Chemical Analysis Report

WQAP-2019-05-09-05

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

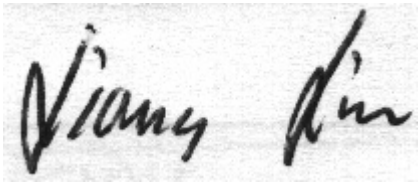
Event Description: **SCI's**
Request ID: **RQ-2019-05-06-73**
Customer: **WQAP**
Project ID: **SCIREF**

Send Reports to:
FL Dept. of Environmental Protection
2295 Victoria Ave.
Suite 364
Fort Myers, FL FL
Attn: Maryann Dugan

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

Certified by: Liang Lin, Environmental Administrator

Date Certified: 29-MAY-2019 10:47



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: PirateCanal @BurntStore **Collection Date/Time: 05/08/2019 11:20**

Field ID: G2SD0037 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085159	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P363737	
	EPA 300.0 Rev. 2.1	Chloride	42		mg Cl/L	P363953	
		Sulfate	22		mg SO4/L	P363954	
	SM 2120 B	Color (true)	34	A	PCU	P363728	
	SM 2320 B-97	Total Alkalinity	223		mg CaCO3/L	P364259	
	SM 2540 C-97	TDS	342		mg/L	P364268	
	SM 2540 D-97	TSS	2	I	mg/L	P364254	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P364263	
2085160	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P364045	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P364078	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P364121	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P364080	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P364050	
2085161	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P363701	
2085164	EPA 8321B	2,4-D	0.038		ug/L	P363672	
		Acesulfame K**	0.10	U	ug/L	P363863	
		AMPA**	0.20	I	ug/L	P363863	
		Sucralose**	0.052		ug/L	P363863	
		Acetaminophen**	0.0080	U	ug/L	P363672	
		Endothall**	0.25	U	ug/L	P363863	
		Glufosinate**	0.10	U	ug/L	P363863	
		Bentazon	8.0E-04	U	ug/L	P363672	
		Glyphosate**	0.12	I	ug/L	P363863	
		Carbamazepine**	8.0E-04	U	ug/L	P363672	
		Diuron	0.0020	U	ug/L	P363672	
		Fenuron	0.016	U	ug/L	P363672	
		Fluridone**	0.0015	I	ug/L	P363672	
		Imazapyr**	0.082		ug/L	P363672	
		Hydrocodone**	0.0020	U	ug/L	P363672	
		Ibuprofen**	0.020	U	ug/L	P363672	
		Imidacloprid	0.0033	I	ug/L	P363672	
		Linuron	0.0040	U	ug/L	P363672	
		MCPP	0.0020	UJ	ug/L	P363672	MS
		Naproxen**	0.0080	U	ug/L	P363672	
		Primidone**	0.0040	U	ug/L	P363672	
		Pyraclostrobin**	0.0020	U	ug/L	P363672	
		Triclopyr**	0.0040	U	ug/L	P363672	
2085165	EPA 200.7 Rev. 4.4	Barium	31.6		ug/L	P363918	
		Calcium	97.8		mg/L	P363918	
		Iron	660		ug/L	P363918	
		Magnesium	6.39		mg/L	P363918	
		Potassium	0.53	I	mg/L	P363918	
		Sodium	25.7		mg/L	P363918	

Field ID: G2SD0037 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085165	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P363918	
	EPA 200.8 Rev. 5.4	Aluminum	170		ug/L	P363918	
		Antimony	0.11	I	ug/L	P363918	
		Arsenic	0.82		ug/L	P363918	
		Boron**	47.6		ug/L	P363918	
		Cadmium	0.020	U	ug/L	P363918	
		Chromium	0.71	I	ug/L	P363918	
		Copper	0.40	U	ug/L	P363918	
		Lead	0.20	U	ug/L	P363918	
		Nickel	0.50	U	ug/L	P363918	
		Selenium	0.21	I	ug/L	P363918	
		Silver	0.010	U	ug/L	P363918	
		Thallium	0.10	U	ug/L	P363918	
2085166	EPA 8270E	Acetochlor	0.25	U	ng/L	P363660	
		Alachlor	0.25	U	ng/L	P363660	
		Ametryn	0.60	U	ng/L	P363660	
		Atrazine	3.8		ng/L	P363660	
		Atrazine Desethyl	1.9	I	ng/L	P363660	
		Azinphos Methyl	5.0	U	ng/L	P363660	
		Bromacil	0.50	U	ng/L	P363660	
		Butylate	0.40	U	ng/L	P363660	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P363660	
		Chlorpyrifos Methyl	0.099	U	ng/L	P363660	
		Cyanazine	3.2	U	ng/L	P363660	
		Demeton	7.0	U	ng/L	P363660	
		Diazinon	0.12	U	ng/L	P363660	
		Dimethenamid**	0.38	IVQ	ng/L	P364350	
		Disulfoton	0.50	U	ng/L	P363660	
		Dithiopyr**	0.099	U	ng/L	P363660	
		EPTC	1.2	U	ng/L	P363660	
		Ethion	0.15	U	ng/L	P363660	
		Ethoprop	0.099	U	ng/L	P363660	
		Fenamiphos	0.50	U	ng/L	P363660	
		Fipronil	0.25	U	ng/L	P363660	
		Fipronil Desulfinyl**	0.12	U	ng/L	P363660	
		Fipronil Sulfide	0.15	U	ng/L	P363660	
		Fipronil Sulfone	0.15	U	ng/L	P363660	
		Fonofos	0.20	U	ng/L	P363660	
		Hexazinone	1.2E+03		ng/L	P363660	
		Malathion	0.35	U	ng/L	P363660	
		Metalaxyl	0.30	U	ng/L	P363660	
		Metolachlor	1.0	I	ng/L	P363660	
		Metribuzin	0.75	U	ng/L	P363660	
		Mevinphos	0.50	U	ng/L	P363660	
		Molinate	0.30	U	ng/L	P363660	

Field ID: G2SD0037 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085166	EPA 8270E	Norflurazon	0.50	U	ng/L	P363660	
		Oxadiazon**	0.099	U	ng/L	P363660	
		Parathion Ethyl	0.25	U	ng/L	P363660	
		Parathion Methyl	0.55	U	ng/L	P363660	
		Pendimethalin	0.99	U	ng/L	P363660	
		Phorate	0.25	U	ng/L	P363660	
		Prodiamine**	0.17	U	ng/L	P363660	
		Prometon	0.89	UJ	ng/L	P363660	LCS, MS, RPD
		Prometryn	0.20	U	ng/L	P363660	
		Simazine	0.50	U	ng/L	P363660	
		Tebuconazole**	0.50	UJ	ng/L	P363660	LCS, RPD
		Terbufos	0.099	U	ng/L	P363660	
		Terbuthylazine	0.42	U	ng/L	P363660	

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: Refer to the narrative for an explanation of QC Codes.
EPA 8270E: Sample expired for preparation for dimethenamid due to re-extraction. Insufficient sample available to perform duplicate matrix spikes in the re-extraction. V - Due to the presence of dimethenamid in both the Method Blank and the sample. Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P363737

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P363918

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: P363918

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: P363953

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363954

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364045

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: P364078

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364121

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364080

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P363701

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

Reference Method: EPA 8270E
Batch ID: P363660

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
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
Metolachlor	0.50	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P363660

Component	Result	Code	Units
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 8270E
Batch ID: P364350

Component	Result	Code	Units
Dimethenamid	0.30	I	ng/L

Reference Method: EPA 8321B
Batch ID: P363672

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P363863

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P363863

Component	Result	Code	Units
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: P363728

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P364259

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

Reference Method: SM 2540 C-97
Batch ID: P364268

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P364254

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P364263

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P364050

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: P363918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	109		P	85 - 115
Iron	106		P	85 - 115
Magnesium	113		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	105		P	85 - 115
Boron	101		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	101		P	85 - 115
Copper	104		P	85 - 115
Lead	93.9		P	85 - 115
Nickel	104		P	85 - 115
Selenium	104		P	85 - 115
Silver	103		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363953

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363954

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364045

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364078

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364080

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P363701

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

Reference Method: EPA 8270E
Batch ID: P363660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	111	P/P	71 - 121
Alachlor	96.2	112	P/P	72 - 119
Ametryn	102	112	P/P	47 - 144
Atrazine	105	114	P/P	75 - 123
Atrazine Desethyl	45.7	47.3	P/P	45 - 133
Azinphos Methyl	98.5	109	P/P	66 - 165
Bromacil	83.8	102	P/P	43 - 123
Butylate	78.6	82.0	P/P	27 - 83.0
Chlorpyrifos Ethyl	101	101	P/P	70 - 117
Chlorpyrifos Methyl	96.1	95.3	P/P	71 - 120
Cyanazine	60.9	50.9	P/P	34 - 264
Demeton	80.6	71.3	P/P	41 - 122
Diazinon	99.1	106	P/P	70 - 127
Disulfoton	86.2	77.7	P/P	56 - 127
Dithiopyr	103	110	P/P	67 - 125
EPTC	78.8	79.0	P/P	24 - 84.0
Ethion	111	113	P/P	53 - 132
Ethoprop	102	103	P/P	57 - 117
Fenamiphos	73.3	58.9	P/P	55 - 136
Fipronil	97.5	113	P/P	64 - 126
Fipronil Desulfinyl	94.5	107	P/P	47 - 114
Fipronil Sulfide	106	105	P/P	57 - 120
Fipronil Sulfone	97.3	105	P/P	52 - 115
Fonofos	91.1	91.9	P/P	61 - 121
Hexazinone	86.5	116	P/P	62 - 131
Malathion	108	106	P/P	67 - 126
Metalaxyl	75.9	71.3	P/P	54 - 128
Metolachlor	107	117	P/P	71 - 118
Metribuzin	88.8	87.5	P/P	42 - 221
Mevinphos	96.0	98.0	P/P	45 - 114
Molinate	89.4	90.3	P/P	33 - 91.0
Norflurazon	78.5	102	P/P	60 - 123
Oxadiazon	111	114	P/P	66 - 121
Parathion Ethyl	95.3	102	P/P	73 - 111

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P363660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Methyl	96.0	101	P/P	74 - 126
Pendimethalin	94.5	97.2	P/P	63 - 131
Phorate	86.2	77.5	P/P	54 - 115
Prodiamine	110	117	P/P	38 - 140
Prometon	54.1	87.6	F/P	61 - 120
Prometryn	91.5	106	P/P	62 - 126
Simazine	97.4	106	P/P	75 - 126
Tebuconazole	16.3	64.0	F/P	21 - 115
Terbufos	89.4	86.2	P/P	65 - 116
Terbuthylazine	103	111	P/P	73 - 117

Reference Method: EPA 8270E
Batch ID: P364350

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dimethenamid	134	135	P/P	46 - 139

Reference Method: EPA 8321B
Batch ID: P363672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	40 - 150
Acetaminophen	88.1		P	30 - 150
Bentazon	127		P	30 - 150
Carbamazepine	95.7		P	40 - 150
Diuron	89.3		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	103		P	40 - 150
Hydrocodone	95.9		P	40 - 150
Ibuprofen	81.4		P	40 - 150
Imazapyr	102		P	40 - 150
Imidacloprid	96.7		P	40 - 150
Linuron	79.6		P	40 - 150
MCPP	115		P	40 - 150
Naproxen	82.6		P	40 - 150
Primidone	89.2		P	40 - 150
Pyraclostrobin	72.8		P	40 - 150
Triclopyr	74.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P363863

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	116		P	40 - 150
Endothall	89.0		P	40 - 150
Glufosinate	109		P	40 - 150
Glyphosate	109		P	40 - 140
Sucralose	103		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P363728

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P364259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P364263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P364050

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P363918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085213	Barium	101		P	80 - 120
2085213	Calcium	104		P	80 - 120
2085213	Iron	109		P	80 - 120
2085213	Magnesium	103		P	80 - 120
2085213	Potassium	99.7		P	80 - 120
2085213	Sodium	101		P	80 - 120
2085213	Zinc	101		P	80 - 120
2085651	Barium	101	101	P/P	80 - 120
2085651	Calcium	107	107	P/P	80 - 120
2085651	Iron	106	105	P/P	80 - 120
2085651	Magnesium	111	110	P/P	80 - 120
2085651	Potassium	106	106	P/P	80 - 120
2085651	Sodium	103	104	P/P	80 - 120
2085651	Zinc	101	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085213	Aluminum	99.9		P	80 - 120
2085213	Antimony	102		P	80 - 120
2085213	Arsenic	103		P	80 - 120
2085213	Boron	103		P	80 - 120
2085213	Cadmium	104		P	80 - 120
2085213	Chromium	99.9		P	80 - 120
2085213	Copper	99.4		P	80 - 120
2085213	Lead	97.0		P	80 - 120
2085213	Nickel	100		P	80 - 120
2085213	Selenium	101		P	80 - 120
2085213	Silver	101		P	80 - 120
2085213	Thallium	106		P	80 - 120
2085651	Aluminum	111	108	P/P	80 - 120
2085651	Antimony	110	107	P/P	80 - 120
2085651	Arsenic	111	109	P/P	80 - 120
2085651	Boron	116	114	P/P	80 - 120
2085651	Cadmium	113	111	P/P	80 - 120
2085651	Chromium	112	110	P/P	80 - 120
2085651	Copper	111	110	P/P	80 - 120
2085651	Lead	110	107	P/P	80 - 120
2085651	Nickel	112	110	P/P	80 - 120
2085651	Selenium	109	105	P/P	80 - 120
2085651	Silver	112	110	P/P	80 - 120
2085651	Thallium	120	116	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085101	Chloride	97.2		P	90 - 110
2085181	Chloride	99.1		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085101	Sulfate	96.8		P	90 - 110
2085181	Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085176	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085160	Kjeldahl Nitrogen	106	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085128	NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085128	Total-P	93.9	94.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P363701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085037	O-Phosphate-P	90.3	91.7	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P363660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2084294	Acetochlor	90.2	90.5	P/P	63 - 129
2084294	Alachlor	88.1	91.6	P/P	65 - 127
2084294	Ametryn	114	112	P/P	40 - 164
2084294	Atrazine	99.5	103	P/P	66 - 135
2084294	Atrazine Desethyl	69.1	66.6	P/P	14 - 157
2084294	Azinphos Methyl	81.0	89.9	P/P	49 - 180
2084294	Bromacil	123	125	P/P	48 - 130
2084294	Butylate	47.8	50.0	P/P	10 - 94.0
2084294	Chlorpyrifos Ethyl	89.9	87.8	P/P	58 - 123
2084294	Chlorpyrifos Methyl	84.7	83.7	P/P	58 - 125
2084294	Cyanazine	76.4	81.0	P/P	24 - 253
2084294	Demeton	70.0	72.6	P/P	25 - 149
2084294	Diazinon	87.8	86.3	P/P	59 - 144
2084294	Disulfoton	79.9	77.2	P/P	54 - 132
2084294	Dithiopyr	88.4	88.0	P/P	64 - 130

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P363660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2084294	EPTC	45.0	53.3	P/P	10 - 92.0
2084294	Ethion	93.9	93.3	P/P	30 - 148
2084294	Ethoprop	90.5	88.7	P/P	50 - 130
2084294	Fenamiphos	85.6	85.1	P/P	49 - 142
2084294	Fipronil	90.8	95.5	P/P	46 - 140
2084294	Fipronil Desulfinyl	83.0	87.7	P/P	30 - 121
2084294	Fipronil Sulfide	95.1	113	P/P	31 - 136
2084294	Fipronil Sulfone	90.3	92.9	P/P	16 - 136
2084294	Fonofos	84.9	82.1	P/P	55 - 129
2084294	Hexazinone	117	121	P/P	56 - 141
2084294	Malathion	96.8	95.8	P/P	56 - 135
2084294	Metalaxyl	81.8	84.1	P/P	54 - 135
2084294	Metolachlor	92.2	93.3	P/P	51 - 140
2084294	Metribuzin	93.9	98.7	P/P	45 - 254
2084294	Mevinphos	93.7	95.0	P/P	33 - 131
2084294	Molinate	66.7	70.6	P/P	14 - 98.0
2084294	Norflurazon	85.8	90.4	P/P	34 - 136
2084294	Oxadiazon	89.3	91.0	P/P	67 - 116
2084294	Parathion Ethyl	91.8	89.3	P/P	66 - 118
2084294	Parathion Methyl	98.6	93.2	P/P	64 - 136
2084294	Pendimethalin	90.2	85.2	P/P	59 - 144
2084294	Phorate	79.5	77.7	P/P	42 - 130
2084294	Prodiamine	99.2	101	P/P	42 - 148
2084294	Prometon	147	124	F/P	59 - 134
2084294	Prometryn	86.9	86.8	P/P	54 - 135
2084294	Simazine	93.6	97.1	P/P	53 - 156
2084294	Tebuconazole	79.0	81.4	P/P	10 - 131
2084294	Terbufos	85.4	85.0	P/P	57 - 131
2084294	Terbuthylazine	91.0	94.7	P/P	68 - 125

Reference Method: EPA 8270E
Batch ID: P364350

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2084283	Dimethenamid	92.0		P	46 - 139

Reference Method: EPA 8321B
Batch ID: P363672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085164	2,4-D	117	106	P/P	40 - 150
2085164	Acetaminophen	85.4	82.1	P/P	30 - 150
2085164	Bentazon	69.6	65.8	P/P	30 - 150
2085164	Carbamazepine	73.4	69.2	P/P	40 - 150
2085164	Diuron	65.6	61.7	P/P	40 - 150
2085164	Fenuron	81.6	76.2	P/P	40 - 150
2085164	Fluridone	95.4	91.7	P/P	40 - 150
2085164	Hydrocodone	86.7	81.4	P/P	40 - 150
2085164	Ibuprofen	83.4	75.3	P/P	40 - 150
2085164	Imazapyr	122	111	P/P	40 - 150
2085164	Imidacloprid	140	129	P/P	40 - 150
2085164	Linuron	62.3	59.7	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P363672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085164	MCPP	156	145	F/P	40 - 150
2085164	Naproxen	95.0	87.5	P/P	40 - 150
2085164	Primidone	95.8	89.2	P/P	40 - 150
2085164	Pyraclostrobin	91.3	90.7	P/P	40 - 150
2085164	Triclopyr	101	92.0	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P363863

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085206	Acesulfame K	94.6	93.5	P/P	40 - 150
2085206	AMPA	62.3	64.7	P/P	40 - 150
2085206	Endothall	73.1	72.8	P/P	40 - 150
2085206	Glufosinate	89.2	90.0	P/P	40 - 150
2085206	Glyphosate	109	115	P/P	40 - 140
2085206	Sucralose	83.1	91.1	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P364263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085112	Fluoride	100	98.1	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P364050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085035	Organic Carbon	98.2	97.3	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P363737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085131	Turbidity	0.391	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P363918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085651	Barium	0.0602	Spike	P	0 - 20
2085651	Calcium	0.593	Spike	P	0 - 20
2085651	Iron	0.571	Spike	P	0 - 20
2085651	Magnesium	0.604	Spike	P	0 - 20
2085651	Potassium	0.566	Spike	P	0 - 20
2085651	Sodium	0.473	Spike	P	0 - 20
2085651	Zinc	0.163	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085651	Aluminum	2.12	Spike	P	0 - 20
2085651	Antimony	2.69	Spike	P	0 - 20
2085651	Arsenic	1.91	Spike	P	0 - 20
2085651	Boron	1.65	Spike	P	0 - 20
2085651	Cadmium	1.88	Spike	P	0 - 20
2085651	Chromium	1.70	Spike	P	0 - 20
2085651	Copper	0.900	Spike	P	0 - 20
2085651	Lead	3.23	Spike	P	0 - 20
2085651	Nickel	1.79	Spike	P	0 - 20
2085651	Selenium	4.15	Spike	P	0 - 20
2085651	Silver	1.65	Spike	P	0 - 20
2085651	Thallium	2.80	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085101	Chloride	0.711	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P363954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085101	Sulfate	0.00855	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085176	Ammonia-N	1.37	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085160	Kjeldahl Nitrogen	1.92	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085128	NO2NO3-N	0.633	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085128	Total-P	0.644	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P363701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085037	O-Phosphate-P	1.54	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P363660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2084294	Acetochlor	0.379	Spike	P	0 - 30
2084294	Alachlor	3.83	Spike	P	0 - 30
2084294	Ametryn	1.08	Spike	P	0 - 30
2084294	Atrazine	1.53	Spike	P	0 - 30
2084294	Atrazine Desethyl	3.66	Spike	P	0 - 30
2084294	Azinphos Methyl	10.4	Spike	P	0 - 30
2084294	Bromacil	0.827	Spike	P	0 - 30
2084294	Butylate	4.53	Spike	P	0 - 30
2084294	Chlorpyrifos Ethyl	2.37	Spike	P	0 - 30
2084294	Chlorpyrifos Methyl	1.19	Spike	P	0 - 30
2084294	Cyanazine	5.83	Spike	P	0 - 30
2084294	Demeton	3.66	Spike	P	0 - 30
2084294	Diazinon	1.73	Spike	P	0 - 30
2084294	Disulfoton	3.40	Spike	P	0 - 30
2084294	Dithiopyr	0.472	Spike	P	0 - 30
2084294	EPTC	16.8	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P363660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2084294	Ethion	0.652	Spike	P	0 - 30
2084294	Ethoprop	2.02	Spike	P	0 - 30
2084294	Fenamiphos	0.635	Spike	P	0 - 30
2084294	Fipronil	5.00	Spike	P	0 - 30
2084294	Fipronil Desulfinyl	5.53	Spike	P	0 - 30
2084294	Fipronil Sulfide	17.2	Spike	P	0 - 30
2084294	Fipronil Sulfone	2.86	Spike	P	0 - 30
2084294	Fonofos	3.32	Spike	P	0 - 30
2084294	Hexazinone	0.863	Spike	P	0 - 30
2084294	Malathion	1.05	Spike	P	0 - 30
2084294	Metalaxyl	2.83	Spike	P	0 - 30
2084294	Metolachlor	0.996	Spike	P	0 - 30
2084294	Metribuzin	4.99	Spike	P	0 - 30
2084294	Mevinphos	1.43	Spike	P	0 - 30
2084294	Molinate	5.75	Spike	P	0 - 30
2084294	Norflurazon	5.30	Spike	P	0 - 30
2084294	Oxadiazon	1.95	Spike	P	0 - 30
2084294	Parathion Ethyl	2.81	Spike	P	0 - 30
2084294	Parathion Methyl	5.70	Spike	P	0 - 30
2084294	Pendimethalin	5.64	Spike	P	0 - 30
2084294	Phorate	2.29	Spike	P	0 - 30
2084294	Prodiamine	2.26	Spike	P	0 - 30
2084294	Prometon	4.83	Spike	P	0 - 30
2084294	Prometryn	0.119	Spike	P	0 - 30
2084294	Simazine	2.82	Spike	P	0 - 30
2084294	Tebuconazole	2.58	Spike	P	0 - 30
2084294	Terbufos	0.497	Spike	P	0 - 30
2084294	Terbuthylazine	3.99	Spike	P	0 - 30
LFB	Acetochlor	7.02	LCS	P	0 - 30
LFB	Alachlor	15.3	LCS	P	0 - 30
LFB	Ametryn	9.64	LCS	P	0 - 30
LFB	Atrazine	8.17	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.54	LCS	P	0 - 30
LFB	Azinphos Methyl	9.98	LCS	P	0 - 30
LFB	Bromacil	19.7	LCS	P	0 - 30
LFB	Butylate	4.23	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	0.0112	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.836	LCS	P	0 - 30
LFB	Cyanazine	17.8	LCS	P	0 - 30
LFB	Demeton	12.3	LCS	P	0 - 30
LFB	Diazinon	6.50	LCS	P	0 - 30
LFB	Disulfoton	10.4	LCS	P	0 - 30
LFB	Dithiopyr	6.32	LCS	P	0 - 30
LFB	EPTC	0.243	LCS	P	0 - 30
LFB	Ethion	2.02	LCS	P	0 - 30
LFB	Ethoprop	1.61	LCS	P	0 - 30
LFB	Fenamiphos	21.7	LCS	P	0 - 30
LFB	Fipronil	14.3	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	12.1	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.276	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.59	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P363660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fonofos	0.875	LCS	P	0 - 30
LFB	Hexazinone	29.6	LCS	P	0 - 30
LFB	Malathion	1.32	LCS	P	0 - 30
LFB	Metalaxyl	6.20	LCS	P	0 - 30
LFB	Metolachlor	8.95	LCS	P	0 - 30
LFB	Metribuzin	1.50	LCS	P	0 - 30
LFB	Mevinphos	2.08	LCS	P	0 - 30
LFB	Molinate	0.950	LCS	P	0 - 30
LFB	Norflurazon	25.8	LCS	P	0 - 30
LFB	Oxadiazon	2.17	LCS	P	0 - 30
LFB	Parathion Ethyl	6.30	LCS	P	0 - 30
LFB	Parathion Methyl	5.56	LCS	P	0 - 30
LFB	Pendimethalin	2.78	LCS	P	0 - 30
LFB	Phorate	10.6	LCS	P	0 - 30
LFB	Prodiamine	6.57	LCS	P	0 - 30
LFB	Prometon	47.2	LCS	F	0 - 30
LFB	Prometryn	14.4	LCS	P	0 - 30
LFB	Simazine	8.89	LCS	P	0 - 30
LFB	Tebuconazole	119	LCS	F	0 - 30
LFB	Terbufos	3.57	LCS	P	0 - 30
LFB	Terbuthylazine	7.96	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P364350

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dimethenamid	0.842	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P363672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085164	2,4-D	6.85	Spike	P	0 - 30
2085164	Acetaminophen	3.92	Spike	P	0 - 30
2085164	Bentazon	5.52	Spike	P	0 - 30
2085164	Carbamazepine	5.85	Spike	P	0 - 30
2085164	Diuron	6.11	Spike	P	0 - 30
2085164	Fenuron	6.74	Spike	P	0 - 30
2085164	Fluridone	3.71	Spike	P	0 - 30
2085164	Hydrocodone	6.36	Spike	P	0 - 30
2085164	Ibuprofen	10.1	Spike	P	0 - 30
2085164	Imazapyr	5.05	Spike	P	0 - 30
2085164	Imidacloprid	7.78	Spike	P	0 - 30
2085164	Linuron	4.24	Spike	P	0 - 30
2085164	MCPP	7.15	Spike	P	0 - 30
2085164	Naproxen	8.25	Spike	P	0 - 30
2085164	Primidone	7.15	Spike	P	0 - 30
2085164	Pyraclostrobin	0.699	Spike	P	0 - 30
2085164	Triclopyr	9.34	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P363863

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085206	Acesulfame K	1.09	Spike	P	0 - 30
2085206	AMPA	2.87	Spike	P	0 - 30
2085206	Endothall	0.442	Spike	P	0 - 30
2085206	Glufosinate	0.901	Spike	P	0 - 30
2085206	Glyphosate	3.88	Spike	P	0 - 30
2085206	Sucralose	9.19	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P363728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085159	Color (true)	3.01	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P364259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085112	Total Alkalinity	0.366	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P364268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085127	TDS	2.25	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P364263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085112	Fluoride	1.45	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P364050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085035	Organic Carbon	0.641	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Surrogates

Lab Sample ID: 2085164
Field Sample ID: G2SD0037

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.7	P	30 - 160
EPA 8321B	Diuron-d6	72.4	P	30 - 160
EPA 8321B	Endothall-d6	93.7	P	30 - 160
EPA 8321B	Endothall-d6	93.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	97.0	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	87.7	P	30 - 160
EPA 8321B	Sucralose-d6	87.7	P	30 - 160

Lab Sample ID: 2085166
Field Sample ID: G2SD0037

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	107	P	68 - 130
EPA 8270E	Simazine-d10	101	P	68 - 130
EPA 8270E	Terbufos-d10	102	P	61 - 136
EPA 8270E	Terbufos-d10	91.5	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A91331
Included Lab Sample IDs: 2085161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	98.1	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A91338
Included Lab Sample IDs: 2085159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A91343
Included Lab Sample IDs: 2085159

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

Reference Method: EPA 8270E
Run ID: A91401
Included Lab Sample IDs: 2085166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	105		P	80 - 120
Ametryn	103		P	80 - 120
Atrazine	102		P	80 - 120
Atrazine Desethyl	90.4		P	80 - 120
Azinphos Methyl	96.0		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	99.7		P	80 - 120
Chlorpyrifos Ethyl	97.9		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	86.2		P	80 - 120
Demeton	98.8		P	80 - 120
Diazinon	99.5		P	80 - 120
Disulfoton	97.1		P	80 - 120
Dithiopyr	98.1		P	80 - 120
EPTC	97.8		P	80 - 120
Ethion	99.5		P	80 - 120
Ethoprop	97.3		P	80 - 120
Fenamiphos	97.5		P	80 - 120
Fipronil	99.5		P	80 - 120
Fipronil Desulfinyl	96.6		P	80 - 120
Fipronil Sulfide	96.8		P	80 - 120
Fipronil Sulfone	94.0		P	80 - 120
Fonofos	98.7		P	80 - 120
Malathion	96.1		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	89.1		P	80 - 120
Mevinphos	103		P	80 - 120
Molinate	99.2		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A91401
Included Lab Sample IDs: 2085166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Norflurazon	101		P	80 - 120
Oxadiazon	104		P	80 - 120
Parathion Ethyl	95.5		P	80 - 120
Parathion Methyl	97.9		P	80 - 120
Pendimethalin	91.4		P	80 - 120
Phorate	96.9		P	80 - 120
Prodiamine	87.8		P	80 - 120
Prometon	98.0		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	99.4		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	98.5		P	80 - 120
Terbuthylazine	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A91404
Included Lab Sample IDs: 2085159

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

Reference Method: EPA 8321B
Run ID: A91439
Included Lab Sample IDs: 2085164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	148	70.8	P/P	60 - 160
Endothall	68.1	109	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A91440
Included Lab Sample IDs: 2085166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexazinone	93.9		P	80 - 120

Reference Method: EPA 8321B
Run ID: A91442
Included Lab Sample IDs: 2085164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	86.3	P/P	60 - 160
Glufosinate	94.7	91.2	P/P	60 - 160
Glyphosate	98.3	90.1	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A91468
Included Lab Sample IDs: 2085160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A91468
Included Lab Sample IDs: 2085160

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

Reference Method: SM 5310 B-00
Run ID: A91470
Included Lab Sample IDs: 2085160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A91484
Included Lab Sample IDs: 2085165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	99.8	P/P	90 - 110
Calcium	103	101	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	100	100	P/P	90 - 110
Sodium	99.8	100	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A91494
Included Lab Sample IDs: 2085160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A91515
Included Lab Sample IDs: 2085165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.3	98.7	P/P	90 - 110
Antimony	96.7	96.4	P/P	90 - 110
Arsenic	103	101	P/P	90 - 110
Boron	95.9	102	P/P	90 - 110
Cadmium	98.8	99.4	P/P	90 - 110
Chromium	99.7	101	P/P	90 - 110
Copper	102	100	P/P	90 - 110
Lead	93.5	94.2	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	102	101	P/P	90 - 110
Silver	98.6	98.6	P/P	90 - 110
Thallium	95.8	95.8	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A91516
Included Lab Sample IDs: 2085160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A91524
Included Lab Sample IDs: 2085164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	101	P/P	50 - 150
Acetaminophen	107	106	P/P	60 - 160
Bentazon	110	99.9	P/P	50 - 160
Carbamazepine	106	105	P/P	60 - 150
Diuron	108	104	P/P	60 - 150
Fenuron	100	99.3	P/P	60 - 150
Fluridone	105	103	P/P	60 - 160
Hydrocodone	100	98.3	P/P	60 - 150
Ibuprofen	119	111	P/P	50 - 160
Imazapyr	105	102	P/P	50 - 150
Imidacloprid	97.5	99.7	P/P	60 - 150
Linuron	104	97.0	P/P	60 - 150
MCPP	105	113	P/P	50 - 150
Naproxen	111	97.6	P/P	50 - 160
Primidone	96.7	94.0	P/P	60 - 150
Pyraclostrobin	103	102	P/P	60 - 150
Triclopyr	100	104	P/P	50 - 150

Reference Method: SM 2320 B-97
Run ID: A91544
Included Lab Sample IDs: 2085159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A91544
Included Lab Sample IDs: 2085159

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A91572
Included Lab Sample IDs: 2085160

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

Reference Method: EPA 8270E
Run ID: A91581
Included Lab Sample IDs: 2085166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A91581
Included Lab Sample IDs: 2085166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dimethenamid	101		P	80 - 120

Reference Method: EPA 8321B
Run ID: A91628
Included Lab Sample IDs: 2085164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	104	95.1	P/P	60 - 160

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.391	
EPA 200.7 Rev. 4.4	Barium	101		101	101	101			0.0602
	Calcium	109		104	107	107			0.593
	Iron	106		109	106	105			0.571
	Magnesium	113		103	111	110			0.604
	Potassium	102		99.7	106	106			0.566
	Sodium	102		101	103	104			0.473
	Zinc	100		101	101	101			0.163
EPA 200.8 Rev. 5.4	Aluminum	101		99.9	111	108			2.12
	Antimony	101		102	110	107			2.69
	Arsenic	105		103	111	109			1.91
	Boron	101		103	116	114			1.65
	Cadmium	104		104	113	111			1.88
	Chromium	101		99.9	112	110			1.70
	Copper	104		99.4	111	110			0.900
	Lead	93.9		97.0	110	107			3.23
	Nickel	104		100	112	110			1.79
	Selenium	104		101	109	105			4.15
	Silver	103		101	112	110			1.65
	Thallium	101		106	120	116			2.80
EPA 300.0 Rev. 2.1	Chloride	98.6		97.2	99.1			0.711	
	Sulfate	98.5		96.8	98.7			0.0085	
EPA 350.1 Rev. 2.0	Ammonia-N	101		101	103				1.37
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106		106	109				1.92
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0		100	99.0				0.633
EPA 365.1 Rev. 2.0	Total-P	98.0		93.9	94.6				0.644
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		90.3	91.7				1.54
EPA 8270E	Acetochlor	103	111	90.2	90.5		7.02		0.379
	Alachlor	96.2	112	88.1	91.6		15.3		3.83
	Ametryn	102	112	114	112		9.64		1.08
	Atrazine	105	114	99.5	103		8.17		1.53
	Atrazine Desethyl	45.7	47.3	69.1	66.6		3.54		3.66
	Azinphos Methyl	98.5	109	81.0	89.9		9.98		10.4
	Bromacil	83.8	102	123	125		19.7		0.827
	Butylate	78.6	82.0	47.8	50.0		4.23		4.53
	Chlorpyrifos Ethyl	101	101	89.9	87.8		0.0112		2.37
	Chlorpyrifos Methyl	96.1	95.3	84.7	83.7		0.836		1.19
	Cyanazine	60.9	50.9	76.4	81.0		17.8		5.83
	Demeton	80.6	71.3	70.0	72.6		12.3		3.66
	Diazinon	99.1	106	87.8	86.3		6.50		1.73
	Dimethenamid	134	135	92.0			0.842		
	Disulfoton	86.2	77.7	79.9	77.2		10.4		3.40
	Dithiopyr	103	110	88.4	88.0		6.32		0.472
	EPTC	78.8	79.0	45.0	53.3		0.243		16.8
	Ethion	111	113	93.9	93.3		2.02		0.652
	Ethoprop	102	103	90.5	88.7		1.61		2.02
	Fenamiphos	73.3	58.9	85.6	85.1		21.7		0.635
	Fipronil	97.5	113	90.8	95.5		14.3		5.00
	Fipronil Desulfinyl	94.5	107	83.0	87.7		12.1		5.53
	Fipronil Sulfide	106	105	95.1	113		0.276		17.2
	Fipronil Sulfone	97.3	105	90.3	92.9		7.59		2.86
	Fonofos	91.1	91.9	84.9	82.1		0.875		3.32
	Hexazinone	86.5	116	117	121		29.6		0.863
	Malathion	108	106	96.8	95.8		1.32		1.05

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Metalaxyl	75.9	71.3	81.8	84.1	6.20		2.83
	Metolachlor	107	117	92.2	93.3	8.95		0.996
	Metribuzin	88.8	87.5	93.9	98.7	1.50		4.99
	Mevinphos	96.0	98.0	93.7	95.0	2.08		1.43
	Molinate	89.4	90.3	66.7	70.6	0.950		5.75
	Norflurazon	78.5	102	85.8	90.4	25.8		5.30
	Oxadiazon	111	114	89.3	91.0	2.17		1.95
	Parathion Ethyl	95.3	102	91.8	89.3	6.30		2.81
	Parathion Methyl	96.0	101	98.6	93.2	5.56		5.70
	Pendimethalin	94.5	97.2	90.2	85.2	2.78		5.64
	Phorate	86.2	77.5	79.5	77.7	10.6		2.29
	Prodiamine	110	117	99.2	101	6.57		2.26
	Prometon	54.1	87.6	147	124	47.2		4.83
	Prometryn	91.5	106	86.9	86.8	14.4		0.119
	Simazine	97.4	106	93.6	97.1	8.89		2.82
	Tebuconazole	16.3	64.0	79.0	81.4	119		2.58
	Terbufos	89.4	86.2	85.4	85.0	3.57		0.497
	Terbuthylazine	103	111	91.0	94.7	7.96		3.99
EPA 8321B	2,4-D	109		117	106			6.85
	Acesulfame K	103		94.6	93.5			1.09
	Acetaminophen	88.1		85.4	82.1			3.92
	AMPA	116		62.3	64.7			2.87
	Bentazon	127		69.6	65.8			5.52
	Carbamazepine	95.7		73.4	69.2			5.85
	Diuron	89.3		65.6	61.7			6.11
	Endothall	89.0		73.1	72.8			0.442
	Fenuron	101		81.6	76.2			6.74
	Fluridone	103		95.4	91.7			3.71
	Glufosinate	109		89.2	90.0			0.901
	Glyphosate	109		109	115			3.88
	Hydrocodone	95.9		86.7	81.4			6.36
	Ibuprofen	81.4		83.4	75.3			10.1
	Imazapyr	102		122	111			5.05
	Imidacloprid	96.7		140	129			7.78
	Linuron	79.6		62.3	59.7			4.24
	MCPP	115		156	145			7.15
	Naproxen	82.6		95.0	87.5			8.25
	Primidone	89.2		95.8	89.2			7.15
	Pyraclostrobin	72.8		91.3	90.7			0.699
	Sucralose	103		83.1	91.1			9.19
	Triclopyr	74.8		101	92.0			9.34
SM 2120 B	Color (true)	100					3.01	
SM 2320 B-97	Total Alkalinity	102					0.366	
SM 2540 C-97	TDS						2.25	
SM 4500 F-C-97	Fluoride	98.5		100	98.1			1.45
SM 5310 B-00	Organic Carbon	98.1		98.2	97.3			0.641

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2085159

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2085165
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2085165
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2085159
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2085159
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2085160
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2085160
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2085160
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2085160
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2085161
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2085166
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2085164
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2085164
SM 2120 B / E31780	True Color measured at 450 nm	2085159
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2085159
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2085159
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2085159
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2085159
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2085160

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	05/09/2019			05/09/2019 16:45	Sima Feizi	2085159
EPA 200.7 Rev. 4.4	05/09/2019	05/14/2019 13:50	Elliott D. Healy	05/15/2019 15:27	Betina Topolski	2085165
EPA 200.8 Rev. 5.4	05/09/2019	05/14/2019 13:50	Elliott D. Healy	05/15/2019 19:46	Robert K Palmer	2085165
EPA 300.0 Rev. 2.1	05/09/2019			05/14/2019 18:04	Lipi Saha	2085159
EPA 350.1 Rev. 2.0	05/09/2019			05/15/2019 12:39	Ping Hua	2085160
EPA 351.2 Rev. 2.0	05/09/2019	05/16/2019 12:45	Adrian Shelby	05/17/2019 17:08	Joseph Suarez	2085160
EPA 353.2 Rev. 2.0	05/09/2019			05/17/2019 10:08	Beverly Y. Sanders	2085160
EPA 365.1 Rev. 2.0	05/09/2019	05/16/2019 14:45	Adrian Shelby	05/21/2019 17:41	Rosalyn Ballman	2085160
EPA 365.1 Rev. 2.0 dissolved	05/09/2019			05/09/2019 14:45	Jhamieka S. Greenwood	2085161
EPA 8270E	05/09/2019	05/09/2019 11:30	Rasheda Ghaffari	05/13/2019 18:38	Dinesh Mishra	2085166
	05/09/2019	05/09/2019 11:30	Rasheda Ghaffari	05/14/2019 20:58	Dinesh Mishra	2085166
	05/09/2019	05/17/2019 08:00	Rasheda Ghaffari	05/21/2019 18:50	Dinesh Mishra	2085166
EPA 8321B	05/09/2019	05/10/2019 10:00	Hoor Shaik	05/17/2019 23:42	Juyoung Kim	2085164
	05/09/2019	05/14/2019 09:30	Rebecca Ware	05/14/2019 11:37	Rebecca Ware	2085164
	05/09/2019	05/14/2019 09:30	Rebecca Ware	05/14/2019 16:36	Rebecca Ware	2085164
	05/09/2019	05/14/2019 09:30	Rebecca Ware	05/23/2019 11:58	Rebecca Ware	2085164
SM 2120 B	05/09/2019			05/09/2019 15:01	Blanca Fach	2085159
SM 2320 B-97	05/09/2019			05/18/2019 07:34	Dale L. Simmons	2085159
SM 2540 C-97	05/09/2019			05/14/2019 14:06	Yijie Li	2085159
SM 2540 D-97	05/09/2019			05/14/2019 14:06	Yijie Li	2085159
SM 4500 F-C-97	05/09/2019			05/18/2019 07:34	Dale L. Simmons	2085159
SM 5310 B-00	05/09/2019			05/16/2019 03:35	Julia Storbeck	2085160