

Chemical Analysis Report

SE-DIST-2023-10-24-01

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

Event Description: **Melbourne Run**
Request ID: **RQ-2023-10-02-57**
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
Attn: Jordan Skaggs

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 08-NOV-2023 10:00



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: 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: SAWGRASS LAKE EAST OF CENTER

Collection Date/Time: 10/23/2023 11:20

Field ID: G3SE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446710	DEP SOP: NU-094-1	Color (true)	350		PCU	P436928	
	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P436941	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P437220	
		Sulfate	4.6		mg SO4/L	P437223	
	SM 2320 B-2011	Total Alkalinity	48		mg CaCO3/L	P437038	
	SM 2540 C-2015	TDS	211		mg/L	P437389	
	SM 2540 D-2015	TSS	3	I	mg/L	P437269	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P437040	
2446711	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P437032	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P437007	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P437074	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P436968	
	SM 5310 B-2011	Organic Carbon	37		mg C/L	P437106	

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: CRANE CREEK EAST OF RR BRIDGE

Collection Date/Time: 10/23/2023 12:20

Field ID: G3SE0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446716	EPA 8270E	Aldrin	0.70	U	ng/L	P437105	
		Alpha-BHC	0.11	U	ng/L	P437105	
		Alpha-Chlordane	0.22	U	ng/L	P437105	
		PCB-1016	2.2	U	ng/L	P437105	
		Beta-BHC	0.11	U	ng/L	P437105	
		PCB-1221	2.2	U	ng/L	P437105	
		Beta-Cyfluthrin	1.3	U	ng/L	P437105	
		PCB-1232	2.2	U	ng/L	P437105	
		Bifenthrin	0.54	U	ng/L	P437105	
		PCB-1242	2.2	U	ng/L	P437105	
		Carbophenothion	0.97	U	ng/L	P437105	
		PCB-1248	2.2	U	ng/L	P437105	
		Chlorothalonil	3.9	U	ng/L	P437105	
		PCB-1254	2.2	U	ng/L	P437105	
		Cis-Nonachlor	0.22	U	ng/L	P437105	
		PCB-1260	2.2	U	ng/L	P437105	
		Cypermethrin	1.6	U	ng/L	P437105	
		Dacthal	0.16	U	ng/L	P437105	
		DDD-p,p'	0.27	U	ng/L	P437105	
		DDE-p,p'	0.22	U	ng/L	P437105	
		DDT-p,p'	1.4	I	ng/L	P437105	
		Delta-BHC	0.43	U	ng/L	P437105	
		Deltamethrin	1.3	U	ng/L	P437105	
		Dichlobenil	0.27	U	ng/L	P437105	
		Dicofol	1.3	U	ng/L	P437105	
		Dieldrin	0.43	U	ng/L	P437105	
		Endosulfan I	0.43	U	ng/L	P437105	
		Endosulfan II	0.97	U	ng/L	P437105	
		Endosulfan Sulfate	0.32	U	ng/L	P437105	
		Endrin	0.97	U	ng/L	P437105	
		Endrin Aldehyde	0.81	U	ng/L	P437105	
		Endrin Ketone	0.43	U	ng/L	P437105	
		Esfenvalerate	0.81	U	ng/L	P437105	
		Ethalfuralin	0.16	U	ng/L	P437105	
		Fenpropathrin	0.27	U	ng/L	P437105	
		Gamma-BHC	0.13	U	ng/L	P437105	
		Gamma-Chlordane	0.22	U	ng/L	P437105	
		Heptachlor	0.22	U	ng/L	P437105	
		Heptachlor Epoxide	0.27	U	ng/L	P437105	
		Hexachlorobenzene**	1.1	U	ng/L	P437105	
		Kepone	15	U	ng/L	P437105	
		Lambda-Cyhalothrin	0.81	U	ng/L	P437105	
		Methoprene	0.81	U	ng/L	P437105	
		Methoxychlor	0.32	U	ng/L	P437105	

Field ID: G3SE0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446716	EPA 8270E	MGK-264	0.22	U	ng/L	P437105	
		Mirex	0.38	U	ng/L	P437105	
		Oxychlordane	0.32	U	ng/L	P437105	
		Permethrin	1.7	U	ng/L	P437105	
		Phenothrin	0.97	U	ng/L	P437105	
		Piperonyl Butoxide	0.41	I	ng/L	P437105	
		Prallethrin	2.2	U	ng/L	P437105	
		Tau-Fluvalinate	0.27	U	ng/L	P437105	
		Tetramethrin	0.81	U	ng/L	P437105	
		Trans-Nonachlor	0.22	U	ng/L	P437105	
		Triclosan Methyl	0.16	U	ng/L	P437105	
		Trifluralin	0.22	U	ng/L	P437105	
	EPA 8276	Chlordane	2.2	U	ng/L	P437105	
		Toxaphene	16	U	ng/L	P437105	

Sample Location: KID CREEK AT OLD DIXIE HIGHWAY

Collection Date/Time: 10/23/2023 12:50

Field ID: G5SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446728	EPA 8321B	2,4-D	0.0020	U	ug/L	P436890	
		Acesulfame K	0.10	U	ug/L	P436792	
		2,4,5-T	0.0040	U	ug/L	P436890	
		AMPA	0.10	U	ug/L	P436792	
		Acetaminophen	0.0080	U	ug/L	P436890	
		Acetamiprid	0.0020	U	ug/L	P436890	
		Endothall	0.25	U	ug/L	P436792	
		Glufosinate	0.10	U	ug/L	P436792	
		Glyphosate	0.10	U	ug/L	P436792	
		Afidopyropen	0.0020	U	ug/L	P436890	
		Bentazon	0.0081		ug/L	P436890	
		Sucralose	0.14		ug/L	P436792	
		Benzovindiflupyr	0.0020	U	ug/L	P436890	
		Carbamazepine	8.0E-04	U	ug/L	P436890	
		Clothianidin	0.0020	U	ug/L	P436890	
		Dinotefuran	0.0020	U	ug/L	P436890	
		Diuron	0.0020	U	ug/L	P436890	
		Fenuron	0.032	U	ug/L	P436890	MS
		Fluridone	8.0E-04	U	ug/L	P436890	
		Imazapyr	0.069		ug/L	P436890	
		Hydrocodone	0.0020	U	ug/L	P436890	
		Ibuprofen	0.080	U	ug/L	P436890	
		Imidacloprid	0.0020	U	ug/L	P436890	
		Linuron	0.0040	U	ug/L	P436890	
		Mandestrobin	0.0020	U	ug/L	P436890	
		MCPP	0.0020	U	ug/L	P436890	
		Naproxen	0.0080	U	ug/L	P436890	
		Primidone	0.0040	U	ug/L	P436890	
		Pyraclostrobin	0.0020	U	ug/L	P436890	
		Silvex	0.0040	U	ug/L	P436890	
		Thiamethoxam	0.0020	U	ug/L	P436890	
		Tolfenpyrad	0.0020	U	ug/L	P436890	
		Triclopyr	0.0040	U	ug/L	P436890	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P436928

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436941

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437220

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437223

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437032

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437007

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437074

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436968

Component	Result	Code	Units
Total-P	0.010	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P437105

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P437105

Component	Result	Code	Units
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276

Batch ID: P437105

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

Reference Method: EPA 8321B

Batch ID: P436792

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

Reference Method: EPA 8321B

Batch ID: P436890

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: P437038

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P437389

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P437269

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P437040

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P437106

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: P436928

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436941

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437220

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437223

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437032

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437007

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437074

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436968

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.4		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P437105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.7		P	30 - 96.0
Alpha-BHC	87.6		P	70 - 109
Alpha-Chlordane	68.2		P	45 - 107
Beta-BHC	81.7		P	64 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P437105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	54.4		P	17 - 141
Bifenthrin	35.8		P	10 - 113
Carbophenothion	53.9		P	24 - 91.0
Chlorothalonil	68.1		P	26 - 180
Cis-Nonachlor	53.5		P	37 - 102
Cypermethrin	51.0		P	20 - 133
Dacthal	71.9		P	69 - 114
DDD-p,p'	56.0		P	42 - 105
DDE-p,p'	56.6		P	42 - 106
DDT-p,p'	63.6		P	42 - 107
Delta-BHC	81.5		P	67 - 144
Deltamethrin	79.3		P	15 - 149
Dichlobenil	74.0		P	46 - 117
Dicofol	62.7		P	34 - 114
Dieldrin	64.5		P	50 - 108
Endosulfan I	82.4		P	55 - 104
Endosulfan II	71.1		P	51 - 111
Endosulfan Sulfate	66.5		P	56 - 121
Endrin	65.1		P	10 - 106
Endrin Aldehyde	68.7		P	34 - 114
Endrin Ketone	82.0		P	63 - 177
Esfenvalerate	63.2		P	29 - 143
Ethalfuralin	62.4		P	46 - 96.0
Fenpropathrin	42.7		P	28 - 115
Gamma-BHC	83.0		P	65 - 121
Gamma-Chlordane	67.0		P	39 - 103
Heptachlor	58.9		P	39 - 94.0
Heptachlor Epoxide	77.7		P	54 - 104
Hexachlorobenzene	64.6		P	36 - 100
Kepone	94.3		P	10 - 225
Lambda-Cyhalothrin	48.4		P	10 - 135
Methoprene	33.6		P	10 - 109
Methoxychlor	87.2		P	52 - 112
MGK-264	75.9		P	44 - 117
Mirex	49.8		P	20 - 90.0
Oxychlordane	60.1		P	44 - 102
PCB-1016	80.0		P	45 - 107
PCB-1260	98.6		P	40 - 118
Permethrin	60.6		P	18 - 135
Phenothrin	41.4		P	10 - 102
Piperonyl Butoxide	95.2		P	28 - 156
Prallethrin	58.6		P	28 - 113
Tau-Fluvalinate	52.4		P	10 - 123
Tetramethrin	77.5		P	18 - 158
Trans-Nonachlor	69.3		P	39 - 104
Triclosan Methyl	64.9		P	54 - 108
Trifluralin	66.9		P	46 - 97.0

Reference Method: EPA 8276

Batch ID: P437105

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

Reference Method: EPA 8276

Batch ID: P437105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	68.0		P	52 - 117
Toxaphene	70.3		P	44 - 125

Reference Method: EPA 8321B

Batch ID: P436792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	99.1		P	40 - 160
Endothall	101		P	40 - 160
Glufosinate	104		P	40 - 160
Glyphosate	95.7		P	40 - 160
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P436890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.0		P	40 - 150
2,4,5-T	76.0		P	40 - 150
Acetaminophen	94.0		P	30 - 150
Acetamiprid	85.3		P	40 - 150
Afidopyropen	79.7		P	30 - 150
Bentazon	92.2		P	30 - 150
Benzovindiflupyr	82.5		P	40 - 150
Carbamazepine	80.1		P	40 - 150
Clothianidin	90.7		P	40 - 150
Dinotefuran	100		P	40 - 150
Diuron	79.8		P	40 - 150
Fenuron	90.6		P	40 - 150
Fluridone	90.0		P	40 - 150
Hydrocodone	90.1		P	40 - 150
Ibuprofen	63.7		P	40 - 150
Imazapyr	81.9		P	40 - 150
Imidacloprid	84.3		P	40 - 150
Linuron	79.7		P	40 - 150
Mandestrobin	90.0		P	40 - 150
MCPP	88.5		P	40 - 150
Naproxen	79.0		P	40 - 150
Primidone	85.2		P	40 - 150
Pyraclostrobin	83.3		P	40 - 150
Silvex	76.5		P	40 - 150
Thiamethoxam	86.0		P	40 - 150
Tolfenpyrad	54.9		P	30 - 150
Triclopyr	83.5		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P437038

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.5		P	92 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P437389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.2		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P437269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	108		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P437040

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

Reference Method: SM 5310 B-2011
Batch ID: P437106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446550	Chloride	104		P	90 - 110
2446792	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446550	Sulfate	104		P	90 - 110
2446792	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446793	Ammonia-N	99.4	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446594	Kjeldahl Nitrogen	99.9	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2445173	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436968

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446828	Total-P	103	100	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P437105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446716	Aldrin	50.9	47.6	P/P	24 - 81.0
2446716	Alpha-BHC	85.3	89.2	P/P	65 - 110
2446716	Alpha-Chlordane	87.0	68.4	P/P	43 - 119
2446716	Beta-BHC	120	90.0	P/P	54 - 165
2446716	Beta-Cyfluthrin	93.3	90.7	P/P	27 - 165
2446716	Bifenthrin	70.5	67.9	P/P	17 - 117
2446716	Carbophenothion	85.8	81.7	P/P	21 - 108
2446716	Chlorothalonil	106	111	P/P	10 - 255
2446716	Cis-Nonachlor	76.0	62.5	P/P	34 - 98.0
2446716	Cypermethrin	102	104	P/P	25 - 143
2446716	Dacthal	82.9	78.2	P/P	55 - 139
2446716	DDD-p,p'	47.5	48.6	P/P	30 - 109
2446716	DDE-p,p'	68.2	62.6	P/P	35 - 106
2446716	DDT-p,p'	90.7	84.7	P/P	41 - 101

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P437105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446716	Delta-BHC	126	90.8	P/P	58 - 165
2446716	Deltamethrin	160	151	P/P	10 - 194
2446716	Dichlobenil	50.2	45.7	P/P	22 - 114
2446716	Dicofol	76.7	69.0	P/P	17 - 133
2446716	Dieldrin	75.2	70.9	P/P	45 - 129
2446716	Endosulfan I	95.7	85.4	P/P	49 - 104
2446716	Endosulfan II	76.7	65.1	P/P	37 - 117
2446716	Endosulfan Sulfate	76.5	69.0	P/P	38 - 128
2446716	Endrin	72.9	70.7	P/P	35 - 116
2446716	Endrin Aldehyde	31.1	54.2	P/P	19 - 108
2446716	Endrin Ketone	78.1	75.8	P/P	44 - 134
2446716	Esfenvalerate	133	120	P/P	27 - 176
2446716	Ethalfuralin	73.1	76.6	P/P	49 - 100
2446716	Fenpropathrin	75.9	72.8	P/P	34 - 117
2446716	Gamma-BHC	87.2	73.5	P/P	59 - 129
2446716	Gamma-Chlordane	88.4	75.8	P/P	33 - 107
2446716	Heptachlor	53.8	65.1	P/P	37 - 94.0
2446716	Heptachlor Epoxide	102	90.1	P/P	38 - 118
2446716	Hexachlorobenzene	61.7	60.7	P/P	35 - 97.0
2446716	Kepone	150	75.1	P/P	10 - 221
2446716	Lambda-Cyhalothrin	96.7	90.6	P/P	23 - 190
2446716	Methoprene	68.8	67.0	P/P	21 - 109
2446716	Methoxychlor	104	94.3	P/P	46 - 118
2446716	MGK-264	105	87.2	P/P	39 - 122
2446716	Mirex	51.8	51.8	P/P	25 - 90.0
2446716	Oxychlordane	84.6	82.5	P/P	42 - 100
2446716	Permethrin	82.5	81.1	P/P	33 - 181
2446716	Phenothrin	60.5	69.3	P/P	12 - 125
2446716	Piperonyl Butoxide	108	113	P/P	10 - 178
2446716	Prallethrin	73.8	84.4	P/P	24 - 122
2446716	Tau-Fluvalinate	124	107	P/P	13 - 151
2446716	Tetramethrin	104	103	P/P	16 - 172
2446716	Trans-Nonachlor	87.0	69.8	P/P	39 - 100
2446716	Triclosan Methyl	68.0	72.0	P/P	43 - 110
2446716	Trifluralin	67.8	69.0	P/P	45 - 94.0
2446879	PCB-1016	87.7	70.3	P/P	45 - 107
2446879	PCB-1260	95.1	95.2	P/P	40 - 112

Reference Method: EPA 8276

Batch ID: P437105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446879	Chlordane	71.0	55.3	P/P	43 - 123
2446879	Toxaphene	77.0	58.7	P/P	27 - 156

Reference Method: EPA 8321B

Batch ID: P436792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446420	Acesulfame K	149	149	P/P	40 - 150
2446420	AMPA	85.3	86.6	P/P	40 - 160
2446420	Endothall	94.8	97.9	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P436792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446420	Glufosinate	83.3	93.3	P/P	40 - 160
2446420	Glyphosate	56.9	54.1	P/P	40 - 160
2446420	Sucralose	106	114	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P436890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446387	2,4-D	90.1	85.9	P/P	40 - 150
2446387	2,4,5-T	102	105	P/P	40 - 150
2446387	Acetaminophen	61.9	65.6	P/P	30 - 150
2446387	Acetamiprid	48.1	46.8	P/P	40 - 150
2446387	Afidopyropen	72.6	69.7	P/P	30 - 150
2446387	Bentazon	42.0	40.9	P/P	30 - 150
2446387	Benzovindiflupyr	76.9	77.6	P/P	40 - 150
2446387	Carbamazepine	48.4	48.7	P/P	40 - 150
2446387	Clothianidin	51.6	52.4	P/P	40 - 150
2446387	Dinotefuran	46.2	48.4	P/P	40 - 150
2446387	Diuron	46.1	46.0	P/P	40 - 150
2446387	Fenuron	31.7	32.2	F/F	40 - 150
2446387	Fluridone	54.0	52.1	P/P	40 - 150
2446387	Hydrocodone	48.6	49.2	P/P	40 - 150
2446387	Ibuprofen	61.7	65.7	P/P	40 - 150
2446387	Imazapyr	69.0	64.1	P/P	40 - 150
2446387	Imidacloprid	77.0	79.0	P/P	40 - 150
2446387	Linuron	59.2	58.5	P/P	40 - 150
2446387	Mandestrobin	83.5	79.9	P/P	40 - 150
2446387	MCPP	109	105	P/P	40 - 150
2446387	Naproxen	63.2	72.0	P/P	40 - 150
2446387	Primidone	49.3	48.6	P/P	40 - 150
2446387	Pyraclostrobin	79.3	79.4	P/P	40 - 150
2446387	Silvex	102	99.4	P/P	40 - 150
2446387	Thiamethoxam	54.7	55.1	P/P	40 - 150
2446387	Tolfenpyrad	52.8	52.2	P/P	30 - 150
2446387	Triclopyr	106	107	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P437040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446791	Fluoride	99.7	100	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P437106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446684	Organic Carbon	99.0		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P436928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446834	Color (true)	0.640	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446656	Turbidity	0.995	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446550	Chloride	1.38	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446550	Sulfate	2.33	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446793	Ammonia-N	2.97	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446594	Kjeldahl Nitrogen	3.88	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2445173	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446828	Total-P	1.83	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P437105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446716	Aldrin	6.77	Spike	P	0 - 41
2446716	Alpha-BHC	4.42	Spike	P	0 - 25
2446716	Alpha-Chlordane	23.9	Spike	P	0 - 32
2446716	Beta-BHC	28.8	Spike	P	0 - 33
2446716	Beta-Cyfluthrin	2.86	Spike	P	0 - 43
2446716	Bifenthrin	3.84	Spike	P	0 - 52
2446716	Carbophenothion	4.92	Spike	P	0 - 30
2446716	Chlorothalonil	3.91	Spike	P	0 - 82
2446716	Cis-Nonachlor	19.5	Spike	P	0 - 33
2446716	Cypermethrin	1.50	Spike	P	0 - 51
2446716	Dacthal	5.91	Spike	P	0 - 27
2446716	DDD-p,p'	1.38	Spike	P	0 - 39
2446716	DDE-p,p'	8.63	Spike	P	0 - 31
2446716	DDT-p,p'	5.58	Spike	P	0 - 29
2446716	Delta-BHC	32.1	Spike	P	0 - 35
2446716	Deltamethrin	5.82	Spike	P	0 - 100
2446716	Dichlobenil	9.41	Spike	P	0 - 40
2446716	Dicofol	10.6	Spike	P	0 - 37
2446716	Dieldrin	5.83	Spike	P	0 - 27
2446716	Endosulfan I	11.4	Spike	P	0 - 23
2446716	Endosulfan II	16.4	Spike	P	0 - 34
2446716	Endosulfan Sulfate	10.4	Spike	P	0 - 36
2446716	Endrin	3.07	Spike	P	0 - 45
2446716	Endrin Aldehyde	54.2	Spike	P	0 - 76
2446716	Endrin Ketone	3.03	Spike	P	0 - 43
2446716	Esfenvalerate	10.3	Spike	P	0 - 51
2446716	Ethalfuralin	4.72	Spike	P	0 - 22
2446716	Fenpropathrin	4.05	Spike	P	0 - 49
2446716	Gamma-BHC	17.0	Spike	P	0 - 28
2446716	Gamma-Chlordane	15.4	Spike	P	0 - 40
2446716	Heptachlor	19.2	Spike	P	0 - 29
2446716	Heptachlor Epoxide	12.8	Spike	P	0 - 33
2446716	Hexachlorobenzene	1.64	Spike	P	0 - 36
2446716	Kepone	66.6	Spike	P	0 - 85
2446716	Lambda-Cyhalothrin	6.45	Spike	P	0 - 55
2446716	Methoprene	2.65	Spike	P	0 - 53
2446716	Methoxychlor	9.69	Spike	P	0 - 50
2446716	MGK-264	18.9	Spike	P	0 - 43
2446716	Mirex	0.0136	Spike	P	0 - 40
2446716	Oxychlordane	2.54	Spike	P	0 - 31
2446716	Permethrin	1.77	Spike	P	0 - 50
2446716	Phenothrin	13.5	Spike	P	0 - 58
2446716	Piperonyl Butoxide	3.88	Spike	P	0 - 100
2446716	Prallethrin	13.5	Spike	P	0 - 39
2446716	Tau-Fluvalinate	14.3	Spike	P	0 - 54
2446716	Tetramethrin	1.37	Spike	P	0 - 51
2446716	Trans-Nonachlor	21.9	Spike	P	0 - 39
2446716	Triclosan Methyl	5.69	Spike	P	0 - 31
2446716	Trifluralin	1.67	Spike	P	0 - 22
2446879	PCB-1016	22.1	Spike	P	0 - 25
2446879	PCB-1260	0.0266	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P437105

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446879	Chlordane	24.9	Spike	P	0 - 28
2446879	Toxaphene	26.9	Spike	P	0 - 27

Reference Method: EPA 8321B

Batch ID: P436792

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446420	Acesulfame K	0.0370	Spike	P	0 - 30
2446420	AMPA	1.50	Spike	P	0 - 30
2446420	Endothall	3.19	Spike	P	0 - 30
2446420	Glufosinate	11.3	Spike	P	0 - 30
2446420	Glyphosate	5.04	Spike	P	0 - 30
2446420	Sucralose	7.88	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P436890

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446387	2,4-D	4.71	Spike	P	0 - 30
2446387	2,4,5-T	2.34	Spike	P	0 - 30
2446387	Acetaminophen	5.93	Spike	P	0 - 30
2446387	Acetamiprid	2.82	Spike	P	0 - 30
2446387	Afidopyropen	4.14	Spike	P	0 - 30
2446387	Bentazon	2.48	Spike	P	0 - 30
2446387	Benzovindiflupyr	0.860	Spike	P	0 - 30
2446387	Carbamazepine	0.671	Spike	P	0 - 30
2446387	Clothianidin	1.57	Spike	P	0 - 30
2446387	Dinotefuran	4.62	Spike	P	0 - 30
2446387	Diuron	0.118	Spike	P	0 - 30
2446387	Fenuron	1.42	Spike	P	0 - 30
2446387	Fluridone	3.59	Spike	P	0 - 30
2446387	Hydrocodone	1.26	Spike	P	0 - 30
2446387	Ibuprofen	6.28	Spike	P	0 - 30
2446387	Imazapyr	4.82	Spike	P	0 - 30
2446387	Imidacloprid	2.54	Spike	P	0 - 30
2446387	Linuron	1.12	Spike	P	0 - 30
2446387	Mandestrobin	4.43	Spike	P	0 - 30
2446387	MCPP	3.61	Spike	P	0 - 30
2446387	Naproxen	13.1	Spike	P	0 - 30
2446387	Primidone	1.39	Spike	P	0 - 30
2446387	Pyraclostrobin	0.192	Spike	P	0 - 30
2446387	Silvex	2.78	Spike	P	0 - 30
2446387	Thiamethoxam	0.839	Spike	P	0 - 30
2446387	Tolfenpyrad	1.27	Spike	P	0 - 30
2446387	Triclopyr	0.428	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P437038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446791	Total Alkalinity	1.82	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P437389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446593	TDS	6.02	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P437040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446791	Fluoride	0.492	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P437106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446684	Organic Carbon	0.0	Sample	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2446716
Field Sample ID: G3SE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	83.3	P	37 - 129
EPA 8270E	Decachlorobiphenyl	73.4	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	66.2	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	59.4	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	62.5	P	28 - 102
EPA 8276	PCNB	94.4	P	49 - 115

Lab Sample ID: 2446728
Field Sample ID: G5SE0050

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.4	P	30 - 160
EPA 8321B	Diuron-d6	48.6	P	30 - 160
EPA 8321B	Endothall-d6	95.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	72.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.0	P	30 - 160
EPA 8321B	Primidone-d5	54.6	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A122307
Included Lab Sample IDs: 2446728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	126	142	P/P	60 - 160
Sucralose	103	109	P/P	60 - 160

Reference Method: DEP SOP: NU-094-1
Run ID: A122317
Included Lab Sample IDs: 2446710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A122323
Included Lab Sample IDs: 2446710

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

Reference Method: EPA 8321B
Run ID: A122367
Included Lab Sample IDs: 2446728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.8	84.3	P/P	50 - 150
2,4,5-T	85.3	102	P/P	50 - 150
Acetaminophen	110	108	P/P	60 - 160
Acetamiprid	107	106	P/P	50 - 150
Afidopyropen	95.0	101	P/P	50 - 150
Bentazon	102	106	P/P	50 - 160
Benzovindiflupyr	100	107	P/P	50 - 150
Carbamazepine	101	100	P/P	60 - 150
Clothianidin	105	108	P/P	60 - 150
Dinotefuran	114	109	P/P	50 - 150
Diuron	107	111	P/P	60 - 160
Fenuron	107	107	P/P	60 - 150
Fluridone	117	115	P/P	60 - 160
Hydrocodone	111	111	P/P	60 - 150
Ibuprofen	67.4	97.5	P/P	50 - 160
Imazapyr	89.9	87.0	P/P	50 - 150
Imidacloprid	99.1	99.6	P/P	60 - 150
Linuron	109	103	P/P	60 - 150
Mandestrobin	106	109	P/P	50 - 150
MCPP	98.3	87.2	P/P	50 - 150
Naproxen	86.0	83.2	P/P	50 - 160
Primidone	100	92.7	P/P	60 - 150
Pyraclostrobin	106	107	P/P	60 - 150
Silvex	75.3	84.6	P/P	50 - 150
Thiamethoxam	110	111	P/P	50 - 150
Tolfenpyrad	97.4	99.2	P/P	60 - 150
Triclopyr	80.8	91.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A122373
Included Lab Sample IDs: 2446728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	97.2	P/P	60 - 160
Endothall	96.6	81.7	P/P	60 - 160
Glufosinate	97.2	86.0	P/P	60 - 160
Glyphosate	101	87.2	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A122379
Included Lab Sample IDs: 2446710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.3	96.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A122379
Included Lab Sample IDs: 2446710

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A122380
Included Lab Sample IDs: 2446711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A122383
Included Lab Sample IDs: 2446711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.9	97.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A122402
Included Lab Sample IDs: 2446711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A122418
Included Lab Sample IDs: 2446711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	93.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A122423
Included Lab Sample IDs: 2446711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	96.6	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A122448
Included Lab Sample IDs: 2446716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.8		P	80 - 120
Toxaphene	94.2		P	80 - 120

Reference Method: EPA 8270E
Run ID: A122458
Included Lab Sample IDs: 2446716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.2		P	80 - 120
Alpha-BHC	99.8		P	80 - 120
Alpha-Chlordane	96.3		P	80 - 120
Beta-BHC	85.9		P	80 - 120
Beta-Cyfluthrin	110		P	80 - 120
Bifenthrin	96.5		P	80 - 120
Carbophenothion	104		P	80 - 120
Chlorothalonil	84.3		P	80 - 120
Cis-Nonachlor	96.1		P	80 - 120
Cypermethrin	103		P	80 - 120
Dacthal	96.0		P	80 - 120
DDD-p,p'	84.1		P	80 - 120
DDE-p,p'	91.4		P	80 - 120
DDT-p,p'	97.4		P	80 - 120
Delta-BHC	81.4		P	80 - 120
Deltamethrin	111		P	80 - 120
Dichlobenil	91.2		P	80 - 120
Dicofol	93.3		P	80 - 120
Dieldrin	90.4		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	85.7		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	96.8		P	80 - 120
Endrin Ketone	91.8		P	80 - 120
Esfenvalerate	117		P	80 - 120
Ethalfuralin	92.0		P	80 - 120
Fenpropathrin	92.9		P	80 - 120
Gamma-BHC	91.8		P	80 - 120
Gamma-Chlordane	96.5		P	80 - 120
Heptachlor	89.7		P	80 - 120
Heptachlor Epoxide	106		P	80 - 120
Hexachlorobenzene	86.8		P	80 - 120
Kepone	91.9		P	80 - 120
Lambda-Cyhalothrin	109		P	80 - 120
Methoprene	92.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A122458
Included Lab Sample IDs: 2446716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoxychlor	95.8		P	80 - 120
MGK-264	89.7		P	80 - 120
Mirex	108		P	80 - 120
Oxychlordane	96.4		P	80 - 120
Permethrin	115		P	80 - 120
Phenothrin	114		P	80 - 120
Piperonyl Butoxide	89.1		P	80 - 120
Prallethrin	92.7		P	80 - 120
Tau-Fluvalinate	119		P	80 - 120
Tetramethrin	92.6		P	80 - 120
Trans-Nonachlor	97.4		P	80 - 120
Triclosan Methyl	91.2		P	80 - 120
Trifluralin	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A122479
Included Lab Sample IDs: 2446710

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

Reference Method: EPA 8270E
Run ID: A122497
Included Lab Sample IDs: 2446716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	101		P	80 - 120
PCB-1260	100		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	100				0.640	
EPA 180.1 Rev. 2.0	Turbidity	104				0.995	
EPA 300.0 Rev. 2.1	Chloride	103	104	103		1.38	
	Sulfate	103	104	102		2.33	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6	99.4	102			2.97
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	99.9	104			3.88
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	99.4	103	100			1.83
EPA 8270E	Aldrin	49.7	50.9	47.6			6.77
	Alpha-BHC	87.6	85.3	89.2			4.42
	Alpha-Chlordane	68.2	87.0	68.4			23.9
	Beta-BHC	81.7	120	90.0			28.8
	Beta-Cyfluthrin	54.4	93.3	90.7			2.86
	Bifenthrin	35.8	70.5	67.9			3.84
	Carbophenothion	53.9	85.8	81.7			4.92
	Chlorothalonil	68.1	106	111			3.91
	Cis-Nonachlor	53.5	76.0	62.5			19.5
	Cypermethrin	51.0	102	104			1.50
	Dacthal	71.9	82.9	78.2			5.91
	DDD-p,p'	56.0	47.5	48.6			1.38
	DDE-p,p'	56.6	68.2	62.6			8.63
	DDT-p,p'	63.6	90.7	84.7			5.58
	Delta-BHC	81.5	126	90.8			32.1
	Deltamethrin	79.3	160	151			5.82
	Dichlobenil	74.0	45.7	50.2			9.41
	Dicofol	62.7	76.7	69.0			10.6
	Dieldrin	64.5	75.2	70.9			5.83
	Endosulfan I	82.4	95.7	85.4			11.4
	Endosulfan II	71.1	76.7	65.1			16.4
	Endosulfan Sulfate	66.5	76.5	69.0			10.4
	Endrin	65.1	72.9	70.7			3.07
	Endrin Aldehyde	68.7	31.1	54.2			54.2
	Endrin Ketone	82.0	78.1	75.8			3.03
	Esfenvalerate	63.2	133	120			10.3
	Ethalfuralin	62.4	73.1	76.6			4.72
	Fenpropathrin	42.7	75.9	72.8			4.05
	Gamma-BHC	83.0	87.2	73.5			17.0
	Gamma-Chlordane	67.0	88.4	75.8			15.4
	Heptachlor	58.9	53.8	65.1			19.2
	Heptachlor Epoxide	77.7	102	90.1			12.8
	Hexachlorobenzene	64.6	61.7	60.7			1.64
	Kepone	94.3	150	75.1			66.6
	Lambda-Cyhalothrin	48.4	96.7	90.6			6.45
	Methoprene	33.6	68.8	67.0			2.65
	Methoxychlor	87.2	104	94.3			9.69
	MGK-264	75.9	105	87.2			18.9
	Mirex	49.8	51.8	51.8			0.0136
	Oxychlordane	60.1	84.6	82.5			2.54
	PCB-1016	80.0	87.7	70.3			22.1
	PCB-1260	98.6	95.1	95.2			0.0266
	Permethrin	60.6	82.5	81.1			1.77
	Phenothrin	41.4	60.5	69.3			13.5
	Piperonyl Butoxide	95.2	108	113			3.88
	Prallethrin	58.6	73.8	84.4			13.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Tau-Fluvalinate	52.4	124	107			14.3
	Tetramethrin	77.5	104	103			1.37
	Trans-Nonachlor	69.3	87.0	69.8			21.9
	Triclosan Methyl	64.9	68.0	72.0			5.69
	Trifluralin	66.9	67.8	69.0			1.67
EPA 8276	Chlordane	68.0	71.0	55.3			24.9
	Toxaphene	70.3	77.0	58.7			26.9
EPA 8321B	2,4-D	77.0	90.1	85.9			4.71
	2,4,5-T	76.0	102	105			2.34
	Acesulfame K	107	149	149			0.0370
	Acetaminophen	94.0	61.9	65.6			5.93
	Acetamiprid	85.3	48.1	46.8			2.82
	Afidopyropen	79.7	72.6	69.7			4.14
	AMPA	99.1	85.3	86.6			1.50
	Bentazon	92.2	42.0	40.9			2.48
	Benzovindiflupyr	82.5	76.9	77.6			0.860
	Carbamazepine	80.1	48.4	48.7			0.671
	Clothianidin	90.7	51.6	52.4			1.57
	Dinotefuran	100	46.2	48.4			4.62
	Diuron	79.8	46.1	46.0			0.118
	Endothall	101	94.8	97.9			3.19
	Fenuron	90.6	31.7	32.2			1.42
	Fluridone	90.0	54.0	52.1			3.59
	Glufosinate	104	83.3	93.3			11.3
	Glyphosate	95.7	56.9	54.1			5.04
	Hydrocodone	90.1	48.6	49.2			1.26
	Ibuprofen	63.7	61.7	65.7			6.28
	Imazapyr	81.9	69.0	64.1			4.82
	Imidacloprid	84.3	77.0	79.0			2.54
	Linuron	79.7	59.2	58.5			1.12
	Mandestrobin	90.0	83.5	79.9			4.43
	MCPP	88.5	109	105			3.61
	Naproxen	79.0	63.2	72.0			13.1
	Primidone	85.2	49.3	48.6			1.39
	Pyraclostrobin	83.3	79.3	79.4			0.192
	Silvex	76.5	102	99.4			2.78
	Sucralose	105	106	114			7.88
	Thiamethoxam	86.0	54.7	55.1			0.839
	Tolfenpyrad	54.9	52.8	52.2			1.27
	Triclopyr	83.5	106	107			0.428
SM 2320 B-2011	Total Alkalinity	97.5				1.82	
SM 2540 C-2015	TDS	93.2				6.02	
SM 2540 D-2015	TSS	108					
SM 4500-F- C-2011	Fluoride	102	99.7	100			0.492
SM 5310 B-2011	Organic Carbon	98.4	99.0			0.0	

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2446710
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2446710
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2446710
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2446710

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2446711
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2446711
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2446711
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2446711
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2446716
EPA 8270E	PCBs in water matrices by GC/MS/MS	2446716
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2446716
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2446728
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2446710
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2446710
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2446710
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2446710
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2446711

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	10/24/2023			10/24/2023 15:37	Samantha L Bates	2446710
EPA 180.1 Rev. 2.0	10/24/2023			10/24/2023 14:32	Anna M. Plaviak	2446710
EPA 300.0 Rev. 2.1	10/24/2023			10/31/2023 11:15	James L Waggeberby	2446710
EPA 350.1 Rev. 2.0	10/24/2023			10/26/2023 10:12	Ping Hua	2446711
EPA 351.2 Rev. 2.0	10/24/2023	10/26/2023 11:38	Simonne.V. Calhoun	10/27/2023 14:39	Ping Hua	2446711
EPA 353.2 Rev. 2.0	10/24/2023			10/26/2023 15:10	Fadila Guebre	2446711
EPA 365.1 Rev. 2.0	10/24/2023	10/25/2023 15:30	Simonne.V. Calhoun	10/26/2023 10:46	James L Waggeberby	2446711
EPA 8270E	10/24/2023	10/26/2023 08:30	Rasheda Ghaffari	10/31/2023 01:23	Julie Wi	2446716
	10/24/2023	10/26/2023 08:30	Rasheda Ghaffari	11/02/2023 01:56	Lipi Saha	2446716
EPA 8276	10/24/2023	10/26/2023 08:30	Rasheda Ghaffari	10/30/2023 12:45	Arthur Maknenko	2446716
EPA 8321B	10/24/2023	10/24/2023 12:00	Hana Lee	10/24/2023 17:48	Tae K Lee	2446728
	10/24/2023	10/24/2023 12:00	Hana Lee	10/25/2023 13:41	Tae K Lee	2446728
	10/24/2023	10/25/2023 09:00	Hoor Shaik	10/25/2023 22:01	Juyoung Kim	2446728
SM 2320 B-2011	10/24/2023			10/25/2023 21:59	Dale L. Simmons	2446710
SM 2540 C-2015	10/24/2023			10/27/2023 16:33	Yijie Li	2446710
SM 2540 D-2015	10/24/2023			10/27/2023 16:33	Yijie Li	2446710
SM 4500-F- C-2011	10/24/2023			10/25/2023 21:59	Dale L. Simmons	2446710
SM 5310 B-2011	10/24/2023			10/26/2023 20:22	Khloe J Berg	2446711