

Chemical Analysis Report

CEN-DIST-2023-06-08-01

Florida DEP Laboratory
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DOH Accreditation E31780

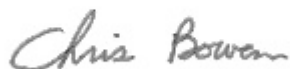
Event Description: **Run 13 with Lucerne LVI**
Request ID: **RQ-2023-06-05-28**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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FL Dept. of Environmental Protection
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Orlando, FL 32803-3767
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 28-JUN-2023 09:45



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: LAKE GEAR AT CENTER

Collection Date/Time: 06/07/2023 13:27

Field ID: G2CE0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415994	EPA 200.7 Rev. 4.4	Calcium	24.2		mg/L	P431079	
		Iron	30	U	ug/L	P431079	
		Magnesium	1.66		mg/L	P431079	
		Potassium	1.8		mg/L	P431079	
		Sodium	8.6		mg/L	P431079	
		Strontium	56.7		ug/L	P431079	
		Tin	3.0	U	ug/L	P431079	
		Titanium	0.75	U	ug/L	P431079	
		Vanadium	2.0	U	ug/L	P431079	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P431079	
		Aluminum	59		ug/L	P431079	
		Antimony	0.34		ug/L	P431079	
		Arsenic	4.00		ug/L	P431079	
		Barium	10.1		ug/L	P431079	
		Beryllium	0.010	U	ug/L	P431079	
		Boron	24.4		ug/L	P431079	
		Cadmium	0.020	U	ug/L	P431079	
		Chromium	0.40	U	ug/L	P431079	
		Cobalt	0.028	I	ug/L	P431079	
		Copper	7.77		ug/L	P431079	
		Lead	0.21	I	ug/L	P431079	
		Manganese	3.45		ug/L	P431079	
		Molybdenum	0.93		ug/L	P431079	
		Nickel	0.50	U	ug/L	P431079	
		Selenium	0.20	U	ug/L	P431079	
		Silver	0.010	U	ug/L	P431079	
		Thallium	0.10	U	ug/L	P431079	
	SM 2340 B-2011	Hardness	67.3		mg/L	P431079	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 06/13/2023.

Sample Location: LAKE DOWNEY AT CENTER

Collection Date/Time: 06/07/2023 12:42

Field ID: G2CE0227

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415978	DEP SOP: NU-094-1	Color (true)	34		PCU	P431020	
	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P431024	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P431227	
		Sulfate	3.7		mg SO4/L	P431229	
	SM 2320 B-2011	Total Alkalinity	7.8		mg CaCO3/L	P431145	
	SM 2540 C-2015	TDS	67		mg/L	P431272	
	SM 2540 D-2015	TSS	2	U	mg/L	P431161	
	SM 4500-F- C-2011	Fluoride	0.030	I	mg F/L	P431630	
2415981	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P431150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P431397	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431365	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P431122	
	SM 5310 B-2011	Organic Carbon	9.8		mg C/L	P431165	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LAKE LUCERNE SW

Collection Date/Time: 06/07/2023 11:54

Field ID: G4CE0202

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415975	DEP SOP: NU-094-1	Color (true)	7.4		PCU	P431020	
	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P431024	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P431227	
		Sulfate	16		mg SO4/L	P431229	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P431145	
	SM 2540 C-2015	TDS	118	A	mg/L	P431272	
	SM 2540 D-2015	TSS	2	IA	mg/L	P431161	
2415976	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P431630	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P431150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35		mg N/L	P431119	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431365	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P431122	
2415977	SM 5310 B-2011	Organic Carbon	3.9		mg C/L	P431165	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P431010	
2415992	EPA 8321B	2,4-D	0.15		ug/L	P431068	
		Acesulfame K	0.17	I	ug/L	P431014	
		2,4,5-T	0.0040	U	ug/L	P431068	
		AMPA	1.3		ug/L	P431014	
		Acetaminophen	0.0080	U	ug/L	P431068	
		Acetamiprid	0.0020	U	ug/L	P431068	
		Endothall	0.25	U	ug/L	P431014	
		Glufosinate	0.10	U	ug/L	P431014	
		Glyphosate	2.0		ug/L	P431014	
		Afidopyropen	0.0020	U	ug/L	P431068	
		Bentazon	0.0031	I	ug/L	P431068	
		Sucralose	0.17		ug/L	P431014	
		Benzovindiflupyr	0.0020	U	ug/L	P431068	
		Carbamazepine	8.0E-04	U	ug/L	P431068	
		Clothianidin	0.0020	U	ug/L	P431068	
		Dinotefuran	0.0035	I	ug/L	P431068	
		Diuron	0.021		ug/L	P431068	
		Fenuron	0.032	U	ug/L	P431068	
		Fluridone	0.010		ug/L	P431068	
		Imazapyr	0.0060	I	ug/L	P431068	
		Hydrocodone	0.0020	U	ug/L	P431068	
		Ibuprofen	0.080	U	ug/L	P431068	
		Imidacloprid	0.0074	I	ug/L	P431068	
		Linuron	0.0040	U	ug/L	P431068	
		Mandestrobin	0.0020	U	ug/L	P431068	
		MCP	0.0020	U	ug/L	P431068	
		Naproxen	0.0080	U	ug/L	P431068	
		Primidone	0.0040	U	ug/L	P431068	
		Pyraclostrobin	0.0020	U	ug/L	P431068	

Field ID: G4CE0202

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415992	EPA 8321B	Silvex	0.0040	U	ug/L	P431068	
		Thiamethoxam	0.0020	U	ug/L	P431068	
		Tolfenpyrad	0.0020	U	ug/L	P431068	
		Triclopyr	0.0040	U	ug/L	P431068	
2415993	EPA 200.7 Rev. 4.4	Calcium	31.4		mg/L	P431079	
		Iron	30	U	ug/L	P431079	
		Magnesium	4.10		mg/L	P431079	
		Potassium	2.6		mg/L	P431079	
		Sodium	8.4		mg/L	P431079	
		Strontium	73.7		ug/L	P431079	
		Tin	3.0	U	ug/L	P431079	
		Titanium	0.75	U	ug/L	P431079	
		Vanadium	2.0	U	ug/L	P431079	
		Zinc	5.0	U	ug/L	P431079	
	EPA 200.8 Rev. 5.4	Aluminum	57		ug/L	P431079	
		Antimony	1.46		ug/L	P431079	
		Arsenic	0.47		ug/L	P431079	
		Barium	9.09		ug/L	P431079	
		Beryllium	0.010	U	ug/L	P431079	
		Boron	31.3		ug/L	P431079	
		Cadmium	0.020	U	ug/L	P431079	
		Chromium	0.40	U	ug/L	P431079	
		Cobalt	0.025	I	ug/L	P431079	
		Copper	1.35		ug/L	P431079	
		Lead	0.27	I	ug/L	P431079	
		Manganese	3.86		ug/L	P431079	
		Molybdenum	3.17		ug/L	P431079	
		Nickel	0.50	U	ug/L	P431079	
		Selenium	0.33	I	ug/L	P431079	
		Silver	0.010	U	ug/L	P431079	
		Thallium	0.10	U	ug/L	P431079	
		Hardness	95.4		mg/L	P431079	
2415996	SM 2340 B-2011	Oxybenzone**	10	U	ng/L	P430843	MS
	EPA 8270E	Acetochlor	0.20	U	ng/L	P430843	
		Octinoxate**	20	U	ng/L	P430843	
		Alachlor	0.41	U	ng/L	P430843	
		Avobenzone**	100	U	ng/L	P430843	MS
		Ametryn	1.1	U	ng/L	P430843	
		Atrazine	29		ng/L	P430843	
		PBDE-47**	4.1	U	ng/L	P430843	
		Atrazine Desethyl	8.2		ng/L	P430843	
		PBDE-99**	5.1	U	ng/L	P430843	
		Azinphos Methyl	3.1	U	ng/L	P430843	
		Tri-o-cresyl Phosphate**	6.1	U	ng/L	P430843	MS
		Azoxystrobin	1.0	I	ng/L	P430843	

Field ID: G4CE0202

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415996	EPA 8270E	Bromacil	11		ng/L	P430843	
		2-Ethylhexyl	12	U	ng/L	P430843	
		2,3,4,5-tetrabromobenzoate (EHTBB)**					
		Butylate	0.20	U	ng/L	P430843	
		Dechlorane Plus**	31	U	ng/L	P430843	
		Caffeine**	370		ng/L	P430843	
		Dechlorane 602**	5.1	U	ng/L	P430843	
		Carbophenothion	0.51	U	ng/L	P430843	
		Dechlorane 603**	4.1	U	ng/L	P430843	MS
		Carfentrazone Ethyl	0.15	U	ng/L	P430843	
		Hexabromobenzene**	6.1	U	ng/L	P430843	
		Chlorfenapyr	0.31	U	ng/L	P430843	
		PBB-153**	8.2	U	ng/L	P430843	MS
		Chlorpyrifos Ethyl	0.31	U	ng/L	P430843	
		Pentabromotoluene**	3.1	U	ng/L	P430843	
		Chlorpyrifos Methyl	0.10	U	ng/L	P430843	
		Tris(2-chloroethyl) phosphate (TCEP)**	72	U	ng/L	P430843	
		Coumaphos	1.1	U	ng/L	P430843	
		Tris(1-chloro-2-propyl) phosphate (TCPP)**	450		ng/L	P430843	
		Cyanazine	5.1	U	ng/L	P430843	
		Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)**	31		ng/L	P430843	
		Cyprodinil	0.20	U	ng/L	P430843	
		Tetradecachloro-m-terphenyl**	7.7	U	ng/L	P430843	MS
		Demeton	3.6	U	ng/L	P430843	
		Diazinon	0.13	U	ng/L	P430843	
		Difenoconazole	0.61	U	ng/L	P430843	
		Dimethenamid	0.10	U	ng/L	P430843	MS
		Dimethomorph	0.31	U	ng/L	P430843	
		Disulfoton	0.61	U	ng/L	P430843	
		Dithiopyr	1.0	U	ng/L	P430843	
		EPTC	0.51	U	ng/L	P430843	
		Ethion	0.31	U	ng/L	P430843	
		Ethoprop	0.13	U	ng/L	P430843	
		Etridiazole	0.10	U	ng/L	P430843	
		Fenamiphos	0.46	U	ng/L	P430843	
		Fenbuconazole	0.51	U	ng/L	P430843	
		Fipronil	0.25	I	ng/L	P430843	
		Fipronil Desulfinyl**	1.4		ng/L	P430843	
		Fipronil Sulfide	0.24	I	ng/L	P430843	MS
		Fipronil Sulfone	0.94		ng/L	P430843	
		Fluazifop-P-butyl	0.10	U	ng/L	P430843	
		Fludioxonil	0.10	U	ng/L	P430843	
		Flumioxazin	3.1	U	ng/L	P430843	
		Flutolanil	0.10	U	ng/L	P430843	RPD
		Fluxapyroxad	0.35	I	ng/L	P430843	

Field ID: G4CE0202

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415996	EPA 8270E	Fonofos	0.15	U	ng/L	P430843	
		Hexazinone	0.51	U	ng/L	P430843	
		Imazalil	0.67	U	ng/L	P430843	
		Iprodione	0.51	U	ng/L	P430843	
		Loratadine**	0.31	U	ng/L	P430843	
		Malathion	0.36	U	ng/L	P430843	
		Metalaxyl	0.51	U	ng/L	P430843	
		Metolachlor	1.7	I	ng/L	P430843	
		Metribuzin	0.41	U	ng/L	P430843	
		Mevinphos	1.0	U	ng/L	P430843	
		Molinate	0.26	U	ng/L	P430843	
		Myclobutanil	13		ng/L	P430843	
		Naled	2.6	U	ng/L	P430843	
		Napropamide	0.72	U	ng/L	P430843	
		Norflurazon	1.0	U	ng/L	P430843	
		Oxadiazon	0.82	I	ng/L	P430843	
		Oxyfluorfen	0.20	U	ng/L	P430843	
		Parathion Ethyl	0.15	U	ng/L	P430843	
		Parathion Methyl	0.20	U	ng/L	P430843	
		Pendimethalin	0.77	U	ng/L	P430843	
		Phenytol**	5.4	U	ng/L	P430843	
		Phorate	0.26	U	ng/L	P430843	
		Prodiamine	0.20	U	ng/L	P430843	
		Prometon	11	I	ng/L	P430843	
		Prometryn	0.36	U	ng/L	P430843	MS
		Pronamide	0.10	U	ng/L	P430843	
		Propanil	0.10	U	ng/L	P430843	
		Propargite	0.82	U	ng/L	P430843	
		Propiconazole	0.61	U	ng/L	P430843	
		Pyraflufen Ethyl	0.31	U	ng/L	P430843	
		Pyridaben	1.4	U	ng/L	P430843	
		Pyriproxyfen	0.26	U	ng/L	P430843	
		Simazine	1.1	I	ng/L	P430843	
		Stirophos	0.41	U	ng/L	P430843	
		Sulfentrazone	1.4	U	ng/L	P430843	
		Tebuconazole	2.1	I	ng/L	P430843	
		Terbufos	0.20	U	ng/L	P430843	
		Terbuthylazine	0.85	I	ng/L	P430843	
		Thiobencarb	0.51	U	ng/L	P430843	
		Triadimefon	0.15	U	ng/L	P430843	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked.

Sample Location: LAKE EMERALD AT CENTER

Collection Date/Time: 06/07/2023 10:42

Field ID: G4CE0204

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415979	DEP SOP: NU-094-1	Color (true)	35	A	PCU	P431023	
	EPA 180.1 Rev. 2.0	Turbidity	27		NTU	P431024	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P431227	
		Sulfate	9.1		mg SO4/L	P431229	
	SM 2320 B-2011	Total Alkalinity	23		mg CaCO3/L	P431145	
	SM 2540 C-2015	TDS	93		mg/L	P431272	
	SM 2540 D-2015	TSS	62		mg/L	P431161	
	SM 4500-F- C-2011	Fluoride	0.078	I	mg F/L	P431630	
2415982	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P431150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	5.6		mg N/L	P431397	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431366	
	EPA 365.1 Rev. 2.0	Total-P	0.54		mg P/L	P431122	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P431165	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LAKE LAWSONA NW OF CENTER

Collection Date/Time: 06/07/2023 10:15

Field ID: G2CE0286

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415995	EPA 200.7 Rev. 4.4	Calcium	13.3		mg/L	P431079	
		Iron	33	I	ug/L	P431079	
		Magnesium	2.75		mg/L	P431079	
		Potassium	1.7		mg/L	P431079	
		Sodium	11.1		mg/L	P431079	
		Strontium	42.8		ug/L	P431079	
		Tin	3.0	U	ug/L	P431079	
		Titanium	1.3	I	ug/L	P431079	
		Vanadium	2.0	U	ug/L	P431079	
	EPA 200.8 Rev. 5.4	Zinc	6.6	I	ug/L	P431079	
		Aluminum	82		ug/L	P431079	
		Antimony	1.06		ug/L	P431079	
		Arsenic	0.86		ug/L	P431079	
		Barium	13.0		ug/L	P431079	
		Beryllium	0.010	U	ug/L	P431079	
		Boron	36.4		ug/L	P431079	
		Cadmium	0.020	U	ug/L	P431079	
		Chromium	0.40	U	ug/L	P431079	
		Cobalt	0.043	I	ug/L	P431079	
		Copper	2.70		ug/L	P431079	
		Lead	2.07		ug/L	P431079	
		Manganese	6.99		ug/L	P431079	
		Molybdenum	1.22		ug/L	P431079	
		Nickel	0.50	U	ug/L	P431079	
		Selenium	0.20	U	ug/L	P431079	
		Silver	0.010	U	ug/L	P431079	
		Thallium	0.10	U	ug/L	P431079	
	SM 2340 B-2011	Hardness	44.6		mg/L	P431079	

Ref. Method and Comment:
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 06/14/2023.

Sample Location: LAKE OLIVE AT CENTER

Collection Date/Time: 06/07/2023 11:09

Field ID: G4CE0223

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2415980	DEP SOP: NU-094-1	Color (true)	24	A	PCU	P431020	
	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P431024	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P431227	
		Sulfate	6.0		mg SO4/L	P431229	
	SM 2320 B-2011	Total Alkalinity	59		mg CaCO3/L	P431145	
	SM 2540 C-2015	TDS	112		mg/L	P431272	
	SM 2540 D-2015	TSS	5	I	mg/L	P431161	
	SM 4500-F- C-2011	Fluoride	0.072	I	mg F/L	P431630	
2415983	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P431150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P431397	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431366	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P431122	
	SM 5310 B-2011	Organic Carbon	7.3		mg C/L	P431165	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P431020

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P431023

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431024

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431079

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431079

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431227

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431229

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431150

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431119

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431397

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431365

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431366

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431122

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P431010

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430843

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
Acetochlor	0.20	U	ng/L
Acetochlor	0.20	U	ng/L
Alachlor	0.40	U	ng/L
Alachlor	0.40	U	ng/L
Ametryn	1.1	U	ng/L
Ametryn	1.1	U	ng/L
Atrazine	0.20	U	ng/L
Atrazine	0.20	U	ng/L
Atrazine Desethyl	1.3	U	ng/L
Atrazine Desethyl	1.3	U	ng/L
Avobenzone	100	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	3.0	U	ng/L
Azinphos Methyl	3.0	U	ng/L
Azoxystrobin	0.40	U	ng/L
Azoxystrobin	0.40	U	ng/L
Bromacil	0.60	U	ng/L
Bromacil	0.60	U	ng/L
Butylate	0.20	U	ng/L
Butylate	0.20	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.15	U	ng/L
Carfentrazone Ethyl	0.15	U	ng/L
Chlorfenapyr	0.30	U	ng/L
Chlorfenapyr	0.30	U	ng/L
Chlorpyrifos Ethyl	0.30	U	ng/L
Chlorpyrifos Ethyl	0.30	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Coumaphos	1.0	U	ng/L
Coumaphos	1.0	U	ng/L
Cyanazine	5.0	U	ng/L
Cyanazine	5.0	U	ng/L
Cyprodinil	0.20	U	ng/L
Cyprodinil	0.20	U	ng/L
Dechlorane 602	5.0	U	ng/L
Dechlorane 602	5.0	U	ng/L
Dechlorane 603	4.0	U	ng/L
Dechlorane 603	4.0	U	ng/L
Dechlorane Plus	30	U	ng/L
Dechlorane Plus	30	U	ng/L
Demeton	3.5	U	ng/L
Demeton	3.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430843

Component	Result	Code	Units
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.30	U	ng/L
Dimethomorph	0.30	U	ng/L
Disulfoton	0.60	U	ng/L
Disulfoton	0.60	U	ng/L
Dithiopyr	1.0	U	ng/L
Dithiopyr	1.0	U	ng/L
EPTC	0.50	U	ng/L
EPTC	0.50	U	ng/L
Ethion	0.30	U	ng/L
Ethion	0.30	U	ng/L
Ethoprop	0.12	U	ng/L
Ethoprop	0.12	U	ng/L
Etridiazole	0.10	U	ng/L
Etridiazole	0.10	U	ng/L
Fenamiphos	0.45	U	ng/L
Fenamiphos	0.45	U	ng/L
Fenbuconazole	0.50	U	ng/L
Fenbuconazole	0.50	U	ng/L
Fipronil	0.20	U	ng/L
Fipronil	0.20	U	ng/L
Fipronil Desulfinyl	0.10	U	ng/L
Fipronil Desulfinyl	0.10	U	ng/L
Fipronil Sulfide	0.10	U	ng/L
Fipronil Sulfide	0.10	U	ng/L
Fipronil Sulfone	0.10	U	ng/L
Fipronil Sulfone	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.10	U	ng/L
Fludioxonil	0.10	U	ng/L
Flumioxazin	3.0	U	ng/L
Flumioxazin	3.0	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.25	U	ng/L
Fluxapyroxad	0.25	U	ng/L
Fonofos	0.15	U	ng/L
Fonofos	0.15	U	ng/L
Hexabromobenzene	6.0	U	ng/L
Hexabromobenzene	6.0	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.65	U	ng/L
Imazalil	0.65	U	ng/L
Iprodione	0.50	U	ng/L
Iprodione	0.50	U	ng/L
Loratadine	0.30	U	ng/L
Loratadine	0.30	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430843

Component	Result	Code	Units
Metalaxyl	0.50	U	ng/L
Metalaxyl	0.50	U	ng/L
Metolachlor	0.75	U	ng/L
Metolachlor	0.75	U	ng/L
Metribuzin	0.40	U	ng/L
Metribuzin	0.40	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.25	U	ng/L
Molinate	0.25	U	ng/L
Myclobutanil	0.35	U	ng/L
Myclobutanil	0.35	U	ng/L
Naled	2.5	U	ng/L
Naled	2.5	U	ng/L
Napropamide	0.70	U	ng/L
Napropamide	0.70	U	ng/L
Norflurazon	1.0	U	ng/L
Norflurazon	1.0	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.35	U	ng/L
Oxadiazon	0.35	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.20	U	ng/L
Oxyfluorfen	0.20	U	ng/L
Parathion Ethyl	0.15	U	ng/L
Parathion Ethyl	0.15	U	ng/L
Parathion Methyl	0.20	U	ng/L
Parathion Methyl	0.20	U	ng/L
PBB-153	8.0	U	ng/L
PBB-153	8.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	0.75	U	ng/L
Pendimethalin	0.75	U	ng/L
Pentabromotoluene	3.0	U	ng/L
Pentabromotoluene	3.0	U	ng/L
Phenytol	5.3	U	ng/L
Phenytol	5.3	U	ng/L
Phorate	0.25	U	ng/L
Phorate	0.25	U	ng/L
Prodiatone	0.20	U	ng/L
Prodiatone	0.20	U	ng/L
Prometon	3.0	U	ng/L
Prometon	3.0	U	ng/L
Prometryn	0.35	U	ng/L
Prometryn	0.35	U	ng/L
Pronamide	0.10	U	ng/L
Pronamide	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430843

Component	Result	Code	Units
Propanil	0.10	U	ng/L
Propanil	0.10	U	ng/L
Propargite	0.80	U	ng/L
Propargite	0.80	U	ng/L
Propiconazole	0.60	U	ng/L
Propiconazole	0.60	U	ng/L
Pyraflufen Ethyl	0.30	U	ng/L
Pyraflufen Ethyl	0.30	U	ng/L
Pyridaben	1.4	U	ng/L
Pyridaben	1.4	U	ng/L
Pyriproxyfen	0.25	U	ng/L
Pyriproxyfen	0.25	U	ng/L
Simazine	0.25	U	ng/L
Simazine	0.25	U	ng/L
Stirophos	0.40	U	ng/L
Stirophos	0.40	U	ng/L
Sulfentrazone	1.4	U	ng/L
Sulfentrazone	1.4	U	ng/L
Tebuconazole	1.4	U	ng/L
Tebuconazole	1.4	U	ng/L
Terbufos	0.20	U	ng/L
Terbufos	0.20	U	ng/L
Terbuthylazine	0.20	U	ng/L
Terbuthylazine	0.20	U	ng/L
Tetradecachloro-m-terphenyl	7.5	U	ng/L
Tetradecachloro-m-terphenyl	7.5	U	ng/L
Thiobencarb	0.50	U	ng/L
Thiobencarb	0.50	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.15	U	ng/L
Triadimefon	0.15	U	ng/L
Tris(1-chloro-2-propyl) phosphate (TCPP)	15	U	ng/L
Tris(1-chloro-2-propyl) phosphate (TCPP)	15	U	ng/L
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	2.5	U	ng/L
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	2.5	U	ng/L
Tris(2-chloroethyl) phosphate (TCEP)	70	U	ng/L
Tris(2-chloroethyl) phosphate (TCEP)	70	U	ng/L

Reference Method: EPA 8321B

Batch ID: P431014

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: EPA 8321B

Batch ID: P431068

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	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
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P431145

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

Reference Method: SM 2540 C-2015

Batch ID: P431272

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P431161

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P431630

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P431165

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P431020

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P431023

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431024

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.5		P	85 - 115
Iron	102		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	102		P	85 - 115
Sodium	99.9		P	85 - 115
Strontium	101		P	85 - 115
Tin	102		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	99.9		P	85 - 115
Zinc	99.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.9		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	98.2		P	85 - 115
Barium	100		P	85 - 115
Beryllium	91.7		P	85 - 115
Boron	101		P	85 - 115
Cadmium	95.5		P	85 - 115
Chromium	94.9		P	85 - 115
Cobalt	99.1		P	85 - 115
Copper	96.4		P	85 - 115
Lead	101		P	85 - 115
Manganese	99.1		P	80 - 120
Molybdenum	97.2		P	85 - 115
Nickel	97.1		P	85 - 115
Selenium	97.8		P	85 - 115
Silver	102		P	85 - 115
Thallium	97.4		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431227

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431229

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431119

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431397

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: P431365

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431366

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431122

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: P431010

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P430843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	121		P	42 - 162
Acetochlor	78.4		P	69 - 123
Alachlor	78.3		P	65 - 118
Ametryn	110		P	58 - 141
Atrazine	88.3		P	73 - 118
Atrazine Desethyl	87.5		P	32 - 125
Avobenzone	174		P	40 - 203
Azinphos Methyl	125		P	36 - 197
Azoxystrobin	96.8		P	58 - 226
Bromacil	95.2		P	48 - 120
Butylate	62.0		P	27 - 85.0
Caffeine	136		P	40 - 137
Carbophenothion	96.6		P	54 - 132
Carfentrazone Ethyl	112		P	60 - 142
Chlorfenapyr	78.5		P	53 - 117
Chlorpyrifos Ethyl	81.1		P	59 - 116
Chlorpyrifos Methyl	103		P	66 - 119
Coumaphos	132		P	11 - 234
Cyanazine	166		P	61 - 248
Cyprodinil	91.5		P	50 - 147
Dechlorane 602	114		P	50 - 150
Dechlorane 603	135		P	50 - 150
Dechlorane Plus	111		P	47 - 182
Demeton	76.5		P	30 - 138
Diazinon	97.2		P	67 - 126
Difenoconazole	135		P	38 - 205
Dimethenamid	95.6		P	57 - 111
Dimethomorph	99.0		P	16 - 212
Disulfoton	90.6		P	46 - 126
Dithiopyr	103		P	62 - 115
EPTC	60.4		P	28 - 80.0
Ethion	66.3		P	24 - 122
Ethoprop	89.3		P	62 - 113
Etridiazole	66.6		P	28 - 92.0
Fenamiphos	78.5		P	57 - 128
Fenbuconazole	87.7		P	52 - 155
Fipronil	99.5		P	63 - 130
Fipronil Desulfinyl	107		P	61 - 130
Fipronil Sulfide	109		P	56 - 117
Fipronil Sulfone	99.3		P	52 - 118
Fluazifop-P-butyl	89.3		P	61 - 128
Fludioxonil	103		P	59 - 129
Flumioxazin	138		P	30 - 250
Flutolanil	84.3		P	53 - 127
Fluxapyroxad	98.1		P	42 - 132
Fonofos	98.8		P	61 - 110
Hexabromobenzene	120		P	50 - 150
Hexazinone	91.9		P	46 - 139
Imazalil	93.6		P	40 - 139
Iprodione	96.0		P	40 - 146
Loratadine	145		P	10 - 224
Malathion	89.8		P	61 - 135

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P430843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Metalaxyl	84.1		P	58 - 121
Metolachlor	97.8		P	64 - 118
Metribuzin	103		P	45 - 245
Mevinphos	84.9		P	49 - 118
Molinate	60.5		P	42 - 92.0
Myclobutanil	91.7		P	55 - 127
Naled	47.3		P	10 - 114
Napropamide	75.1		P	39 - 121
Norflurazon	89.2		P	55 - 129
Octinoxate	125		P	26 - 166
Oxadiazon	85.1		P	54 - 115
Oxybenzone	133		P	49 - 135
Oxyfluorfen	99.6		P	64 - 139
Parathion Ethyl	99.1		P	70 - 111
Parathion Methyl	96.3		P	76 - 136
PBB-153	136		P	50 - 150
PBDE-47	105		P	41 - 148
PBDE-99	105		P	38 - 147
Pendimethalin	69.2		P	52 - 118
Pentabromotoluene	114		P	50 - 150
Phenytoin	51.6		P	10 - 162
Phorate	98.6		P	40 - 122
Prodiamine	44.7		P	26 - 141
Prometon	99.0		P	54 - 122
Prometryn	109		P	61 - 128
Pronamide	106		P	72 - 121
Propanil	117		P	45 - 144
Propargite	69.1		P	10 - 199
Propiconazole	82.4		P	56 - 127
Pyraflufen Ethyl	86.5		P	56 - 140
Pyridaben	108		P	26 - 211
Pyriproxyfen	101		P	33 - 194
Simazine	89.5		P	67 - 121
Stirophos	70.8		P	20 - 142
Sulfentrazone	93.9		P	21 - 144
Tebuconazole	59.8		P	10 - 122
Terbufos	96.5		P	60 - 129
Terbuthylazine	85.8		P	69 - 113
Tetradecachloro-m-terphenyl	190		P	70 - 200
Thiobencarb	79.3		P	51 - 120
Tri-o-cresyl Phosphate	125		P	49 - 150
Triadimefon	93.4		P	56 - 114
Tris(1-chloro-2-propyl) phosphate (TCPP)	115		P	50 - 150
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	113		P	50 - 150
Tris(2-chloroethyl) phosphate (TCEP)	122		P	70 - 180

Reference Method: EPA 8321B

Batch ID: P431014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	122		P	40 - 150
AMPA	124		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P431014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endothall	108		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	98.5		P	40 - 150
Sucralose	97.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P431068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	40 - 150
2,4,5-T	77.2		P	40 - 150
Acetaminophen	67.4		P	30 - 150
Acetamiprid	72.2		P	40 - 150
Afidopyropen	69.1		P	30 - 150
Bentazon	115		P	30 - 150
Benzovindiflupyr	89.8		P	40 - 150
Carbamazepine	71.4		P	40 - 150
Clothianidin	92.6		P	40 - 150
Dinotefuran	87.0		P	40 - 150
Diuron	85.4		P	40 - 150
Fenuron	82.1		P	40 - 150
Fluridone	89.3		P	40 - 150
Hydrocodone	96.7		P	40 - 150
Ibuprofen	79.5		P	40 - 150
Imazapyr	92.5		P	40 - 150
Imidacloprid	84.6		P	40 - 150
Linuron	59.8		P	40 - 150
Mandestrobin	88.1		P	40 - 150
MCPP	101		P	40 - 150
Naproxen	78.7		P	40 - 150
Primidone	79.8		P	40 - 150
Pyraclostrobin	81.4		P	40 - 150
Silvex	103		P	40 - 150
Thiamethoxam	87.7		P	40 - 150
Tolfenpyrad	50.1		P	30 - 150
Triclopyr	88.2		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P431145

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.8		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P431272

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P431161

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	92.2		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431630

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

Reference Method: SM 5310 B-2011
Batch ID: P431165

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P431079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415994	Calcium	99.1		P	80 - 120
2415994	Iron	102	104	P/P	80 - 120
2415994	Magnesium	98.8	101	P/P	80 - 120
2415994	Potassium	101	102	P/P	80 - 120
2415994	Sodium	95.8		P	80 - 120
2415994	Strontium	100	102	P/P	80 - 120
2415994	Tin	102	101	P/P	80 - 120
2415994	Titanium	101	102	P/P	80 - 120
2415994	Vanadium	102	101	P/P	80 - 120
2415994	Zinc	99.2	98.8	P/P	80 - 120
2416173	Calcium	101		P	80 - 120
2416173	Iron	101		P	80 - 120
2416173	Magnesium	100		P	80 - 120
2416173	Potassium	103		P	80 - 120
2416173	Sodium	103		P	80 - 120
2416173	Strontium	103		P	80 - 120
2416173	Tin	102		P	80 - 120
2416173	Titanium	101		P	80 - 120
2416173	Vanadium	102		P	80 - 120
2416173	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P431079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415994	Aluminum	98.8	97.9	P/P	80 - 120
2415994	Antimony	103	103	P/P	80 - 120
2415994	Arsenic	99.4	99.3	P/P	80 - 120
2415994	Barium	101	101	P/P	80 - 120
2415994	Beryllium	94.3	99.6	P/P	80 - 120
2415994	Boron	100	99.8	P/P	80 - 120
2415994	Cadmium	98.4	99.9	P/P	80 - 120
2415994	Chromium	94.9	95.7	P/P	80 - 120
2415994	Cobalt	99.1	99.2	P/P	80 - 120
2415994	Copper	96.4	96.7	P/P	80 - 120
2415994	Lead	104	103	P/P	80 - 120
2415994	Manganese	102	102	P/P	80 - 120
2415994	Molybdenum	98.4	98.7	P/P	80 - 120
2415994	Nickel	97.5	97.4	P/P	80 - 120
2415994	Selenium	98.5	99.7	P/P	80 - 120
2415994	Silver	102	102	P/P	80 - 120
2415994	Thallium	101	101	P/P	80 - 120
2416173	Aluminum	97.1		P	80 - 120
2416173	Antimony	102		P	80 - 120
2416173	Arsenic	97.2		P	80 - 120
2416173	Barium	99.8		P	80 - 120
2416173	Beryllium	96.2		P	80 - 120
2416173	Boron	99.4		P	80 - 120
2416173	Cadmium	99.6		P	80 - 120
2416173	Chromium	94.3		P	80 - 120
2416173	Cobalt	97.0		P	80 - 120
2416173	Copper	95.5		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2416173	Lead	102		P	80 - 120
2416173	Manganese	99.9		P	80 - 120
2416173	Molybdenum	98.5		P	80 - 120
2416173	Nickel	94.1		P	80 - 120
2416173	Selenium	98.5		P	80 - 120
2416173	Silver	101		P	80 - 120
2416173	Thallium	98.9		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415731	Chloride	98.1		P	90 - 110
2415980	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431229

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415731	Sulfate	94.3		P	90 - 110
2415980	Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415964	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415961	Kjeldahl Nitrogen	97.8	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2416514	Kjeldahl Nitrogen	103	98.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431365

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415959	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415982	NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P431122

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415981	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P431010

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415977	O-Phosphate-P	95.8	95.1	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P430843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415493	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	128	140	P/P	26 - 165
2415493	Acetochlor	86.1	91.5	P/P	67 - 124
2415493	Alachlor	78.8	88.7	P/P	60 - 120
2415493	Ametryn	114	127	P/P	54 - 216
2415493	Atrazine Desethyl	97.9	102	P/P	15 - 122
2415493	Avobenzene	167	193	P/F	37 - 178
2415493	Azinphos Methyl	134	132	P/P	40 - 292
2415493	Azoxystrobin	121	117	P/P	35 - 220
2415493	Bromacil	122	118	P/P	45 - 127
2415493	Butylate	68.0	72.3	P/P	20 - 83.0
2415493	Caffeine	143	142	P/P	10 - 194
2415493	Carbophenothion	104	111	P/P	57 - 127
2415493	Carfentrazone Ethyl	115	121	P/P	51 - 141
2415493	Chlorfenapyr	80.8	86.5	P/P	46 - 111
2415493	Chlorpyrifos Ethyl	95.7	94.4	P/P	52 - 120
2415493	Chlorpyrifos Methyl	110	113	P/P	63 - 119
2415493	Coumaphos	132	144	P/P	10 - 228
2415493	Cyanazine	178	188	P/P	59 - 241
2415493	Cyprodinil	101	114	P/P	47 - 146
2415493	Dechlorane 602	108	126	P/P	50 - 150
2415493	Dechlorane 603	148	161	P/F	50 - 150
2415493	Dechlorane Plus	106	116	P/P	50 - 150
2415493	Demeton	80.5	87.8	P/P	40 - 136
2415493	Diazinon	109	114	P/P	69 - 132
2415493	Difenoconazole	138	155	P/P	57 - 258
2415493	Dimethenamid	105	112	P/F	54 - 110
2415493	Dimethomorph	137	124	P/P	28 - 210
2415493	Disulfoton	98.4	105	P/P	43 - 133
2415493	Dithiopyr	112	116	P/P	39 - 116
2415493	EPTC	68.8	72.7	P/P	20 - 78.0
2415493	Ethion	67.3	77.2	P/P	17 - 119
2415493	Ethoprop	98.3	106	P/P	66 - 120
2415493	Etridiazole	70.7	78.3	P/P	28 - 96.0
2415493	Fenamiphos	94.2	99.0	P/P	41 - 126
2415493	Fenbuconazole	94.0	99.1	P/P	42 - 169
2415493	Fipronil	102	115	P/P	61 - 132
2415493	Fipronil Desulfinyl	114	119	P/P	56 - 132
2415493	Fipronil Sulfide	108	136	P/F	48 - 119
2415493	Fipronil Sulfone	107	123	P/P	42 - 131
2415493	Fluazifop-P-butyl	94.8	86.5	P/P	53 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P430843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415493	Fludioxonil	95.6	102	P/P	56 - 127
2415493	Flumioxazin	144	159	P/P	19 - 300
2415493	Flutolanil	74.5	119	P/P	41 - 127
2415493	Fluxapyroxad	92.0	106	P/P	42 - 172
2415493	Fonofos	112	112	P/P	59 - 113
2415493	Hexabromobenzene	140	146	P/P	50 - 150
2415493	Hexazinone	101	103	P/P	66 - 122
2415493	Imazalil	84.1	91.5	P/P	21 - 283
2415493	Iprodione	102	106	P/P	43 - 150
2415493	Loratadine	157	171	P/P	23 - 201
2415493	Malathion	96.7	106	P/P	58 - 136
2415493	Metaxyl	90.8	99.6	P/P	55 - 120
2415493	Metolachlor	109	111	P/P	57 - 121
2415493	Metribuzin	107	114	P/P	58 - 294
2415493	Mevinphos	96.7	105	P/P	50 - 126
2415493	Molinate	70.5	72.4	P/P	42 - 93.0
2415493	Myclobutanil	98.6	105	P/P	55 - 125
2415493	Naled	54.9	61.7	P/P	18 - 200
2415493	Napropamide	72.3	85.4	P/P	39 - 110
2415493	Norflurazon	102	101	P/P	48 - 128
2415493	Octinoxate	134	140	P/P	21 - 159
2415493	Oxadiazon	91.2	93.9	P/P	43 - 112
2415493	Oxybenzone	136	146	P/F	41 - 142
2415493	Oxyfluorfen	101	112	P/P	64 - 153
2415493	Parathion Ethyl	101	102	P/P	69 - 114
2415493	Parathion Methyl	110	104	P/P	79 - 139
2415493	PBB-153	147	161	P/F	50 - 150
2415493	PBDE-47	108	121	P/P	27 - 144
2415493	PBDE-99	103	119	P/P	18 - 150
2415493	Pendimethalin	92.1	89.1	P/P	50 - 139
2415493	Pentabromotoluene	130	133	P/P	50 - 150
2415493	Phenytoin	60.4	62.9	P/P	10 - 146
2415493	Phorate	91.3	109	P/P	54 - 161
2415493	Prodiamine	49.8	51.3	P/P	30 - 161
2415493	Prometon	102	109	P/P	45 - 134
2415493	Prometryn	119	139	P/F	45 - 137
2415493	Pronamide	108	121	P/P	65 - 133
2415493	Propanil	126	142	P/P	49 - 142
2415493	Propargite	69.6	71.4	P/P	10 - 203
2415493	Propiconazole	91.7	86.9	P/P	38 - 146
2415493	Pyraflufen Ethyl	97.7	83.4	P/P	34 - 153
2415493	Pyridaben	130	142	P/P	12 - 192
2415493	Pyriproxyfen	98.6	115	P/P	33 - 180
2415493	Simazine	108	114	P/P	51 - 157
2415493	Stirophos	77.1	83.2	P/P	10 - 128
2415493	Sulfentrazone	104	114	P/P	53 - 186
2415493	Tebuconazole	63.9	65.0	P/P	10 - 133
2415493	Terbufos	103	107	P/P	65 - 139
2415493	Terbutylazine	95.6	88.0	P/P	66 - 117
2415493	Tetradecachloro-m-terphenyl	221	234	F/F	70 - 200
2415493	Thiobencarb	91.2	100	P/P	51 - 119
2415493	Tri-o-cresyl Phosphate	134	145	P/F	31 - 144

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P430843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415493	Triadimefon	96.1	108	P/P	48 - 119
2415493	Tris(1-chloro-2-propyl) phosphate (TCPP)	106	107	P/P	50 - 150
2415493	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	121	131	P/P	50 - 150
2415493	Tris(2-chloroethyl) phosphate (TCEP)	127	139	P/P	70 - 180

Reference Method: EPA 8321B

Batch ID: P431014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415133	Acesulfame K	119	116	P/P	40 - 150
2415133	AMPA	73.6	78.6	P/P	40 - 150
2415133	Endothall	110	116	P/P	40 - 150
2415133	Glufosinate	88.2	96.2	P/P	40 - 150
2415133	Glyphosate	96.6	100	P/P	40 - 150
2415133	Sucralose	90.1	84.9	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P431068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415085	2,4-D	96.1	87.7	P/P	40 - 150
2415085	2,4,5-T	93.8	97.3	P/P	40 - 150
2415085	Acetaminophen	72.3	71.8	P/P	30 - 150
2415085	Acetamiprid	60.4	54.6	P/P	40 - 150
2415085	Afidopyropen	66.6	69.9	P/P	30 - 150
2415085	Bentazon	53.5	54.2	P/P	30 - 150
2415085	Benzovindiflupyr	71.1	74.0	P/P	40 - 150
2415085	Carbamazepine	68.3	63.6	P/P	40 - 150
2415085	Clothianidin	77.1	75.1	P/P	40 - 150
2415085	Dinotefuran	66.7	66.4	P/P	40 - 150
2415085	Diuron	72.1	70.2	P/P	40 - 150
2415085	Fenuron	57.2	64.4	P/P	40 - 150
2415085	Fluridone	88.5	76.0	P/P	40 - 150
2415085	Hydrocodone	63.7	60.1	P/P	40 - 150
2415085	Ibuprofen	75.9	82.0	P/P	40 - 150
2415085	Imazapyr	77.2	67.0	P/P	40 - 150
2415085	Imidacloprid	115	115	P/P	40 - 150
2415085	Linuron	61.7	73.6	P/P	40 - 150
2415085	Mandestrobin	89.2	79.7	P/P	40 - 150
2415085	MCPP	103	101	P/P	40 - 150
2415085	Naproxen	76.3	75.4	P/P	40 - 150
2415085	Primidone	68.2	71.5	P/P	40 - 150
2415085	Pyraclostrobin	86.1	77.5	P/P	40 - 150
2415085	Silvex	93.9	88.5	P/P	40 - 150
2415085	Thiamethoxam	82.5	82.1	P/P	40 - 150
2415085	Tolfenpyrad	56.1	52.9	P/P	30 - 150
2415085	Triclopyr	95.8	102	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P431630

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

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P431630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2416069	Fluoride	102	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P431165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2416263	Organic Carbon	93.2	94.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P431020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415980	Color (true)	5.29	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P431023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415979	Color (true)	1.26	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415707	Turbidity	11.6	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415994	Calcium	1.88	Spike	P	0 - 20
2415994	Iron	1.72	Spike	P	0 - 20
2415994	Magnesium	1.63	Spike	P	0 - 20
2415994	Potassium	0.933	Spike	P	0 - 20
2415994	Sodium	0.402	Spike	P	0 - 20
2415994	Strontium	1.39	Spike	P	0 - 20
2415994	Tin	0.899	Spike	P	0 - 20
2415994	Titanium	0.258	Spike	P	0 - 20
2415994	Vanadium	1.02	Spike	P	0 - 20
2415994	Zinc	0.402	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415994	Aluminum	0.777	Spike	P	0 - 20
2415994	Antimony	0.162	Spike	P	0 - 20
2415994	Arsenic	0.114	Spike	P	0 - 20
2415994	Barium	0.267	Spike	P	0 - 20
2415994	Beryllium	5.49	Spike	P	0 - 20
2415994	Boron	0.441	Spike	P	0 - 20
2415994	Cadmium	1.53	Spike	P	0 - 20
2415994	Chromium	0.782	Spike	P	0 - 20
2415994	Cobalt	0.134	Spike	P	0 - 20
2415994	Copper	0.256	Spike	P	0 - 20
2415994	Lead	0.236	Spike	P	0 - 20
2415994	Manganese	0.0939	Spike	P	0 - 20
2415994	Molybdenum	0.342	Spike	P	0 - 20
2415994	Nickel	0.0352	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415994	Selenium	1.13	Spike	P	0 - 20
2415994	Silver	0.686	Spike	P	0 - 20
2415994	Thallium	0.534	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415731	Chloride	1.35	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431229

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415731	Sulfate	1.30	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415964	Ammonia-N	0.425	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415961	Kjeldahl Nitrogen	3.85	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2416514	Kjeldahl Nitrogen	4.02	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415959	NO2NO3-N	0.396	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431366

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P431366

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415982	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P431122

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415981	Total-P	1.86	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P431010

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415977	O-Phosphate-P	0.733	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P430843

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415493	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	9.17	Spike	P	0 - 37
2415493	Acetochlor	5.99	Spike	P	0 - 28
2415493	Alachlor	11.7	Spike	P	0 - 30
2415493	Ametryn	10.8	Spike	P	0 - 32
2415493	Atrazine	0.711	Spike	P	0 - 41
2415493	Atrazine Desethyl	3.11	Spike	P	0 - 36
2415493	Avobenzone	14.0	Spike	P	0 - 36
2415493	Azinphos Methyl	1.62	Spike	P	0 - 75
2415493	Azoxystrobin	3.86	Spike	P	0 - 39
2415493	Bromacil	3.27	Spike	P	0 - 33
2415493	Butylate	6.19	Spike	P	0 - 44
2415493	Caffeine	1.06	Spike	P	0 - 74
2415493	Carbophenothion	6.11	Spike	P	0 - 25
2415493	Carfentrazone Ethyl	5.04	Spike	P	0 - 27
2415493	Chlorfenapyr	6.86	Spike	P	0 - 24
2415493	Chlorpyrifos Ethyl	1.41	Spike	P	0 - 26
2415493	Chlorpyrifos Methyl	2.47	Spike	P	0 - 26
2415493	Coumaphos	8.28	Spike	P	0 - 28
2415493	Cyanazine	5.47	Spike	P	0 - 48
2415493	Cyprodinil	12.4	Spike	P	0 - 29
2415493	Dechlorane 602	15.6	Spike	P	0 - 30
2415493	Dechlorane 603	8.35	Spike	P	0 - 30
2415493	Dechlorane Plus	8.99	Spike	P	0 - 30
2415493	Demeton	8.62	Spike	P	0 - 33
2415493	Diazinon	5.34	Spike	P	0 - 29
2415493	Difenoconazole	11.5	Spike	P	0 - 34
2415493	Dimethenamid	6.09	Spike	P	0 - 39
2415493	Dimethomorph	9.40	Spike	P	0 - 51
2415493	Disulfoton	6.37	Spike	P	0 - 30
2415493	Dithiopyr	3.21	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P430843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415493	EPTC	5.52	Spike	P	0 - 43
2415493	Ethion	13.7	Spike	P	0 - 79
2415493	Ethoprop	8.01	Spike	P	0 - 29
2415493	Etridiazole	10.2	Spike	P	0 - 33
2415493	Fenamiphos	4.95	Spike	P	0 - 40
2415493	Fenbuconazole	5.32	Spike	P	0 - 74
2415493	Fipronil	7.93	Spike	P	0 - 29
2415493	Fipronil Desulfinyl	3.53	Spike	P	0 - 32
2415493	Fipronil Sulfide	8.71	Spike	P	0 - 30
2415493	Fipronil Sulfone	4.12	Spike	P	0 - 33
2415493	Fluazifop-P-butyl	9.14	Spike	P	0 - 38
2415493	Fludioxonil	6.72	Spike	P	0 - 29
2415493	Flumioxazin	9.80	Spike	P	0 - 51
2415493	Flutolanil	46.2	Spike	F	0 - 25
2415493	Fluxapyroxad	14.4	Spike	P	0 - 45
2415493	Fonofos	0.170	Spike	P	0 - 27
2415493	Hexabromobenzene	4.10	Spike	P	0 - 30
2415493	Hexazinone	1.56	Spike	P	0 - 30
2415493	Imazalil	8.48	Spike	P	0 - 100
2415493	Iprodione	3.49	Spike	P	0 - 33
2415493	Loratadine	8.27	Spike	P	0 - 56
2415493	Malathion	9.08	Spike	P	0 - 37
2415493	Metalaxyl	9.20	Spike	P	0 - 40
2415493	Metolachlor	2.34	Spike	P	0 - 29
2415493	Metribuzin	6.30	Spike	P	0 - 45
2415493	Mevinphos	7.97	Spike	P	0 - 29
2415493	Molinate	2.75	Spike	P	0 - 33
2415493	Myclobutanil	6.11	Spike	P	0 - 26
2415493	Naled	11.6	Spike	P	0 - 37
2415493	Napropamide	16.6	Spike	P	0 - 44
2415493	Norflurazon	0.901	Spike	P	0 - 30
2415493	Octinoxate	4.48	Spike	P	0 - 45
2415493	Oxadiazon	3.00	Spike	P	0 - 28
2415493	Oxybenzone	6.80	Spike	P	0 - 46
2415493	Oxyfluorfen	9.91	Spike	P	0 - 28
2415493	Parathion Ethyl	0.810	Spike	P	0 - 31
2415493	Parathion Methyl	5.56	Spike	P	0 - 29
2415493	PBB-153	9.21	Spike	P	0 - 30
2415493	PBDE-47	11.7	Spike	P	0 - 36
2415493	PBDE-99	13.8	Spike	P	0 - 40
2415493	Pendimethalin	3.33	Spike	P	0 - 33
2415493	Pentabromotoluene	2.68	Spike	P	0 - 30
2415493	Phenytoin	4.00	Spike	P	0 - 100
2415493	Phorate	17.5	Spike	P	0 - 36
2415493	Prodiamine	2.87	Spike	P	0 - 71
2415493	Prometon	4.77	Spike	P	0 - 36
2415493	Prometryn	15.3	Spike	P	0 - 28
2415493	Pronamide	11.5	Spike	P	0 - 24
2415493	Propanil	11.4	Spike	P	0 - 28
2415493	Propargite	2.54	Spike	P	0 - 43
2415493	Propiconazole	3.28	Spike	P	0 - 33

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P430843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415493	Pyraflufen Ethyl	15.8	Spike	P	0 - 29
2415493	Pyridaben	8.92	Spike	P	0 - 30
2415493	Pyriproxyfen	15.6	Spike	P	0 - 79
2415493	Simazine	5.35	Spike	P	0 - 29
2415493	Stirophos	7.66	Spike	P	0 - 61
2415493	Sulfentrazone	6.90	Spike	P	0 - 33
2415493	Tebuconazole	1.84	Spike	P	0 - 69
2415493	Terbufos	3.93	Spike	P	0 - 29
2415493	Terbuthylazine	8.21	Spike	P	0 - 32
2415493	Tetradecachloro-m-terphenyl	5.36	Spike	P	0 - 30
2415493	Thiobencarb	9.69	Spike	P	0 - 26
2415493	Tri-o-cresyl Phosphate	8.11	Spike	P	0 - 33
2415493	Triadimefon	11.3	Spike	P	0 - 28
2415493	Tris(1-chloro-2-propyl) phosphate (TCPP)	0.139	Spike	P	0 - 30
2415493	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	8.05	Spike	P	0 - 30
2415493	Tris(2-chloroethyl) phosphate (TCEP)	9.00	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P431014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415133	Acesulfame K	2.58	Spike	P	0 - 30
2415133	AMPA	6.61	Spike	P	0 - 30
2415133	Endothall	5.38	Spike	P	0 - 30
2415133	Glufosinate	8.75	Spike	P	0 - 30
2415133	Glyphosate	3.88	Spike	P	0 - 30
2415133	Sucralose	5.65	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P431068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415085	2,4-D	8.33	Spike	P	0 - 30
2415085	2,4,5-T	3.57	Spike	P	0 - 30
2415085	Acetaminophen	0.692	Spike	P	0 - 30
2415085	Acetamiprid	10.1	Spike	P	0 - 30
2415085	Afidopyropen	4.76	Spike	P	0 - 30
2415085	Bentazon	1.19	Spike	P	0 - 30
2415085	Benzovindiflupyr	4.07	Spike	P	0 - 30
2415085	Carbamazepine	5.89	Spike	P	0 - 30
2415085	Clothianidin	2.52	Spike	P	0 - 30
2415085	Dinotefuran	0.411	Spike	P	0 - 30
2415085	Diuron	2.72	Spike	P	0 - 30
2415085	Fenuron	12.0	Spike	P	0 - 30
2415085	Fluridone	7.31	Spike	P	0 - 30
2415085	Hydrocodone	5.91	Spike	P	0 - 30
2415085	Ibuprofen	7.73	Spike	P	0 - 30
2415085	Imazapyr	11.6	Spike	P	0 - 30
2415085	Imidacloprid	0.271	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P431068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415085	Linuron	17.7	Spike	P	0 - 30
2415085	Mandestrobin	11.2	Spike	P	0 - 30
2415085	MCP	2.18	Spike	P	0 - 30
2415085	Naproxen	1.29	Spike	P	0 - 30
2415085	Primidone	4.79	Spike	P	0 - 30
2415085	Pyraclostrobin	10.5	Spike	P	0 - 30
2415085	Silvex	5.89	Spike	P	0 - 30
2415085	Thiamethoxam	0.547	Spike	P	0 - 30
2415085	Tolfenpyrad	5.96	Spike	P	0 - 30
2415085	Triclopyr	5.82	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
 Batch ID: P431145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2416069	Total Alkalinity	2.39	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
 Batch ID: P431272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415975	TDS	1.69	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
 Batch ID: P431630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2416069	Fluoride	0.520	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
 Batch ID: P431165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2416263	Organic Carbon	1.24	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2415992
Field Sample ID: G4CE0202

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.0	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.8	P	30 - 160
EPA 8321B	Primidone-d5	75.6	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2415996
Field Sample ID: G4CE0202

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	71.7	P	20 - 200
EPA 8270E	Simazine-d10	74.4	P	62 - 142
EPA 8270E	Terbufos-d10	83.4	P	58 - 132
EPA 8270E	Terphenyl-d14	96.5	P	52 - 137

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A119666

Included Lab Sample IDs: 2415977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	98.3	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A119671

Included Lab Sample IDs: 2415975, 2415978, 2415979, 2415980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.6	99.4	P/P	90 - 110
Color (true)	99.9	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119672

Included Lab Sample IDs: 2415975, 2415978, 2415979, 2415980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	96.5	97.0	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A119721

Included Lab Sample IDs: 2415992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	119	140	P/P	60 - 160
Sucralose	88.6	79.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A119722

Included Lab Sample IDs: 2415992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	107	P/P	60 - 160
Endothall	107	104	P/P	60 - 160
Glufosinate	113	93.7	P/P	60 - 160
Glyphosate	105	106	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A119730

Included Lab Sample IDs: 2415975, 2415978, 2415979, 2415980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.3	96.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119733

Included Lab Sample IDs: 2415976, 2415981, 2415982, 2415983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A119745

Included Lab Sample IDs: 2415993, 2415994, 2415995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.6	97.3	P/P	90 - 110
Antimony	100	99.6	P/P	90 - 110
Arsenic	99.0	97.3	P/P	90 - 110
Barium	98.7	97.5	P/P	90 - 110
Beryllium	95.3	95.7	P/P	90 - 110
Boron	95.7	95.8	P/P	90 - 110
Cadmium	97.1	97.0	P/P	90 - 110
Chromium	96.6	96.0	P/P	90 - 110
Cobalt	99.5	98.6	P/P	90 - 110
Copper	96.4	95.0	P/P	90 - 110
Lead	101	100	P/P	90 - 110
Molybdenum	96.0	95.1	P/P	90 - 110
Nickel	97.3	96.1	P/P	90 - 110
Selenium	97.7	97.1	P/P	90 - 110
Silver	101	100	P/P	90 - 110
Thallium	99.0	98.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119748

Included Lab Sample IDs: 2415996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	105		P	80 - 120
Avobenzene	118		P	80 - 120
Dechlorane 602	103		P	80 - 120
Dechlorane 603	105		P	80 - 120
Dechlorane Plus	100		P	80 - 120
Hexabromobenzene	102		P	80 - 120
Octinoxate	96.1		P	80 - 120
Oxybenzone	97.0		P	80 - 120
PBB-153	107		P	80 - 120
PBDE-47	99.6		P	80 - 120
PBDE-99	104		P	80 - 120
Pentabromotoluene	99.1		P	80 - 120
Tetradecachloro-m-terphenyl	117		P	80 - 120
Tri-o-cresyl Phosphate	102		P	80 - 120
Tris(1-chloro-2-propyl) phosphate (TCPP)	85.4		P	80 - 120
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	94.8		P	80 - 120
Tris(2-chloroethyl) phosphate (TCEP)	91.5		P	80 - 120

Reference Method: SM 5310 B-2011

Run ID: A119749

Included Lab Sample IDs: 2415976, 2415981, 2415982, 2415983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119763

Included Lab Sample IDs: 2415982, 2415983

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119766

Included Lab Sample IDs: 2415976, 2415981

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119778

Included Lab Sample IDs: 2415975, 2415978, 2415979, 2415980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.6	98.5	P/P	90 - 110
Chloride	99.1	96.6	P/P	90 - 110
Sulfate	97.2	98.4	P/P	90 - 110
Sulfate	99.1	97.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A119779

Included Lab Sample IDs: 2415993, 2415994, 2415995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Manganese	97.9	98.7	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119782

Included Lab Sample IDs: 2415996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	87.5		P	80 - 120
Alachlor	90.2		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	90.0		P	80 - 120
Atrazine Desethyl	106		P	80 - 120
Azinphos Methyl	93.7		P	80 - 120
Azoxystrobin	95.5		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	96.1		P	80 - 120
Caffeine	114		P	80 - 120
Carbophenothion	97.3		P	80 - 120
Carfentrazone Ethyl	99.4		P	80 - 120
Chlorfenapyr	88.3		P	80 - 120
Chlorpyrifos Ethyl	85.6		P	80 - 120
Chlorpyrifos Methyl	106		P	80 - 120
Coumaphos	95.1		P	80 - 120
Cyanazine	99.9		P	80 - 120
Cyprodinil	101		P	80 - 120
Demeton	99.7		P	80 - 120
Diazinon	98.0		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E
 Run ID: A119782
 Included Lab Sample IDs: 2415996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Difenoconazole	103		P	80 - 120
Dimethenamid	100		P	80 - 120
Dimethomorph	86.1		P	80 - 120
Disulfoton	95.0		P	80 - 120
Dithiopyr	106		P	80 - 120
EPTC	99.4		P	80 - 120
Ethion	82.3		P	80 - 120
Ethoprop	104		P	80 - 120
Etridiazole	91.2		P	80 - 120
Fenamiphos	89.0		P	80 - 120
Fenbuconazole	85.9		P	80 - 120
Fipronil	88.3		P	80 - 120
Fipronil Desulfinyl	106		P	80 - 120
Fipronil Sulfide	106		P	80 - 120
Fipronil Sulfone	104		P	80 - 120
Fluazifop-P-butyl	94.0		P	80 - 120
Fludioxonil	113		P	80 - 120
Flumioxazin	92.6		P	80 - 120
Flutolanil	105		P	80 - 120
Fluxapyroxad	105		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	100		P	80 - 120
Imazalil	97.6		P	80 - 120
Iprodione	84.7		P	80 - 120
Loratadine	82.7		P	80 - 120
Malathion	86.6		P	80 - 120
Metalaxyl	96.1		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	99.4		P	80 - 120
Mevinphos	103		P	80 - 120
Molinate	89.4		P	80 - 120
Myclobutanil	89.8		P	80 - 120
Naled	96.7		P	80 - 120
Napropamide	99.8		P	80 - 120
Norflurazon	96.0		P	80 - 120
Oxadiazon	99.4		P	80 - 120
Oxyfluorfen	96.6		P	80 - 120
Parathion Ethyl	94.1		P	80 - 120
Parathion Methyl	92.6		P	80 - 120
Pendimethalin	94.8		P	80 - 120
Phenytoin	99.2		P	80 - 120
Phorate	99.8		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	112		P	80 - 120
Pronamide	101		P	80 - 120
Propanil	108		P	80 - 120
Propargite	96.2		P	80 - 120
Propiconazole	90.8		P	80 - 120
Pyraflufen Ethyl	97.5		P	80 - 120
Pyridaben	95.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A119782
Included Lab Sample IDs: 2415996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyriproxyfen	102		P	80 - 120
Simazine	90.4		P	80 - 120
Stirophos	86.3		P	80 - 120
Sulfentrazone	110		P	80 - 120
Tebuconazole	98.7		P	80 - 120
Terbufos	98.6		P	80 - 120
Terbuthylazine	91.0		P	80 - 120
Thiobencarb	103		P	80 - 120
Triadimefon	107		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A119811
Included Lab Sample IDs: 2415993, 2415994, 2415995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.6	99.8	P/P	90 - 110
Iron	102	100	P/P	90 - 110
Magnesium	100	99.0	P/P	90 - 110
Potassium	100	99.2	P/P	90 - 110
Sodium	99.5	95.3	P/P	90 - 110
Strontium	101	101	P/P	90 - 110
Tin	99.6	101	P/P	90 - 110
Titanium	99.4	99.8	P/P	90 - 110
Vanadium	97.9	98.8	P/P	90 - 110
Zinc	96.7	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A119838
Included Lab Sample IDs: 2415976, 2415981, 2415982, 2415983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	105	P/P	90 - 110
NO2NO3-N	105	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A119841
Included Lab Sample IDs: 2415976

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A119880
Included Lab Sample IDs: 2415981, 2415983

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119886

Included Lab Sample IDs: 2415982

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

Reference Method: EPA 8321B

Run ID: A119900

Included Lab Sample IDs: 2415992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.3	86.0	P/P	50 - 150
2,4,5-T	93.8	105	P/P	50 - 150
Acetaminophen	82.1	95.1	P/P	60 - 160
Acetamiprid	109	103	P/P	50 - 150
Afidopyropen	119	143	P/P	50 - 150
Bentazon	118	120	P/P	50 - 160
Benzovindiflupyr	85.0	118	P/P	50 - 150
Carbamazepine	97.0	104	P/P	60 - 150
Clothianidin	133	121	P/P	60 - 150
Dinotefuran	108	114	P/P	50 - 150
Diuron	110	114	P/P	60 - 160
Fenuron	92.5	97.2	P/P	60 - 150
Fluridone	111	112	P/P	60 - 160
Hydrocodone	117	116	P/P	60 - 150
Ibuprofen	133	106	P/P	50 - 160
Imazapyr	98.8	103	P/P	50 - 150
Imidacloprid	93.0	83.2	P/P	60 - 150
Linuron	81.7	100	P/P	60 - 150
Mandestrobin	101	105	P/P	50 - 150
MCPP	101	98.9	P/P	50 - 150
Naproxen	72.3	101	P/P	50 - 160
Primidone	101	90.1	P/P	60 - 150
Pyraclostrobin	101	107	P/P	60 - 150
Silvex	106	103	P/P	50 - 150
Thiamethoxam	130	94.9	P/P	50 - 150
Tolfenpyrad	111	103	P/P	60 - 150
Triclopyr	88.3	110	P/P	50 - 150

Reference Method: SM 4500-F- C-2011

Run ID: A119960

Included Lab Sample IDs: 2415975, 2415978, 2415979, 2415980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	102	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			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	98.7				5.29	
	Color (true)	99.3				1.26	
EPA 180.1 Rev. 2.0	Turbidity	96.0				11.6	
EPA 200.7 Rev. 4.4	Calcium	99.5	99.1	101			1.88
	Iron	102	102	104	101		1.72
	Magnesium	102	98.8	101	100		1.63
	Potassium	102	101	102	103		0.933
	Sodium	99.9	95.8	103			0.402
	Strontium	101	100	102	103		1.39
	Tin	102	102	101	102		0.899
	Titanium	101	101	102	101		0.258
	Vanadium	99.9	102	101	102		1.02
	Zinc	99.9	99.2	98.8	105		0.402
EPA 200.8 Rev. 5.4	Aluminum	97.9	98.8	97.9	97.1		0.777
	Antimony	103	103	103	102		0.162
	Arsenic	98.2	99.4	99.3	97.2		0.114
	Barium	100	101	101	99.8		0.267
	Beryllium	91.7	94.3	99.6	96.2		5.49
	Boron	101	100	99.8	99.4		0.441
	Cadmium	95.5	98.4	99.9	99.6		1.53
	Chromium	94.9	94.9	95.7	94.3		0.782
	Cobalt	99.1	99.1	99.2	97.0		0.134
	Copper	96.4	96.4	96.7	95.5		0.256
	Lead	101	104	103	102		0.236
	Manganese	99.1	102	102	99.9		0.0939
	Molybdenum	97.2	98.4	98.7	98.5		0.342
	Nickel	97.1	97.5	97.4	94.1		0.0352
	Selenium	97.8	98.5	99.7	98.5		1.13
	Silver	102	102	102	101		0.686
	Thallium	97.4	101	101	98.9		0.534
EPA 300.0 Rev. 2.1	Chloride	98.9	98.1	97.2		1.35	
	Sulfate	98.7	94.3	97.1		1.30	
EPA 350.1 Rev. 2.0	Ammonia-N	94.6	100	101			0.425
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	97.8	103			3.85
	Kjeldahl Nitrogen	101	103	98.7			4.02
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103	102			0.396
	NO2NO3-N	104	102	102			0.0
EPA 365.1 Rev. 2.0	Total-P	101	104	102			1.86
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.2	95.8	95.1			0.733
EPA 8270E	2-Ethylhexyl	121	140	128			9.17
	2,3,4,5-tetrabromobenzoate (EHTBB)						
	Acetochlor	78.4	86.1	91.5			5.99
	Alachlor	78.3	78.8	88.7			11.7
	Ametryn	110	114	127			10.8
	Atrazine	88.3					0.711
	Atrazine Desethyl	87.5	97.9	102			3.11
	Avobenzone	174	193	167			14.0
	Azinphos Methyl	125	134	132			1.62
	Azoxystrobin	96.8	121	117			3.86
	Bromacil	95.2	122	118			3.27
	Butylate	62.0	68.0	72.3			6.19
	Caffeine	136	143	142			1.06
	Carbophenothion	96.6	104	111			6.11

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Carfentrazone Ethyl	112	115	121			5.04
	Chlorfenapyr	78.5	80.8	86.5			6.86
	Chlorpyrifos Ethyl	81.1	95.7	94.4			1.41
	Chlorpyrifos Methyl	103	110	113			2.47
	Coumaphos	132	132	144			8.28
	Cyanazine	166	178	188			5.47
	Cyprodinil	91.5	101	114			12.4
	Dechlorane 602	114	126	108			15.6
	Dechlorane 603	135	161	148			8.35
	Dechlorane Plus	111	116	106			8.99
	Demeton	76.5	80.5	87.8			8.62
	Diazinon	97.2	109	114			5.34
	Difenoconazole	135	138	155			11.5
	Dimethenamid	95.6	105	112			6.09
	Dimethomorph	99.0	137	124			9.40
	Disulfoton	90.6	98.4	105			6.37
	Dithiopyr	103	112	116			3.21
	EPTC	60.4	68.8	72.7			5.52
	Ethion	66.3	67.3	77.2			13.7
	Ethoprop	89.3	98.3	106			8.01
	Etridiazole	66.6	70.7	78.3			10.2
	Fenamiphos	78.5	94.2	99.0			4.95
	Fenbuconazole	87.7	94.0	99.1			5.32
	Fipronil	99.5	102	115			7.93
	Fipronil Desulfinyl	107	114	119			3.53
	Fipronil Sulfide	109	108	136			8.71
	Fipronil Sulfone	99.3	107	123			4.12
	Fluazifop-P-butyl	89.3	94.8	86.5			9.14
	Fludioxonil	103	95.6	102			6.72
	Flumioxazin	138	144	159			9.80
	Flutolanil	84.3	119	74.5			46.2
	Fluxapyroxad	98.1	106	92.0			14.4
	Fonofos	98.8	112	112			0.170
	Hexabromobenzene	120	146	140			4.10
	Hexazinone	91.9	103	101			1.56
	Imazalil	93.6	91.5	84.1			8.48
	Iprodione	96.0	106	102			3.49
	Loratadine	145	171	157			8.27
	Malathion	89.8	106	96.7			9.08
	Metalaxyl	84.1	99.6	90.8			9.20
	Metolachlor	97.8	111	109			2.34
	Metribuzin	103	114	107			6.30
	Mevinphos	84.9	105	96.7			7.97
	Molinate	60.5	72.4	70.5			2.75
	Myclobutanil	91.7	105	98.6			6.11
	Naled	47.3	61.7	54.9			11.6
	Napropamide	75.1	85.4	72.3			16.6
	Norflurazon	89.2	101	102			0.901
	Octinoxate	125	140	134			4.48
	Oxadiazon	85.1	93.9	91.2			3.00
	Oxybenzone	133	146	136			6.80
	Oxyfluorfen	99.6	112	101			9.91
	Parathion Ethyl	99.1	102	101			0.810
	Parathion Methyl	96.3	104	110			5.56

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	PBB-153	136	161	147			9.21
	PBDE-47	105	121	108			11.7
	PBDE-99	105	119	103			13.8
	Pendimethalin	69.2	89.1	92.1			3.33
	Pentabromotoluene	114	133	130			2.68
	Phenytoin	51.6	62.9	60.4			4.00
	Phorate	98.6	109	91.3			17.5
	Prodiamine	44.7	51.3	49.8			2.87
	Prometon	99.0	109	102			4.77
	Prometryn	109	139	119			15.3
	Pronamide	106	121	108			11.5
	Propanil	117	142	126			11.4
	Propargite	69.1	71.4	69.6			2.54
	Propiconazole	82.4	86.9	91.7			3.28
	Pyraflufen Ethyl	86.5	83.4	97.7			15.8
	Pyridaben	108	142	130			8.92
	Pyriproxyfen	101	115	98.6			15.6
	Simazine	89.5	114	108			5.35
	Stirophos	70.8	83.2	77.1			7.66
	Sulfentrazone	93.9	114	104			6.90
	Tebuconazole	59.8	65.0	63.9			1.84
	Terbufos	96.5	107	103			3.93
	Terbutylazine	85.8	88.0	95.6			8.21
	Tetradecachloro-m-terphenyl	190	221	234			5.36
	Thiobencarb	79.3	100	91.2			9.69
	Tri-o-cresyl Phosphate	125	145	134			8.11
	Triadimefon	93.4	108	96.1			11.3
	Tris(1-chloro-2-propyl) phosphate (TCPP)	115	106	107			0.139
	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	113	121	131			8.05
	Tris(2-chloroethyl) phosphate (TCEP)	122	139	127			9.00
EPA 8321B	2,4-D	104	96.1	87.7			8.33
	2,4,5-T	77.2	93.8	97.3			3.57
	Acesulfame K	122	119	116			2.58
	Acetaminophen	67.4	71.8	72.3			0.692
	Acetamiprid	72.2	54.6	60.4			10.1
	Afidopyropen	69.1	69.9	66.6			4.76
	AMPA	124	73.6	78.6			6.61
	Bentazon	115	53.5	54.2			1.19
	Benzovindiflupyr	89.8	71.1	74.0			4.07
	Carbamazepine	71.4	63.6	68.3			5.89
	Clothianidin	92.6	75.1	77.1			2.52
	Dinotefuran	87.0	66.4	66.7			0.411
	Diuron	85.4	70.2	72.1			2.72
	Endothall	108	110	116			5.38
	Fenuron	82.1	64.4	57.2			12.0
	Fluridone	89.3	88.5	76.0			7.31
	Glufosinate	105	88.2	96.2			8.75
	Glyphosate	98.5	96.6	100			3.88
	Hydrocodone	96.7	60.1	63.7			5.91
	Ibuprofen	79.5	75.9	82.0			7.73
	Imazapyr	92.5	77.2	67.0			11.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Imidacloprid	84.6	115	115		
	Linuron	59.8	61.7	73.6		
	Mandestrobin	88.1	89.2	79.7		
	MCP	101	103	101		
	Naproxen	78.7	76.3	75.4		
	Primidone	79.8	71.5	68.2		
	Pyraclostrobin	81.4	86.1	77.5		
	Silvex	103	93.9	88.5		
	Sucralose	97.2	90.1	84.9		
	Thiamethoxam	87.7	82.1	82.5		
	Tolfenpyrad	50.1	56.1	52.9		
	Triclopyr	88.2	95.8	102		
SM 2320 B-2011	Total Alkalinity	97.8				2.39
SM 2540 C-2015	TDS	96.3				1.69
SM 2540 D-2015	TSS	92.2				
SM 4500-F- C-2011	Fluoride	98.9	102	102		
SM 5310 B-2011	Organic Carbon	94.7	93.2	94.7		

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2415975, 2415978, 2415979, 2415980
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2415975, 2415978, 2415979, 2415980
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2415993, 2415994, 2415995
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2415993, 2415994, 2415995
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2415975, 2415978, 2415979, 2415980
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2415975, 2415978, 2415979, 2415980
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2415976, 2415981, 2415982, 2415983
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2415976, 2415981, 2415982, 2415983
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2415976, 2415981, 2415982, 2415983
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2415976, 2415981, 2415982, 2415983
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2415977
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2415996
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2415996
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2415992
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2415975, 2415978, 2415979, 2415980
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2415993, 2415994, 2415995
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2415975, 2415978, 2415979, 2415980
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2415975, 2415978, 2415979, 2415980
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2415975, 2415978, 2415979, 2415980
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2415976, 2415981, 2415982, 2415983

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	06/08/2023			06/08/2023 15:15	Samantha L Bates	2415975
	06/08/2023			06/08/2023 15:16	Samantha L Bates	2415978
	06/08/2023			06/08/2023 15:17	Samantha L Bates	2415980
	06/08/2023			06/08/2023 15:39	Samantha L Bates	2415979
EPA 180.1 Rev. 2.0	06/08/2023			06/08/2023 14:35	Anna M. Plaviak	2415975
	06/08/2023			06/08/2023 14:37	Anna M. Plaviak	2415978
	06/08/2023			06/08/2023 14:38	Anna M. Plaviak	2415979
	06/08/2023			06/08/2023 14:40	Anna M. Plaviak	2415980
EPA 200.7 Rev. 4.4	06/08/2023	06/09/2023 12:40	George D Taylor	06/14/2023 20:48	McKinley C Carter	2415993
	06/08/2023	06/09/2023 12:40	George D Taylor	06/14/2023 20:56	McKinley C Carter	2415994
	06/08/2023	06/09/2023 12:40	George D Taylor	06/14/2023 21:27	McKinley C Carter	2415995
EPA 200.8 Rev. 5.4	06/08/2023	06/09/2023 12:40	George D Taylor	06/12/2023 17:06	Conrad Hartmann	2415993
	06/08/2023	06/09/2023 12:40	George D Taylor	06/12/2023 17:15	Conrad Hartmann	2415995
	06/08/2023	06/09/2023 12:40	George D Taylor	06/12/2023 17:24	Conrad Hartmann	2415994
	06/08/2023	06/09/2023 12:40	George D Taylor	06/13/2023 15:24	Emily M Philpot	2415993
	06/08/2023	06/09/2023 12:40	George D Taylor	06/13/2023 15:30	Emily M Philpot	2415995
EPA 300.0 Rev. 2.1	06/08/2023	06/09/2023 12:40	George D Taylor	06/13/2023 15:43	Emily M Philpot	2415994
	06/08/2023			06/13/2023 11:30	James L Waggeberby	2415980
	06/08/2023			06/13/2023 15:46	James L Waggeberby	2415975
	06/08/2023			06/13/2023 16:01	James L Waggeberby	2415978
	06/08/2023			06/13/2023 16:16	James L Waggeberby	2415979
EPA 350.1 Rev. 2.0	06/08/2023			06/12/2023 13:18	Khloe J Berg	2415976
	06/08/2023			06/12/2023 13:19	Khloe J Berg	2415981
	06/08/2023			06/12/2023 13:20	Khloe J Berg	2415982
	06/08/2023			06/12/2023 13:22	Khloe J Berg	2415983
EPA 351.2 Rev. 2.0	06/08/2023	06/12/2023 12:30	Simonne.V. Calhoun	06/15/2023 11:31	Ping Hua	2415976
	06/08/2023	06/16/2023 10:18	Simonne.V. Calhoun	06/19/2023 10:54	Samantha L Bates	2415981
	06/08/2023	06/16/2023 10:18	Simonne.V. Calhoun	06/19/2023 10:57	Samantha L Bates	2415983
	06/08/2023	06/16/2023 10:18	Simonne.V. Calhoun	06/19/2023 12:54	Samantha L Bates	2415982
EPA 353.2 Rev. 2.0	06/08/2023			06/15/2023 09:47	Beverly Y. Sanders	2415976
	06/08/2023			06/15/2023 09:49	Beverly Y. Sanders	2415981
	06/08/2023			06/15/2023 09:56	Beverly Y. Sanders	2415982
	06/08/2023			06/15/2023 10:02	Beverly Y. Sanders	2415983
EPA 365.1 Rev. 2.0	06/08/2023	06/12/2023 13:00	Alexis Price	06/13/2023 12:17	Simonne.V. Calhoun	2415982
	06/08/2023	06/12/2023 13:00	Alexis Price	06/13/2023 12:18	Simonne.V. Calhoun	2415983
	06/08/2023	06/12/2023 13:00	Alexis Price	06/13/2023 14:06	Simonne.V. Calhoun	2415981
	06/08/2023	06/12/2023 13:00	Alexis Price	06/13/2023 14:07	Simonne.V. Calhoun	2415976
EPA 365.1 Rev. 2.0 dissolved	06/08/2023			06/08/2023 14:03	Adam P Silver	2415977
EPA 8270E	06/08/2023	06/08/2023 11:30	Fe-Val Siddell	06/12/2023 18:33	Vandana T. Nagar	2415996
	06/08/2023	06/08/2023 11:30	Fe-Val Siddell	06/13/2023 00:43	Arthur Maknenko	2415996

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	06/08/2023	06/10/2023 20:00	Touraj Touran	06/11/2023 00:30	Touraj Touran	2415992
	06/08/2023	06/10/2023 20:00	Touraj Touran	06/11/2023 09:49	Touraj Touran	2415992
	06/08/2023	06/12/2023 13:00	Hoor Shaik	06/19/2023 23:11	Juyoung Kim	2415992
SM 2320 B-2011	06/08/2023			06/11/2023 06:19	Dale L. Simmons	2415975
	06/08/2023			06/11/2023 06:29	Dale L. Simmons	2415978
	06/08/2023			06/11/2023 06:38	Dale L. Simmons	2415979
	06/08/2023			06/11/2023 06:49	Dale L. Simmons	2415980
SM 2340 B-2011	06/08/2023			06/14/2023 20:48	McKinley C Carter	2415993
	06/08/2023			06/14/2023 20:56	McKinley C Carter	2415994
	06/08/2023			06/14/2023 21:27	McKinley C Carter	2415995
	06/08/2023			06/09/2023 13:09	Dana G. Hughes	2415975, 2415978, 2415979, 2415980
SM 2540 C-2015	06/08/2023			06/09/2023 13:09	Dana G. Hughes	2415975, 2415978, 2415979, 2415980
SM 2540 D-2015	06/08/2023			06/21/2023 21:28	Dale L. Simmons	2415975
SM 4500-F- C-2011	06/08/2023			06/21/2023 21:34	Dale L. Simmons	2415978
	06/08/2023			06/21/2023 21:39	Dale L. Simmons	2415979
	06/08/2023			06/21/2023 21:44	Dale L. Simmons	2415980
	06/08/2023			06/12/2023 23:21	Elise M. Gillis	2415976
SM 5310 B-2011	06/08/2023			06/12/2023 23:37	Elise M. Gillis	2415981
	06/08/2023			06/12/2023 23:51	Elise M. Gillis	2415982
	06/08/2023			06/13/2023 00:06	Elise M. Gillis	2415983
	06/08/2023					