

Chemical Analysis Report

SE-DIST-2023-11-15-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **SMP - Okeechobee**
Request ID: **RQ-2023-10-23-19**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 13-DEC-2023 13:31



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: GOMEZ CREEK NORTH AT 441

Collection Date/Time: 11/14/2023 10:20

Field ID: G3SE0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451629	DEP SOP: NU-094-1	Color (true)	320		PCU	P437808	
	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P438148	
		Sulfate	4.0		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	37		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	134		mg/L	P438344	
	SM 2540 D-2015	TSS	8	I	mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P438018	
2451631	EPA 350.1 Rev. 2.0	Ammonia-N	0.41		mg N/L	P438430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.5		mg N/L	P438034	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P438096	
	EPA 365.1 Rev. 2.0	Total-P	0.47		mg P/L	P438118	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P438145	

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: LEMKIN CREEK AT 78

Collection Date/Time: 11/14/2023 11:10

Field ID: G1SE0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451636	DEP SOP: NU-094-1	Color (true)	90		PCU	P437808	
	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	93		mg Cl/L	P438316	
		Sulfate	74		mg SO4/L	P438319	
	SM 2320 B-2011	Total Alkalinity	110		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	388		mg/L	P438344	
	SM 2540 D-2015	TSS	2	U	mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P438018	
2451637	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P438431	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P438035	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P438097	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P438118	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P438145	
2451638	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P437833	

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: TAYLOR CREEK AT 98

Collection Date/Time: 11/14/2023 11:35

Field ID: G1SE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451633	DEP SOP: NU-094-1	Color (true)	130		PCU	P437808	
	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	53		mg Cl/L	P438316	
		Sulfate	22		mg SO4/L	P438319	
	SM 2320 B-2011	Total Alkalinity	125		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	268		mg/L	P438344	
	SM 2540 D-2015	TSS	10		mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.12		mg F/L	P438018	
2451634	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P438430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P438034	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.051		mg N/L	P438097	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P438118	
	SM 5310 B-2011	Organic Carbon	25		mg C/L	P438145	
2451635	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.096		mg P/L	P437833	
2451647	EPA 8270E	Aldrin	0.67	U	ng/L	P437988	
		Alpha-BHC	0.10	UJ	ng/L	P437988	LCS, MS
		Alpha-Chlordane	0.21	U	ng/L	P437988	
		PCB-1016	2.1	U	ng/L	P437988	
		Beta-BHC	0.10	U	ng/L	P437988	
		PCB-1221	2.1	U	ng/L	P437988	
		Beta-Cyfluthrin	1.3	U	ng/L	P437988	
		PCB-1232	2.1	U	ng/L	P437988	
		Bifenthrin	0.52	U	ng/L	P437988	
		PCB-1242	2.1	U	ng/L	P437988	
		PCB-1248	2.1	U	ng/L	P437988	
		Chlorothalonil	3.7	U	ng/L	P437988	
		PCB-1254	2.1	U	ng/L	P437988	
		Cis-Nonachlor	0.21	U	ng/L	P437988	
		PCB-1260	2.1	U	ng/L	P437988	
		Cypermethrin	1.6	U	ng/L	P437988	
		Dacthal	0.16	UJ	ng/L	P437988	LCS
		DDD-p,p'	0.26	U	ng/L	P437988	
		DDE-p,p'	0.21	U	ng/L	P437988	
		DDT-p,p'	0.83	U	ng/L	P437988	
		Delta-BHC	0.41	U	ng/L	P437988	
		Deltamethrin	1.3	U	ng/L	P437988	
		Dichlobenil	0.26	U	ng/L	P437988	
		Dicofol	1.3	U	ng/L	P437988	
		Dieldrin	0.41	U	ng/L	P437988	
		Endosulfan I	0.41	U	ng/L	P437988	
		Endosulfan II	0.93	U	ng/L	P437988	
		Endosulfan Sulfate	0.31	U	ng/L	P437988	
		Endrin	0.93	U	ng/L	P437988	

Field ID: G1SE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451647	EPA 8270E	Endrin Aldehyde	0.78	UJ	ng/L	P437988	CCV
		Endrin Ketone	0.41	UJ	ng/L	P437988	LCS, MS
		Esfenvalerate	0.78	U	ng/L	P437988	
		Ethalfuralin	0.16	U	ng/L	P437988	
		Fenpropathrin	0.26	U	ng/L	P437988	
		Gamma-BHC	0.13	U	ng/L	P437988	
		Gamma-Chlordane	0.21	U	ng/L	P437988	
		Heptachlor	0.21	U	ng/L	P437988	
		Heptachlor Epoxide	0.26	U	ng/L	P437988	
		Hexachlorobenzene**	1.0	U	ng/L	P437988	
		Kepone	14	U	ng/L	P437988	
		Lambda-Cyhalothrin	0.78	U	ng/L	P437988	
		Methoprene	0.78	U	ng/L	P437988	
		Methoxychlor	0.31	U	ng/L	P437988	
		MGK-264	0.21	U	ng/L	P437988	
		Mirex	0.36	U	ng/L	P437988	
		Oxychlordane	0.31	U	ng/L	P437988	
		Permethrin	1.7	U	ng/L	P437988	
		Phenothrin	0.93	U	ng/L	P437988	
		Piperonyl Butoxide	0.41	I	ng/L	P437988	
		Prallethrin	2.1	U	ng/L	P437988	
		Tau-Fluvalinate	0.26	U	ng/L	P437988	
		Tetramethrin	0.78	U	ng/L	P437988	
		Trans-Nonachlor	0.21	U	ng/L	P437988	
		Triclosan Methyl	0.16	U	ng/L	P437988	
		Trifluralin	0.21	U	ng/L	P437988	
	EPA 8276	Chlordane	2.1	U	ng/L	P437988	
		Toxaphene	16	U	ng/L	P437988	
2451648	EPA 8270E	Oxybenzone**	11	U	ng/L	P437970	
		Acetochlor	0.21	U	ng/L	P437970	
		Octinoxate**	160	U	ng/L	P437970	
		Alachlor	0.42	U	ng/L	P437970	
		Avobenzone**	110	U	ng/L	P437970	
		Ametryn	2.8	I	ng/L	P437970	
		Atrazine	15		ng/L	P437970	
		PBDE-47**	4.2	U	ng/L	P437970	
		Atrazine Desethyl	5.3	I	ng/L	P437970	
		PBDE-99**	5.3	U	ng/L	P437970	
		Azinphos Methyl	3.2	UJ	ng/L	P437970	LCS, MS
		Tri-o-cresyl Phosphate**	6.3	U	ng/L	P437970	
		Azoxystrobin	0.42	U	ng/L	P437970	
		Bromacil	0.63	U	ng/L	P437970	
		2-Ethylhexyl	13	U	ng/L	P437970	
		2,3,4,5-tetrabromobenzoate (EHTBB)**					
		Butylate	0.47	U	ng/L	P437970	

Field ID: G1SE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451648	EPA 8270E	Dechlorane Plus**	32	U	ng/L	P437970	CCV
		Caffeine**	8.3	I	ng/L	P437970	
		Dechlorane 602**	5.3	U	ng/L	P437970	
		Carbophenothion	0.53	U	ng/L	P437970	
		Dechlorane 603**	4.2	U	ng/L	P437970	
		Carfentrazone Ethyl	0.16	U	ng/L	P437970	
		Hexabromobenzene**	6.3	U	ng/L	P437970	
		Chlorfenapyr	0.32	UJ	ng/L	P437970	
		PBB-153**	6.3	U	ng/L	P437970	
		Chlorpyrifos Ethyl	0.32	U	ng/L	P437970	
		Pentabromotoluene**	3.2	U	ng/L	P437970	
		Chlorpyrifos Methyl	0.11	U	ng/L	P437970	
		Tris(2-chloroethyl) phosphate (TCEP)**	58	U	ng/L	P437970	
		Coumaphos	1.1	U	ng/L	P437970	
		Tris(1-chloro-2-propyl) phosphate (TCPP)**	55	I	ng/L	P437970	
		Cyanazine	5.3	U	ng/L	P437970	MS
		Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)**	3.1	I	ng/L	P437970	
		Cyprodinil	0.21	U	ng/L	P437970	
		Tetradecachloro-m-terphenyl**	7.9	U	ng/L	P437970	
		Demeton	3.7	U	ng/L	P437970	
		Diazinon	0.13	U	ng/L	P437970	
		Difenoconazole	0.63	U	ng/L	P437970	
		Dimethenamid	0.11	U	ng/L	P437970	
		Dimethomorph	0.32	U	ng/L	P437970	
		Disulfoton	0.63	U	ng/L	P437970	
		Dithiopyr	1.1	U	ng/L	P437970	
		EPTC	0.53	U	ng/L	P437970	
		Ethion	0.32	U	ng/L	P437970	
		Ethoprop	0.13	UJ	ng/L	P437970	
		Etridiazole	0.11	U	ng/L	P437970	CCV
		Fenamiphos	0.47	U	ng/L	P437970	
		Fenbuconazole	0.53	U	ng/L	P437970	
		Fipronil	0.21	UJ	ng/L	P437970	
		Fipronil Desulfinyl**	0.27	I	ng/L	P437970	
		Fipronil Sulfide	0.34	I	ng/L	P437970	
		Fipronil Sulfone	0.52	I	ng/L	P437970	
		Fluazifop-P-butyl	0.11	U	ng/L	P437970	
		Fludioxonil	0.11	U	ng/L	P437970	
		Flumioxazin	3.2	U	ng/L	P437970	
		Flutolanil	0.11	U	ng/L	P437970	
		Fluxapyroxad	0.26	U	ng/L	P437970	
		Fonofos	0.16	U	ng/L	P437970	
		Hexazinone	86		ng/L	P437970	
		Imazalil	0.68	U	ng/L	P437970	

Field ID: G1SE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451648	EPA 8270E	Iprodione	0.53	U	ng/L	P437970	
		Loratadine**	0.32	U	ng/L	P437970	
		Malathion	0.37	U	ng/L	P437970	
		Metalaxyl	0.53	U	ng/L	P437970	
		Metolachlor	6.6		ng/L	P437970	
		Metribuzin	0.42	U	ng/L	P437970	
		Mevinphos	1.1	U	ng/L	P437970	
		Molinate	0.26	U	ng/L	P437970	
		Myclobutanil	0.71	I	ng/L	P437970	
		Naled	2.6	U	ng/L	P437970	
		Napropamide	0.74	U	ng/L	P437970	
		Norflurazon	1.1	U	ng/L	P437970	
		Oxadiazon	0.38	I	ng/L	P437970	
		Oxyfluorfen	0.21	U	ng/L	P437970	
		Parathion Ethyl	0.16	U	ng/L	P437970	
		Parathion Methyl	0.21	U	ng/L	P437970	
		Pendimethalin	1.8	U	ng/L	P437970	
		Phenytol**	5.6	U	ng/L	P437970	
		Phorate	0.26	U	ng/L	P437970	
		Prodiamine	0.21	UJ	ng/L	P437970	RPD
		Prometon	3.2	U	ng/L	P437970	
		Prometryn	0.37	U	ng/L	P437970	
		Pronamide	0.11	U	ng/L	P437970	
		Propanil	0.11	U	ng/L	P437970	
		Propargite	0.84	U	ng/L	P437970	
		Propiconazole	0.63	U	ng/L	P437970	
		Pyraflufen Ethyl	0.32	U	ng/L	P437970	
		Pyridaben	5.9	I	ng/L	P437970	
		Pyriproxyfen	0.26	U	ng/L	P437970	
		Simazine	0.26	U	ng/L	P437970	
		Stirophos	0.42	U	ng/L	P437970	
		Sulfentrazone	5.2	I	ng/L	P437970	
		Tebuconazole	4.7	I	ng/L	P437970	
		Terbufos	0.21	UJ	ng/L	P437970	LCS
		Terbutylazine	0.21	U	ng/L	P437970	
		Thiobencarb	0.53	U	ng/L	P437970	
		Triadimefon	0.16	U	ng/L	P437970	

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

EPA 8270E: MS accuracy for atrazine and hexazinone not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: LETTUCE CREEK AT 710

Collection Date/Time: 11/14/2023 12:15

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451630	DEP SOP: NU-094-1	Color (true)	230		PCU	P437808	
	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	66		mg Cl/L	P438316	
		Sulfate	12		mg SO4/L	P438319	
	SM 2320 B-2011	Total Alkalinity	118		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	298		mg/L	P438344	
	SM 2540 D-2015	TSS	4	I	mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P438018	
2451632	EPA 350.1 Rev. 2.0	Ammonia-N	0.38		mg N/L	P438430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P438034	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P438096	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P438118	
	SM 5310 B-2011	Organic Carbon	31		mg C/L	P438145	

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: FORT DRUM CREEK AT 304TH STREET

Collection Date/Time: 11/14/2023 10:00

Field ID: G3SE0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451649	EPA 200.7 Rev. 4.4	Calcium	20.0		mg/L	P437910	
		Iron	920		ug/L	P437910	
		Magnesium	4.11		mg/L	P437910	
		Potassium	3.4		mg/L	P437910	
		Sodium	12.4		mg/L	P437910	
		Strontium	309		ug/L	P437910	
		Tin	3.0	U	ug/L	P437910	
		Titanium	1.1	I	ug/L	P437910	
		Vanadium	2.0	U	ug/L	P437910	
		Zinc	5.0	U	ug/L	P437910	
	EPA 200.8 Rev. 5.4	Aluminum	169		ug/L	P437910	
		Antimony	0.050	U	ug/L	P437910	
		Arsenic	0.51		ug/L	P437910	
		Barium	15.5		ug/L	P437910	
		Beryllium	0.019	I	ug/L	P437910	
		Boron	28.3		ug/L	P437910	
		Cadmium	0.020	U	ug/L	P437910	
		Chromium	0.98	I	ug/L	P437910	
		Cobalt	0.211		ug/L	P437910	
		Copper	0.43	I	ug/L	P437910	
		Lead	0.20	U	ug/L	P437910	
		Manganese	43.3		ug/L	P437910	
		Molybdenum	0.15	U	ug/L	P437910	
		Nickel	0.56	I	ug/L	P437910	
		Selenium	0.26	I	ug/L	P437910	
		Silver	0.010	U	ug/L	P437910	
		Thallium	0.10	U	ug/L	P437910	
	SM 2340 B-2011	Hardness	66.8		mg/L	P437910	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P437808

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437852

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437910

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: P437910

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	0.019	I	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438316

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438319

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438431

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438035

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438097

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438118

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P437833

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

Reference Method: EPA 8270E

Batch ID: P437970

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
Acetochlor	0.20	U	ng/L
Alachlor	0.40	U	ng/L
Ametryn	1.1	U	ng/L
Atrazine	0.20	U	ng/L
Atrazine Desethyl	1.3	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	3.0	U	ng/L
Azoxystrobin	0.40	U	ng/L
Bromacil	0.60	U	ng/L
Butylate	0.45	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.15	U	ng/L
Chlorfenapyr	0.30	U	ng/L
Chlorpyrifos Ethyl	0.30	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Coumaphos	1.0	U	ng/L
Cyanazine	5.0	U	ng/L
Cyprodinil	0.20	U	ng/L
Dechlorane 602	5.0	U	ng/L
Dechlorane 603	4.0	U	ng/L
Dechlorane Plus	30	U	ng/L
Demeton	3.5	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.30	U	ng/L
Disulfoton	0.60	U	ng/L
Dithiopyr	1.0	U	ng/L
EPTC	0.50	U	ng/L
Ethion	0.30	U	ng/L
Ethoprop	0.12	U	ng/L
Etridiazole	0.10	U	ng/L
Fenamiphos	0.45	U	ng/L
Fenbuconazole	0.50	U	ng/L
Fipronil	0.20	U	ng/L
Fipronil Desulfinyl	0.10	U	ng/L
Fipronil Sulfide	0.10	U	ng/L
Fipronil Sulfone	0.10	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P437970

Component	Result	Code	Units
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.10	U	ng/L
Flumioxazin	3.0	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.25	U	ng/L
Fonofos	0.15	U	ng/L
Hexabromobenzene	6.0	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.65	U	ng/L
Iprodione	0.50	U	ng/L
Loratadine	0.30	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.50	U	ng/L
Metolachlor	0.75	U	ng/L
Metribuzin	0.40	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.25	U	ng/L
Myclobutanil	0.35	U	ng/L
Naled	2.5	U	ng/L
Napropamide	0.70	U	ng/L
Norflurazon	1.0	U	ng/L
Octinoxate	150	U	ng/L
Oxadiazon	0.35	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.20	U	ng/L
Parathion Ethyl	0.15	U	ng/L
Parathion Methyl	0.20	U	ng/L
PBB-153	6.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	1.7	U	ng/L
Pentabromotoluene	3.0	U	ng/L
Phenytol	5.3	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.20	U	ng/L
Prometon	3.0	U	ng/L
Prometryn	0.35	U	ng/L
Pronamide	0.10	U	ng/L
Propanil	0.10	U	ng/L
Propargite	0.80	U	ng/L
Propiconazole	0.60	U	ng/L
Pyraflufen Ethyl	0.30	U	ng/L
Pyridaben	1.4	U	ng/L
Pyriproxyfen	0.25	U	ng/L
Simazine	0.25	U	ng/L
Stirophos	0.40	U	ng/L
Sulfentrazone	1.4	U	ng/L
Tebuconazole	1.4	U	ng/L
Terbufos	0.20	U	ng/L
Terbutylazine	0.20	U	ng/L
Tetradecachloro-m-terphenyl	7.5	U	ng/L
Thiobencarb	0.50	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P437970

Component	Result	Code	Units
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.15	U	ng/L
Tris(1-chloro-2-propyl) phosphate (TCPP)	25	U	ng/L
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	2.5	U	ng/L
Tris(2-chloroethyl) phosphate (TCEP)	55	U	ng/L

Reference Method: EPA 8270E

Batch ID: P437988

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P437988

Component	Result	Code	Units
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P437988

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2320 B-2011
Batch ID: P438014

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

Reference Method: SM 2540 C-2015
Batch ID: P438344

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438340

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P438145

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: P437808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437852

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	107		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	103		P	85 - 115
Sodium	102		P	85 - 115
Strontium	101		P	85 - 115
Tin	101		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	103		P	85 - 115
Barium	103		P	85 - 115
Beryllium	98.0		P	85 - 115
Boron	99.7		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	100		P	85 - 115
Copper	99.6		P	85 - 115
Lead	97.2		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	102		P	85 - 115
Selenium	103		P	85 - 115
Silver	107		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438316

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438319

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438035

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438097

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438118

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P437833

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

Reference Method: EPA 8270E

Batch ID: P437970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	89.8		P	37 - 154
Acetochlor	78.6		P	64 - 124
Alachlor	76.8		P	61 - 118
Ametryn	108		P	47 - 158
Atrazine	77.3		P	68 - 121
Atrazine Desethyl	87.1		P	30 - 119
Avobenzone	119		P	48 - 193
Azinphos Methyl	19.8		F	30 - 194
Azoxystrobin	87.3		P	58 - 154
Bromacil	102		P	47 - 126
Butylate	46.0		P	31 - 83.0
Caffeine	71.0		P	10 - 180
Carbophenothion	82.7		P	59 - 133
Carfentrazone Ethyl	114		P	59 - 147
Chlorfenapyr	52.7		P	52 - 118
Chlorpyrifos Ethyl	67.4		P	59 - 119
Chlorpyrifos Methyl	70.9		P	65 - 123
Coumaphos	128		P	11 - 223
Cyanazine	94.3		P	63 - 250
Cyprodinil	86.1		P	52 - 143
Dechlorane 602	100		P	23 - 142
Dechlorane 603	100		P	51 - 171
Dechlorane Plus	119		P	46 - 161
Demeton	44.1		P	42 - 119
Diazinon	98.4		P	67 - 132
Difenoconazole	101		P	12 - 204
Dimethenamid	71.5		P	53 - 113
Dimethomorph	139		P	13 - 238
Disulfoton	68.6		P	56 - 126
Dithiopyr	91.0		P	58 - 127
EPTC	48.6		P	31 - 78.0
Ethion	78.3		P	24 - 127
Ethoprop	63.2		P	60 - 118
Etridiazole	60.6		P	32 - 91.0
Fenamiphos	71.8		P	54 - 129
Fenbuconazole	105		P	31 - 162
Fipronil	75.8		P	56 - 131
Fipronil Desulfinyl	80.0		P	58 - 132
Fipronil Sulfide	96.2		P	51 - 123
Fipronil Sulfone	71.7		P	50 - 125

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P437970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluazifop-P-butyl	75.1		P	52 - 132
Fludioxonil	75.8		P	52 - 129
Flumioxazin	97.8		P	34 - 250
Flutolanil	81.5		P	45 - 128
Fluxapyroxad	73.7		P	31 - 150
Fonofos	64.1		P	60 - 116
Hexabromobenzene	91.4		P	52 - 165
Hexazinone	85.5		P	59 - 120
Imazalil	73.5		P	39 - 134
Iprodione	92.6		P	39 - 243
Loratadine	122		P	10 - 240
Malathion	78.3		P	53 - 145
Metaxyl	78.7		P	59 - 120
Metolachlor	82.5		P	64 - 122
Metribuzin	79.3		P	33 - 128
Mevinphos	64.4		P	48 - 119
Molinate	43.2		P	42 - 89.0
Myclobutanil	92.9		P	54 - 129
Naled	43.7		P	10 - 138
Napropamide	90.1		P	40 - 122
Norflurazon	71.1		P	49 - 132
Octinoxate	101		P	29 - 176
Oxadiazon	84.6		P	50 - 115
Oxybenzone	93.9		P	45 - 145
Oxyfluorfen	104		P	62 - 149
Parathion Ethyl	72.6		P	68 - 119
Parathion Methyl	114		P	68 - 147
PBB-153	94.0		P	42 - 179
PBDE-47	98.7		P	44 - 141
PBDE-99	94.3		P	36 - 141
Pendimethalin	107		P	59 - 158
Pentabromotoluene	90.8		P	58 - 148
Phenytoin	65.3		P	10 - 151
Phorate	52.2		P	44 - 124
Prodiamine	31.8		P	10 - 136
Prometon	105		P	45 - 131
Prometryn	89.3		P	52 - 140
Pronamide	98.7		P	70 - 129
Propanil	113		P	54 - 144
Propargite	100		P	10 - 191
Propiconazole	69.5		P	49 - 128
Pyraflufen Ethyl	98.1		P	46 - 141
Pyridaben	108		P	29 - 198
Pyriproxyfen	46.7		P	33 - 221
Simazine	79.1		P	62 - 119
Stirophos	102		P	13 - 144
Sulfentrazone	76.1		P	12 - 152
Tebuconazole	97.6		P	10 - 135
Terbufos	64.2		F	67 - 136
Terbuthylazine	78.4		P	66 - 113
Tetradecachloro-m-terphenyl	95.4		P	30 - 235
Thiobencarb	97.3		P	51 - 125

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P437970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tri-o-cresyl Phosphate	112		P	50 - 150
Triadimefon	97.7		P	57 - 118
Tris(1-chloro-2-propyl) phosphate (TCPP)	115		P	60 - 160
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	107		P	66 - 141
Tris(2-chloroethyl) phosphate (TCEP)	120		P	59 - 166

Reference Method: EPA 8270E

Batch ID: P437988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	41.8		P	30 - 96.0
Alpha-BHC	61.4		F	70 - 109
Alpha-Chlordane	58.3		P	45 - 107
Beta-BHC	77.8		P	64 - 138
Beta-Cyfluthrin	54.9		P	17 - 141
Bifenthrin	43.4		P	10 - 113
Chlorothalonil	90.3		P	26 - 180
Cis-Nonachlor	71.3		P	37 - 102
Cypermethrin	60.2		P	20 - 133
Dacthal	67.4		F	69 - 114
DDD-p,p'	51.5		P	42 - 105
DDE-p,p'	57.0		P	42 - 106
DDT-p,p'	60.4		P	42 - 107
Delta-BHC	79.7		P	67 - 144
Deltamethrin	99.0		P	15 - 149
Dichlobenil	59.6		P	46 - 117
Dicofol	73.5		P	34 - 114
Dieldrin	61.1		P	50 - 108
Endosulfan I	76.6		P	55 - 104
Endosulfan II	79.0		P	51 - 111
Endosulfan Sulfate	75.5		P	56 - 121
Endrin	68.4		P	10 - 106
Endrin Aldehyde	70.1		P	34 - 114
Endrin Ketone	37.0		F	63 - 177
Esfenvalerate	71.8		P	29 - 143
Ethalfuralin	73.3		P	46 - 96.0
Fenpropathrin	71.8		P	28 - 115
Gamma-BHC	67.3		P	65 - 121
Gamma-Chlordane	50.2		P	39 - 103
Heptachlor	56.7		P	39 - 94.0
Heptachlor Epoxide	72.0		P	54 - 104
Hexachlorobenzene	51.2		P	36 - 100
Kepone	91.6		P	10 - 225
Lambda-Cyhalothrin	50.8		P	10 - 135
Methoprene	45.3		P	10 - 109
Methoxychlor	69.2		P	52 - 112
MGK-264	54.9		P	44 - 117
Mirex	33.3		P	20 - 90.0
Oxychlordane	77.6		P	44 - 102
PCB-1016	80.8		P	45 - 107
PCB-1260	82.3		P	40 - 118
Permethrin	57.9		P	18 - 135

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P437988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Phenothrin	38.8		P	10 - 102
Piperonyl Butoxide	54.2		P	28 - 156
Prallethrin	53.5		P	28 - 113
Tau-Fluvalinate	72.1		P	10 - 123
Tetramethrin	44.3		P	18 - 158
Trans-Nonachlor	52.3		P	39 - 104
Triclosan Methyl	80.6		P	54 - 108
Trifluralin	46.3		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P437988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	63.1		P	52 - 117
Toxaphene	73.8		P	44 - 125

Reference Method: SM 2320 B-2011
Batch ID: P438014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P438344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.0		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438340

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	107		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

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

Reference Method: SM 5310 B-2011
Batch ID: P438145

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P437910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451123	Calcium	105	106	P/P	80 - 120
2451123	Iron	106	107	P/P	80 - 120
2451123	Magnesium	106	107	P/P	80 - 120
2451123	Potassium	102	101	P/P	80 - 120
2451123	Sodium	101		P	80 - 120
2451123	Strontium	101	101	P/P	80 - 120
2451123	Tin	100	101	P/P	80 - 120
2451123	Titanium	102	102	P/P	80 - 120
2451123	Vanadium	104	104	P/P	80 - 120
2451123	Zinc	102	103	P/P	80 - 120
2451582	Calcium	102		P	80 - 120
2451582	Iron	105		P	80 - 120
2451582	Magnesium	107		P	80 - 120
2451582	Potassium	99.4		P	80 - 120
2451582	Sodium	99.1		P	80 - 120
2451582	Strontium	97.4		P	80 - 120
2451582	Tin	99.4		P	80 - 120
2451582	Titanium	102		P	80 - 120
2451582	Vanadium	103		P	80 - 120
2451582	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P437910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451123	Aluminum	102	102	P/P	80 - 120
2451123	Antimony	103	103	P/P	80 - 120
2451123	Arsenic	103	103	P/P	80 - 120
2451123	Barium	104	103	P/P	80 - 120
2451123	Beryllium	97.8	98.5	P/P	80 - 120
2451123	Boron	104	106	P/P	80 - 120
2451123	Cadmium	103	101	P/P	80 - 120
2451123	Chromium	100	101	P/P	80 - 120
2451123	Cobalt	98.6	99.1	P/P	80 - 120
2451123	Copper	100	99.8	P/P	80 - 120
2451123	Lead	98.5	98.8	P/P	80 - 120
2451123	Manganese	99.8	100	P/P	80 - 120
2451123	Molybdenum	102	102	P/P	80 - 120
2451123	Nickel	99.4	99.6	P/P	80 - 120
2451123	Selenium	101	102	P/P	80 - 120
2451123	Silver	106	105	P/P	80 - 120
2451123	Thallium	102	103	P/P	80 - 120
2451582	Aluminum	101		P	80 - 120
2451582	Antimony	102		P	80 - 120
2451582	Arsenic	102		P	80 - 120
2451582	Barium	103		P	80 - 120
2451582	Beryllium	97.3		P	80 - 120
2451582	Boron	102		P	80 - 120
2451582	Cadmium	101		P	80 - 120
2451582	Chromium	97.1		P	80 - 120
2451582	Cobalt	96.9		P	80 - 120
2451582	Copper	96.6		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451582	Lead	97.5		P	80 - 120
2451582	Manganese	96.8		P	80 - 120
2451582	Molybdenum	102		P	80 - 120
2451582	Nickel	98.9		P	80 - 120
2451582	Selenium	102		P	80 - 120
2451582	Silver	106		P	80 - 120
2451582	Thallium	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451475	Chloride	98.6		P	90 - 110
2451570	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451475	Sulfate	97.7		P	90 - 110
2451570	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438316

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451672	Chloride	101		P	90 - 110
2451803	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451672	Sulfate	101		P	90 - 110
2451803	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451572	Ammonia-N	95.6	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451675	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451617	Kjeldahl Nitrogen	104	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451677	Kjeldahl Nitrogen	106	92.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451567	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438097

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451634	NO2NO3-N	99.3	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451620	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451638	O-Phosphate-P	94.5	93.4	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P437970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451648	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	110	94.8	P/P	29 - 155
2451648	Acetochlor	88.5	68.0	P/P	60 - 124
2451648	Alachlor	77.5	77.5	P/P	54 - 122
2451648	Ametryn	108	107	P/P	51 - 208
2451648	Atrazine Desethyl	97.0	88.7	P/P	13 - 124
2451648	Avobenzene	147	130	P/P	35 - 187
2451648	Azinphos Methyl	14.5	16.8	F/F	43 - 276
2451648	Azoxystrobin	89.5	94.8	P/P	52 - 300
2451648	Bromacil	109	95.7	P/P	44 - 134
2451648	Butylate	42.0	38.9	P/P	23 - 82.0
2451648	Caffeine	89.7	89.6	P/P	10 - 277
2451648	Carbophenothion	94.3	78.4	P/P	47 - 135
2451648	Carfentrazone Ethyl	98.1	86.8	P/P	46 - 147
2451648	Chlorfenapyr	56.2	63.9	P/P	43 - 114
2451648	Chlorpyrifos Ethyl	75.1	82.0	P/P	47 - 124
2451648	Chlorpyrifos Methyl	100	97.1	P/P	60 - 135

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P437970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451648	Coumaphos	134	112	P/P	10 - 222
2451648	Cyanazine	110	98.9	P/P	10 - 257
2451648	Cyprodinil	101	102	P/P	42 - 148
2451648	Dechlorane 602	100	87.2	P/P	14 - 133
2451648	Dechlorane 603	93.3	75.8	P/P	18 - 191
2451648	Dechlorane Plus	86.0	75.9	P/P	23 - 154
2451648	Demeton	62.6	68.6	P/P	41 - 137
2451648	Diazinon	112	94.1	P/P	64 - 139
2451648	Difenoconazole	123	105	P/P	46 - 254
2451648	Dimethenamid	68.5	78.8	P/P	47 - 117
2451648	Dimethomorph	181	165	P/P	14 - 255
2451648	Disulfoton	91.1	81.4	P/P	52 - 130
2451648	Dithiopyr	72.3	69.7	P/P	40 - 121
2451648	EPTC	40.1	37.1	P/P	19 - 78.0
2451648	Ethion	89.5	57.2	P/P	12 - 124
2451648	Ethoprop	70.3	67.9	P/F	68 - 144
2451648	Etridiazole	55.4	43.1	P/P	26 - 96.0
2451648	Fenamiphos	50.9	52.2	P/P	41 - 129
2451648	Fenbuconazole	93.1	70.1	P/P	26 - 169
2451648	Fipronil	79.0	75.8	P/P	46 - 145
2451648	Fipronil Desulfinyl	84.9	68.4	P/P	47 - 136
2451648	Fipronil Sulfide	99.6	87.0	P/P	41 - 127
2451648	Fipronil Sulfone	72.7	71.4	P/P	35 - 133
2451648	Fluazifop-P-butyl	85.5	91.8	P/P	46 - 131
2451648	Fludioxonil	67.0	77.4	P/P	51 - 124
2451648	Flumioxazin	143	140	P/P	10 - 289
2451648	Flutolanil	89.7	91.8	P/P	34 - 130
2451648	Fluxapyroxad	76.3	77.2	P/P	10 - 197
2451648	Fonofos	84.2	85.6	P/P	42 - 131
2451648	Hexabromobenzene	109	74.8	P/P	47 - 178
2451648	Imazalil	117	106	P/P	37 - 252
2451648	Iprodione	102	86.0	P/P	34 - 265
2451648	Loratadine	163	105	P/P	20 - 231
2451648	Malathion	83.9	96.9	P/P	34 - 164
2451648	Metalaxyl	69.5	68.8	P/P	49 - 125
2451648	Metolachlor	91.3	91.9	P/P	54 - 125
2451648	Metribuzin	86.5	84.0	P/P	51 - 139
2451648	Mevinphos	77.3	75.5	P/P	46 - 130
2451648	Molinate	45.4	47.5	P/P	39 - 93.0
2451648	Myclobutanil	76.2	66.9	P/P	50 - 130
2451648	Naled	34.9	26.2	P/P	10 - 150
2451648	Napropamide	83.0	78.5	P/P	10 - 109
2451648	Norflurazon	81.4	70.1	P/P	36 - 134
2451648	Octinoxate	109	111	P/P	18 - 170
2451648	Oxadiazon	77.6	65.8	P/P	43 - 112
2451648	Oxybenzone	107	98.5	P/P	33 - 154
2451648	Oxyfluorfen	109	96.6	P/P	62 - 154
2451648	Parathion Ethyl	88.7	78.3	P/P	65 - 120
2451648	Parathion Methyl	135	120	P/P	77 - 185
2451648	PBB-153	104	80.7	P/P	23 - 193
2451648	PBDE-47	110	103	P/P	31 - 139
2451648	PBDE-99	103	82.6	P/P	24 - 138

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P437970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451648	Pendimethalin	138	125	P/P	50 - 146
2451648	Pentabromotoluene	103	98.1	P/P	54 - 152
2451648	Phenytoin	67.5	52.1	P/P	10 - 157
2451648	Phorate	65.9	84.8	P/P	54 - 161
2451648	Prodiamine	44.4	129	P/P	29 - 160
2451648	Prometon	111	98.4	P/P	38 - 145
2451648	Prometryn	99.8	103	P/P	32 - 151
2451648	Pronamide	108	94.9	P/P	61 - 140
2451648	Propanil	135	132	P/P	50 - 147
2451648	Propargite	105	75.2	P/P	10 - 190
2451648	Propiconazole	76.3	78.7	P/P	30 - 146
2451648	Pyraflufen Ethyl	84.0	76.6	P/P	30 - 147
2451648	Pyridaben	91.5	63.8	P/P	15 - 195
2451648	Pyriproxyfen	40.4	35.9	P/P	31 - 218
2451648	Simazine	76.7	85.5	P/P	45 - 139
2451648	Stirophos	50.4	88.6	P/P	10 - 134
2451648	Sulfentrazone	84.6	64.0	P/P	53 - 186
2451648	Tebuconazole	115	72.8	P/P	10 - 133
2451648	Terbufos	77.7	91.6	P/P	65 - 151
2451648	Terbutylazine	84.5	83.1	P/P	62 - 117
2451648	Tetradecachloro-m-terphenyl	90.3	97.1	P/P	10 - 260
2451648	Thiobencarb	84.4	81.3	P/P	48 - 122
2451648	Tri-o-cresyl Phosphate	119	112	P/P	32 - 151
2451648	Triadimefon	106	75.2	P/P	46 - 124
2451648	Tris(1-chloro-2-propyl) phosphate (TCPP)	135	129	P/P	51 - 154
2451648	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	111	104	P/P	59 - 147
2451648	Tris(2-chloroethyl) phosphate (TCEP)	131	116	P/P	65 - 156

Reference Method: EPA 8270E

Batch ID: P437988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451509	PCB-1016	103	99.4	P/P	45 - 107
2451509	PCB-1260	106	105	P/P	40 - 112
2451647	Aldrin	59.8	65.5	P/P	24 - 81.0
2451647	Alpha-BHC	64.7	75.6	F/P	65 - 110
2451647	Alpha-Chlordane	57.9	50.5	P/P	43 - 119
2451647	Beta-BHC	71.2	69.4	P/P	54 - 165
2451647	Beta-Cyfluthrin	74.1	79.6	P/P	27 - 165
2451647	Bifenthrin	68.5	73.3	P/P	17 - 117
2451647	Chlorothalonil	104	104	P/P	10 - 255
2451647	Cis-Nonachlor	72.4	57.4	P/P	34 - 98.0
2451647	Cypermethrin	72.8	81.3	P/P	25 - 143
2451647	Dacthal	64.6	67.0	P/P	55 - 139
2451647	DDD-p,p'	48.2	39.2	P/P	30 - 109
2451647	DDE-p,p'	62.0	55.1	P/P	35 - 106
2451647	DDT-p,p'	76.8	75.8	P/P	41 - 101
2451647	Delta-BHC	83.4	89.0	P/P	58 - 165
2451647	Deltamethrin	157	161	P/P	10 - 194
2451647	Dichlobenil	43.9	41.4	P/P	22 - 114
2451647	Dicofol	82.6	76.4	P/P	17 - 133
2451647	Dieldrin	60.7	53.7	P/P	45 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P437988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451647	Endosulfan I	78.9	77.9	P/P	49 - 104
2451647	Endosulfan II	87.2	86.0	P/P	37 - 117
2451647	Endosulfan Sulfate	81.8	74.9	P/P	38 - 128
2451647	Endrin	62.7	53.9	P/P	35 - 116
2451647	Endrin Aldehyde	41.4	34.4	P/P	19 - 108
2451647	Endrin Ketone	35.1	30.7	F/F	44 - 134
2451647	Esfenvalerate	127	145	P/P	27 - 176
2451647	Ethalfuralin	74.8	69.8	P/P	49 - 100
2451647	Fenpropathrin	80.6	87.7	P/P	34 - 117
2451647	Gamma-BHC	65.4	66.1	P/P	59 - 129
2451647	Gamma-Chlordane	51.7	54.8	P/P	33 - 107
2451647	Heptachlor	62.9	61.4	P/P	37 - 94.0
2451647	Heptachlor Epoxide	72.8	68.4	P/P	38 - 118
2451647	Hexachlorobenzene	47.3	39.7	P/P	35 - 97.0
2451647	Kepone	95.9	107	P/P	10 - 221
2451647	Lambda-Cyhalothrin	84.3	91.2	P/P	23 - 190
2451647	Methoprene	86.6	77.9	P/P	21 - 109
2451647	Methoxychlor	65.5	71.7	P/P	46 - 118
2451647	MGK-264	63.5	65.4	P/P	39 - 122
2451647	Mirex	50.8	54.0	P/P	25 - 90.0
2451647	Oxychlordane	60.5	61.4	P/P	42 - 100
2451647	Permethrin	84.7	83.1	P/P	33 - 181
2451647	Phenothrin	64.4	59.0	P/P	12 - 125
2451647	Piperonyl Butoxide	55.9	46.7	P/P	10 - 178
2451647	Prallethrin	70.8	90.3	P/P	24 - 122
2451647	Tau-Fluvalinate	129	138	P/P	13 - 151
2451647	Tetramethrin	76.1	122	P/P	16 - 172
2451647	Trans-Nonachlor	55.2	56.3	P/P	39 - 100
2451647	Triclosan Methyl	76.3	72.1	P/P	43 - 110
2451647	Trifluralin	56.3	49.5	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P437988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451509	Chlordane	89.8	82.8	P/P	43 - 123
2451509	Toxaphene	113	111	P/P	27 - 156

Reference Method: SM 4500-F- C-2011

Batch ID: P438018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451614	Fluoride	102	102	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P438145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451619	Organic Carbon	95.3	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P437808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451672	Color (true)	0.207	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451498	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451123	Calcium	0.705	Spike	P	0 - 20
2451123	Iron	0.482	Spike	P	0 - 20
2451123	Magnesium	0.467	Spike	P	0 - 20
2451123	Potassium	0.533	Spike	P	0 - 20
2451123	Sodium	0.245	Spike	P	0 - 20
2451123	Strontium	0.0943	Spike	P	0 - 20
2451123	Tin	0.953	Spike	P	0 - 20
2451123	Titanium	0.175	Spike	P	0 - 20
2451123	Vanadium	0.0278	Spike	P	0 - 20
2451123	Zinc	0.616	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451123	Aluminum	0.0441	Spike	P	0 - 20
2451123	Antimony	0.247	Spike	P	0 - 20
2451123	Arsenic	0.138	Spike	P	0 - 20
2451123	Barium	0.436	Spike	P	0 - 20
2451123	Beryllium	0.668	Spike	P	0 - 20
2451123	Boron	1.53	Spike	P	0 - 20
2451123	Cadmium	1.64	Spike	P	0 - 20
2451123	Chromium	0.813	Spike	P	0 - 20
2451123	Cobalt	0.489	Spike	P	0 - 20
2451123	Copper	0.448	Spike	P	0 - 20
2451123	Lead	0.305	Spike	P	0 - 20
2451123	Manganese	0.233	Spike	P	0 - 20
2451123	Molybdenum	0.427	Spike	P	0 - 20
2451123	Nickel	0.171	Spike	P	0 - 20
2451123	Selenium	0.950	Spike	P	0 - 20
2451123	Silver	0.942	Spike	P	0 - 20
2451123	Thallium	0.793	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451475	Chloride	0.716	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451475	Sulfate	1.00	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438316

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451672	Chloride	0.161	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451672	Sulfate	0.316	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451572	Ammonia-N	2.78	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451675	Ammonia-N	0.549	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451617	Kjeldahl Nitrogen	5.59	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451677	Kjeldahl Nitrogen	8.86	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P438096

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451567	NO2NO3-N	1.00	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P438097

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451634	NO2NO3-N	1.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438118

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451620	Total-P	0.515	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P437833

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451638	O-Phosphate-P	0.921	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P437970

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451648	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	14.4	Spike	P	0 - 35
2451648	Acetochlor	26.2	Spike	P	0 - 28
2451648	Alachlor	0.00605	Spike	P	0 - 30
2451648	Ametryn	0.732	Spike	P	0 - 32
2451648	Atrazine	2.00	Spike	P	0 - 33
2451648	Atrazine Desethyl	7.45	Spike	P	0 - 36
2451648	Avobenzene	12.4	Spike	P	0 - 35
2451648	Azinphos Methyl	14.5	Spike	P	0 - 62
2451648	Azoxystrobin	5.75	Spike	P	0 - 39
2451648	Bromacil	13.0	Spike	P	0 - 33
2451648	Butylate	7.59	Spike	P	0 - 51
2451648	Caffeine	0.0798	Spike	P	0 - 100
2451648	Carbophenothion	18.5	Spike	P	0 - 34
2451648	Carfentrazone Ethyl	12.3	Spike	P	0 - 33
2451648	Chlorfenapyr	12.8	Spike	P	0 - 28
2451648	Chlorpyrifos Ethyl	8.86	Spike	P	0 - 31
2451648	Chlorpyrifos Methyl	3.24	Spike	P	0 - 27
2451648	Coumaphos	17.6	Spike	P	0 - 62
2451648	Cyanazine	10.8	Spike	P	0 - 48
2451648	Cyprodinil	1.50	Spike	P	0 - 29
2451648	Dechlorane 602	13.7	Spike	P	0 - 60
2451648	Dechlorane 603	20.7	Spike	P	0 - 40
2451648	Dechlorane Plus	12.6	Spike	P	0 - 38

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P437970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451648	Demeton	9.22	Spike	P	0 - 33
2451648	Diazinon	17.1	Spike	P	0 - 32
2451648	Difenoconazole	15.8	Spike	P	0 - 71
2451648	Dimethenamid	13.9	Spike	P	0 - 60
2451648	Dimethomorph	9.08	Spike	P	0 - 61
2451648	Disulfoton	11.3	Spike	P	0 - 30
2451648	Dithiopyr	3.74	Spike	P	0 - 28
2451648	EPTC	7.72	Spike	P	0 - 56
2451648	Ethion	44.1	Spike	P	0 - 79
2451648	Ethoprop	3.43	Spike	P	0 - 31
2451648	Etridiazole	25.0	Spike	P	0 - 43
2451648	Fenamiphos	2.43	Spike	P	0 - 43
2451648	Fenbuconazole	28.3	Spike	P	0 - 79
2451648	Fipronil	4.05	Spike	P	0 - 46
2451648	Fipronil Desulfinyl	19.4	Spike	P	0 - 36
2451648	Fipronil Sulfide	12.2	Spike	P	0 - 34
2451648	Fipronil Sulfone	1.47	Spike	P	0 - 47
2451648	Fluazifop-P-butyl	7.12	Spike	P	0 - 38
2451648	Fludioxonil	14.4	Spike	P	0 - 29
2451648	Flumioxazin	1.57	Spike	P	0 - 63
2451648	Flutolanil	2.29	Spike	P	0 - 36
2451648	Fluxapyroxad	1.17	Spike	P	0 - 65
2451648	Fonofos	1.68	Spike	P	0 - 35
2451648	Hexabromobenzene	37.1	Spike	P	0 - 41
2451648	Hexazinone	8.67	Spike	P	0 - 31
2451648	Imazalil	10.7	Spike	P	0 - 52
2451648	Iprodione	16.8	Spike	P	0 - 49
2451648	Loratadine	43.3	Spike	P	0 - 59
2451648	Malathion	14.4	Spike	P	0 - 77
2451648	Metalaxyl	1.11	Spike	P	0 - 76
2451648	Metolachlor	0.418	Spike	P	0 - 29
2451648	Metribuzin	2.95	Spike	P	0 - 51
2451648	Mevinphos	2.28	Spike	P	0 - 31
2451648	Molinate	4.59	Spike	P	0 - 39
2451648	Myclobutanil	11.2	Spike	P	0 - 34
2451648	Naled	28.5	Spike	P	0 - 37
2451648	Napropamide	5.63	Spike	P	0 - 100
2451648	Norflurazon	14.9	Spike	P	0 - 54
2451648	Octinoxate	2.30	Spike	P	0 - 35
2451648	Oxadiazon	14.2	Spike	P	0 - 34
2451648	Oxybenzone	8.66	Spike	P	0 - 35
2451648	Oxyfluorfen	12.5	Spike	P	0 - 28
2451648	Parathion Ethyl	12.5	Spike	P	0 - 31
2451648	Parathion Methyl	11.4	Spike	P	0 - 29
2451648	PBB-153	25.4	Spike	P	0 - 49
2451648	PBDE-47	5.75	Spike	P	0 - 36
2451648	PBDE-99	21.8	Spike	P	0 - 46
2451648	Pendimethalin	10.1	Spike	P	0 - 31
2451648	Pentabromotoluene	5.07	Spike	P	0 - 16
2451648	Phenytoin	25.7	Spike	P	0 - 100
2451648	Phorate	25.1	Spike	P	0 - 36

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P437970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451648	Prodiamine	97.5	Spike	F	0 - 68
2451648	Prometon	11.6	Spike	P	0 - 35
2451648	Prometryn	3.03	Spike	P	0 - 33
2451648	Pronamide	13.2	Spike	P	0 - 24
2451648	Propanil	1.67	Spike	P	0 - 28
2451648	Propargite	32.9	Spike	P	0 - 53
2451648	Propiconazole	3.07	Spike	P	0 - 44
2451648	Pyraflufen Ethyl	9.26	Spike	P	0 - 61
2451648	Pyridaben	22.8	Spike	P	0 - 43
2451648	Pyriproxyfen	12.0	Spike	P	0 - 82
2451648	Simazine	10.9	Spike	P	0 - 29
2451648	Stiropfos	55.0	Spike	P	0 - 100
2451648	Sulfentrazone	18.2	Spike	P	0 - 64
2451648	Tebuconazole	32.7	Spike	P	0 - 76
2451648	Terbufos	16.4	Spike	P	0 - 29
2451648	Terbutylazine	1.57	Spike	P	0 - 28
2451648	Tetradecachloro-m-terphenyl	7.24	Spike	P	0 - 42
2451648	Thiobencarb	3.73	Spike	P	0 - 26
2451648	Tri-o-cresyl Phosphate	6.12	Spike	P	0 - 24
2451648	Triadimefon	34.2	Spike	P	0 - 40
2451648	Tris(1-chloro-2-propyl) phosphate (TCPP)	3.59	Spike	P	0 - 30
2451648	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	6.06	Spike	P	0 - 22
2451648	Tris(2-chloroethyl) phosphate (TCEP)	12.0	Spike	P	0 - 15

Reference Method: EPA 8270E

Batch ID: P437988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451509	PCB-1016	3.13	Spike	P	0 - 25
2451509	PCB-1260	0.829	Spike	P	0 - 30
2451647	Aldrin	9.11	Spike	P	0 - 41
2451647	Alpha-BHC	15.5	Spike	P	0 - 25
2451647	Alpha-Chlordane	13.5	Spike	P	0 - 32
2451647	Beta-BHC	2.62	Spike	P	0 - 33
2451647	Beta-Cyfluthrin	7.08	Spike	P	0 - 43
2451647	Bifenthrin	6.74	Spike	P	0 - 52
2451647	Chlorothalonil	0.513	Spike	P	0 - 82
2451647	Cis-Nonachlor	23.2	Spike	P	0 - 33
2451647	Cypermethrin	11.0	Spike	P	0 - 51
2451647	Dacthal	3.72	Spike	P	0 - 27
2451647	DDD-p,p'	20.6	Spike	P	0 - 39
2451647	DDE-p,p'	11.8	Spike	P	0 - 31
2451647	DDT-p,p'	1.37	Spike	P	0 - 29
2451647	Delta-BHC	6.42	Spike	P	0 - 35
2451647	Deltamethrin	3.04	Spike	P	0 - 100
2451647	Dichlobenil	5.71	Spike	P	0 - 40
2451647	Dicofol	7.76	Spike	P	0 - 37
2451647	Dieldrin	12.3	Spike	P	0 - 27
2451647	Endosulfan I	1.23	Spike	P	0 - 23
2451647	Endosulfan II	1.40	Spike	P	0 - 34

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P437988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451647	Endosulfan Sulfate	8.82	Spike	P	0 - 36
2451647	Endrin	15.0	Spike	P	0 - 45
2451647	Endrin Aldehyde	18.4	Spike	P	0 - 76
2451647	Endrin Ketone	13.3	Spike	P	0 - 43
2451647	Esfenvalerate	13.2	Spike	P	0 - 51
2451647	Ethalfuralin	7.03	Spike	P	0 - 22
2451647	Fenpropathrin	7.59	Spike	P	0 - 49
2451647	Gamma-BHC	1.08	Spike	P	0 - 28
2451647	Gamma-Chlordane	5.86	Spike	P	0 - 40
2451647	Heptachlor	2.32	Spike	P	0 - 29
2451647	Heptachlor Epoxide	6.19	Spike	P	0 - 33
2451647	Hexachlorobenzene	17.6	Spike	P	0 - 36
2451647	Kepone	10.7	Spike	P	0 - 85
2451647	Lambda-Cyhalothrin	7.95	Spike	P	0 - 55
2451647	Methoprene	10.6	Spike	P	0 - 53
2451647	Methoxychlor	9.12	Spike	P	0 - 50
2451647	MGK-264	2.91	Spike	P	0 - 43
2451647	Mirex	6.00	Spike	P	0 - 40
2451647	Oxychlordane	1.53	Spike	P	0 - 31
2451647	Permethrin	1.99	Spike	P	0 - 50
2451647	Phenothrin	8.82	Spike	P	0 - 58
2451647	Piperonyl Butoxide	14.5	Spike	P	0 - 100
2451647	Prallethrin	24.2	Spike	P	0 - 39
2451647	Tau-Fluvalinate	6.49	Spike	P	0 - 54
2451647	Tetramethrin	46.6	Spike	P	0 - 51
2451647	Trans-Nonachlor	2.04	Spike	P	0 - 39
2451647	Triclosan Methyl	5.61	Spike	P	0 - 31
2451647	Trifluralin	12.7	Spike	P	0 - 22

Reference Method: EPA 8276

Batch ID: P437988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451509	Chlordane	8.07	Spike	P	0 - 28
2451509	Toxaphene	2.01	Spike	P	0 - 27

Reference Method: SM 2320 B-2011

Batch ID: P438014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451614	Total Alkalinity	1.72	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P438344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451565	TDS	2.12	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451614	Fluoride	0.484	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P438145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451619	Organic Carbon	0.262	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2451647
Field Sample ID: G1SE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	95.0	P	37 - 129
EPA 8270E	Decachlorobiphenyl	91.7	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	64.5	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	54.6	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	45.7	P	28 - 102
EPA 8276	PCNB	114	P	49 - 115

Lab Sample ID: 2451648
Field Sample ID: G1SE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	94.1	P	20 - 200
EPA 8270E	Simazine-d10	94.5	P	58 - 137
EPA 8270E	Terbufos-d10	69.3	P	50 - 134
EPA 8270E	Terphenyl-d14	60.7	P	44 - 134

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A122732

Included Lab Sample IDs: 2451633, 2451636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A122740

Included Lab Sample IDs: 2451635, 2451638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.0	94.4	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A122745

Included Lab Sample IDs: 2451629, 2451630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122747

Included Lab Sample IDs: 2451629, 2451630, 2451633, 2451636

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

Reference Method: SM 2320 B-2011

Run ID: A122815

Included Lab Sample IDs: 2451629, 2451630, 2451633, 2451636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.7	97.8	P/P	90 - 110
Total Alkalinity	97.8	96.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A122815

Included Lab Sample IDs: 2451629, 2451630, 2451633, 2451636

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122816

Included Lab Sample IDs: 2451649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	103	P/P	90 - 110
Antimony	101	100	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Beryllium	100	101	P/P	90 - 110
Boron	99.7	101	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122816

Included Lab Sample IDs: 2451649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	103	100	P/P	90 - 110
Cobalt	98.8	97.8	P/P	90 - 110
Copper	97.8	97.9	P/P	90 - 110
Lead	97.1	96.8	P/P	90 - 110
Manganese	102	99.8	P/P	90 - 110
Molybdenum	101	101	P/P	90 - 110
Nickel	99.7	99.6	P/P	90 - 110
Selenium	100	100	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Thallium	100	99.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A122817

Included Lab Sample IDs: 2451649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	100	P/P	90 - 110
Iron	103	100	P/P	90 - 110
Magnesium	102	100	P/P	90 - 110
Potassium	98.7	97.2	P/P	90 - 110
Sodium	98.7	97.1	P/P	90 - 110
Strontium	98.0	96.9	P/P	90 - 110
Tin	99.5	96.3	P/P	90 - 110
Titanium	97.8	97.0	P/P	90 - 110
Vanadium	98.1	97.4	P/P	90 - 110
Zinc	101	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122849

Included Lab Sample IDs: 2451631, 2451632, 2451634, 2451637

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

Reference Method: SM 5310 B-2011

Run ID: A122873

Included Lab Sample IDs: 2451631, 2451632, 2451634, 2451637

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.8	P/P	90 - 110
Organic Carbon	95.6	95.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122874

Included Lab Sample IDs: 2451629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	105	P/P	90 - 110
Sulfate	104	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122886

Included Lab Sample IDs: 2451631, 2451632, 2451634, 2451637

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.9	P/P	90 - 110
Total-P	98.9	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122899

Included Lab Sample IDs: 2451631, 2451632, 2451634, 2451637

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.4	97.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122949

Included Lab Sample IDs: 2451630, 2451633, 2451636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A122979

Included Lab Sample IDs: 2451647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	102		P	80 - 120
PCB-1260	102		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122988

Included Lab Sample IDs: 2451631, 2451632, 2451634, 2451637

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.8	P/P	90 - 110
Ammonia-N	98.6	98.7	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A123000

Included Lab Sample IDs: 2451648

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	95.7		P	80 - 120
Avobenzene	99.6		P	80 - 120
Dechlorane 602	101		P	80 - 120
Dechlorane 603	93.6		P	80 - 120
Dechlorane Plus	95.7		P	80 - 120
Hexabromobenzene	95.2		P	80 - 120
Octinoxate	98.4		P	80 - 120
Oxybenzone	103		P	80 - 120
PBB-153	89.7		P	80 - 120
PBDE-47	97.2		P	80 - 120
PBDE-99	96.8		P	80 - 120
Pentabromotoluene	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A123000
Included Lab Sample IDs: 2451648

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tetradecachloro-m-terphenyl	90.5		P	80 - 120
Tri-o-cresyl Phosphate	103		P	80 - 120
Tris(1-chloro-2-propyl) phosphate (TCPP)	104		P	80 - 120
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	104		P	80 - 120
Tris(2-chloroethyl) phosphate (TCEP)	108		P	80 - 120

Reference Method: EPA 8270E
Run ID: A123010
Included Lab Sample IDs: 2451647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	110		P	80 - 120
Alpha-BHC	94.9		P	80 - 120
Alpha-Chlordane	81.7		P	80 - 120
Beta-BHC	84.1		P	80 - 120
Beta-Cyfluthrin	89.2		P	80 - 120
Bifenthrin	88.8		P	80 - 120
Chlorothalonil	97.2		P	80 - 120
Cis-Nonachlor	109		P	80 - 120
Cypermethrin	81.2		P	80 - 120
Dacthal	89.2		P	80 - 120
DDD-p,p'	97.4		P	80 - 120
DDE-p,p'	85.0		P	80 - 120
DDT-p,p'	94.7		P	80 - 120
Delta-BHC	99.3		P	80 - 120
Deltamethrin	118		P	80 - 120
Dichlobenil	92.8		P	80 - 120
Dicofol	93.0		P	80 - 120
Dieldrin	88.6		P	80 - 120
Endosulfan I	97.6		P	80 - 120
Endosulfan II	105		P	80 - 120
Endosulfan Sulfate	114		P	80 - 120
Endrin	94.8		P	80 - 120
Endrin Aldehyde	164*		F	80 - 120
Endrin Ketone	90.6		P	80 - 120
Esfenvalerate	103		P	80 - 120
Ethalfuralin	107		P	80 - 120
Fenpropathrin	90.7		P	80 - 120
Gamma-BHC	83.0		P	80 - 120
Gamma-Chlordane	86.1		P	80 - 120
Heptachlor	94.3		P	80 - 120
Heptachlor Epoxide	103		P	80 - 120
Hexachlorobenzene	85.0		P	80 - 120
Kepone	99.0		P	80 - 120
Lambda-Cyhalothrin	98.9		P	80 - 120
Methoprene	81.9		P	80 - 120
Methoxychlor	86.9		P	80 - 120
MGK-264	80.1		P	80 - 120
Mirex	119		P	80 - 120
Oxychlordane	96.8		P	80 - 120
Permethrin	94.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A123010
Included Lab Sample IDs: 2451647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Phenothrin	90.6		P	80 - 120
Piperonyl Butoxide	114		P	80 - 120
Prallethrin	84.4		P	80 - 120
Tau-Fluvalinate	109		P	80 - 120
Tetramethrin	110		P	80 - 120
Trans-Nonachlor	86.0		P	80 - 120
Triclosan Methyl	86.2		P	80 - 120
Trifluralin	99.9		P	80 - 120

Reference Method: EPA 8270E
Run ID: A123076
Included Lab Sample IDs: 2451648

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	85.8		P	80 - 120
Alachlor	92.2		P	80 - 120
Ametryn	97.0		P	80 - 120
Atrazine	91.7		P	80 - 120
Atrazine Desethyl	106		P	80 - 120
Azinphos Methyl	107		P	80 - 120
Azoxystrobin	107		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	94.6		P	80 - 120
Caffeine	84.8		P	80 - 120
Carbophenothion	93.1		P	80 - 120
Carfentrazone Ethyl	92.5		P	80 - 120
Chlorfenapyr	77.8*		F	80 - 120
Chlorpyrifos Ethyl	87.7		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Coumaphos	102		P	80 - 120
Cyanazine	99.9		P	80 - 120
Cyprodinil	103		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	107		P	80 - 120
Difenoconazole	95.4		P	80 - 120
Dimethenamid	93.8		P	80 - 120
Dimethomorph	97.6		P	80 - 120
Disulfoton	98.9		P	80 - 120
Dithiopyr	106		P	80 - 120
EPTC	99.4		P	80 - 120
Ethion	88.2		P	80 - 120
Ethoprop	97.6		P	80 - 120
Etridiazole	98.4		P	80 - 120
Fenamiphos	88.3		P	80 - 120
Fenbuconazole	96.4		P	80 - 120
Fipronil	77.9*		F	80 - 120
Fipronil Desulfinyl	88.8		P	80 - 120
Fipronil Sulfide	95.3		P	80 - 120
Fipronil Sulfone	96.3		P	80 - 120
Fluazifop-P-butyl	87.3		P	80 - 120
Fludioxonil	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A123076
Included Lab Sample IDs: 2451648

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Flumioxazin	95.3		P	80 - 120
Flutolanil	99.2		P	80 - 120
Fluxapyroxad	93.0		P	80 - 120
Fonofos	97.4		P	80 - 120
Hexazinone	99.6		P	80 - 120
Imazalil	101		P	80 - 120
Iprodione	86.8		P	80 - 120
Loratadine	93.2		P	80 - 120
Malathion	88.0		P	80 - 120
Metalaxyl	90.9		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	99.3		P	80 - 120
Mevinphos	94.3		P	80 - 120
Molinate	88.8		P	80 - 120
Myclobutanil	89.7		P	80 - 120
Naled	100		P	80 - 120
Napropamide	94.0		P	80 - 120
Norflurazon	100		P	80 - 120
Oxadiazon	101		P	80 - 120
Oxyfluorfen	101		P	80 - 120
Parathion Ethyl	95.8		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	105		P	80 - 120
Phenytoin	96.7		P	80 - 120
Phorate	105		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	95.0		P	80 - 120
Prometryn	99.4		P	80 - 120
Pronamide	100		P	80 - 120
Propanil	111		P	80 - 120
Propargite	99.7		P	80 - 120
Propiconazole	84.5		P	80 - 120
Pyraflufen Ethyl	96.9		P	80 - 120
Pyridaben	98.3		P	80 - 120
Pyriproxyfen	112		P	80 - 120
Simazine	85.7		P	80 - 120
Stiropfos	99.9		P	80 - 120
Sulfentrazone	86.1		P	80 - 120
Tebuconazole	96.6		P	80 - 120
Terbufos	103		P	80 - 120
Terbutylazine	97.2		P	80 - 120
Thiobencarb	101		P	80 - 120
Triadimefon	99.2		P	80 - 120

Reference Method: EPA 8276
Run ID: A123147
Included Lab Sample IDs: 2451647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.0		P	80 - 120
Toxaphene	109		P	80 - 120

Quality Assurance Report

Calibration Verification

* 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
DEP SOP: NU-094-1	Color (true)	103					0.207	
EPA 180.1 Rev. 2.0	Turbidity	104					0.0	
EPA 200.7 Rev. 4.4	Calcium	107	105	106	102			0.705
	Iron	107	106	107	105			0.482
	Magnesium	109	106	107	107			0.467
	Potassium	103	102	101	99.4			0.533
	Sodium	102	101	99.1				0.245
	Strontium	101	101	101	97.4			0.0943
	Tin	101	100	101	99.4			0.953
	Titanium	100	102	102	102			0.175
	Vanadium	101	104	104	103			0.0278
	Zinc	100	102	103	102			0.616
EPA 200.8 Rev. 5.4	Aluminum	100	102	102	101			0.0441
	Antimony	103	103	103	102			0.247
	Arsenic	103	103	103	102			0.138
	Barium	103	104	103	103			0.436
	Beryllium	98.0	97.8	98.5	97.3			0.668
	Boron	99.7	104	106	102			1.53
	Cadmium	100	103	101	101			1.64
	Chromium	101	100	101	97.1			0.813
	Cobalt	100	98.6	99.1	96.9			0.489
	Copper	99.6	100	99.8	96.6			0.448
	Lead	97.2	98.5	98.8	97.5			0.305
	Manganese	99.2	99.8	100	96.8			0.233
	Molybdenum	101	102	102	102			0.427
	Nickel	102	99.4	99.6	98.9			0.171
	Selenium	103	101	102	102			0.950
	Silver	107	106	105	106			0.942
	Thallium	101	102	103	101			0.793
EPA 300.0 Rev. 2.1	Chloride	103	98.6	99.9			0.716	
	Chloride	103	101	105			0.161	
	Sulfate	102	97.7	101			1.00	
	Sulfate	104	101	106			0.316	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8	95.6	98.8				2.78
	Ammonia-N	95.2	101	102				0.549
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	104	97.2				5.59
	Kjeldahl Nitrogen	97.7	106	92.4				8.86
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	99.5	100				1.00
	NO2NO3-N	99.0	99.3	97.3				1.61
EPA 365.1 Rev. 2.0	Total-P	104	105	106				0.515
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.6	94.5	93.4				0.921
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	89.8	110	94.8				14.4
	Acetochlor	78.6	88.5	68.0				26.2
	Alachlor	76.8	77.5	77.5				0.0060
	Aldrin	41.8	65.5	59.8				9.11
	Alpha-BHC	61.4	75.6	64.7				15.5
	Alpha-Chlordane	58.3	50.5	57.9				13.5
	Ametryn	108	108	107				0.732
	Atrazine	77.3						2.00
	Atrazine Desethyl	87.1	97.0	88.7				7.45
	Avobenzone	119	147	130				12.4
	Azinphos Methyl	19.8	14.5	16.8				14.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Azoxystrobin	87.3	89.5	94.8			5.75
	Beta-BHC	77.8	69.4	71.2			2.62
	Beta-Cyfluthrin	54.9	79.6	74.1			7.08
	Bifenthrin	43.4	73.3	68.5			6.74
	Bromacil	102	109	95.7			13.0
	Butylate	46.0	42.0	38.9			7.59
	Caffeine	71.0	89.7	89.6			0.0798
	Carbophenothion	82.7	94.3	78.4			18.5
	Carfentrazone Ethyl	114	98.1	86.8			12.3
	Chlorfenapyr	52.7	56.2	63.9			12.8
	Chlorothalonil	90.3	104	104			0.513
	Chlorpyrifos Ethyl	67.4	75.1	82.0			8.86
	Chlorpyrifos Methyl	70.9	100	97.1			3.24
	Cis-Nonachlor	71.3	57.4	72.4			23.2
	Coumaphos	128	134	112			17.6
	Cyanazine	94.3	110	98.9			10.8
	Cypermethrin	60.2	81.3	72.8			11.0
	Cyprodinil	86.1	101	102			1.50
	Dacthal	67.4	67.0	64.6			3.72
	DDD-p,p'	51.5	39.2	48.2			20.6
	DDE-p,p'	57.0	55.1	62.0			11.8
	DDT-p,p'	60.4	75.8	76.8			1.37
	Dechlorane 602	100	100	87.2			13.7
	Dechlorane 603	100	93.3	75.8			20.7
	Dechlorane Plus	119	86.0	75.9			12.6
	Delta-BHC	79.7	89.0	83.4			6.42
	Deltamethrin	99.0	161	157			3.04
	Demeton	44.1	62.6	68.6			9.22
	Diazinon	98.4	112	94.1			17.1
	Dichlobenil	59.6	41.4	43.9			5.71
	Dicofol	73.5	76.4	82.6			7.76
	Dieldrin	61.1	53.7	60.7			12.3
	Difenoconazole	101	123	105			15.8
	Dimethenamid	71.5	68.5	78.8			13.9
	Dimethomorph	139	181	165			9.08
	Disulfoton	68.6	91.1	81.4			11.3
	Dithiopyr	91.0	72.3	69.7			3.74
	Endosulfan I	76.6	77.9	78.9			1.23
	Endosulfan II	79.0	86.0	87.2			1.40
	Endosulfan Sulfate	75.5	74.9	81.8			8.82
	Endrin	68.4	53.9	62.7			15.0
	Endrin Aldehyde	70.1	34.4	41.4			18.4
	Endrin Ketone	37.0	30.7	35.1			13.3
	EPTC	48.6	40.1	37.1			7.72
	Esfenvalerate	71.8	145	127			13.2
	Ethalfuralin	73.3	69.8	74.8			7.03
	Ethion	78.3	89.5	57.2			44.1
	Ethoprop	63.2	70.3	67.9			3.43
	Etridiazole	60.6	55.4	43.1			25.0
	Fenamiphos	71.8	50.9	52.2			2.43
	Fenbuconazole	105	93.1	70.1			28.3
	Fenpropathrin	71.8	87.7	80.6			7.59
	Fipronil	75.8	79.0	75.8			4.05
	Fipronil Desulfinyl	80.0	84.9	68.4			19.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Fipronil Sulfide	96.2	99.6	87.0			12.2
	Fipronil Sulfone	71.7	72.7	71.4			1.47
	Fluazifop-P-butyl	75.1	85.5	91.8			7.12
	Fludioxonil	75.8	67.0	77.4			14.4
	Flumioxazin	97.8	143	140			1.57
	Flutolanil	81.5	89.7	91.8			2.29
	Fluxapyroxad	73.7	76.3	77.2			1.17
	Fonofos	64.1	84.2	85.6			1.68
	Gamma-BHC	67.3	66.1	65.4			1.08
	Gamma-Chlordane	50.2	54.8	51.7			5.86
	Heptachlor	56.7	61.4	62.9			2.32
	Heptachlor Epoxide	72.0	68.4	72.8			6.19
	Hexabromobenzene	91.4	109	74.8			37.1
	Hexachlorobenzene	51.2	39.7	47.3			17.6
	Hexazinone	85.5					8.67
	Imazalil	73.5	117	106			10.7
	Iprodione	92.6	102	86.0			16.8
	Kepone	91.6	107	95.9			10.7
	Lambda-Cyhalothrin	50.8	91.2	84.3			7.95
	Loratadine	122	163	105			43.3
	Malathion	78.3	83.9	96.9			14.4
	Metalaxyl	78.7	69.5	68.8			1.11
	Methoprene	45.3	86.6	77.9			10.6
	Methoxychlor	69.2	65.5	71.7			9.12
	Metolachlor	82.5	91.3	91.9			0.418
	Metribuzin	79.3	86.5	84.0			2.95
	Mevinphos	64.4	77.3	75.5			2.28
	MGK-264	54.9	63.5	65.4			2.91
	Mirex	33.3	50.8	54.0			6.00
	Molinate	43.2	45.4	47.5			4.59
	Myclobutanil	92.9	76.2	66.9			11.2
	Naled	43.7	34.9	26.2			28.5
	Napropamide	90.1	83.0	78.5			5.63
	Norflurazon	71.1	81.4	70.1			14.9
	Octinoxate	101	109	111			2.30
	Oxadiazon	84.6	77.6	65.8			14.2
	Oxybenzone	93.9	107	98.5			8.66
	Oxychlordane	77.6	60.5	61.4			1.53
	Oxyfluorfen	104	96.6	109			12.5
	Parathion Ethyl	72.6	78.3	88.7			12.5
	Parathion Methyl	114	120	135			11.4
	PBB-153	94.0	104	80.7			25.4
	PBDE-47	98.7	110	103			5.75
	PBDE-99	94.3	103	82.6			21.8
	PCB-1016	80.8	103	99.4			3.13
	PCB-1260	82.3	106	105			0.829
	Pendimethalin	107	125	138			10.1
	Pentabromotoluene	90.8	103	98.1			5.07
	Permethrin	57.9	84.7	83.1			1.99
	Phenothrin	38.8	64.4	59.0			8.82
	Phenytoln	65.3	52.1	67.5			25.7
	Phorate	52.2	84.8	65.9			25.1
	Piperonyl Butoxide	54.2	55.9	46.7			14.5
	Prallethrin	53.5	70.8	90.3			24.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Prodiamine	31.8	129	44.4		97.5
	Prometon	105	98.4	111		11.6
	Prometryn	89.3	103	99.8		3.03
	Pronamide	98.7	94.9	108		13.2
	Propanil	113	132	135		1.67
	Propargite	100	75.2	105		32.9
	Propiconazole	69.5	78.7	76.3		3.07
	Pyraflufen Ethyl	98.1	76.6	84.0		9.26
	Pyridaben	108	63.8	91.5		22.8
	Pyriproxyfen	46.7	35.9	40.4		12.0
	Simazine	79.1	85.5	76.7		10.9
	Stirophos	102	88.6	50.4		55.0
	Sulfentrazone	76.1	64.0	84.6		18.2
	Tau-Fluvalinate	72.1	129	138		6.49
	Tebuconazole	97.6	72.8	115		32.7
	Terbufos	64.2	91.6	77.7		16.4
	Terbutylazine	78.4	83.1	84.5		1.57
	Tetradecachloro-m-terphenyl	95.4	90.3	97.1		7.24
	Tetramethrin	44.3	76.1	122		46.6
	Thiobencarb	97.3	81.3	84.4		3.73
	Trans-Nonachlor	52.3	55.2	56.3		2.04
	Tri-o-cresyl Phosphate	112	119	112		6.12
	Triadimefon	97.7	75.2	106		34.2
	Triclosan Methyl	80.6	76.3	72.1		5.61
	Trifluralin	46.3	56.3	49.5		12.7
	Tris(1-chloro-2-propyl) phosphate (TCPP)	115	135	129		3.59
	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	107	111	104		6.06
	Tris(2-chloroethyl) phosphate (TCEP)	120	131	116		12.0
EPA 8276	Chlordane	63.1	89.8	82.8		8.07
	Toxaphene	73.8	113	111		2.01
SM 2320 B-2011	Total Alkalinity	100			1.72	
SM 2540 C-2015	TDS	94.0			2.12	
SM 2540 D-2015	TSS	107				
SM 4500-F- C-2011	Fluoride	102	102	102		0.484
SM 5310 B-2011	Organic Carbon	94.1	95.3	95.6		0.262

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2451629, 2451630, 2451633, 2451636
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2451629, 2451630, 2451633, 2451636
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2451649
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2451649
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2451629, 2451630, 2451633, 2451636
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2451629, 2451630, 2451633, 2451636
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2451631, 2451632, 2451634, 2451637
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2451631, 2451632, 2451634, 2451637
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2451631, 2451632, 2451634, 2451637
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2451631, 2451632, 2451634, 2451637

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2451635, 2451638
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2451648
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2451647
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2451648
EPA 8270E	PCBs in water matrices by GC/MS/MS	2451647
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2451647
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2451629, 2451630, 2451633, 2451636
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2451649
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2451629, 2451630, 2451633, 2451636
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2451629, 2451630, 2451633, 2451636
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2451629, 2451630, 2451633, 2451636
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2451631, 2451632, 2451634, 2451637

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	11/15/2023			11/15/2023 13:24	Samantha L Bates	2451633, 2451636
	11/15/2023			11/15/2023 14:42	Samantha L Bates	2451629
	11/15/2023			11/15/2023 14:43	Samantha L Bates	2451630
EPA 180.1 Rev. 2.0	11/15/2023			11/15/2023 14:12	Khloe J Berg	2451629, 2451630
	11/15/2023			11/15/2023 14:13	Khloe J Berg	2451633
	11/15/2023			11/15/2023 14:14	Khloe J Berg	2451636
EPA 200.7 Rev. 4.4	11/15/2023	11/16/2023 14:25	George D Taylor	11/17/2023 22:34	Samatha Luckman	2451649
EPA 200.8 Rev. 5.4	11/15/2023	11/16/2023 14:25	George D Taylor	11/17/2023 23:13	Emily M Philpot	2451649
EPA 300.0 Rev. 2.1	11/15/2023			11/22/2023 13:41	James L Waggeberby	2451629
	11/15/2023			11/27/2023 21:58	James L Waggeberby	2451630
	11/15/2023			11/27/2023 22:14	James L Waggeberby	2451633
EPA 350.1 Rev. 2.0	11/15/2023			11/27/2023 22:29	James L Waggeberby	2451636
	11/15/2023			12/01/2023 13:26	Khloe J Berg	2451637
	11/15/2023			12/01/2023 15:10	Khloe J Berg	2451631
	11/15/2023			12/01/2023 15:11	Khloe J Berg	2451632
EPA 351.2 Rev. 2.0	11/15/2023			12/01/2023 15:13	Khloe J Berg	2451634
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 16:04	Ping Hua	2451631
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 16:05	Ping Hua	2451632
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 16:07	Ping Hua	2451634
EPA 353.2 Rev. 2.0	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 16:12	Ping Hua	2451637
	11/15/2023			11/20/2023 12:05	Anna M. Plaviak	2451631
	11/15/2023			11/20/2023 12:06	Anna M. Plaviak	2451632
	11/15/2023			11/20/2023 12:19	Anna M. Plaviak	2451634
EPA 365.1 Rev. 2.0	11/15/2023			11/20/2023 12:20	Anna M. Plaviak	2451637
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:21	Chandler E Cox	2451631
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:24	Chandler E Cox	2451632
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:25	Chandler E Cox	2451634
EPA 365.1 Rev. 2.0 dissolved	11/15/2023			11/27/2023 11:26	Chandler E Cox	2451637
	11/15/2023			11/15/2023 14:05	Chandler E Cox	2451638
	11/15/2023			11/15/2023 14:07	Chandler E Cox	2451635
EPA 8270E	11/15/2023	11/20/2023 08:30	Rasheda Ghaffari	12/01/2023 00:14	Lipi Saha	2451647
	11/15/2023	11/20/2023 08:30	Rasheda Ghaffari	12/01/2023 20:01	Vandana T. Nagar	2451647
	11/15/2023	11/21/2023 08:30	Rasheda Ghaffari	11/30/2023 18:31	Vandana T. Nagar	2451648
	11/15/2023	11/21/2023 08:30	Rasheda Ghaffari	12/03/2023 19:19	Arthur Maknenko	2451648
EPA 8276	11/15/2023	11/20/2023 08:30	Rasheda Ghaffari	12/10/2023 12:33	Arthur Maknenko	2451647
SM 2320 B-2011	11/15/2023			11/18/2023 14:17	Adam P Silver	2451629
	11/15/2023			11/18/2023 14:32	Adam P Silver	2451630
	11/15/2023			11/18/2023 14:46	Adam P Silver	2451633
SM 2340 B-2011	11/15/2023			11/18/2023 15:33	Adam P Silver	2451636
	11/15/2023			11/17/2023 22:34	Samatha Luckman	2451649

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 C-2015	11/15/2023			11/20/2023 15:30	Yijie Li	2451629, 2451630, 2451633, 2451636
SM 2540 D-2015	11/15/2023			11/20/2023 15:30	Yijie Li	2451629, 2451630, 2451633, 2451636
SM 4500-F- C-2011	11/15/2023			11/18/2023 14:17	Adam P Silver	2451629
	11/15/2023			11/18/2023 14:32	Adam P Silver	2451630
	11/15/2023			11/18/2023 14:46	Adam P Silver	2451633
	11/15/2023			11/18/2023 15:33	Adam P Silver	2451636
SM 5310 B-2011	11/15/2023			11/21/2023 21:58	Kenneth H Lee	2451631
	11/15/2023			11/21/2023 22:12	Kenneth H Lee	2451632
	11/15/2023			11/21/2023 22:26	Kenneth H Lee	2451634
	11/15/2023			11/21/2023 23:06	Kenneth H Lee	2451637