

Chemical Analysis Report

SO-DIST-2022-04-07-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **2022 SMP : Croal Creek**
Request ID: **RQ-2022-03-28-26**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 26-APR-2022 15:10

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

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: Metals, 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: CoralCreekEast

Collection Date/Time: 04/06/2022 09:15

Field ID: G2SD0046

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317700	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P412100	
	SM 2320 B-2011	Total Alkalinity	150		mg CaCO3/L	P412455	
	SM 2540 D-2011	TSS	4	IA	mg/L	P412433	
	SM 4500-F- C-2011	Fluoride	1.3		mg F/L	P412531	
2317701	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P412302	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P412212	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P412398	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P412309	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P412477	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: GOTTFRIED CREEK @ DEER CREEK MOBILE HOME **Collection Date/Time: 04/06/2022 10:20**

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317706	EPA 8270E	Aldrin	0.68	U	ng/L	P412073	
		Alpha-BHC	0.11	U	ng/L	P412073	
		Alpha-Chlordane	0.21	U	ng/L	P412073	
		PCB-1016	2.1	U	ng/L	P412073	
		Beta-BHC	0.11	U	ng/L	P412073	
		PCB-1221	2.1	U	ng/L	P412073	
		Beta-Cyfluthrin**	1.3	U	ng/L	P412073	
		PCB-1232	2.1	U	ng/L	P412073	
		Bifenthrin**	0.53	U	ng/L	P412073	
		PCB-1242	2.1	U	ng/L	P412073	
		Carbophenothion	0.95	U	ng/L	P412073	
		PCB-1248	2.1	U	ng/L	P412073	
		Chlorothalonil	1.3	U	ng/L	P412073	
		PCB-1254	2.1	U	ng/L	P412073	
		Cis-Nonachlor**	0.21	U	ng/L	P412073	
		PCB-1260	2.1	U	ng/L	P412073	
		Cypermethrin	1.6	U	ng/L	P412073	
		Dacthal**	0.16	U	ng/L	P412073	
		DDD-p,p'	0.26	U	ng/L	P412073	
		DDE-p,p'	0.21	U	ng/L	P412073	
		DDT-p,p'	0.26	U	ng/L	P412073	
		Delta-BHC	0.42	U	ng/L	P412073	
		Deltamethrin**	1.3	U	ng/L	P412073	
		Dichlobenil**	0.26	U	ng/L	P412073	
		Dicofol	1.3	U	ng/L	P412073	
		Dieldrin	0.42	U	ng/L	P412073	
		Endosulfan I	0.42	U	ng/L	P412073	
		Endosulfan II	0.42	U	ng/L	P412073	
		Endosulfan Sulfate	0.32	U	ng/L	P412073	
		Endrin	0.42	U	ng/L	P412073	
		Endrin Aldehyde	0.79	U	ng/L	P412073	
		Endrin Ketone	0.42	U	ng/L	P412073	
		Esfenvalerate**	0.79	U	ng/L	P412073	
		Ethalfuralin**	0.16	U	ng/L	P412073	
		Fenpropathrin**	0.26	U	ng/L	P412073	
		Gamma-BHC	0.13	U	ng/L	P412073	
		Gamma-Chlordane	0.21	U	ng/L	P412073	
		Heptachlor	0.21	U	ng/L	P412073	
		Heptachlor Epoxide	0.26	U	ng/L	P412073	
		Hexachlorobenzene**	1.1	U	ng/L	P412073	
		Kepone**	5.3	U	ng/L	P412073	
		Lambda-Cyhalothrin**	0.79	U	ng/L	P412073	
		Methoprene**	0.79	U	ng/L	P412073	

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317706	EPA 8270E	Methoxychlor	0.32	UJ	ng/L	P412073	CCV, LCS
		MGK-264**	0.21	U	ng/L	P412073	RPD
		Mirex	0.74	U	ng/L	P412073	
		Oxychlordan**	0.32	U	ng/L	P412073	MS
		Permethrin	1.7	U	ng/L	P412073	
		Phenothrin**	0.95	U	ng/L	P412073	
		Piperonyl Butoxide**	0.16	U	ng/L	P412073	
		Prallethrin**	2.1	U	ng/L	P412073	RPD
		Tau-Fluvalinate**	0.26	U	ng/L	P412073	
		Tetramethrin**	0.79	UJ	ng/L	P412073	CCV, RPD
		Trans-Nonachlor**	0.21	U	ng/L	P412073	
		Triclosan Methyl**	0.16	U	ng/L	P412073	
		Trifluralin	0.21	U	ng/L	P412073	
		Chlordane	2.6	U	ng/L	P412073	
		Toxaphene	16	U	ng/L	P412073	
2317707	EPA 8321B	2,4-D	0.0036	I	ug/L	P412180	
		Acesulfame K	0.10	U	ug/L	P412076	
		2,4,5-T	0.0040	U	ug/L	P412180	
		AMPA	1.0	U	ug/L	P412076	
		Acetaminophen	0.0080	U	ug/L	P412180	
		Acetamiprid	0.0020	U	ug/L	P412180	
		Endothall	0.25	U	ug/L	P412076	
		Glufosinate	1.0	U	ug/L	P412076	
		Glyphosate	1.0	U	ug/L	P412076	
		Afidopyropen	0.0020	U	ug/L	P412180	
		Bentazon	8.0E-04	U	ug/L	P412180	
		Sucralose	0.099		ug/L	P412076	
		Benzovindiflupyr	0.0020	U	ug/L	P412180	
		Carbamazepine	8.0E-04	U	ug/L	P412180	
		Clothianidin	0.0020	U	ug/L	P412180	
		Dinotefuran	0.0020	U	ug/L	P412180	
		Diuron	0.0020	U	ug/L	P412180	
		Fenuron	0.032	U	ug/L	P412180	
		Fluridone	0.0039		ug/L	P412180	
		Imazapyr	0.0086	I	ug/L	P412180	
		Hydrocodone	0.0020	U	ug/L	P412180	
		Ibuprofen	0.020	U	ug/L	P412180	
		Imidacloprid	0.0020	U	ug/L	P412180	
		Linuron	0.0040	U	ug/L	P412180	
		Mandestrobin	0.0020	U	ug/L	P412180	
		MCPP	0.0040	U	ug/L	P412180	
		Naproxen	0.0080	U	ug/L	P412180	
		Primidone	0.0040	U	ug/L	P412180	
		Pyraclostrobin	0.0020	U	ug/L	P412180	
		Silvex	0.0040	U	ug/L	P412180	

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317707	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P412180	
		Tolfenpyrad	0.0020	U	ug/L	P412180	
		Triclopyr	0.0040	U	ug/L	P412180	
2317708	EPA 200.7 Rev. 4.4	Calcium	435		mg/L	P412394	
		Iron	120	U	ug/L	P412394	
		Magnesium	1.34E+03		mg/L	P412394	
		Strontium	7.77E+03		ug/L	P412394	
	EPA 200.8 Rev. 5.4	Tin	150	U	ug/L	P412394	
		Titanium	4.5	I	ug/L	P412394	
		Vanadium	8.0	U	ug/L	P412394	
		Zinc	20	U	ug/L	P412394	
		Aluminum	36	I	ug/L	P412394	
		Antimony	0.20	U	ug/L	P412394	
		Arsenic	2.27		ug/L	P412394	
		Beryllium	0.10	U	ug/L	P412394	
		Cadmium	0.080	U	ug/L	P412394	
		Chromium	1.6	U	ug/L	P412394	
		Cobalt	0.080	U	ug/L	P412394	
		Copper	4.1		ug/L	P412394	
		Lead	2.0	U	ug/L	P412394	
		Manganese	7.2		ug/L	P412394	
		Molybdenum	12.2		ug/L	P412394	
		Nickel	2.0	U	ug/L	P412394	
		Selenium	0.80	U	ug/L	P412394	
		Silver	0.040	U	ug/L	P412394	
		Thallium	1.0	U	ug/L	P412394	

Ref. Method and Comment:

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

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium and strontium are unavailable because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 04/19/2022.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412100

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412394

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412394

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412302

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412212

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412398

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P412309

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

Reference Method: EPA 8270E

Batch ID: P412073

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
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412073

Component	Result	Code	Units
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	0.70	U	ng/L
Mirex	0.70	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
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412073

Component	Result	Code	Units
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: P412073

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B

Batch ID: P412076

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: P412180

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P412180

Component	Result	Code	Units
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	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	0.0040	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: P412455

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

Reference Method: SM 2540 D-2011
Batch ID: P412433

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412531

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412477

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P412100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.8		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	110		P	85 - 115
Magnesium	104		P	85 - 115
Strontium	104		P	85 - 115
Tin	102		P	85 - 115
Titanium	106		P	85 - 115
Vanadium	99.1		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	94.0		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.4		P	85 - 115
Cobalt	103		P	85 - 115
Copper	98.6		P	85 - 115
Lead	103		P	85 - 115
Manganese	99.6		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.0		P	85 - 115
Silver	105		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P412302

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P412212

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P412398

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P412309

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

Reference Method: EPA 8270E

Batch ID: P412073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	30.6		P	10 - 93.0
Alpha-BHC	87.9		P	75 - 106
Alpha-Chlordane	64.4		P	50 - 109
Beta-BHC	101		P	36 - 138
Beta-Cyfluthrin	61.3		P	23 - 167
Bifenthrin	39.8		P	11 - 123
Carbophenothion	51.8		P	18 - 96.0
Chlorothalonil	137		P	27 - 190
Cis-Nonachlor	70.2		P	40 - 111
Cypermethrin	69.2		P	25 - 155
Dacthal	106		P	72 - 119
DDD-p,p'	83.5		P	47 - 108
DDE-p,p'	65.2		P	48 - 107
DDT-p,p'	58.4		P	49 - 111
Delta-BHC	121		P	54 - 138
Deltamethrin	67.5		P	22 - 189
Dichlobenil	96.7		P	32 - 113
Dicofol	62.0		P	50 - 108
Dieldrin	75.0		P	56 - 110
Endosulfan I	71.8		P	60 - 105
Endosulfan II	87.9		P	50 - 120
Endosulfan Sulfate	107		P	55 - 121
Endrin	80.4		P	31 - 119
Endrin Aldehyde	87.4		P	36 - 116
Endrin Ketone	96.4		P	69 - 177
Esfenvalerate	68.0		P	10 - 179
Ethalfuralin	74.5		P	49 - 99.0
Fenpropathrin	59.9		P	35 - 119
Gamma-BHC	98.2		P	69 - 120
Gamma-Chlordane	54.8		P	45 - 107
Heptachlor	60.9		P	41 - 100
Heptachlor Epoxide	75.6		P	58 - 106
Hexachlorobenzene	64.5		P	39 - 100
Kepone	126		P	10 - 191
Lambda-Cyhalothrin	54.5		P	21 - 206
Methoprene	45.8		P	10 - 129
Methoxychlor	59.7		F	61 - 111
MGK-264	71.6		P	20 - 123
Mirex	49.2		P	10 - 182
Oxychlordane	66.5		P	39 - 110
PCB-1016	64.0		P	49 - 111
PCB-1260	82.0		P	42 - 116
Permethrin	61.2		P	26 - 152
Phenothrin	35.1		P	10 - 109
Piperonyl Butoxide	105		P	19 - 147
Prallethrin	55.1		P	14 - 109

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P412073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tau-Fluvalinate	59.0		P	16 - 134
Tetramethrin	46.7		P	10 - 125
Trans-Nonachlor	60.9		P	45 - 107
Triclosan Methyl	68.8		P	60 - 110
Trifluralin	62.6		P	44 - 101

Reference Method: EPA 8276

Batch ID: P412073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.8		P	61 - 118
Toxaphene	94.5		P	51 - 122

Reference Method: EPA 8321B

Batch ID: P412076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	84.8		P	40 - 150
AMPA	116		P	40 - 150
Endothall	57.8		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	107		P	40 - 150
Sucralose	85.7		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P412180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	84.6		P	40 - 150
Acetaminophen	52.0		P	30 - 150
Acetamiprid	75.7		P	40 - 150
Afidopyropen	63.9		P	40 - 150
Bentazon	112		P	30 - 150
Benzovindiflupyr	81.1		P	40 - 150
Carbamazepine	96.9		P	40 - 150
Clothianidin	76.7		P	40 - 150
Dinotefuran	80.7		P	40 - 150
Diuron	72.5		P	40 - 150
Fenuron	119		P	40 - 150
Fluridone	66.9		P	40 - 150
Hydrocodone	72.9		P	40 - 150
Ibuprofen	56.5		P	40 - 150
Imazapyr	91.9		P	40 - 150
Imidacloprid	82.4		P	40 - 150
Linuron	70.8		P	40 - 150
Mandestrobin	60.5		P	40 - 150
MCPP	128		P	40 - 150
Naproxen	74.6		P	40 - 150
Primidone	59.7		P	40 - 150
Pyraclostrobin	76.9		P	40 - 150
Silvex	86.8		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P412180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	81.4		P	40 - 150
Tolfenpyrad	41.3		P	30 - 150
Triclopyr	86.1		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P412455

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P412531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P412477

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318261	Iron	104	105	P/P	70 - 130
2318261	Tin	77.6	89.5	P/P	70 - 130
2318261	Titanium	86.0	90.4	P/P	70 - 130
2318261	Vanadium	101	101	P/P	70 - 130
2318261	Zinc	100	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318261	Aluminum	119	126	P/P	70 - 130
2318261	Antimony	101	101	P/P	70 - 130
2318261	Arsenic	115	117	P/P	70 - 130
2318261	Beryllium	108	105	P/P	70 - 130
2318261	Cadmium	94.9	94.6	P/P	70 - 130
2318261	Chromium	103	102	P/P	70 - 130
2318261	Cobalt	114	115	P/P	70 - 130
2318261	Copper	109	110	P/P	70 - 130
2318261	Lead	110	111	P/P	70 - 130
2318261	Manganese	98.5	98.6	P/P	70 - 130
2318261	Molybdenum	115	116	P/P	70 - 130
2318261	Nickel	119	120	P/P	70 - 130
2318261	Selenium	103	103	P/P	70 - 130
2318261	Silver	95.7	95.2	P/P	70 - 130
2318261	Thallium	111	112	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P412302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318298	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P412212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316413	Kjeldahl Nitrogen	104	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P412398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317701	NO2NO3-N	98.5	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P412309

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316637	Total-P	96.4	96.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317302	PCB-1016	69.8	62.8	P/P	46 - 110
2317302	PCB-1260	69.0	68.6	P/P	42 - 111
2317899	Aldrin	34.4	27.4	P/P	10 - 89.0
2317899	Alpha-BHC	94.1	81.2	P/P	71 - 105
2317899	Alpha-Chlordane	56.7	58.4	P/P	43 - 107
2317899	Beta-BHC	112	107	P/P	57 - 152
2317899	Beta-Cyfluthrin	58.3	61.3	P/P	29 - 186
2317899	Bifenthrin	43.2	46.8	P/P	19 - 119
2317899	Carbophenothion	38.9	40.0	P/P	19 - 107
2317899	Chlorothalonil	131	125	P/P	10 - 245
2317899	Cis-Nonachlor	50.1	59.7	P/P	36 - 110
2317899	Cypermethrin	60.3	64.8	P/P	24 - 169
2317899	Dacthal	81.7	73.5	P/P	62 - 115
2317899	DDD-p,p'	57.0	64.4	P/P	36 - 109
2317899	DDE-p,p'	54.9	59.8	P/P	30 - 114
2317899	DDT-p,p'	52.6	60.6	P/P	42 - 108
2317899	Delta-BHC	109	110	P/P	60 - 164
2317899	Deltamethrin	60.4	48.7	P/P	10 - 210
2317899	Dichlobenil	89.6	77.6	P/P	23 - 108
2317899	Dicofol	68.6	67.4	P/P	44 - 109
2317899	Dieldrin	58.0	62.1	P/P	37 - 119
2317899	Endosulfan I	62.9	58.0	P/P	52 - 105
2317899	Endosulfan II	75.3	66.9	P/P	35 - 127
2317899	Endosulfan Sulfate	83.5	77.4	P/P	39 - 130
2317899	Endrin	61.7	63.3	P/P	30 - 116
2317899	Endrin Aldehyde	77.7	85.2	P/P	20 - 110
2317899	Endrin Ketone	85.0	78.0	P/P	48 - 134
2317899	Esfenvalerate	59.0	68.1	P/P	10 - 199
2317899	Ethalfuralin	68.7	59.7	P/P	48 - 95.0
2317899	Fenpropathrin	56.3	63.8	P/P	37 - 121
2317899	Gamma-BHC	106	98.8	P/P	61 - 126
2317899	Gamma-Chlordane	47.8	53.7	P/P	39 - 105
2317899	Heptachlor	49.2	47.9	P/P	38 - 96.0
2317899	Heptachlor Epoxide	56.3	65.4	P/P	42 - 114
2317899	Hexachlorobenzene	59.4	62.1	P/P	39 - 93.0
2317899	Kepone	123	103	P/P	10 - 215
2317899	Lambda-Cyhalothrin	54.6	57.1	P/P	10 - 204
2317899	Methoprene	43.7	45.1	P/P	17 - 108
2317899	Methoxychlor	64.7	67.1	P/P	56 - 115
2317899	MGK-264	70.5	43.3	P/P	35 - 120
2317899	Mirex	45.7	49.4	P/P	10 - 178
2317899	Oxychlordane	46.9	51.4	F/P	47 - 91.0
2317899	Permethrin	49.7	65.0	P/P	27 - 170
2317899	Phenothrin	31.4	32.9	P/P	10 - 133
2317899	Piperonyl Butoxide	97.0	85.4	P/P	23 - 150
2317899	Prallethrin	58.5	38.1	P/P	21 - 113
2317899	Tau-Fluvalinate	53.8	58.8	P/P	16 - 158
2317899	Tetramethrin	61.7	38.9	P/P	22 - 132
2317899	Trans-Nonachlor	56.9	60.6	P/P	43 - 102
2317899	Triclosan Methyl	64.6	57.4	P/P	49 - 109
2317899	Trifluralin	65.5	70.3	P/P	48 - 93.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P412073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317302	Chlordane	60.6	74.0	P/P	55 - 128
2317302	Toxaphene	77.4	96.4	P/P	57 - 211

Reference Method: EPA 8321B

Batch ID: P412076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317274	Acesulfame K	128	135	P/P	40 - 150
2317274	AMPA	116	96.3	P/P	40 - 150
2317274	Endothall	91.0	73.4	P/P	40 - 150
2317274	Glufosinate	104	88.5	P/P	40 - 150
2317274	Glyphosate	100	96.9	P/P	40 - 150
2317274	Sucralose	92.6	93.6	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P412180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316982	2,4,5-T	128	125	P/P	40 - 150
2316982	Acetaminophen	94.4	107	P/P	30 - 150
2316982	Acetamiprid	92.9	103	P/P	40 - 150
2316982	Afidopyropen	71.5	70.0	P/P	40 - 150
2316982	Benzovindiflupyr	80.6	97.3	P/P	40 - 150
2316982	Carbamazepine	92.1	104	P/P	40 - 150
2316982	Clothianidin	69.5	121	P/P	40 - 150
2316982	Dinotefuran	120	130	P/P	40 - 150
2316982	Diuron	97.6	91.7	P/P	40 - 150
2316982	Fenuron	118	110	P/P	40 - 150
2316982	Fluridone	65.1	72.1	P/P	40 - 150
2316982	Hydrocodone	90.4	102	P/P	40 - 150
2316982	Ibuprofen	52.0	65.4	P/P	40 - 150
2316982	Imazapyr	86.7	105	P/P	40 - 150
2316982	Linuron	58.6	68.7	P/P	40 - 150
2316982	Mandestrobin	84.0	92.5	P/P	40 - 150
2316982	MCPP	141	146	P/P	40 - 150
2316982	Naproxen	116	85.9	P/P	40 - 150
2316982	Primidone	96.0	115	P/P	40 - 150
2316982	Pyraclostrobin	84.3	93.6	P/P	40 - 150
2316982	Silvex	115	136	P/P	40 - 150
2316982	Tolfenpyrad	59.4	45.5	P/P	30 - 150
2316982	Triclopyr	116	133	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P412531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318237	Fluoride	96.3	97.1	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P412477

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

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P412477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318660	Organic Carbon	87.1	88.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P412100

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317642	Turbidity	4.67	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412394

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318261	Calcium	1.90	Spike	P	0 - 20
2318261	Iron	0.366	Spike	P	0 - 20
2318261	Magnesium	1.35	Spike	P	0 - 20
2318261	Strontium	1.36	Spike	P	0 - 20
2318261	Tin	14.2	Spike	P	0 - 20
2318261	Titanium	3.70	Spike	P	0 - 20
2318261	Vanadium	0.135	Spike	P	0 - 20
2318261	Zinc	0.786	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412394

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318261	Aluminum	5.23	Spike	P	0 - 20
2318261	Antimony	0.132	Spike	P	0 - 20
2318261	Arsenic	1.40	Spike	P	0 - 20
2318261	Beryllium	2.97	Spike	P	0 - 20
2318261	Cadmium	0.257	Spike	P	0 - 20
2318261	Chromium	0.0921	Spike	P	0 - 20
2318261	Cobalt	0.851	Spike	P	0 - 20
2318261	Copper	1.06	Spike	P	0 - 20
2318261	Lead	0.719	Spike	P	0 - 20
2318261	Manganese	0.138	Spike	P	0 - 20
2318261	Molybdenum	1.08	Spike	P	0 - 20
2318261	Nickel	0.597	Spike	P	0 - 20
2318261	Selenium	0.317	Spike	P	0 - 20
2318261	Silver	0.538	Spike	P	0 - 20
2318261	Thallium	1.09	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P412302

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318298	Ammonia-N	0.343	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P412212

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316413	Kjeldahl Nitrogen	4.52	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P412398

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317701	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P412309

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316637	Total-P	0.0500	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P412073

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317302	PCB-1016	10.8	Spike	P	0 - 32
2317302	PCB-1260	1.05	Spike	P	0 - 31
2317899	Aldrin	22.4	Spike	P	0 - 37
2317899	Alpha-BHC	14.8	Spike	P	0 - 16
2317899	Alpha-Chlordane	2.89	Spike	P	0 - 28
2317899	Beta-BHC	4.24	Spike	P	0 - 32
2317899	Beta-Cyfluthrin	5.12	Spike	P	0 - 41
2317899	Bifenthrin	7.82	Spike	P	0 - 36
2317899	Carbophenothion	2.64	Spike	P	0 - 30
2317899	Chlorothalonil	5.08	Spike	P	0 - 54
2317899	Cis-Nonachlor	17.7	Spike	P	0 - 33
2317899	Cypermethrin	7.11	Spike	P	0 - 38
2317899	Dacthal	10.5	Spike	P	0 - 23
2317899	DDD-p,p'	12.1	Spike	P	0 - 35
2317899	DDE-p,p'	8.54	Spike	P	0 - 27
2317899	DDT-p,p'	14.1	Spike	P	0 - 31
2317899	Delta-BHC	0.667	Spike	P	0 - 30
2317899	Deltamethrin	21.4	Spike	P	0 - 76
2317899	Dichlobenil	14.4	Spike	P	0 - 33
2317899	Dicofol	1.77	Spike	P	0 - 24
2317899	Dieldrin	6.14	Spike	P	0 - 35
2317899	Endosulfan I	8.19	Spike	P	0 - 25
2317899	Endosulfan II	11.9	Spike	P	0 - 31
2317899	Endosulfan Sulfate	7.53	Spike	P	0 - 38
2317899	Endrin	2.56	Spike	P	0 - 53
2317899	Endrin Aldehyde	9.18	Spike	P	0 - 81
2317899	Endrin Ketone	8.50	Spike	P	0 - 33
2317899	Esfenvalerate	14.3	Spike	P	0 - 46
2317899	Ethalfuralin	14.1	Spike	P	0 - 22
2317899	Fenpropathrin	12.5	Spike	P	0 - 29
2317899	Gamma-BHC	6.79	Spike	P	0 - 17
2317899	Gamma-Chlordane	11.6	Spike	P	0 - 28
2317899	Heptachlor	2.75	Spike	P	0 - 28
2317899	Heptachlor Epoxide	14.9	Spike	P	0 - 23
2317899	Hexachlorobenzene	4.45	Spike	P	0 - 22
2317899	Kepone	17.8	Spike	P	0 - 61
2317899	Lambda-Cyhalothrin	4.50	Spike	P	0 - 52

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P412073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317899	Methoprene	3.15	Spike	P	0 - 38
2317899	Methoxychlor	3.58	Spike	P	0 - 29
2317899	MGK-264	47.7	Spike	F	0 - 41
2317899	Mirex	7.70	Spike	P	0 - 39
2317899	Oxychlordane	9.13	Spike	P	0 - 33
2317899	Permethrin	26.8	Spike	P	0 - 39
2317899	Phenothrin	4.66	Spike	P	0 - 52
2317899	Piperonyl Butoxide	12.7	Spike	P	0 - 91
2317899	Prallethrin	42.3	Spike	F	0 - 34
2317899	Tau-Fluvalinate	8.93	Spike	P	0 - 41
2317899	Tetramethrin	45.4	Spike	F	0 - 43
2317899	Trans-Nonachlor	6.30	Spike	P	0 - 31
2317899	Triclosan Methyl	11.8	Spike	P	0 - 24
2317899	Trifluralin	7.04	Spike	P	0 - 23

Reference Method: EPA 8276
Batch ID: P412073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317302	Chlordane	19.9	Spike	P	0 - 25
2317302	Toxaphene	21.8	Spike	P	0 - 24

Reference Method: EPA 8321B
Batch ID: P412076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317274	Acesulfame K	4.86	Spike	P	0 - 30
2317274	AMPA	18.8	Spike	P	0 - 30
2317274	Endothall	21.4	Spike	P	0 - 30
2317274	Glufosinate	15.7	Spike	P	0 - 30
2317274	Glyphosate	3.54	Spike	P	0 - 30
2317274	Sucralose	0.993	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316982	2,4-D	8.21	Spike	P	0 - 30
2316982	2,4,5-T	2.30	Spike	P	0 - 30
2316982	Acetaminophen	12.3	Spike	P	0 - 30
2316982	Acetamiprid	10.4	Spike	P	0 - 30
2316982	Afidopyropen	2.11	Spike	P	0 - 30
2316982	Bentazon	2.18	Spike	P	0 - 30
2316982	Benzovindiflupyr	18.8	Spike	P	0 - 30
2316982	Carbamazepine	12.2	Spike	P	0 - 30
2316982	Clothianidin	26.8	Spike	P	0 - 30
2316982	Dinotefuran	7.97	Spike	P	0 - 30
2316982	Diuron	5.38	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P412180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316982	Fenuron	6.94	Spike	P	0 - 30
2316982	Fluridone	10.1	Spike	P	0 - 30
2316982	Hydrocodone	11.8	Spike	P	0 - 30
2316982	Ibuprofen	22.8	Spike	P	0 - 30
2316982	Imazapyr	17.5	Spike	P	0 - 30
2316982	Imidacloprid	13.6	Spike	P	0 - 30
2316982	Linuron	15.8	Spike	P	0 - 30
2316982	Mandestrobin	9.58	Spike	P	0 - 30
2316982	MCPPP	3.91	Spike	P	0 - 30
2316982	Naproxen	29.9	Spike	P	0 - 30
2316982	Primidone	17.7	Spike	P	0 - 30
2316982	Pyraclostrobin	10.4	Spike	P	0 - 30
2316982	Silvex	17.1	Spike	P	0 - 30
2316982	Thiamethoxam	0.302	Spike	P	0 - 30
2316982	Tolfenpyrad	26.5	Spike	P	0 - 30
2316982	Triclopyr	13.2	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
 Batch ID: P412455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318237	Total Alkalinity	2.25	Sample	P	0 - 5.2

Reference Method: SM 4500-F- C-2011
 Batch ID: P412531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318237	Fluoride	0.520	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
 Batch ID: P412477

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318660	Organic Carbon	1.12	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2317706
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	50.2	P	38 - 115
EPA 8270E	Decachlorobiphenyl	88.2	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	51.2	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	59.2	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	78.8	P	30 - 97.0
EPA 8276	PCNB	77.3	P	45 - 119

Lab Sample ID: 2317707
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	112	P	30 - 160
EPA 8321B	Diuron-d6	70.1	P	30 - 160
EPA 8321B	Endothall-d6	98.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.8	P	30 - 160
EPA 8321B	Primidone-d5	128	P	30 - 160
EPA 8321B	Sucralose-d6	138	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111369

Included Lab Sample IDs: 2317700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	98.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A111413

Included Lab Sample IDs: 2317707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	125	130	P/P	60 - 160
Glufosinate	129	126	P/P	60 - 160
Glyphosate	123	125	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111419

Included Lab Sample IDs: 2317707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	90.4	86.0	P/P	60 - 160
Endothall	75.8	87.5	P/P	60 - 160
Sucralose	92.1	94.4	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111449

Included Lab Sample IDs: 2317701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	99.3	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A111487

Included Lab Sample IDs: 2317706

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	110		P	80 - 120
PCB-1260	110		P	80 - 120

Reference Method: EPA 8276

Run ID: A111490

Included Lab Sample IDs: 2317706

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.0		P	80 - 120
Toxaphene	103		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111492

Included Lab Sample IDs: 2317701

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A111495
 Included Lab Sample IDs: 2317706

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	97.8		P	80 - 120
Alpha-Chlordane	99.6		P	80 - 120
Beta-BHC	115		P	80 - 120
Beta-Cyfluthrin	98.9		P	80 - 120
Bifenthrin	86.5		P	80 - 120
Carbophenothion	113		P	80 - 120
Chlorothalonil	96.5		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	98.6		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	100		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	94.0		P	80 - 120
Delta-BHC	109		P	80 - 120
Deltamethrin	88.7		P	80 - 120
Dichlobenil	114		P	80 - 120
Dicofol	104		P	80 - 120
Dieldrin	100		P	80 - 120
Endosulfan I	94.9		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	99.9		P	80 - 120
Endrin	108		P	80 - 120
Endrin Aldehyde	118		P	80 - 120
Endrin Ketone	117		P	80 - 120
Esfenvalerate	101		P	80 - 120
Ethalfuralin	99.5		P	80 - 120
Fenpropathrin	91.0		P	80 - 120
Gamma-BHC	109		P	80 - 120
Gamma-Chlordane	92.5		P	80 - 120
Heptachlor	98.4		P	80 - 120
Heptachlor Epoxide	118		P	80 - 120
Hexachlorobenzene	111		P	80 - 120
Kepone	87.9		P	80 - 120
Lambda-Cyhalothrin	98.9		P	80 - 120
Methoprene	94.3		P	80 - 120
Methoxychlor	76.7*		F	80 - 120
MGK-264	99.1		P	80 - 120
Mirex	101		P	80 - 120
Oxychlordane	98.8		P	80 - 120
Permethrin	95.2		P	80 - 120
Phenothrin	96.8		P	80 - 120
Piperonyl Butoxide	96.1		P	80 - 120
Prallethrin	98.9		P	80 - 120
Tau-Fluvalinate	101		P	80 - 120
Tetramethrin	75.3*		F	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111497

Included Lab Sample IDs: 2317701

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

Reference Method: EPA 8321B

Run ID: A111499

Included Lab Sample IDs: 2317707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	118	P/P	50 - 150
2,4,5-T	127	133	P/P	50 - 150
Acetaminophen	89.2	91.4	P/P	60 - 160
Acetamiprid	86.5	89.1	P/P	50 - 150
Afidopyropen	87.3	88.0	P/P	50 - 150
Bentazon	155	143	P/P	50 - 160
Benzovindiflupyr	95.9	89.6	P/P	50 - 150
Carbamazepine	94.5	97.1	P/P	60 - 150
Clothianidin	83.7	107	P/P	60 - 150
Dinotefuran	87.2	84.6	P/P	50 - 150
Diuron	119	122	P/P	60 - 160
Fenuron	88.9	91.0	P/P	60 - 150
Fluridone	88.8	105	P/P	60 - 160
Hydrocodone	90.9	92.0	P/P	60 - 150
Ibuprofen	60.8	113	P/P	50 - 160
Imazapyr	95.2	98.3	P/P	50 - 150
Imidacloprid	83.3	84.6	P/P	60 - 150
Linuron	68.0	68.3	P/P	60 - 150
Mandestrobin	92.4	87.5	P/P	50 - 150
MCPP	114	128	P/P	50 - 150
Naproxen	88.7	79.3	P/P	50 - 160
Primidone	122	78.4	P/P	60 - 150
Pyraclostrobin	92.7	103	P/P	60 - 150
Silvex	134	138	P/P	50 - 150
Thiamethoxam	86.0	80.3	P/P	50 - 150
Tolfenpyrad	95.9	78.3	P/P	60 - 150
Triclopyr	109	115	P/P	50 - 150

Reference Method: SM 2320 B-2011

Run ID: A111512

Included Lab Sample IDs: 2317700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.1	95.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111518

Included Lab Sample IDs: 2317701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	94.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111539

Included Lab Sample IDs: 2317708

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.6	101	P/P	90 - 110
Antimony	98.2	98.5	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Beryllium	97.0	97.1	P/P	90 - 110
Cadmium	96.7	97.2	P/P	90 - 110
Chromium	96.7	95.7	P/P	90 - 110
Copper	103	103	P/P	90 - 110
Lead	98.5	98.7	P/P	90 - 110
Manganese	97.8	96.4	P/P	90 - 110
Molybdenum	98.1	97.8	P/P	90 - 110
Nickel	104	104	P/P	90 - 110
Selenium	97.3	97.4	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Thallium	97.0	97.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111545

Included Lab Sample IDs: 2317701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	98.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111549

Included Lab Sample IDs: 2317700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111562

Included Lab Sample IDs: 2317708

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cobalt	101	105	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111618

Included Lab Sample IDs: 2317708

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	105	105	P/P	90 - 110
Iron	104	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Strontium	102	101	P/P	90 - 110
Tin	102	99.0	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Zinc	105	102	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity	95.8				4.67	
EPA 200.7 Rev. 4.4	Calcium	107					1.90
	Iron	110	104	105			0.366
	Magnesium	104					1.35
	Strontium	104					1.36
	Tin	102	77.6	89.5			14.2
	Titanium	106	86.0	90.4			3.70
	Vanadium	99.1	101	101			0.135
	Zinc	105	100	101			0.786
EPA 200.8 Rev. 5.4	Aluminum	103	119	126			5.23
	Antimony	101	101	101			0.132
	Arsenic	102	115	117			1.40
	Beryllium	94.0	108	105			2.97
	Cadmium	100	94.9	94.6			0.257
	Chromium	98.4	103	102			0.0921
	Cobalt	103	114	115			0.851
	Copper	98.6	109	110			1.06
	Lead	103	110	111			0.719
	Manganese	99.6	98.5	98.6			0.138
	Molybdenum	101	115	116			1.08
	Nickel	100	119	120			0.597
	Selenium	99.0	103	103			0.317
	Silver	105	95.7	95.2			0.538
	Thallium	105	111	112			1.09
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	100	100			0.343
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	104	98.5			4.52
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.5	97.5			1.02
EPA 365.1 Rev. 2.0	Total-P	104	96.4	96.5			0.0500
EPA 8270E	Aldrin	30.6	34.4	27.4			22.4
	Alpha-BHC	87.9	94.1	81.2			14.8
	Alpha-Chlordane	64.4	56.7	58.4			2.89
	Beta-BHC	101	112	107			4.24
	Beta-Cyfluthrin	61.3	58.3	61.3			5.12
	Bifenthrin	39.8	43.2	46.8			7.82
	Carbophenothion	51.8	38.9	40.0			2.64
	Chlorothalonil	137	131	125			5.08
	Cis-Nonachlor	70.2	50.1	59.7			17.7
	Cypermethrin	69.2	60.3	64.8			7.11
	Dacthal	106	81.7	73.5			10.5
	DDD-p,p'	83.5	57.0	64.4			12.1
	DDE-p,p'	65.2	54.9	59.8			8.54
	DDT-p,p'	58.4	52.6	60.6			14.1
	Delta-BHC	121	109	110			0.667
	Deltamethrin	67.5	60.4	48.7			21.4
	Dichlobenil	96.7	89.6	77.6			14.4
	Dicofol	62.0	68.6	67.4			1.77
	Dieldrin	75.0	58.0	62.1			6.14
	Endosulfan I	71.8	62.9	58.0			8.19
	Endosulfan II	87.9	75.3	66.9			11.9
	Endosulfan Sulfate	107	83.5	77.4			7.53
	Endrin	80.4	61.7	63.3			2.56
	Endrin Aldehyde	87.4	77.7	85.2			9.18
	Endrin Ketone	96.4	85.0	78.0			8.50
	Esfenvalerate	68.0	59.0	68.1			14.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision SMP	MS
						LCS	
EPA 8270E	Ethalfuralin	74.5		68.7	59.7		14.1
	Fenpropathrin	59.9		56.3	63.8		12.5
	Gamma-BHC	98.2		106	98.8		6.79
	Gamma-Chlordane	54.8		47.8	53.7		11.6
	Heptachlor	60.9		49.2	47.9		2.75
	Heptachlor Epoxide	75.6		56.3	65.4		14.9
	Hexachlorobenzene	64.5		59.4	62.1		4.45
	Kepone	126		123	103		17.8
	Lambda-Cyhalothrin	54.5		54.6	57.1		4.50
	Methoprene	45.8		43.7	45.1		3.15
	Methoxychlor	59.7		64.7	67.1		3.58
	MGK-264	71.6		70.5	43.3		47.7
	Mirex	49.2		45.7	49.4		7.70
	Oxychlordane	66.5		46.9	51.4		9.13
	PCB-1016	64.0		69.8	62.8		10.8
	PCB-1260	82.0		69.0	68.6		1.05
	Permethrin	61.2		49.7	65.0		26.8
	Phenothrin	35.1		31.4	32.9		4.66
	Piperonyl Butoxide	105		97.0	85.4		12.7
	Prallethrin	55.1		58.5	38.1		42.3
	Tau-Fluvalinate	59.0		53.8	58.8		8.93
	Tetramethrin	46.7		61.7	38.9		45.4
	Trans-Nonachlor	60.9		56.9	60.6		6.30
	Triclosan Methyl	68.8		64.6	57.4		11.8
	Trifluralin	62.6		65.5	70.3		7.04
EPA 8276	Chlordane	79.8		60.6	74.0		19.9
	Toxaphene	94.5		77.4	96.4		21.8
EPA 8321B	2,4-D	110					8.21
	2,4,5-T	84.6		128	125		2.30
	Acesulfame K	84.8		128	135		4.86
	Acetaminophen	52.0		94.4	107		12.3
	Acetamiprid	75.7		92.9	103		10.4
	Afidopyropen	63.9		71.5	70.0		2.11
	AMPA	116		116	96.3		18.8
	Bentazon	112					2.18
	Benzovindiflupyr	81.1		80.6	97.3		18.8
	Carbamazepine	96.9		92.1	104		12.2
	Clothianidin	76.7		69.5	121		26.8
	Dinotefuran	80.7		120	130		7.97
	Diuron	72.5		97.6	91.7		5.38
	Endothall	57.8		91.0	73.4		21.4
	Fenuron	119		118	110		6.94
	Fluridone	66.9		65.1	72.1		10.1
	Glufosinate	104		104	88.5		15.7
	Glyphosate	107		96.9	100		3.54
	Hydrocodone	72.9		90.4	102		11.8
	Ibuprofen	56.5		52.0	65.4		22.8
	Imazapyr	91.9		86.7	105		17.5
	Imidacloprid	82.4					13.6
	Linuron	70.8		58.6	68.7		15.8
	Mandestrobin	60.5		84.0	92.5		9.58
	MCPP	128		141	146		3.91
	Naproxen	74.6		116	85.9		29.9
	Primidone	59.7		96.0	115		17.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
EPA 8321B	Pyraclostrobin	76.9	84.3	93.6		10.4
	Silvex	86.8	115	136		17.1
	Sucralose	85.7	92.6	93.6		0.993
	Thiamethoxam	81.4				0.302
	Tolfenpyrad	41.3	59.4	45.5		26.5
	Triclopyr	86.1	116	133		13.2
SM 2320 B-2011	Total Alkalinity	96.6			2.25	
SM 4500-F- C-2011	Fluoride	97.5	96.3	97.1		0.520
SM 5310 B-2011	Organic Carbon	97.6	87.1	88.4		1.12

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2317700
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2317708
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2317708
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2317701
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2317701
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2317701
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2317701
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2317706
EPA 8270E	PCBs in water matrices by GC/MS/MS	2317706
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2317706
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2317707
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2317700
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2317700
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2317700
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2317701

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	04/07/2022			04/07/2022 15:44	Anna M. Plaviak	2317700
EPA 200.7 Rev. 4.4	04/07/2022	04/15/2022 09:45	Megan Whitefoot	04/21/2022 22:03	Josef B Mick	2317708
	04/07/2022	04/15/2022 09:45	Megan Whitefoot	04/21/2022 22:11	Josef B Mick	2317708
EPA 200.8 Rev. 5.4	04/07/2022	04/15/2022 09:45	Megan Whitefoot	04/18/2022 18:45	Alexander Thompson	2317708
	04/07/2022	04/15/2022 09:45	Megan Whitefoot	04/18/2022 20:40	Alexander Thompson	2317708
	04/07/2022	04/15/2022 09:45	Megan Whitefoot	04/19/2022 13:08	Alexander Thompson	2317708
EPA 350.1 Rev. 2.0	04/07/2022			04/13/2022 12:38	Ping Hua	2317701
EPA 351.2 Rev. 2.0	04/07/2022	04/12/2022 09:01	Samantha L Bates	04/18/2022 15:27	Alexandra J Mattheus	2317701
EPA 353.2 Rev. 2.0	04/07/2022			04/14/2022 16:01	Nathaniel J Jones	2317701
EPA 365.1 Rev. 2.0	04/07/2022	04/13/2022 14:10	Simonne.V. Calhoun	04/15/2022 11:34	James L Waggeberby	2317701
EPA 8270E	04/07/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 01:41	Vandana T. Nagar	2317706
	04/07/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 19:39	Vandana T. Nagar	2317706
EPA 8276	04/07/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 05:05	Arthur Maknenko	2317706
EPA 8321B	04/07/2022	04/08/2022 14:00	Manjita Shrestha	04/08/2022 22:12	Manjita Shrestha	2317707
	04/07/2022	04/08/2022 14:00	Manjita Shrestha	04/09/2022 11:37	Manjita Shrestha	2317707
	04/07/2022	04/12/2022 08:00	June Rhew	04/13/2022 07:02	Juyoung Kim	2317707
SM 2320 B-2011	04/07/2022			04/14/2022 23:49	Dale L. Simmons	2317700
SM 2540 D-2011	04/07/2022			04/08/2022 15:29	Yijie Li	2317700
SM 4500-F- C-2011	04/07/2022			04/19/2022 02:42	Dale L. Simmons	2317700
SM 5310 B-2011	04/07/2022			04/15/2022 23:46	Judith K. Clark	2317701