

Chemical Analysis Report

SO-DIST-2023-10-06-01

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

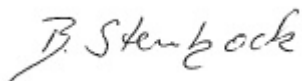
Event Description: **2023 SMP: Burnt Store & More**
Request ID: **RQ-2023-10-02-64**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 25-OCT-2023 16:11



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: YUCCA PEN MARINE AT N OF OLD
BURNTSTORE**

Collection Date/Time: 10/05/2023 10:00

Field ID: G2SD0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2443373	DEP SOP: NU-094-1	Color (true)	140		PCU	P436145	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P436138	
	EPA 300.0 Rev. 2.1	Chloride	51		mg Cl/L	P436323	
		Sulfate	4.0		mg SO4/L	P436326	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P436470	
	SM 2540 C-2015	TDS	166	AJ	mg/L	P436766	RPD
	SM 2540 D-2015	TSS	24	A	mg/L	P436583	
	SM 4500-F- C-2011	Fluoride	0.043	I	mg F/L	P436359	
2443374	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P436288	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P436271	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P436453	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P436220	MS
	SM 5310 B-2011	Organic Carbon	20		mg C/L	P436333	

Ref. Method and Comment:

SM 2540 C-2015: Refer to the Lab Analysis Report for an explanation of QC Codes.

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: FORD CANAL AT GALLEE WAY

Collection Date/Time: 10/05/2023 10:50

Field ID: G3SD0136

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2443375	DEP SOP: NU-094-1	Color (true)	54	A	PCU	P436145	
	EPA 180.1 Rev. 2.0	Turbidity	2.8	A	NTU	P436138	
	EPA 300.0 Rev. 2.1	Chloride	72		mg Cl/L	P436323	
		Sulfate	25		mg SO4/L	P436326	
	SM 2320 B-2011	Total Alkalinity	223		mg CaCO3/L	P436470	
	SM 2540 C-2015	TDS	413		mg/L	P436766	RPD
	SM 2540 D-2015	TSS	3	I	mg/L	P436583	
	SM 4500-F- C-2011	Fluoride	0.19		mg F/L	P436359	
2443376	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P436288	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P436271	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P436453	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P436220	MS
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P436333	
2443384	EPA 8321B	2,4-D	0.012		ug/L	P436051	
		Acesulfame K	0.21	I	ug/L	P436195	
		2,4,5-T	0.0040	U	ug/L	P436051	
		AMPA	0.89		ug/L	P436195	
		Acetaminophen	0.0080	U	ug/L	P436051	
		Acetamiprid	0.0020	U	ug/L	P436051	
		Endothall	0.25	U	ug/L	P436195	
		Glufosinate	0.10	U	ug/L	P436195	
		Glyphosate	97		ug/L	P436195	
		Afidopyropen	0.0020	U	ug/L	P436051	
		Bentazon	0.0048		ug/L	P436051	
		Sucralose	0.84		ug/L	P436195	
		Benzovindiflupyr	0.0020	U	ug/L	P436051	
		Carbamazepine	0.0012	I	ug/L	P436051	
		Clothianidin	0.0037	I	ug/L	P436051	
		Dinotefuran	0.0020	U	ug/L	P436051	
		Diuron	0.0029	I	ug/L	P436051	
		Fenuron	0.032	U	ug/L	P436051	
		Fluridone	8.0E-04	U	ug/L	P436051	
		Imazapyr	0.42		ug/L	P436051	
		Hydrocodone	0.0020	U	ug/L	P436051	
		Ibuprofen	0.080	U	ug/L	P436051	
		Imidacloprid	0.0033	I	ug/L	P436051	
		Linuron	0.0040	U	ug/L	P436051	
		Mandestrobin	0.0020	U	ug/L	P436051	
		MCP	0.011		ug/L	P436051	
		Naproxen	0.0080	U	ug/L	P436051	
		Primidone	0.0040	U	ug/L	P436051	
		Pyraclostrobin	0.0020	U	ug/L	P436051	
		Silvex	0.0040	U	ug/L	P436051	
		Thiamethoxam	0.0020	U	ug/L	P436051	

Field ID: G3SD0136

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2443384	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P436051	
		Triclopyr	0.0040	U	ug/L	P436051	

Ref. Method and Comment:
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: MANUEL BRANCH AT BROADWAY

Collection Date/Time: 10/05/2023 11:25

Field ID: G3SD0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2443383	EPA 8270E	Aldrin	0.66	U	ng/L	P435920	
		Alpha-BHC	0.10	U	ng/L	P435920	
		Alpha-Chlordane	0.20	U	ng/L	P435920	
		PCB-1016	2.0	U	ng/L	P435920	
		Beta-BHC	0.30	I	ng/L	P435920	
		PCB-1221	2.0	U	ng/L	P435920	
		Beta-Cyfluthrin	1.3	U	ng/L	P435920	
		PCB-1232	2.0	U	ng/L	P435920	
		Bifenthrin	0.51	U	ng/L	P435920	
		PCB-1242	2.0	U	ng/L	P435920	
		Carbophenothion	0.92	U	ng/L	P435920	
		PCB-1248	2.0	U	ng/L	P435920	
		Chlorothalonil	3.7	U	ng/L	P435920	
		PCB-1254	2.0	U	ng/L	P435920	
		Cis-Nonachlor	0.20	U	ng/L	P435920	
		PCB-1260	2.0	U	ng/L	P435920	
		Cypermethrin	1.5	U	ng/L	P435920	
		Dacthal	0.15	U	ng/L	P435920	
		DDD-p,p'	0.26	U	ng/L	P435920	
		DDE-p,p'	0.20	U	ng/L	P435920	
		DDT-p,p'	0.82	U	ng/L	P435920	
		Delta-BHC	0.41	U	ng/L	P435920	
		Deltamethrin	1.3	U	ng/L	P435920	
		Dichlobenil	0.26	U	ng/L	P435920	
		Dicofol	1.3	U	ng/L	P435920	
		Dieldrin	0.57	I	ng/L	P435920	
		Endosulfan I	0.41	U	ng/L	P435920	
		Endosulfan II	0.92	U	ng/L	P435920	
		Endosulfan Sulfate	0.31	U	ng/L	P435920	
		Endrin	0.92	U	ng/L	P435920	
		Endrin Aldehyde	0.77	U	ng/L	P435920	
		Endrin Ketone	0.41	U	ng/L	P435920	
		Esfenvalerate	0.77	U	ng/L	P435920	
		Ethalfuralin	0.15	U	ng/L	P435920	
		Fenpropathrin	0.26	U	ng/L	P435920	
		Gamma-BHC	0.13	U	ng/L	P435920	
		Gamma-Chlordane	0.20	U	ng/L	P435920	
		Heptachlor	0.20	U	ng/L	P435920	
		Heptachlor Epoxide	0.26	U	ng/L	P435920	
		Hexachlorobenzene**	1.0	U	ng/L	P435920	
		Kepone	14	U	ng/L	P435920	
		Lambda-Cyhalothrin	0.77	U	ng/L	P435920	
		Methoprene	0.77	U	ng/L	P435920	
		Methoxychlor	0.31	U	ng/L	P435920	

Field ID: G3SD0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2443383	EPA 8270E	MGK-264	0.20	U	ng/L	P435920	
		Mirex	0.36	U	ng/L	P435920	
		Oxychlordane	0.31	U	ng/L	P435920	
		Permethrin	1.6	U	ng/L	P435920	
		Phenothrin	0.92	U	ng/L	P435920	
		Piperonyl Butoxide	4.9		ng/L	P435920	
		Prallethrin	2.0	U	ng/L	P435920	
		Tau-Fluvalinate	0.26	U	ng/L	P435920	
		Tetramethrin	0.77	U	ng/L	P435920	
		Trans-Nonachlor	0.20	U	ng/L	P435920	
		Triclosan Methyl	0.15	U	ng/L	P435920	
		Trifluralin	0.20	U	ng/L	P435920	
	EPA 8276	Chlordane	2.0	U	ng/L	P435920	
		Toxaphene	15	U	ng/L	P435920	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P436145

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436138

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436323

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436326

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436288

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436271

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436453

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436220

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

Reference Method: EPA 8270E
Batch ID: P435920

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: P435920

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: P435920

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

Reference Method: EPA 8321B

Batch ID: P436051

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: EPA 8321B

Batch ID: P436195

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

Reference Method: SM 2320 B-2011

Batch ID: P436470

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: P436766

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P436583

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P436359

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P436333

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: P436145

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: P436138

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436323

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436326

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436288

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: P436271

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436453

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436220

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

Reference Method: EPA 8270E
Batch ID: P435920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	50.4		P	24 - 81.0
Alpha-BHC	86.0		P	65 - 110
Alpha-Chlordane	92.1		P	43 - 119
Beta-BHC	109		P	54 - 165

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P435920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	70.0		P	27 - 165
Bifenthrin	49.5		P	17 - 117
Carbophenothion	36.4		P	21 - 108
Chlorothalonil	124		P	10 - 255
Cis-Nonachlor	84.7		P	34 - 98.0
Cypermethrin	47.4		P	25 - 143
Dacthal	86.6		P	55 - 139
DDD-p,p'	59.0		P	30 - 109
DDE-p,p'	51.5		P	35 - 106
DDT-p,p'	63.3		P	41 - 101
Delta-BHC	142		P	58 - 165
Deltamethrin	81.7		P	10 - 194
Dichlobenil	78.7		P	22 - 114
Dicofol	77.0		P	17 - 133
Dieldrin	59.5		P	45 - 129
Endosulfan I	66.7		P	49 - 104
Endosulfan II	68.6		P	37 - 117
Endosulfan Sulfate	93.4		P	38 - 128
Endrin	55.5		P	35 - 116
Endrin Aldehyde	82.4		P	19 - 108
Endrin Ketone	91.6		P	44 - 134
Esfenvalerate	80.6		P	27 - 176
Ethalfuralin	76.2		P	49 - 100
Fenpropathrin	60.6		P	34 - 117
Gamma-BHC	109		P	59 - 129
Gamma-Chlordane	99.4		P	33 - 107
Heptachlor	57.3		P	37 - 94.0
Heptachlor Epoxide	75.7		P	38 - 118
Hexachlorobenzene	64.6		P	35 - 97.0
Kepone	88.8		P	10 - 221
Lambda-Cyhalothrin	37.2		P	23 - 190
Methoprene	45.0		P	21 - 109
Methoxychlor	78.7		P	46 - 118
MGK-264	99.0		P	39 - 122
Mirex	50.4		P	25 - 90.0
Oxychlordane	64.7		P	42 - 100
PCB-1016	69.2		P	45 - 107
PCB-1260	76.3		P	40 - 118
Permethrin	62.9		P	33 - 181
Phenothrin	53.3		P	12 - 125
Piperonyl Butoxide	91.1		P	10 - 178
Prallethrin	63.1		P	24 - 122
Tau-Fluvalinate	67.6		P	13 - 151
Tetramethrin	72.4		P	16 - 172
Trans-Nonachlor	64.1		P	39 - 100
Triclosan Methyl	67.1		P	43 - 110
Trifluralin	63.5		P	45 - 94.0

Reference Method: EPA 8276
Batch ID: P435920

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: P435920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	90.2		P	52 - 117
Toxaphene	85.9		P	44 - 125

Reference Method: EPA 8321B

Batch ID: P436051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.1		P	40 - 150
2,4,5-T	94.6		P	40 - 150
Acetaminophen	77.3		P	30 - 150
Acetamiprid	83.5		P	40 - 150
Afidopyropen	77.9		P	30 - 150
Bentazon	91.8		P	30 - 150
Benzovindiflupyr	78.7		P	40 - 150
Carbamazepine	76.3		P	40 - 150
Clothianidin	84.6		P	40 - 150
Dinotefuran	90.8		P	40 - 150
Diuron	81.3		P	40 - 150
Fenuron	79.0		P	40 - 150
Fluridone	101		P	40 - 150
Hydrocodone	97.2		P	40 - 150
Ibuprofen	76.6		P	40 - 150
Imazapyr	84.1		P	40 - 150
Imidacloprid	78.2		P	40 - 150
Linuron	85.9		P	40 - 150
Mandestrobin	88.4		P	40 - 150
MCPP	91.8		P	40 - 150
Naproxen	55.2		P	40 - 150
Primidone	82.7		P	40 - 150
Pyraclostrobin	73.2		P	40 - 150
Silvex	77.7		P	40 - 150
Thiamethoxam	90.7		P	40 - 150
Tolfenpyrad	49.8		P	30 - 150
Triclopyr	101		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P436195

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	93.4		P	40 - 150
Endothall	90.0		P	40 - 150
Glufosinate	78.2		P	40 - 150
Glyphosate	73.9		P	40 - 150
Sucralose	91.3		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P436470

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.7		P	92 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P436766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	106		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P436583

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

Reference Method: SM 4500-F- C-2011
Batch ID: P436359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P436333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443359	Chloride	104		P	90 - 110
2443434	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443359	Sulfate	103		P	90 - 110
2443434	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443435	Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443166	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443361	Total-P	112	112	F/F	90 - 110

Reference Method: EPA 8270E
Batch ID: P435920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2442830	Aldrin	44.1	44.9	P/P	24 - 81.0
2442830	Alpha-BHC	85.7	73.0	P/P	65 - 110
2442830	Alpha-Chlordane	107	86.2	P/P	43 - 119
2442830	Beta-BHC	124	115	P/P	54 - 165
2442830	Beta-Cyfluthrin	69.6	67.8	P/P	27 - 165
2442830	Bifenthrin	43.4	42.7	P/P	17 - 117
2442830	Carbophenothion	66.2	59.5	P/P	21 - 108
2442830	Chlorothalonil	130	105	P/P	10 - 255
2442830	Cis-Nonachlor	90.2	75.4	P/P	34 - 98.0
2442830	Cypermethrin	47.6	44.8	P/P	25 - 143
2442830	Dacthal	93.1	78.5	P/P	55 - 139
2442830	DDD-p,p'	63.2	55.2	P/P	30 - 109
2442830	DDE-p,p'	61.3	50.3	P/P	35 - 106
2442830	DDT-p,p'	69.5	59.5	P/P	41 - 101
2442830	Delta-BHC	154	153	P/P	58 - 165
2442830	Deltamethrin	91.9	88.3	P/P	10 - 194
2442830	Dichlobenil	87.6	66.7	P/P	22 - 114
2442830	Dicofol	80.8	76.5	P/P	17 - 133
2442830	Dieldrin	62.9	55.9	P/P	45 - 129
2442830	Endosulfan I	69.3	59.3	P/P	49 - 104

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P435920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2442830	Endosulfan II	79.2	76.5	P/P	37 - 117
2442830	Endosulfan Sulfate	103	82.9	P/P	38 - 128
2442830	Endrin	69.6	56.7	P/P	35 - 116
2442830	Endrin Aldehyde	86.8	71.1	P/P	19 - 108
2442830	Endrin Ketone	102	88.3	P/P	44 - 134
2442830	Esfenvalerate	81.4	79.3	P/P	27 - 176
2442830	Ethalfuralin	57.2	54.1	P/P	49 - 100
2442830	Fenpropathrin	66.8	54.9	P/P	34 - 117
2442830	Gamma-BHC	97.0	100	P/P	59 - 129
2442830	Gamma-Chlordane	99.0	94.3	P/P	33 - 107
2442830	Heptachlor	48.4	50.0	P/P	37 - 94.0
2442830	Heptachlor Epoxide	74.7	70.6	P/P	38 - 118
2442830	Hexachlorobenzene	70.8	60.9	P/P	35 - 97.0
2442830	Kepone	101	98.5	P/P	10 - 221
2442830	Lambda-Cyhalothrin	33.7	37.1	P/P	23 - 190
2442830	Methoprene	38.9	35.4	P/P	21 - 109
2442830	Methoxychlor	88.5	75.8	P/P	46 - 118
2442830	MGK-264	101	98.4	P/P	39 - 122
2442830	Mirex	52.5	55.7	P/P	25 - 90.0
2442830	Oxychlordane	63.2	51.5	P/P	42 - 100
2442830	Permethrin	63.6	57.9	P/P	33 - 181
2442830	Phenothrin	49.3	49.6	P/P	12 - 125
2442830	Piperonyl Butoxide	99.2	76.2	P/P	10 - 178
2442830	Prallethrin	66.2	72.1	P/P	24 - 122
2442830	Tau-Fluvalinate	72.7	69.4	P/P	13 - 151
2442830	Tetramethrin	71.7	69.4	P/P	16 - 172
2442830	Trans-Nonachlor	66.0	65.0	P/P	39 - 100
2442830	Triclosan Methyl	70.9	57.6	P/P	43 - 110
2442830	Trifluralin	62.4	50.4	P/P	45 - 94.0
2443209	PCB-1016	71.0	74.9	P/P	45 - 107
2443209	PCB-1260	71.2	72.2	P/P	40 - 112

Reference Method: EPA 8276

Batch ID: P435920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443209	Chlordane	73.9	81.0	P/P	43 - 123
2443209	Toxaphene	71.7	85.1	P/P	27 - 156

Reference Method: EPA 8321B

Batch ID: P436051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2442904	2,4-D	97.0	100	P/P	40 - 150
2442904	2,4,5-T	94.2	100	P/P	40 - 150
2442904	Acetaminophen	72.3	73.1	P/P	30 - 150
2442904	Afidopyropen	74.9	84.8	P/P	30 - 150
2442904	Carbamazepine	61.7	66.8	P/P	40 - 150
2442904	Clothianidin	75.9	80.9	P/P	40 - 150
2442904	Dinotefuran	79.1	91.4	P/P	40 - 150
2442904	Diuron	63.3	66.3	P/P	40 - 150
2442904	Fenuron	55.8	60.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P436051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2442904	Fluridone	79.6	80.7	P/P	40 - 150
2442904	Hydrocodone	76.3	81.4	P/P	40 - 150
2442904	Ibuprofen	54.7	58.3	P/P	40 - 150
2442904	Imazapyr	84.5	86.1	P/P	40 - 150
2442904	Imidacloprid	110	117	P/P	40 - 150
2442904	Linuron	80.4	71.0	P/P	40 - 150
2442904	Mandestrobin	92.7	97.7	P/P	40 - 150
2442904	MCCP	89.2	98.2	P/P	40 - 150
2442904	Naproxen	75.8	71.0	P/P	40 - 150
2442904	Primidone	75.2	79.1	P/P	40 - 150
2442904	Pyraclostrobin	68.6	94.6	P/P	40 - 150
2442904	Silvex	103	100	P/P	40 - 150
2442904	Thiamethoxam	88.5	90.8	P/P	40 - 150
2442904	Tolfenpyrad	54.2	66.8	P/P	30 - 150
2442904	Triclopyr	97.1	101	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P436195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443120	Acesulfame K	130	137	P/P	40 - 150
2443120	AMPA	84.8	82.8	P/P	40 - 150
2443120	Endothall	98.1	94.5	P/P	40 - 150
2443120	Glufosinate	78.9	77.4	P/P	40 - 150
2443120	Glyphosate	102	118	P/P	40 - 150
2443120	Sucralose	107	96.5	P/P	40 - 150

Reference Method: SM 5310 B-2011

Batch ID: P436333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443184	Organic Carbon	94.7	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P436145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443375	Color (true)	1.53	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443375	Turbidity	1.79	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443359	Chloride	0.911	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443359	Sulfate	1.11	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443435	Ammonia-N	0.737	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443329	Kjeldahl Nitrogen	3.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443166	NO2NO3-N	0.475	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443361	Total-P	0.0670	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P435920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2442830	Aldrin	1.80	Spike	P	0 - 41
2442830	Alpha-BHC	14.4	Spike	P	0 - 25
2442830	Alpha-Chlordane	21.8	Spike	P	0 - 32
2442830	Beta-BHC	7.46	Spike	P	0 - 33
2442830	Beta-Cyfluthrin	2.61	Spike	P	0 - 43
2442830	Bifenthrin	1.67	Spike	P	0 - 52
2442830	Carbophenothion	10.8	Spike	P	0 - 30
2442830	Chlorothalonil	21.3	Spike	P	0 - 82
2442830	Cis-Nonachlor	17.9	Spike	P	0 - 33
2442830	Cypermethrin	5.89	Spike	P	0 - 51
2442830	Dacthal	16.1	Spike	P	0 - 27
2442830	DDD-p,p'	13.6	Spike	P	0 - 39
2442830	DDE-p,p'	19.8	Spike	P	0 - 31
2442830	DDT-p,p'	15.5	Spike	P	0 - 29
2442830	Delta-BHC	0.730	Spike	P	0 - 35
2442830	Deltamethrin	4.09	Spike	P	0 - 100
2442830	Dichlobenil	27.1	Spike	P	0 - 40
2442830	Dicofol	5.52	Spike	P	0 - 37
2442830	Dieldrin	11.1	Spike	P	0 - 27
2442830	Endosulfan I	14.9	Spike	P	0 - 23
2442830	Endosulfan II	3.47	Spike	P	0 - 34
2442830	Endosulfan Sulfate	21.9	Spike	P	0 - 36
2442830	Endrin	20.5	Spike	P	0 - 45
2442830	Endrin Aldehyde	19.9	Spike	P	0 - 76
2442830	Endrin Ketone	14.3	Spike	P	0 - 43
2442830	Esfenvalerate	2.65	Spike	P	0 - 51
2442830	Ethalfuralin	4.73	Spike	P	0 - 22
2442830	Fenpropathrin	19.6	Spike	P	0 - 49
2442830	Gamma-BHC	2.98	Spike	P	0 - 28
2442830	Gamma-Chlordane	4.51	Spike	P	0 - 40
2442830	Heptachlor	3.32	Spike	P	0 - 29
2442830	Heptachlor Epoxide	5.63	Spike	P	0 - 33
2442830	Hexachlorobenzene	15.0	Spike	P	0 - 36
2442830	Kepone	2.93	Spike	P	0 - 85
2442830	Lambda-Cyhalothrin	9.85	Spike	P	0 - 55
2442830	Methoprene	9.42	Spike	P	0 - 53
2442830	Methoxychlor	15.5	Spike	P	0 - 50
2442830	MGK-264	2.67	Spike	P	0 - 43
2442830	Mirex	5.91	Spike	P	0 - 40
2442830	Oxychlordane	20.5	Spike	P	0 - 31
2442830	Permethrin	9.32	Spike	P	0 - 50
2442830	Phenothrin	0.457	Spike	P	0 - 58
2442830	Piperonyl Butoxide	26.2	Spike	P	0 - 100
2442830	Prallethrin	8.44	Spike	P	0 - 39
2442830	Tau-Fluvalinate	4.62	Spike	P	0 - 54
2442830	Tetramethrin	3.20	Spike	P	0 - 51
2442830	Trans-Nonachlor	1.58	Spike	P	0 - 39
2442830	Triclosan Methyl	20.7	Spike	P	0 - 31
2442830	Trifluralin	18.6	Spike	P	0 - 22
2443209	PCB-1016	5.42	Spike	P	0 - 25
2443209	PCB-1260	1.43	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P435920

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443209	Chlordane	9.22	Spike	P	0 - 28
2443209	Toxaphene	17.2	Spike	P	0 - 27

Reference Method: EPA 8321B

Batch ID: P436051

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2442904	2,4-D	3.12	Spike	P	0 - 30
2442904	2,4,5-T	6.11	Spike	P	0 - 30
2442904	Acetaminophen	1.11	Spike	P	0 - 30
2442904	Acetamiprid	4.12	Spike	P	0 - 30
2442904	Afidopyropen	12.5	Spike	P	0 - 30
2442904	Bentazon	11.9	Spike	P	0 - 30
2442904	Benzovindiflupyr	17.6	Spike	P	0 - 30
2442904	Carbamazepine	7.88	Spike	P	0 - 30
2442904	Clothianidin	6.10	Spike	P	0 - 30
2442904	Dinotefuran	7.96	Spike	P	0 - 30
2442904	Diuron	3.68	Spike	P	0 - 30
2442904	Fenuron	7.67	Spike	P	0 - 30
2442904	Fluridone	1.42	Spike	P	0 - 30
2442904	Hydrocodone	6.42	Spike	P	0 - 30
2442904	Ibuprofen	6.42	Spike	P	0 - 30
2442904	Imazapyr	1.88	Spike	P	0 - 30
2442904	Imidacloprid	4.83	Spike	P	0 - 30
2442904	Linuron	12.5	Spike	P	0 - 30
2442904	Mandestrobin	5.25	Spike	P	0 - 30
2442904	MCPD	9.62	Spike	P	0 - 30
2442904	Naproxen	6.49	Spike	P	0 - 30
2442904	Primidone	5.05	Spike	P	0 - 30
2442904	Pyraclostrobin	17.4	Spike	P	0 - 30
2442904	Silvex	2.89	Spike	P	0 - 30
2442904	Thiamethoxam	2.32	Spike	P	0 - 30
2442904	Tolfenpyrad	20.8	Spike	P	0 - 30
2442904	Triclopyr	4.32	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P436195

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443120	Acesulfame K	5.11	Spike	P	0 - 30
2443120	AMPA	2.10	Spike	P	0 - 30
2443120	Endothall	3.74	Spike	P	0 - 30
2443120	Glufosinate	1.83	Spike	P	0 - 30
2443120	Glyphosate	14.9	Spike	P	0 - 30
2443120	Sucralose	9.69	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P436470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443359	Total Alkalinity	0.0706	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P436766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443373	TDS	11.4	Sample	F	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P436583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443373	TSS	6.56	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P436359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443359	Fluoride	0.480	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P436333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443184	Organic Carbon	2.72	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2443383
Field Sample ID: G3SD0078

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	79.4	P	37 - 129
EPA 8270E	Decachlorobiphenyl	70.3	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	52.1	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	49.9	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	61.0	P	28 - 102
EPA 8276	PCNB	90.2	P	49 - 115

Lab Sample ID: 2443384
Field Sample ID: G3SD0136

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.6	P	30 - 160
EPA 8321B	Diuron-d6	52.7	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	55.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.2	P	30 - 160
EPA 8321B	Primidone-d5	64.2	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122011

Included Lab Sample IDs: 2443373, 2443375

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

Reference Method: DEP SOP: NU-094-1

Run ID: A122013

Included Lab Sample IDs: 2443373, 2443375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.7	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122048

Included Lab Sample IDs: 2443374, 2443376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	98.9	P/P	90 - 110
Ammonia-N	98.9	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122058

Included Lab Sample IDs: 2443384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	116	129	P/P	60 - 160
Sucralose	103	102	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A122059

Included Lab Sample IDs: 2443384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.2	103	P/P	60 - 160
Endothall	83.0	74.7	P/P	60 - 160
Glufosinate	88.7	80.3	P/P	60 - 160
Glyphosate	81.6	88.2	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A122062

Included Lab Sample IDs: 2443384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	94.4	96.6	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A122063

Included Lab Sample IDs: 2443384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	105	P/P	50 - 150
2,4,5-T	97.5	114	P/P	50 - 150
Acetaminophen	111	109	P/P	60 - 160
Acetamiprid	109	115	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A122063
Included Lab Sample IDs: 2443384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	120	114	P/P	50 - 150
Bentazon	137	94.3	P/P	50 - 160
Benzovindiflupyr	127	133	P/P	50 - 150
Carbamazepine	101	103	P/P	60 - 150
Clothianidin	100	102	P/P	60 - 150
Dinotefuran	108	106	P/P	50 - 150
Diuron	113	115	P/P	60 - 160
Fenuron	106	102	P/P	60 - 150
Fluridone	154	117	P/P	60 - 160
Hydrocodone	120	127	P/P	60 - 150
Ibuprofen	129	67.1	P/P	50 - 160
Imidacloprid	97.2	98.3	P/P	60 - 150
Linuron	141	148	P/P	60 - 150
Mandestrobin	125	124	P/P	50 - 150
MCPP	104	104	P/P	50 - 150
Naproxen	67.2	71.8	P/P	50 - 160
Primidone	94.7	98.7	P/P	60 - 150
Pyraclostrobin	105	110	P/P	60 - 150
Silvex	109	114	P/P	50 - 150
Thiamethoxam	108	114	P/P	50 - 150
Tolfenpyrad	105	113	P/P	60 - 150
Triclopyr	96.5	117	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A122066
Included Lab Sample IDs: 2443373, 2443375

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

Reference Method: SM 5310 B-2011
Run ID: A122075
Included Lab Sample IDs: 2443374, 2443376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	97.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A122079
Included Lab Sample IDs: 2443373, 2443375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	100	P/P	90 - 110
Fluoride	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A122116
Included Lab Sample IDs: 2443376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122116

Included Lab Sample IDs: 2443376

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122128

Included Lab Sample IDs: 2443374, 2443376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122130

Included Lab Sample IDs: 2443374, 2443376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A122131

Included Lab Sample IDs: 2443373, 2443375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	94.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122149

Included Lab Sample IDs: 2443374

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	97.5	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A122163

Included Lab Sample IDs: 2443383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.1		P	80 - 120
Toxaphene	91.0		P	80 - 120

Reference Method: EPA 8270E

Run ID: A122187

Included Lab Sample IDs: 2443383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.6		P	80 - 120
PCB-1260	95.2		P	80 - 120

Reference Method: EPA 8270E

Run ID: A122254

Included Lab Sample IDs: 2443383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A122254
 Included Lab Sample IDs: 2443383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.4		P	80 - 120
Alpha-BHC	94.9		P	80 - 120
Alpha-Chlordane	105		P	80 - 120
Beta-BHC	95.2		P	80 - 120
Beta-Cyfluthrin	90.0		P	80 - 120
Bifenthrin	88.6		P	80 - 120
Carbophenothion	93.8		P	80 - 120
Chlorothalonil	85.0		P	80 - 120
Cis-Nonachlor	104		P	80 - 120
Cypermethrin	92.4		P	80 - 120
Dacthal	97.4		P	80 - 120
DDD-p,p'	97.1		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	91.5		P	80 - 120
Delta-BHC	93.9		P	80 - 120
Deltamethrin	88.8		P	80 - 120
Dichlobenil	96.8		P	80 - 120
Dicofol	98.2		P	80 - 120
Dieldrin	95.9		P	80 - 120
Endosulfan I	88.4		P	80 - 120
Endosulfan II	98.7		P	80 - 120
Endosulfan Sulfate	110		P	80 - 120
Endrin	99.5		P	80 - 120
Endrin Aldehyde	109		P	80 - 120
Endrin Ketone	96.7		P	80 - 120
Esfenvalerate	82.4		P	80 - 120
Ethalfuralin	95.0		P	80 - 120
Fenpropathrin	92.3		P	80 - 120
Gamma-BHC	99.6		P	80 - 120
Gamma-Chlordane	106		P	80 - 120
Heptachlor	88.3		P	80 - 120
Heptachlor Epoxide	94.5		P	80 - 120
Hexachlorobenzene	85.7		P	80 - 120
Kepone	96.5		P	80 - 120
Lambda-Cyhalothrin	87.4		P	80 - 120
Methoprene	97.6		P	80 - 120
Methoxychlor	88.3		P	80 - 120
MGK-264	96.3		P	80 - 120
Mirex	108		P	80 - 120
Oxychlordane	97.3		P	80 - 120
Permethrin	88.5		P	80 - 120
Phenothrin	88.6		P	80 - 120
Piperonyl Butoxide	80.0		P	80 - 120
Prallethrin	94.0		P	80 - 120
Tau-Fluvalinate	83.1		P	80 - 120
Tetramethrin	81.6		P	80 - 120
Trans-Nonachlor	98.5		P	80 - 120
Triclosan Methyl	92.6		P	80 - 120
Trifluralin	98.7		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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	100				1.53	
EPA 180.1 Rev. 2.0	Turbidity	105				1.79	
EPA 300.0 Rev. 2.1	Chloride	104	104	105		0.911	
	Sulfate	104	103	105		1.11	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6	99.8	101			0.737
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105					3.05
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101	101	102			0.475
EPA 365.1 Rev. 2.0	Total-P	108	112	112			0.0670
EPA 8270E	Aldrin	50.4	44.1	44.9			1.80
	Alpha-BHC	86.0	85.7	73.0			14.4
	Alpha-Chlordane	92.1	107	86.2			21.8
	Beta-BHC	109	124	115			7.46
	Beta-Cyfluthrin	70.0	69.6	67.8			2.61
	Bifenthrin	49.5	42.7	43.4			1.67
	Carbophenothion	36.4	59.5	66.2			10.8
	Chlorothalonil	124	105	130			21.3
	Cis-Nonachlor	84.7	75.4	90.2			17.9
	Cypermethrin	47.4	44.8	47.6			5.89
	Dacthal	86.6	78.5	93.1			16.1
	DDD-p,p'	59.0	55.2	63.2			13.6
	DDE-p,p'	51.5	50.3	61.3			19.8
	DDT-p,p'	63.3	59.5	69.5			15.5
	Delta-BHC	142	153	154			0.730
	Deltamethrin	81.7	88.3	91.9			4.09
	Dichlobenil	78.7	66.7	87.6			27.1
	Dicofol	77.0	76.5	80.8			5.52
	Dieldrin	59.5	55.9	62.9			11.1
	Endosulfan I	66.7	59.3	69.3			14.9
	Endosulfan II	68.6	76.5	79.2			3.47
	Endosulfan Sulfate	93.4	82.9	103			21.9
	Endrin	55.5	56.7	69.6			20.5
	Endrin Aldehyde	82.4	71.1	86.8			19.9
	Endrin Ketone	91.6	88.3	102			14.3
	Esfenvalerate	80.6	79.3	81.4			2.65
	Ethalfuralin	76.2	54.1	57.2			4.73
	Fenpropathrin	60.6	54.9	66.8			19.6
	Gamma-BHC	109	100	97.0			2.98
	Gamma-Chlordane	99.4	94.3	99.0			4.51
	Heptachlor	57.3	48.4	50.0			3.32
	Heptachlor Epoxide	75.7	70.6	74.7			5.63
	Hexachlorobenzene	64.6	60.9	70.8			15.0
	Kepone	88.8	98.5	101			2.93
	Lambda-Cyhalothrin	37.2	37.1	33.7			9.85
	Methoprene	45.0	35.4	38.9			9.42
	Methoxychlor	78.7	75.8	88.5			15.5
	MGK-264	99.0	98.4	101			2.67
	Mirex	50.4	55.7	52.5			5.91
	Oxychlordane	64.7	51.5	63.2			20.5
	PCB-1016	69.2	71.0	74.9			5.42
	PCB-1260	76.3	71.2	72.2			1.43
	Permethrin	62.9	57.9	63.6			9.32
	Phenothrin	53.3	49.6	49.3			0.457
	Piperonyl Butoxide	91.1	76.2	99.2			26.2
	Prallethrin	63.1	72.1	66.2			8.44

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Tau-Fluvalinate	67.6	69.4	72.7			4.62
	Tetramethrin	72.4	69.4	71.7			3.20
	Trans-Nonachlor	64.1	65.0	66.0			1.58
	Triclosan Methyl	67.1	57.6	70.9			20.7
	Trifluralin	63.5	50.4	62.4			18.6
EPA 8276	Chlordane	90.2	73.9	81.0			9.22
	Toxaphene	85.9	71.7	85.1			17.2
EPA 8321B	2,4-D	89.1	97.0	100			3.12
	2,4,5-T	94.6	94.2	100			6.11
	Acesulfame K	106	130	137			5.11
	Acetaminophen	77.3	72.3	73.1			1.11
	Acetamiprid	83.5					4.12
	Afidopyropen	77.9	74.9	84.8			12.5
	AMPA	93.4	84.8	82.8			2.10
	Bentazon	91.8					11.9
	Benzovindiflupyr	78.7					17.6
	Carbamazepine	76.3	61.7	66.8			7.88
	Clothianidin	84.6	75.9	80.9			6.10
	Dinotefuran	90.8	79.1	91.4			7.96
	Diuron	81.3	63.3	66.3			3.68
	Endothall	90.0	98.1	94.5			3.74
	Fenuron	79.0	55.8	60.2			7.67
	Fluridone	101	79.6	80.7			1.42
	Glufosinate	78.2	78.9	77.4			1.83
	Glyphosate	73.9	102	118			14.9
	Hydrocodone	97.2	76.3	81.4			6.42
	Ibuprofen	76.6	54.7	58.3			6.42
	Imazapyr	84.1	84.5	86.1			1.88
	Imidacloprid	78.2	110	117			4.83
	Linuron	85.9	80.4	71.0			12.5
	Mandestrobin	88.4	92.7	97.7			5.25
	MCPP	91.8	89.2	98.2			9.62
	Naproxen	55.2	75.8	71.0			6.49
	Primidone	82.7	75.2	79.1			5.05
	Pyraclostrobin	73.2	68.6	94.6			17.4
	Silvex	77.7	103	100			2.89
	Sucralose	91.3	107	96.5			9.69
	Thiamethoxam	90.7	88.5	90.8			2.32
	Tolfenpyrad	49.8	54.2	66.8			20.8
	Triclopyr	101	97.1	101			4.32
SM 2320 B-2011	Total Alkalinity	97.7				0.0706	
SM 2540 C-2015	TDS	106				11.4	
SM 2540 D-2015	TSS	108				6.56	
SM 4500-F- C-2011	Fluoride	98.8					0.480
SM 5310 B-2011	Organic Carbon	95.0	94.7	97.6			2.72

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2443373, 2443375
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2443373, 2443375
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2443373, 2443375
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2443373, 2443375

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2443374, 2443376
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2443374, 2443376
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2443374, 2443376
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2443374, 2443376
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2443383
EPA 8270E	PCBs in water matrices by GC/MS/MS	2443383
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2443383
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2443384
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2443373, 2443375
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2443373, 2443375
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2443373, 2443375
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2443373, 2443375
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2443374, 2443376

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	10/06/2023			10/06/2023 15:46	Alexis Price	2443373
	10/06/2023			10/06/2023 15:47	Alexis Price	2443375
EPA 180.1 Rev. 2.0	10/06/2023			10/06/2023 14:38	Khloe J Berg	2443373
	10/06/2023			10/06/2023 14:41	Khloe J Berg	2443375
EPA 300.0 Rev. 2.1	10/06/2023			10/10/2023 12:10	James L Waggeberby	2443373
	10/06/2023			10/10/2023 12:25	James L Waggeberby	2443375
EPA 350.1 Rev. 2.0	10/06/2023			10/10/2023 14:35	Ping Hua	2443376
	10/06/2023			10/10/2023 15:02	Ping Hua	2443374
EPA 351.2 Rev. 2.0	10/06/2023	10/12/2023 09:10	Ping Hua	10/12/2023 16:55	Ping Hua	2443374
	10/06/2023	10/12/2023 09:10	Ping Hua	10/12/2023 16:57	Ping Hua	2443376
EPA 353.2 Rev. 2.0	10/06/2023			10/12/2023 13:06	Anna M. Plaviak	2443374
	10/06/2023			10/12/2023 13:07	Anna M. Plaviak	2443376
EPA 365.1 Rev. 2.0	10/06/2023	10/10/2023 15:15	Adam P Silver	10/11/2023 16:52	Simonne.V. Calhoun	2443376
	10/06/2023	10/10/2023 15:15	Adam P Silver	10/13/2023 12:29	James L Waggeberby	2443374
EPA 8270E	10/06/2023	10/10/2023 08:00	Fe-Val Siddell	10/12/2023 06:38	Julie Wi	2443383
	10/06/2023	10/10/2023 08:00	Fe-Val Siddell	10/18/2023 03:26	Julie Wi	2443383
EPA 8276	10/06/2023	10/10/2023 08:00	Fe-Val Siddell	10/12/2023 16:37	Lipi Saha	2443383
EPA 8321B	10/06/2023	10/06/2023 13:00	Hoor Shaik	10/10/2023 03:19	Juyoung Kim	2443384
	10/06/2023	10/06/2023 13:00	Hoor Shaik	10/10/2023 17:52	Juyoung Kim	2443384
	10/06/2023	10/10/2023 06:00	Hana Lee	10/10/2023 13:03	Tae K Lee	2443384
	10/06/2023	10/10/2023 06:00	Hana Lee	10/10/2023 23:08	Tae K Lee	2443384
	10/06/2023	10/10/2023 06:00	Hana Lee	10/11/2023 01:32	Tae K Lee	2443384
SM 2320 B-2011	10/06/2023			10/12/2023 23:21	Chandler E Cox	2443373
	10/06/2023			10/12/2023 23:33	Chandler E Cox	2443375
SM 2540 C-2015	10/06/2023			10/11/2023 15:58	Yijie Li	2443373, 2443375
SM 2540 D-2015	10/06/2023			10/11/2023 15:58	Yijie Li	2443373, 2443375
SM 4500-F- C-2011	10/06/2023			10/09/2023 22:32	Dale L. Simmons	2443373
	10/06/2023			10/09/2023 23:23	Dale L. Simmons	2443375
SM 5310 B-2011	10/06/2023			10/10/2023 22:01	Elise M. Gillis	2443374
	10/06/2023			10/10/2023 22:16	Elise M. Gillis	2443376