

Chemical Analysis Report

NE-DIST-2020-01-15-01

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

Event Description: **LSJR Southside 2020**
Request ID: **RQ-2020-01-13-28**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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: 31-JAN-2020 15:25



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: Cormorant Branch @ Marbon Rd

Collection Date/Time: 01/14/2020 10:15

Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149377	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P377300	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P377329	
		Sulfate	19		mg SO4/L	P377331	
	SM 2120 B-2011	Color (true)	51	A	PCU	P377334	
	SM 2320 B-2011	Total Alkalinity	86		mg CaCO3/L	P377367	
	SM 2540 C-2011	TDS	163		mg/L	P377611	
	SM 2540 D-2011	TSS	2	U	mg/L	P377512	
2149378	SM 4500 F-C-2011	Fluoride	0.10		mg F/L	P377371	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P377307	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P377739	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P377419	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P377543	
2149379	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P377340	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P377210	
2149397	EPA 8321B	2,4-D	0.0096		ug/L	P377201	
		Acesulfame K**	0.10	U	ug/L	P377312	MS
		AMPA**	0.18	I	ug/L	P377312	
		Sucralose**	0.18		ug/L	P377312	
		Acetaminophen**	0.0080	U	ug/L	P377201	
		Acetamiprid**	0.0020	U	ug/L	P377201	
		Endothall**	0.25	U	ug/L	P377312	MS
		Glufosinate**	0.10	U	ug/L	P377312	
		Glyphosate**	0.10	U	ug/L	P377312	
		Afidopyropen**	0.0020	UJ	ug/L	P377201	
		Bentazon	0.035		ug/L	P377201	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377201	
		Carbamazepine**	8.0E-04	U	ug/L	P377201	
		Clothianidin**	0.0020	U	ug/L	P377201	
		Dinotefuran**	0.0020	U	ug/L	P377201	
		Diuron	0.13		ug/L	P377201	
		Fenuron	0.016	U	ug/L	P377201	
		Fluridone**	0.031		ug/L	P377201	
		Imazapyr**	0.55		ug/L	P377201	
		Hydrocodone**	0.0020	U	ug/L	P377201	
		Ibuprofen**	0.020	U	ug/L	P377201	
		Imidacloprid	0.026		ug/L	P377201	MS
		Linuron	0.0040	U	ug/L	P377201	
		Mandestrobin**	0.0020	UJ	ug/L	P377201	
		MCP	0.0021	I	ug/L	P377201	
		Naproxen**	0.0080	U	ug/L	P377201	
		Primidone**	0.012	I	ug/L	P377201	
		Pyraclostrobin**	0.0020	U	ug/L	P377201	
		Thiamethoxam**	0.0020	U	ug/L	P377201	

Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149397	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377201	
		Triclopyr**	0.0040	U	ug/L	P377201	
2149400	EPA 200.7 Rev. 4.4	Barium	39.6		ug/L	P377256	
		Calcium	34.5		mg/L	P377256	
		Iron	1.26E+03		ug/L	P377256	
		Magnesium	6.19		mg/L	P377256	
		Potassium	2.2		mg/L	P377256	
		Sodium	15.9		mg/L	P377256	
		Zinc	5.0	U	ug/L	P377256	
	EPA 200.8 Rev. 5.4	Aluminum	17	I	ug/L	P377256	
		Antimony	0.061	I	ug/L	P377256	
		Arsenic	1.07		ug/L	P377256	
		Boron**	26.0		ug/L	P377256	
		Cadmium	0.020	U	ug/L	P377256	
		Chromium	0.40	U	ug/L	P377256	
		Copper	1.63		ug/L	P377256	
		Lead	0.20	U	ug/L	P377256	
		Nickel	0.50	U	ug/L	P377256	
		Selenium	0.20	U	ug/L	P377256	
		Silver	0.010	U	ug/L	P377256	
		Thallium	0.10	U	ug/L	P377256	
	SM 2340B	Hardness	112		mg/L	P377256	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Goodbys CR @ SR-13

Collection Date/Time: 01/14/2020 08:10

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149368	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P377300	
	EPA 300.0 Rev. 2.1	Bromide	0.37		mg Br/L	P377473	
	SM 2320 B-2011	Total Alkalinity	100		mg CaCO3/L	P377366	
	SM 2540 D-2011	TSS	10	I	mg/L	P377513	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P377370	
2149369	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P377306	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P377737	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P377418	
	EPA 365.1 Rev. 2.0	Total-P	0.094		mg P/L	P377542	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P377340	
2149370	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P377210	
2149392	EPA 8276	Chlordane	5.2	U	ng/L	P377222	
		Toxaphene	31	U	ng/L	P377222	
2149394	EPA 8321B	2,4-D	0.023		ug/L	P377201	
		Acesulfame K**	0.10	UJ	ug/L	P377312	MS
		AMPA**	0.17	I	ug/L	P377312	
		Sucralose**	0.12		ug/L	P377312	
		Acetaminophen**	0.0080	U	ug/L	P377201	
		Acetamiprid**	0.0020	U	ug/L	P377201	
		Endothall**	0.25	UJ	ug/L	P377312	MS
		Glufosinate**	0.10	U	ug/L	P377312	
		Glyphosate**	0.27	I	ug/L	P377312	
		Afidopyropen**	0.0020	UJ	ug/L	P377201	
		Bentazon	0.024		ug/L	P377201	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377201	
		Carbamazepine**	8.0E-04	U	ug/L	P377201	
		Clothianidin**	0.0020	U	ug/L	P377201	
		Dinotefuran**	0.0020	U	ug/L	P377201	
		Diuron	0.0086		ug/L	P377201	
		Fenuron	0.016	U	ug/L	P377201	
		Fluridone**	0.016		ug/L	P377201	
		Imazapyr**	0.82		ug/L	P377201	
		Hydrocodone**	0.0020	U	ug/L	P377201	
		Ibuprofen**	0.020	U	ug/L	P377201	
		Imidacloprid	0.020		ug/L	P377201	MS
		Linuron	0.0040	U	ug/L	P377201	
		Mandestrobin**	0.0020	UJ	ug/L	P377201	
		MCP	0.0053	I	ug/L	P377201	
		Naproxen**	0.0080	U	ug/L	P377201	
		Primidone**	0.0040	U	ug/L	P377201	
		Pyraclostrobin**	0.0020	U	ug/L	P377201	
		Thiamethoxam**	0.0020	U	ug/L	P377201	
		Tolfenpyrad**	0.0020	U	ug/L	P377201	

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149394	EPA 8321B	Triclopyr**	0.0040	U	ug/L	P377201	
2149398	EPA 200.7 Rev. 4.4	Iron	760		ug/L	P377256	
		Manganese	22.3		ug/L	P377256	
		Zinc	5.1	I	ug/L	P377256	
	EPA 200.8 Rev. 5.4	Aluminum	162		ug/L	P377256	
		Antimony	0.11	I	ug/L	P377256	
		Arsenic	1.76		ug/L	P377256	
		Cadmium	0.020	U	ug/L	P377256	
		Chromium	0.48	I	ug/L	P377256	
		Copper	1.52		ug/L	P377256	
		Lead	0.68		ug/L	P377256	
		Nickel	0.50	U	ug/L	P377256	
		Selenium	0.20	U	ug/L	P377256	
		Silver	0.010	U	ug/L	P377256	
		Thallium	0.10	U	ug/L	P377256	

Ref. Method and Comment:

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Miller Creek at Atlantic Blvd.

Collection Date/Time: 01/14/2020 08:55

Field ID: G2NE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149371	EPA 180.1 Rev. 2.0	Turbidity	9.7	A	NTU	P377300	
	EPA 300.0 Rev. 2.1	Bromide	1.1		mg Br/L	P377473	
	SM 2320 B-2011	Total Alkalinity	146		mg CaCO3/L	P377366	
	SM 2540 D-2011	TSS	10	I	mg/L	P377513	
	SM 4500 F-C-2011	Fluoride	0.17		mg F/L	P377370	
2149372	EPA 350.1 Rev. 2.0	Ammonia-N	0.45		mg N/L	P377306	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P377737	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P377418	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P377542	
	SM 5310 B-2011	Organic Carbon	8.4		mg C/L	P377340	
2149373	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.19		mg P/L	P377210	
2149395	EPA 8321B	2,4-D	0.0020	U	ug/L	P377201	
		Acesulfame K**	1.0	UQ	ug/L	P377312	MS
		AMPA**	0.10	U	ug/L	P377312	
		Sucralose**	0.71		ug/L	P377312	
		Acetaminophen**	0.013	I	ug/L	P377201	
		Acetamiprid**	0.0020	U	ug/L	P377201	
		Endothall**	2.5	UQ	ug/L	P377312	MS
		Glufosinate**	0.10	U	ug/L	P377312	
		Glyphosate**	0.20	I	ug/L	P377312	
		Afidopyropen**	0.0020	UJ	ug/L	P377201	
		Bentazon	0.016		ug/L	P377201	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377201	
		Carbamazepine**	8.0E-04	U	ug/L	P377201	
		Clothianidin**	0.0020	U	ug/L	P377201	
		Dinotefuran**	0.0020	U	ug/L	P377201	
		Diuron	0.0040	I	ug/L	P377201	
		Fenuron	0.016	U	ug/L	P377201	
		Fluridone**	8.0E-04	U	ug/L	P377201	
		Imazapyr**	0.024		ug/L	P377201	
		Hydrocodone**	0.0020	U	ug/L	P377201	
		Ibuprofen**	0.020	U	ug/L	P377201	
		Imidacloprid	0.017		ug/L	P377201	MS
		Linuron	0.0040	U	ug/L	P377201	
		Mandestrobin**	0.0020	UJ	ug/L	P377201	
		MCP	0.0020	U	ug/L	P377201	
		Naproxen**	0.0080	U	ug/L	P377201	
		Primidone**	0.0040	U	ug/L	P377201	
		Pyraclostrobin**	0.0020	U	ug/L	P377201	
		Thiamethoxam**	0.0020	U	ug/L	P377201	
		Tolfenpyrad**	0.0020	U	ug/L	P377201	
		Triclopyr**	0.0040	U	ug/L	P377201	

Field ID: G2NE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.
EPA 8321B: MDL for some parameters elevated due to matrix interference. Q - Sample re-analyzed beyond normal holding time due to required dilution of the sample matrix.

Sample Location: Deep Bottom Creek at Scott Mill Rd

Collection Date/Time: 01/14/2020 09:55

Field ID: 20030595

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149380	EPA 180.1 Rev. 2.0	Turbidity	7.6	A	NTU	P377301	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P377330	
		Sulfate	26		mg SO4/L	P377332	
	SM 2120 B-2011	Color (true)	53		PCU	P377334	
	SM 2320 B-2011	Total Alkalinity	91		mg CaCO3/L	P377367	
	SM 2540 C-2011	TDS	216		mg/L	P377611	
	SM 2540 D-2011	TSS	5	I	mg/L	P377512	
	SM 4500 F-C-2011	Fluoride	0.098	I	mg F/L	P377371	
2149381	EPA 350.1 Rev. 2.0	Ammonia-N	0.087		mg N/L	P377307	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P377739	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P377419	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P377543	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P377341	
2149382	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P377211	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Miramar at San Jose

Collection Date/Time: 01/14/2020 09:25

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149374	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P377300	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P377329	
		Sulfate	78		mg SO4/L	P377331	
	SM 2120 B-2011	Color (true)	16		PCU	P377334	
	SM 2320 B-2011	Total Alkalinity	77		mg CaCO3/L	P377366	
	SM 2540 C-2011	TDS	252	A	mg/L	P377611	
	SM 2540 D-2011	TSS	2	UA	mg/L	P377512	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P377370	
2149375	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P377307	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P377739	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P377418	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P377543	
	SM 5310 B-2011	Organic Carbon	4.0		mg C/L	P377340	
2149376	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.029		mg P/L	P377211	
2149393	EPA 8270E	Aldrin	4.1	U	ng/L	P377222	
		Alpha-BHC	2.1	U	ng/L	P377222	
		Alpha-Chlordane	1.0	U	ng/L	P377222	
		Beta-BHC	10	U	ng/L	P377222	
		Bifenthrin**	4.1	U	ng/L	P377222	
		Delta-BHC	8.3	U	ng/L	P377222	
		Gamma-BHC	8.3	U	ng/L	P377222	
		Carbophenothion	10	U	ng/L	P377222	
		Chlorothalonil	2.1	UJ	ng/L	P377222	RPD
		Cis-Nonachlor**	1.0	U	ng/L	P377222	
		Cypermethrin	21	U	ng/L	P377222	
		DDD-p,p'	6.2	U	ng/L	P377222	
		DDE-p,p'	6.2	U	ng/L	P377222	
		DDT-p,p'	7.2	U	ng/L	P377222	
		Dicofol	31	U	ng/L	P377222	
		Dieldrin	12	I	ng/L	P377222	
		Endosulfan I	4.1	U	ng/L	P377222	
		Endosulfan II	4.1	U	ng/L	P377222	
		Endosulfan Sulfate	2.1	U	ng/L	P377222	
		Endrin	2.1	U	ng/L	P377222	
		Endrin Aldehyde	2.1	U	ng/L	P377222	
		Endrin Ketone	2.1	U	ng/L	P377222	
		Ethalfuralin**	3.1	U	ng/L	P377222	
		Gamma-Chlordane	1.0	U	ng/L	P377222	
		Heptachlor	1.5	U	ng/L	P377222	
		Heptachlor Epoxide	3.6	I	ng/L	P377222	
		Hexachlorobenzene	2.1	U	ng/L	P377222	
		Methoxychlor	4.1	U	ng/L	P377222	
		Mirex	2.1	U	ng/L	P377222	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149393	EPA 8270E	Permethrin	10	U	ng/L	P377222	
		Trans-Nonachlor**	1.0	U	ng/L	P377222	
		Trifluralin	2.6	U	ng/L	P377222	
2149396	EPA 8321B	2,4-D	0.0037	I	ug/L	P377201	
		Acesulfame K**	0.15	I	ug/L	P377312	MS
		AMPA**	0.10	U	ug/L	P377312	
		Sucralose**	1.4		ug/L	P377312	
		Acetaminophen**	0.0080	U	ug/L	P377201	
		Acetamiprid**	0.0020	U	ug/L	P377201	
		Endothall**	0.25	U	ug/L	P377312	MS
		Glufosinate**	0.10	U	ug/L	P377312	
		Glyphosate**	0.16	I	ug/L	P377312	
		Afidopyropen**	0.0020	UJ	ug/L	P377201	
		Bentazon	0.096		ug/L	P377201	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377201	
		Carbamazepine**	0.036		ug/L	P377201	
		Clothianidin**	0.0020	U	ug/L	P377201	
		Dinotefuran**	0.0020	U	ug/L	P377201	
		Diuron	0.027		ug/L	P377201	
		Fenuron	0.016	U	ug/L	P377201	
		Fluridone**	8.0E-04	U	ug/L	P377201	
		Imazapyr**	0.45		ug/L	P377201	
		Hydrocodone**	0.0020	U	ug/L	P377201	
		Ibuprofen**	0.020	U	ug/L	P377201	
		Imidacloprid	0.017		ug/L	P377201	MS
		Linuron	0.0040	U	ug/L	P377201	
		Mandestrobin**	0.0020	UJ	ug/L	P377201	
		MCPP	0.0020	U	ug/L	P377201	
		Naproxen**	0.0080	U	ug/L	P377201	
		Primidone**	0.0040	U	ug/L	P377201	
		Pyraclostrobin**	0.0020	U	ug/L	P377201	
		Thiamethoxam**	0.0020	U	ug/L	P377201	
		Tolfenpyrad**	0.0020	U	ug/L	P377201	
		Triclopyr**	0.0040	U	ug/L	P377201	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377300

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377301

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377256

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377330

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377332

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377306

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377307

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377737

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377739

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377418

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377419

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377542

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377543

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377210

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377211

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

Reference Method: EPA 8270E
Batch ID: P377222

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	10	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	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
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P377222

Component	Result	Code	Units
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P377222

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P377201

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P377312

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P377334

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P377366

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

Reference Method: SM 2320 B-2011
Batch ID: P377367

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

Reference Method: SM 2540 C-2011
Batch ID: P377611

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377512

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377513

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377371

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377340

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

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P377341

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: P377256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	101		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Manganese	102		P	85 - 115
Potassium	110		P	85 - 115
Sodium	101		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	107		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	103		P	85 - 115
Boron	107		P	85 - 115
Cadmium	115		P	85 - 115
Chromium	102		P	85 - 115
Copper	106		P	85 - 115
Lead	107		P	85 - 115
Nickel	112		P	85 - 115
Selenium	105		P	85 - 115
Silver	105		P	85 - 115
Thallium	108		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377330

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377332

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377306

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377307

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377737

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: P377739

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377418

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377419

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377542

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377543

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377210

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377211

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

Reference Method: EPA 8270E
 Batch ID: P377222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.4	57.4	P/P	20 - 87.0
Alpha-BHC	91.0	89.2	P/P	65 - 142
Alpha-Chlordane	80.8	75.5	P/P	58 - 106
Beta-BHC	83.4	82.7	P/P	65 - 179
Bifenthrin	93.9	94.4	P/P	38 - 128
Carbophenothion	84.3	66.6	P/P	20 - 144
Chlorothalonil	119	82.5	P/P	20 - 214
Cis-Nonachlor	80.8	74.3	P/P	56 - 113
Cypermethrin	106	99.2	P/P	37 - 130
DDD-p,p'	87.3	79.7	P/P	66 - 119
DDE-p,p'	81.4	76.0	P/P	53 - 108
DDT-p,p'	87.5	87.6	P/P	57 - 133
Delta-BHC	95.6	92.4	P/P	68 - 187
Dicofol	90.6	92.1	P/P	66 - 123
Dieldrin	82.0	78.5	P/P	65 - 111
Endosulfan I	90.3	84.1	P/P	65 - 115
Endosulfan II	93.7	88.0	P/P	68 - 133
Endosulfan Sulfate	93.1	91.1	P/P	62 - 127
Endrin	84.5	79.0	P/P	64 - 122
Endrin Aldehyde	80.6	74.4	P/P	61 - 132
Endrin Ketone	91.5	90.4	P/P	66 - 120
Ethalfuralin	85.9	84.3	P/P	57 - 127
Gamma-BHC	101	90.6	P/P	71 - 158
Gamma-Chlordane	79.1	74.5	P/P	53 - 106
Heptachlor	76.0	74.7	P/P	45 - 96.0
Heptachlor Epoxide	80.5	76.6	P/P	64 - 109
Hexachlorobenzene	80.1	81.0	P/P	46 - 103
Methoxychlor	94.7	93.8	P/P	69 - 149
Mirex	80.2	79.0	P/P	31 - 90.0
Permethrin	95.8	95.7	P/P	41 - 108
Trans-Nonachlor	78.6	73.3	P/P	50 - 107
Trifluralin	89.0	88.0	P/P	58 - 119

Reference Method: EPA 8276
 Batch ID: P377222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	91.1	92.7	P/P	47 - 119
Toxaphene	105	102	P/P	41 - 112

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	92.6		P	30 - 160
Acetamiprid	98.6		P	40 - 160
Afidopyropen	104		P	40 - 160
Bentazon	72.9		P	30 - 160
Benzovindiflupyr	91.1		P	40 - 160
Carbamazepine	114		P	40 - 160
Clothianidin	104		P	40 - 160
Dinotefuran	96.3		P	40 - 160
Diuron	88.3		P	40 - 160
Fenuron	101		P	40 - 160
Fluridone	107		P	40 - 160
Hydrocodone	105		P	40 - 160
Ibuprofen	84.1		P	30 - 160
Imazapyr	88.5		P	40 - 160
Imidacloprid	105		P	40 - 160
Linuron	83.4		P	40 - 160
Mandestrobin	93.1		P	40 - 160
MCPP	131		P	40 - 160
Naproxen	70.6		P	40 - 160
Primidone	110		P	40 - 160
Pyraclostrobin	82.2		P	30 - 160
Thiamethoxam	104		P	40 - 160
Tolfenpyrad	48.7		P	40 - 160
Triclopyr	100		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P377312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	84.2		P	40 - 150
AMPA	91.8		P	40 - 150
Endothall	117		P	40 - 150
Glufosinate	96.2		P	40 - 150
Glyphosate	118		P	40 - 140
Sucralose	91.7		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P377334

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P377366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P377367

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P377371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377340

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

Reference Method: SM 5310 B-2011
Batch ID: P377341

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149189	Barium	99.8		P	80 - 120
2149189	Calcium	102		P	80 - 120
2149189	Iron	107		P	80 - 120
2149189	Magnesium	104		P	80 - 120
2149189	Manganese	100		P	80 - 120
2149189	Potassium	105		P	80 - 120
2149189	Sodium	101		P	80 - 120
2149189	Zinc	104		P	80 - 120
2149400	Barium	98.7	100	P/P	80 - 120
2149400	Calcium	104		P	80 - 120
2149400	Iron	104	105	P/P	80 - 120
2149400	Magnesium	105		P	80 - 120
2149400	Manganese	99.5	102	P/P	80 - 120
2149400	Potassium	102	102	P/P	80 - 120
2149400	Sodium	102		P	80 - 120
2149400	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149189	Aluminum	106		P	80 - 120
2149189	Antimony	103		P	80 - 120
2149189	Arsenic	102		P	80 - 120
2149189	Boron	106		P	80 - 120
2149189	Cadmium	115		P	80 - 120
2149189	Chromium	91.4		P	80 - 120
2149189	Copper	102		P	80 - 120
2149189	Lead	111		P	80 - 120
2149189	Nickel	108		P	80 - 120
2149189	Selenium	103		P	80 - 120
2149189	Silver	101		P	80 - 120
2149189	Thallium	112		P	80 - 120
2149400	Aluminum	103	100	P/P	80 - 120
2149400	Antimony	102	101	P/P	80 - 120
2149400	Arsenic	100	100	P/P	80 - 120
2149400	Boron	105	104	P/P	80 - 120
2149400	Cadmium	109	110	P/P	80 - 120
2149400	Chromium	91.3	90.0	P/P	80 - 120
2149400	Copper	99.1	99.5	P/P	80 - 120
2149400	Lead	106	106	P/P	80 - 120
2149400	Nickel	105	107	P/P	80 - 120
2149400	Selenium	101	100	P/P	80 - 120
2149400	Silver	103	101	P/P	80 - 120
2149400	Thallium	107	107	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148883	Chloride	101		P	90 - 110
2149312	Chloride	96.2		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149380	Chloride	100	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148883	Sulfate	101		P	90 - 110
2149312	Sulfate	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377332

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149380	Sulfate	101	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149696	Bromide	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P377306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149282	Ammonia-N	96.0	95.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P377307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149431	Ammonia-N	96.4	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P377737

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149339	Kjeldahl Nitrogen	99.4	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149333	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149378	NO2NO3-N	94.5	94.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149314	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149375	Total-P	107	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149340	O-Phosphate-P	96.3	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149376	O-Phosphate-P	95.4	96.6	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P377222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149393	Aldrin	61.7	61.3	P/P	32 - 82.0
2149393	Alpha-BHC	99.2	103	P/P	68 - 157
2149393	Alpha-Chlordane	68.1	66.5	P/P	54 - 108
2149393	Beta-BHC	76.3	82.8	P/P	54 - 200
2149393	Bifenthrin	106	102	P/P	49 - 124
2149393	Carbophenothion	110	112	P/P	42 - 173
2149393	Chlorothalonil	239	254	P/P	10 - 289
2149393	Cis-Nonachlor	66.5	63.5	P/P	53 - 112
2149393	Cypermethrin	107	110	P/P	43 - 141
2149393	DDD-p,p'	73.2	70.7	P/P	58 - 125
2149393	DDE-p,p'	66.4	66.3	P/P	50 - 108
2149393	DDT-p,p'	81.8	85.4	P/P	52 - 140
2149393	Delta-BHC	79.7	86.7	P/P	61 - 228
2149393	Dicofol	87.1	83.1	P/P	59 - 130
2149393	Dieldrin	74.3	70.5	P/P	57 - 121
2149393	Endosulfan I	80.1	82.8	P/P	62 - 123
2149393	Endosulfan II	80.3	78.8	P/P	48 - 163
2149393	Endosulfan Sulfate	92.9	91.6	P/P	63 - 132
2149393	Endrin	70.0	68.7	P/P	58 - 128
2149393	Endrin Aldehyde	48.2	46.7	P/P	44 - 126
2149393	Endrin Ketone	98.6	94.9	P/P	68 - 127
2149393	Ethalfuralin	89.7	89.7	P/P	55 - 131
2149393	Gamma-BHC	119	116	P/P	54 - 206
2149393	Gamma-Chlordane	67.7	66.8	P/P	52 - 105
2149393	Heptachlor	74.9	75.1	P/P	47 - 94.0
2149393	Heptachlor Epoxide	82.9	80.6	P/P	61 - 113
2149393	Hexachlorobenzene	80.6	82.0	P/P	45 - 100
2149393	Methoxychlor	94.7	95.2	P/P	63 - 153

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P377222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149393	Mirex	81.4	80.9	P/P	38 - 90.0
2149393	Permethrin	104	99.9	P/P	45 - 112
2149393	Trans-Nonachlor	65.3	63.1	P/P	50 - 103
2149393	Trifluralin	88.3	89.4	P/P	57 - 122

Reference Method: EPA 8276
 Batch ID: P377222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149392	Chlordane	86.8	84.8	P/P	34 - 129
2149392	Toxaphene	98.8	99.6	P/P	26 - 123

Reference Method: EPA 8321B
 Batch ID: P377201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149266	2,4-D	111	113	P/P	40 - 160
2149266	Acetaminophen	93.4	103	P/P	30 - 160
2149266	Acetamiprid	104	102	P/P	40 - 160
2149266	Afidopyropen	105	101	P/P	40 - 160
2149266	Bentazon	45.1	48.1	P/P	30 - 160
2149266	Benzovindiflupyr	85.8	85.6	P/P	40 - 160
2149266	Carbamazepine	72.1	88.1	P/P	40 - 160
2149266	Clothianidin	113	113	P/P	40 - 160
2149266	Dinotefuran	132	121	P/P	40 - 160
2149266	Diuron	73.8	75.3	P/P	40 - 160
2149266	Fenuron	106	111	P/P	40 - 160
2149266	Fluridone	97.2	103	P/P	40 - 160
2149266	Hydrocodone	111	114	P/P	40 - 160
2149266	Ibuprofen	88.0	78.8	P/P	30 - 160
2149266	Imazapyr	90.9	86.1	P/P	40 - 160
2149266	Imidacloprid	165	156	F/P	40 - 160
2149266	Linuron	77.8	80.4	P/P	40 - 160
2149266	Mandestrobin	89.6	90.1	P/P	40 - 160
2149266	MCP	117	124	P/P	40 - 160
2149266	Naproxen	84.0	76.8	P/P	40 - 160
2149266	Primidone	90.1	113	P/P	40 - 160
2149266	Pyraclostrobin	84.7	85.3	P/P	30 - 160
2149266	Thiamethoxam	152	147	P/P	40 - 160
2149266	Tolfenpyrad	52.0	56.6	P/P	40 - 160
2149266	Triclopyr	84.6	102	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P377312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149394	Acesulfame K	34.6	35.6	F/F	40 - 150
2149394	AMPA	72.3	69.6	P/P	40 - 150
2149394	Endothall	154	155	F/F	40 - 150
2149394	Glufosinate	75.9	78.7	P/P	40 - 150
2149394	Glyphosate	64.3	67.5	P/P	40 - 140
2149394	Sucralose	92.3	67.9	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149335	Fluoride	98.5	98.5	P/P	89 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P377371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149476	Fluoride	101	101	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P377340

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149282	Organic Carbon	97.4	98.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P377341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149480	Organic Carbon	101	98.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149371	Turbidity	4.53	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377301

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149380	Turbidity	0.786	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149400	Barium	1.45	Spike	P	0 - 20
2149400	Calcium	3.05	Spike	P	0 - 20
2149400	Iron	0.945	Spike	P	0 - 20
2149400	Magnesium	2.07	Spike	P	0 - 20
2149400	Manganese	1.67	Spike	P	0 - 20
2149400	Potassium	0.394	Spike	P	0 - 20
2149400	Sodium	0.573	Spike	P	0 - 20
2149400	Zinc	1.48	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149400	Aluminum	2.41	Spike	P	0 - 20
2149400	Antimony	0.796	Spike	P	0 - 20
2149400	Arsenic	0.230	Spike	P	0 - 20
2149400	Boron	0.837	Spike	P	0 - 20
2149400	Cadmium	1.28	Spike	P	0 - 20
2149400	Chromium	1.39	Spike	P	0 - 20
2149400	Copper	0.336	Spike	P	0 - 20
2149400	Lead	0.446	Spike	P	0 - 20
2149400	Nickel	1.56	Spike	P	0 - 20
2149400	Selenium	1.02	Spike	P	0 - 20
2149400	Silver	1.32	Spike	P	0 - 20
2149400	Thallium	0.111	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149312	Chloride	0.124	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149380	Chloride	0.144	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149312	Sulfate	0.424	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149380	Sulfate	0.443	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149696	Bromide	2.11	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149282	Ammonia-N	0.372	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149431	Ammonia-N	2.71	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149339	Kjeldahl Nitrogen	3.58	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149431	Kjeldahl Nitrogen	1.35	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149333	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149378	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149314	Total-P	0.379	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149375	Total-P	1.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149340	O-Phosphate-P	0.451	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149376	O-Phosphate-P	0.961	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149393	Aldrin	0.700	Spike	P	0 - 30
2149393	Alpha-BHC	3.75	Spike	P	0 - 30
2149393	Alpha-Chlordane	2.30	Spike	P	0 - 30
2149393	Beta-BHC	8.22	Spike	P	0 - 30
2149393	Bifenthrin	3.88	Spike	P	0 - 30
2149393	Carbophenothion	2.55	Spike	P	0 - 30
2149393	Chlorothalonil	6.35	Spike	P	0 - 30
2149393	Cis-Nonachlor	4.53	Spike	P	0 - 30
2149393	Cypermethrin	2.32	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149393	DDD-p,p'	3.58	Spike	P	0 - 30
2149393	DDE-p,p'	0.107	Spike	P	0 - 30
2149393	DDT-p,p'	4.34	Spike	P	0 - 30
2149393	Delta-BHC	8.46	Spike	P	0 - 30
2149393	Dicofol	4.68	Spike	P	0 - 30
2149393	Dieldrin	3.45	Spike	P	0 - 30
2149393	Endosulfan I	3.33	Spike	P	0 - 30
2149393	Endosulfan II	1.92	Spike	P	0 - 30
2149393	Endosulfan Sulfate	1.40	Spike	P	0 - 30
2149393	Endrin	1.88	Spike	P	0 - 30
2149393	Endrin Aldehyde	3.07	Spike	P	0 - 30
2149393	Endrin Ketone	3.78	Spike	P	0 - 30
2149393	Ethalfuralin	0.0712	Spike	P	0 - 30
2149393	Gamma-BHC	3.23	Spike	P	0 - 30
2149393	Gamma-Chlordane	1.35	Spike	P	0 - 30
2149393	Heptachlor	0.356	Spike	P	0 - 30
2149393	Heptachlor Epoxide	2.42	Spike	P	0 - 30
2149393	Hexachlorobenzene	1.74	Spike	P	0 - 30
2149393	Methoxychlor	0.472	Spike	P	0 - 30
2149393	Mirex	0.666	Spike	P	0 - 30
2149393	Permethrin	4.27	Spike	P	0 - 30
2149393	Trans-Nonachlor	3.39	Spike	P	0 - 30
2149393	Trifluralin	1.24	Spike	P	0 - 30
LFB	Aldrin	5.36	LCS	P	0 - 30
LFB	Alpha-BHC	1.99	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.73	LCS	P	0 - 30
LFB	Beta-BHC	0.750	LCS	P	0 - 30
LFB	Bifenthrin	0.623	LCS	P	0 - 30
LFB	Carbophenothion	23.4	LCS	P	0 - 30
LFB	Chlorothalonil	36.1	LCS	F	0 - 30
LFB	Cis-Nonachlor	8.30	LCS	P	0 - 30
LFB	Cypermethrin	6.33	LCS	P	0 - 30
LFB	DDD-p,p'	9.08	LCS	P	0 - 30
LFB	DDE-p,p'	6.81	LCS	P	0 - 30
LFB	DDT-p,p'	0.104	LCS	P	0 - 30
LFB	Delta-BHC	3.42	LCS	P	0 - 30
LFB	Dicofol	1.60	LCS	P	0 - 30
LFB	Dieldrin	4.41	LCS	P	0 - 30
LFB	Endosulfan I	7.10	LCS	P	0 - 30
LFB	Endosulfan II	6.26	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.18	LCS	P	0 - 30
LFB	Endrin	6.67	LCS	P	0 - 30
LFB	Endrin Aldehyde	7.98	LCS	P	0 - 30
LFB	Endrin Ketone	1.17	LCS	P	0 - 30
LFB	Ethalfuralin	1.95	LCS	P	0 - 30
LFB	Gamma-BHC	10.4	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.95	LCS	P	0 - 30
LFB	Heptachlor	1.77	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.00	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.06	LCS	P	0 - 30
LFB	Methoxychlor	0.917	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	1.56	LCS	P	0 - 30
LFB	Permethrin	0.0955	LCS	P	0 - 30
LFB	Trans-Nonachlor	6.95	LCS	P	0 - 30
LFB	Trifluralin	1.09	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149392	Chlordane	2.29	Spike	P	0 - 30
2149392	Toxaphene	0.825	Spike	P	0 - 30
LFB	Chlordane	1.70	LCS	P	0 - 30
LFB	Toxaphene	2.57	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149266	2,4-D	2.11	Spike	P	0 - 30
2149266	Acetaminophen	9.74	Spike	P	0 - 30
2149266	Acetamiprid	2.21	Spike	P	0 - 30
2149266	Afidopyropen	4.73	Spike	P	0 - 30
2149266	Bentazon	2.38	Spike	P	0 - 30
2149266	Benzovindiflupyr	0.298	Spike	P	0 - 30
2149266	Carbamazepine	18.5	Spike	P	0 - 30
2149266	Clothianidin	0.0384	Spike	P	0 - 30
2149266	Dinotefuran	6.19	Spike	P	0 - 30
2149266	Diuron	1.99	Spike	P	0 - 30
2149266	Fenuron	4.80	Spike	P	0 - 30
2149266	Fluridone	5.79	Spike	P	0 - 30
2149266	Hydrocodone	2.80	Spike	P	0 - 30
2149266	Ibuprofen	11.0	Spike	P	0 - 30
2149266	Imazapyr	3.73	Spike	P	0 - 30
2149266	Imidacloprid	4.85	Spike	P	0 - 30
2149266	Linuron	3.26	Spike	P	0 - 30
2149266	Mandestrobin	0.643	Spike	P	0 - 30
2149266	MCP	6.20	Spike	P	0 - 30
2149266	Naproxen	8.88	Spike	P	0 - 30
2149266	Primidone	20.9	Spike	P	0 - 30
2149266	Pyraclostrobin	0.777	Spike	P	0 - 30
2149266	Thiamethoxam	2.87	Spike	P	0 - 30
2149266	Tolfenpyrad	8.40	Spike	P	0 - 30
2149266	Triclopyr	18.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377312

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

Reference Method: EPA 8321B
Batch ID: P377312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149394	Acesulfame K	2.74	Spike	P	0 - 30
2149394	AMPA	3.01	Spike	P	0 - 30
2149394	Endothall	0.554	Spike	P	0 - 30
2149394	Glufosinate	3.62	Spike	P	0 - 30
2149394	Glyphosate	3.48	Spike	P	0 - 30
2149394	Sucralose	28.8	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P377334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149377	Color (true)	2.60	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P377366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149335	Total Alkalinity	0.767	Sample	P	0 - 2.8

Reference Method: SM 2320 B-2011
Batch ID: P377367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149476	Total Alkalinity	0.0121	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P377611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149374	TDS	0.396	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149335	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
Batch ID: P377371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149476	Fluoride	0.473	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P377340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149282	Organic Carbon	0.829	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P377341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149480	Organic Carbon	1.82	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2149392
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	79.3	P	26 - 97.0
EPA 8276	PCNB	119	P	38 - 141

Lab Sample ID: 2149393
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	104	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	81.8	P	34 - 106

Lab Sample ID: 2149394
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.5	P	30 - 160
EPA 8321B	Diuron-d6	69.5	P	30 - 160
EPA 8321B	Endothall-d6	145	P	30 - 160
EPA 8321B	Endothall-d6	145	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	63.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	63.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.8	P	30 - 160
EPA 8321B	Primidone-d5	95.4	P	30 - 160
EPA 8321B	Sucralose-d6	45.0	P	30 - 160
EPA 8321B	Sucralose-d6	45.0	P	30 - 160

Lab Sample ID: 2149395
Field Sample ID: G2NE0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.5	P	30 - 160
EPA 8321B	Diuron-d6	80.9	P	30 - 160
EPA 8321B	Endothall-d6	138	P	30 - 160
EPA 8321B	Endothall-d6	138	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	58.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	58.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.0	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	88.8	P	30 - 160
EPA 8321B	Sucralose-d6	88.8	P	30 - 160

Lab Sample ID: 2149396
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	101	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	103	P	30 - 160
EPA 8321B	Diuron-d6	87.3	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2149396
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Endothall-d6	149	P	30 - 160
EPA 8321B	Endothall-d6	149	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.8	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2149397
Field Sample ID: 20030852

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	100	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.9	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.7	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	91.1	P	30 - 160
EPA 8321B	Sucralose-d6	91.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96846

Included Lab Sample IDs: 2149368, 2149371

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	102	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96853

Included Lab Sample IDs: 2149374, 2149377, 2149380

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A96905

Included Lab Sample IDs: 2149370, 2149373, 2149376, 2149379, 2149382

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	100	P/P	90 - 110
O-Phosphate-P	99.7	99.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A96947

Included Lab Sample IDs: 2149368, 2149371, 2149374, 2149377, 2149380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96950

Included Lab Sample IDs: 2149369, 2149372, 2149375, 2149378, 2149381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	99.9	P/P	90 - 110
Ammonia-N	98.8	99.5	P/P	90 - 110
Ammonia-N	99.9	98.8	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A96960

Included Lab Sample IDs: 2149374, 2149377, 2149380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115

Reference Method: SM 5310 B-2011

Run ID: A96961

Included Lab Sample IDs: 2149369, 2149372, 2149375, 2149378, 2149381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	99.0	P/P	90 - 110
Organic Carbon	99.0	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A96974

Included Lab Sample IDs: 2149369, 2149372, 2149375, 2149378, 2149381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	96.5	97.0	P/P	90 - 110
NO2NO3-N	97.0	97.0	P/P	90 - 110
NO2NO3-N	98.0	97.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A96976

Included Lab Sample IDs: 2149368, 2149371, 2149374, 2149377, 2149380

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

Reference Method: SM 4500 F-C-2011

Run ID: A96976

Included Lab Sample IDs: 2149368, 2149371, 2149374, 2149377, 2149380

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

Reference Method: EPA 8321B

Run ID: A96995

Included Lab Sample IDs: 2149394, 2149395, 2149396, 2149397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	97.6	P/P	60 - 160
Glufosinate	88.7	84.1	P/P	60 - 160
Glyphosate	89.2	87.1	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A96997

Included Lab Sample IDs: 2149394, 2149395, 2149396, 2149397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	111	81.8	P/P	60 - 160
Acesulfame K	126	75.2	P/P	60 - 160
Endothall	123	123	P/P	60 - 160
Endothall	132	131	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2149394, 2149395, 2149396, 2149397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	95.5	P/P	50 - 150
2,4-D	91.1	106	P/P	50 - 150
Acetaminophen	96.0	98.2	P/P	60 - 160
Acetaminophen	98.2	102	P/P	60 - 160
Acetamiprid	109	111	P/P	50 - 150
Acetamiprid	114	109	P/P	50 - 150
Afidopyropen	100	99.3	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2149394, 2149395, 2149396, 2149397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	99.6	100	P/P	50 - 150
Bentazon	80.8	80.1	P/P	50 - 160
Bentazon	86.0	99.3	P/P	50 - 160
Bentazon	99.3	90.6	P/P	50 - 160
Benzovindiflupyr	101	98.9	P/P	50 - 150
Benzovindiflupyr	99.9	101	P/P	50 - 150
Carbamazepine	107	99.2	P/P	60 - 150
Carbamazepine	108	107	P/P	60 - 150
Clothianidin	116	119	P/P	60 - 150
Clothianidin	119	116	P/P	60 - 150
Dinotefuran	103	109	P/P	50 - 150
Dinotefuran	96.7	103	P/P	50 - 150
Diuron	116	99.5	P/P	60 - 150
Diuron	99.5	111	P/P	60 - 150
Fenuron	108	110	P/P	60 - 150
Fenuron	110	106	P/P	60 - 150
Fluridone	111	98.4	P/P	60 - 160
Fluridone	98.4	108	P/P	60 - 160
Hydrocodone	107	94.9	P/P	60 - 150
Hydrocodone	94.9	107	P/P	60 - 150
Ibuprofen	109	108	P/P	50 - 160
Ibuprofen	94.3	109	P/P	50 - 160
Imazapyr	84.5	88.5	P/P	50 - 150
Imazapyr	85.7	82.9	P/P	50 - 150
Imidacloprid	103	100	P/P	60 - 150
Imidacloprid	100	100	P/P	60 - 150
Linuron	103	104	P/P	60 - 150
Linuron	97.1	103	P/P	60 - 150
Mandestrobin	106	102	P/P	50 - 150
Mandestrobin	107	106	P/P	50 - 150
MCP	89.9	94.3	P/P	50 - 150
MCP	94.3	95.6	P/P	50 - 150
Naproxen	100	79.2	P/P	50 - 160
Naproxen	116	100	P/P	50 - 160
Primidone	111	113	P/P	60 - 150
Primidone	113	111	P/P	60 - 150
Pyraclostrobin	96.8	89.5	P/P	60 - 150
Pyraclostrobin	96.8	96.8	P/P	60 - 150
Thiamethoxam	107	111	P/P	50 - 150
Thiamethoxam	113	107	P/P	50 - 150
Tolfenpyrad	91.5	88.9	P/P	60 - 150
Tolfenpyrad	96.8	91.5	P/P	60 - 150
Triclopyr	100	98.6	P/P	50 - 150
Triclopyr	98.6	99.2	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97041

Included Lab Sample IDs: 2149398, 2149400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.0	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97041

Included Lab Sample IDs: 2149398, 2149400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.9	99.4	P/P	90 - 110
Iron	99.2	99.8	P/P	90 - 110
Iron	99.8	99.8	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Manganese	105	104	P/P	90 - 110
Potassium	99.7	99.6	P/P	90 - 110
Sodium	101	99.7	P/P	90 - 110
Zinc	101	101	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A97061

Included Lab Sample IDs: 2149393

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	89.6		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	92.8		P	80 - 120
Beta-BHC	104		P	80 - 120
Bifenthrin	98.7		P	80 - 120
Carbophenothion	94.7		P	80 - 120
Chlorothalonil	104		P	80 - 120
Cis-Nonachlor	91.3		P	80 - 120
Cypermethrin	97.7		P	80 - 120
DDD-p,p'	94.4		P	80 - 120
DDE-p,p'	92.2		P	80 - 120
DDT-p,p'	97.1		P	80 - 120
Delta-BHC	106		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	93.1		P	80 - 120
Endosulfan I	93.0		P	80 - 120
Endosulfan II	95.4		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	94.5		P	80 - 120
Endrin Aldehyde	92.0		P	80 - 120
Endrin Ketone	99.3		P	80 - 120
Ethalfuralin	97.2		P	80 - 120
Gamma-BHC	88.9		P	80 - 120
Gamma-Chlordane	92.2		P	80 - 120
Heptachlor	87.5		P	80 - 120
Heptachlor Epoxide	91.8		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Methoxychlor	102		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	100		P	80 - 120
Trans-Nonachlor	91.9		P	80 - 120
Trifluralin	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A97086

Included Lab Sample IDs: 2149392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	97.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97087

Included Lab Sample IDs: 2149398, 2149400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	101	P/P	90 - 110
Antimony	92.4	94.4	P/P	90 - 110
Boron	107	105	P/P	90 - 110
Chromium	96.8	95.1	P/P	90 - 110
Copper	103	101	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Selenium	103	105	P/P	90 - 110
Silver	106	107	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97095

Included Lab Sample IDs: 2149398, 2149400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.9	99.3	P/P	90 - 110
Arsenic	99.5	98.9	P/P	90 - 110
Thallium	97.2	96.0	P/P	90 - 110
Thallium	98.1	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97097

Included Lab Sample IDs: 2149369, 2149372, 2149378, 2149381

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97098

Included Lab Sample IDs: 2149375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	109	108	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97109

Included Lab Sample IDs: 2149394, 2149395, 2149396, 2149397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	89.7	P/P	60 - 160
Sucralose	93.9	92.5	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97129

Included Lab Sample IDs: 2149398, 2149400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	101	101	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Nickel	95.0	94.6	P/P	90 - 110
Nickel	96.3	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97144

Included Lab Sample IDs: 2149375, 2149378, 2149381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	108	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97145

Included Lab Sample IDs: 2149369, 2149372

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	101	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							4.53	
	Turbidity							0.786	
EPA 200.7 Rev. 4.4	Barium	102		99.8	98.7	100			1.45
	Calcium	101		102	104				3.05
	Iron	107		107	104	105			0.945
	Magnesium	103		104	105				2.07
	Manganese	102		100	99.5	102			1.67
	Potassium	110		105	102	102			0.394
	Sodium	101		101	102				0.573
	Zinc	101		104	101	102			1.48
EPA 200.8 Rev. 5.4	Aluminum	107		106	103	100			2.41
	Antimony	102		103	102	101			0.796
	Arsenic	103		100	100	102			0.230
	Boron	107		106	105	104			0.837
	Cadmium	115		109	110	115			1.28
	Chromium	102		91.4	91.3	90.0			1.39
	Copper	106		102	99.1	99.5			0.336
	Lead	107		111	106	106			0.446
	Nickel	112		105	107	108			1.56
	Selenium	105		103	101	100			1.02
	Silver	105		101	103	101			1.32
	Thallium	108		107	107	112			0.111
EPA 300.0 Rev. 2.1	Bromide	105		104	102				2.11
	Chloride	100		96.2	101			0.124	
	Chloride	100		100	100				0.144
	Sulfate	98.9		99.1	101			0.424	
	Sulfate	100		101	101				0.443
EPA 350.1 Rev. 2.0	Ammonia-N	101		96.0	95.5				0.372
	Ammonia-N	99.3		96.4	99.8				2.71
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		99.4	107				3.58
	Kjeldahl Nitrogen	105							1.35
EPA 353.2 Rev. 2.0	NO2NO3-N	96.0		97.0	97.0				0.0
	NO2NO3-N	97.5		94.5	94.5				0.0
EPA 365.1 Rev. 2.0	Total-P	104		107	106				0.379
	Total-P	105		107	108				1.11
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1		96.3	95.8				0.451
	O-Phosphate-P	104		95.4	96.6				0.961
EPA 8270E	Aldrin	54.4	57.4	61.7	61.3	5.36			0.700
	Alpha-BHC	91.0	89.2	99.2	103	1.99			3.75
	Alpha-Chlordane	80.8	75.5	68.1	66.5	6.73			2.30
	Beta-BHC	83.4	82.7	76.3	82.8	0.750			8.22
	Bifenthrin	93.9	94.4	106	102	0.623			3.88
	Carbophenothion	84.3	66.6	110	112	23.4			2.55
	Chlorothalonil	119	82.5	239	254	36.1			6.35
	Cis-Nonachlor	80.8	74.3	66.5	63.5	8.30			4.53
	Cypermethrin	106	99.2	107	110	6.33			2.32
	DDD-p,p'	87.3	79.7	73.2	70.7	9.08			3.58
	DDE-p,p'	81.4	76.0	66.4	66.3	6.81			0.107
	DDT-p,p'	87.5	87.6	81.8	85.4	0.104			4.34
	Delta-BHC	95.6	92.4	79.7	86.7	3.42			8.46
	Dicofol	90.6	92.1	87.1	83.1	1.60			4.68
	Dieldrin	82.0	78.5	74.3	70.5	4.41			3.45
	Endosulfan I	90.3	84.1	80.1	82.8	7.10			3.33
	Endosulfan II	93.7	88.0	80.3	78.8	6.26			1.92

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Endosulfan Sulfate	93.1	91.1	92.9	91.6	2.18	1.40
	Endrin	84.5	79.0	70.0	68.7	6.67	1.88
	Endrin Aldehyde	80.6	74.4	48.2	46.7	7.98	3.07
	Endrin Ketone	91.5	90.4	98.6	94.9	1.17	3.78
	Ethalfuralin	85.9	84.3	89.7	89.7	1.95	0.0712
	Gamma-BHC	101	90.6	119	116	10.4	3.23
	Gamma-Chlordane	79.1	74.5	67.7	66.8	5.95	1.35
	Heptachlor	76.0	74.7	74.9	75.1	1.77	0.356
	Heptachlor Epoxide	80.5	76.6	82.9	80.6	5.00	2.42
	Hexachlorobenzene	80.1	81.0	80.6	82.0	1.06	1.74
	Methoxychlor	94.7	93.8	94.7	95.2	0.917	0.472
	Mirex	80.2	79.0	81.4	80.9	1.56	0.666
	Permethrin	95.8	95.7	104	99.9	0.0955	4.27
	Trans-Nonachlor	78.6	73.3	65.3	63.1	6.95	3.39
	Trifluralin	89.0	88.0	88.3	89.4	1.09	1.24
EPA 8276	Chlordane	91.1	92.7	86.8	84.8	1.70	2.29
	Toxaphene	105	102	98.8	99.6	2.57	0.825
EPA 8321B	2,4-D	133		111	113		2.11
	Acesulfame K	84.2		34.6	35.6		2.74
	Acetaminophen	92.6		93.4	103		9.74
	Acetamiprid	98.6		104	102		2.21
	Afidopyropen	104		105	101		4.73
	AMPA	91.8		72.3	69.6		3.01
	Bentazon	72.9		45.1	48.1		2.38
	Benzovindiflupyr	91.1		85.8	85.6		0.298
	Carbamazepine	114		72.1	88.1		18.5
	Clothianidin	104		113	113		0.0384
	Dinotefuran	96.3		132	121		6.19
	Diuron	88.3		73.8	75.3		1.99
	Endothall	117		154	155		0.554
	Fenuron	101		106	111		4.80
	Fluridone	107		97.2	103		5.79
	Glufosinate	96.2		75.9	78.7		3.62
	Glyphosate	118		64.3	67.5		3.48
	Hydrocodone	105		111	114		2.80
	Ibuprofen	84.1		88.0	78.8		11.0
	Imazapyr	88.5		90.9	86.1		3.73
	Imidacloprid	105		165	156		4.85
	Linuron	83.4		77.8	80.4		3.26
	Mandestrobin	93.1		89.6	90.1		0.643
	MCPP	131		117	124		6.20
	Naproxen	70.6		84.0	76.8		8.88
	Primidone	110		90.1	113		20.9
	Pyraclostrobin	82.2		84.7	85.3		0.777
	Sucralose	91.7		92.3	67.9		28.8
	Thiamethoxam	104		152	147		2.87
	Tolfenpyrad	48.7		52.0	56.6		8.40
	Triclopyr	100		84.6	102		18.3
SM 2120 B-2011	Color (true)	99.6				2.60	
SM 2320 B-2011	Total Alkalinity	104				0.767	
	Total Alkalinity	104				0.0121	
SM 2540 C-2011	TDS					0.396	
SM 4500 F-C-2011	Fluoride	99.4		98.5	98.5		0.0
	Fluoride	99.4		101	101		0.473

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 5310 B-2011	Organic Carbon	98.0	97.4	98.5			0.829
	Organic Carbon	101	101	98.9			1.82

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2149368, 2149371, 2149374, 2149377, 2149380
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2149398, 2149400
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2149398, 2149400
EPA 300.0 Rev. 2.1 / E31780	Bromide in aqueous matrices	2149368, 2149371
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2149374, 2149377, 2149380
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2149374, 2149377, 2149380
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2149369, 2149372, 2149375, 2149378, 2149381
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2149369, 2149372, 2149375, 2149378, 2149381
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2149369, 2149372, 2149375, 2149378, 2149381
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2149369, 2149372, 2149375, 2149378, 2149381
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2149370, 2149373, 2149376, 2149379, 2149382
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2149393
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2149392
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2149394, 2149395, 2149396, 2149397
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2149394, 2149395, 2149396, 2149397
SM 2120 B-2011 / E31780	True Color measured at 450 nm (not valid for NPDES monitoring)	2149374, 2149377, 2149380
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2149368, 2149371, 2149374, 2149377, 2149380
SM 2340B / E31780	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2149400
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2149374, 2149377, 2149380
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2149368, 2149371, 2149374, 2149377, 2149380
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2149368, 2149371, 2149374, 2149377, 2149380
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2149369, 2149372, 2149375, 2149378, 2149381

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	01/15/2020			01/15/2020 18:01	Yen Ta	2149368, 2149371, 2149374, 2149377, 2149380
EPA 200.7 Rev. 4.4	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/21/2020 13:51	Vijayalakshmi Reddy	2149398
	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/21/2020 14:16	Vijayalakshmi Reddy	2149400
EPA 200.8 Rev. 5.4	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/23/2020 17:09	Justin Cutchin	2149398
	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/23/2020 17:19	Justin Cutchin	2149400
	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/24/2020 13:56	Alexander Thompson	2149400
	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/24/2020 17:19	Alexander Thompson	2149398
	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/27/2020 15:19	Alexander Thompson	2149400
	01/15/2020	01/16/2020 13:35	Elliott D. Healy	01/27/2020 18:41	Alexander Thompson	2149398
EPA 300.0 Rev. 2.1	01/15/2020			01/16/2020 20:51	Lipi Saha	2149374
	01/15/2020			01/16/2020 21:03	Lipi Saha	2149377
	01/15/2020			01/16/2020 22:03	Lipi Saha	2149380
	01/15/2020			01/17/2020 16:50	Lipi Saha	2149368
	01/15/2020			01/17/2020 17:07	Lipi Saha	2149371
EPA 350.1 Rev. 2.0	01/15/2020			01/16/2020 15:36	Ping Hua	2149369
	01/15/2020			01/16/2020 15:42	Ping Hua	2149375
	01/15/2020			01/16/2020 15:54	Ping Hua	2149378
	01/15/2020			01/16/2020 15:55	Ping Hua	2149381
	01/15/2020			01/16/2020 17:51	Ping Hua	2149372
EPA 351.2 Rev. 2.0	01/15/2020	01/27/2020 16:40	Jhamieka S. Greenwood	01/28/2020 12:15	Jhamieka S. Greenwood	2149375
	01/15/2020	01/27/2020 16:40	Jhamieka S. Greenwood	01/28/2020 12:17	Jhamieka S. Greenwood	2149378
	01/15/2020	01/27/2020 16:40	Jhamieka S. Greenwood	01/28/2020 12:18	Jhamieka S. Greenwood	2149381
	01/15/2020	01/27/2020 16:40	Jhamieka S. Greenwood	01/28/2020 14:16	Jhamieka S. Greenwood	2149369
	01/15/2020	01/27/2020 16:40	Jhamieka S. Greenwood	01/28/2020 14:18	Jhamieka S. Greenwood	2149372
EPA 353.2 Rev. 2.0	01/15/2020			01/17/2020 11:42	Beverly Y. Sanders	2149369
	01/15/2020			01/17/2020 11:44	Beverly Y. Sanders	2149372
	01/15/2020			01/17/2020 11:52	Beverly Y. Sanders	2149378
	01/15/2020			01/17/2020 12:01	Beverly Y. Sanders	2149381
	01/15/2020			01/17/2020 13:04	Beverly Y. Sanders	2149375
EPA 365.1 Rev. 2.0	01/15/2020	01/22/2020 14:24	Yen Ta	01/23/2020 14:40	Benjamin T. Nordmann	2149369
	01/15/2020	01/22/2020 14:24	Yen Ta	01/23/2020 14:41	Benjamin T. Nordmann	2149372
	01/15/2020	01/22/2020 14:24	Yen Ta	01/23/2020 14:51	Benjamin T. Nordmann	2149378
	01/15/2020	01/22/2020 14:24	Yen Ta	01/23/2020 14:52	Benjamin T. Nordmann	2149381
	01/15/2020	01/22/2020 14:24	Yen Ta	01/24/2020 14:05	Benjamin T. Nordmann	2149375
EPA 365.1 Rev. 2.0 dissolved	01/15/2020			01/15/2020 17:05	Jhamieka S. Greenwood	2149376
	01/15/2020			01/15/2020 17:29	Jhamieka S. Greenwood	2149370
	01/15/2020			01/15/2020 17:30	Jhamieka S. Greenwood	2149373
	01/15/2020			01/15/2020 17:31	Jhamieka S. Greenwood	2149379
	01/15/2020			01/15/2020 17:32	Jhamieka S. Greenwood	2149382

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	01/15/2020	01/17/2020 08:30	Rasheda Ghaffari	01/22/2020 23:20	Arthur Maknenko	2149393
EPA 8276	01/15/2020	01/17/2020 08:30	Rasheda Ghaffari	01/23/2020 04:51	Michael Poppell	2149392
EPA 8321B	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/18/2020 22:34	Juyoung Kim	2149394
	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/18/2020 23:09	Juyoung Kim	2149395
	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/19/2020 00:18	Juyoung Kim	2149396
	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/19/2020 00:53	Juyoung Kim	2149397
	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/21/2020 11:04	Juyoung Kim	2149394
	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/21/2020 11:39	Juyoung Kim	2149396
	01/15/2020	01/17/2020 10:00	Hoor Shaik	01/21/2020 12:13	Juyoung Kim	2149397
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 11:45	Rebecca Ware	2149394
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 11:56	Rebecca Ware	2149395
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 12:07	Rebecca Ware	2149396
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 12:17	Rebecca Ware	2149397
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/19/2020 14:15	Rebecca Ware	2149394
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/19/2020 14:43	Rebecca Ware	2149396
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/19/2020 14:56	Rebecca Ware	2149397
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/21/2020 10:58	Rebecca Ware	2149395
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/23/2020 19:09	Rebecca Ware	2149394
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/23/2020 19:32	Rebecca Ware	2149396
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/23/2020 19:44	Rebecca Ware	2149397
	01/15/2020	01/17/2020 11:00	Rebecca Ware	01/24/2020 09:48	Rebecca Ware	2149395
SM 2120 B-2011	01/15/2020			01/15/2020 18:24	Madeline Funaro	2149374
	01/15/2020			01/15/2020 18:25	Madeline Funaro	2149377
	01/15/2020			01/15/2020 18:26	Madeline Funaro	2149380
SM 2320 B-2011	01/15/2020			01/17/2020 03:36	Dale L. Simmons	2149368
	01/15/2020			01/17/2020 03:49	Dale L. Simmons	2149374
	01/15/2020			01/17/2020 04:29	Dale L. Simmons	2149371
	01/15/2020			01/17/2020 06:50	Dale L. Simmons	2149377
	01/15/2020			01/17/2020 07:03	Dale L. Simmons	2149380
SM 2340B	01/15/2020			01/21/2020 14:16	Vijayalakshmi Reddy	2149400
SM 2540 C-2011	01/15/2020			01/16/2020 15:45	Sima Feizi	2149374, 2149377, 2149380
SM 2540 D-2011	01/15/2020			01/16/2020 15:45	Sima Feizi	2149368, 2149371, 2149374, 2149377, 2149380
SM 4500 F-C-2011	01/15/2020			01/17/2020 03:36	Dale L. Simmons	2149368
	01/15/2020			01/17/2020 03:49	Dale L. Simmons	2149374
	01/15/2020			01/17/2020 04:29	Dale L. Simmons	2149371
	01/15/2020			01/17/2020 06:50	Dale L. Simmons	2149377
	01/15/2020			01/17/2020 07:03	Dale L. Simmons	2149380
SM 5310 B-2011	01/15/2020			01/16/2020 22:13	Lauren Lees	2149369
	01/15/2020			01/16/2020 22:25	Lauren Lees	2149372

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	01/15/2020			01/16/2020 22:38	Lauren Lees	2149375
	01/15/2020			01/16/2020 22:50	Lauren Lees	2149378
	01/15/2020			01/17/2020 00:50	Lauren Lees	2149381