

Chemical Analysis Report

NE-DIST-2019-10-31-01

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

Event Description: **LSJR Palatka**
Request ID: **RQ-2019-10-28-18**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 21-NOV-2019 16:15

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: Bull Creek Ditch 1 mile Upstream of Dead Lake Collection Date/Time: 10/30/2019 10:15

Field ID: G2NE1194

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132784	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P373530	
	EPA 300.0 Rev. 2.1	Chloride	140		mg Cl/L	P374075	
		Sulfate	30		mg SO4/L	P374080	
	SM 2120 B	Color (true)	280		PCU	P373535	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P373971	
	SM 2540 C-97	TDS	452	A	mg/L	P373884	
	SM 2540 D-97	TSS	2	UA	mg/L	P373641	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P373975	
2132785	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P373778	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P373859	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.071		mg N/L	P373566	
	EPA 365.1 Rev. 2.0	Total-P	0.45		mg P/L	P373920	
	SM 5310 B-00	Organic Carbon	32		mg C/L	P373609	
2132786	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.38		mg P/L	P373551	
2132816	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P373607	
		2,4-D	0.045		ug/L	P373553	MS
		AMPA**	1.5		ug/L	P373607	
		Sucralose**	0.18		ug/L	P373607	
		Acetaminophen**	0.0080	U	ug/L	P373553	
		Acetamiprid**	0.0020	U	ug/L	P373553	
		Endothall**	0.25	U	ug/L	P373607	
		Glufosinate**	0.10	U	ug/L	P373607	
		Glyphosate**	1.0		ug/L	P373607	
		Afidopyropen**	0.0020	UJ	ug/L	P373553	
		Bentazon	0.57		ug/L	P373553	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373553	
		Carbamazepine**	8.0E-04	U	ug/L	P373553	
		Clothianidin**	0.0041	I	ug/L	P373553	
		Dinotefuran**	0.0020	U	ug/L	P373553	
		Diuron	0.0020	U	ug/L	P373553	
		Fenuron	0.016	U	ug/L	P373553	
		Fluridone**	8.0E-04	U	ug/L	P373553	
		Imazapyr**	0.055		ug/L	P373553	
		Hydrocodone**	0.0020	U	ug/L	P373553	
		Ibuprofen**	0.020	U	ug/L	P373553	
		Imidacloprid	0.032		ug/L	P373553	MS
		Linuron	0.0040	U	ug/L	P373553	
		Mandestrobin**	0.0020	UJ	ug/L	P373553	
		MCP	0.0020	U	ug/L	P373553	MS
		Naproxen**	0.0080	U	ug/L	P373553	
		Primidone**	0.0040	U	ug/L	P373553	
		Pyraclostrobin**	0.0020	U	ug/L	P373553	
		Thiamethoxam**	0.053		ug/L	P373553	

Field ID: G2NE1194

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132816	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P373553	
		Triclopyr**	0.0040	U	ug/L	P373553	
2132820	EPA 200.7 Rev. 4.4	Barium	18.0		ug/L	P373660	
		Calcium	39.0		mg/L	P373660	
		Iron	420		ug/L	P373660	
		Magnesium	14.4		mg/L	P373660	
		Potassium	6.4		mg/L	P373660	
		Sodium	62.4		mg/L	P373660	
		Zinc	5.0	U	ug/L	P373660	
	EPA 200.8 Rev. 5.4	Aluminum	76		ug/L	P373660	
		Antimony	0.080	I	ug/L	P373660	
		Arsenic	1.07		ug/L	P373660	
		Boron**	42.7		ug/L	P373660	
		Cadmium	0.020	U	ug/L	P373660	
		Chromium	0.64	I	ug/L	P373660	
		Copper	0.61	I	ug/L	P373660	
		Lead	0.20	U	ug/L	P373660	
		Nickel	0.50	U	ug/L	P373660	
		Selenium	0.20	U	ug/L	P373660	
		Silver	0.010	U	ug/L	P373660	
		Thallium	0.10	U	ug/L	P373660	
2132821	EPA 8270E	Acetochlor	0.25	U	ng/L	P373575	
		Alachlor	0.25	U	ng/L	P373575	
		Ametryn	0.60	U	ng/L	P373575	
		Atrazine	190		ng/L	P373575	
		Atrazine Desethyl	21		ng/L	P373575	
		Azinphos Methyl	5.0	U	ng/L	P373575	
		Bromacil	0.50	U	ng/L	P373575	MS
		Butylate	0.40	U	ng/L	P373575	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P373575	
		Chlorpyrifos Methyl	0.099	U	ng/L	P373575	
		Cyanazine	3.2	U	ng/L	P373575	
		Demeton	7.0	U	ng/L	P373575	
		Diazinon	6.8		ng/L	P373575	
		Dimethenamid**	0.099	U	ng/L	P373575	
		Disulfoton	0.50	U	ng/L	P373575	
		Dithiopyr**	2.5		ng/L	P373575	
		EPTC	1.2	U	ng/L	P373575	
		Ethion	0.15	U	ng/L	P373575	MS
		Ethoprop	0.099	U	ng/L	P373575	
		Fenamiphos	0.50	U	ng/L	P373575	
		Fipronil	40		ng/L	P373575	
		Fipronil Desulfinyl**	12	J	ng/L	P373575	LCS
		Fipronil Sulfide	8.4		ng/L	P373575	
		Fipronil Sulfone	13		ng/L	P373575	

Field ID: G2NE1194

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132821	EPA 8270E	Fonofos	0.20	U	ng/L	P373575	
		Hexazinone	2.1	J	ng/L	P373575	
		Malathion	0.35	U	ng/L	P373575	
		Metaxyl	9.4		ng/L	P373575	
		Metolachlor	260		ng/L	P373575	
		Metribuzin	6.1		ng/L	P373575	
		Mevinphos	0.50	U	ng/L	P373575	
		Molinate	0.30	U	ng/L	P373575	
		Norflurazon	0.50	U	ng/L	P373575	
		Oxadiazon**	45		ng/L	P373575	
		Parathion Ethyl	0.25	U	ng/L	P373575	
		Parathion Methyl	0.55	U	ng/L	P373575	
		Pendimethalin	0.99	U	ng/L	P373575	
		Phorate	0.25	U	ng/L	P373575	
		Prodiamine**	0.17	U	ng/L	P373575	MS
		Prometon	2.0	I	ng/L	P373575	
		Prometryn	0.20	U	ng/L	P373575	
		Simazine	150		ng/L	P373575	
		Tebuconazole**	0.50	U	ng/L	P373575	
		Terbufos	0.099	U	ng/L	P373575	
		Terbuthylazine	0.42	U	ng/L	P373575	

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-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample

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

EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. Reported results for hexazinone J qualified due to the internal standard recoveries exceeding control limits; Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Dunns Creek 0.4 mile Upstream of US-17

Collection Date/Time: 10/30/2019 12:40

Field ID: G2NE1187

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132775	EPA 180.1 Rev. 2.0	Turbidity	4.9		NTU	P373530	
	EPA 300.0 Rev. 2.1	Chloride	140		mg Cl/L	P374075	
		Sulfate	35		mg SO4/L	P374080	
		Color (true)	120		PCU	P373535	
	SM 2320 B-97	Total Alkalinity	55	A	mg CaCO3/L	P373971	
	SM 2540 C-97	TDS	431		mg/L	P373882	
	SM 2540 D-97	TSS	9	I	mg/L	P373640	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P373975	
2132777	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P373781	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P373859	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P373566	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P373920	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P373609	
2132779	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.042		mg P/L	P373549	
2132817	EPA 200.7 Rev. 4.4	Barium	15.7		ug/L	P373660	
		Calcium	35.7		mg/L	P373660	
		Iron	200		ug/L	P373660	
		Magnesium	12.6		mg/L	P373660	
		Potassium	3.4		mg/L	P373660	
		Sodium	73.7		mg/L	P373660	
		Zinc	5.0	U	ug/L	P373660	
	EPA 200.8 Rev. 5.4	Aluminum	81		ug/L	P373660	
		Antimony	0.053	I	ug/L	P373660	
		Arsenic	1.11		ug/L	P373660	
		Boron**	40.3		ug/L	P373660	
		Cadmium	0.020	U	ug/L	P373660	
		Chromium	0.40	U	ug/L	P373660	
		Copper	0.66	I	ug/L	P373660	
		Lead	0.20	U	ug/L	P373660	
		Nickel	0.50	U	ug/L	P373660	
		Selenium	0.20	U	ug/L	P373660	
		Silver	0.010	U	ug/L	P373660	
		Thallium	0.10	U	ug/L	P373660	

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-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample

Sample Location: Mill Br. @ Old San Mateo Rd

Collection Date/Time: 10/30/2019 13:05

Field ID: 20030577

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132781	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P373530	
	EPA 300.0 Rev. 2.1	Chloride	550		mg Cl/L	P374075	
		Sulfate	210		mg SO4/L	P374080	
	SM 2120 B	Color (true)	57		PCU	P373535	
	SM 2320 B-97	Total Alkalinity	95		mg CaCO3/L	P373971	
	SM 2540 C-97	TDS	1.32E+03		mg/L	P373882	
	SM 2540 D-97	TSS	2	U	mg/L	P373640	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P373975	
2132782	EPA 350.1 Rev. 2.0	Ammonia-N	0.14		mg N/L	P373778	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P373859	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.93		mg N/L	P373566	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P373920	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P373609	
2132783	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.18		mg P/L	P373551	
2132815	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P373607	
		2,4-D	6.6		ug/L	P373553	MS
		AMPA**	0.30	I	ug/L	P373607	
		Sucralose**	0.19	I	ug/L	P373607	
		Acetaminophen**	0.0080	U	ug/L	P373553	
		Acetamiprid**	0.0020	U	ug/L	P373553	
		Endothall**	0.25	U	ug/L	P373607	
		Glufosinate**	0.10	U	ug/L	P373607	
		Glyphosate**	0.23	I	ug/L	P373607	
		Afidopyrophen**	0.0020	UJ	ug/L	P373553	
		Bentazon	8.0E-04	U	ug/L	P373553	
		Benzovindiflupyr**	0.0026	IJ	ug/L	P373553	
		Carbamazepine**	8.0E-04	U	ug/L	P373553	
		Clothianidin**	0.0020	U	ug/L	P373553	
		Dinotefuran**	0.0020	U	ug/L	P373553	
		Diuron	0.0020	U	ug/L	P373553	
		Fenuron	0.016	U	ug/L	P373553	
		Fluridone**	8.0E-04	U	ug/L	P373553	
		Imazapyr**	0.068		ug/L	P373553	
		Hydrocodone**	0.0020	U	ug/L	P373553	
		Ibuprofen**	0.020	U	ug/L	P373553	
		Imidacloprid	0.021		ug/L	P373553	MS
		Linuron	0.0040	U	ug/L	P373553	
		Mandestrobin**	0.0020	UJ	ug/L	P373553	
		MCP	0.0020	U	ug/L	P373553	MS
		Naproxen**	0.0080	U	ug/L	P373553	
		Primidone**	0.0040	U	ug/L	P373553	
		Pyraclostrobin**	0.0020	U	ug/L	P373553	
		Thiamethoxam**	0.0020	U	ug/L	P373553	

Field ID: 20030577

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132815	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P373553	
		Triclopyr**	0.0040	U	ug/L	P373553	
2132819	EPA 200.7 Rev. 4.4	Barium	35.2		ug/L	P373660	
		Calcium	119		mg/L	P373660	
		Iron	600		ug/L	P373660	
		Magnesium	55.0		mg/L	P373660	
		Potassium	10.8		mg/L	P373660	
		Sodium	267		mg/L	P373660	
		Zinc	5.0	U	ug/L	P373660	
	EPA 200.8 Rev. 5.4	Aluminum	67		ug/L	P373660	
		Antimony	0.089	I	ug/L	P373660	
		Arsenic	0.80		ug/L	P373660	
		Boron**	84.6		ug/L	P373660	
		Cadmium	0.020	U	ug/L	P373660	
		Chromium	0.56	I	ug/L	P373660	
		Copper	0.75	I	ug/L	P373660	
		Lead	0.20	U	ug/L	P373660	
		Nickel	0.50	U	ug/L	P373660	
		Selenium	0.20	U	ug/L	P373660	
		Silver	0.010	U	ug/L	P373660	
		Thallium	0.10	U	ug/L	P373660	

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-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample

EPA 8321B: J - second source check standards for some analytes were not available for analysis. The surrogate 2,4-D-d3 recovery could not be assessed due to an elevated level of 2,4-D in the sample matrix.

Sample Location: Moccassin Branch at Winford Masters Rd

Collection Date/Time: 10/30/2019 13:40

Field ID: 20030557

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2132776	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P373530	
	EPA 300.0 Rev. 2.1	Chloride	96		mg Cl/L	P374075	
		Sulfate	180		mg SO4/L	P374256	
		Color (true)	91		PCU	P373535	
	SM 2320 B-97	Total Alkalinity	102		mg CaCO3/L	P373971	
	SM 2540 C-97	TDS	584		mg/L	P373882	
	SM 2540 D-97	TSS	2	U	mg/L	P373640	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P373975	
2132778	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P373778	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P373859	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P373566	
	EPA 365.1 Rev. 2.0	Total-P	0.36		mg P/L	P373920	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P373609	
2132780	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.29		mg P/L	P373549	
2132818	EPA 200.7 Rev. 4.4	Barium	21.1		ug/L	P373660	
		Calcium	85.7		mg/L	P373660	
		Iron	690		ug/L	P373660	
		Magnesium	25.1		mg/L	P373660	
		Potassium	8.6		mg/L	P373660	
		Sodium	44.4		mg/L	P373660	
		Zinc	5.0	U	ug/L	P373660	
	EPA 200.8 Rev. 5.4	Aluminum	52		ug/L	P373660	
		Antimony	0.12	I	ug/L	P373660	
		Arsenic	0.97		ug/L	P373660	
		Boron**	61.8		ug/L	P373660	
		Cadmium	0.020	U	ug/L	P373660	
		Chromium	0.60	I	ug/L	P373660	
		Copper	0.94		ug/L	P373660	
		Lead	0.20	U	ug/L	P373660	
		Nickel	0.50	U	ug/L	P373660	
		Selenium	0.20	U	ug/L	P373660	
		Silver	0.010	U	ug/L	P373660	
		Thallium	0.10	U	ug/L	P373660	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373530

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373660

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
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: P373660

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: P374075

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374080

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374256

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373778

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373781

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373859

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373566

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373920

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373549

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373551

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

Reference Method: EPA 8270E
Batch ID: P373575

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P373575

Component	Result	Code	Units
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P373553

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P373553

Component	Result	Code	Units
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: P373607

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

Reference Method: SM 2120 B
Batch ID: P373535

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P373971

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

Reference Method: SM 2540 C-97
Batch ID: P373882

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P373884

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P373640

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P373641

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P373975

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P373609

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: P373660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	80 - 120
Calcium	108		P	80 - 120
Iron	103		P	80 - 120
Magnesium	111		P	80 - 120
Potassium	111		P	80 - 120
Sodium	97.8		P	80 - 120
Zinc	99.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	92.5		P	85 - 115
Antimony	98.6		P	85 - 115
Arsenic	97.9		P	85 - 115
Boron	90.9		P	85 - 115
Cadmium	95.4		P	85 - 115
Chromium	95.9		P	85 - 115
Copper	95.4		P	85 - 115
Lead	97.6		P	85 - 115
Nickel	95.5		P	85 - 115
Selenium	92.4		P	85 - 115
Silver	99.1		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374075

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374080

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373778

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373781

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373859

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373566

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373920

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373549

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373551

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

Reference Method: EPA 8270E
Batch ID: P373575

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	102	115	P/P	69 - 122
Alachlor	99.6	109	P/P	71 - 120
Ametryn	101	125	P/P	47 - 138
Atrazine	101	107	P/P	74 - 124
Atrazine Desethyl	99.2	115	P/P	38 - 138
Azinphos Methyl	122	123	P/P	69 - 154
Bromacil	110	119	P/P	39 - 121
Butylate	66.3	65.5	P/P	27 - 87.0
Chlorpyrifos Ethyl	98.0	102	P/P	69 - 118
Chlorpyrifos Methyl	94.6	101	P/P	70 - 120
Cyanazine	156	180	P/P	20 - 250
Demeton	83.2	89.3	P/P	39 - 118
Diazinon	101	114	P/P	68 - 127
Dimethenamid	101	113	P/P	66 - 125
Disulfoton	92.9	104	P/P	52 - 126
Dithiopyr	99.2	109	P/P	67 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P373575

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
EPTC	68.1	70.2	P/P	24 - 88.0
Ethion	97.8	99.9	P/P	51 - 132
Ethoprop	93.4	105	P/P	58 - 117
Fenamiphos	106	104	P/P	38 - 139
Fipronil	110	123	P/P	61 - 124
Fipronil Desulfinyl	110	122	P/F	47 - 120
Fipronil Sulfide	97.6	104	P/P	56 - 119
Fipronil Sulfone	103	113	P/P	50 - 117
Fonofos	90.8	98.4	P/P	60 - 121
Hexazinone	106	119	P/P	55 - 137
Malathion	94.8	106	P/P	66 - 126
Metalaxyl	103	113	P/P	33 - 140
Metolachlor	99.5	107	P/P	69 - 119
Metribuzin	185	186	P/P	31 - 238
Mevinphos	92.7	101	P/P	42 - 113
Molinate	76.1	78.5	P/P	32 - 96.0
Norflurazon	111	119	P/P	54 - 123
Oxadiazon	96.0	103	P/P	63 - 128
Parathion Ethyl	91.6	98.2	P/P	72 - 111
Parathion Methyl	99.9	107	P/P	74 - 126
Pendimethalin	82.6	85.1	P/P	61 - 131
Phorate	90.6	98.5	P/P	51 - 115
Prodiamine	43.8	44.0	P/P	38 - 144
Prometon	91.3	96.7	P/P	54 - 119
Prometryn	97.1	103	P/P	63 - 120
Simazine	103	110	P/P	75 - 126
Tebuconazole	84.5	98.8	P/P	20 - 119
Terbufos	91.3	99.7	P/P	64 - 116
Terbutylazine	94.7	102	P/P	73 - 117

Reference Method: EPA 8321B
Batch ID: P373553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	136		P	40 - 160
Acetaminophen	83.8		P	30 - 160
Acetamiprid	92.7		P	40 - 160
Afidopyropen	97.4		P	40 - 160
Bentazon	105		P	30 - 160
Benzovindiflupyr	94.2		P	40 - 160
Carbamazepine	103		P	40 - 160
Clothianidin	92.3		P	40 - 160
Dinotefuran	93.2		P	40 - 160
Diuron	100		P	40 - 160
Fenuron	99.4		P	40 - 160
Fluridone	96.4		P	40 - 160
Hydrocodone	89.0		P	40 - 160
Ibuprofen	93.5		P	30 - 160
Imazapyr	92.6		P	40 - 160
Imidacloprid	111		P	40 - 160
Linuron	82.0		P	40 - 160
Mandestrobin	93.1		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P373553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MCP	149		P	40 - 160
Naproxen	73.0		P	40 - 160
Primidone	92.3		P	40 - 160
Pyraclostrobin	83.8		P	30 - 160
Thiamethoxam	98.8		P	40 - 160
Tolfenpyrad	52.0		P	40 - 160
Triclopyr	117		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P373607

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	51.3		P	40 - 150
AMPA	85.5		P	40 - 150
Endothall	97.1		P	40 - 150
Glufosinate	103		P	40 - 150
Glyphosate	89.7		P	40 - 140
Sucralose	86.2		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P373535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.2		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P373971

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P373975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P373609

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	103		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132928	Barium	102		P	80 - 120
2132928	Calcium	95.0		P	80 - 120
2132928	Iron	103		P	80 - 120
2132928	Magnesium	97.0		P	80 - 120
2132928	Potassium	109		P	80 - 120
2132928	Sodium	105		P	80 - 120
2132928	Zinc	98.7		P	80 - 120
2132938	Barium	104	102	P/P	80 - 120
2132938	Calcium	108	107	P/P	80 - 120
2132938	Iron	104	104	P/P	80 - 120
2132938	Magnesium	110	110	P/P	80 - 120
2132938	Potassium	108	107	P/P	80 - 120
2132938	Sodium	98.4		P	80 - 120
2132938	Zinc	102	99.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132928	Aluminum	92.3		P	80 - 120
2132928	Antimony	99.8		P	80 - 120
2132928	Arsenic	95.8		P	80 - 120
2132928	Boron	94.1		P	80 - 120
2132928	Cadmium	94.7		P	80 - 120
2132928	Chromium	95.5		P	80 - 120
2132928	Copper	90.9		P	80 - 120
2132928	Lead	97.2		P	80 - 120
2132928	Nickel	91.6		P	80 - 120
2132928	Selenium	90.8		P	80 - 120
2132928	Silver	100		P	80 - 120
2132928	Thallium	101		P	80 - 120
2132938	Aluminum	92.4	95.6	P/P	80 - 120
2132938	Antimony	97.3	101	P/P	80 - 120
2132938	Arsenic	93.8	96.6	P/P	80 - 120
2132938	Boron	92.7	94.6	P/P	80 - 120
2132938	Cadmium	94.2	97.6	P/P	80 - 120
2132938	Chromium	96.6	98.3	P/P	80 - 120
2132938	Copper	93.6	96.0	P/P	80 - 120
2132938	Lead	96.0	99.0	P/P	80 - 120
2132938	Nickel	93.3	95.8	P/P	80 - 120
2132938	Selenium	87.2	89.4	P/P	80 - 120
2132938	Silver	101	103	P/P	80 - 120
2132938	Thallium	99.0	104	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132793	Chloride	99.6		P	90 - 110
2132944	Chloride	99.8		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132793	Sulfate	100		P	90 - 110
2132944	Sulfate	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2133023	Sulfate	97.1		P	90 - 110
2133461	Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132778	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2133086	Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132708	Kjeldahl Nitrogen	97.7	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132693	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373549

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132712	O-Phosphate-P	96.6	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132918	O-Phosphate-P	98.7	98.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P373575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132730	Acetochlor	102	101	P/P	63 - 129
2132730	Alachlor	113	100	P/P	65 - 127

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P373575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132730	Ametryn	115	114	P/P	40 - 164
2132730	Atrazine Desethyl	120	122	P/P	14 - 157
2132730	Azinphos Methyl	109	106	P/P	49 - 180
2132730	Bromacil	115	144	P/F	48 - 130
2132730	Butylate	58.2	58.7	P/P	10 - 94.0
2132730	Chlorpyrifos Ethyl	86.1	91.8	P/P	58 - 123
2132730	Chlorpyrifos Methyl	98.0	95.2	P/P	58 - 125
2132730	Cyanazine	198	193	P/P	24 - 253
2132730	Demeton	90.5	90.8	P/P	25 - 149
2132730	Diazinon	119	116	P/P	59 - 144
2132730	Dimethenamid	90.5	87.1	P/P	46 - 139
2132730	Disulfoton	110	109	P/P	54 - 132
2132730	Dithiopyr	103	97.7	P/P	64 - 130
2132730	EPTC	65.5	63.8	P/P	10 - 92.0
2132730	Ethion	24.5	26.9	F/F	30 - 148
2132730	Ethoprop	105	105	P/P	50 - 130
2132730	Fenamiphos	62.6	61.8	P/P	49 - 142
2132730	Fipronil	109	109	P/P	46 - 140
2132730	Fipronil Desulfinyl	110	105	P/P	30 - 121
2132730	Fipronil Sulfide	106	95.1	P/P	31 - 136
2132730	Fipronil Sulfone	90.6	92.1	P/P	16 - 136
2132730	Fonofos	108	110	P/P	55 - 129
2132730	Hexazinone	116	110	P/P	56 - 141
2132730	Malathion	102	86.3	P/P	56 - 135
2132730	Metalaxyl	99.8	93.8	P/P	54 - 135
2132730	Metolachlor	98.8	94.7	P/P	51 - 140
2132730	Metribuzin	247	237	P/P	45 - 254
2132730	Mevinphos	99.9	102	P/P	33 - 131
2132730	Molinate	77.7	77.9	P/P	14 - 98.0
2132730	Norflurazon	100	98.6	P/P	34 - 136
2132730	Oxadiazon	88.9	86.9	P/P	67 - 116
2132730	Parathion Ethyl	93.2	92.1	P/P	66 - 118
2132730	Parathion Methyl	104	105	P/P	64 - 136
2132730	Pendimethalin	85.9	83.8	P/P	59 - 144
2132730	Phorate	111	107	P/P	42 - 130
2132730	Prodiamine	44.5	41.6	P/F	42 - 148
2132730	Prometon	89.3	85.9	P/P	59 - 134
2132730	Prometryn	101	99.2	P/P	54 - 135
2132730	Simazine	112	113	P/P	53 - 156
2132730	Tebuconazole	26.2	26.6	P/P	10 - 131
2132730	Terbufos	117	116	P/P	57 - 131
2132730	Terbuthylazine	99.0	95.1	P/P	68 - 125

Reference Method: EPA 8321B
Batch ID: P373553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132728	2,4-D	157	162	P/F	40 - 160
2132728	Acetaminophen	92.6	92.4	P/P	30 - 160
2132728	Acetamiprid	123	119	P/P	40 - 160
2132728	Afidopyropen	118	114	P/P	40 - 160
2132728	Bentazon	83.7	85.5	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P373553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132728	Benzovindiflupyr	101	105	P/P	40 - 160
2132728	Carbamazepine	117	116	P/P	40 - 160
2132728	Clothianidin	113	105	P/P	40 - 160
2132728	Dinotefuran	124	123	P/P	40 - 160
2132728	Diuron	103	105	P/P	40 - 160
2132728	Fenuron	104	103	P/P	40 - 160
2132728	Fluridone	106	111	P/P	40 - 160
2132728	Hydrocodone	108	111	P/P	40 - 160
2132728	Ibuprofen	106	112	P/P	30 - 160
2132728	Imazapyr	130	121	P/P	40 - 160
2132728	Imidacloprid	188	186	F/F	40 - 160
2132728	Linuron	85.2	93.8	P/P	40 - 160
2132728	Mandestrobin	102	104	P/P	40 - 160
2132728	MCCP	169	165	F/F	40 - 160
2132728	Naproxen	106	105	P/P	40 - 160
2132728	Primidone	112	117	P/P	40 - 160
2132728	Pyraclostrobin	99.9	98.6	P/P	30 - 160
2132728	Thiamethoxam	153	153	P/P	40 - 160
2132728	Tolfenpyrad	65.6	64.9	P/P	40 - 160
2132728	Triclopyr	136	130	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P373607

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132580	Acesulfame K	79.0	80.8	P/P	40 - 150
2132580	AMPA	94.5	91.7	P/P	40 - 150
2132580	Endothall	83.3	87.3	P/P	40 - 150
2132580	Glufosinate	100	98.0	P/P	40 - 150
2132580	Glyphosate	80.5	88.8	P/P	40 - 140
2132580	Sucralose	73.8	96.2	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P373975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132775	Fluoride	100	97.6	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P373609

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132647	Organic Carbon	105	105	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132710	Turbidity	2.29	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132938	Barium	1.65	Spike	P	0 - 20
2132938	Calcium	0.219	Spike	P	0 - 20
2132938	Iron	0.450	Spike	P	0 - 20
2132938	Magnesium	0.295	Spike	P	0 - 20
2132938	Potassium	0.799	Spike	P	0 - 20
2132938	Sodium	1.60	Spike	P	0 - 20
2132938	Zinc	1.67	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132938	Aluminum	2.80	Spike	P	0 - 20
2132938	Antimony	4.18	Spike	P	0 - 20
2132938	Arsenic	2.94	Spike	P	0 - 20
2132938	Boron	1.79	Spike	P	0 - 20
2132938	Cadmium	3.60	Spike	P	0 - 20
2132938	Chromium	1.69	Spike	P	0 - 20
2132938	Copper	2.53	Spike	P	0 - 20
2132938	Lead	3.09	Spike	P	0 - 20
2132938	Nickel	2.66	Spike	P	0 - 20
2132938	Selenium	2.48	Spike	P	0 - 20
2132938	Silver	1.88	Spike	P	0 - 20
2132938	Thallium	4.71	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132793	Chloride	0.233	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2133023	Sulfate	1.26	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132778	Ammonia-N	0.577	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2133086	Ammonia-N	0.707	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132708	Kjeldahl Nitrogen	2.14	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132693	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132663	Total-P	1.80	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132712	O-Phosphate-P	0.494	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132918	O-Phosphate-P	0.0875	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P373575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132730	Acetochlor	1.05	Spike	P	0 - 30
2132730	Alachlor	12.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P373575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132730	Ametryn	0.821	Spike	P	0 - 30
2132730	Atrazine	2.52	Spike	P	0 - 30
2132730	Atrazine Desethyl	1.19	Spike	P	0 - 30
2132730	Azinphos Methyl	2.28	Spike	P	0 - 30
2132730	Bromacil	22.1	Spike	P	0 - 30
2132730	Butylate	0.811	Spike	P	0 - 30
2132730	Chlorpyrifos Ethyl	6.34	Spike	P	0 - 30
2132730	Chlorpyrifos Methyl	2.92	Spike	P	0 - 30
2132730	Cyanazine	2.91	Spike	P	0 - 30
2132730	Demeton	0.300	Spike	P	0 - 30
2132730	Diazinon	2.93	Spike	P	0 - 30
2132730	Dimethenamid	3.74	Spike	P	0 - 30
2132730	Disulfoton	0.170	Spike	P	0 - 30
2132730	Dithiopyr	5.48	Spike	P	0 - 30
2132730	EPTC	2.55	Spike	P	0 - 30
2132730	Ethion	9.56	Spike	P	0 - 30
2132730	Ethoprop	0.0550	Spike	P	0 - 30
2132730	Fenamiphos	1.36	Spike	P	0 - 30
2132730	Fipronil	0.125	Spike	P	0 - 30
2132730	Fipronil Desulfinyl	4.14	Spike	P	0 - 30
2132730	Fipronil Sulfide	10.5	Spike	P	0 - 30
2132730	Fipronil Sulfone	1.66	Spike	P	0 - 30
2132730	Fonofos	2.44	Spike	P	0 - 30
2132730	Hexazinone	5.19	Spike	P	0 - 30
2132730	Malathion	16.3	Spike	P	0 - 30
2132730	Metaxyl	6.21	Spike	P	0 - 30
2132730	Metolachlor	3.70	Spike	P	0 - 30
2132730	Metribuzin	4.00	Spike	P	0 - 30
2132730	Mevinphos	2.38	Spike	P	0 - 30
2132730	Molinate	0.143	Spike	P	0 - 30
2132730	Norflurazon	1.88	Spike	P	0 - 30
2132730	Oxadiazon	2.24	Spike	P	0 - 30
2132730	Parathion Ethyl	1.17	Spike	P	0 - 30
2132730	Parathion Methyl	0.468	Spike	P	0 - 30
2132730	Pendimethalin	2.51	Spike	P	0 - 30
2132730	Phorate	4.09	Spike	P	0 - 30
2132730	Prodiamine	6.77	Spike	P	0 - 30
2132730	Prometon	3.86	Spike	P	0 - 30
2132730	Prometryn	2.23	Spike	P	0 - 30
2132730	Simazine	0.705	Spike	P	0 - 30
2132730	Tebuconazole	1.30	Spike	P	0 - 30
2132730	Terbufos	1.19	Spike	P	0 - 30
2132730	Terbutylazine	4.07	Spike	P	0 - 30
LFB	Acetochlor	12.2	LCS	P	0 - 30
LFB	Alachlor	9.40	LCS	P	0 - 30
LFB	Ametryn	20.7	LCS	P	0 - 30
LFB	Atrazine	5.67	LCS	P	0 - 30
LFB	Atrazine Desethyl	14.8	LCS	P	0 - 30
LFB	Azinphos Methyl	0.925	LCS	P	0 - 30
LFB	Bromacil	7.79	LCS	P	0 - 30
LFB	Butylate	1.22	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P373575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorpyrifos Ethyl	4.36	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.76	LCS	P	0 - 30
LFB	Cyanazine	14.1	LCS	P	0 - 30
LFB	Demeton	7.08	LCS	P	0 - 30
LFB	Diazinon	11.6	LCS	P	0 - 30
LFB	Dimethenamid	11.3	LCS	P	0 - 30
LFB	Disulfoton	11.7	LCS	P	0 - 30
LFB	Dithiopyr	9.10	LCS	P	0 - 30
LFB	EPTC	3.05	LCS	P	0 - 30
LFB	Ethion	2.11	LCS	P	0 - 30
LFB	Ethoprop	11.5	LCS	P	0 - 30
LFB	Fenamiphos	2.03	LCS	P	0 - 30
LFB	Fipronil	10.5	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	10.6	LCS	P	0 - 30
LFB	Fipronil Sulfide	6.77	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.45	LCS	P	0 - 30
LFB	Fonofos	7.98	LCS	P	0 - 30
LFB	Hexazinone	11.5	LCS	P	0 - 30
LFB	Malathion	10.8	LCS	P	0 - 30
LFB	Metalaxyl	8.95	LCS	P	0 - 30
LFB	Metolachlor	7.04	LCS	P	0 - 30
LFB	Metribuzin	0.660	LCS	P	0 - 30
LFB	Mevinphos	8.60	LCS	P	0 - 30
LFB	Molinate	3.11	LCS	P	0 - 30
LFB	Norflurazon	6.90	LCS	P	0 - 30
LFB	Oxadiazon	7.34	LCS	P	0 - 30
LFB	Parathion Ethyl	6.92	LCS	P	0 - 30
LFB	Parathion Methyl	7.26	LCS	P	0 - 30
LFB	Pendimethalin	2.93	LCS	P	0 - 30
LFB	Phorate	8.30	LCS	P	0 - 30
LFB	Prodiamine	0.581	LCS	P	0 - 30
LFB	Prometon	5.75	LCS	P	0 - 30
LFB	Prometryn	6.09	LCS	P	0 - 30
LFB	Simazine	6.28	LCS	P	0 - 30
LFB	Tebuconazole	15.6	LCS	P	0 - 30
LFB	Terbufos	8.84	LCS	P	0 - 30
LFB	Terbutylazine	7.18	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P373553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132728	2,4-D	2.60	Spike	P	0 - 30
2132728	Acetaminophen	0.200	Spike	P	0 - 30
2132728	Acetamiprid	3.31	Spike	P	0 - 30
2132728	Afidopyropen	3.22	Spike	P	0 - 30
2132728	Bentazon	2.08	Spike	P	0 - 30
2132728	Benzovindiflupyr	3.56	Spike	P	0 - 30
2132728	Carbamazepine	1.08	Spike	P	0 - 30
2132728	Clothianidin	7.10	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P373553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132728	Dinotefuran	0.679	Spike	P	0 - 30
2132728	Diuron	1.39	Spike	P	0 - 30
2132728	Fenuron	0.564	Spike	P	0 - 30
2132728	Fluridone	4.57	Spike	P	0 - 30
2132728	Hydrocodone	3.01	Spike	P	0 - 30
2132728	Ibuprofen	6.06	Spike	P	0 - 30
2132728	Imazapyr	4.31	Spike	P	0 - 30
2132728	Imidacloprid	1.18	Spike	P	0 - 30
2132728	Linuron	9.63	Spike	P	0 - 30
2132728	Mandestrobin	2.60	Spike	P	0 - 30
2132728	MCP	2.31	Spike	P	0 - 30
2132728	Naproxen	1.36	Spike	P	0 - 30
2132728	Primidone	4.71	Spike	P	0 - 30
2132728	Pyraclostrobin	1.31	Spike	P	0 - 30
2132728	Thiamethoxam	0.0825	Spike	P	0 - 30
2132728	Tolfenpyrad	0.963	Spike	P	0 - 30
2132728	Triclopyr	4.56	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P373607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132580	Acesulfame K	2.30	Spike	P	0 - 30
2132580	AMPA	2.41	Spike	P	0 - 30
2132580	Endothall	4.67	Spike	P	0 - 30
2132580	Glufosinate	2.47	Spike	P	0 - 30
2132580	Glyphosate	9.89	Spike	P	0 - 30
2132580	Sucralose	25.5	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P373535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132710	Color (true)	0.586	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P373971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132775	Total Alkalinity	0.249	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P373882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132662	TDS	5.77	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P373884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132784	TDS	0.664	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P373975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132775	Fluoride	1.99	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P373609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132647	Organic Carbon	0.291	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2132815
Field Sample ID: 20030577

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	75.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.7	P	30 - 160
EPA 8321B	Diuron-d6	74.9	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	61.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	61.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	103	P	30 - 160
EPA 8321B	Primidone-d5	96.5	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160

Lab Sample ID: 2132816
Field Sample ID: G2NE1194

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.9	P	30 - 160
EPA 8321B	Diuron-d6	59.4	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	30 - 160
EPA 8321B	Ibuprofen-d3	102	P	30 - 160
EPA 8321B	Primidone-d5	72.6	P	30 - 160
EPA 8321B	Sucralose-d6	31.0	P	30 - 160
EPA 8321B	Sucralose-d6	31.0	P	30 - 160

Lab Sample ID: 2132821
Field Sample ID: G2NE1194

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	114	P	68 - 130
EPA 8270E	Terbufos-d10	116	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95384

Included Lab Sample IDs: 2132775, 2132776, 2132781, 2132784

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

Reference Method: SM 2120 B

Run ID: A95385

Included Lab Sample IDs: 2132775, 2132776, 2132781, 2132784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	101	P/P	90 - 115
Color (true)	99.2	99.3	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95389

Included Lab Sample IDs: 2132779, 2132780, 2132783, 2132786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.5	97.2	P/P	90 - 110
O-Phosphate-P	98.7	99.0	P/P	90 - 110
O-Phosphate-P	99.0	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95392

Included Lab Sample IDs: 2132777, 2132778, 2132782, 2132785

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

Reference Method: SM 5310 B-00

Run ID: A95422

Included Lab Sample IDs: 2132777, 2132778, 2132782, 2132785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	104	P/P	90 - 110
Organic Carbon	107	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95494

Included Lab Sample IDs: 2132817, 2132818, 2132819, 2132820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	102	P/P	90 - 110
Calcium	101	98.7	P/P	90 - 110
Iron	98.6	98.1	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	102	102	P/P	90 - 110
Sodium	99.5	97.8	P/P	90 - 110
Zinc	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95511

Included Lab Sample IDs: 2132775, 2132776, 2132781, 2132784

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95516

Included Lab Sample IDs: 2132777, 2132778, 2132782, 2132785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.6	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95522

Included Lab Sample IDs: 2132815, 2132816

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	62.3	65.1	P/P	60 - 160
Acesulfame K	80.4	62.3	P/P	60 - 160
Endothall	90.2	94.9	P/P	60 - 160
Endothall	94.9	105	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95523

Included Lab Sample IDs: 2132815, 2132816

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	81.7	85.0	P/P	60 - 160
AMPA	87.5	81.7	P/P	60 - 160
Glufosinate	102	109	P/P	60 - 160
Glufosinate	107	102	P/P	60 - 160
Glyphosate	92.5	91.6	P/P	60 - 160
Glyphosate	98.2	92.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95575

Included Lab Sample IDs: 2132815, 2132816

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	111	116	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95588

Included Lab Sample IDs: 2132815, 2132816

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.6	97.4	P/P	50 - 150
2,4-D	96.9	93.5	P/P	50 - 150
Acetaminophen	105	106	P/P	60 - 160
Acetamiprid	110	109	P/P	50 - 150
Afidopyropen	105	107	P/P	50 - 150
Bentazon	103	98.8	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95588

Included Lab Sample IDs: 2132815, 2132816

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	107	108	P/P	50 - 160
Benzovindiflupyr	114	115	P/P	50 - 150
Carbamazepine	110	112	P/P	60 - 150
Clothianidin	104	93.7	P/P	60 - 150
Dinotefuran	104	105	P/P	50 - 150
Diuron	113	111	P/P	60 - 150
Fenuron	108	110	P/P	60 - 150
Fluridone	115	118	P/P	60 - 160
Hydrocodone	108	110	P/P	60 - 150
Ibuprofen	95.7	79.8	P/P	50 - 160
Imazapyr	105	93.0	P/P	50 - 150
Imidacloprid	103	110	P/P	60 - 150
Linuron	105	104	P/P	60 - 150
Mandestrobin	107	107	P/P	50 - 150
MCP	111	97.7	P/P	50 - 150
Naproxen	90.6	86.0	P/P	50 - 160
Primidone	97.3	100	P/P	60 - 150
Pyraclostrobin	104	99.0	P/P	60 - 150
Thiamethoxam	102	105	P/P	50 - 150
Tolfenpyrad	104	105	P/P	60 - 150
Triclopyr	90.2	86.4	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95591

Included Lab Sample IDs: 2132777, 2132778, 2132782, 2132785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.4	92.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A95613

Included Lab Sample IDs: 2132775, 2132776, 2132781, 2132784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.5	P/P	90 - 110
Total Alkalinity	98.5	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95613

Included Lab Sample IDs: 2132775, 2132776, 2132781, 2132784

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: EPA 365.1 Rev. 2.0

Run ID: A95657

Included Lab Sample IDs: 2132777, 2132778, 2132782, 2132785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.4	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95657

Included Lab Sample IDs: 2132777, 2132778, 2132782, 2132785

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95714

Included Lab Sample IDs: 2132817, 2132818, 2132819, 2132820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.1	97.4	P/P	90 - 110
Aluminum	97.4	97.5	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Antimony	99.0	101	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Boron	100	98.9	P/P	90 - 110
Boron	96.9	100	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Cadmium	99.7	102	P/P	90 - 110
Chromium	101	105	P/P	90 - 110
Chromium	105	103	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Copper	102	100	P/P	90 - 110
Lead	101	102	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Selenium	98.2	99.9	P/P	90 - 110
Selenium	99.9	98.5	P/P	90 - 110
Silver	103	105	P/P	90 - 110
Silver	105	104	P/P	90 - 110
Thallium	96.9	98.9	P/P	90 - 110
Thallium	98.9	98.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95765

Included Lab Sample IDs: 2132776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	101	98.6	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A95775

Included Lab Sample IDs: 2132821

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	106		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	105		P	80 - 120
Atrazine Desethyl	96.0		P	80 - 120
Azinphos Methyl	95.4		P	80 - 120
Bromacil	94.3		P	80 - 120
Butylate	98.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A95775
Included Lab Sample IDs: 2132821

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorpyrifos Ethyl	106		P	80 - 120
Chlorpyrifos Methyl	102		P	80 - 120
Cyanazine	89.7		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	109		P	80 - 120
Dimethenamid	106		P	80 - 120
Disulfoton	105		P	80 - 120
Dithiopyr	108		P	80 - 120
EPTC	101		P	80 - 120
Ethion	84.6		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	91.4		P	80 - 120
Fipronil	96.2		P	80 - 120
Fipronil Desulfinyl	99.7		P	80 - 120
Fipronil Sulfide	93.9		P	80 - 120
Fipronil Sulfone	92.3		P	80 - 120
Fonofos	103		P	80 - 120
Hexazinone	104		P	80 - 120
Malathion	91.1		P	80 - 120
Metalaxyl	103		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	97.1		P	80 - 120
Molinate	98.1		P	80 - 120
Norflurazon	91.6		P	80 - 120
Oxadiazon	110		P	80 - 120
Parathion Ethyl	98.1		P	80 - 120
Parathion Methyl	98.3		P	80 - 120
Pendimethalin	98.9		P	80 - 120
Phorate	104		P	80 - 120
Prodiamine	95.3		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	103		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	106		P	80 - 120
Terbuthylazine	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A95778
Included Lab Sample IDs: 2132821

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	98.2		P	80 - 120
Metolachlor	110		P	80 - 120
Simazine	101		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.29	
EPA 200.7 Rev. 4.4	Barium	102		102	104	102			1.65
	Calcium	108		95.0	108	107			0.219
	Iron	103		103	104	104			0.450
	Magnesium	111		97.0	110	110			0.295
	Potassium	111		109	108	107			0.799
	Sodium	97.8		105	98.4				1.60
	Zinc	99.1		98.7	102	99.9			1.67
EPA 200.8 Rev. 5.4	Aluminum	92.5		92.3	92.4	95.6			2.80
	Antimony	98.6		99.8	97.3	101			4.18
	Arsenic	97.9		95.8	93.8	96.6			2.94
	Boron	90.9		94.1	92.7	94.6			1.79
	Cadmium	95.4		94.7	94.2	97.6			3.60
	Chromium	95.9		95.5	96.6	98.3			1.69
	Copper	95.4		90.9	93.6	96.0			2.53
	Lead	97.6		97.2	96.0	99.0			3.09
	Nickel	95.5		91.6	93.3	95.8			2.66
	Selenium	92.4		90.8	87.2	89.4			2.48
	Silver	99.1		100	101	103			1.88
	Thallium	101		101	99.0	104			4.71
EPA 300.0 Rev. 2.1	Chloride	98.1		99.6	99.8			0.233	
	Sulfate	99.1		100	99.9				
	Sulfate	99.6		97.1	96.6			1.26	
EPA 350.1 Rev. 2.0	Ammonia-N	102		100	101				0.577
	Ammonia-N	101		103	104				0.707
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		97.7	95.0				2.14
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		100	100				0.0
EPA 365.1 Rev. 2.0	Total-P	101							1.80
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		96.6	97.2				0.494
	O-Phosphate-P	103		98.7	98.8				0.0875
EPA 8270E	Acetochlor	115	102	102	101		12.2		1.05
	Alachlor	109	99.6	113	100		9.40		12.1
	Ametryn	101	125	115	114		20.7		0.821
	Atrazine	101	107				5.67		2.52
	Atrazine Desethyl	99.2	115	120	122		14.8		1.19
	Azinphos Methyl	122	123	109	106		0.925		2.28
	Bromacil	110	119	115	144		7.79		22.1
	Butylate	66.3	65.5	58.2	58.7		1.22		0.811
	Chlorpyrifos Ethyl	98.0	102	86.1	91.8		4.36		6.34
	Chlorpyrifos Methyl	101	94.6	98.0	95.2		6.76		2.92
	Cyanazine	180	156	198	193		14.1		2.91
	Demeton	89.3	83.2	90.5	90.8		7.08		0.300
	Diazinon	114	101	119	116		11.6		2.93
	Dimethenamid	113	101	90.5	87.1		11.3		3.74
	Disulfoton	104	92.9	110	109		11.7		0.170
	Dithiopyr	109	99.2	103	97.7		9.10		5.48
	EPTC	70.2	68.1	65.5	63.8		3.05		2.55
	Ethion	99.9	97.8	24.5	26.9		2.11		9.56
	Ethoprop	105	93.4	105	105		11.5		0.0550
	Fenamiphos	106	104	62.6	61.8		2.03		1.36
	Fipronil	110	123	109	109		10.5		0.125
	Fipronil Desulfinyl	110	122	110	105		10.6		4.14
	Fipronil Sulfide	97.6	104	106	95.1		6.77		10.5
	Fipronil Sulfone	103	113	90.6	92.1		9.45		1.66

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Fonofos	90.8	98.4	108	110	7.98	2.44
	Hexazinone	106	119	116	110	11.5	5.19
	Malathion	94.8	106	102	86.3	10.8	16.3
	Metalaxyl	103	113	99.8	93.8	8.95	6.21
	Metolachlor	99.5	107	98.8	94.7	7.04	3.70
	Metribuzin	185	186	247	237	0.660	4.00
	Mevinphos	92.7	101	99.9	102	8.60	2.38
	Molinate	76.1	78.5	77.7	77.9	3.11	0.143
	Norflurazon	111	119	100	98.6	6.90	1.88
	Oxadiazon	96.0	103	88.9	86.9	7.34	2.24
	Parathion Ethyl	91.6	98.2	93.2	92.1	6.92	1.17
	Parathion Methyl	99.9	107	104	105	7.26	0.468
	Pendimethalin	82.6	85.1	85.9	83.8	2.93	2.51
	Phorate	90.6	98.5	111	107	8.30	4.09
	Prodiamine	43.8	44.0	44.5	41.6	0.581	6.77
	Prometon	91.3	96.7	89.3	85.9	5.75	3.86
	Prometryn	97.1	103	101	99.2	6.09	2.23
	Simazine	103	110	112	113	6.28	0.705
	Tebuconazole	84.5	98.8	26.2	26.6	15.6	1.30
	Terbufos	91.3	99.7	117	116	8.84	1.19
EPA 8321B	Terbuthylazine	94.7	102	99.0	95.1	7.18	4.07
	2,4-D	136		157	162		2.60
	Acesulfame K	51.3		79.0	80.8		2.30
	Acetaminophen	83.8		92.6	92.4		0.200
	Acetamiprid	92.7		123	119		3.31
	Afidopyropen	97.4		118	114		3.22
	AMPA	85.5		94.5	91.7		2.41
	Bentazon	105		83.7	85.5		2.08
	Benzovindiflupyr	94.2		101	105		3.56
	Carbamazepine	103		117	116		1.08
	Clothianidin	92.3		113	105		7.10
	Dinotefuran	93.2		124	123		0.679
	Diuron	100		103	105		1.39
	Endothall	97.1		83.3	87.3		4.67
	Fenuron	99.4		104	103		0.564
	Fluridone	96.4		106	111		4.57
	Glufosinate	103		100	98.0		2.47
	Glyphosate	89.7		80.5	88.8		9.89
	Hydrocodone	89.0		108	111		3.01
	Ibuprofen	93.5		106	112		6.06
	Imazapyr	92.6		130	121		4.31
	Imidacloprid	111		188	186		1.18
	Linuron	82.0		85.2	93.8		9.63
	Mandestrobin	93.1		102	104		2.60
	MCPP	149		169	165		2.31
	Naproxen	73.0		106	105		1.36
	Primidone	92.3		112	117		4.71
	Pyraclostrobin	83.8		99.9	98.6		1.31
	Sucralose	86.2		73.8	96.2		25.5
	Thiamethoxam	98.8		153	153		0.0825
	Tolfenpyrad	52.0		65.6	64.9		0.963
	Triclopyr	117		136	130		4.56
SM 2120 B	Color (true)	99.2				0.586	
SM 2320 B-97	Total Alkalinity	100				0.249	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
					LCS	
SM 2540 C-97	TDS				5.77	
	TDS				0.664	
SM 4500 F-C-97	Fluoride	97.8	100	97.6		1.99
SM 5310 B-00	Organic Carbon	103	105	105		0.291

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2132775, 2132776, 2132781, 2132784
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2132817, 2132818, 2132819, 2132820
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2132817, 2132818, 2132819, 2132820
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2132775, 2132776, 2132781, 2132784
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2132775, 2132776, 2132781, 2132784
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2132777, 2132778, 2132782, 2132785
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2132777, 2132778, 2132782, 2132785
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2132777, 2132778, 2132782, 2132785
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2132777, 2132778, 2132782, 2132785
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2132779, 2132780, 2132783, 2132786
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2132821
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2132815, 2132816
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2132815, 2132816
SM 2120 B / E31780	True Color measured at 450 nm	2132775, 2132776, 2132781, 2132784
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2132775, 2132776, 2132781, 2132784
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2132775, 2132776, 2132781, 2132784
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2132775, 2132776, 2132781, 2132784
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2132775, 2132776, 2132781, 2132784
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2132777, 2132778, 2132782, 2132785

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	10/31/2019			10/31/2019 16:52	Rosalyn Ballman	2132775, 2132776, 2132781, 2132784
EPA 200.7 Rev. 4.4	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/05/2019 14:25	Alexander Thompson	2132817
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/05/2019 14:31	Alexander Thompson	2132818
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/05/2019 14:37	Alexander Thompson	2132819
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/05/2019 14:43	Alexander Thompson	2132819
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/05/2019 14:49	Alexander Thompson	2132820
EPA 200.8 Rev. 5.4	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/13/2019 19:18	Robert K Palmer	2132817
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/13/2019 19:57	Robert K Palmer	2132818
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/13/2019 20:06	Robert K Palmer	2132819
	10/31/2019	11/04/2019 17:00	Elliott D. Healy	11/13/2019 20:16	Robert K Palmer	2132820
EPA 300.0 Rev. 2.1	10/31/2019			11/07/2019 03:57	Jhamieka S. Greenwood	2132775
	10/31/2019			11/07/2019 04:09	Jhamieka S. Greenwood	2132776
	10/31/2019			11/07/2019 04:21	Jhamieka S. Greenwood	2132781
	10/31/2019			11/07/2019 04:33	Jhamieka S. Greenwood	2132784
	10/31/2019			11/14/2019 19:44	Lipi Saha	2132776
EPA 350.1 Rev. 2.0	10/31/2019			11/04/2019 12:13	Ping Hua	2132782
	10/31/2019			11/04/2019 12:14	Ping Hua	2132785
	10/31/2019			11/04/2019 13:48	Ping Hua	2132777
	10/31/2019			11/04/2019 13:51	Ping Hua	2132778
EPA 351.2 Rev. 2.0	10/31/2019	11/07/2019 11:50	Sima Feizi	11/08/2019 11:48	Virginia P. Brown	2132777
	10/31/2019	11/07/2019 11:50	Sima Feizi	11/08/2019 11:50	Virginia P. Brown	2132778
	10/31/2019	11/07/2019 11:50	Sima Feizi	11/08/2019 11:51	Virginia P. Brown	2132782
	10/31/2019	11/07/2019 11:50	Sima Feizi	11/08/2019 11:53	Virginia P. Brown	2132785
EPA 353.2 Rev. 2.0	10/31/2019			11/01/2019 10:37	Beverly Y. Sanders	2132777
	10/31/2019			11/01/2019 10:38	Beverly Y. Sanders	2132778
	10/31/2019			11/01/2019 11:06	Beverly Y. Sanders	2132782
	10/31/2019			11/01/2019 11:07	Beverly Y. Sanders	2132785
EPA 365.1 Rev. 2.0	10/31/2019	11/08/2019 13:00	Lipi Saha	11/12/2019 12:51	Benjamin T. Nordmann	2132777
	10/31/2019	11/08/2019 13:00	Lipi Saha	11/12/2019 12:53	Benjamin T. Nordmann	2132778
	10/31/2019	11/08/2019 13:00	Lipi Saha	11/12/2019 12:54	Benjamin T. Nordmann	2132782
	10/31/2019	11/08/2019 13:00	Lipi Saha	11/12/2019 12:57	Benjamin T. Nordmann	2132785
EPA 365.1 Rev. 2.0 dissolved	10/31/2019			10/31/2019 16:22	Samantha Davila	2132779
	10/31/2019			10/31/2019 16:36	Samantha Davila	2132780
	10/31/2019			10/31/2019 16:55	Samantha Davila	2132783
	10/31/2019			10/31/2019 16:57	Samantha Davila	2132786
EPA 8270E	10/31/2019	11/04/2019 09:00	Rasheda Ghaffari	11/07/2019 17:37	Vandana T. Nagar	2132821
	10/31/2019	11/04/2019 09:00	Rasheda Ghaffari	11/08/2019 13:14	Vandana T. Nagar	2132821
EPA 8321B	10/31/2019	11/04/2019 10:30	Rebecca Ware	11/04/2019 15:36	Rebecca Ware	2132815
	10/31/2019	11/04/2019 10:30	Rebecca Ware	11/04/2019 16:06	Rebecca Ware	2132816
	10/31/2019	11/04/2019 10:30	Rebecca Ware	11/05/2019 14:38	Rebecca Ware	2132815

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/31/2019	11/04/2019 10:30	Rebecca Ware	11/05/2019 15:02	Rebecca Ware	2132816
	10/31/2019	11/04/2019 10:30	Rebecca Ware	11/06/2019 16:50	Rebecca Ware	2132816
	10/31/2019	11/04/2019 10:30	Rebecca Ware	11/06/2019 18:13	Rebecca Ware	2132815
	10/31/2019	11/06/2019 08:00	Hoor Shaik	11/09/2019 14:24	Juyoung Kim	2132815
	10/31/2019	11/06/2019 08:00	Hoor Shaik	11/09/2019 14:58	Juyoung Kim	2132816
	10/31/2019	11/06/2019 08:00	Hoor Shaik	11/11/2019 19:20	Juyoung Kim	2132815
	10/31/2019	11/06/2019 08:00	Hoor Shaik	11/11/2019 21:04	Juyoung Kim	2132816
	10/31/2019			10/31/2019 17:10	Madeline Funaro	2132775
SM 2120 B	10/31/2019			10/31/2019 17:11	Madeline Funaro	2132776
	10/31/2019			10/31/2019 17:12	Madeline Funaro	2132781
	10/31/2019			10/31/2019 17:41	Madeline Funaro	2132784
	10/31/2019			11/08/2019 05:20	Dale L. Simmons	2132775
SM 2320 B-97	10/31/2019			11/08/2019 06:53	Dale L. Simmons	2132776
	10/31/2019			11/08/2019 07:45	Dale L. Simmons	2132784
	10/31/2019			11/08/2019 07:58	Dale L. Simmons	2132781
	10/31/2019			11/01/2019 14:20	Rosalyn Ballman	2132775, 2132776, 2132781, 2132784
SM 2540 C-97	10/31/2019			11/01/2019 14:20	Rosalyn Ballman	2132775, 2132776, 2132781, 2132784
SM 2540 D-97	10/31/2019			11/08/2019 05:10	Dale L. Simmons	2132775
SM 4500 F-C-97	10/31/2019			11/08/2019 06:53	Dale L. Simmons	2132776
	10/31/2019			11/08/2019 07:45	Dale L. Simmons	2132784
	10/31/2019			11/08/2019 07:58	Dale L. Simmons	2132781
	10/31/2019			11/01/2019 20:55	Madeline Funaro	2132777
SM 5310 B-00	10/31/2019			11/01/2019 21:18	Madeline Funaro	2132778
	10/31/2019			11/01/2019 22:15	Madeline Funaro	2132782
	10/31/2019			11/01/2019 22:33	Madeline Funaro	2132785
	10/31/2019					