

Chemical Analysis Report

NW-DIST-2019-12-12-01

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

Event Description: **SMP Bioassessment**
Request ID: **RQ-2019-12-09-47**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-JAN-2020 14:07

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: Little Black Creek upstream of Black Creek

Collection Date/Time: 12/11/2019 13:30

Field ID: G3NW0200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143263	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P375815	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P376319	
		Sulfate	2.1		mg SO4/L	P376321	
	SM 2120 B	Color (true)	87		PCU	P375752	
	SM 2320 B-97	Total Alkalinity	0.93	I	mg CaCO3/L	P376251	
	SM 2540 C-97	TDS	38		mg/L	P376416	
	SM 2540 D-97	TSS	4	I	mg/L	P376356	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P376254	
2143264	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P376139	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36	I	mg N/L	P375839	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P376150	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P375920	
	SM 5310 B-00	Organic Carbon	9.8		mg C/L	P376168	
2143265	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P375767	
2143269	EPA 8321B	2,4-D	0.0020	U	ug/L	P375653	
		Acesulfame K**	0.10	U	ug/L	P375838	
		AMPA**	0.10	U	ug/L	P375838	
		Sucralose**	0.010	U	ug/L	P375838	
		Acetaminophen**	0.0080	U	ug/L	P375653	
		Acetamiprid**	0.0020	U	ug/L	P375653	
		Endothall**	0.25	U	ug/L	P375838	
		Glufosinate**	0.10	U	ug/L	P375838	
		Glyphosate**	0.10	U	ug/L	P375838	
		Afidopyropen**	0.0020	UJ	ug/L	P375653	
		Bentazon	8.0E-04	U	ug/L	P375653	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P375653	
		Carbamazepine**	8.0E-04	U	ug/L	P375653	
		Clothianidin**	0.0020	U	ug/L	P375653	
		Dinotefuran**	0.0020	U	ug/L	P375653	
		Diuron	0.0020	U	ug/L	P375653	
		Fenuron	0.016	U	ug/L	P375653	
		Fluridone**	8.0E-04	U	ug/L	P375653	
		Imazapyr**	0.0040	U	ug/L	P375653	
		Hydrocodone**	0.0020	U	ug/L	P375653	
		Ibuprofen**	0.020	U	ug/L	P375653	
		Imidacloprid	0.0020	U	ug/L	P375653	MS
		Linuron	0.0040	U	ug/L	P375653	
		Mandestrobin**	0.0020	UJ	ug/L	P375653	
		MCPD	0.0020	U	ug/L	P375653	
		Naproxen**	0.0080	U	ug/L	P375653	
		Primidone**	0.0040	U	ug/L	P375653	
		Pyraclostrobin**	0.0020	U	ug/L	P375653	
		Thiamethoxam**	0.0020	U	ug/L	P375653	

Field ID: G3NW0200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143269	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P375653	
		Triclopyr**	0.0040	U	ug/L	P375653	
2143270	EPA 200.7 Rev. 4.4	Barium	10.6		ug/L	P376068	
		Calcium	1.69		mg/L	P376068	
		Iron	290		ug/L	P376068	
		Magnesium	0.63		mg/L	P376068	
		Potassium	0.36	I	mg/L	P376068	
		Sodium	2.1		mg/L	P376068	
		Zinc	5.0	U	ug/L	P376068	
	EPA 200.8 Rev. 5.4	Aluminum	299		ug/L	P376068	
		Antimony	0.050	U	ug/L	P376068	
		Arsenic	0.23		ug/L	P376068	
		Boron**	10		ug/L	P376068	
		Cadmium	0.020	U	ug/L	P376068	
		Chromium	0.40	U	ug/L	P376068	
		Copper	0.40	U	ug/L	P376068	
		Lead	0.23	I	ug/L	P376068	
		Nickel	0.86	I	ug/L	P376068	
		Selenium	0.20	U	ug/L	P376068	
		Silver	0.010	U	ug/L	P376068	
		Thallium	0.10	U	ug/L	P376068	
2143271	EPA 8270E	Acetochlor	0.26	U	ng/L	P375696	
		Alachlor	0.26	U	ng/L	P375696	
		Ametryn	0.63	U	ng/L	P375696	
		Atrazine	0.26	U	ng/L	P375696	
		Atrazine Desethyl	1.6	U	ng/L	P375696	
		Azinphos Methyl	5.3	U	ng/L	P375696	
		Bromacil	0.53	U	ng/L	P375696	
		Butylate	0.42	U	ng/L	P375696	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P375696	
		Chlorpyrifos Methyl	0.11	U	ng/L	P375696	
		Cyanazine	3.4	U	ng/L	P375696	
		Demeton	7.4	U	ng/L	P375696	
		Diazinon	0.13	U	ng/L	P375696	
		Dimethenamid**	0.11	U	ng/L	P375696	
		Disulfoton	0.53	U	ng/L	P375696	
		Dithiopyr**	0.11	U	ng/L	P375696	
		EPTC	1.3	U	ng/L	P375696	
		Ethion	0.16	U	ng/L	P375696	
		Ethoprop	0.11	U	ng/L	P375696	
		Fenamiphos	0.53	U	ng/L	P375696	
		Fipronil	0.26	U	ng/L	P375696	
		Fipronil Desulfinyl**	0.13	U	ng/L	P375696	
		Fipronil Sulfide	0.16	U	ng/L	P375696	
		Fipronil Sulfone	0.16	U	ng/L	P375696	

Field ID: G3NW0200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143271	EPA 8270E	Fonofos	0.21	U	ng/L	P375696	
		Hexazinone	0.53	U	ng/L	P375696	
		Malathion	0.37	U	ng/L	P375696	
		Metolachlor	0.32	U	ng/L	P375696	
		Metolachlor	0.53	U	ng/L	P375696	
		Metribuzin	0.79	U	ng/L	P375696	
		Mevinphos	0.53	U	ng/L	P375696	
		Molinate	0.32	U	ng/L	P375696	
		Norflurazon	0.53	U	ng/L	P375696	
		Oxadiazon**	0.11	U	ng/L	P375696	
		Parathion Ethyl	0.26	U	ng/L	P375696	
		Parathion Methyl	0.58	U	ng/L	P375696	
		Pendimethalin	1.1	U	ng/L	P375696	
		Phorate	0.26	U	ng/L	P375696	
		Prodiamine**	0.18	UJ	ng/L	P375696	LCS, MS, RPD
		Prometon	0.95	U	ng/L	P375696	
		Prometryn	0.21	U	ng/L	P375696	
		Simazine	0.53	U	ng/L	P375696	
		Tebuconazole**	0.53	UJ	ng/L	P375696	RPD
		Terbufos	0.11	U	ng/L	P375696	
		Terbuthylazine	0.45	U	ng/L	P375696	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference and matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample.

EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. 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: P375815

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376068

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: P376068

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: P376319

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376321

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376139

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: P375839

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376150

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375920

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375767

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

Reference Method: EPA 8270E
Batch ID: P375696

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: P375696

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
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P375653

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
MCPP	0.0020	U	ug/L
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: EPA 8321B
Batch ID: P375838

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P375838

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: SM 2120 B
Batch ID: P375752

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P376251

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

Reference Method: SM 2540 C-97
Batch ID: P376416

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P376356

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P376254

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P376168

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: P376068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	92.9		P	85 - 115
Calcium	105		P	85 - 115
Iron	105		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	103		P	85 - 115
Sodium	106		P	85 - 115
Zinc	91.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	99.6		P	85 - 115
Boron	101		P	85 - 115
Cadmium	98.5		P	85 - 115
Chromium	98.1		P	85 - 115
Copper	98.9		P	85 - 115
Lead	99.3		P	85 - 115
Nickel	101		P	85 - 115
Selenium	97.3		P	85 - 115
Silver	103		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376319

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376321

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376139

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375839

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376150

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375920

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375767

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.0		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P375696

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.6	98.6	P/P	69 - 122
Alachlor	87.0	102	P/P	71 - 120
Ametryn	90.5	106	P/P	47 - 138
Atrazine	93.6	104	P/P	74 - 124
Atrazine Desethyl	71.9	72.6	P/P	38 - 138
Azinphos Methyl	87.3	98.1	P/P	69 - 154
Bromacil	104	85.8	P/P	39 - 121
Butylate	57.7	61.7	P/P	27 - 87.0
Chlorpyrifos Ethyl	92.2	109	P/P	69 - 118
Chlorpyrifos Methyl	92.9	99.0	P/P	70 - 120
Cyanazine	77.5	93.5	P/P	20 - 250
Demeton	84.3	83.6	P/P	39 - 118
Diazinon	85.1	94.2	P/P	68 - 127
Dimethenamid	83.7	92.9	P/P	66 - 125
Disulfoton	85.4	87.8	P/P	52 - 126
Dithiopyr	82.0	98.9	P/P	67 - 127
EPTC	55.2	62.5	P/P	24 - 88.0
Ethion	81.7	108	P/P	51 - 132
Ethoprop	84.7	89.2	P/P	58 - 117
Fenamiphos	89.4	107	P/P	38 - 139
Fipronil	82.9	101	P/P	61 - 124
Fipronil Desulfinyl	79.4	103	P/P	47 - 120
Fipronil Sulfide	69.3	84.0	P/P	56 - 119
Fipronil Sulfone	77.9	95.1	P/P	50 - 117
Fonofos	86.0	87.9	P/P	60 - 121
Hexazinone	87.6	109	P/P	55 - 137
Malathion	100	105	P/P	66 - 126
Metalaxyl	86.6	103	P/P	33 - 140
Metolachlor	79.2	93.1	P/P	69 - 119
Metribuzin	97.7	93.8	P/P	31 - 238
Mevinphos	90.0	89.1	P/P	42 - 113
Molinate	69.2	70.5	P/P	32 - 96.0
Norflurazon	79.8	97.0	P/P	54 - 123
Oxadiazon	80.1	98.1	P/P	63 - 128

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P375696

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Ethyl	84.9	98.5	P/P	72 - 111
Parathion Methyl	95.7	101	P/P	74 - 126
Pendimethalin	74.2	97.6	P/P	61 - 131
Phorate	90.5	83.6	P/P	51 - 115
Prodiamine	36.3	58.4	F/P	38 - 144
Prometon	75.6	94.8	P/P	54 - 119
Prometryn	83.9	98.3	P/P	63 - 120
Simazine	96.7	103	P/P	75 - 126
Tebuconazole	37.6	73.0	P/P	20 - 119
Terbufos	90.5	95.0	P/P	64 - 116
Terbuthylazine	87.1	100	P/P	73 - 117

Reference Method: EPA 8321B
Batch ID: P375653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	139		P	30 - 160
Acetaminophen	97.4		P	30 - 150
Acetamiprid	101		P	30 - 160
Afidopyropen	99.8		P	30 - 160
Bentazon	85.3		P	30 - 150
Benzovindiflupyr	94.8		P	30 - 160
Carbamazepine	107		P	30 - 160
Clothianidin	97.8		P	30 - 160
Dinotefuran	103		P	30 - 160
Diuron	80.0		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	97.2		P	30 - 160
Hydrocodone	94.7		P	30 - 160
Ibuprofen	77.9		P	30 - 160
Imazapyr	96.5		P	30 - 160
Imidacloprid	110		P	30 - 160
Linuron	81.2		P	30 - 160
Mandestrobin	84.7		P	30 - 160
MCPP	132		P	30 - 160
Naproxen	63.9		P	30 - 160
Primidone	98.5		P	30 - 160
Pyraclostrobin	84.7		P	30 - 160
Thiamethoxam	102		P	30 - 160
Tolfenpyrad	52.8		P	30 - 160
Triclopyr	106		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P375838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.7		P	40 - 150
AMPA	85.3		P	40 - 150
Endothall	94.5		P	40 - 150
Glufosinate	87.5		P	40 - 150
Glyphosate	119		P	40 - 140
Sucralose	77.9		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P375752

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.2		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P376251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P376254

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P376168

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143969	Barium	91.7		P	70 - 130
2143969	Iron	107		P	70 - 130
2143969	Zinc	90.6		P	70 - 130
2143972	Barium	95.4	95.6	P/P	70 - 130
2143972	Iron	109	110	P/P	70 - 130
2143972	Zinc	94.7	95.1	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143969	Aluminum	102		P	70 - 130
2143969	Antimony	104		P	70 - 130
2143969	Arsenic	101		P	70 - 130
2143969	Cadmium	94.8		P	70 - 130
2143969	Chromium	86.0		P	70 - 130
2143969	Copper	94.8		P	80 - 120
2143969	Lead	103		P	70 - 130
2143969	Nickel	99.6		P	70 - 130
2143969	Selenium	94.0		P	70 - 130
2143969	Silver	99.0		P	70 - 130
2143969	Thallium	106		P	70 - 130
2143972	Aluminum	104	104	P/P	70 - 130
2143972	Antimony	104	104	P/P	70 - 130
2143972	Arsenic	103	102	P/P	70 - 130
2143972	Cadmium	94.8	97.7	P/P	70 - 130
2143972	Chromium	85.7	84.9	P/P	70 - 130
2143972	Copper	92.2	94.0	P/P	80 - 120
2143972	Lead	103	104	P/P	70 - 130
2143972	Nickel	95.6	90.2	P/P	70 - 130
2143972	Selenium	99.8	99.2	P/P	70 - 130
2143972	Silver	100	102	P/P	70 - 130
2143972	Thallium	108	111	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142641	Chloride	101	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142748	Ammonia-N	105	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143199	Kjeldahl Nitrogen	103	95.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P376150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143197	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P375920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143067	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P375767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143475	O-Phosphate-P	96.7	98.0	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P375696

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142778	Acetochlor	89.0	93.8	P/P	63 - 129
2142778	Alachlor	86.5	92.8	P/P	65 - 127
2142778	Ametryn	78.2	79.4	P/P	40 - 164
2142778	Atrazine Desethyl	61.7	73.6	P/P	14 - 157
2142778	Azinphos Methyl	76.8	85.7	P/P	49 - 180
2142778	Bromacil	70.8	78.3	P/P	48 - 130
2142778	Butylate	40.2	49.6	P/P	10 - 94.0
2142778	Chlorpyrifos Ethyl	101	99.3	P/P	58 - 123
2142778	Chlorpyrifos Methyl	91.7	97.9	P/P	58 - 125
2142778	Cyanazine	78.3	81.5	P/P	24 - 253
2142778	Demeton	90.6	110	P/P	25 - 149
2142778	Diazinon	91.2	98.1	P/P	59 - 144
2142778	Dimethenamid	83.6	96.8	P/P	46 - 139
2142778	Disulfoton	81.4	81.0	P/P	54 - 132
2142778	Dithiopyr	88.8	89.9	P/P	64 - 130
2142778	EPTC	40.3	48.1	P/P	10 - 92.0
2142778	Ethion	96.7	83.7	P/P	30 - 148
2142778	Ethoprop	89.1	99.6	P/P	50 - 130
2142778	Fenamiphos	99.2	80.5	P/P	49 - 142
2142778	Fipronil	93.4	88.4	P/P	46 - 140
2142778	Fipronil Desulfinyl	88.7	90.9	P/P	30 - 121
2142778	Fipronil Sulfide	76.6	69.8	P/P	31 - 136
2142778	Fipronil Sulfone	86.4	80.1	P/P	16 - 136
2142778	Fonofos	86.5	97.1	P/P	55 - 129
2142778	Hexazinone	104	105	P/P	56 - 141
2142778	Malathion	98.8	93.3	P/P	56 - 135
2142778	Metalaxyl	91.7	94.2	P/P	54 - 135
2142778	Metolachlor	80.6	81.5	P/P	51 - 140
2142778	Metribuzin	109	118	P/P	45 - 254
2142778	Mevinphos	78.8	106	P/P	33 - 131
2142778	Molinate	58.5	73.8	P/P	14 - 98.0
2142778	Norflurazon	76.2	81.0	P/P	34 - 136
2142778	Oxadiazon	77.2	75.9	P/P	67 - 116
2142778	Parathion Ethyl	92.4	100	P/P	66 - 118

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P375696

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142778	Parathion Methyl	96.8	115	P/P	64 - 136
2142778	Pendimethalin	104	99.2	P/P	59 - 144
2142778	Phorate	75.7	100	P/P	42 - 130
2142778	Prodiamine	90.7	40.2	P/F	42 - 148
2142778	Prometon	88.0	88.8	P/P	59 - 134
2142778	Prometryn	93.7	88.5	P/P	54 - 135
2142778	Simazine	89.4	97.5	P/P	53 - 156
2142778	Tebuconazole	70.7	48.9	P/P	10 - 131
2142778	Terbufos	96.7	104	P/P	57 - 131
2142778	Terbutylazine	90.5	96.4	P/P	68 - 125

Reference Method: EPA 8321B
 Batch ID: P375653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142333	2,4-D	107	107	P/P	30 - 160
2142333	Acetaminophen	95.4	101	P/P	30 - 150
2142333	Acetamiprid	99.2	107	P/P	30 - 160
2142333	Afidopyropen	96.0	98.2	P/P	30 - 160
2142333	Bentazon	40.1	46.3	P/P	30 - 150
2142333	Benzovindiflupyr	90.7	96.2	P/P	30 - 160
2142333	Carbamazepine	82.0	81.4	P/P	30 - 160
2142333	Clothianidin	89.4	94.8	P/P	30 - 160
2142333	Dinotefuran	115	121	P/P	30 - 160
2142333	Diuron	63.9	66.3	P/P	30 - 160
2142333	Fenuron	73.1	78.9	P/P	30 - 160
2142333	Fluridone	87.1	90.5	P/P	30 - 160
2142333	Hydrocodone	80.8	88.8	P/P	30 - 160
2142333	Ibuprofen	70.1	70.8	P/P	30 - 160
2142333	Imazapyr	76.5	78.7	P/P	30 - 160
2142333	Imidacloprid	156	160	P/F	30 - 160
2142333	Linuron	71.0	69.2	P/P	30 - 160
2142333	Mandestrobin	81.1	81.7	P/P	30 - 160
2142333	MCP	124	131	P/P	30 - 160
2142333	Naproxen	82.2	81.5	P/P	30 - 160
2142333	Primidone	98.1	102	P/P	30 - 160
2142333	Pyraclostrobin	87.3	88.7	P/P	30 - 160
2142333	Thiamethoxam	116	122	P/P	30 - 160
2142333	Tolfenpyrad	56.0	54.7	P/P	30 - 160
2142333	Triclopyr	129	122	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P375838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142668	Acesulfame K	127	131	P/P	40 - 150
2142668	AMPA	69.1	83.7	P/P	40 - 150
2142668	Endothall	93.1	72.3	P/P	40 - 150
2142668	Glufosinate	99.9	84.5	P/P	40 - 150
2142668	Sucralose	79.2	79.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P376254

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143445	Fluoride	101	100	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P376168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2142709	Organic Carbon	100	99.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P375815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143239	Turbidity	3.85	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143972	Barium	0.155	Spike	P	0 - 20
2143972	Calcium	0.998	Spike	P	0 - 20
2143972	Iron	0.814	Spike	P	0 - 20
2143972	Magnesium	0.728	Spike	P	0 - 20
2143972	Potassium	1.35	Spike	P	0 - 20
2143972	Sodium	0.923	Spike	P	0 - 20
2143972	Zinc	0.444	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143972	Aluminum	0.00801	Spike	P	0 - 20
2143972	Antimony	0.265	Spike	P	0 - 20
2143972	Arsenic	0.337	Spike	P	0 - 20
2143972	Boron	0.678	Spike	P	0 - 20
2143972	Cadmium	2.98	Spike	P	0 - 20
2143972	Chromium	0.956	Spike	P	0 - 20
2143972	Copper	2.02	Spike	P	0 - 20
2143972	Lead	1.06	Spike	P	0 - 20
2143972	Nickel	5.79	Spike	P	0 - 20
2143972	Selenium	0.583	Spike	P	0 - 20
2143972	Silver	1.41	Spike	P	0 - 20
2143972	Thallium	2.68	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142641	Chloride	1.00	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142748	Ammonia-N	1.27	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143199	Kjeldahl Nitrogen	6.19	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143197	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143067	Total-P	2.53	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143475	O-Phosphate-P	0.935	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P375696

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142778	Acetochlor	5.25	Spike	P	0 - 30
2142778	Alachlor	7.01	Spike	P	0 - 30
2142778	Ametryn	1.02	Spike	P	0 - 30
2142778	Atrazine	9.05	Spike	P	0 - 30
2142778	Atrazine Desethyl	17.6	Spike	P	0 - 30
2142778	Azinphos Methyl	11.0	Spike	P	0 - 30
2142778	Bromacil	10.1	Spike	P	0 - 30
2142778	Butylate	20.8	Spike	P	0 - 30
2142778	Chlorpyrifos Ethyl	2.18	Spike	P	0 - 30
2142778	Chlorpyrifos Methyl	6.60	Spike	P	0 - 30
2142778	Cyanazine	3.94	Spike	P	0 - 30
2142778	Demeton	19.5	Spike	P	0 - 30
2142778	Diazinon	7.28	Spike	P	0 - 30
2142778	Dimethenamid	14.7	Spike	P	0 - 30
2142778	Disulfoton	0.408	Spike	P	0 - 30
2142778	Dithiopyr	1.21	Spike	P	0 - 30
2142778	EPTC	17.7	Spike	P	0 - 30
2142778	Ethion	14.4	Spike	P	0 - 30
2142778	Ethoprop	11.1	Spike	P	0 - 30
2142778	Fenamiphos	20.9	Spike	P	0 - 30
2142778	Fipronil	5.51	Spike	P	0 - 30
2142778	Fipronil Desulfinyl	2.42	Spike	P	0 - 30
2142778	Fipronil Sulfide	9.19	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P375696

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142778	Fipronil Sulfone	7.57	Spike	P	0 - 30
2142778	Fonofos	11.5	Spike	P	0 - 30
2142778	Hexazinone	0.968	Spike	P	0 - 30
2142778	Malathion	5.72	Spike	P	0 - 30
2142778	Metalaxyl	2.62	Spike	P	0 - 30
2142778	Metolachlor	1.01	Spike	P	0 - 30
2142778	Metribuzin	8.07	Spike	P	0 - 30
2142778	Mevinphos	29.4	Spike	P	0 - 30
2142778	Molinate	23.1	Spike	P	0 - 30
2142778	Norflurazon	6.09	Spike	P	0 - 30
2142778	Oxadiazon	1.65	Spike	P	0 - 30
2142778	Parathion Ethyl	8.36	Spike	P	0 - 30
2142778	Parathion Methyl	16.9	Spike	P	0 - 30
2142778	Pendimethalin	4.95	Spike	P	0 - 30
2142778	Phorate	27.8	Spike	P	0 - 30
2142778	Prodiamine	77.2	Spike	F	0 - 30
2142778	Prometon	0.887	Spike	P	0 - 30
2142778	Prometryn	5.75	Spike	P	0 - 30
2142778	Simazine	8.63	Spike	P	0 - 30
2142778	Tebuconazole	36.4	Spike	F	0 - 30
2142778	Terbufos	7.74	Spike	P	0 - 30
2142778	Terbutylazine	6.23	Spike	P	0 - 30
LFB	Acetochlor	13.0	LCS	P	0 - 30
LFB	Alachlor	15.5	LCS	P	0 - 30
LFB	Ametryn	15.4	LCS	P	0 - 30
LFB	Atrazine	10.3	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.955	LCS	P	0 - 30
LFB	Azinphos Methyl	11.7	LCS	P	0 - 30
LFB	Bromacil	19.1	LCS	P	0 - 30
LFB	Butylate	6.78	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	16.8	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.28	LCS	P	0 - 30
LFB	Cyanazine	18.7	LCS	P	0 - 30
LFB	Demeton	0.898	LCS	P	0 - 30
LFB	Diazinon	10.1	LCS	P	0 - 30
LFB	Dimethenamid	10.4	LCS	P	0 - 30
LFB	Disulfoton	2.73	LCS	P	0 - 30
LFB	Dithiopyr	18.6	LCS	P	0 - 30
LFB	EPTC	12.4	LCS	P	0 - 30
LFB	Ethion	27.8	LCS	P	0 - 30
LFB	Ethoprop	5.22	LCS	P	0 - 30
LFB	Fenamiphos	18.3	LCS	P	0 - 30
LFB	Fipronil	19.7	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	25.6	LCS	P	0 - 30
LFB	Fipronil Sulfide	19.3	LCS	P	0 - 30
LFB	Fipronil Sulfone	19.9	LCS	P	0 - 30
LFB	Fonofos	2.23	LCS	P	0 - 30
LFB	Hexazinone	21.3	LCS	P	0 - 30
LFB	Malathion	4.05	LCS	P	0 - 30
LFB	Metalaxyl	17.2	LCS	P	0 - 30
LFB	Metolachlor	16.1	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
 Batch ID: P375696

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metribuzin	4.12	LCS	P	0 - 30
LFB	Mevinphos	1.00	LCS	P	0 - 30
LFB	Molinate	1.96	LCS	P	0 - 30
LFB	Norflurazon	19.4	LCS	P	0 - 30
LFB	Oxadiazon	20.1	LCS	P	0 - 30
LFB	Parathion Ethyl	14.8	LCS	P	0 - 30
LFB	Parathion Methyl	5.13	LCS	P	0 - 30
LFB	Pendimethalin	27.2	LCS	P	0 - 30
LFB	Phorate	7.87	LCS	P	0 - 30
LFB	Prodiamine	46.7	LCS	F	0 - 30
LFB	Prometon	22.5	LCS	P	0 - 30
LFB	Prometryn	15.7	LCS	P	0 - 30
LFB	Simazine	6.41	LCS	P	0 - 30
LFB	Tebuconazole	64.0	LCS	F	0 - 30
LFB	Terbufos	4.86	LCS	P	0 - 30
LFB	Terbutylazine	14.1	LCS	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P375653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142333	2,4-D	0.583	Spike	P	0 - 30
2142333	Acetaminophen	5.80	Spike	P	0 - 30
2142333	Acetamiprid	7.79	Spike	P	0 - 30
2142333	Afidopyropen	2.25	Spike	P	0 - 30
2142333	Bentazon	6.65	Spike	P	0 - 30
2142333	Benzovindiflupyr	5.87	Spike	P	0 - 30
2142333	Carbamazepine	0.758	Spike	P	0 - 30
2142333	Clothianidin	5.73	Spike	P	0 - 30
2142333	Dinotefuran	4.65	Spike	P	0 - 30
2142333	Diuron	3.51	Spike	P	0 - 30
2142333	Fenuron	7.60	Spike	P	0 - 30
2142333	Fluridone	2.96	Spike	P	0 - 30
2142333	Hydrocodone	9.50	Spike	P	0 - 30
2142333	Ibuprofen	1.03	Spike	P	0 - 30
2142333	Imazapyr	2.04	Spike	P	0 - 30
2142333	Imidacloprid	2.84	Spike	P	0 - 30
2142333	Linuron	2.59	Spike	P	0 - 30
2142333	Mandestrobin	0.752	Spike	P	0 - 30
2142333	MCPP	5.67	Spike	P	0 - 30
2142333	Naproxen	0.875	Spike	P	0 - 30
2142333	Primidone	3.39	Spike	P	0 - 30
2142333	Pyraclostrobin	1.61	Spike	P	0 - 30
2142333	Thiamethoxam	4.67	Spike	P	0 - 30
2142333	Tolfenpyrad	2.25	Spike	P	0 - 30
2142333	Triclopyr	4.98	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P375838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142668	Acesulfame K	3.34	Spike	P	0 - 30
2142668	AMPA	9.25	Spike	P	0 - 30
2142668	Endothall	25.2	Spike	P	0 - 30
2142668	Glufosinate	16.7	Spike	P	0 - 30
2142668	Glyphosate	7.27	Spike	P	0 - 30
2142668	Sucralose	0.00455	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P375752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143345	Color (true)	2.49	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P376251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143445	Total Alkalinity	0.0509	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P376416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143239	TDS	5.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P376254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143445	Fluoride	0.979	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P376168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2142709	Organic Carbon	0.521	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2143269
Field Sample ID: G3NW0200

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.2	P	30 - 160
EPA 8321B	Diuron-d6	73.6	P	30 - 160
EPA 8321B	Endothall-d6	66.7	P	30 - 160
EPA 8321B	Endothall-d6	66.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.8	P	30 - 160
EPA 8321B	Primidone-d5	90.5	P	30 - 160
EPA 8321B	Sucralose-d6	95.3	P	30 - 160
EPA 8321B	Sucralose-d6	95.3	P	30 - 160

Lab Sample ID: 2143271
Field Sample ID: G3NW0200

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	115	P	68 - 130
EPA 8270E	Terbufos-d10	126	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A96307
Included Lab Sample IDs: 2143263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.0	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A96310
Included Lab Sample IDs: 2143265

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	94.9	95.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A96325
Included Lab Sample IDs: 2143263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96374
Included Lab Sample IDs: 2143263

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

Reference Method: EPA 8321B
Run ID: A96386
Included Lab Sample IDs: 2143269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	76.2	85.0	P/P	60 - 160
Glufosinate	97.6	104	P/P	60 - 160
Glyphosate	132	126	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A96395
Included Lab Sample IDs: 2143264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.9	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A96441
Included Lab Sample IDs: 2143264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96459

Included Lab Sample IDs: 2143264

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A96466

Included Lab Sample IDs: 2143264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96468

Included Lab Sample IDs: 2143269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	139	140	P/P	60 - 160
Endothall	84.5	77.9	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A96470

Included Lab Sample IDs: 2143264

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

Reference Method: SM 2320 B-97

Run ID: A96509

Included Lab Sample IDs: 2143263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A96509

Included Lab Sample IDs: 2143263

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

Reference Method: EPA 8321B

Run ID: A96534

Included Lab Sample IDs: 2143269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	86.9	96.1	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A96566

Included Lab Sample IDs: 2143269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	81.8	87.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A96566

Included Lab Sample IDs: 2143269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	110	97.6	P/P	60 - 160
Acetamiprid	105	100	P/P	60 - 160
Afidopyropen	101	107	P/P	50 - 150
Bentazon	77.5	110	P/P	50 - 160
Benzovindiflupyr	112	94.8	P/P	60 - 150
Carbamazepine	93.2	88.8	P/P	60 - 150
Clothianidin	100	87.3	P/P	50 - 150
Dinotefuran	107	99.3	P/P	50 - 150
Diuron	95.6	91.2	P/P	60 - 150
Fenuron	106	103	P/P	60 - 150
Fluridone	109	102	P/P	60 - 160
Hydrocodone	104	95.5	P/P	60 - 150
Ibuprofen	79.4	84.9	P/P	50 - 160
Imazapyr	94.0	109	P/P	50 - 150
Imidacloprid	96.9	82.9	P/P	60 - 150
Linuron	103	95.9	P/P	60 - 150
Mandestrobin	96.3	95.8	P/P	50 - 150
MCPP	63.5	84.1	P/P	50 - 150
Naproxen	85.3	99.4	P/P	50 - 160
Primidone	102	89.3	P/P	60 - 150
Pyraclostrobin	103	100	P/P	60 - 150
Thiamethoxam	104	92.3	P/P	60 - 150
Tolfenpyrad	98.3	89.9	P/P	50 - 150
Triclopyr	64.9	86.7	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A96609

Included Lab Sample IDs: 2143270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	97.0	95.7	P/P	95 - 105
Calcium	102	102	P/P	95 - 105
Iron	102	104	P/P	95 - 105
Magnesium	102	102	P/P	95 - 105
Potassium	101	104	P/P	95 - 105
Sodium	104	106	P/P	95 - 105
Zinc	96.3	93.1	P/P	95 - 105

Reference Method: EPA 8270E

Run ID: A96618

Included Lab Sample IDs: 2143271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	105		P	80 - 120
Ametryn	99.8		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	94.3		P	80 - 120
Bromacil	97.1		P	80 - 120
Butylate	99.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A96618
Included Lab Sample IDs: 2143271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorpyrifos Ethyl	99.4		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	98.6		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	98.6		P	80 - 120
Dimethenamid	96.8		P	80 - 120
Disulfoton	94.3		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	100		P	80 - 120
Ethion	98.0		P	80 - 120
Ethoprop	99.8		P	80 - 120
Fenamiphos	99.3		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	86.3		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fonofos	96.0		P	80 - 120
Hexazinone	99.8		P	80 - 120
Malathion	90.8		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	97.2		P	80 - 120
Metribuzin	90.6		P	80 - 120
Mevinphos	104		P	80 - 120
Molinate	99.6		P	80 - 120
Norflurazon	103		P	80 - 120
Oxadiazon	105		P	80 - 120
Parathion Ethyl	98.2		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	102		P	80 - 120
Phorate	96.5		P	80 - 120
Prodiamine	87.3		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	98.8		P	80 - 120
Simazine	105		P	80 - 120
Tebuconazole	99.7		P	80 - 120
Terbufos	97.3		P	80 - 120
Terbutylazine	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96720
Included Lab Sample IDs: 2143270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	101	99.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96742
Included Lab Sample IDs: 2143270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	92.3	94.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96767

Included Lab Sample IDs: 2143270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	101	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	104	99.8	P/P	90 - 110
Cadmium	99.3	101	P/P	90 - 110
Selenium	99.3	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96794

Included Lab Sample IDs: 2143270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	100	98.4	P/P	90 - 110
Lead	98.6	97.7	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Silver	104	102	P/P	90 - 110

* 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							3.85	
EPA 200.7 Rev. 4.4	Barium	92.9		91.7	95.4	95.6			0.155
	Calcium	105							0.998
	Iron	105		107	109	110			0.814
	Magnesium	103							0.728
	Potassium	103							1.35
	Sodium	106							0.923
	Zinc	91.0		90.6	94.7	95.1			0.444
EPA 200.8 Rev. 5.4	Aluminum	101		102	104	104			0.0080
	Antimony	103		104	104	104			0.265
	Arsenic	99.6		101	103	102			0.337
	Boron	101							0.678
	Cadmium	98.5		94.8	94.8	97.7			2.98
	Chromium	98.1		86.0	85.7	84.9			0.956
	Copper	98.9		94.8	92.2	94.0			2.02
	Lead	99.3		103	103	104			1.06
	Nickel	101		99.6	95.6	90.2			5.79
	Selenium	97.3		94.0	99.8	99.2			0.583
	Silver	103		99.0	100	102			1.41
	Thallium	107		106	108	111			2.68
EPA 300.0 Rev. 2.1	Chloride	101		101	99.5				1.00
	Sulfate	101							
EPA 350.1 Rev. 2.0	Ammonia-N	98.2		105	104				1.27
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.9		103	95.4				6.19
EPA 353.2 Rev. 2.0	NO2NO3-N	102		102	102				0.0
EPA 365.1 Rev. 2.0	Total-P	107		105	108				2.53
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0		96.7	98.0				0.935
EPA 8270E	Acetochlor	98.6	86.6	93.8	89.0		13.0		5.25
	Alachlor	102	87.0	86.5	92.8		15.5		7.01
	Ametryn	106	90.5	78.2	79.4		15.4		1.02
	Atrazine	104	93.6				10.3		9.05
	Atrazine Desethyl	72.6	71.9	61.7	73.6	0.955			17.6
	Azinphos Methyl	98.1	87.3	76.8	85.7	11.7			11.0
	Bromacil	104	85.8	70.8	78.3	19.1			10.1
	Butylate	61.7	57.7	40.2	49.6	6.78			20.8
	Chlorpyrifos Ethyl	109	92.2	99.3	101	16.8			2.18
	Chlorpyrifos Methyl	99.0	92.9	97.9	91.7	6.28			6.60
	Cyanazine	93.5	77.5	78.3	81.5	18.7			3.94
	Demeton	83.6	84.3	90.6	110	0.898			19.5
	Diazinon	94.2	85.1	91.2	98.1	10.1			7.28
	Dimethenamid	92.9	83.7	83.6	96.8	10.4			14.7
	Disulfoton	87.8	85.4	81.4	81.0	2.73			0.408
	Dithiopyr	98.9	82.0	88.8	89.9	18.6			1.21
	EPTC	62.5	55.2	40.3	48.1	12.4			17.7
	Ethion	108	81.7	96.7	83.7	27.8			14.4
	Ethoprop	89.2	84.7	89.1	99.6	5.22			11.1
	Fenamiphos	107	89.4	99.2	80.5	18.3			20.9
	Fipronil	101	82.9	93.4	88.4	19.7			5.51
	Fipronil Desulfinyl	103	79.4	88.7	90.9	25.6			2.42
	Fipronil Sulfide	84.0	69.3	76.6	69.8	19.3			9.19
	Fipronil Sulfone	95.1	77.9	86.4	80.1	19.9			7.57
	Fonofos	87.9	86.0	86.5	97.1	2.23			11.5
	Hexazinone	109	87.6	104	105	21.3			0.968
	Malathion	105	100	98.8	93.3	4.05			5.72

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Metalaxyl	103	86.6	91.7	94.2	17.2		2.62
	Metolachlor	93.1	79.2	80.6	81.5	16.1		1.01
	Metribuzin	93.8	97.7	109	118	4.12		8.07
	Mevinphos	89.1	90.0	78.8	106	1.00		29.4
	Molinate	70.5	69.2	58.5	73.8	1.96		23.1
	Norflurazon	97.0	79.8	76.2	81.0	19.4		6.09
	Oxadiazon	98.1	80.1	77.2	75.9	20.1		1.65
	Parathion Ethyl	98.5	84.9	92.4	100	14.8		8.36
	Parathion Methyl	101	95.7	96.8	115	5.13		16.9
	Pendimethalin	97.6	74.2	104	99.2	27.2		4.95
	Phorate	83.6	90.5	75.7	100	7.87		27.8
	Prodiamine	36.3	58.4	90.7	40.2	46.7		77.2
	Prometon	94.8	75.6	88.0	88.8	22.5		0.887
	Prometryn	98.3	83.9	93.7	88.5	15.7		5.75
	Simazine	103	96.7	89.4	97.5	6.41		8.63
	Tebuconazole	37.6	73.0	70.7	48.9	64.0		36.4
	Terbufos	95.0	90.5	96.7	104	4.86		7.74
	Terbuthylazine	100	87.1	90.5	96.4	14.1		6.23
EPA 8321B	2,4-D	139		107	107			0.583
	Acesulfame K	92.7		127	131			3.34
	Acetaminophen	97.4		101	95.4			5.80
	Acetamiprid	101		99.2	107			7.79
	Afidopyropen	99.8		96.0	98.2			2.25
	AMPA	85.3		69.1	83.7			9.25
	Bentazon	85.3		40.1	46.3			6.65
	Benzovindiflupyr	94.8		90.7	96.2			5.87
	Carbamazepine	107		82.0	81.4			0.758
	Clothianidin	97.8		89.4	94.8			5.73
	Dinotefuran	103		121	115			4.65
	Diuron	80.0		63.9	66.3			3.51
	Endothall	94.5		93.1	72.3			25.2
	Fenuron	103		73.1	78.9			7.60
	Fluridone	97.2		87.1	90.5			2.96
	Glufosinate	87.5		99.9	84.5			16.7
	Glyphosate	119						7.27
	Hydrocodone	94.7		88.8	80.8			9.50
	Ibuprofen	77.9		70.1	70.8			1.03
	Imazapyr	96.5		76.5	78.7			2.04
	Imidacloprid	110		156	160			2.84
	Linuron	81.2		71.0	69.2			2.59
	Mandestrobin	84.7		81.1	81.7			0.752
	MCPP	132		124	131			5.67
	Naproxen	63.9		82.2	81.5			0.875
	Primidone	98.5		102	98.1			3.39
	Pyraclostrobin	84.7		87.3	88.7			1.61
	Sucralose	77.9		79.2	79.2			0.0045
	Thiamethoxam	102		122	116			4.67
	Tolfenpyrad	52.8		56.0	54.7			2.25
	Triclopyr	106		129	122			4.98
SM 2120 B	Color (true)	99.2					2.49	
SM 2320 B-97	Total Alkalinity	103					0.0509	
SM 2540 C-97	TDS						5.88	
SM 4500 F-C-97	Fluoride	97.5		101	100			0.979
SM 5310 B-00	Organic Carbon	101		100	99.5			0.521

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2143263
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2143270
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2143270
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2143263
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2143263
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2143264
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2143264
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2143264
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2143264
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2143265
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2143271
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2143269
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2143269
SM 2120 B / E31780	True Color measured at 450 nm	2143263
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2143263
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2143263
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2143263
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2143263
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2143264

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	12/12/2019			12/12/2019 17:19	Yen Ta	2143263
EPA 200.7 Rev. 4.4	12/12/2019	12/18/2019 14:30	Elliott D. Healy	12/20/2019 10:11	Betina Topolski	2143270
EPA 200.8 Rev. 5.4	12/12/2019	12/18/2019 14:30	Elliott D. Healy	01/06/2020 15:19	Justin Cutchin	2143270
	12/12/2019	12/18/2019 14:30	Elliott D. Healy	01/07/2020 18:56	Alexander Thompson	2143270
	12/12/2019	12/18/2019 14:30	Elliott D. Healy	01/08/2020 18:05	Alexander Thompson	2143270
	12/12/2019	12/18/2019 14:30	Elliott D. Healy	01/09/2020 17:59	Alexander Thompson	2143270
EPA 300.0 Rev. 2.1	12/12/2019			12/21/2019 00:24	Lipi Saha	2143263
EPA 350.1 Rev. 2.0	12/12/2019			12/17/2019 13:08	Ping Hua	2143264
EPA 351.2 Rev. 2.0	12/12/2019	12/16/2019 12:35	Sima Feizi	12/17/2019 12:25	Jhamieka S. Greenwood	2143264
EPA 353.2 Rev. 2.0	12/12/2019			12/19/2019 10:41	Beverly Y. Sanders	2143264
EPA 365.1 Rev. 2.0	12/12/2019	12/16/2019 14:17	Yen Ta	12/18/2019 15:18	Benjamin T. Nordmann	2143264
EPA 365.1 Rev. 2.0 dissolved	12/12/2019			12/12/2019 17:09	Samantha Davila	2143265
EPA 8270E	12/12/2019	12/16/2019 08:00	Fe-Val Siddell	12/17/2019 18:46	Vandana T. Nagar	2143271
EPA 8321B	12/12/2019	12/13/2019 10:00	Hoor Shaik	12/23/2019 08:48	Juyoung Kim	2143269
	12/12/2019	12/16/2019 10:00	Rebecca Ware	12/16/2019 17:05	Rebecca Ware	2143269
	12/12/2019	12/16/2019 10:00	Rebecca Ware	12/17/2019 14:16	Rebecca Ware	2143269
	12/12/2019	12/16/2019 10:00	Rebecca Ware	12/23/2019 15:26	Mohammad Ghaffari	2143269
SM 2120 B	12/12/2019			12/12/2019 16:43	Madeline Funaro	2143263
SM 2320 B-97	12/12/2019			12/17/2019 17:27	Dale L. Simmons	2143263
SM 2540 C-97	12/12/2019			12/17/2019 16:36	Yijie Li	2143263
SM 2540 D-97	12/12/2019			12/17/2019 16:36	Yijie Li	2143263
SM 4500 F-C-97	12/12/2019			12/17/2019 17:27	Dale L. Simmons	2143263
SM 5310 B-00	12/12/2019			12/18/2019 23:37	Madeline Funaro	2143264