

Chemical Analysis Report

WAS-SECT-2019-10-23-01

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

Event Description: **Wakulla BMAP**
Request ID: **RQ-2019-10-21-23**
Customer: **WAS-SECT**
Project ID: **BMAP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 18-NOV-2019 16:19

A handwritten signature in black ink, appearing to read "Liang Lin", is shown 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: Wakulla River at boat tram

Collection Date/Time: 10/23/2019 12:14

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130983	EPA 180.1 Rev. 2.0	Turbidity	0.40		NTU	P373095	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P373694	
		Sulfate	12		mg SO4/L	P373697	
	SM 2120 B	Color (true)	9.9		PCU	P373109	
	SM 2320 B-97	Total Alkalinity	142		mg CaCO3/L	P373310	
	SM 2540 C-97	TDS	182	A	mg/L	P373596	
	SM 2540 D-97	TSS	2	UA	mg/L	P373651	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P373313	
2130984	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P373454	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P373240	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P373196	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P373252	
	SM 5310 B-00	Organic Carbon	1.3		mg C/L	P373403	
2130985	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P373089	
2130989	EPA 8321B	2,4-D	0.0020	U	ug/L	P373086	
		Acesulfame K**	0.10	U	ug/L	P373023	
		AMPA**	0.10	U	ug/L	P373023	MS
		Sucralose**	0.043		ug/L	P373023	
		Acetaminophen**	0.0080	U	ug/L	P373086	
		Acetamiprid**	0.0020	U	ug/L	P373086	
		Endothall**	0.25	U	ug/L	P373023	
		Glufosinate**	0.10	U	ug/L	P373023	
		Glyphosate**	0.10	U	ug/L	P373023	
		Afidopyropen**	0.0020	UJ	ug/L	P373086	
		Bentazon	8.0E-04	U	ug/L	P373086	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373086	
		Carbamazepine**	8.0E-04	U	ug/L	P373086	
		Clothianidin**	0.0020	U	ug/L	P373086	
		Dinotefuran**	0.0020	U	ug/L	P373086	
		Diuron	0.0020	U	ug/L	P373086	
		Fenuron	0.016	U	ug/L	P373086	
		Fluridone**	8.0E-04	U	ug/L	P373086	
		Imazapyr**	0.0040	U	ug/L	P373086	
		Hydrocodone**	0.0020	U	ug/L	P373086	
		Ibuprofen**	0.020	U	ug/L	P373086	
		Imidacloprid	0.0020	U	ug/L	P373086	MS
		Linuron	0.0040	U	ug/L	P373086	
		Mandestrobin**	0.0020	UJ	ug/L	P373086	
		MCPD	0.0020	U	ug/L	P373086	
		Naproxen**	0.0080	U	ug/L	P373086	
		Primidone**	0.0040	U	ug/L	P373086	
		Pyraclostrobin**	0.0020	U	ug/L	P373086	
		Thiamethoxam**	0.0020	U	ug/L	P373086	

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130989	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P373086	
		Triclopyr**	0.0040	U	ug/L	P373086	
2130990	EPA 200.7 Rev. 4.4	Barium	11.4		ug/L	P373024	
		Calcium	46.8		mg/L	P373024	
		Iron	30	U	ug/L	P373024	
		Magnesium	10.2		mg/L	P373024	
		Potassium	0.64	I	mg/L	P373024	
		Sodium	7.4		mg/L	P373024	
		Zinc	5.0	U	ug/L	P373024	
	EPA 200.8 Rev. 5.4	Aluminum	15	I	ug/L	P373024	
		Antimony	0.069	I	ug/L	P373024	
		Arsenic	0.69		ug/L	P373024	
		Boron**	17.9		ug/L	P373024	
		Cadmium	0.021	I	ug/L	P373024	
		Chromium	0.75	I	ug/L	P373024	
		Copper	0.40	U	ug/L	P373024	
		Lead	0.20	U	ug/L	P373024	
		Nickel	0.50	U	ug/L	P373024	
		Selenium	0.42	I	ug/L	P373024	
		Silver	0.010	U	ug/L	P373024	
		Thallium	0.10	U	ug/L	P373024	
2130991	EPA 8270E	Acetochlor	0.24	U	ng/L	P373194	
		Alachlor	0.24	U	ng/L	P373194	
		Ametryn	0.57	U	ng/L	P373194	
		Atrazine	0.74	I	ng/L	P373194	
		Atrazine Desethyl	1.4	U	ng/L	P373194	
		Azinphos Methyl	4.8	U	ng/L	P373194	
		Bromacil	0.48	U	ng/L	P373194	
		Butylate	0.38	U	ng/L	P373194	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P373194	
		Chlorpyrifos Methyl	0.096	U	ng/L	P373194	
		Cyanazine	3.1	U	ng/L	P373194	
		Demeton	6.7	U	ng/L	P373194	
		Diazinon	0.12	U	ng/L	P373194	
		Dimethenamid**	0.096	U	ng/L	P373194	
		Disulfoton	0.48	U	ng/L	P373194	
		Dithiopyr**	0.11	I	ng/L	P373194	
		EPTC	1.2	U	ng/L	P373194	
		Ethion	0.14	UJ	ng/L	P373194	RPD
		Ethoprop	0.096	U	ng/L	P373194	
		Fenamiphos	0.48	U	ng/L	P373194	
		Fipronil	0.24	U	ng/L	P373194	
		Fipronil Desulfinyl**	0.12	UJ	ng/L	P373194	RPD
		Fipronil Sulfide	0.14	U	ng/L	P373194	
		Fipronil Sulfone	0.14	U	ng/L	P373194	

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130991	EPA 8270E	Fonofos	0.19	U	ng/L	P373194	
		Hexazinone	1.9	I	ng/L	P373194	
		Malathion	0.33	U	ng/L	P373194	
		Metaxyl	0.29	U	ng/L	P373194	
		Metolachlor	0.48	U	ng/L	P373194	
		Metribuzin	0.72	UJ	ng/L	P373194	RPD
		Mevinphos	0.48	U	ng/L	P373194	
		Molinate	0.29	U	ng/L	P373194	
		Norflurazon	0.48	U	ng/L	P373194	
		Oxadiazon**	0.096	U	ng/L	P373194	
		Parathion Ethyl	0.24	U	ng/L	P373194	
		Parathion Methyl	0.53	U	ng/L	P373194	
		Pendimethalin	0.96	U	ng/L	P373194	
		Phorate	0.24	U	ng/L	P373194	
		Prodiamine**	0.17	U	ng/L	P373194	
		Prometon	0.86	U	ng/L	P373194	
		Prometryn	0.19	U	ng/L	P373194	
		Simazine	1.7	I	ng/L	P373194	
		Tebuconazole**	0.48	UJ	ng/L	P373194	RPD
		Terbufos	0.096	U	ng/L	P373194	
		Terbuthylazine	0.41	U	ng/L	P373194	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373095

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373024

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373024

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	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 300.0 Rev. 2.1
Batch ID: P373694

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373454

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373240

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373252

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373089

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P373194

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P373194

Component	Result	Code	Units
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B

Batch ID: P373023

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: P373086

Component	Result	Code	Units
2,4-D	0.0020	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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
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
MCP	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P373086

Component	Result	Code	Units
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P373109

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P373310

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

Reference Method: SM 2540 C-97
Batch ID: P373596

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P373651

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P373313

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P373403

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P373024

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	101		P	85 - 115
Iron	102		P	85 - 115
Magnesium	99.0		P	85 - 115
Potassium	103		P	85 - 115
Sodium	98.6		P	85 - 115
Zinc	97.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P373024

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	108		P	80 - 120
Antimony	105		P	80 - 120
Arsenic	103		P	80 - 120
Boron	111		P	80 - 120
Cadmium	100		P	80 - 120
Chromium	98.5		P	85 - 115
Copper	101		P	80 - 120
Lead	104		P	80 - 120
Nickel	100		P	80 - 120
Selenium	100		P	80 - 120
Silver	103		P	80 - 120
Thallium	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P373694

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P373697

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P373454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P373240

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P373196

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P373252

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P373089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.5		P	90 - 110

Reference Method: EPA 8270E

Batch ID: P373194

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	91.4	87.7	P/P	69 - 122
Alachlor	89.3	79.6	P/P	71 - 120
Ametryn	58.1	52.5	P/P	47 - 138
Atrazine	105	94.8	P/P	74 - 124
Atrazine Desethyl	92.0	83.1	P/P	38 - 138
Azinphos Methyl	101	91.5	P/P	69 - 154
Bromacil	75.0	69.3	P/P	39 - 121
Butylate	63.8	52.8	P/P	27 - 87.0
Chlorpyrifos Ethyl	103	91.2	P/P	69 - 118
Chlorpyrifos Methyl	103	88.0	P/P	70 - 120
Cyanazine	101	106	P/P	20 - 250
Demeton	91.9	81.3	P/P	39 - 118
Diazinon	90.4	79.9	P/P	68 - 127
Dimethenamid	88.6	84.0	P/P	66 - 125
Disulfoton	89.6	82.9	P/P	52 - 126
Dithiopyr	87.2	77.0	P/P	67 - 127
EPTC	67.2	51.5	P/P	24 - 88.0
Ethion	73.6	74.2	P/P	51 - 132
Ethoprop	97.3	84.7	P/P	58 - 117
Fenamiphos	107	97.5	P/P	38 - 139
Fipronil	88.4	80.9	P/P	61 - 124
Fipronil Desulfinyl	75.5	47.6	P/P	47 - 120
Fipronil Sulfide	89.9	95.0	P/P	56 - 119
Fipronil Sulfone	93.2	78.5	P/P	50 - 117
Fonofos	99.1	85.2	P/P	60 - 121
Hexazinone	101	92.8	P/P	55 - 137
Malathion	115	101	P/P	66 - 126
Metalaxyl	97.6	82.4	P/P	33 - 140
Metolachlor	91.0	81.0	P/P	69 - 119
Metribuzin	151	134	P/P	31 - 238
Mevinphos	100	81.3	P/P	42 - 113
Molinate	79.8	68.0	P/P	32 - 96.0
Norflurazon	96.4	88.3	P/P	54 - 123
Oxadiazon	84.6	76.1	P/P	63 - 128

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P373194

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Ethyl	90.5	80.6	P/P	72 - 111
Parathion Methyl	107	95.8	P/P	74 - 126
Pendimethalin	85.1	75.0	P/P	61 - 131
Phorate	89.1	75.9	P/P	51 - 115
Prodiamine	87.5	76.9	P/P	38 - 144
Prometon	89.7	80.3	P/P	54 - 119
Prometryn	84.3	82.9	P/P	63 - 120
Simazine	106	92.1	P/P	75 - 126
Tebuconazole	58.6	60.0	P/P	20 - 119
Terbufos	99.7	84.4	P/P	64 - 116
Terbuthylazine	93.0	84.8	P/P	73 - 117

Reference Method: EPA 8321B

Batch ID: P373023

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	96.0		P	40 - 150
AMPA	113		P	40 - 150
Endothall	108		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	118		P	40 - 140
Sucralose	89.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P373086

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	140		P	40 - 160
Acetaminophen	83.5		P	30 - 160
Acetamiprid	97.2		P	40 - 160
Afidopyropen	87.8		P	40 - 160
Bentazon	82.4		P	30 - 160
Benzovindiflupyr	89.4		P	40 - 160
Carbamazepine	99.5		P	40 - 160
Clothianidin	88.7		P	40 - 160
Dinotefuran	92.6		P	40 - 160
Diuron	91.0		P	40 - 160
Fenuron	98.4		P	40 - 160
Fluridone	89.1		P	40 - 160
Hydrocodone	91.0		P	40 - 160
Ibuprofen	94.1		P	30 - 160
Imazapyr	101		P	40 - 160
Imidacloprid	92.4		P	40 - 160
Linuron	78.0		P	40 - 160
Mandestrobin	94.1		P	40 - 160
MCPP	118		P	40 - 160
Naproxen	86.6		P	40 - 160
Primidone	77.0		P	40 - 160
Pyraclostrobin	82.8		P	30 - 160
Thiamethoxam	103		P	40 - 160
Tolfenpyrad	50.7		P	40 - 160
Triclopyr	117		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P373109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.4		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P373310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P373313

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P373403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	103		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P373024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130990	Barium	98.9	98.8	P/P	80 - 120
2130990	Calcium	97.8		P	80 - 120
2130990	Iron	103	100	P/P	80 - 120
2130990	Magnesium	97.9		P	80 - 120
2130990	Potassium	99.0	103	P/P	80 - 120
2130990	Sodium	98.1		P	80 - 120
2130990	Zinc	97.1	96.2	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P373024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130990	Aluminum	105	97.9	P/P	80 - 120
2130990	Antimony	108	100	P/P	80 - 120
2130990	Arsenic	105	96.4	P/P	80 - 120
2130990	Boron	108	101	P/P	80 - 120
2130990	Cadmium	103	95.1	P/P	80 - 120
2130990	Chromium	96.2	96.1	P/P	80 - 120
2130990	Copper	98.9	91.8	P/P	80 - 120
2130990	Lead	104	97.8	P/P	80 - 120
2130990	Nickel	97.7	91.9	P/P	80 - 120
2130990	Selenium	103	92.8	P/P	80 - 120
2130990	Silver	104	96.9	P/P	80 - 120
2130990	Thallium	99.6	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P373694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130642	Chloride	102		P	90 - 110
2130755	Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P373697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130642	Sulfate	101		P	90 - 110
2130755	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P373454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130984	Ammonia-N	98.9	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P373240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130984	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P373196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130697	NO2NO3-N	95.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P373252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131024	Total-P	94.4	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P373089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131016	O-Phosphate-P	95.8	96.9	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P373194

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130991	Acetochlor	82.7	90.9	P/P	63 - 129
2130991	Alachlor	78.9	88.7	P/P	65 - 127
2130991	Ametryn	71.7	71.0	P/P	40 - 164
2130991	Atrazine	86.2	98.8	P/P	66 - 135
2130991	Atrazine Desethyl	63.1	70.7	P/P	14 - 157
2130991	Azinphos Methyl	86.3	94.6	P/P	49 - 180
2130991	Bromacil	66.0	78.7	P/P	48 - 130
2130991	Butylate	51.4	67.8	P/P	10 - 94.0
2130991	Chlorpyrifos Ethyl	85.5	92.1	P/P	58 - 123
2130991	Chlorpyrifos Methyl	85.4	94.6	P/P	58 - 125
2130991	Cyanazine	76.6	89.3	P/P	24 - 253
2130991	Demeton	79.3	91.6	P/P	25 - 149
2130991	Diazinon	77.1	88.3	P/P	59 - 144
2130991	Dimethenamid	83.1	82.5	P/P	46 - 139
2130991	Disulfoton	76.1	89.6	P/P	54 - 132
2130991	Dithiopyr	77.4	82.7	P/P	64 - 130
2130991	EPTC	53.4	59.9	P/P	10 - 92.0
2130991	Ethion	98.9	58.2	P/P	30 - 148
2130991	Ethoprop	80.4	96.8	P/P	50 - 130
2130991	Fenamiphos	98.3	96.9	P/P	49 - 142
2130991	Fipronil	89.3	84.6	P/P	46 - 140
2130991	Fipronil Desulfinyl	87.8	76.1	P/P	30 - 121
2130991	Fipronil Sulfide	88.4	90.5	P/P	31 - 136
2130991	Fipronil Sulfone	96.7	95.7	P/P	16 - 136
2130991	Fonofos	80.0	92.4	P/P	55 - 129
2130991	Hexazinone	98.8	96.8	P/P	56 - 141
2130991	Malathion	103	112	P/P	56 - 135
2130991	Metaxyl	84.9	85.7	P/P	54 - 135
2130991	Metolachlor	82.2	85.5	P/P	51 - 140
2130991	Metribuzin	74.0	143	P/P	45 - 254
2130991	Mevinphos	76.2	94.9	P/P	33 - 131
2130991	Molinate	60.6	80.6	P/P	14 - 98.0
2130991	Norflurazon	90.0	94.7	P/P	34 - 136
2130991	Oxadiazon	82.2	78.8	P/P	67 - 116

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P373194

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130991	Parathion Ethyl	83.0	82.0	P/P	66 - 118
2130991	Parathion Methyl	88.6	103	P/P	64 - 136
2130991	Pendimethalin	80.8	82.8	P/P	59 - 144
2130991	Phorate	83.2	88.5	P/P	42 - 130
2130991	Prodiamine	92.1	79.4	P/P	42 - 148
2130991	Prometon	81.5	85.1	P/P	59 - 134
2130991	Prometryn	82.7	82.0	P/P	54 - 135
2130991	Simazine	75.0	84.8	P/P	53 - 156
2130991	Tebuconazole	78.7	49.8	P/P	10 - 131
2130991	Terbufos	85.0	98.3	P/P	57 - 131
2130991	Terbutylazine	86.6	90.4	P/P	68 - 125

Reference Method: EPA 8321B

Batch ID: P373023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130718	Acesulfame K	60.4	56.7	P/P	40 - 150
2130718	AMPA	37.6	38.8	F/F	40 - 150
2130718	Endothall	90.7	91.3	P/P	40 - 150
2130718	Glufosinate	72.4	69.4	P/P	40 - 150
2130718	Glyphosate	80.6	84.8	P/P	40 - 140
2130718	Sucralose	55.3	47.7	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P373086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130634	2,4-D	125	118	P/P	40 - 160
2130634	Acetaminophen	74.1	74.6	P/P	30 - 160
2130634	Acetamiprid	114	112	P/P	40 - 160
2130634	Afidopyropen	94.7	88.1	P/P	40 - 160
2130634	Bentazon	51.8	50.6	P/P	30 - 160
2130634	Benzovindiflupyr	88.1	84.6	P/P	40 - 160
2130634	Carbamazepine	91.1	92.1	P/P	40 - 160
2130634	Clothianidin	93.4	91.1	P/P	40 - 160
2130634	Dinotefuran	112	107	P/P	40 - 160
2130634	Diuron	78.5	80.7	P/P	40 - 160
2130634	Fenuron	94.3	89.3	P/P	40 - 160
2130634	Fluridone	84.2	84.0	P/P	40 - 160
2130634	Hydrocodone	113	111	P/P	40 - 160
2130634	Ibuprofen	81.8	77.0	P/P	30 - 160
2130634	Imazapyr	91.5	86.9	P/P	40 - 160
2130634	Imidacloprid	173	161	F/F	40 - 160
2130634	Linuron	65.8	63.8	P/P	40 - 160
2130634	Mandestrobin	98.9	97.2	P/P	40 - 160
2130634	MCPP	106	111	P/P	40 - 160
2130634	Naproxen	89.1	92.1	P/P	40 - 160
2130634	Primidone	109	105	P/P	40 - 160
2130634	Pyraclostrobin	82.7	80.7	P/P	30 - 160
2130634	Thiamethoxam	157	151	P/P	40 - 160
2130634	Tolfenpyrad	61.2	60.2	P/P	40 - 160
2130634	Triclopyr	121	99.0	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P373313

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131051	Fluoride	96.5	96.5	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P373403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131044	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P373095

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131022	Turbidity	7.50	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P373024

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130990	Barium	0.0809	Spike	P	0 - 20
2130990	Calcium	0.858	Spike	P	0 - 20
2130990	Iron	2.28	Spike	P	0 - 20
2130990	Magnesium	1.55	Spike	P	0 - 20
2130990	Potassium	3.82	Spike	P	0 - 20
2130990	Sodium	1.14	Spike	P	0 - 20
2130990	Zinc	0.980	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P373024

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130990	Aluminum	7.27	Spike	P	0 - 20
2130990	Antimony	7.32	Spike	P	0 - 20
2130990	Arsenic	8.39	Spike	P	0 - 20
2130990	Boron	6.09	Spike	P	0 - 20
2130990	Cadmium	7.75	Spike	P	0 - 20
2130990	Chromium	0.0298	Spike	P	0 - 20
2130990	Copper	7.43	Spike	P	0 - 20
2130990	Lead	6.44	Spike	P	0 - 20
2130990	Nickel	6.10	Spike	P	0 - 20
2130990	Selenium	9.97	Spike	P	0 - 20
2130990	Silver	6.56	Spike	P	0 - 20
2130990	Thallium	0.900	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P373694

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130642	Chloride	0.169	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P373697

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130642	Sulfate	0.0791	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130984	Ammonia-N	0.996	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130984	Kjeldahl Nitrogen	0.774	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130697	NO2NO3-N	0.922	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131024	Total-P	6.96	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131016	O-Phosphate-P	0.871	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P373194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130991	Acetochlor	9.43	Spike	P	0 - 30
2130991	Alachlor	11.7	Spike	P	0 - 30
2130991	Ametryn	1.01	Spike	P	0 - 30
2130991	Atrazine	11.3	Spike	P	0 - 30
2130991	Atrazine Desethyl	11.3	Spike	P	0 - 30
2130991	Azinphos Methyl	9.10	Spike	P	0 - 30
2130991	Bromacil	17.6	Spike	P	0 - 30
2130991	Butylate	27.4	Spike	P	0 - 30
2130991	Chlorpyrifos Ethyl	7.41	Spike	P	0 - 30
2130991	Chlorpyrifos Methyl	10.2	Spike	P	0 - 30
2130991	Cyanazine	15.3	Spike	P	0 - 30
2130991	Demeton	14.3	Spike	P	0 - 30
2130991	Diazinon	13.5	Spike	P	0 - 30
2130991	Dimethenamid	0.779	Spike	P	0 - 30
2130991	Disulfoton	16.3	Spike	P	0 - 30
2130991	Dithiopyr	6.39	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P373194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130991	EPTC	11.6	Spike	P	0 - 30
2130991	Ethion	51.8	Spike	F	0 - 30
2130991	Ethoprop	18.5	Spike	P	0 - 30
2130991	Fenamiphos	1.45	Spike	P	0 - 30
2130991	Fipronil	5.40	Spike	P	0 - 30
2130991	Fipronil Desulfinyl	14.3	Spike	P	0 - 30
2130991	Fipronil Sulfide	2.30	Spike	P	0 - 30
2130991	Fipronil Sulfone	0.959	Spike	P	0 - 30
2130991	Fonofos	14.4	Spike	P	0 - 30
2130991	Hexazinone	1.78	Spike	P	0 - 30
2130991	Malathion	8.03	Spike	P	0 - 30
2130991	Metaxyl	0.998	Spike	P	0 - 30
2130991	Metolachlor	3.97	Spike	P	0 - 30
2130991	Metribuzin	63.4	Spike	F	0 - 30
2130991	Mevinphos	21.8	Spike	P	0 - 30
2130991	Molinate	28.3	Spike	P	0 - 30
2130991	Norflurazon	5.05	Spike	P	0 - 30
2130991	Oxadiazon	4.24	Spike	P	0 - 30
2130991	Parathion Ethyl	1.21	Spike	P	0 - 30
2130991	Parathion Methyl	14.6	Spike	P	0 - 30
2130991	Pendimethalin	2.53	Spike	P	0 - 30
2130991	Phorate	6.15	Spike	P	0 - 30
2130991	Prodiamine	14.9	Spike	P	0 - 30
2130991	Prometon	4.29	Spike	P	0 - 30
2130991	Prometryn	0.750	Spike	P	0 - 30
2130991	Simazine	7.84	Spike	P	0 - 30
2130991	Tebuconazole	45.0	Spike	F	0 - 30
2130991	Terbufos	14.6	Spike	P	0 - 30
2130991	Terbutylazine	4.33	Spike	P	0 - 30
LFB	Acetochlor	4.13	LCS	P	0 - 30
LFB	Alachlor	11.5	LCS	P	0 - 30
LFB	Ametryn	10.1	LCS	P	0 - 30
LFB	Atrazine	10.0	LCS	P	0 - 30
LFB	Atrazine Desethyl	10.1	LCS	P	0 - 30
LFB	Azinphos Methyl	9.90	LCS	P	0 - 30
LFB	Bromacil	7.90	LCS	P	0 - 30
LFB	Butylate	19.0	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	11.8	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	15.6	LCS	P	0 - 30
LFB	Cyanazine	4.72	LCS	P	0 - 30
LFB	Demeton	12.2	LCS	P	0 - 30
LFB	Diazinon	12.3	LCS	P	0 - 30
LFB	Dimethenamid	5.30	LCS	P	0 - 30
LFB	Disulfoton	7.83	LCS	P	0 - 30
LFB	Dithiopyr	12.4	LCS	P	0 - 30
LFB	EPTC	26.5	LCS	P	0 - 30
LFB	Ethion	0.796	LCS	P	0 - 30
LFB	Ethoprop	13.8	LCS	P	0 - 30
LFB	Fenamiphos	8.86	LCS	P	0 - 30
LFB	Fipronil	8.78	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	45.5	LCS	F	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P373194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Sulfide	5.57	LCS	P	0 - 30
LFB	Fipronil Sulfone	17.1	LCS	P	0 - 30
LFB	Fonofos	15.0	LCS	P	0 - 30
LFB	Hexazinone	8.68	LCS	P	0 - 30
LFB	Malathion	12.8	LCS	P	0 - 30
LFB	Metalaxyl	17.0	LCS	P	0 - 30
LFB	Metolachlor	11.7	LCS	P	0 - 30
LFB	Metribuzin	11.6	LCS	P	0 - 30
LFB	Mevinphos	20.7	LCS	P	0 - 30
LFB	Molinate	16.0	LCS	P	0 - 30
LFB	Norflurazon	8.74	LCS	P	0 - 30
LFB	Oxadiazon	10.7	LCS	P	0 - 30
LFB	Parathion Ethyl	11.5	LCS	P	0 - 30
LFB	Parathion Methyl	10.8	LCS	P	0 - 30
LFB	Pendimethalin	12.6	LCS	P	0 - 30
LFB	Phorate	15.9	LCS	P	0 - 30
LFB	Prodiamine	12.9	LCS	P	0 - 30
LFB	Prometon	11.0	LCS	P	0 - 30
LFB	Prometryn	1.66	LCS	P	0 - 30
LFB	Simazine	14.0	LCS	P	0 - 30
LFB	Tebuconazole	2.41	LCS	P	0 - 30
LFB	Terbufos	16.6	LCS	P	0 - 30
LFB	Terbuthylazine	9.26	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P373023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130718	Acesulfame K	5.81	Spike	P	0 - 30
2130718	AMPA	1.72	Spike	P	0 - 30
2130718	Endothall	0.656	Spike	P	0 - 30
2130718	Glufosinate	4.28	Spike	P	0 - 30
2130718	Glyphosate	2.16	Spike	P	0 - 30
2130718	Sucralose	14.2	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P373086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130634	2,4-D	5.38	Spike	P	0 - 30
2130634	Acetaminophen	0.457	Spike	P	0 - 30
2130634	Acetamiprid	1.39	Spike	P	0 - 30
2130634	Afidopyropen	7.19	Spike	P	0 - 30
2130634	Bentazon	1.64	Spike	P	0 - 30
2130634	Benzovindiflupyr	4.05	Spike	P	0 - 30
2130634	Carbamazepine	0.956	Spike	P	0 - 30
2130634	Clothianidin	2.49	Spike	P	0 - 30
2130634	Dinotefuran	4.38	Spike	P	0 - 30
2130634	Diuron	2.43	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P373086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130634	Fenuron	5.44	Spike	P	0 - 30
2130634	Fluridone	0.190	Spike	P	0 - 30
2130634	Hydrocodone	2.36	Spike	P	0 - 30
2130634	Ibuprofen	6.09	Spike	P	0 - 30
2130634	Imazapyr	4.54	Spike	P	0 - 30
2130634	Imidacloprid	5.63	Spike	P	0 - 30
2130634	Linuron	3.04	Spike	P	0 - 30
2130634	Mandestrobin	1.76	Spike	P	0 - 30
2130634	MCP	4.34	Spike	P	0 - 30
2130634	Naproxen	3.36	Spike	P	0 - 30
2130634	Primidone	4.00	Spike	P	0 - 30
2130634	Pyraclostrobin	2.50	Spike	P	0 - 30
2130634	Thiamethoxam	3.93	Spike	P	0 - 30
2130634	Tolfenpyrad	1.68	Spike	P	0 - 30
2130634	Triclopyr	20.1	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P373109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131111	Color (true)	2.69	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P373310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131051	Total Alkalinity	0.347	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97

Batch ID: P373596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130983	TDS	7.69	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97

Batch ID: P373313

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131051	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00

Batch ID: P373403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131044	Organic Carbon	0.0377	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2130989**Field Sample ID: 44059**

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	67.7	P	30 - 160
EPA 8321B	Bentazon-d7	73.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.3	P	30 - 160
EPA 8321B	Diuron-d6	82.0	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.5	P	30 - 160
EPA 8321B	Primidone-d5	72.4	P	30 - 160
EPA 8321B	Sucralose-d6	89.3	P	30 - 160
EPA 8321B	Sucralose-d6	89.3	P	30 - 160

Lab Sample ID: 2130991**Field Sample ID: 44059**

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	99.7	P	68 - 130
EPA 8270E	Terbufos-d10	103	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95219

Included Lab Sample IDs: 2130985

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95221

Included Lab Sample IDs: 2130990

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.0	99.2	P/P	95 - 105
Calcium	100	99.0	P/P	95 - 105
Iron	101	99.6	P/P	95 - 105
Magnesium	101	99.2	P/P	95 - 105
Potassium	99.9	98.6	P/P	95 - 105
Sodium	98.7	99.1	P/P	95 - 105
Zinc	98.4	96.7	P/P	95 - 105

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95225

Included Lab Sample IDs: 2130983

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

Reference Method: SM 2120 B

Run ID: A95231

Included Lab Sample IDs: 2130983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.3	P/P	90 - 115

Reference Method: EPA 8321B

Run ID: A95270

Included Lab Sample IDs: 2130989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	96.7	103	P/P	60 - 160
Glufosinate	100	107	P/P	60 - 160
Glyphosate	105	118	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95272

Included Lab Sample IDs: 2130984

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

Reference Method: EPA 8321B

Run ID: A95273

Included Lab Sample IDs: 2130989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	93.1	93.9	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95273

Included Lab Sample IDs: 2130989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endothall	114	114	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95283

Included Lab Sample IDs: 2130989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	102	P/P	50 - 150
Acetaminophen	95.8	99.0	P/P	60 - 160
Acetamiprid	104	105	P/P	50 - 150
Afidopyropen	104	99.3	P/P	50 - 150
Bentazon	98.1	98.8	P/P	50 - 160
Benzovindiflupyr	104	100	P/P	50 - 150
Carbamazepine	103	104	P/P	60 - 150
Clothianidin	100	97.6	P/P	60 - 150
Dinotefuran	99.8	98.6	P/P	50 - 150
Diuron	103	105	P/P	60 - 150
Fenuron	104	105	P/P	60 - 150
Fluridone	107	109	P/P	60 - 160
Hydrocodone	67.9	92.6	P/P	60 - 150
Ibuprofen	103	88.2	P/P	50 - 160
Imazapyr	100	95.7	P/P	50 - 150
Imidacloprid	101	101	P/P	60 - 150
Linuron	104	98.1	P/P	60 - 150
Mandestrobin	109	114	P/P	50 - 150
MCPP	91.4	92.5	P/P	50 - 150
Naproxen	106	102	P/P	50 - 160
Primidone	98.5	94.1	P/P	60 - 150
Pyraclostrobin	96.0	106	P/P	60 - 150
Thiamethoxam	102	101	P/P	50 - 150
Tolfenpyrad	101	94.2	P/P	60 - 150
Triclopyr	94.2	94.9	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95296

Included Lab Sample IDs: 2130990

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	99.2	P/P	90 - 110
Antimony	96.7	95.7	P/P	90 - 110
Arsenic	99.0	97.6	P/P	90 - 110
Boron	104	102	P/P	90 - 110
Cadmium	97.2	96.6	P/P	90 - 110
Copper	98.3	97.6	P/P	90 - 110
Lead	98.0	97.1	P/P	90 - 110
Nickel	96.5	95.6	P/P	90 - 110
Selenium	98.3	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97
Run ID: A95300
Included Lab Sample IDs: 2130983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A95300
Included Lab Sample IDs: 2130983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A95312
Included Lab Sample IDs: 2130984

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A95324
Included Lab Sample IDs: 2130984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.7	101	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A95339
Included Lab Sample IDs: 2130984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A95359
Included Lab Sample IDs: 2130984

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A95370
Included Lab Sample IDs: 2130990

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	100	99.8	P/P	90 - 110
Silver	99.0	97.7	P/P	90 - 110
Thallium	91.6	92.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A95482
Included Lab Sample IDs: 2130983

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95482

Included Lab Sample IDs: 2130983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	106	P/P	90 - 110
Sulfate	104	105	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95575

Included Lab Sample IDs: 2130989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	87.2	97.0	P/P	60 - 160

Reference Method: EPA 8270E

Run ID: A95586

Included Lab Sample IDs: 2130991

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	102		P	80 - 120
Atrazine Desethyl	102		P	80 - 120
Azinphos Methyl	94.3		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	103		P	80 - 120
Chlorpyrifos Ethyl	97.7		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	102		P	80 - 120
Demeton	98.2		P	80 - 120
Diazinon	104		P	80 - 120
Dimethenamid	104		P	80 - 120
Disulfoton	99.7		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	102		P	80 - 120
Ethion	102		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	93.9		P	80 - 120
Fipronil	98.0		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	97.7		P	80 - 120
Fipronil Sulfone	98.2		P	80 - 120
Fonofos	98.7		P	80 - 120
Hexazinone	105		P	80 - 120
Malathion	95.5		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	105		P	80 - 120
Mevinphos	96.5		P	80 - 120
Molinate	106		P	80 - 120
Norflurazon	97.6		P	80 - 120
Oxadiazon	105		P	80 - 120
Parathion Ethyl	93.2		P	80 - 120
Parathion Methyl	92.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A95586

Included Lab Sample IDs: 2130991

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pendimethalin	102		P	80 - 120
Phorate	102		P	80 - 120
Prodiamine	112		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	100		P	80 - 120
Simazine	111		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	98.7		P	80 - 120
Terbuthylazine	103		P	80 - 120

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						7.50	
EPA 200.7 Rev. 4.4	Barium	101		98.9	98.8			0.0809
	Calcium	101		97.8				0.858
	Iron	102		103	100			2.28
	Magnesium	99.0		97.9				1.55
	Potassium	103		99.0	103			3.82
	Sodium	98.6		98.1				1.14
	Zinc	97.5		97.1	96.2			0.980
EPA 200.8 Rev. 5.4	Aluminum	108		105	97.9			7.27
	Antimony	105		108	100			7.32
	Arsenic	103		105	96.4			8.39
	Boron	111		108	101			6.09
	Cadmium	100		103	95.1			7.75
	Chromium	98.5		96.2	96.1			0.0298
	Copper	101		98.9	91.8			7.43
	Lead	104		104	97.8			6.44
	Nickel	100		97.7	91.9			6.10
	Selenium	100		103	92.8			9.97
	Silver	103		104	96.9			6.56
	Thallium	107		99.6	101			0.900
EPA 300.0 Rev. 2.1	Chloride	103		102	98.3		0.169	
	Sulfate	102		101	98.8		0.0791	
EPA 350.1 Rev. 2.0	Ammonia-N	99.1		98.9	100			0.996
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.6		102	103			0.774
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5		95.0	96.0			0.922
EPA 365.1 Rev. 2.0	Total-P	101		94.4	102			6.96
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5		95.8	96.9			0.871
EPA 8270E	Acetochlor	91.4	87.7	82.7	90.9	4.13		9.43
	Alachlor	89.3	79.6	78.9	88.7	11.5		11.7
	Ametryn	58.1	52.5	71.7	71.0	10.1		1.01
	Atrazine	105	94.8	86.2	98.8	10.0		11.3
	Atrazine Desethyl	92.0	83.1	63.1	70.7	10.1		11.3
	Azinphos Methyl	101	91.5	86.3	94.6	9.90		9.10
	Bromacil	75.0	69.3	66.0	78.7	7.90		17.6
	Butylate	63.8	52.8	51.4	67.8	19.0		27.4
	Chlorpyrifos Ethyl	103	91.2	85.5	92.1	11.8		7.41
	Chlorpyrifos Methyl	103	88.0	85.4	94.6	15.6		10.2
	Cyanazine	101	106	76.6	89.3	4.72		15.3
	Demeton	91.9	81.3	79.3	91.6	12.2		14.3
	Diazinon	90.4	79.9	77.1	88.3	12.3		13.5
	Dimethenamid	88.6	84.0	83.1	82.5	5.30		0.779
	Disulfoton	89.6	82.9	76.1	89.6	7.83		16.3
	Dithiopyr	87.2	77.0	77.4	82.7	12.4		6.39
	EPTC	67.2	51.5	53.4	59.9	26.5		11.6
	Ethion	73.6	74.2	98.9	58.2	0.796		51.8
	Ethoprop	97.3	84.7	80.4	96.8	13.8		18.5
	Fenamiphos	107	97.5	98.3	96.9	8.86		1.45
	Fipronil	88.4	80.9	89.3	84.6	8.78		5.40
	Fipronil Desulfinyl	75.5	47.6	87.8	76.1	45.5		14.3
	Fipronil Sulfide	89.9	95.0	88.4	90.5	5.57		2.30
	Fipronil Sulfone	93.2	78.5	96.7	95.7	17.1		0.959
	Fonofos	99.1	85.2	80.0	92.4	15.0		14.4
	Hexazinone	101	92.8	98.8	96.8	8.68		1.78
	Malathion	115	101	103	112	12.8		8.03

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Metalaxyl	97.6	82.4	84.9	85.7	17.0	0.998
	Metolachlor	91.0	81.0	82.2	85.5	11.7	3.97
	Metribuzin	151	134	74.0	143	11.6	63.4
	Mevinphos	100	81.3	76.2	94.9	20.7	21.8
	Molinate	79.8	68.0	60.6	80.6	16.0	28.3
	Norflurazon	96.4	88.3	90.0	94.7	8.74	5.05
	Oxadiazon	84.6	76.1	82.2	78.8	10.7	4.24
	Parathion Ethyl	90.5	80.6	83.0	82.0	11.5	1.21
	Parathion Methyl	107	95.8	88.6	103	10.8	14.6
	Pendimethalin	85.1	75.0	80.8	82.8	12.6	2.53
	Phorate	89.1	75.9	83.2	88.5	15.9	6.15
	Prodiamine	87.5	76.9	92.1	79.4	12.9	14.9
	Prometon	89.7	80.3	81.5	85.1	11.0	4.29
	Prometryn	84.3	82.9	82.7	82.0	1.66	0.750
	Simazine	106	92.1	75.0	84.8	14.0	7.84
	Tebuconazole	58.6	60.0	78.7	49.8	2.41	45.0
	Terbufos	99.7	84.4	85.0	98.3	16.6	14.6
	Terbuthylazine	93.0	84.8	86.6	90.4	9.26	4.33
EPA 8321B	2,4-D	140		125	118		5.38
	Acesulfame K	96.0		60.4	56.7		5.81
	Acetaminophen	83.5		74.1	74.6		0.457
	Acetamiprid	97.2		114	112		1.39
	Afidopyropen	87.8		94.7	88.1		7.19
	AMPA	113		37.6	38.8		1.72
	Bentazon	82.4		51.8	50.6		1.64
	Benzovindiflupyr	89.4		88.1	84.6		4.05
	Carbamazepine	99.5		91.1	92.1		0.956
	Clothianidin	88.7		93.4	91.1		2.49
	Dinotefuran	92.6		112	107		4.38
	Diuron	91.0		78.5	80.7		2.43
	Endothall	108		90.7	91.3		0.656
	Fenuron	98.4		94.3	89.3		5.44
	Fluridone	89.1		84.2	84.0		0.190
	Glufosinate	108		72.4	69.4		4.28
	Glyphosate	118		80.6	84.8		2.16
	Hydrocodone	91.0		113	111		2.36
	Ibuprofen	94.1		81.8	77.0		6.09
	Imazapyr	101		91.5	86.9		4.54
	Imidacloprid	92.4		173	161		5.63
	Linuron	78.0		65.8	63.8		3.04
	Mandestrobin	94.1		98.9	97.2		1.76
	MCPP	118		106	111		4.34
	Naproxen	86.6		89.1	92.1		3.36
	Primidone	77.0		109	105		4.00
	Pyraclostrobin	82.8		82.7	80.7		2.50
	Sucralose	89.6		55.3	47.7		14.2
	Thiamethoxam	103		157	151		3.93
	Tolfenpyrad	50.7		61.2	60.2		1.68
	Triclopyr	117		121	99.0		20.1
SM 2120 B	Color (true)	98.4				2.69	
SM 2320 B-97	Total Alkalinity	104				0.347	
SM 2540 C-97	TDS					7.69	
SM 4500 F-C-97	Fluoride	96.1		96.5	96.5		0.0
SM 5310 B-00	Organic Carbon	103		102	102		0.0377

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2130983
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2130990
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2130990
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2130983
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2130983
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2130984
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2130984
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2130984
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2130984
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2130985
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2130991
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2130989
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2130989
SM 2120 B / E31780	True Color measured at 450 nm	2130983
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2130983
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2130983
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2130983
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2130983
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2130984

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	10/23/2019			10/24/2019 15:01	Rosalyn Ballman	2130983
EPA 200.7 Rev. 4.4	10/23/2019	10/24/2019 10:44	Alexander Thompson	10/24/2019 16:25	Betina Topolski	2130990
EPA 200.8 Rev. 5.4	10/23/2019	10/24/2019 10:44	Alexander Thompson	10/28/2019 16:04	Justin Cutchin	2130990
	10/23/2019	10/24/2019 10:44	Alexander Thompson	10/31/2019 01:29	Robert K Palmer	2130990
EPA 300.0 Rev. 2.1	10/23/2019			11/01/2019 17:18	Jhamieka S. Greenwood	2130983
EPA 350.1 Rev. 2.0	10/23/2019			10/29/2019 11:38	Ping Hua	2130984
EPA 351.2 Rev. 2.0	10/23/2019	10/28/2019 13:27	Sima Feizi	10/29/2019 18:55	Jhamieka S. Greenwood	2130984
EPA 353.2 Rev. 2.0	10/23/2019			10/28/2019 09:20	Beverly Y. Sanders	2130984
EPA 365.1 Rev. 2.0	10/23/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 13:47	Lipi Saha	2130984
EPA 365.1 Rev. 2.0 dissolved	10/23/2019			10/24/2019 15:35	Julia Storbeck	2130985
EPA 8270E	10/23/2019	10/28/2019 09:00	Fe-Val Siddell	11/01/2019 16:24	Vandana T. Nagar	2130991
EPA 8321B	10/23/2019	10/24/2019 11:00	Rebecca Ware	10/24/2019 19:08	Rebecca Ware	2130989
	10/23/2019	10/24/2019 11:00	Rebecca Ware	10/25/2019 15:54	Rebecca Ware	2130989
	10/23/2019	10/24/2019 11:00	Rebecca Ware	11/07/2019 13:14	Rebecca Ware	2130989
	10/23/2019	10/25/2019 14:00	Hoor Shaik	10/26/2019 05:08	Juyoung Kim	2130989
SM 2120 B	10/23/2019			10/24/2019 15:48	Madeline Funaro	2130983
SM 2320 B-97	10/23/2019			10/29/2019 00:05	Dale L. Simmons	2130983
SM 2540 C-97	10/23/2019			10/25/2019 14:21	Yijie Li	2130983
SM 2540 D-97	10/23/2019			10/25/2019 14:21	Yijie Li	2130983
SM 4500 F-C-97	10/23/2019			10/29/2019 00:05	Dale L. Simmons	2130983
SM 5310 B-00	10/23/2019			10/29/2019 17:39	Madeline Funaro	2130984