	39 - 100
2298524	Hexachlorobenzene	73.7		P	39 - 93.0
2298524	Kepone	106		P	10 - 191
2298524	Kepone	75.1		P	10 - 215
2298524	Lambda-Cyhalothrin	98.5		P	10 - 186
2298524	Lambda-Cyhalothrin	90.8		P	10 - 204
2298524	Methoprene	65.6		P	10 - 129
2298524	Methoprene	67.2		P	17 - 108
2298524	Methoxychlor	104		P	61 - 111
2298524	Methoxychlor	93.3		P	56 - 115
2298524	MGK-264	82.8		P	20 - 123
2298524	MGK-264	76.2		P	35 - 120
2298524	Mirex	55.5		P	10 - 182
2298524	Mirex	53.9		P	10 - 178
2298524	Oxychlordane	79.7		P	39 - 110
2298524	Oxychlordane	75.3		P	47 - 91.0
2298524	Permethrin	97.2		P	26 - 152
2298524	Permethrin	87.8		P	27 - 170
2298524	Phenothrin	78.7		P	10 - 109
2298524	Phenothrin	77.0		P	10 - 133
2298524	Piperonyl Butoxide	101		P	27 - 142
2298524	Piperonyl Butoxide	91.8		P	23 - 150
2298524	Prallethrin	70.4		P	14 - 109
2298524	Prallethrin	63.7		P	21 - 113
2298524	Tau-Fluvalinate	84.8		P	16 - 134
2298524	Tau-Fluvalinate	62.0		P	16 - 158
2298524	Tetramethrin	103		P	10 - 125
2298524	Tetramethrin	91.3		P	22 - 132
2298524	Trans-Nonachlor	79.0		P	45 - 107
2298524	Trans-Nonachlor	64.8		P	43 - 102
2298524	Triclosan Methyl	73.2		P	60 - 110
2298524	Triclosan Methyl	71.3		P	49 - 109
2298524	Trifluralin	79.6		P	49 - 98.0
2298524	Trifluralin	75.3		P	48 - 93.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299619	Chlordane	77.8	68.4	P/P	55 - 128
2299619	Toxaphene	75.2	86.9	P/P	29 - 164

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299472	Fluoride	98.2	98.2	P/P	92 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P408614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299601	Fluoride	97.0	98.3	P/P	92 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300414	Fluoride	97.5	96.9	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P408837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299333	Organic Carbon	94.7	95.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P408839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299602	Organic Carbon	95.2	96.1	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P408958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298793	Organic Carbon	92.9	92.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P408514

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299560	Turbidity	0.228	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408533

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298000	Calcium	0.561	Spike	P	0 - 20
2298000	Iron	0.429	Spike	P	0 - 20
2298000	Magnesium	0.182	Spike	P	0 - 20
2298000	Strontium	0.645	Spike	P	0 - 20
2298000	Tin	4.97	Spike	P	0 - 20
2298000	Vanadium	0.985	Spike	P	0 - 20
2298000	Zinc	2.96	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408710

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299623	Calcium	0.520	Spike	P	0 - 20
2299623	Iron	1.78	Spike	P	0 - 20
2299623	Magnesium	2.06	Spike	P	0 - 20
2299623	Potassium	1.09	Spike	P	0 - 20
2299623	Sodium	0.289	Spike	P	0 - 20
2299623	Strontium	0.802	Spike	P	0 - 20
2299623	Tin	0.379	Spike	P	0 - 20
2299623	Titanium	1.05	Spike	P	0 - 20
2299623	Vanadium	0.829	Spike	P	0 - 20
2299623	Zinc	0.514	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408533

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298000	Aluminum	0.734	Spike	P	0 - 20
2298000	Antimony	1.41	Spike	P	0 - 20
2298000	Arsenic	1.17	Spike	P	0 - 20
2298000	Beryllium	4.07	Spike	P	0 - 20
2298000	Cadmium	0.408	Spike	P	0 - 20
2298000	Chromium	0.0363	Spike	P	0 - 20
2298000	Cobalt	0.918	Spike	P	0 - 20
2298000	Copper	0.649	Spike	P	0 - 20
2298000	Lead	0.885	Spike	P	0 - 20
2298000	Manganese	0.278	Spike	P	0 - 20
2298000	Molybdenum	0.250	Spike	P	0 - 20
2298000	Nickel	1.36	Spike	P	0 - 20
2298000	Selenium	0.610	Spike	P	0 - 20
2298000	Silver	0.593	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299623	Aluminum	1.44	Spike	P	0 - 20
2299623	Antimony	0.367	Spike	P	0 - 20
2299623	Arsenic	1.78	Spike	P	0 - 20
2299623	Barium	0.402	Spike	P	0 - 20
2299623	Beryllium	1.67	Spike	P	0 - 20
2299623	Boron	1.02	Spike	P	0 - 20
2299623	Cadmium	2.77	Spike	P	0 - 20
2299623	Chromium	0.789	Spike	P	0 - 20
2299623	Cobalt	1.49	Spike	P	0 - 20
2299623	Copper	0.690	Spike	P	0 - 20
2299623	Lead	2.24	Spike	P	0 - 20
2299623	Manganese	0.357	Spike	P	0 - 20
2299623	Molybdenum	1.10	Spike	P	0 - 20
2299623	Nickel	1.31	Spike	P	0 - 20
2299623	Selenium	0.404	Spike	P	0 - 20
2299623	Silver	0.312	Spike	P	0 - 20
2299623	Thallium	1.21	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299471	Chloride	0.444	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P408881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299333	Ammonia-N	1.73	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299533	Ammonia-N	0.175	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299446	Kjeldahl Nitrogen	0.937	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408851

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299870	Kjeldahl Nitrogen	3.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408888

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299910	Kjeldahl Nitrogen	2.35	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408680

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299475	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408784

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299602	NO2NO3-N	0.503	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408649

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299870	Total-P	2.09	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408651

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299637	Total-P	1.30	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408503

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299455	O-Phosphate-P	0.512	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408504

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299600	O-Phosphate-P	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P408463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298524	Aldrin	6.74	Spike	P	0 - 37
2298524	Alpha-BHC	7.74	Spike	P	0 - 16
2298524	Alpha-Chlordane	9.18	Spike	P	0 - 28
2298524	Beta-BHC	28.3	Spike	P	0 - 32
2298524	Beta-Cyfluthrin	27.3	Spike	P	0 - 41
2298524	Bifenthrin	6.26	Spike	P	0 - 36
2298524	Carbophenothion	1.89	Spike	P	0 - 81
2298524	Chlorothalonil	0.639	Spike	P	0 - 54
2298524	Cis-Nonachlor	14.1	Spike	P	0 - 33
2298524	Cypermethrin	21.7	Spike	P	0 - 38
2298524	Dacthal	9.92	Spike	P	0 - 23
2298524	DDD-p,p'	14.9	Spike	P	0 - 35
2298524	DDE-p,p'	0.842	Spike	P	0 - 27
2298524	DDT-p,p'	6.37	Spike	P	0 - 31
2298524	Delta-BHC	13.4	Spike	P	0 - 30
2298524	Deltamethrin	27.6	Spike	P	0 - 76
2298524	Dichlobenil	39.8	Spike	F	0 - 33
2298524	Dicofol	8.65	Spike	P	0 - 24
2298524	Dieldrin	11.3	Spike	P	0 - 35
2298524	Endosulfan I	7.08	Spike	P	0 - 25
2298524	Endosulfan II	24.9	Spike	P	0 - 31
2298524	Endosulfan Sulfate	37.8	Spike	P	0 - 38
2298524	Endrin	12.9	Spike	P	0 - 53
2298524	Endrin Aldehyde	31.5	Spike	P	0 - 81
2298524	Endrin Ketone	29.5	Spike	P	0 - 33
2298524	Esfenvalerate	24.9	Spike	P	0 - 46
2298524	Ethalfuralin	5.69	Spike	P	0 - 22
2298524	Fenpropathrin	14.9	Spike	P	0 - 29
2298524	Gamma-BHC	3.81	Spike	P	0 - 17
2298524	Gamma-Chlordane	9.98	Spike	P	0 - 28
2298524	Heptachlor	7.41	Spike	P	0 - 28
2298524	Heptachlor Epoxide	15.6	Spike	P	0 - 23
2298524	Hexachlorobenzene	6.28	Spike	P	0 - 22
2298524	Kepone	33.8	Spike	P	0 - 61
2298524	Lambda-Cyhalothrin	8.17	Spike	P	0 - 52
2298524	Methoprene	2.46	Spike	P	0 - 38
2298524	Methoxychlor	11.1	Spike	P	0 - 29
2298524	MGK-264	8.29	Spike	P	0 - 41
2298524	Mirex	2.77	Spike	P	0 - 39
2298524	Oxychlordane	5.71	Spike	P	0 - 33
2298524	Permethrin	10.1	Spike	P	0 - 39
2298524	Phenothrin	2.19	Spike	P	0 - 52
2298524	Piperonyl Butoxide	9.33	Spike	P	0 - 91
2298524	Prallethrin	9.99	Spike	P	0 - 34
2298524	Tau-Fluvalinate	31.1	Spike	P	0 - 41
2298524	Tetramethrin	12.0	Spike	P	0 - 43
2298524	Trans-Nonachlor	19.8	Spike	P	0 - 31
2298524	Triclosan Methyl	2.68	Spike	P	0 - 24
2298524	Trifluralin	5.55	Spike	P	0 - 23

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P408463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299619	Chlordane	11.0	Spike	P	0 - 30
2299619	Toxaphene	14.5	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P408517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299560	Color (true)	2.73	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P408518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299633	Color (true)	1.84	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P408610

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299472	Total Alkalinity	1.38	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P408611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299601	Total Alkalinity	0.0625	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P408794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300414	Total Alkalinity	4.54	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P408978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299607	TDS	7.79	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299472	Fluoride	0.0	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P408614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299601	Fluoride	0.967	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300414	Fluoride	0.490	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P408837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299333	Organic Carbon	0.669	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P408839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299602	Organic Carbon	0.768	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P408958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298793	Organic Carbon	0.461	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2299619
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	72.4	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	76.9	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	63.5	P	30 - 97.0
EPA 8276	PCNB	76.8	P	45 - 119

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109853

Included Lab Sample IDs: 2299600, 2299603, 2299606, 2299609

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	98.8	P/P	90 - 110
O-Phosphate-P	99.8	99.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109856

Included Lab Sample IDs: 2299598, 2299601, 2299604, 2299607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A109857

Included Lab Sample IDs: 2299598, 2299607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	85 - 115
Color (true)	102	102	P/P	85 - 115

Reference Method: SM 2320 B-2011

Run ID: A109907

Included Lab Sample IDs: 2299601, 2299607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.5	99.7	P/P	90 - 110
Total Alkalinity	99.7	96.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109907

Included Lab Sample IDs: 2299601, 2299607

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109915

Included Lab Sample IDs: 2299621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	96.6	96.3	P/P	90 - 110
Arsenic	97.4	97.8	P/P	90 - 110
Cadmium	95.4	94.9	P/P	90 - 110
Chromium	96.8	96.6	P/P	90 - 110
Cobalt	97.3	96.8	P/P	90 - 110
Copper	98.9	97.9	P/P	90 - 110
Manganese	98.5	98.4	P/P	90 - 110
Molybdenum	94.9	94.2	P/P	90 - 110
Nickel	100	99.6	P/P	90 - 110
Selenium	97.9	97.5	P/P	90 - 110
Silver	96.1	94.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A109916

Included Lab Sample IDs: 2299621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	101	99.9	P/P	90 - 110
Strontium	101	103	P/P	90 - 110
Tin	101	101	P/P	90 - 110
Vanadium	99.4	99.8	P/P	90 - 110
Zinc	97.8	98.2	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A109917

Included Lab Sample IDs: 2299619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.7		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	106		P	80 - 120
Beta-BHC	100		P	80 - 120
Beta-Cyfluthrin	89.8		P	80 - 120
Bifenthrin	98.3		P	80 - 120
Carbophenothion	97.9		P	80 - 120
Chlorothalonil	93.2		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	104		P	80 - 120
Dacthal	99.2		P	80 - 120
DDD-p,p'	98.4		P	80 - 120
DDE-p,p'	99.5		P	80 - 120
DDT-p,p'	99.8		P	80 - 120
Delta-BHC	98.4		P	80 - 120
Deltamethrin	90.5		P	80 - 120
Dichlobenil	95.8		P	80 - 120
Dicofol	98.6		P	80 - 120
Dieldrin	98.1		P	80 - 120
Endosulfan I	98.7		P	80 - 120
Endosulfan II	97.0		P	80 - 120
Endosulfan Sulfate	93.3		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	103		P	80 - 120
Endrin Ketone	112		P	80 - 120
Esfenvalerate	92.1		P	80 - 120
Ethalfuralin	99.2		P	80 - 120
Fenpropathrin	92.8		P	80 - 120
Gamma-BHC	99.2		P	80 - 120
Gamma-Chlordane	97.8		P	80 - 120
Heptachlor	99.3		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Kepone	57.1*		F	80 - 120
Lambda-Cyhalothrin	88.5		P	80 - 120
Methoprene	95.4		P	80 - 120
Methoxychlor	100		P	80 - 120
MGK-264	87.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A109917
Included Lab Sample IDs: 2299619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	96.2		P	80 - 120
Oxychlordane	97.8		P	80 - 120
Permethrin	98.8		P	80 - 120
Phenothrin	99.1		P	80 - 120
Piperonyl Butoxide	72.5*		F	80 - 120
Prallethrin	84.1		P	80 - 120
Tau-Fluvalinate	94.2		P	80 - 120
Tetramethrin	79.6*		F	80 - 120
Trans-Nonachlor	103		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	98.1		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A109923
Included Lab Sample IDs: 2299608

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A109933
Included Lab Sample IDs: 2299621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.8	103	P/P	90 - 110
Beryllium	96.4	98.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A109952
Included Lab Sample IDs: 2299621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	96.3	96.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A109953
Included Lab Sample IDs: 2299622, 2299623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	99.5	P/P	90 - 110
Aluminum	99.3	101	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Antimony	99.1	101	P/P	90 - 110
Arsenic	102	98.5	P/P	90 - 110
Arsenic	99.4	99.3	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Beryllium	101	99.7	P/P	90 - 110
Beryllium	98.6	99.1	P/P	90 - 110
Boron	96.9	99.4	P/P	90 - 110
Boron	98.1	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109953

Included Lab Sample IDs: 2299622, 2299623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	100	100	P/P	90 - 110
Cadmium	98.8	100	P/P	90 - 110
Chromium	100	99.8	P/P	90 - 110
Chromium	99.3	101	P/P	90 - 110
Cobalt	94.7	95.4	P/P	90 - 110
Cobalt	97.1	94.0	P/P	90 - 110
Copper	100	96.4	P/P	90 - 110
Copper	96.9	98.0	P/P	90 - 110
Lead	93.7	92.3	P/P	90 - 110
Lead	93.8	92.4	P/P	90 - 110
Manganese	99.5	99.2	P/P	90 - 110
Manganese	99.5	100	P/P	90 - 110
Molybdenum	98.4	98.7	P/P	90 - 110
Molybdenum	100	99.1	P/P	90 - 110
Nickel	101	96.9	P/P	90 - 110
Nickel	97.2	97.8	P/P	90 - 110
Selenium	99.0	99.7	P/P	90 - 110
Selenium	99.6	98.4	P/P	90 - 110
Silver	98.9	98.8	P/P	90 - 110
Silver	99.3	99.7	P/P	90 - 110
Thallium	104	105	P/P	90 - 110
Thallium	105	103	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A109954

Included Lab Sample IDs: 2299619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.7		P	80 - 120
Toxaphene	104		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109970

Included Lab Sample IDs: 2299599, 2299602, 2299605

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

Reference Method: SM 2320 B-2011

Run ID: A109978

Included Lab Sample IDs: 2299598, 2299604

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	96.8	P/P	90 - 110
Total Alkalinity	98.3	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109978

Included Lab Sample IDs: 2299598, 2299604

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

Reference Method: SM 4500 F-C-2011

Run ID: A109978

Included Lab Sample IDs: 2299598, 2299604

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

Reference Method: SM 5310 B-2011

Run ID: A109998

Included Lab Sample IDs: 2299599, 2299602, 2299605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	97.3	P/P	90 - 110
Organic Carbon	96.7	97.6	P/P	90 - 110
Organic Carbon	97.2	96.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110001

Included Lab Sample IDs: 2299622, 2299623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	99.7	98.6	P/P	90 - 110
Sodium	102	101	P/P	90 - 110
Strontium	103	105	P/P	90 - 110
Tin	103	102	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Zinc	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110004

Included Lab Sample IDs: 2299608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110006

Included Lab Sample IDs: 2299608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110013

Included Lab Sample IDs: 2299599, 2299602, 2299605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110025

Included Lab Sample IDs: 2299608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.4	94.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110029

Included Lab Sample IDs: 2299599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.7	102	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110041

Included Lab Sample IDs: 2299608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	95.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110045

Included Lab Sample IDs: 2299622

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110064

Included Lab Sample IDs: 2299599, 2299602, 2299605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110092

Included Lab Sample IDs: 2299602, 2299605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	94.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A11040

Included Lab Sample IDs: 2299598, 2299607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Sulfate	98.3	98.8	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.228	
EPA 200.7 Rev. 4.4	Calcium	106						0.561
	Calcium	103	99.2	112				0.520
	Iron	111	105	106				0.429
	Iron	106	105	107	110			1.78
	Magnesium	103						0.182
	Magnesium	102	103	110				2.06
	Potassium	103	103	105	110			1.09
	Sodium	102	103	107				0.289
	Strontium	103	99.1	100				0.645
	Strontium	104	104	103	106			0.802
	Tin	108	91.7	96.3				4.97
	Tin	108	105	105	108			0.379
	Titanium	107	105	106	108			1.05
	Vanadium	104	106	107				0.985
	Vanadium	106	107	107	107			0.829
	Zinc	103	97.3	100				2.96
	Zinc	107	83.8	84.3	106			0.514
EPA 200.8 Rev. 5.4	Aluminum	102	104	105				0.734
	Aluminum	101	100	98.9	102			1.44
	Antimony	98.8	110	109				1.41
	Antimony	99.2	104	103	99.9			0.367
	Arsenic	96.5	117	115				1.17
	Arsenic	102	104	102	102			1.78
	Barium	105	106	106	106			0.402
	Beryllium	95.8	117	112				4.07
	Beryllium	102	104	102	103			1.67
	Boron	97.6	98.6	97.2	98.6			1.02
	Cadmium	99.3	102	103				0.408
	Cadmium	100	105	102	102			2.77
	Chromium	100	111	111				0.0363
	Chromium	102	107	106	104			0.789
	Cobalt	98.0	118	117				0.918
	Cobalt	99.3	100	98.7	98.1			1.49
	Copper	98.3	112	112				0.649
	Copper	102	99.0	98.3	102			0.690
	Lead	94.9	106	105				0.885
	Lead	95.5	99.1	96.9	97.2			2.24
	Manganese	100	106	106				0.278
	Manganese	100						0.357
	Molybdenum	98.8	116	116				0.250
	Molybdenum	102	106	105	101			1.10
	Nickel	98.8	119	118				1.36
	Nickel	103	101	99.6	102			1.31
	Selenium	97.6	110	111				0.610
	Selenium	99.7	102	101	99.0			0.404
	Silver	99.5	97.9	97.3				0.593
	Silver	102	100	100	100			0.312
	Thallium	105	109	108	107			1.21
EPA 300.0 Rev. 2.1	Chloride	100	100	102			0.444	
	Sulfate	96.3	96.3	95.4				
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	99.6	97.2				1.73
	Ammonia-N	100	103	103				0.175
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	109	107				0.937

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	101	105			3.00
	Kjeldahl Nitrogen	95.3	94.5	97.6			2.35
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104	103			0.484
	NO2NO3-N	102	100	99.0			0.503
EPA 365.1 Rev. 2.0	Total-P	106	105	108			2.09
	Total-P	109	107	109			1.30
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.9	97.5	98.0			0.512
	O-Phosphate-P	101	98.7	98.7			0.0
EPA 8270E	Aldrin	58.8	60.8	56.9			6.74
	Alpha-BHC	94.8	93.2	101			7.74
	Alpha-Chlordane	84.4	76.2	69.5			9.18
	Beta-BHC	109	106	79.9			28.3
	Beta-Cyfluthrin	74.1	94.0	71.4			27.3
	Bifenthrin	57.6	75.1	70.5			6.26
	Carbophenothion	49.4	64.0	62.8			1.89
	Chlorothalonil	84.8	76.1	76.6			0.639
	Cis-Nonachlor	76.9	64.3	55.9			14.1
	Cypermethrin	83.3	99.4	80.0			21.7
	Dacthal	98.1	87.2	78.9			9.92
	DDD-p,p'	85.2	78.5	67.7			14.9
	DDE-p,p'	77.6	69.7	69.1			0.842
	DDT-p,p'	75.5	76.6	71.9			6.37
	Delta-BHC	112	105	92.2			13.4
	Deltamethrin	84.1	114	86.4			27.6
	Dichlobenil	96.5	77.2	51.5			39.8
	Dicofol	77.3	81.5	74.8			8.65
	Dieldrin	84.1	71.4	63.3			11.3
	Endosulfan I	84.3	74.3	69.2			7.08
	Endosulfan II	89.0	72.2	56.2			24.9
	Endosulfan Sulfate	95.0	80.2	54.7			37.8
	Endrin	84.3	76.1	66.9			12.9
	Endrin Aldehyde	84.9	75.8	55.2			31.5
	Endrin Ketone	123	103	76.7			29.5
	Esfenvalerate	66.6	84.8	66.0			24.9
	Ethalfuralin	78.3	79.7	75.3			5.69
	Fenpropathrin	76.0	88.6	76.3			14.9
	Gamma-BHC	101	95.7	92.1			3.81
	Gamma-Chlordane	79.1	74.6	67.5			9.98
	Heptachlor	72.6	68.2	63.3			7.41
	Heptachlor Epoxide	90.8	82.3	70.4			15.6
	Hexachlorobenzene	78.2	78.5	73.7			6.28
	Kepone	134	106	75.1			33.8
	Lambda-Cyhalothrin	68.6	98.5	90.8			8.17
	Methoprene	47.0	65.6	67.2			2.46
	Methoxychlor	94.9	104	93.3			11.1
	MGK-264	85.8	82.8	76.2			8.29
	Mirex	53.1	55.5	53.9			2.77
	Oxychlordane	78.1	79.7	75.3			5.71
	Permethrin	75.2	97.2	87.8			10.1
	Phenothrin	47.3	78.7	77.0			2.19
	Piperonyl Butoxide	96.1	101	91.8			9.33
	Prallethrin	67.7	70.4	63.7			9.99
	Tau-Fluvalinate	65.0	84.8	62.0			31.1
	Tetramethrin	83.6	103	91.3			12.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Trans-Nonachlor	78.7	79.0	64.8		19.8
	Triclosan Methyl	87.6	73.2	71.3		2.68
	Trifluralin	77.6	79.6	75.3		5.55
EPA 8276	Chlordane	78.0	77.8	68.4		11.0
	Toxaphene	67.6	75.2	86.9		14.5
SM 2120 B-2011	Color (true)	101			2.73	
	Color (true)	99.4			1.84	
SM 2320 B-2011	Total Alkalinity	98.9			1.38	
	Total Alkalinity	99.4			0.0625	
	Total Alkalinity	98.6			4.54	
SM 2540 C-2011	TDS				7.79	
SM 4500 F-C-2011	Fluoride	97.9	98.2	98.2		0.0
	Fluoride	98.4	97.0	98.3		0.967
	Fluoride	97.5	97.5	96.9		0.490
SM 5310 B-2011	Organic Carbon	95.8	94.7	95.5		0.669
	Organic Carbon	95.8	95.2	96.1		0.768
	Organic Carbon	96.1	92.9	92.4		0.461

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2299598, 2299601, 2299604, 2299607
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2299621, 2299622, 2299623
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2299621, 2299622, 2299623
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2299598, 2299607
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2299598, 2299607
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2299599, 2299602, 2299605, 2299608
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2299599, 2299602, 2299605, 2299608
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2299599, 2299602, 2299605, 2299608
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2299599, 2299602, 2299605, 2299608
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2299600, 2299603, 2299606, 2299609
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2299619
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2299619
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2299598, 2299607
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2299598, 2299601, 2299604, 2299607
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2299622, 2299623
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2299598, 2299607
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2299598, 2299601, 2299604, 2299607
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2299598, 2299601, 2299604, 2299607
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2299599, 2299602, 2299605, 2299608

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	01/13/2022			01/13/2022 15:45	Khloe J Berg	2299598, 2299601, 2299604, 2299607
EPA 200.7 Rev. 4.4	01/13/2022	01/14/2022 11:10	Vijayalakshmi Reddy	01/19/2022 03:31	Josef B Mick	2299621
	01/13/2022	01/20/2022 09:53	Emily M Philpot	01/21/2022 18:46	Josef B Mick	2299622
	01/13/2022	01/20/2022 09:53	Emily M Philpot	01/21/2022 18:53	Josef B Mick	2299623
	01/13/2022	01/20/2022 09:53	Emily M Philpot	01/26/2022 00:22	Josef B Mick	2299622
EPA 200.8 Rev. 5.4	01/13/2022	01/14/2022 11:10	Vijayalakshmi Reddy	01/18/2022 17:02	Alexander Thompson	2299621
	01/13/2022	01/14/2022 11:10	Vijayalakshmi Reddy	01/19/2022 13:38	Alexander Thompson	2299621
	01/13/2022	01/14/2022 11:10	Vijayalakshmi Reddy	01/20/2022 12:17	Alexander Thompson	2299621
	01/13/2022	01/20/2022 09:53	Emily M Philpot	01/20/2022 18:12	McKinley C Carter	2299623
	01/13/2022	01/20/2022 09:53	Emily M Philpot	01/20/2022 21:51	McKinley C Carter	2299622
EPA 300.0 Rev. 2.1	01/13/2022			01/28/2022 16:42	James L Waggeberby	2299598
	01/13/2022			01/28/2022 16:54	James L Waggeberby	2299607
EPA 350.1 Rev. 2.0	01/13/2022			01/24/2022 13:39	Ping Hua	2299608
	01/13/2022			01/26/2022 14:44	Ping Hua	2299599
	01/13/2022			01/26/2022 14:45	Ping Hua	2299602
	01/13/2022			01/26/2022 14:46	Ping Hua	2299605
EPA 351.2 Rev. 2.0	01/13/2022	01/24/2022 11:37	Samantha L Bates	01/25/2022 12:34	Alexandra J Mattheus	2299599
	01/13/2022	01/24/2022 11:42	Samantha L Bates	01/25/2022 11:05	Alexandra J Mattheus	2299608
	01/13/2022	01/26/2022 10:32	Samantha L Bates	01/27/2022 12:51	Alexandra J Mattheus	2299602
	01/13/2022	01/26/2022 10:32	Samantha L Bates	01/27/2022 12:53	Alexandra J Mattheus	2299605
EPA 353.2 Rev. 2.0	01/13/2022			01/19/2022 12:28	Beverly Y. Sanders	2299608
	01/13/2022			01/21/2022 10:35	Beverly Y. Sanders	2299602
	01/13/2022			01/21/2022 10:41	Beverly Y. Sanders	2299599
	01/13/2022			01/21/2022 10:42	Beverly Y. Sanders	2299605
EPA 365.1 Rev. 2.0	01/13/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/21/2022 13:06	Shengyu Ding	2299608
	01/13/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 16:18	Shengyu Ding	2299599
	01/13/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 16:19	Shengyu Ding	2299602
	01/13/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 16:20	Shengyu Ding	2299605
EPA 365.1 Rev. 2.0 dissolved	01/13/2022			01/13/2022 15:07	Ping Hua	2299609
	01/13/2022			01/13/2022 15:16	Ping Hua	2299600
	01/13/2022			01/13/2022 15:18	Ping Hua	2299603
	01/13/2022			01/13/2022 15:19	Ping Hua	2299606
EPA 8270E	01/13/2022	01/14/2022 08:30	Rasheda Ghaffari	01/18/2022 22:57	Vandana T. Nagar	2299619
EPA 8276	01/13/2022	01/14/2022 08:30	Rasheda Ghaffari	01/20/2022 02:54	Arthur Maknenko	2299619
SM 2120 B-2011	01/13/2022			01/13/2022 16:47	Sarah A Nixon	2299598
	01/13/2022			01/13/2022 16:52	Sarah A Nixon	2299607
SM 2320 B-2011	01/13/2022			01/15/2022 02:18	Dale L. Simmons	2299607
	01/13/2022			01/15/2022 05:07	Dale L. Simmons	2299601
	01/13/2022			01/21/2022 01:55	Dale L. Simmons	2299598
	01/13/2022			01/21/2022 04:03	Dale L. Simmons	2299604

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340B	01/13/2022			01/21/2022 18:46	Josef B Mick	2299622
	01/13/2022			01/21/2022 18:53	Josef B Mick	2299623
SM 2540 C-2011	01/13/2022			01/18/2022 15:32	Yijie Li	2299598, 2299607
SM 2540 D-2011	01/13/2022			01/18/2022 15:32	Yijie Li	2299598, 2299601, 2299604, 2299607
SM 4500 F-C-2011	01/13/2022			01/15/2022 02:18	Dale L. Simmons	2299607
	01/13/2022			01/15/2022 04:24	Dale L. Simmons	2299601
	01/13/2022			01/21/2022 01:55	Dale L. Simmons	2299598
	01/13/2022			01/21/2022 04:03	Dale L. Simmons	2299604
SM 5310 B-2011	01/13/2022			01/21/2022 04:06	Nathaniel J Jones	2299599
	01/13/2022			01/21/2022 10:51	Nathaniel J Jones	2299602
	01/13/2022			01/21/2022 16:46	Nathaniel J Jones	2299605
	01/13/2022			01/25/2022 02:37	Nathaniel J Jones	2299608