

Chemical Analysis Report

SO-DIST-2023-12-14-01

Florida DEP Laboratory
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DOH Accreditation E31780

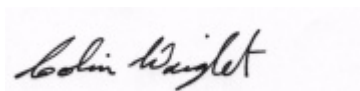
Event Description: **2023 SMP : Myakka**
Request ID: **RQ-2023-12-11-38**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
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Certified by: Colin Wright, Program Administrator

Date Certified: 10-JAN-2024 14:48



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: BRANDYBRANCHATNWLILYCORD

Collection Date/Time: 12/13/2023 09:25

Field ID: G3SD0201

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457079	EPA 8270E	Aldrin	0.67	U	ng/L	P439306	
		Alpha-BHC	0.10	U	ng/L	P439306	
		Alpha-Chlordane	0.21	U	ng/L	P439306	
		PCB-1016	2.1	U	ng/L	P439306	
		Beta-BHC	0.10	U	ng/L	P439306	
		PCB-1221	2.1	U	ng/L	P439306	
		Beta-Cyfluthrin	1.3	U	ng/L	P439306	
		PCB-1232	2.1	U	ng/L	P439306	
		Bifenthrin	0.52	U	ng/L	P439306	
		PCB-1242	2.1	U	ng/L	P439306	
		Carbophenothion	0.93	U	ng/L	P439306	
		PCB-1248	2.1	U	ng/L	P439306	
		Chlorothalonil	3.7	U	ng/L	P439306	
		PCB-1254	2.1	U	ng/L	P439306	
		Cis-Nonachlor	0.21	U	ng/L	P439306	
		PCB-1260	2.1	U	ng/L	P439306	
		Cypermethrin	1.6	U	ng/L	P439306	
		Dacthal	0.16	U	ng/L	P439306	RPD
		DDD-p,p'	0.26	U	ng/L	P439306	
		DDE-p,p'	0.21	U	ng/L	P439306	
		DDT-p,p'	0.83	U	ng/L	P439306	
		Delta-BHC	0.41	U	ng/L	P439306	
		Deltamethrin	1.3	U	ng/L	P439306	
		Dichlobenil	0.26	U	ng/L	P439306	
		Dicofol	1.3	U	ng/L	P439306	
		Dieldrin	0.42	I	ng/L	P439306	
		Endosulfan I	0.41	U	ng/L	P439306	
		Endosulfan II	0.93	U	ng/L	P439306	
		Endosulfan Sulfate	0.31	U	ng/L	P439306	
		Endrin	0.93	U	ng/L	P439306	
		Endrin Aldehyde	0.78	U	ng/L	P439306	
		Endrin Ketone	0.41	U	ng/L	P439306	
		Esfenvalerate	0.78	U	ng/L	P439306	
		Ethalfuralin	0.16	U	ng/L	P439306	MS
		Fenpropathrin	0.26	U	ng/L	P439306	
		Gamma-BHC	0.13	U	ng/L	P439306	
		Gamma-Chlordane	0.21	U	ng/L	P439306	
		Heptachlor	0.21	U	ng/L	P439306	RPD
		Heptachlor Epoxide	0.26	U	ng/L	P439306	MS
		Hexachlorobenzene**	1.0	U	ng/L	P439306	
		Kepone	14	U	ng/L	P439306	
		Lambda-Cyhalothrin	0.78	U	ng/L	P439306	
		Methoprene	0.78	U	ng/L	P439306	MS
		Methoxychlor	0.31	U	ng/L	P439306	

Field ID: G3SD0201

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457079	EPA 8270E	MGK-264	0.21	UJ	ng/L	P439306	LCS
		Mirex	0.36	U	ng/L	P439306	
		Oxychlordane	0.31	U	ng/L	P439306	MS
		Permethrin	1.7	U	ng/L	P439306	
		Phenothrin	0.93	U	ng/L	P439306	
		Piperonyl Butoxide	0.16	U	ng/L	P439306	
		Prallethrin	2.1	U	ng/L	P439306	RPD
		Tau-Fluvalinate	0.26	U	ng/L	P439306	
		Tetramethrin	0.78	U	ng/L	P439306	
		Trans-Nonachlor	0.21	U	ng/L	P439306	
		Triclosan Methyl	0.16	UJ	ng/L	P439306	LCS
		Trifluralin	0.21	U	ng/L	P439306	
		Chlordane	2.1	UJ	ng/L	P439306	SUR
		Toxaphene	16	UJ	ng/L	P439306	SUR
2457081	EPA 8321B	Acesulfame K	0.10	U	ug/L	P439028	
		2,4-D	0.0020	U	ug/L	P439060	
		AMPA	0.10	U	ug/L	P439028	
		2,4,5-T	0.0040	U	ug/L	P439060	
		Acetaminophen	0.0080	U	ug/L	P439060	
		Endothall	0.25	U	ug/L	P439028	
		Acetamiprid	0.0020	U	ug/L	P439060	
		Glufosinate	0.10	U	ug/L	P439028	
		Glyphosate	0.10	U	ug/L	P439028	
		Afidopypropen	0.0020	U	ug/L	P439060	
		Sucralose	0.010	U	ug/L	P439028	
		Bentazon	8.0E-04	U	ug/L	P439060	
		Benzovindiflupyr	0.0020	U	ug/L	P439060	
		Carbamazepine	8.0E-04	U	ug/L	P439060	
		Clothianidin	0.0020	U	ug/L	P439060	
		Dinotefuran	0.0020	U	ug/L	P439060	
		Diuron	0.0020	U	ug/L	P439060	
		Fenuron	0.032	U	ug/L	P439060	
		Fluridone	8.0E-04	U	ug/L	P439060	
		Imazapyr	0.073		ug/L	P439060	
		Hydrocodone	0.0020	U	ug/L	P439060	
		Ibuprofen	0.080	U	ug/L	P439060	
		Imidacloprid	0.0020	U	ug/L	P439060	
		Linuron	0.0040	U	ug/L	P439060	
		Mandestrobin	0.0020	U	ug/L	P439060	
		MCP	0.0020	U	ug/L	P439060	
		Naproxen	0.0080	U	ug/L	P439060	
		Primidone	0.0040	U	ug/L	P439060	
		Pyraclostrobin	0.0020	U	ug/L	P439060	
		Silvex	0.0040	U	ug/L	P439060	
		Thiamethoxam	0.0020	U	ug/L	P439060	

Field ID: G3SD0201

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457081	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P439060	
		Triclopyr	0.0040	U	ug/L	P439060	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: MS accuracy for glyphosate could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: LAKE MYAKKA (UPPER) AT MIDDLE

Collection Date/Time: 12/13/2023 11:00

Field ID: G3SD0133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457071	DEP SOP: NU-094-1	Color (true)	80		PCU	P439001	
	EPA 180.1 Rev. 2.0	Turbidity	100		NTU	P439416	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P439205	
		Sulfate	170		mg SO4/L	P439337	
	SM 2320 B-2011	Total Alkalinity	43		mg CaCO3/L	P439285	
	SM 2540 C-2015	TDS	286		mg/L	P439432	
	SM 2540 D-2015	TSS	136		mg/L	P439347	
2457072	SM 4500-F- C-2011	Fluoride	0.26		mg F/L	P439291	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P439219	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.5		mg N/L	P439109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.098		mg N/L	P439165	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P439252	
2457080	EPA 8270E	SM 5310 B-2014	Organic Carbon	20	mg C/L	P439357	
		Aldrin	0.68	U	ng/L	P439306	
		Alpha-BHC	0.10	U	ng/L	P439306	
		Alpha-Chlordane	0.21	U	ng/L	P439306	
		PCB-1016	2.1	U	ng/L	P439306	
		Beta-BHC	0.10	U	ng/L	P439306	
		PCB-1221	2.1	U	ng/L	P439306	
		Beta-Cyfluthrin	1.3	U	ng/L	P439306	
		PCB-1232	2.1	U	ng/L	P439306	
		Bifenthrin	0.52	U	ng/L	P439306	
		PCB-1242	2.1	U	ng/L	P439306	
		Carbophenothion	0.94	U	ng/L	P439306	
		PCB-1248	2.1	U	ng/L	P439306	
		Chlorothalonil	3.8	U	ng/L	P439306	
		PCB-1254	2.1	U	ng/L	P439306	
		Cis-Nonachlor	0.21	U	ng/L	P439306	
		PCB-1260	2.1	U	ng/L	P439306	
		Cypermethrin	1.6	U	ng/L	P439306	
		Dacthal	0.16	U	ng/L	P439306	
		DDD-p,p'	0.26	U	ng/L	P439306	
		DDE-p,p'	0.21	U	ng/L	P439306	
		DDT-p,p'	0.83	U	ng/L	P439306	
		Delta-BHC	0.42	U	ng/L	P439306	
		Deltamethrin	1.3	U	ng/L	P439306	
		Dichlobenil	0.26	U	ng/L	P439306	
		Dicofol	1.3	U	ng/L	P439306	
		Dieldrin	0.42	U	ng/L	P439306	
		Endosulfan I	0.42	U	ng/L	P439306	
		Endosulfan II	0.94	U	ng/L	P439306	
		Endosulfan Sulfate	0.31	U	ng/L	P439306	
		Endrin	0.94	U	ng/L	P439306	
		Endrin Aldehyde	0.78	U	ng/L	P439306	

RPD

Field ID: G3SD0133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457080	EPA 8270E	Endrin Ketone	0.42	U	ng/L	P439306	
		Esfenvalerate	0.78	U	ng/L	P439306	
		Ethalfuralin	0.16	U	ng/L	P439306	MS
		Fenpropathrin	0.26	U	ng/L	P439306	
		Gamma-BHC	0.13	U	ng/L	P439306	
		Gamma-Chlordane	0.21	U	ng/L	P439306	
		Heptachlor	0.21	U	ng/L	P439306	RPD
		Heptachlor Epoxide	0.26	U	ng/L	P439306	MS
		Hexachlorobenzene**	13		ng/L	P439306	
		Kepone	14	U	ng/L	P439306	
		Lambda-Cyhalothrin	0.78	U	ng/L	P439306	
		Methoprene	0.78	U	ng/L	P439306	MS
		Methoxychlor	0.31	U	ng/L	P439306	
		MGK-264	0.21	UJ	ng/L	P439306	LCS
		Mirex	0.36	U	ng/L	P439306	
		Oxychlordane	0.31	U	ng/L	P439306	MS
		Permethrin	1.7	U	ng/L	P439306	
		Phenothrin	0.94	U	ng/L	P439306	
		Piperonyl Butoxide	0.16	U	ng/L	P439306	
		Prallethrin	2.1	U	ng/L	P439306	RPD
		Tau-Fluvalinate	0.26	U	ng/L	P439306	
		Tetramethrin	0.78	U	ng/L	P439306	
		Trans-Nonachlor	0.21	U	ng/L	P439306	
		Triclosan Methyl	0.16	UJ	ng/L	P439306	LCS
		Trifluralin	0.21	U	ng/L	P439306	
	EPA 8276	Chlordane	2.1	UJ	ng/L	P439306	SUR
		Toxaphene	16	UJ	ng/L	P439306	SUR

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Sample Location: LAKE MYAKKA (LOWER) AT MIDDLE

Collection Date/Time: 12/13/2023 12:20

Field ID: G3SD0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457073	DEP SOP: NU-094-1	Color (true)	90		PCU	P439001	
	EPA 180.1 Rev. 2.0	Turbidity	65		NTU	P439416	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P439205	
		Sulfate	160		mg SO4/L	P439337	
	SM 2320 B-2011	Total Alkalinity	45		mg CaCO3/L	P439285	
	SM 2540 C-2015	TDS	300		mg/L	P439432	
	SM 2540 D-2015	TSS	106		mg/L	P439347	
	SM 4500-F- C-2011	Fluoride	0.28		mg F/L	P439291	
2457074	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P439219	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P439109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P439165	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P439252	
	SM 5310 B-2014	Organic Carbon	21		mg C/L	P439359	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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: P439001

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439416

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439205

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439219

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439165

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439252

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

Reference Method: EPA 8270E
Batch ID: P439306

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: P439306

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: P439306

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

Reference Method: EPA 8321B

Batch ID: P439028

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: P439060

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P439285

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: P439432

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P439347

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P439291

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P439357

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

Reference Method: SM 5310 B-2014
Batch ID: P439359

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: P439001

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439416

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439205

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439252

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

Reference Method: EPA 8270E
Batch ID: P439306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	47.6		P	30 - 96.0
Alpha-BHC	103		P	70 - 109
Alpha-Chlordane	53.0		P	45 - 107
Beta-BHC	112		P	64 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P439306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	108		P	17 - 141
Bifenthrin	55.6		P	10 - 113
Carbophenothion	66.7		P	24 - 91.0
Chlorothalonil	72.6		P	26 - 180
Cis-Nonachlor	75.8		P	37 - 102
Cypermethrin	84.7		P	20 - 133
Dacthal	110		P	69 - 114
DDD-p,p'	76.0		P	42 - 105
DDE-p,p'	75.5		P	42 - 106
DDT-p,p'	68.3		P	42 - 107
Delta-BHC	68.6		P	67 - 144
Deltamethrin	140		P	15 - 149
Dichlobenil	90.5		P	46 - 117
Dicofol	74.3		P	34 - 114
Dieldrin	79.1		P	50 - 108
Endosulfan I	56.8		P	55 - 104
Endosulfan II	73.8		P	51 - 111
Endosulfan Sulfate	116		P	56 - 121
Endrin	67.8		P	10 - 106
Endrin Aldehyde	101		P	34 - 114
Endrin Ketone	94.7		P	63 - 177
Esfenvalerate	122		P	29 - 143
Ethalfuralin	87.9		P	46 - 96.0
Fenpropathrin	62.3		P	28 - 115
Gamma-BHC	115		P	65 - 121
Gamma-Chlordane	86.4		P	39 - 103
Heptachlor	56.2		P	39 - 94.0
Heptachlor Epoxide	92.5		P	54 - 104
Hexachlorobenzene	49.2		P	36 - 100
Kepone	157		P	10 - 225
Lambda-Cyhalothrin	68.6		P	10 - 135
Methoprene	62.0		P	10 - 109
Methoxychlor	83.7		P	52 - 112
MGK-264	119		F	44 - 117
Mirex	60.1		P	20 - 90.0
Oxychlordane	70.7		P	44 - 102
PCB-1016	76.9		P	45 - 107
PCB-1260	68.6		P	40 - 112
Permethrin	99.4		P	18 - 135
Phenothrin	81.5		P	10 - 102
Piperonyl Butoxide	96.2		P	28 - 156
Prallethrin	85.4		P	28 - 113
Tau-Fluvalinate	79.0		P	10 - 123
Tetramethrin	121		P	18 - 158
Trans-Nonachlor	51.8		P	39 - 104
Triclosan Methyl	48.0		F	54 - 108
Trifluralin	78.1		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P439306

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: P439306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	99.0		P	52 - 117
Toxaphene	95.9		P	44 - 125

Reference Method: EPA 8321B
Batch ID: P439028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	133		P	40 - 150
AMPA	58.3		P	40 - 160
Endothall	45.4		P	40 - 160
Glufosinate	59.2		P	40 - 160
Glyphosate	47.4		P	40 - 160
Sucralose	83.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P439060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	40 - 150
2,4,5-T	105		P	40 - 150
Acetaminophen	76.3		P	30 - 150
Acetamiprid	82.4		P	40 - 150
Afidopyropen	68.6		P	30 - 150
Bentazon	56.0		P	30 - 150
Benzovindiflupyr	78.4		P	40 - 150
Carbamazepine	70.7		P	40 - 150
Clothianidin	89.6		P	40 - 150
Dinotefuran	92.9		P	40 - 150
Diuron	66.7		P	40 - 150
Fenuron	140		P	40 - 150
Fluridone	82.1		P	40 - 150
Hydrocodone	89.3		P	40 - 150
Ibuprofen	68.4		P	40 - 150
Imazapyr	90.1		P	40 - 150
Imidacloprid	86.9		P	40 - 150
Linuron	66.5		P	40 - 150
Mandestrobin	84.5		P	40 - 150
MCPP	96.3		P	40 - 150
Naproxen	66.0		P	40 - 150
Primidone	85.0		P	40 - 150
Pyraclostrobin	71.9		P	40 - 150
Silvex	84.7		P	40 - 150
Thiamethoxam	86.7		P	40 - 150
Tolfenpyrad	43.5		P	30 - 150
Triclopyr	121		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P439285

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P439432

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

Reference Method: SM 2540 D-2015
Batch ID: P439347

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.2		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P439291

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

Reference Method: SM 5310 B-2014
Batch ID: P439357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.9		P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P439359

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: P439205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457093	Chloride	100		P	90 - 110
2457262	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456443	Sulfate	98.6		P	90 - 110
2456503	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457043	Ammonia-N	104	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456985	Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457227	NO2NO3-N	96.1	96.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457222	Total-P	107	110	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P439306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456889	PCB-1016	64.8	61.1	P/P	45 - 107
2456889	PCB-1260	80.8	70.5	P/P	40 - 112
2457418	Aldrin	69.7	68.6	P/P	24 - 81.0
2457418	Alpha-BHC	74.4	72.2	P/P	65 - 110
2457418	Alpha-Chlordane	72.0	72.4	P/P	43 - 119
2457418	Beta-BHC	73.9	81.1	P/P	54 - 165
2457418	Beta-Cyfluthrin	122	129	P/P	27 - 165
2457418	Bifenthrin	87.3	89.6	P/P	17 - 117
2457418	Carbophenothion	68.0	80.7	P/P	21 - 108
2457418	Chlorothalonil	103	103	P/P	10 - 255
2457418	Cis-Nonachlor	82.7	78.8	P/P	34 - 98.0
2457418	Cypermethrin	101	81.6	P/P	25 - 143
2457418	Dacthal	100	70.7	P/P	55 - 139
2457418	DDD-p,p'	83.9	75.0	P/P	30 - 109

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P439306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457418	DDE-p,p'	85.0	73.2	P/P	35 - 106
2457418	DDT-p,p'	74.4	77.5	P/P	41 - 101
2457418	Delta-BHC	75.8	78.7	P/P	58 - 165
2457418	Deltamethrin	178	140	P/P	10 - 194
2457418	Dichlobenil	53.1	41.0	P/P	22 - 114
2457418	Dicofol	81.7	88.4	P/P	17 - 133
2457418	Dieldrin	90.4	78.4	P/P	45 - 129
2457418	Endosulfan I	71.5	83.2	P/P	49 - 104
2457418	Endosulfan II	71.3	77.3	P/P	37 - 117
2457418	Endosulfan Sulfate	67.5	67.0	P/P	38 - 128
2457418	Endrin	81.0	77.7	P/P	35 - 116
2457418	Endrin Aldehyde	54.6	55.4	P/P	19 - 108
2457418	Endrin Ketone	82.6	95.9	P/P	44 - 134
2457418	Esfenvalerate	137	135	P/P	27 - 176
2457418	Ethalfuralin	105	110	F/F	49 - 100
2457418	Fenpropathrin	67.9	91.6	P/P	34 - 117
2457418	Gamma-BHC	93.2	85.0	P/P	59 - 129
2457418	Gamma-Chlordane	82.9	105	P/P	33 - 107
2457418	Heptachlor	63.6	91.5	P/P	37 - 94.0
2457418	Heptachlor Epoxide	106	123	P/F	38 - 118
2457418	Hexachlorobenzene	55.5	57.2	P/P	35 - 97.0
2457418	Kepone	99.4	102	P/P	10 - 221
2457418	Lambda-Cyhalothrin	101	103	P/P	23 - 190
2457418	Methoprene	81.7	116	P/F	21 - 109
2457418	Methoxychlor	72.7	91.8	P/P	46 - 118
2457418	MGK-264	89.3	81.2	P/P	39 - 122
2457418	Mirex	80.5	84.8	P/P	25 - 90.0
2457418	Oxychlordane	76.7	102	P/F	42 - 100
2457418	Permethrin	126	121	P/P	33 - 181
2457418	Phenothrin	110	95.1	P/P	12 - 125
2457418	Piperonyl Butoxide	81.6	97.7	P/P	10 - 178
2457418	Prallethrin	77.4	47.3	P/P	24 - 122
2457418	Tau-Fluvalinate	119	99.0	P/P	13 - 151
2457418	Tetramethrin	103	111	P/P	16 - 172
2457418	Trans-Nonachlor	74.6	86.9	P/P	39 - 100
2457418	Triclosan Methyl	65.7	85.3	P/P	43 - 110
2457418	Trifluralin	74.3	71.6	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P439306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456889	Chlordane	91.2	113	P/P	43 - 123
2456889	Toxaphene	89.4	112	P/P	27 - 156

Reference Method: EPA 8321B

Batch ID: P439028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456963	Acesulfame K	123	126	P/P	40 - 150
2456963	AMPA	72.3	45.4	P/P	40 - 160
2456963	Endothall	65.0	50.4	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P439028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456963	Glufosinate	74.6	64.9	P/P	40 - 160
2456963	Sucralose	64.6	65.5	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P439060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456963	2,4-D	93.2	94.3	P/P	40 - 150
2456963	2,4,5-T	72.0	76.3	P/P	40 - 150
2456963	Acetaminophen	84.1	95.8	P/P	30 - 150
2456963	Acetamiprid	63.5	69.2	P/P	40 - 150
2456963	Afidopyropen	66.6	73.5	P/P	30 - 150
2456963	Benzovindiflupyr	75.8	82.6	P/P	40 - 150
2456963	Carbamazepine	57.1	62.9	P/P	40 - 150
2456963	Clothianidin	88.7	98.1	P/P	40 - 150
2456963	Dinotefuran	77.8	81.7	P/P	40 - 150
2456963	Diuron	54.6	58.6	P/P	40 - 150
2456963	Fenuron	91.4	94.1	P/P	40 - 150
2456963	Fluridone	55.0	78.2	P/P	40 - 150
2456963	Hydrocodone	72.3	75.5	P/P	40 - 150
2456963	Ibuprofen	59.9	62.3	P/P	40 - 150
2456963	Imidacloprid	104	115	P/P	40 - 150
2456963	Linuron	59.4	63.3	P/P	40 - 150
2456963	Mandestrobin	77.4	85.4	P/P	40 - 150
2456963	MCPP	84.5	88.6	P/P	40 - 150
2456963	Naproxen	59.4	78.2	P/P	40 - 150
2456963	Primidone	88.8	100	P/P	40 - 150
2456963	Pyraclostrobin	72.3	80.0	P/P	40 - 150
2456963	Silvex	83.0	87.7	P/P	40 - 150
2456963	Thiamethoxam	74.8	82.3	P/P	40 - 150
2456963	Tolfenpyrad	46.6	54.5	P/P	30 - 150
2456963	Triclopyr	76.2	79.6	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P439291

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457220	Fluoride	101	102	P/P	94 - 106

Reference Method: SM 5310 B-2014

Batch ID: P439357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457007	Organic Carbon	101	100	P/P	85 - 115

Reference Method: SM 5310 B-2014

Batch ID: P439359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457094	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P439001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457006	Color (true)	0.669	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457093	Chloride	0.908	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456443	Sulfate	1.56	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457043	Ammonia-N	3.15	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456985	Kjeldahl Nitrogen	0.185	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457227	NO2NO3-N	0.426	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457222	Total-P	2.58	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P439306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456889	PCB-1016	5.95	Spike	P	0 - 25
2456889	PCB-1260	13.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P439306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457418	Aldrin	1.60	Spike	P	0 - 41
2457418	Alpha-BHC	3.09	Spike	P	0 - 25
2457418	Alpha-Chlordane	0.530	Spike	P	0 - 32
2457418	Beta-BHC	9.33	Spike	P	0 - 33
2457418	Beta-Cyfluthrin	6.33	Spike	P	0 - 43
2457418	Bifenthrin	2.49	Spike	P	0 - 52
2457418	Carbophenothion	17.1	Spike	P	0 - 49
2457418	Chlorothalonil	0.0174	Spike	P	0 - 82
2457418	Cis-Nonachlor	4.84	Spike	P	0 - 33
2457418	Cypermethrin	21.6	Spike	P	0 - 51
2457418	Dacthal	34.6	Spike	F	0 - 27
2457418	DDD-p,p'	11.3	Spike	P	0 - 39
2457418	DDE-p,p'	14.9	Spike	P	0 - 31
2457418	DDT-p,p'	4.12	Spike	P	0 - 29
2457418	Delta-BHC	3.64	Spike	P	0 - 35
2457418	Deltamethrin	23.8	Spike	P	0 - 100
2457418	Dichlobenil	25.8	Spike	P	0 - 40
2457418	Dicofol	7.87	Spike	P	0 - 37
2457418	Dieldrin	14.1	Spike	P	0 - 27
2457418	Endosulfan I	15.2	Spike	P	0 - 23
2457418	Endosulfan II	8.09	Spike	P	0 - 34
2457418	Endosulfan Sulfate	0.690	Spike	P	0 - 36
2457418	Endrin	4.15	Spike	P	0 - 45
2457418	Endrin Aldehyde	1.48	Spike	P	0 - 76
2457418	Endrin Ketone	15.0	Spike	P	0 - 43
2457418	Esfenvalerate	1.73	Spike	P	0 - 51
2457418	Ethalfuralin	4.40	Spike	P	0 - 22
2457418	Fenpropathrin	29.6	Spike	P	0 - 49
2457418	Gamma-BHC	9.20	Spike	P	0 - 28
2457418	Gamma-Chlordane	23.1	Spike	P	0 - 40
2457418	Heptachlor	35.9	Spike	F	0 - 29
2457418	Heptachlor Epoxide	14.1	Spike	P	0 - 33
2457418	Hexachlorobenzene	2.95	Spike	P	0 - 36
2457418	Kepone	2.52	Spike	P	0 - 85
2457418	Lambda-Cyhalothrin	2.07	Spike	P	0 - 55
2457418	Methoprene	34.2	Spike	P	0 - 53
2457418	Methoxychlor	23.2	Spike	P	0 - 50
2457418	MGK-264	9.51	Spike	P	0 - 43
2457418	Mirex	5.29	Spike	P	0 - 40
2457418	Oxychlordane	28.4	Spike	P	0 - 31
2457418	Permethrin	4.15	Spike	P	0 - 50
2457418	Phenothrin	14.4	Spike	P	0 - 58
2457418	Piperonyl Butoxide	17.9	Spike	P	0 - 100
2457418	Prallethrin	48.2	Spike	F	0 - 39
2457418	Tau-Fluvalinate	18.2	Spike	P	0 - 54
2457418	Tetramethrin	7.50	Spike	P	0 - 51
2457418	Trans-Nonachlor	15.2	Spike	P	0 - 39
2457418	Triclosan Methyl	25.9	Spike	P	0 - 31
2457418	Trifluralin	3.73	Spike	P	0 - 22

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P439306

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456889	Chlordane	21.7	Spike	P	0 - 28
2456889	Toxaphene	22.7	Spike	P	0 - 27

Reference Method: EPA 8321B

Batch ID: P439028

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456963	Acesulfame K	2.29	Spike	P	0 - 30
2456963	AMPA	24.3	Spike	P	0 - 30
2456963	Endothall	25.2	Spike	P	0 - 30
2456963	Glufosinate	13.9	Spike	P	0 - 30
2456963	Glyphosate	17.3	Spike	P	0 - 30
2456963	Sucralose	1.15	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P439060

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456963	2,4-D	0.986	Spike	P	0 - 30
2456963	2,4,5-T	5.69	Spike	P	0 - 30
2456963	Acetaminophen	13.1	Spike	P	0 - 30
2456963	Acetamiprid	8.64	Spike	P	0 - 30
2456963	Afidopyropen	9.82	Spike	P	0 - 30
2456963	Bentazon	3.83	Spike	P	0 - 30
2456963	Benzovindiflupyr	8.56	Spike	P	0 - 30
2456963	Carbamazepine	7.99	Spike	P	0 - 30
2456963	Clothianidin	10.0	Spike	P	0 - 30
2456963	Dinotefuran	4.53	Spike	P	0 - 30
2456963	Diuron	6.14	Spike	P	0 - 30
2456963	Fenuron	2.92	Spike	P	0 - 30
2456963	Fluridone	6.02	Spike	P	0 - 30
2456963	Hydrocodone	4.46	Spike	P	0 - 30
2456963	Ibuprofen	3.91	Spike	P	0 - 30
2456963	Imazapyr	1.95	Spike	P	0 - 30
2456963	Imidacloprid	7.89	Spike	P	0 - 30
2456963	Linuron	6.42	Spike	P	0 - 30
2456963	Mandestrobin	9.82	Spike	P	0 - 30
2456963	MCPP	4.68	Spike	P	0 - 30
2456963	Naproxen	27.4	Spike	P	0 - 30
2456963	Primidone	12.2	Spike	P	0 - 30
2456963	Pyraclostrobin	10.1	Spike	P	0 - 30
2456963	Silvex	5.61	Spike	P	0 - 30
2456963	Thiamethoxam	9.43	Spike	P	0 - 30
2456963	Tolfenpyrad	15.7	Spike	P	0 - 30
2456963	Triclopyr	4.33	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P439285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457220	Total Alkalinity	3.36	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P439432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456919	TDS	0.766	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P439291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457220	Fluoride	0.500	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P439357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457007	Organic Carbon	0.643	Spike	P	0 - 15

Reference Method: SM 5310 B-2014
Batch ID: P439359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457094	Organic Carbon	0.0455	Spike	P	0 - 15

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

Quality Assurance Report Surrogates

Lab Sample ID: 2457079

Field Sample ID: G3SD0201

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	59.5	P	37 - 129
EPA 8270E	Decachlorobiphenyl	104	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	64.1	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	84.5	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	114	F	28 - 102
EPA 8276	PCNB	111	P	49 - 115

Lab Sample ID: 2457080

Field Sample ID: G3SD0133

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	51.2	P	37 - 129
EPA 8270E	Decachlorobiphenyl	110	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	47.9	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	83.7	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	250	F	28 - 102
EPA 8276	PCNB	288	F	49 - 115

Lab Sample ID: 2457081

Field Sample ID: G3SD0201

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	45.9	P	30 - 160
EPA 8321B	Diuron-d6	41.1	P	30 - 160
EPA 8321B	Endothall-d6	34.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.1	P	30 - 160
EPA 8321B	Primidone-d5	46.1	P	30 - 160
EPA 8321B	Sucralose-d6	90.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A123236

Included Lab Sample IDs: 2457071, 2457073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A123238

Included Lab Sample IDs: 2457071, 2457073

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

Reference Method: EPA 8321B

Run ID: A123270

Included Lab Sample IDs: 2457081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	132	128	P/P	60 - 160
Sucralose	87.9	84.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A123301

Included Lab Sample IDs: 2457081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	127	135	P/P	60 - 160
Endothall	127	109	P/P	60 - 160
Glufosinate	136	144	P/P	60 - 160
Glyphosate	138	150	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123302

Included Lab Sample IDs: 2457072, 2457074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A123310

Included Lab Sample IDs: 2457081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.9	108	P/P	50 - 150
2,4,5-T	101	101	P/P	50 - 150
Acetaminophen	109	114	P/P	60 - 160
Acetamiprid	109	112	P/P	50 - 150
Afidopyropen	112	99.7	P/P	50 - 150
Bentazon	96.1	93.1	P/P	50 - 160
Benzovindiflupyr	108	112	P/P	50 - 150
Carbamazepine	108	108	P/P	60 - 150
Clothianidin	107	110	P/P	60 - 150
Dinotefuran	104	112	P/P	50 - 150
Diuron	110	113	P/P	60 - 160
Fenuron	106	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A123310
Included Lab Sample IDs: 2457081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	116	112	P/P	60 - 160
Hydrocodone	112	114	P/P	60 - 150
Ibuprofen	103	104	P/P	50 - 160
Imazapyr	88.8	86.4	P/P	50 - 150
Imidacloprid	99.0	104	P/P	60 - 150
Linuron	101	113	P/P	60 - 150
Mandestrobin	114	112	P/P	50 - 150
MCPP	101	97.9	P/P	50 - 150
Naproxen	92.6	98.8	P/P	50 - 160
Primidone	94.3	102	P/P	60 - 150
Pyraclostrobin	109	112	P/P	60 - 150
Silvex	104	105	P/P	50 - 150
Thiamethoxam	113	120	P/P	50 - 150
Tolfenpyrad	101	100	P/P	60 - 150
Triclopyr	98.3	105	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A123321
Included Lab Sample IDs: 2457071, 2457073

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A123325
Included Lab Sample IDs: 2457072, 2457074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	99.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A123338
Included Lab Sample IDs: 2457071, 2457073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	100	104	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A123353
Included Lab Sample IDs: 2457071, 2457073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.0	95.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A123353
Included Lab Sample IDs: 2457071, 2457073

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123358

Included Lab Sample IDs: 2457072, 2457074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.8	P/P	90 - 110

Reference Method: SM 5310 B-2014

Run ID: A123379

Included Lab Sample IDs: 2457072, 2457074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	120	P/P	85 - 115
Organic Carbon	114	95.4	P/P	70 - 130

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123424

Included Lab Sample IDs: 2457072, 2457074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.3	97.0	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A123442

Included Lab Sample IDs: 2457079, 2457080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.7		P	80 - 120
Toxaphene	94.7		P	80 - 120

Reference Method: EPA 8270E

Run ID: A123446

Included Lab Sample IDs: 2457079, 2457080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	105		P	80 - 120
Alpha-BHC	115		P	80 - 120
Alpha-Chlordane	106		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	103		P	80 - 120
Bifenthrin	111		P	80 - 120
Carbophenothion	98.1		P	80 - 120
Chlorothalonil	98.8		P	80 - 120
Cis-Nonachlor	106		P	80 - 120
Cypermethrin	101		P	80 - 120
Dacthal	113		P	80 - 120
DDD-p,p'	116		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	97.2		P	80 - 120
Deltamethrin	102		P	80 - 120
Dichlobenil	96.9		P	80 - 120
Dicofol	96.3		P	80 - 120
Dieldrin	96.2		P	80 - 120
Endosulfan I	98.1		P	80 - 120
Endosulfan II	96.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A123446

Included Lab Sample IDs: 2457079, 2457080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	101		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	98.8		P	80 - 120
Esfenvalerate	103		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	100		P	80 - 120
Gamma-BHC	100		P	80 - 120
Gamma-Chlordane	89.1		P	80 - 120
Heptachlor	91.2		P	80 - 120
Heptachlor Epoxide	87.2		P	80 - 120
Hexachlorobenzene	96.4		P	80 - 120
Kepone	95.5		P	80 - 120
Lambda-Cyhalothrin	98.0		P	80 - 120
Methoprene	98.7		P	80 - 120
Methoxychlor	98.5		P	80 - 120
MGK-264	115		P	80 - 120
Mirex	105		P	80 - 120
Oxychlordane	106		P	80 - 120
Permethrin	101		P	80 - 120
Phenothrin	100		P	80 - 120
Piperonyl Butoxide	95.5		P	80 - 120
Prallethrin	102		P	80 - 120
Tau-Fluvalinate	105		P	80 - 120
Tetramethrin	98.5		P	80 - 120
Trans-Nonachlor	104		P	80 - 120
Triclosan Methyl	96.3		P	80 - 120
Trifluralin	99.5		P	80 - 120

Reference Method: EPA 8270E

Run ID: A123481

Included Lab Sample IDs: 2457079, 2457080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	92.8		P	80 - 120
PCB-1260	83.2		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)	99.6				0.669	
EPA 180.1 Rev. 2.0	Turbidity	103					
EPA 300.0 Rev. 2.1	Chloride	105	100	106		0.908	
	Sulfate	102	98.6	98.8		1.56	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	104	99.2			3.15
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.2	101	100			0.185
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	97.5	96.1	96.6			0.426
EPA 365.1 Rev. 2.0	Total-P	109	107	110			2.58
EPA 8270E	Aldrin	47.6	69.7	68.6			1.60
	Alpha-BHC	103	74.4	72.2			3.09
	Alpha-Chlordane	53.0	72.0	72.4			0.530
	Beta-BHC	112	73.9	81.1			9.33
	Beta-Cyfluthrin	108	122	129			6.33
	Bifenthrin	55.6	87.3	89.6			2.49
	Carbophenothion	66.7	68.0	80.7			17.1
	Chlorothalonil	72.6	103	103			0.0174
	Cis-Nonachlor	75.8	82.7	78.8			4.84
	Cypermethrin	84.7	101	81.6			21.6
	Dacthal	110	100	70.7			34.6
	DDD-p,p'	76.0	83.9	75.0			11.3
	DDE-p,p'	75.5	85.0	73.2			14.9
	DDT-p,p'	68.3	74.4	77.5			4.12
	Delta-BHC	68.6	75.8	78.7			3.64
	Deltamethrin	140	178	140			23.8
	Dichlobenil	90.5	53.1	41.0			25.8
	Dicofol	74.3	81.7	88.4			7.87
	Dieldrin	79.1	90.4	78.4			14.1
	Endosulfan I	56.8	71.5	83.2			15.2
	Endosulfan II	73.8	71.3	77.3			8.09
	Endosulfan Sulfate	116	67.5	67.0			0.690
	Endrin	67.8	81.0	77.7			4.15
	Endrin Aldehyde	101	54.6	55.4			1.48
	Endrin Ketone	94.7	82.6	95.9			15.0
	Esfenvalerate	122	137	135			1.73
	Ethalfuralin	87.9	105	110			4.40
	Fenpropathrin	62.3	67.9	91.6			29.6
	Gamma-BHC	115	93.2	85.0			9.20
	Gamma-Chlordane	86.4	82.9	105			23.1
	Heptachlor	56.2	63.6	91.5			35.9
	Heptachlor Epoxide	92.5	106	123			14.1
	Hexachlorobenzene	49.2	55.5	57.2			2.95
	Kepone	157	99.4	102			2.52
	Lambda-Cyhalothrin	68.6	101	103			2.07
	Methoprene	62.0	81.7	116			34.2
	Methoxychlor	83.7	72.7	91.8			23.2
	MGK-264	119	89.3	81.2			9.51
	Mirex	60.1	80.5	84.8			5.29
	Oxychlordane	70.7	76.7	102			28.4
	PCB-1016	76.9	61.1	64.8			5.95
	PCB-1260	68.6	70.5	80.8			13.7
	Permethrin	99.4	126	121			4.15
	Phenothrin	81.5	110	95.1			14.4
	Piperonyl Butoxide	96.2	81.6	97.7			17.9
	Prallethrin	85.4	77.4	47.3			48.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Tau-Fluvalinate	79.0	119	99.0		18.2
	Tetramethrin	121	103	111		7.50
	Trans-Nonachlor	51.8	74.6	86.9		15.2
	Triclosan Methyl	48.0	65.7	85.3		25.9
	Trifluralin	78.1	74.3	71.6		3.73
EPA 8276	Chlordane	99.0	91.2	113		21.7
	Toxaphene	95.9	89.4	112		22.7
EPA 8321B	2,4-D	109	93.2	94.3		0.986
	2,4,5-T	105	72.0	76.3		5.69
	Acesulfame K	133	123	126		2.29
	Acetaminophen	76.3	84.1	95.8		13.1
	Acetamiprid	82.4	63.5	69.2		8.64
	Afidopyropen	68.6	66.6	73.5		9.82
	AMPA	58.3	72.3	45.4		24.3
	Bentazon	56.0				3.83
	Benzovindiflupyr	78.4	75.8	82.6		8.56
	Carbamazepine	70.7	57.1	62.9		7.99
	Clothianidin	89.6	88.7	98.1		10.0
	Dinotefuran	92.9	77.8	81.7		4.53
	Diuron	66.7	54.6	58.6		6.14
	Endothall	45.4	65.0	50.4		25.2
	Fenuron	140	91.4	94.1		2.92
	Fluridone	82.1	55.0	78.2		6.02
	Glufosinate	59.2	74.6	64.9		13.9
	Glyphosate	47.4				17.3
	Hydrocodone	89.3	72.3	75.5		4.46
	Ibuprofen	68.4	59.9	62.3		3.91
	Imazapyr	90.1				1.95
	Imidacloprid	86.9	104	115		7.89
	Linuron	66.5	59.4	63.3		6.42
	Mandestrobin	84.5	77.4	85.4		9.82
	MCPP	96.3	84.5	88.6		4.68
	Naproxen	66.0	59.4	78.2		27.4
	Primidone	85.0	88.8	100		12.2
	Pyraclostrobin	71.9	72.3	80.0		10.1
	Silvex	84.7	83.0	87.7		5.61
	Sucralose	83.5	64.6	65.5		1.15
	Thiamethoxam	86.7	74.8	82.3		9.43
	Tolfenpyrad	43.5	46.6	54.5		15.7
	Triclopyr	121	76.2	79.6		4.33
SM 2320 B-2011	Total Alkalinity	100			3.36	
SM 2540 C-2015	TDS	96.4			0.766	
SM 2540 D-2015	TSS	95.2				
SM 4500-F- C-2011	Fluoride	102	101	102		0.500
SM 5310 B-2014	Organic Carbon	98.9	101	100		0.643
	Organic Carbon	102	102	102		0.0455

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2457071, 2457073
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2457071, 2457073
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2457071, 2457073

Reference Method Descriptions

Method	Description	Associated Samples
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2457071, 2457073
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2457072, 2457074
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2457072, 2457074
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2457072, 2457074
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2457072, 2457074
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2457079, 2457080
EPA 8270E	PCBs in water matrices by GC/MS/MS	2457079, 2457080
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2457079, 2457080
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2457081
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2457071, 2457073
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2457071, 2457073
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2457071, 2457073
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2457071, 2457073
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2457072, 2457074

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	12/14/2023			12/14/2023 15:37	Samantha L Bates	2457071
	12/14/2023			12/14/2023 15:38	Samantha L Bates	2457073
EPA 180.1 Rev. 2.0	12/14/2023			12/14/2023 15:47	Anna M. Plaviak	2457071
	12/14/2023			12/14/2023 15:59	Anna M. Plaviak	2457073
EPA 300.0 Rev. 2.1	12/14/2023			12/19/2023 03:08	James L Waggeberby	2457071
	12/14/2023			12/19/2023 03:23	James L Waggeberby	2457073
	12/14/2023			12/21/2023 08:19	James L Waggeberby	2457071
	12/14/2023			12/21/2023 08:34	James L Waggeberby	2457073
EPA 350.1 Rev. 2.0	12/14/2023			12/19/2023 14:01	Khloe J Berg	2457072
	12/14/2023			12/19/2023 14:02	Khloe J Berg	2457074
	12/14/2023			12/27/2023 10:39	Samantha L Bates	2457072
EPA 351.2 Rev. 2.0	12/14/2023	12/18/2023 13:10	Simonne.V. Calhoun	12/27/2023 10:40	Samantha L Bates	2457074
	12/14/2023	12/18/2023 13:10	Simonne.V. Calhoun	12/18/2023 12:50	Anna M. Plaviak	2457072
EPA 353.2 Rev. 2.0	12/14/2023			12/18/2023 12:51	Anna M. Plaviak	2457074
	12/14/2023			12/20/2023 16:33	James L Waggeberby	2457072
EPA 365.1 Rev. 2.0	12/14/2023	12/20/2023 12:07	Adam P Silver	12/20/2023 16:34	James L Waggeberby	2457074
	12/14/2023	12/20/2023 08:00	Fe-Val Siddell	01/03/2024 15:04	Lipi Saha	2457079
EPA 8270E	12/14/2023	12/20/2023 08:00	Fe-Val Siddell	01/03/2024 15:34	Lipi Saha	2457080
	12/14/2023	12/20/2023 08:00	Fe-Val Siddell	12/28/2023 05:43	Julie Wi	2457079
	12/14/2023	12/20/2023 08:00	Fe-Val Siddell	12/28/2023 06:13	Julie Wi	2457080
EPA 8276	12/14/2023	12/20/2023 08:00	Fe-Val Siddell	12/23/2023 08:55	Kenedi Mills	2457079
	12/14/2023	12/20/2023 08:00	Fe-Val Siddell	12/23/2023 09:52	Kenedi Mills	2457080
EPA 8321B	12/14/2023	12/15/2023 12:00	Hana Lee	12/15/2023 16:10	Hana Lee	2457081
	12/14/2023	12/15/2023 12:00	Hana Lee	12/16/2023 08:06	Tae K Lee	2457081
	12/14/2023	12/18/2023 09:00	Hoor Shaik	12/18/2023 18:55	Juyoung Kim	2457081
SM 2320 B-2011	12/14/2023			12/19/2023 21:04	Dale L. Simmons	2457071
	12/14/2023			12/19/2023 21:16	Dale L. Simmons	2457073
SM 2540 C-2015	12/14/2023			12/19/2023 15:26	Yijie Li	2457071, 2457073
SM 2540 D-2015	12/14/2023			12/19/2023 15:26	Yijie Li	2457071, 2457073
SM 4500-F- C-2011	12/14/2023			12/19/2023 21:04	Dale L. Simmons	2457071
	12/14/2023			12/19/2023 21:16	Dale L. Simmons	2457073
SM 5310 B-2014	12/14/2023			12/19/2023 17:17	Kenneth H Lee	2457072
	12/14/2023			12/20/2023 15:49	Kenneth H Lee	2457074