

Chemical Analysis Report

SW-DIST-2023-12-20-01

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

Event Description: **Run 11**
Request ID: **RQ-2023-12-18-26**
Customer: **SW-DIST**
Project ID: **SMP**

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13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Date Certified: 11-JAN-2024 11:57



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: ENGLISH CREEK AT S COUNTY LINE

Collection Date/Time: 12/19/2023 09:40

Field ID: G2SW0169

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2458187	EPA 8321B	2,4-D	0.0031	I	ug/L	P439250	
		Acesulfame K	0.10	I	ug/L	P439184	
		2,4,5-T	0.0040	U	ug/L	P439250	
		AMPA	4.2		ug/L	P439184	MS
		Acetaminophen	0.0080	U	ug/L	P439250	
		Acetamiprid	0.11		ug/L	P439250	
		Endothall	0.25	U	ug/L	P439184	
		Glufosinate	0.10	U	ug/L	P439184	
		Glyphosate	5.2		ug/L	P439184	
		Afidopyropen	0.0020	U	ug/L	P439250	
		Bentazon	0.0011	I	ug/L	P439250	
		Sucralose	0.38		ug/L	P439184	
		Benzovindiflupyr	0.0020	U	ug/L	P439250	
		Carbamazepine	0.0019	I	ug/L	P439250	
		Clothianidin	0.015		ug/L	P439250	
		Dinotefuran	0.0026	I	ug/L	P439250	
		Diuron	0.032		ug/L	P439250	
		Fenuron	0.032	U	ug/L	P439250	
		Fluridone	1.0E-03	I	ug/L	P439250	
		Imazapyr	0.18		ug/L	P439250	
		Hydrocodone	0.0020	U	ug/L	P439250	
		Ibuprofen	0.080	U	ug/L	P439250	
		Imidacloprid	0.027		ug/L	P439250	
		Linuron	0.0040	U	ug/L	P439250	
		Mandestrobin	0.0020	U	ug/L	P439250	
		MCPP	0.0020	U	ug/L	P439250	
		Naproxen	0.0080	U	ug/L	P439250	
		Primidone	0.0040	U	ug/L	P439250	
		Pyraclostrobin	0.0020	U	ug/L	P439250	
		Silvex	0.0040	U	ug/L	P439250	
		Thiamethoxam	0.014		ug/L	P439250	
		Tolfenpyrad	0.0020	U	ug/L	P439250	
		Triclopyr	0.0040	U	ug/L	P439250	

Sample Location: BELLOWS OUTLET

Collection Date/Time: 12/19/2023 10:15

Field ID: G1SW0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2458169	DEP SOP: NU-094-1	Color (true)	40	A	PCU	P439276	
	EPA 180.1 Rev. 2.0	Turbidity	7.6		NTU	P439270	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P439530	
		Sulfate	8.8		mg SO4/L	P439533	
	SM 2320 B-2011	Total Alkalinity	93		mg CaCO3/L	P439420	
	SM 2540 C-2015	TDS	168		mg/L	P439635	
	SM 2540 D-2015	TSS	13	I	mg/L	P439572	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P439422	
2458170	EPA 350.1 Rev. 2.0	Ammonia-N	0.31		mg N/L	P439646	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P439448	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P439378	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P439385	
	SM 5310 B-2014	Organic Carbon	15		mg C/L	P439529	
2458185	EPA 8270E	Aldrin	0.71	U	ng/L	P439324	
		Alpha-BHC	0.11	U	ng/L	P439324	RPD
		Alpha-Chlordane	0.22	U	ng/L	P439324	
		PCB-1016	2.2	U	ng/L	P439324	
		Beta-BHC	0.11	U	ng/L	P439324	
		PCB-1221	2.2	U	ng/L	P439324	
		Beta-Cyfluthrin	1.4	U	ng/L	P439324	
		PCB-1232	2.2	U	ng/L	P439324	
		Bifenthrin	0.55	U	ng/L	P439324	
		PCB-1242	2.2	U	ng/L	P439324	
		PCB-1248	2.2	U	ng/L	P439324	
		Chlorothalonil	3.9	U	ng/L	P439324	MS
		PCB-1254	2.2	U	ng/L	P439324	
		Cis-Nonachlor	0.22	U	ng/L	P439324	
		PCB-1260	2.2	U	ng/L	P439324	
		Cypermethrin	1.6	U	ng/L	P439324	
		Dacthal	0.16	U	ng/L	P439324	
		DDD-p,p'	0.27	U	ng/L	P439324	
		DDE-p,p'	0.22	U	ng/L	P439324	
		DDT-p,p'	3.7	IV	ng/L	P439324	
		Delta-BHC	0.44	U	ng/L	P439324	MS
		Deltamethrin	1.4	U	ng/L	P439324	
		Dichlobenil	0.27	U	ng/L	P439324	RPD
		Dicofol	1.4	U	ng/L	P439324	
		Diieldrin	0.44	U	ng/L	P439324	
		Endosulfan I	0.44	U	ng/L	P439324	
		Endosulfan II	0.99	U	ng/L	P439324	
		Endosulfan Sulfate	0.33	U	ng/L	P439324	
		Endrin	0.99	U	ng/L	P439324	
		Endrin Aldehyde	0.82	U	ng/L	P439324	
		Endrin Ketone	0.44	U	ng/L	P439324	

Field ID: G1SW0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2458185	EPA 8270E	Esfenvalerate	0.82	U	ng/L	P439324	
		Ethalfuralin	0.16	U	ng/L	P439324	MS, RPD
		Fenpropathrin	0.27	U	ng/L	P439324	
		Gamma-BHC	0.14	U	ng/L	P439324	RPD
		Gamma-Chlordane	0.22	U	ng/L	P439324	MS
		Heptachlor	0.22	U	ng/L	P439324	
		Heptachlor Epoxide	0.27	U	ng/L	P439324	
		Hexachlorobenzene**	1.1	U	ng/L	P439324	
		Kepone	15	U	ng/L	P439324	
		Lambda-Cyhalothrin	0.82	U	ng/L	P439324	
		Methoprene	0.82	U	ng/L	P439324	
		Methoxychlor	0.33	U	ng/L	P439324	
		MGK-264	0.22	U	ng/L	P439324	
		Mirex	0.38	U	ng/L	P439324	
		Oxychlordane	0.33	U	ng/L	P439324	RPD
		Permethrin	1.8	U	ng/L	P439324	
		Phenothrin	0.99	U	ng/L	P439324	
		Piperonyl Butoxide	0.16	U	ng/L	P439324	
		Prallethrin	2.2	U	ng/L	P439324	
		Tau-Fluvalinate	0.27	U	ng/L	P439324	
		Tetramethrin	0.82	U	ng/L	P439324	
		Trans-Nonachlor	0.22	U	ng/L	P439324	
		Triclosan Methyl	0.16	U	ng/L	P439324	
		Trifluralin	0.22	U	ng/L	P439324	RPD
	EPA 8276	Chlordane	2.2	UJ	ng/L	P439324	MS, SUR
		Toxaphene	16	UJ	ng/L	P439324	MS, SUR

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated because of sample matrix interference.

EPA 8270E: V - Due to the presence of DDT in both the Method Blank and the sample.

EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: THIRTEEN MILE CREEK AT VANDERVORT ROAD

Collection Date/Time: 12/19/2023 11:00

Field ID: G2SW0158

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2458171	DEP SOP: NU-094-1	Color (true)	10		PCU	P439276	
	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P439270	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P439530	
		Sulfate	15		mg SO4/L	P439533	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P439420	
	SM 2540 C-2015	TDS	147		mg/L	P439635	
	SM 2540 D-2015	TSS	5	I	mg/L	P439572	
	SM 4500-F- C-2011	Fluoride	0.041	I	mg F/L	P439422	
2458172	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P439647	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P439448	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P439480	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P439385	
	SM 5310 B-2014	Organic Carbon	2.2		mg C/L	P439529	
2458186	EPA 8321B	2,4-D	0.0020	U	ug/L	P439250	
		Acesulfame K	0.48		ug/L	P439184	
		2,4,5-T	0.0040	U	ug/L	P439250	
		AMPA	0.10	U	ug/L	P439184	MS
		Acetaminophen	0.0080	U	ug/L	P439250	
		Acetamiprid	0.0020	U	ug/L	P439250	
		Endothall	0.25	U	ug/L	P439184	
		Glufosinate	0.10	U	ug/L	P439184	
		Glyphosate	0.10	U	ug/L	P439184	
		Afidopyropen	0.0020	U	ug/L	P439250	
		Bentazon	0.024		ug/L	P439250	
		Sucralose	0.19		ug/L	P439184	
		Benzovindiflupyr	0.0020	U	ug/L	P439250	
		Carbamazepine	8.0E-04	U	ug/L	P439250	
		Clothianidin	0.0020	U	ug/L	P439250	
		Dinotefuran	0.0020	U	ug/L	P439250	
		Diuron	0.0020	U	ug/L	P439250	
		Fenuron	0.032	U	ug/L	P439250	
		Fluridone	8.0E-04	U	ug/L	P439250	
		Imazapyr	0.0040	U	ug/L	P439250	
		Hydrocodone	0.0020	U	ug/L	P439250	
		Ibuprofen	0.080	U	ug/L	P439250	
		Imidacloprid	0.0020	U	ug/L	P439250	
		Linuron	0.0040	U	ug/L	P439250	
		Mandestrobin	0.0020	U	ug/L	P439250	
		MCP	0.0020	U	ug/L	P439250	
		Naproxen	0.0080	U	ug/L	P439250	
		Primidone	0.0040	U	ug/L	P439250	
		Pyraclostrobin	0.0020	U	ug/L	P439250	
		Silvex	0.0040	U	ug/L	P439250	

Field ID: G2SW0158

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2458186	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P439250	
		Tolfenpyrad	0.0020	U	ug/L	P439250	
		Triclopyr	0.0040	U	ug/L	P439250	

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P439276

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439270

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439530

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439533

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439646

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439647

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439448

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439378

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439480

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P439385

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

Reference Method: EPA 8270E

Batch ID: P439324

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	2.1	I	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P439324

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

Reference Method: EPA 8276

Batch ID: P439324

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

Reference Method: EPA 8321B

Batch ID: P439184

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: P439250

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P439250

Component	Result	Code	Units
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: P439420

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

Reference Method: SM 2540 C-2015

Batch ID: P439635

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P439572

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P439422

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014

Batch ID: P439529

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: P439276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439270

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439530

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439533

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439646

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439647

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439448

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439480

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P439385

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

Reference Method: EPA 8270E

Batch ID: P439324

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	45.6		P	30 - 96.0
Alpha-BHC	85.5		P	70 - 109
Alpha-Chlordane	65.6		P	45 - 107
Beta-BHC	86.0		P	64 - 138
Beta-Cyfluthrin	85.2		P	17 - 141
Bifenthrin	64.2		P	10 - 113
Chlorothalonil	65.6		P	26 - 180
Cis-Nonachlor	77.3		P	37 - 102
Cypermethrin	89.0		P	20 - 133
Dacthal	86.0		P	69 - 114
DDD-p,p'	76.1		P	42 - 105
DDE-p,p'	72.1		P	42 - 106
DDT-p,p'	97.4		P	42 - 107
Delta-BHC	119		P	67 - 144
Deltamethrin	117		P	15 - 149
Dichlobenil	102		P	46 - 117
Dicofol	72.3		P	34 - 114
Dieldrin	71.2		P	50 - 108
Endosulfan I	72.1		P	55 - 104
Endosulfan II	77.6		P	51 - 111
Endosulfan Sulfate	87.1		P	56 - 121
Endrin	90.1		P	10 - 106
Endrin Aldehyde	107		P	34 - 114
Endrin Ketone	116		P	63 - 177
Esfenvalerate	79.0		P	29 - 143
Ethalfuralin	81.0		P	46 - 96.0
Fenpropathrin	69.0		P	28 - 115
Gamma-BHC	76.9		P	65 - 121
Gamma-Chlordane	97.9		P	39 - 103
Heptachlor	61.2		P	39 - 94.0
Heptachlor Epoxide	72.4		P	54 - 104
Hexachlorobenzene	80.3		P	36 - 100
Kepone	99.4		P	10 - 225
Lambda-Cyhalothrin	69.3		P	10 - 135
Methoprene	75.9		P	10 - 109
Methoxychlor	88.2		P	52 - 112
MGK-264	97.0		P	44 - 117
Mirex	57.3		P	20 - 90.0
Oxychlordane	78.5		P	44 - 102
PCB-1016	59.1		P	45 - 107
PCB-1260	73.0		P	40 - 118
Permethrin	71.0		P	18 - 135
Phenothrin	57.2		P	10 - 102
Piperonyl Butoxide	88.3		P	28 - 156
Prallethrin	91.6		P	28 - 113
Tau-Fluvalinate	71.9		P	10 - 123

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P439324

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tetramethrin	94.7		P	18 - 158
Trans-Nonachlor	62.0		P	39 - 104
Triclosan Methyl	65.6		P	54 - 108
Trifluralin	54.2		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P439324

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	97.9		P	52 - 117
Toxaphene	115		P	44 - 125

Reference Method: EPA 8321B
Batch ID: P439184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	128		P	40 - 150
AMPA	89.1		P	40 - 150
Endothall	92.7		P	40 - 150
Glufosinate	93.8		P	40 - 150
Glyphosate	91.2		P	40 - 150
Sucralose	80.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P439250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	40 - 150
2,4,5-T	93.2		P	40 - 150
Acetaminophen	56.1		P	30 - 150
Acetamiprid	88.2		P	40 - 150
Afidopyropen	73.9		P	30 - 150
Bentazon	68.7		P	30 - 150
Benzovindiflupyr	80.2		P	40 - 150
Carbamazepine	68.4		P	40 - 150
Clothianidin	84.2		P	40 - 150
Dinotefuran	96.2		P	40 - 150
Diuron	68.7		P	40 - 150
Fenuron	94.2		P	40 - 150
Fluridone	83.4		P	40 - 150
Hydrocodone	81.6		P	40 - 150
Ibuprofen	60.6		P	40 - 150
Imazapyr	81.5		P	40 - 150
Imidacloprid	86.1		P	40 - 150
Linuron	67.2		P	40 - 150
Mandestrobin	84.8		P	40 - 150
MCPP	97.1		P	40 - 150
Naproxen	63.3		P	40 - 150
Primidone	83.3		P	40 - 150
Pyraclostrobin	73.7		P	40 - 150
Silvex	86.9		P	40 - 150
Thiamethoxam	86.0		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P439250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	45.6		P	30 - 150
Triclopyr	107		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P439420

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P439635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.4		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P439572

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.4		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P439422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P439529

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	102		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439530

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458077	Chloride	103		P	90 - 110
2458169	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458077	Sulfate	102		P	90 - 110
2458169	Sulfate	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439646

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458094	Ammonia-N	97.4	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458172	Ammonia-N	97.2	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458172	Kjeldahl Nitrogen	104	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458080	NO2NO3-N	93.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456452	NO2NO3-N	94.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458170	Total-P	108	110	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P439324

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458168	Aldrin	49.1	49.2	P/P	24 - 81.0
2458168	Alpha-BHC	102	76.5	P/P	65 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P439324

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458168	Alpha-Chlordane	70.8	63.3	P/P	43 - 119
2458168	Beta-BHC	131	99.2	P/P	54 - 165
2458168	Beta-Cyfluthrin	104	83.9	P/P	27 - 165
2458168	Bifenthrin	74.2	66.3	P/P	17 - 117
2458168	Chlorothalonil	7.70	6.56	F/F	10 - 255
2458168	Cis-Nonachlor	70.3	56.3	P/P	34 - 98.0
2458168	Cypermethrin	100	70.7	P/P	25 - 143
2458168	Dacthal	96.3	88.0	P/P	55 - 139
2458168	DDD-p,p'	72.2	63.4	P/P	30 - 109
2458168	DDE-p,p'	63.6	59.9	P/P	35 - 106
2458168	DDT-p,p'	83.7	61.1	P/P	41 - 101
2458168	Delta-BHC	197	144	F/P	58 - 165
2458168	Deltamethrin	151	132	P/P	10 - 194
2458168	Dichlobenil	50.8	85.2	P/P	22 - 114
2458168	Dicofol	75.0	58.3	P/P	17 - 133
2458168	Dieldrin	60.1	57.6	P/P	45 - 129
2458168	Endosulfan I	71.0	63.8	P/P	49 - 104
2458168	Endosulfan II	86.3	68.9	P/P	37 - 117
2458168	Endosulfan Sulfate	72.9	72.4	P/P	38 - 128
2458168	Endrin	93.7	74.5	P/P	35 - 116
2458168	Endrin Aldehyde	67.8	61.5	P/P	19 - 108
2458168	Endrin Ketone	124	107	P/P	44 - 134
2458168	Esfenvalerate	104	92.8	P/P	27 - 176
2458168	Ethalfuralin	131	98.2	F/P	49 - 100
2458168	Fenpropathrin	84.3	57.5	P/P	34 - 117
2458168	Gamma-BHC	124	78.9	P/P	59 - 129
2458168	Gamma-Chlordane	120	93.7	F/P	33 - 107
2458168	Heptachlor	58.9	59.6	P/P	37 - 94.0
2458168	Heptachlor Epoxide	86.6	66.6	P/P	38 - 118
2458168	Hexachlorobenzene	93.4	82.1	P/P	35 - 97.0
2458168	Kepone	81.0	81.5	P/P	10 - 221
2458168	Lambda-Cyhalothrin	90.5	100	P/P	23 - 190
2458168	Methoprene	64.6	57.1	P/P	21 - 109
2458168	Methoxychlor	85.8	64.0	P/P	46 - 118
2458168	MGK-264	88.0	73.4	P/P	39 - 122
2458168	Mirex	72.9	58.5	P/P	25 - 90.0
2458168	Oxychlordane	90.3	64.8	P/P	42 - 100
2458168	Permethrin	84.9	89.2	P/P	33 - 181
2458168	Phenothrin	103	102	P/P	12 - 125
2458168	Piperonyl Butoxide	124	83.1	P/P	10 - 178
2458168	Prallethrin	75.2	94.5	P/P	24 - 122
2458168	Tau-Fluvalinate	99.0	85.3	P/P	13 - 151
2458168	Tetramethrin	84.1	75.3	P/P	16 - 172
2458168	Trans-Nonachlor	81.7	67.1	P/P	39 - 100
2458168	Triclosan Methyl	60.3	54.7	P/P	43 - 110
2458168	Trifluralin	70.7	54.7	P/P	45 - 94.0
2458398	PCB-1016	58.2	48.1	P/P	45 - 107
2458398	PCB-1260	77.6	63.6	P/P	40 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P439324

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458398	Chlordane	129	109	F/P	43 - 123
2458398	Toxaphene	217	178	F/F	27 - 156

Reference Method: EPA 8321B

Batch ID: P439184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457794	Acesulfame K	133	133	P/P	40 - 150
2457794	AMPA	167	169	F/F	40 - 150
2457794	Endothall	96.9	93.6	P/P	40 - 150
2457794	Glufosinate	104	103	P/P	40 - 150
2457794	Glyphosate	71.1	77.5	P/P	40 - 150
2457794	Sucralose	82.0	77.6	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P439250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457794	2,4-D	133	110	P/P	40 - 150
2457794	2,4,5-T	103	85.5	P/P	40 - 150
2457794	Acetaminophen	68.8	56.1	P/P	30 - 150
2457794	Acetamiprid	101	87.0	P/P	40 - 150
2457794	Afidopyropen	83.4	67.5	P/P	30 - 150
2457794	Bentazon	61.7	53.3	P/P	30 - 150
2457794	Benzovindiflupyr	96.5	76.5	P/P	40 - 150
2457794	Carbamazepine	78.7	65.4	P/P	40 - 150
2457794	Clothianidin	101	82.6	P/P	40 - 150
2457794	Dinotefuran	124	100	P/P	40 - 150
2457794	Diuron	81.2	65.1	P/P	40 - 150
2457794	Fenuron	123	119	P/P	40 - 150
2457794	Fluridone	92.9	75.2	P/P	40 - 150
2457794	Hydrocodone	101	83.3	P/P	40 - 150
2457794	Ibuprofen	76.1	62.3	P/P	40 - 150
2457794	Imazapyr	106	83.8	P/P	40 - 150
2457794	Imidacloprid	118	92.7	P/P	40 - 150
2457794	Linuron	72.3	60.7	P/P	40 - 150
2457794	Mandestrobin	101	80.7	P/P	40 - 150
2457794	MCPP	119	89.7	P/P	40 - 150
2457794	Naproxen	66.1	60.9	P/P	40 - 150
2457794	Primidone	102	80.1	P/P	40 - 150
2457794	Pyraclostrobin	87.9	71.5	P/P	40 - 150
2457794	Silvex	102	78.2	P/P	40 - 150
2457794	Thiamethoxam	96.1	78.5	P/P	40 - 150
2457794	Tolfenpyrad	61.1	46.0	P/P	30 - 150
2457794	Triclopyr	125	96.5	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P439422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458034	Fluoride	101	100	P/P	94 - 106

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2014
Batch ID: P439529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458172	Organic Carbon	101	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P439276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458169	Color (true)	6.48	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458077	Turbidity	4.53	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458077	Chloride	0.0665	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458077	Sulfate	0.152	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439646

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458094	Ammonia-N	2.21	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458172	Ammonia-N	0.159	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458172	Kjeldahl Nitrogen	0.721	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458080	NO2NO3-N	0.253	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P439480

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456452	NO2NO3-N	0.452	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P439385

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458170	Total-P	1.23	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P439324

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458168	Aldrin	0.189	Spike	P	0 - 41
2458168	Alpha-BHC	28.1	Spike	F	0 - 25
2458168	Alpha-Chlordane	11.2	Spike	P	0 - 32
2458168	Beta-BHC	27.4	Spike	P	0 - 33
2458168	Beta-Cyfluthrin	21.2	Spike	P	0 - 43
2458168	Bifenthrin	11.2	Spike	P	0 - 52
2458168	Chlorothalonil	16.0	Spike	P	0 - 82
2458168	Cis-Nonachlor	22.2	Spike	P	0 - 33
2458168	Cypermethrin	34.5	Spike	P	0 - 51
2458168	Dacthal	9.01	Spike	P	0 - 27
2458168	DDD-p,p'	12.9	Spike	P	0 - 39
2458168	DDE-p,p'	5.86	Spike	P	0 - 31
2458168	DDT-p,p'	21.3	Spike	P	0 - 29
2458168	Delta-BHC	30.9	Spike	P	0 - 35
2458168	Deltamethrin	13.5	Spike	P	0 - 100
2458168	Dichlobenil	50.6	Spike	F	0 - 40
2458168	Dicofol	25.0	Spike	P	0 - 37
2458168	Dieldrin	4.33	Spike	P	0 - 27
2458168	Endosulfan I	10.7	Spike	P	0 - 23
2458168	Endosulfan II	22.4	Spike	P	0 - 34
2458168	Endosulfan Sulfate	0.756	Spike	P	0 - 36
2458168	Endrin	22.7	Spike	P	0 - 45
2458168	Endrin Aldehyde	9.70	Spike	P	0 - 76
2458168	Endrin Ketone	15.2	Spike	P	0 - 43
2458168	Esfenvalerate	11.5	Spike	P	0 - 51
2458168	Ethalfuralin	28.6	Spike	F	0 - 22
2458168	Fenpropathrin	37.7	Spike	P	0 - 49
2458168	Gamma-BHC	44.2	Spike	F	0 - 28
2458168	Gamma-Chlordane	24.8	Spike	P	0 - 40
2458168	Heptachlor	1.14	Spike	P	0 - 29
2458168	Heptachlor Epoxide	26.1	Spike	P	0 - 33
2458168	Hexachlorobenzene	12.9	Spike	P	0 - 36
2458168	Kepone	0.571	Spike	P	0 - 85
2458168	Lambda-Cyhalothrin	10.0	Spike	P	0 - 55
2458168	Methoprene	12.3	Spike	P	0 - 53
2458168	Methoxychlor	29.0	Spike	P	0 - 50
2458168	MGK-264	18.1	Spike	P	0 - 43

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P439324

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458168	Mirex	21.9	Spike	P	0 - 40
2458168	Oxychlordane	32.9	Spike	F	0 - 31
2458168	Permethrin	4.87	Spike	P	0 - 50
2458168	Phenothrin	1.27	Spike	P	0 - 58
2458168	Piperonyl Butoxide	39.8	Spike	P	0 - 100
2458168	Prallethrin	22.8	Spike	P	0 - 39
2458168	Tau-Fluvalinate	14.9	Spike	P	0 - 54
2458168	Tetramethrin	11.2	Spike	P	0 - 51
2458168	Trans-Nonachlor	19.6	Spike	P	0 - 39
2458168	Triclosan Methyl	9.72	Spike	P	0 - 31
2458168	Trifluralin	25.4	Spike	F	0 - 22
2458398	PCB-1016	19.1	Spike	P	0 - 25
2458398	PCB-1260	19.7	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P439324

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458398	Chlordane	16.9	Spike	P	0 - 28
2458398	Toxaphene	19.7	Spike	P	0 - 27

Reference Method: EPA 8321B

Batch ID: P439184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457794	Acesulfame K	0.143	Spike	P	0 - 30
2457794	AMPA	1.21	Spike	P	0 - 30
2457794	Endothall	3.48	Spike	P	0 - 30
2457794	Glufosinate	1.53	Spike	P	0 - 30
2457794	Glyphosate	8.66	Spike	P	0 - 30
2457794	Sucralose	5.52	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P439250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457794	2,4-D	18.5	Spike	P	0 - 30
2457794	2,4,5-T	18.8	Spike	P	0 - 30
2457794	Acetaminophen	20.3	Spike	P	0 - 30
2457794	Acetamiprid	14.4	Spike	P	0 - 30
2457794	Afidopyropen	21.1	Spike	P	0 - 30
2457794	Bentazon	14.6	Spike	P	0 - 30
2457794	Benzovindiflupyr	23.1	Spike	P	0 - 30
2457794	Carbamazepine	18.4	Spike	P	0 - 30
2457794	Clothianidin	20.4	Spike	P	0 - 30
2457794	Dinotefuran	21.3	Spike	P	0 - 30
2457794	Diuron	22.1	Spike	P	0 - 30
2457794	Fenuron	3.26	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P439250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457794	Fluridone	21.1	Spike	P	0 - 30
2457794	Hydrocodone	19.5	Spike	P	0 - 30
2457794	Ibuprofen	20.0	Spike	P	0 - 30
2457794	Imazapyr	23.7	Spike	P	0 - 30
2457794	Imidacloprid	24.2	Spike	P	0 - 30
2457794	Linuron	17.5	Spike	P	0 - 30
2457794	Mandestrobin	22.0	Spike	P	0 - 30
2457794	MCP	27.9	Spike	P	0 - 30
2457794	Naproxen	8.19	Spike	P	0 - 30
2457794	Primidone	23.8	Spike	P	0 - 30
2457794	Pyraclostrobin	20.6	Spike	P	0 - 30
2457794	Silvex	26.7	Spike	P	0 - 30
2457794	Thiamethoxam	20.2	Spike	P	0 - 30
2457794	Tolfenpyrad	28.2	Spike	P	0 - 30
2457794	Triclopyr	25.4	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P439420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458034	Total Alkalinity	2.11	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P439635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458044	TDS	5.08	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P439422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458034	Fluoride	0.492	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014

Batch ID: P439529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458172	Organic Carbon	0.752	Spike	P	0 - 15

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

Quality Assurance Report Surrogates

Lab Sample ID: 2458185

Field Sample ID: G1SW0060

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	91.6	P	37 - 129
EPA 8270E	Decachlorobiphenyl	82.6	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	36.7	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	57.8	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	77.4	P	28 - 102
EPA 8276	PCNB	121	F	49 - 115

Lab Sample ID: 2458186

Field Sample ID: G2SW0158

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.4	P	30 - 160
EPA 8321B	Diuron-d6	63.9	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.5	P	30 - 160
EPA 8321B	Primidone-d5	80.5	P	30 - 160
EPA 8321B	Sucralose-d6	82.5	P	30 - 160

Lab Sample ID: 2458187

Field Sample ID: G2SW0169

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.0	P	30 - 160
EPA 8321B	Diuron-d6	65.8	P	30 - 160
EPA 8321B	Endothall-d6	158	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	152	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.2	P	30 - 160
EPA 8321B	Primidone-d5	85.4	P	30 - 160
EPA 8321B	Sucralose-d6	86.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A123347

Included Lab Sample IDs: 2458169, 2458171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A123350

Included Lab Sample IDs: 2458169, 2458171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.2	99.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123396

Included Lab Sample IDs: 2458170

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A123400

Included Lab Sample IDs: 2458169, 2458171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	96.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A123400

Included Lab Sample IDs: 2458169, 2458171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123403

Included Lab Sample IDs: 2458170

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

Reference Method: EPA 8321B

Run ID: A123411

Included Lab Sample IDs: 2458186, 2458187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	140	134	P/P	60 - 160
Sucralose	81.6	80.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A123419

Included Lab Sample IDs: 2458186, 2458187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	92.5	84.6	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A123419

Included Lab Sample IDs: 2458186, 2458187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endothall	93.6	93.5	P/P	60 - 160
Glufosinate	98.6	99.5	P/P	60 - 160
Glyphosate	106	99.8	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123435

Included Lab Sample IDs: 2458172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A123436

Included Lab Sample IDs: 2458186, 2458187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	108	P/P	50 - 150
2,4,5-T	94.2	81.5	P/P	50 - 150
Acetaminophen	110	106	P/P	60 - 160
Acetamiprid	111	110	P/P	50 - 150
Afidopyropen	98.3	102	P/P	50 - 150
Bentazon	100	104	P/P	50 - 160
Benzovindiflupyr	107	105	P/P	50 - 150
Carbamazepine	106	111	P/P	60 - 150
Clothianidin	108	111	P/P	60 - 150
Dinotefuran	113	114	P/P	50 - 150
Diuron	115	116	P/P	60 - 160
Fenuron	108	108	P/P	60 - 150
Fluridone	111	110	P/P	60 - 160
Hydrocodone	114	112	P/P	60 - 150
Ibuprofen	89.8	87.7	P/P	50 - 160
Imazapyr	97.5	94.2	P/P	50 - 150
Imidacloprid	99.6	99.1	P/P	60 - 150
Linuron	106	110	P/P	60 - 150
Mandestrobin	113	109	P/P	50 - 150
MCPP	114	110	P/P	50 - 150
Naproxen	101	93.0	P/P	50 - 160
Primidone	105	99.8	P/P	60 - 150
Pyraclostrobin	109	109	P/P	60 - 150
Silvex	108	111	P/P	50 - 150
Thiamethoxam	116	116	P/P	50 - 150
Tolfenpyrad	98.7	101	P/P	60 - 150
Triclopyr	109	101	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123437

Included Lab Sample IDs: 2458172

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123459

Included Lab Sample IDs: 2458170, 2458172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	99.6	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A123464

Included Lab Sample IDs: 2458185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	104		P	80 - 120

Reference Method: SM 5310 B-2014

Run ID: A123465

Included Lab Sample IDs: 2458170, 2458172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	101	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123466

Included Lab Sample IDs: 2458169, 2458171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.5	P/P	90 - 110
Sulfate	100	99.3	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A123493

Included Lab Sample IDs: 2458185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	109		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	110		P	80 - 120
Beta-Cyfluthrin	96.3		P	80 - 120
Bifenthrin	101		P	80 - 120
Chlorothalonil	101		P	80 - 120
Cis-Nonachlor	97.2		P	80 - 120
Cypermethrin	103		P	80 - 120
Dacthal	110		P	80 - 120
DDD-p,p'	106		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	94.0		P	80 - 120
Delta-BHC	103		P	80 - 120
Deltamethrin	97.6		P	80 - 120
Dichlobenil	106		P	80 - 120
Dicofol	96.9		P	80 - 120
Dieldrin	100		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	99.0		P	80 - 120
Endosulfan Sulfate	96.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A123493
Included Lab Sample IDs: 2458185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin	102		P	80 - 120
Endrin Aldehyde	97.0		P	80 - 120
Endrin Ketone	99.3		P	80 - 120
Esfenvalerate	96.5		P	80 - 120
Ethalfuralin	99.9		P	80 - 120
Fenpropathrin	105		P	80 - 120
Gamma-BHC	113		P	80 - 120
Gamma-Chlordane	109		P	80 - 120
Heptachlor	114		P	80 - 120
Heptachlor Epoxide	113		P	80 - 120
Hexachlorobenzene	103		P	80 - 120
Kepone	94.5		P	80 - 120
Lambda-Cyhalothrin	98.9		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	104		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	104		P	80 - 120
Oxychlordane	114		P	80 - 120
Permethrin	102		P	80 - 120
Phenothrin	99.0		P	80 - 120
Piperonyl Butoxide	109		P	80 - 120
Prallethrin	96.1		P	80 - 120
Tau-Fluvalinate	99.2		P	80 - 120
Tetramethrin	98.7		P	80 - 120
Trans-Nonachlor	96.8		P	80 - 120
Triclosan Methyl	103		P	80 - 120
Trifluralin	104		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A123521
Included Lab Sample IDs: 2458170, 2458172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	101	P/P	90 - 110
Ammonia-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A123542
Included Lab Sample IDs: 2458185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	91.5		P	80 - 120
PCB-1260	98.8		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)	97.8				6.48	
EPA 180.1 Rev. 2.0	Turbidity	104				4.53	
EPA 300.0 Rev. 2.1	Chloride	102	103	101		0.0665	
	Sulfate	100	102	99.8		0.152	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	97.4	100			2.21
	Ammonia-N	97.2	97.2	97.0			0.159
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	104	105			0.721
EPA 353.2 Rev. 2.0	NO2NO3-N	96.5	93.0				0.253
	NO2NO3-N	100	94.8				0.452
EPA 365.1 Rev. 2.0	Total-P	105	108	110			1.23
EPA 8270E	Aldrin	45.6	49.2	49.1			0.189
	Alpha-BHC	85.5	76.5	102			28.1
	Alpha-Chlordane	65.6	63.3	70.8			11.2
	Beta-BHC	86.0	99.2	131			27.4
	Beta-Cyfluthrin	85.2	83.9	104			21.2
	Bifenthrin	64.2	66.3	74.2			11.2
	Chlorothalonil	65.6	6.56	7.70			16.0
	Cis-Nonachlor	77.3	56.3	70.3			22.2
	Cypermethrin	89.0	70.7	100			34.5
	Dacthal	86.0	88.0	96.3			9.01
	DDD-p,p'	76.1	63.4	72.2			12.9
	DDE-p,p'	72.1	59.9	63.6			5.86
	DDT-p,p'	97.4	61.1	83.7			21.3
	Delta-BHC	119	144	197			30.9
	Deltamethrin	117	151	132			13.5
	Dichlobenil	102	50.8	85.2			50.6
	Dicofol	72.3	75.0	58.3			25.0
	Dieldrin	71.2	60.1	57.6			4.33
	Endosulfan I	72.1	71.0	63.8			10.7
	Endosulfan II	77.6	86.3	68.9			22.4
	Endosulfan Sulfate	87.1	72.9	72.4			0.756
	Endrin	90.1	93.7	74.5			22.7
	Endrin Aldehyde	107	67.8	61.5			9.70
	Endrin Ketone	116	124	107			15.2
	Esfenvalerate	79.0	104	92.8			11.5
	Ethalfuralin	81.0	131	98.2			28.6
	Fenpropathrin	69.0	84.3	57.5			37.7
	Gamma-BHC	76.9	124	78.9			44.2
	Gamma-Chlordane	97.9	120	93.7			24.8
	Heptachlor	61.2	58.9	59.6			1.14
	Heptachlor Epoxide	72.4	86.6	66.6			26.1
	Hexachlorobenzene	80.3	93.4	82.1			12.9
	Kepone	99.4	81.0	81.5			0.571
	Lambda-Cyhalothrin	69.3	90.5	100			10.0
	Methoprene	75.9	64.6	57.1			12.3
	Methoxychlor	88.2	85.8	64.0			29.0
	MGK-264	97.0	88.0	73.4			18.1
	Mirex	57.3	72.9	58.5			21.9
	Oxychlordane	78.5	90.3	64.8			32.9
	PCB-1016	59.1	58.2	48.1			19.1
	PCB-1260	73.0	77.6	63.6			19.7
	Permethrin	71.0	84.9	89.2			4.87
	Phenothrin	57.2	103	102			1.27
	Piperonyl Butoxide	88.3	124	83.1			39.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Prallethrin	91.6	75.2	94.5			22.8
	Tau-Fluvalinate	71.9	99.0	85.3			14.9
	Tetramethrin	94.7	84.1	75.3			11.2
	Trans-Nonachlor	62.0	81.7	67.1			19.6
	Triclosan Methyl	65.6	60.3	54.7			9.72
	Trifluralin	54.2	70.7	54.7			25.4
EPA 8276	Chlordane	97.9	129	109			16.9
	Toxaphene	115	217	178			19.7
EPA 8321B	2,4-D	109	133	110			18.5
	2,4,5-T	93.2	103	85.5			18.8
	Acesulfame K	128	133	133			0.143
	Acetaminophen	56.1	68.8	56.1			20.3
	Acetamiprid	88.2	101	87.0			14.4
	Afidopyropen	73.9	83.4	67.5			21.1
	AMPA	89.1	167	169			1.21
	Bentazon	68.7	61.7	53.3			14.6
	Benzovindiflupyr	80.2	96.5	76.5			23.1
	Carbamazepine	68.4	78.7	65.4			18.4
	Clothianidin	84.2	101	82.6			20.4
	Dinotefuran	96.2	124	100			21.3
	Diuron	68.7	81.2	65.1			22.1
	Endothall	92.7	96.9	93.6			3.48
	Fenuron	94.2	123	119			3.26
	Fluridone	83.4	92.9	75.2			21.1
	Glufosinate	93.8	104	103			1.53
	Glyphosate	91.2	71.1	77.5			8.66
	Hydrocodone	81.6	101	83.3			19.5
	Ibuprofen	60.6	76.1	62.3			20.0
	Imazapyr	81.5	106	83.8			23.7
	Imidacloprid	86.1	118	92.7			24.2
	Linuron	67.2	72.3	60.7			17.5
	Mandestrobin	84.8	101	80.7			22.0
	MCPP	97.1	119	89.7			27.9
	Naproxen	63.3	66.1	60.9			8.19
	Primidone	83.3	102	80.1			23.8
	Pyraclostrobin	73.7	87.9	71.5			20.6
	Silvex	86.9	102	78.2			26.7
	Sucralose	80.7	82.0	77.6			5.52
	Thiamethoxam	86.0	96.1	78.5			20.2
	Tolfenpyrad	45.6	61.1	46.0			28.2
	Triclopyr	107	125	96.5			25.4
SM 2320 B-2011	Total Alkalinity	102				2.11	
SM 2540 C-2015	TDS	96.4				5.08	
SM 2540 D-2015	TSS	94.4					
SM 4500-F- C-2011	Fluoride	101	101	100			0.492
SM 5310 B-2014	Organic Carbon	102	101	100			0.752

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2458169, 2458171
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2458169, 2458171
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2458169, 2458171

Reference Method Descriptions

Method	Description	Associated Samples
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2458169, 2458171
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2458170, 2458172
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2458170, 2458172
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2458170, 2458172
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2458170, 2458172
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2458185
EPA 8270E	PCBs in water matrices by GC/MS/MS	2458185
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2458185
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2458186, 2458187
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2458169, 2458171
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2458169, 2458171
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2458169, 2458171
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2458169, 2458171
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2458170, 2458172

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	12/20/2023			12/20/2023 14:04	Samantha L Bates	2458169, 2458171
EPA 180.1 Rev. 2.0	12/20/2023			12/20/2023 13:27	Chandler E Cox	2458169
	12/20/2023			12/20/2023 13:29	Chandler E Cox	2458171
EPA 300.0 Rev. 2.1	12/20/2023			12/28/2023 19:57	Anna M. Plaviak	2458169
	12/20/2023			12/28/2023 22:14	Anna M. Plaviak	2458171
EPA 350.1 Rev. 2.0	12/20/2023			01/05/2024 12:44	Ping Hua	2458172
	12/20/2023			01/05/2024 13:46	Ping Hua	2458170
EPA 351.2 Rev. 2.0	12/20/2023	12/27/2023 10:50	Simonne.V. Calhoun	12/28/2023 14:32	Samantha L Bates	2458170
	12/20/2023	12/27/2023 10:50	Simonne.V. Calhoun	12/28/2023 14:34	Samantha L Bates	2458172
EPA 353.2 Rev. 2.0	12/20/2023			12/21/2023 13:58	Fadila Guebre	2458170
	12/20/2023			12/27/2023 12:06	Fadila Guebre	2458172
EPA 365.1 Rev. 2.0	12/20/2023	12/22/2023 09:57	Adam P Silver	12/22/2023 14:01	James L Waggeberby	2458170
	12/20/2023	12/22/2023 09:57	Adam P Silver	12/27/2023 15:02	James L Waggeberby	2458172
EPA 8270E	12/20/2023	12/22/2023 08:00	Fe-Val Siddell	01/04/2024 01:27	Julie Wi	2458185
	12/20/2023	12/22/2023 08:00	Fe-Val Siddell	01/05/2024 22:08	Lipi Saha	2458185
EPA 8276	12/20/2023	12/22/2023 08:00	Fe-Val Siddell	12/29/2023 10:02	Kenedi Mills	2458185
EPA 8321B	12/20/2023	12/22/2023 09:00	Hoor Shaik	12/27/2023 19:11	Juyoung Kim	2458186
	12/20/2023	12/22/2023 09:00	Hoor Shaik	12/27/2023 19:29	Juyoung Kim	2458187
	12/20/2023	12/22/2023 10:50	Hana Lee	12/22/2023 14:02	Hana Lee	2458186
	12/20/2023	12/22/2023 10:50	Hana Lee	12/22/2023 14:16	Hana Lee	2458187
	12/20/2023	12/22/2023 10:50	Hana Lee	12/23/2023 21:56	Hana Lee	2458186
	12/20/2023	12/22/2023 10:50	Hana Lee	12/23/2023 22:09	Hana Lee	2458187
SM 2320 B-2011	12/20/2023			12/21/2023 23:07	Dale L. Simmons	2458169
	12/20/2023			12/21/2023 23:19	Dale L. Simmons	2458171
SM 2540 C-2015	12/20/2023			12/21/2023 15:04	Yijie Li	2458169, 2458171
SM 2540 D-2015	12/20/2023			12/21/2023 15:04	Yijie Li	2458169, 2458171
SM 4500-F- C-2011	12/20/2023			12/21/2023 23:07	Dale L. Simmons	2458169
	12/20/2023			12/21/2023 23:19	Dale L. Simmons	2458171
SM 5310 B-2014	12/20/2023			12/23/2023 14:40	Kenneth H Lee	2458172
	12/20/2023			12/23/2023 16:14	Kenneth H Lee	2458170