

Chemical Analysis Report

CEN-DIST-2023-06-22-03

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

Event Description: **Run 1**
Request ID: **RQ-2023-06-19-23**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 11-JUL-2023 15:56



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: REED CANAL AT REED CANAL PARK

Collection Date/Time: 06/21/2023 11:01

Field ID: G5CE0156

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419455	DEP SOP: NU-094-1	Color (true)	34		PCU	P431666	
	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P431664	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P431914	
		Sulfate	12		mg SO4/L	P431833	
	SM 2320 B-2011	Total Alkalinity	202		mg CaCO3/L	P431955	
	SM 2540 C-2015	TDS	364		mg/L	P432044	
	SM 2540 D-2015	TSS	2	I	mg/L	P432046	
2419456	SM 4500-F- C-2011	Fluoride	0.094	I	mg F/L	P431774	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P431806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P431803	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P431999	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P431781	
2419465	SM 5310 B-2011	Organic Carbon	8.8		mg C/L	P431960	
	EPA 8321B	2,4-D	0.045		ug/L	P431822	
		Acesulfame K	0.13	I	ug/L	P431715	
		2,4,5-T	0.0040	U	ug/L	P431822	
		AMPA	0.79		ug/L	P431715	
		Acetaminophen	0.0080	U	ug/L	P431822	
		Acetamiprid	0.0020	U	ug/L	P431822	
		Endothall	0.25	U	ug/L	P431715	
		Glufosinate	0.10	U	ug/L	P431715	
		Glyphosate	5.4		ug/L	P431715	
		Afidopyropen	0.0020	U	ug/L	P431822	
		Bentazon	0.56		ug/L	P431822	
		Sucralose	1.0		ug/L	P431715	
		Benzovindiflupyr	0.0020	U	ug/L	P431822	
		Carbamazepine	0.0032	I	ug/L	P431822	
		Clothianidin	0.0046	I	ug/L	P431822	
		Dinotefuran	0.0020	U	ug/L	P431822	
		Diuron	0.0030	I	ug/L	P431822	MS
		Fenuron	0.032	U	ug/L	P431822	
		Fluridone	0.014		ug/L	P431822	
		Imazapyr	0.15		ug/L	P431822	
		Hydrocodone	0.0020	U	ug/L	P431822	
		Ibuprofen	0.080	U	ug/L	P431822	
		Imidacloprid	0.0042	I	ug/L	P431822	
		Linuron	0.0040	U	ug/L	P431822	
		Mandestrobin	0.0020	U	ug/L	P431822	
		MCPP	0.014		ug/L	P431822	
		Naproxen	0.0080	U	ug/L	P431822	
		Primidone	0.0042	I	ug/L	P431822	
		Pyraclostrobin	0.0020	U	ug/L	P431822	
		Silvex	0.0040	U	ug/L	P431822	
		Thiamethoxam	0.0020	U	ug/L	P431822	

Field ID: G5CE0156

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419465	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P431822	
		Triclopyr	0.0040	U	ug/L	P431822	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: FB

Collection Date/Time: 06/21/2023 11:15

Field ID: FB_06212023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419457	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P431665	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P431664	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P431831	
		Sulfate	0.20	U	mg SO4/L	P431834	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P432022	
	SM 2540 C-2015	TDS	15	U	mg/L	P432043	
	SM 2540 D-2015	TSS	2	U	mg/L	P432045	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P431774	
2419458	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P431806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P431803	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431999	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P431781	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P431960	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

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

Sample Location: UNNAMED DITCH AT 100M US OF MADELINE AVE **Collection Date/Time: 06/21/2023 11:40**

Field ID: G5CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419464	EPA 8270E	Aldrin	0.66	U	ng/L	P431672	
		Alpha-BHC	0.10	U	ng/L	P431672	
		Alpha-Chlordane	0.20	U	ng/L	P431672	
		PCB-1016	2.0	U	ng/L	P431672	
		Beta-BHC	0.10	U	ng/L	P431672	
		PCB-1221	2.0	U	ng/L	P431672	
		Beta-Cyfluthrin	1.3	U	ng/L	P431672	
		PCB-1232	2.0	U	ng/L	P431672	
		Bifenthrin	0.51	U	ng/L	P431672	
		PCB-1242	2.0	U	ng/L	P431672	
		PCB-1248	2.0	U	ng/L	P431672	
		Chlorothalonil	3.7	U	ng/L	P431672	
		PCB-1254	2.0	U	ng/L	P431672	
		Cis-Nonachlor	0.20	U	ng/L	P431672	
		PCB-1260	2.0	U	ng/L	P431672	MS
		Cypermethrin	1.5	U	ng/L	P431672	
		Dacthal	0.15	U	ng/L	P431672	
		DDD-p,p'	0.25	U	ng/L	P431672	
		DDE-p,p'	0.20	U	ng/L	P431672	
		DDT-p,p'	0.25	U	ng/L	P431672	
		Delta-BHC	0.41	U	ng/L	P431672	
		Deltamethrin	1.3	U	ng/L	P431672	
		Dichlobenil	0.25	U	ng/L	P431672	
		Dicofol	1.3	U	ng/L	P431672	
		Dieldrin	0.41	U	ng/L	P431672	
		Endosulfan I	0.41	U	ng/L	P431672	
		Endosulfan II	0.41	U	ng/L	P431672	
		Endosulfan Sulfate	0.30	U	ng/L	P431672	
		Endrin	0.41	U	ng/L	P431672	
		Endrin Aldehyde	0.76	U	ng/L	P431672	
		Endrin Ketone	0.41	U	ng/L	P431672	
		Esfenvalerate	0.76	U	ng/L	P431672	
		Ethalfuralin	0.15	U	ng/L	P431672	
		Fenpropathrin	0.25	U	ng/L	P431672	
		Gamma-BHC	0.13	U	ng/L	P431672	
		Gamma-Chlordane	0.21	I	ng/L	P431672	
		Heptachlor	0.20	U	ng/L	P431672	
		Heptachlor Epoxide	0.25	U	ng/L	P431672	
		Hexachlorobenzene**	1.0	U	ng/L	P431672	
		Kepone	5.1	UJ	ng/L	P431672	CCV
		Lambda-Cyhalothrin	0.76	U	ng/L	P431672	
		Methoprene	0.76	U	ng/L	P431672	
		Methoxychlor	0.30	U	ng/L	P431672	

Field ID: G5CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419464	EPA 8270E	MGK-264	0.20	U	ng/L	P431672	
		Mirex	0.36	U	ng/L	P431672	
		Oxychlordane	0.30	U	ng/L	P431672	
		Permethrin	1.6	U	ng/L	P431672	
		Phenothrin	0.91	U	ng/L	P431672	
		Piperonyl Butoxide	0.17	I	ng/L	P431672	
		Prallethrin	2.0	U	ng/L	P431672	
		Tau-Fluvalinate	0.25	U	ng/L	P431672	
		Tetramethrin	0.76	U	ng/L	P431672	
		Trans-Nonachlor	0.20	U	ng/L	P431672	
		Triclosan Methyl	0.15	U	ng/L	P431672	
		Trifluralin	0.20	U	ng/L	P431672	
	EPA 8276	Chlordane	2.0	UJ	ng/L	P431672	LCS, MS
		Toxaphene	15	U	ng/L	P431672	MS

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.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P431665

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P431666

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431664

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431831

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431834

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431803

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431999

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431781

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

Reference Method: EPA 8270E
Batch ID: P431672

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P431672

Component	Result	Code	Units
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P431672

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

Reference Method: EPA 8276

Batch ID: P431672

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

Reference Method: EPA 8321B

Batch ID: P431715

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: P431822

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P431822

Component	Result	Code	Units
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: P431955

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

Reference Method: SM 2320 B-2011

Batch ID: P432022

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

Reference Method: SM 2540 C-2015

Batch ID: P432043

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015

Batch ID: P432044

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P432045

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P432046

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P431960

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: P431665

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P431666

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431664

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431831

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431834

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431803

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P431999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P431781

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.1		P	90 - 110

Reference Method: EPA 8270E

Batch ID: P431672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.6		P	10 - 92.0
Alpha-BHC	81.1		P	75 - 107
Alpha-Chlordane	73.8		P	50 - 108
Beta-BHC	99.6		P	36 - 138
Beta-Cyfluthrin	75.4		P	20 - 161
Bifenthrin	52.5		P	10 - 119
Chlorothalonil	110		P	26 - 186
Cis-Nonachlor	72.5		P	42 - 119
Cypermethrin	99.1		P	22 - 150
Dacthal	85.5		P	72 - 119
DDD-p,p'	69.0		P	45 - 107
DDE-p,p'	70.9		P	48 - 106
DDT-p,p'	68.0		P	48 - 110
Delta-BHC	86.9		P	54 - 140
Deltamethrin	139		P	22 - 189
Dichlobenil	56.1		P	36 - 117
Dicofol	73.7		P	46 - 155
Dieldrin	79.4		P	54 - 110
Endosulfan I	80.3		P	59 - 105
Endosulfan II	78.5		P	51 - 118
Endosulfan Sulfate	78.8		P	57 - 121
Endrin	76.8		P	10 - 120
Endrin Aldehyde	76.5		P	34 - 118
Endrin Ketone	97.1		P	69 - 177
Esfenvalerate	95.2		P	23 - 168
Ethalfuralin	73.6		P	49 - 99.0
Fenpropathrin	72.3		P	34 - 117
Gamma-BHC	92.2		P	72 - 117
Gamma-Chlordane	70.9		P	43 - 106
Heptachlor	73.7		P	41 - 98.0
Heptachlor Epoxide	83.6		P	57 - 106
Hexachlorobenzene	68.6		P	36 - 99.0
Kepone	63.5		P	16 - 215
Lambda-Cyhalothrin	71.5		P	21 - 177
Methoprene	66.1		P	10 - 119
Methoxychlor	71.3		P	60 - 112
MGK-264	86.3		P	26 - 122
Mirex	51.2		P	10 - 169
Oxychlordane	75.2		P	43 - 105
PCB-1016	58.2		P	48 - 112

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P431672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1260	56.8		P	44 - 118
Permethrin	86.9		P	24 - 148
Phenothrin	67.9		P	10 - 106
Piperonyl Butoxide	88.9		P	10 - 139
Prallethrin	78.5		P	17 - 109
Tau-Fluvalinate	87.4		P	13 - 131
Tetramethrin	79.9		P	10 - 132
Trans-Nonachlor	72.0		P	44 - 106
Triclosan Methyl	74.5		P	59 - 109
Trifluralin	75.0		P	44 - 101

Reference Method: EPA 8276
Batch ID: P431672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	48.6		F	61 - 116
Toxaphene	50.6		P	48 - 124

Reference Method: EPA 8321B
Batch ID: P431715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	95.4		P	40 - 150
Endothall	92.3		P	40 - 150
Glufosinate	99.5		P	40 - 150
Glyphosate	103		P	40 - 150
Sucralose	99.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P431822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	97.6		P	40 - 150
Acetaminophen	72.8		P	30 - 150
Acetamiprid	72.9		P	40 - 150
Afidopyropen	51.2		P	30 - 150
Bentazon	117		P	30 - 150
Benzovindiflupyr	86.3		P	40 - 150
Carbamazepine	85.7		P	40 - 150
Clothianidin	89.9		P	40 - 150
Dinotefuran	85.1		P	40 - 150
Diuron	85.2		P	40 - 150
Fenuron	88.9		P	40 - 150
Fluridone	95.5		P	40 - 150
Hydrocodone	87.7		P	40 - 150
Ibuprofen	76.4		P	40 - 150
Imazapyr	79.6		P	40 - 150
Imidacloprid	86.6		P	40 - 150
Linuron	87.3		P	40 - 150
Mandestrobin	84.3		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P431822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MCPD	91.7		P	40 - 150
Naproxen	82.9		P	40 - 150
Primidone	74.9		P	40 - 150
Pyraclostrobin	76.0		P	40 - 150
Silvex	84.2		P	40 - 150
Thiamethoxam	86.4		P	40 - 150
Tolfenpyrad	53.7		P	30 - 150
Triclopyr	88.4		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P431955

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.2		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P432022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.5		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P432043

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

Reference Method: SM 2540 C-2015
Batch ID: P432044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.3		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P432045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.4		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P432046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	105		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P431960

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431831

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419489	Chloride	108		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418864	Sulfate	101		P	90 - 110
2419270	Sulfate	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419489	Sulfate	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418864	Chloride	104		P	90 - 110
2419270	Chloride	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419431	Ammonia-N	97.0	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419564	Kjeldahl Nitrogen	107	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419438	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419511	Total-P	97.9	96.7	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P431672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419482	Aldrin	45.8	39.4	P/P	20 - 82.0
2419482	Alpha-BHC	79.3	74.7	P/P	71 - 109

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P431672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419482	Alpha-Chlordane	68.6	62.8	P/P	42 - 106
2419482	Beta-BHC	123	133	P/P	69 - 180
2419482	Beta-Cyfluthrin	86.4	79.2	P/P	18 - 175
2419482	Bifenthrin	65.5	52.7	P/P	21 - 128
2419482	Chlorothalonil	142	167	P/P	10 - 300
2419482	Cis-Nonachlor	65.4	57.3	P/P	34 - 106
2419482	Cypermethrin	121	114	P/P	22 - 158
2419482	Dacthal	78.3	81.8	P/P	54 - 116
2419482	DDD-p,p'	63.1	59.0	P/P	34 - 107
2419482	DDE-p,p'	62.1	55.5	P/P	33 - 110
2419482	DDT-p,p'	64.5	55.0	P/P	50 - 122
2419482	Delta-BHC	95.3	96.8	P/P	77 - 193
2419482	Deltamethrin	171	163	P/P	10 - 195
2419482	Dichlobenil	34.0	39.8	P/P	25 - 113
2419482	Dicofol	70.8	62.6	P/P	38 - 247
2419482	Dieldrin	71.8	63.2	P/P	45 - 118
2419482	Endosulfan I	87.7	76.0	P/P	51 - 106
2419482	Endosulfan II	79.5	71.1	P/P	37 - 122
2419482	Endosulfan Sulfate	68.5	72.0	P/P	43 - 132
2419482	Endrin	69.0	66.0	P/P	29 - 101
2419482	Endrin Aldehyde	62.2	64.3	P/P	19 - 110
2419482	Endrin Ketone	114	115	P/P	60 - 140
2419482	Esfenvalerate	111	110	P/P	26 - 199
2419482	Ethalfuralin	66.4	63.3	P/P	45 - 99.0
2419482	Fenpropathrin	74.0	69.3	P/P	35 - 120
2419482	Gamma-BHC	112	118	P/P	63 - 128
2419482	Gamma-Chlordane	65.2	58.8	P/P	40 - 104
2419482	Heptachlor	87.9	72.8	P/P	36 - 97.0
2419482	Heptachlor Epoxide	82.2	73.5	P/P	49 - 184
2419482	Hexachlorobenzene	65.7	57.5	P/P	39 - 96.0
2419482	Kepone	73.8	78.8	P/P	10 - 217
2419482	Lambda-Cyhalothrin	91.7	85.6	P/P	21 - 193
2419482	Methoprene	66.5	58.3	P/P	20 - 106
2419482	Methoxychlor	66.0	62.6	P/P	53 - 118
2419482	MGK-264	78.5	79.2	P/P	40 - 118
2419482	Mirex	53.0	43.1	P/P	26 - 92.0
2419482	Oxychlordane	74.7	66.0	P/P	44 - 99.0
2419482	Permethrin	99.7	91.5	P/P	33 - 182
2419482	Phenothrin	68.6	45.9	P/P	10 - 129
2419482	Piperonyl Butoxide	82.6	90.6	P/P	10 - 211
2419482	Prallethrin	70.1	67.7	P/P	24 - 113
2419482	Tau-Fluvalinate	109	117	P/P	14 - 149
2419482	Tetramethrin	81.1	72.6	P/P	17 - 151
2419482	Trans-Nonachlor	65.2	58.4	P/P	42 - 102
2419482	Triclosan Methyl	75.0	69.3	P/P	48 - 108
2419482	Trifluralin	66.8	58.5	P/P	47 - 96.0
2419486	PCB-1016	60.1	54.2	P/P	46 - 111
2419486	PCB-1260	43.9	49.1	F/P	45 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P431672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419486	Chlordane	42.9	39.9	F/F	53 - 126
2419486	Toxaphene	48.6	44.5	F/F	56 - 211

Reference Method: EPA 8321B

Batch ID: P431715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419423	Acesulfame K	128	129	P/P	40 - 150
2419423	AMPA	72.9	77.2	P/P	40 - 150
2419423	Endothall	106	110	P/P	40 - 150
2419423	Glufosinate	70.5	76.4	P/P	40 - 150
2419423	Glyphosate	109	115	P/P	40 - 150
2419423	Sucralose	105	99.9	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P431822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419423	2,4-D	107	111	P/P	40 - 150
2419423	2,4,5-T	115	111	P/P	40 - 150
2419423	Acetaminophen	66.5	79.7	P/P	30 - 150
2419423	Acetamiprid	73.4	78.2	P/P	40 - 150
2419423	Afidopyropen	52.8	57.4	P/P	30 - 150
2419423	Bentazon	78.5	91.9	P/P	30 - 150
2419423	Benzovindiflupyr	80.3	81.6	P/P	40 - 150
2419423	Carbamazepine	71.4	77.9	P/P	40 - 150
2419423	Clothianidin	93.5	109	P/P	40 - 150
2419423	Dinotefuran	79.1	91.0	P/P	40 - 150
2419423	Diuron	30.0	32.2	F/F	40 - 150
2419423	Fenuron	74.3	78.1	P/P	40 - 150
2419423	Fluridone	84.4	93.5	P/P	40 - 150
2419423	Hydrocodone	75.6	79.3	P/P	40 - 150
2419423	Ibuprofen	58.1	56.4	P/P	40 - 150
2419423	Imazapyr	80.0	92.9	P/P	40 - 150
2419423	Imidacloprid	113	126	P/P	40 - 150
2419423	Linuron	58.4	67.4	P/P	40 - 150
2419423	Mandestrobin	83.4	85.8	P/P	40 - 150
2419423	MCPP	110	126	P/P	40 - 150
2419423	Naproxen	74.3	81.7	P/P	40 - 150
2419423	Primidone	79.2	95.3	P/P	40 - 150
2419423	Pyraclostrobin	80.5	84.2	P/P	40 - 150
2419423	Silvex	92.3	103	P/P	40 - 150
2419423	Thiamethoxam	87.6	88.9	P/P	40 - 150
2419423	Tolfenpyrad	55.3	64.9	P/P	30 - 150
2419423	Triclopyr	101	110	P/P	40 - 150

Reference Method: SM 5310 B-2011

Batch ID: P431960

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419434	Organic Carbon	94.4	95.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P431665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419221	Color (true)	1.07	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P431666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419430	Color (true)	1.12	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419268	Turbidity	3.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431831

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419489	Chloride	0.264	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418864	Sulfate	1.22	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418864	Chloride	0.348	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419431	Ammonia-N	0.780	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419564	Kjeldahl Nitrogen	0.870	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P431999

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419438	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P431781

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419511	Total-P	1.14	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P431672

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419482	Aldrin	14.9	Spike	P	0 - 41
2419482	Alpha-BHC	5.96	Spike	P	0 - 25
2419482	Alpha-Chlordane	8.78	Spike	P	0 - 33
2419482	Beta-BHC	7.65	Spike	P	0 - 36
2419482	Beta-Cyfluthrin	8.75	Spike	P	0 - 42
2419482	Bifenthrin	21.7	Spike	P	0 - 53
2419482	Chlorothalonil	16.0	Spike	P	0 - 71
2419482	Cis-Nonachlor	13.3	Spike	P	0 - 29
2419482	Cypermethrin	6.10	Spike	P	0 - 40
2419482	Dacthal	4.34	Spike	P	0 - 26
2419482	DDD-p,p'	6.61	Spike	P	0 - 39
2419482	DDE-p,p'	11.3	Spike	P	0 - 33
2419482	DDT-p,p'	16.0	Spike	P	0 - 40
2419482	Delta-BHC	1.56	Spike	P	0 - 37
2419482	Deltamethrin	4.76	Spike	P	0 - 100
2419482	Dichlobenil	15.7	Spike	P	0 - 40
2419482	Dicofol	12.3	Spike	P	0 - 31
2419482	Dieldrin	11.0	Spike	P	0 - 27
2419482	Endosulfan I	14.3	Spike	P	0 - 23
2419482	Endosulfan II	11.2	Spike	P	0 - 28
2419482	Endosulfan Sulfate	4.95	Spike	P	0 - 38
2419482	Endrin	4.51	Spike	P	0 - 63
2419482	Endrin Aldehyde	3.34	Spike	P	0 - 60
2419482	Endrin Ketone	0.875	Spike	P	0 - 37
2419482	Esfenvalerate	1.59	Spike	P	0 - 52
2419482	Ethalfuralin	4.74	Spike	P	0 - 23
2419482	Fenpropathrin	6.59	Spike	P	0 - 32
2419482	Gamma-BHC	5.05	Spike	P	0 - 17
2419482	Gamma-Chlordane	10.3	Spike	P	0 - 40
2419482	Heptachlor	18.8	Spike	P	0 - 29
2419482	Heptachlor Epoxide	11.2	Spike	P	0 - 25
2419482	Hexachlorobenzene	13.2	Spike	P	0 - 36
2419482	Kepone	6.56	Spike	P	0 - 93
2419482	Lambda-Cyhalothrin	6.92	Spike	P	0 - 55
2419482	Methoprene	13.1	Spike	P	0 - 53
2419482	Methoxychlor	5.19	Spike	P	0 - 29
2419482	MGK-264	0.898	Spike	P	0 - 35

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P431672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419482	Mirex	20.6	Spike	P	0 - 46
2419482	Oxychlordane	12.4	Spike	P	0 - 29
2419482	Permethrin	8.59	Spike	P	0 - 44
2419482	Phenothrin	39.6	Spike	P	0 - 56
2419482	Piperonyl Butoxide	9.22	Spike	P	0 - 100
2419482	Prallethrin	3.48	Spike	P	0 - 42
2419482	Tau-Fluvalinate	7.57	Spike	P	0 - 54
2419482	Tetramethrin	11.2	Spike	P	0 - 51
2419482	Trans-Nonachlor	11.0	Spike	P	0 - 37
2419482	Triclosan Methyl	7.80	Spike	P	0 - 31
2419482	Trifluralin	13.3	Spike	P	0 - 30
2419486	PCB-1016	10.3	Spike	P	0 - 32
2419486	PCB-1260	11.3	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P431672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419486	Chlordane	7.31	Spike	P	0 - 25
2419486	Toxaphene	8.94	Spike	P	0 - 26

Reference Method: EPA 8321B
Batch ID: P431715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419423	Acesulfame K	0.529	Spike	P	0 - 30
2419423	AMPA	5.77	Spike	P	0 - 30
2419423	Endothall	4.41	Spike	P	0 - 30
2419423	Glufosinate	8.08	Spike	P	0 - 30
2419423	Glyphosate	5.92	Spike	P	0 - 30
2419423	Sucralose	4.67	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P431822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419423	2,4-D	3.67	Spike	P	0 - 30
2419423	2,4,5-T	2.94	Spike	P	0 - 30
2419423	Acetaminophen	18.0	Spike	P	0 - 30
2419423	Acetamiprid	6.32	Spike	P	0 - 30
2419423	Afidopyropen	8.40	Spike	P	0 - 30
2419423	Bentazon	15.8	Spike	P	0 - 30
2419423	Benzovindiflupyr	1.67	Spike	P	0 - 30
2419423	Carbamazepine	8.79	Spike	P	0 - 30
2419423	Clothianidin	15.1	Spike	P	0 - 30
2419423	Dinotefuran	14.0	Spike	P	0 - 30
2419423	Diuron	7.21	Spike	P	0 - 30
2419423	Fenuron	4.99	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P431822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419423	Fluridone	8.93	Spike	P	0 - 30
2419423	Hydrocodone	4.83	Spike	P	0 - 30
2419423	Ibuprofen	2.93	Spike	P	0 - 30
2419423	Imazapyr	14.9	Spike	P	0 - 30
2419423	Imidacloprid	11.0	Spike	P	0 - 30
2419423	Linuron	14.4	Spike	P	0 - 30
2419423	Mandestrobin	2.83	Spike	P	0 - 30
2419423	MCPP	13.5	Spike	P	0 - 30
2419423	Naproxen	9.51	Spike	P	0 - 30
2419423	Primidone	18.5	Spike	P	0 - 30
2419423	Pyraclostrobin	4.48	Spike	P	0 - 30
2419423	Silvex	10.9	Spike	P	0 - 30
2419423	Thiamethoxam	1.43	Spike	P	0 - 30
2419423	Tolfenpyrad	16.0	Spike	P	0 - 30
2419423	Triclopyr	8.50	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P431955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419404	Total Alkalinity	0.900	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P432022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2420299	Total Alkalinity	0.430	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P432043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418552	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P432044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419404	TDS	4.51	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418853	Fluoride	1.45	Spike	P	0 - 1.9

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P431960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419434	Organic Carbon	0.780	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2419464

Field Sample ID: G5CE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	71.6	P	29 - 130
EPA 8270E	Decachlorobiphenyl	87.1	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	56.4	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	53.8	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	48.8	P	30 - 101
EPA 8276	PCNB	82.3	P	48 - 121

Lab Sample ID: 2419465

Field Sample ID: G5CE0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.9	P	30 - 160
EPA 8321B	Diuron-d6	50.7	P	30 - 160
EPA 8321B	Endothall-d6	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	58.2	P	30 - 160
EPA 8321B	Primidone-d5	66.8	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119978

Included Lab Sample IDs: 2419455, 2419457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A119979

Included Lab Sample IDs: 2419455, 2419457

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

Reference Method: SM 4500-F- C-2011

Run ID: A120036

Included Lab Sample IDs: 2419455, 2419457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	106	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120041

Included Lab Sample IDs: 2419456, 2419458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.8	98.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A120044

Included Lab Sample IDs: 2419465

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	128	P/P	60 - 160
Sucralose	91.5	91.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A120048

Included Lab Sample IDs: 2419465

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.0	87.8	P/P	60 - 160
Endothall	80.3	84.4	P/P	60 - 160
Glufosinate	89.8	93.2	P/P	60 - 160
Glyphosate	90.0	102	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120051

Included Lab Sample IDs: 2419455, 2419457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	104	102	P/P	90 - 110
Sulfate	102	105	P/P	90 - 110
Sulfate	105	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A120059
Included Lab Sample IDs: 2419464

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	99.3		P	80 - 120
Alpha-Chlordane	103		P	80 - 120
Beta-BHC	107		P	80 - 120
Beta-Cyfluthrin	116		P	80 - 120
Bifenthrin	102		P	80 - 120
Chlorothalonil	103		P	80 - 120
Cis-Nonachlor	105		P	80 - 120
Cypermethrin	103		P	80 - 120
Dacthal	105		P	80 - 120
DDD-p,p'	110		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	100		P	80 - 120
Delta-BHC	101		P	80 - 120
Deltamethrin	104		P	80 - 120
Dichlobenil	103		P	80 - 120
Dicofol	90.7		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	105		P	80 - 120
Endosulfan Sulfate	99.0		P	80 - 120
Endrin	104		P	80 - 120
Endrin Aldehyde	98.6		P	80 - 120
Endrin Ketone	108		P	80 - 120
Esfenvalerate	105		P	80 - 120
Ethalfuralin	94.1		P	80 - 120
Fenpropathrin	101		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	99.6		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Kepone	61.7*		F	80 - 120
Lambda-Cyhalothrin	113		P	80 - 120
Methoprene	103		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	101		P	80 - 120
Mirex	80.3		P	80 - 120
Oxychlordane	104		P	80 - 120
Permethrin	107		P	80 - 120
Phenothrin	107		P	80 - 120
Piperonyl Butoxide	94.2		P	80 - 120
Prallethrin	104		P	80 - 120
Tau-Fluvalinate	107		P	80 - 120
Tetramethrin	99.5		P	80 - 120
Trans-Nonachlor	104		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	97.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120073

Included Lab Sample IDs: 2419456, 2419458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.7	94.7	P/P	90 - 110
Kjeldahl Nitrogen	94.7	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120076

Included Lab Sample IDs: 2419456

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120078

Included Lab Sample IDs: 2419458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	101	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A120082

Included Lab Sample IDs: 2419464

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	90.5		P	80 - 120
Toxaphene	86.7		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120095

Included Lab Sample IDs: 2419456, 2419458

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

Reference Method: EPA 8321B

Run ID: A120108

Included Lab Sample IDs: 2419465

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.6	85.9	P/P	50 - 150
2,4,5-T	97.8	85.0	P/P	50 - 150
Acetaminophen	96.7	97.0	P/P	60 - 160
Acetamiprid	108	111	P/P	50 - 150
Afidopyropen	109	97.4	P/P	50 - 150
Bentazon	119	127	P/P	50 - 160
Benzovindiflupyr	112	105	P/P	50 - 150
Carbamazepine	114	113	P/P	60 - 150
Clothianidin	111	99.6	P/P	60 - 150
Dinotefuran	95.5	98.8	P/P	50 - 150
Diuron	111	124	P/P	60 - 160
Fenuron	103	106	P/P	60 - 150
Fluridone	107	107	P/P	60 - 160
Hydrocodone	113	107	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A120108
Included Lab Sample IDs: 2419465

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ibuprofen	79.5	82.3	P/P	50 - 160
Imazapyr	84.9	86.9	P/P	50 - 150
Imidacloprid	96.3	97.7	P/P	60 - 150
Linuron	91.8	104	P/P	60 - 150
Mandestrobin	109	111	P/P	50 - 150
MCP	86.5	86.7	P/P	50 - 150
Naproxen	136	137	P/P	50 - 160
Primidone	91.8	93.3	P/P	60 - 150
Pyraclostrobin	113	110	P/P	60 - 150
Silvex	87.0	86.8	P/P	50 - 150
Thiamethoxam	106	118	P/P	50 - 150
Tolfenpyrad	103	108	P/P	60 - 150
Triclopyr	102	103	P/P	50 - 150

Reference Method: SM 2320 B-2011
Run ID: A120110
Included Lab Sample IDs: 2419455

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.4	94.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A120112
Included Lab Sample IDs: 2419456, 2419458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	97.2	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A120146
Included Lab Sample IDs: 2419457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	95.8	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A120169
Included Lab Sample IDs: 2419464

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	93.1		P	80 - 120
PCB-1260	95.5		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		Precision	
					LCS	SMP
DEP SOP: NU-094-1	Color (true)	99.5				1.07
	Color (true)	101				1.12
EPA 180.1 Rev. 2.0	Turbidity	99.5				3.15
EPA 300.0 Rev. 2.1	Chloride	105	108			0.264
	Chloride	99.5	104	106		0.348
	Sulfate	103	101	105		1.22
	Sulfate	105	106			
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	97.0	97.8		0.780
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	107	106		0.870
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104	104		0.0
EPA 365.1 Rev. 2.0	Total-P	96.1	97.9	96.7		1.14
EPA 8270E	Aldrin	49.6	45.8	39.4		14.9
	Alpha-BHC	81.1	79.3	74.7		5.96
	Alpha-Chlordane	73.8	68.6	62.8		8.78
	Beta-BHC	99.6	123	133		7.65
	Beta-Cyfluthrin	75.4	86.4	79.2		8.75
	Bifenthrin	52.5	65.5	52.7		21.7
	Chlorothalonil	110	142	167		16.0
	Cis-Nonachlor	72.5	65.4	57.3		13.3
	Cypermethrin	99.1	121	114		6.10
	Dacthal	85.5	78.3	81.8		4.34
	DDD-p,p'	69.0	63.1	59.0		6.61
	DDE-p,p'	70.9	62.1	55.5		11.3
	DDT-p,p'	68.0	64.5	55.0		16.0
	Delta-BHC	86.9	95.3	96.8		1.56
	Deltamethrin	139	171	163		4.76
	Dichlobenil	56.1	34.0	39.8		15.7
	Dicofol	73.7	70.8	62.6		12.3
	Dieldrin	79.4	71.8	63.2		11.0
	Endosulfan I	80.3	87.7	76.0		14.3
	Endosulfan II	78.5	79.5	71.1		11.2
	Endosulfan Sulfate	78.8	68.5	72.0		4.95
	Endrin	76.8	69.0	66.0		4.51
	Endrin Aldehyde	76.5	62.2	64.3		3.34
	Endrin Ketone	97.1	114	115		0.875
	Esfenvalerate	95.2	111	110		1.59
	Ethalfuralin	73.6	66.4	63.3		4.74
	Fenpropathrin	72.3	74.0	69.3		6.59
	Gamma-BHC	92.2	112	118		5.05
	Gamma-Chlordane	70.9	65.2	58.8		10.3
	Heptachlor	73.7	87.9	72.8		18.8
	Heptachlor Epoxide	83.6	82.2	73.5		11.2
	Hexachlorobenzene	68.6	65.7	57.5		13.2
	Kepone	63.5	73.8	78.8		6.56
	Lambda-Cyhalothrin	71.5	91.7	85.6		6.92
	Methoprene	66.1	66.5	58.3		13.1
	Methoxychlor	71.3	66.0	62.6		5.19
	MGK-264	86.3	78.5	79.2		0.898
	Mirex	51.2	53.0	43.1		20.6
	Oxychlordane	75.2	74.7	66.0		12.4
	PCB-1016	58.2	60.1	54.2		10.3
	PCB-1260	56.8	43.9	49.1		11.3
	Permethrin	86.9	99.7	91.5		8.59
	Phenothrin	67.9	68.6	45.9		39.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Piperonyl Butoxide	88.9	82.6	90.6			9.22
	Prallethrin	78.5	70.1	67.7			3.48
	Tau-Fluvalinate	87.4	109	117			7.57
	Tetramethrin	79.9	81.1	72.6			11.2
	Trans-Nonachlor	72.0	65.2	58.4			11.0
	Triclosan Methyl	74.5	75.0	69.3			7.80
	Trifluralin	75.0	66.8	58.5			13.3
EPA 8276	Chlordane	48.6	42.9	39.9			7.31
	Toxaphene	50.6	48.6	44.5			8.94
EPA 8321B	2,4-D	110	107	111			3.67
	2,4,5-T	97.6	115	111			2.94
	Acesulfame K	112	128	129			0.529
	Acetaminophen	72.8	66.5	79.7			18.0
	Acetamiprid	72.9	73.4	78.2			6.32
	Afidopyropen	51.2	52.8	57.4			8.40
	AMPA	95.4	72.9	77.2			5.77
	Bentazon	117	78.5	91.9			15.8
	Benzovindiflupyr	86.3	80.3	81.6			1.67
	Carbamazepine	85.7	71.4	77.9			8.79
	Clothianidin	89.9	93.5	109			15.1
	Dinotefuran	85.1	79.1	91.0			14.0
	Diuron	85.2	30.0	32.2			7.21
	Endothall	92.3	106	110			4.41
	Fenuron	88.9	74.3	78.1			4.99
	Fluridone	95.5	84.4	93.5			8.93
	Glufosinate	99.5	70.5	76.4			8.08
	Glyphosate	103	109	115			5.92
	Hydrocodone	87.7	75.6	79.3			4.83
	Ibuprofen	76.4	58.1	56.4			2.93
	Imazapyr	79.6	80.0	92.9			14.9
	Imidacloprid	86.6	113	126			11.0
	Linuron	87.3	58.4	67.4			14.4
	Mandestrobin	84.3	83.4	85.8			2.83
	MCPP	91.7	110	126			13.5
	Naproxen	82.9	74.3	81.7			9.51
	Primidone	74.9	79.2	95.3			18.5
	Pyraclostrobin	76.0	80.5	84.2			4.48
	Silvex	84.2	92.3	103			10.9
	Sucralose	99.0	105	99.9			4.67
	Thiamethoxam	86.4	87.6	88.9			1.43
	Tolfenpyrad	53.7	55.3	64.9			16.0
	Triclopyr	88.4	101	110			8.50
SM 2320 B-2011	Total Alkalinity	97.2				0.900	
	Total Alkalinity	96.5				0.430	
SM 2540 C-2015	TDS	102				3.92	
	TDS	96.3				4.51	
SM 2540 D-2015	TSS	98.4					
	TSS	95.3					
SM 4500-F- C-2011	Fluoride	105					1.45
SM 5310 B-2011	Organic Carbon	95.8	94.4	95.4			0.780

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2419455, 2419457
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2419455, 2419457
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2419455, 2419457
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2419455, 2419457
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2419456, 2419458
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2419456, 2419458
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2419456, 2419458
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2419456, 2419458
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2419464
EPA 8270E	PCBs in water matrices by GC/MS/MS	2419464
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2419464
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2419465
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2419455, 2419457
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2419455, 2419457
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2419455, 2419457
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2419455, 2419457
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2419456, 2419458

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	06/22/2023			06/22/2023 15:13	Anna M. Plaviak	2419457
	06/22/2023			06/22/2023 15:20	Anna M. Plaviak	2419455
EPA 180.1 Rev. 2.0	06/22/2023			06/22/2023 13:47	Khloe J Berg	2419455
	06/22/2023			06/22/2023 13:48	Khloe J Berg	2419457
EPA 300.0 Rev. 2.1	06/22/2023			06/27/2023 08:17	James L Waggeberby	2419455
	06/22/2023			06/27/2023 10:32	James L Waggeberby	2419457
	06/22/2023			06/28/2023 16:22	James L Waggeberby	2419455
EPA 350.1 Rev. 2.0	06/22/2023			06/26/2023 13:15	Khloe J Berg	2419456
	06/22/2023			06/26/2023 13:16	Khloe J Berg	2419458
	06/22/2023			06/26/2023 13:16	Khloe J Berg	2419458
EPA 351.2 Rev. 2.0	06/22/2023	06/27/2023 10:05	Dana G. Hughes	06/28/2023 14:35	Ping Hua	2419456
	06/22/2023	06/27/2023 10:05	Dana G. Hughes	06/28/2023 14:40	Ping Hua	2419458
EPA 353.2 Rev. 2.0	06/22/2023			06/29/2023 11:42	Beverly Y. Sanders	2419456
	06/22/2023			06/29/2023 11:43	Beverly Y. Sanders	2419458
EPA 365.1 Rev. 2.0	06/22/2023	06/27/2023 13:15	Simonne.V. Calhoun	06/28/2023 14:37	Simonne.V. Calhoun	2419456
	06/22/2023	06/27/2023 13:15	Simonne.V. Calhoun	06/28/2023 15:24	Simonne.V. Calhoun	2419458
EPA 8270E	06/22/2023	06/23/2023 08:00	Fe-Val Siddell	06/27/2023 23:16	Michael Poppell	2419464
	06/22/2023	06/23/2023 08:00	Fe-Val Siddell	06/30/2023 03:30	Lipi Saha	2419464
EPA 8276	06/22/2023	06/23/2023 08:00	Fe-Val Siddell	06/28/2023 15:26	Arthur Maknenko	2419464
EPA 8321B	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 07:48	Tae K Lee	2419465
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 19:43	Tae K Lee	2419465
	06/22/2023	06/28/2023 08:30	Hoor Shaik	06/28/2023 21:57	Juyoung Kim	2419465
	06/22/2023	06/28/2023 08:30	Hoor Shaik	06/29/2023 09:55	Juyoung Kim	2419465
	06/22/2023			06/29/2023 01:44	Dale L. Simmons	2419455
SM 2320 B-2011	06/22/2023			06/30/2023 14:08	Dale L. Simmons	2419457
SM 2540 C-2015	06/22/2023			06/23/2023 15:19	Yijie Li	2419455, 2419457
SM 2540 D-2015	06/22/2023			06/23/2023 15:19	Yijie Li	2419455, 2419457
SM 4500-F- C-2011	06/22/2023			06/24/2023 11:16	Dale L. Simmons	2419455
	06/22/2023			06/24/2023 11:25	Dale L. Simmons	2419457
SM 5310 B-2011	06/22/2023			06/28/2023 23:58	Elise M. Gillis	2419456
	06/22/2023			06/29/2023 00:11	Elise M. Gillis	2419458