Chemical Analysis Report

SO-DIST-2019-09-04-02

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

Event Description: **Sarasota Cricks**
Request ID: **RQ-2019-08-26-15**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
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Date Certified: 25-SEP-2019 15:46

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: NorthCreek@OaksCreekCt **Collection Date/Time: 09/03/2019 11:00**

Field ID: G3SD0064 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116415	EPA 8321B	2,4-D	0.021		ug/L	P370131	
		Acesulfame K**	0.10	U	ug/L	P370242	
		AMPA**	0.24	I	ug/L	P370242	
		Sucralose**	0.25		ug/L	P370242	
		Acetaminophen**	0.0080	U	ug/L	P370131	
		Endothall**	0.25	U	ug/L	P370242	
		Acetamiprid**	0.0020	U	ug/L	P370131	
		Glufosinate**	0.10	U	ug/L	P370242	
		Glyphosate**	0.10	U	ug/L	P370242	
		Afidopyropen**	0.0020	UJ	ug/L	P370131	
		Bentazon	0.015		ug/L	P370131	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370131	
		Carbamazepine**	0.0012	I	ug/L	P370131	
		Clothianidin**	0.015		ug/L	P370131	
		Dinotefuran**	0.0020	U	ug/L	P370131	
		Diuron	0.0020	U	ug/L	P370131	
		Fenuron	0.016	U	ug/L	P370131	
		Fluridone**	0.010		ug/L	P370131	
		Imazapyr**	0.22		ug/L	P370131	
		Hydrocodone**	0.0020	U	ug/L	P370131	
		Ibuprofen**	0.020	U	ug/L	P370131	
		Imidacloprid	0.62		ug/L	P370131	MS
		Linuron	0.0040	U	ug/L	P370131	
		Mandestrobin**	0.0020	UJ	ug/L	P370131	
		MCPP	0.0096	J	ug/L	P370131	LCS, MS
		Naproxen**	0.015	I	ug/L	P370131	RPD
		Primidone**	0.0061	I	ug/L	P370131	
		Pyraclostrobin**	0.0020	U	ug/L	P370131	
		Thiamethoxam**	0.052		ug/L	P370131	
		Tolfenpyrad**	0.0020	U	ug/L	P370131	
		Triclopyr**	0.0040	U	ug/L	P370131	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for 2,4-D and imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.
EPA 8321B: Results confirmed in re-extraction.

Sample Location: NorthCreek(Tidal)@41 **Collection Date/Time: 09/03/2019 11:25**

Field ID: G3SD0089_DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116417	EPA 8321B	2,4-D	0.13		ug/L	P370131	
		Acesulfame K**	0.10	U	ug/L	P370242	
		AMPA**	0.30	I	ug/L	P370242	
		Sucralose**	0.31		ug/L	P370242	
		Acetaminophen**	0.0080	U	ug/L	P370131	
		Endothall**	0.25	U	ug/L	P370242	
		Acetamiprid**	0.0020	U	ug/L	P370131	
		Glufosinate**	0.10	U	ug/L	P370242	
		Glyphosate**	0.10	U	ug/L	P370242	
		Afidopyropen**	0.0020	UJ	ug/L	P370131	
		Bentazon	0.035		ug/L	P370131	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370131	
		Carbamazepine**	0.0014	I	ug/L	P370131	
		Clothianidin**	0.012		ug/L	P370131	
		Dinotefuran**	0.0020	U	ug/L	P370131	
		Diuron	0.054		ug/L	P370131	
		Fenuron	0.016	U	ug/L	P370131	
		Fluridone**	0.32		ug/L	P370131	
		Imazapyr**	0.55		ug/L	P370131	
		Hydrocodone**	0.0020	U	ug/L	P370131	
		Ibuprofen**	0.020	U	ug/L	P370131	
		Imidacloprid	0.34		ug/L	P370131	MS
		Linuron	0.0040	U	ug/L	P370131	
		Mandestrobin**	0.0020	UJ	ug/L	P370131	
		MCPP	0.0034	IJ	ug/L	P370131	LCS, MS
		Naproxen**	0.0080	U	ug/L	P370131	RPD
		Primidone**	0.0069	I	ug/L	P370131	
		Pyraclostrobin**	0.0020	U	ug/L	P370131	
		Thiamethoxam**	0.013		ug/L	P370131	
		Tolfenpyrad**	0.0020	UJ	ug/L	P370131	CCV
		Triclopyr**	0.0040	U	ug/L	P370131	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for 2,4-D and imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.
EPA 8321B: Results confirmed in re-extraction.

Sample Location: PhillippeCreek@Proctor **Collection Date/Time: 09/03/2019 10:15**

Field ID: G3SD0091 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116405	EPA 180.1 Rev. 2.0	Turbidity	6.9	A	NTU	P370151	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P370346	
		Sulfate	94		mg SO4/L	P370349	
	SM 2120 B	Color (true)	59		PCU	P370162	
	SM 2320 B-97	Total Alkalinity	175		mg CaCO3/L	P370282	
	SM 2540 C-97	TDS	445		mg/L	P370729	
	SM 2540 D-97	TSS	4	I	mg/L	P370616	
	SM 4500 F-C-97	Fluoride	0.34		mg F/L	P370284	
2116406	EPA 350.1 Rev. 2.0	Ammonia-N	0.079		mg N/L	P370446	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P370190	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.54		mg N/L	P370265	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P370416	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P370246	
2116407	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P370140	

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

Sample Location: NorthCreek(Tidal)@41 **Collection Date/Time: 09/03/2019 11:20**

Field ID: G3SD0089 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116416	EPA 8321B	2,4-D	0.20		ug/L	P370131	
		Acesulfame K**	0.10	U	ug/L	P370242	
		AMPA**	0.33	I	ug/L	P370242	
		Sucralose**	0.28		ug/L	P370242	
		Acetaminophen**	0.0080	U	ug/L	P370131	
		Endothall**	0.25	U	ug/L	P370242	
		Acetamiprid**	0.0020	U	ug/L	P370131	
		Glufosinate**	0.10	U	ug/L	P370242	
		Glyphosate**	0.10	U	ug/L	P370242	
		Afidopyropen**	0.0020	UJ	ug/L	P370131	
		Bentazon	0.031		ug/L	P370131	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370131	
		Carbamazepine**	0.0017	I	ug/L	P370131	
		Clothianidin**	0.012		ug/L	P370131	
		Dinotefuran**	0.0020	U	ug/L	P370131	
		Diuron	0.078		ug/L	P370131	
		Fenuron	0.016	U	ug/L	P370131	
		Fluridone**	0.076		ug/L	P370131	
		Imazapyr**	0.39		ug/L	P370131	
		Hydrocodone**	0.0020	U	ug/L	P370131	
		Ibuprofen**	0.020	U	ug/L	P370131	
		Imidacloprid	0.38		ug/L	P370131	MS
		Linuron	0.0040	U	ug/L	P370131	
		Mandestrobin**	0.0020	UJ	ug/L	P370131	
		MCPP	0.0036	IJ	ug/L	P370131	LCS, MS
		Naproxen**	0.0080	U	ug/L	P370131	RPD
		Primidone**	0.0060	I	ug/L	P370131	
		Pyraclostrobin**	0.0020	U	ug/L	P370131	
		Thiamethoxam**	0.014		ug/L	P370131	
		Tolfenpyrad**	0.0020	U	ug/L	P370131	
		Triclopyr**	0.0040	U	ug/L	P370131	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for 2,4-D and imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.
EPA 8321B: Results confirmed in re-extraction.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370151

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370346

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370349

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370446

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370190

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370265

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370416

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370140

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

Reference Method: EPA 8321B
Batch ID: P370131

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P370131

Component	Result	Code	Units
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: P370242

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: P370162

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P370282

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

Reference Method: SM 2540 C-97
Batch ID: P370729

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P370616

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P370284

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P370246

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370346

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370349

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370446

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370265

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370416

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370140

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

Reference Method: EPA 8321B
Batch ID: P370131

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	145		P	40 - 160
Acetaminophen	81.4		P	30 - 160
Acetamiprid	86.3		P	40 - 160
Afidopyropen	95.6		P	40 - 160
Bentazon	89.3		P	30 - 160
Benzovindiflupyr	95.5		P	40 - 160
Carbamazepine	100		P	40 - 160
Clothianidin	98.5		P	40 - 160
Dinotefuran	93.9		P	40 - 160
Diuron	100		P	40 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P370131

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	106		P	40 - 160
Fluridone	106		P	40 - 160
Hydrocodone	92.2		P	40 - 160
Ibuprofen	117		P	30 - 160
Imazapyr	84.2		P	40 - 160
Imidacloprid	104		P	40 - 160
Linuron	72.6		P	40 - 160
Mandestrobin	102		P	40 - 160
MCPP	178		F	40 - 160
Naproxen	124		P	40 - 160
Primidone	94.9		P	40 - 160
Pyraclostrobin	99.1		P	30 - 160
Thiamethoxam	106		P	40 - 160
Tolfenpyrad	78.8		P	40 - 160
Triclopyr	105		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P370242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	91.8		P	40 - 150
AMPA	58.2		P	40 - 150
Endothall	107		P	40 - 150
Glufosinate	113		P	40 - 150
Glyphosate	109		P	40 - 140
Sucralose	125		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P370162

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P370282

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

Reference Method: SM 4500 F-C-97
Batch ID: P370284

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P370246

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116285	Chloride	100		P	90 - 110
2116366	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116285	Sulfate	99.5		P	90 - 110
2116366	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116371	Ammonia-N	96.3	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116371	Kjeldahl Nitrogen	92.2	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370265

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116369	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116340	Total-P	103	93.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116425	O-Phosphate-P	97.4	98.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P370131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116166	Acetaminophen	78.5	81.5	P/P	30 - 160
2116166	Acetamiprid	106	88.4	P/P	40 - 160
2116166	Afidopyropen	142	133	P/P	40 - 160
2116166	Bentazon	65.4	53.2	P/P	30 - 160
2116166	Benzovindiflupyr	117	102	P/P	40 - 160
2116166	Carbamazepine	95.6	91.7	P/P	40 - 160
2116166	Clothianidin	102	101	P/P	40 - 160
2116166	Dinotefuran	107	105	P/P	40 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P370131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116166	Diuron	86.8	88.1	P/P	40 - 160
2116166	Fenuron	85.5	81.7	P/P	40 - 160
2116166	Fluridone	103	107	P/P	40 - 160
2116166	Hydrocodone	92.1	91.2	P/P	40 - 160
2116166	Ibuprofen	125	132	P/P	30 - 160
2116166	Imidacloprid	200	194	F/F	40 - 160
2116166	Linuron	64.8	68.1	P/P	40 - 160
2116166	Mandestrobin	109	99.9	P/P	40 - 160
2116166	MCPP	231	224	F/F	40 - 160
2116166	Naproxen	97.7	153	P/P	40 - 160
2116166	Primidone	103	97.3	P/P	40 - 160
2116166	Pyraclostrobin	122	107	P/P	30 - 160
2116166	Thiamethoxam	150	138	P/P	40 - 160
2116166	Tolfenpyrad	88.9	85.2	P/P	40 - 160
2116166	Triclopyr	126	157	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P370242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116330	Acesulfame K	116	110	P/P	40 - 150
2116330	AMPA	55.2	58.3	P/P	40 - 150
2116330	Endothall	79.7	92.8	P/P	40 - 150
2116330	Glufosinate	84.8	77.0	P/P	40 - 150
2116330	Glyphosate	75.3	77.9	P/P	40 - 140
2116330	Sucralose	115	129	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P370284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116463	Fluoride	98.5	97.4	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P370246

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116341	Organic Carbon	105	102	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116405	Turbidity	4.07	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116285	Chloride	0.852	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116285	Sulfate	1.54	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116371	Ammonia-N	0.609	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116371	Kjeldahl Nitrogen	5.19	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116369	NO2NO3-N	0.281	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116340	Total-P	8.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116425	O-Phosphate-P	0.818	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P370131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116166	2,4-D	3.50	Spike	P	0 - 30
2116166	Acetaminophen	3.75	Spike	P	0 - 30
2116166	Acetamiprid	17.9	Spike	P	0 - 30
2116166	Afidopyropen	6.87	Spike	P	0 - 30
2116166	Bentazon	8.98	Spike	P	0 - 30
2116166	Benzovindiflupyr	13.4	Spike	P	0 - 30
2116166	Carbamazepine	3.91	Spike	P	0 - 30
2116166	Clothianidin	1.49	Spike	P	0 - 30
2116166	Dinotefuran	2.05	Spike	P	0 - 30
2116166	Diuron	1.42	Spike	P	0 - 30
2116166	Fenuron	4.52	Spike	P	0 - 30
2116166	Fluridone	2.58	Spike	P	0 - 30
2116166	Hydrocodone	1.07	Spike	P	0 - 30
2116166	Ibuprofen	5.56	Spike	P	0 - 30
2116166	Imazapyr	8.34	Spike	P	0 - 30
2116166	Imidacloprid	2.89	Spike	P	0 - 30
2116166	Linuron	4.99	Spike	P	0 - 30
2116166	Mandestrobin	8.27	Spike	P	0 - 30
2116166	MCPP	3.30	Spike	P	0 - 30
2116166	Naproxen	44.1	Spike	F	0 - 30
2116166	Primidone	5.46	Spike	P	0 - 30
2116166	Pyraclostrobin	13.0	Spike	P	0 - 30
2116166	Thiamethoxam	8.32	Spike	P	0 - 30
2116166	Tolfenpyrad	4.23	Spike	P	0 - 30
2116166	Triclopyr	21.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116330	Acesulfame K	4.94	Spike	P	0 - 30
2116330	AMPA	4.46	Spike	P	0 - 30
2116330	Endothall	15.2	Spike	P	0 - 30
2116330	Glufosinate	9.59	Spike	P	0 - 30
2116330	Glyphosate	2.98	Spike	P	0 - 30
2116330	Sucralose	11.0	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P370162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116463	Color (true)	1.79	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P370282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116463	Total Alkalinity	1.36	Sample	P	0 - 2.8

Quality Assurance Report
Precision

Reference Method: SM 2540 C-97
Batch ID: P370729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116334	TDS	5.45	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P370284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116463	Fluoride	0.958	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P370246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116341	Organic Carbon	2.08	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: 2116415
Field Sample ID: G3SD0064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	143	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	112	P	30 - 160
EPA 8321B	Endothall-d6	98.0	P	30 - 160
EPA 8321B	Endothall-d6	98.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	145	P	30 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Sucralose-d6	35.1	P	30 - 160
EPA 8321B	Sucralose-d6	35.1	P	30 - 160

Lab Sample ID: 2116416
Field Sample ID: G3SD0089

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.1	P	30 - 160
EPA 8321B	Diuron-d6	88.7	P	30 - 160
EPA 8321B	Endothall-d6	97.3	P	30 - 160
EPA 8321B	Endothall-d6	97.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	97.6	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	37.3	P	30 - 160
EPA 8321B	Sucralose-d6	37.3	P	30 - 160

Lab Sample ID: 2116417
Field Sample ID: G3SD0089_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.1	P	30 - 160
EPA 8321B	Diuron-d6	96.2	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	57.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	57.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	125	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	35.6	P	30 - 160
EPA 8321B	Sucralose-d6	35.6	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A93981
Included Lab Sample IDs: 2116407

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	99.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A93983
Included Lab Sample IDs: 2116405

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

Reference Method: SM 2120 B
Run ID: A93988
Included Lab Sample IDs: 2116405

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A94012
Included Lab Sample IDs: 2116405

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A94021
Included Lab Sample IDs: 2116406

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A94033
Included Lab Sample IDs: 2116406

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A94038
Included Lab Sample IDs: 2116405

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

Reference Method: SM 4500 F-C-97
Run ID: A94038
Included Lab Sample IDs: 2116405

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A94043
Included Lab Sample IDs: 2116406

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	98.9	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A94082
Included Lab Sample IDs: 2116415, 2116416, 2116417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	83.9	85.1	P/P	60 - 160
Glufosinate	116	121	P/P	60 - 160
Glyphosate	115	130	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A94086
Included Lab Sample IDs: 2116415, 2116416, 2116417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	132	128	P/P	60 - 160
Endothall	113	117	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A94110
Included Lab Sample IDs: 2116406

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94123
Included Lab Sample IDs: 2116406

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.9	98.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A94124
Included Lab Sample IDs: 2116415, 2116416, 2116417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	104	P/P	50 - 150
2,4-D	122	119	P/P	50 - 150
Acetaminophen	95.2	88.7	P/P	60 - 160
Acetaminophen	98.9	93.1	P/P	60 - 160
Acetamiprid	108	104	P/P	50 - 150
Acetamiprid	108	105	P/P	50 - 150
Afidopyropen	131	132	P/P	50 - 150
Afidopyropen	98.0	105	P/P	50 - 150
Bentazon	81.7	83.4	P/P	50 - 160
Bentazon	92.4	91.8	P/P	50 - 160
Benzovindiflupyr	105	120	P/P	50 - 150
Benzovindiflupyr	128	123	P/P	50 - 150
Carbamazepine	111	113	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A94124
Included Lab Sample IDs: 2116415, 2116416, 2116417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	114	114	P/P	60 - 150
Clothianidin	106	93.8	P/P	60 - 150
Clothianidin	117	100	P/P	60 - 150
Dinotefuran	101	95.9	P/P	50 - 150
Dinotefuran	103	100	P/P	50 - 150
Diuron	105	108	P/P	60 - 150
Diuron	107	109	P/P	60 - 150
Fenuron	102	104	P/P	60 - 150
Fenuron	109	106	P/P	60 - 150
Fluridone	122	125	P/P	60 - 160
Fluridone	124	127	P/P	60 - 160
Hydrocodone	104	98.7	P/P	60 - 150
Hydrocodone	108	100	P/P	60 - 150
Ibuprofen	123	131	P/P	50 - 160
Ibuprofen	94.2	112	P/P	50 - 160
Imazapyr	78.5	75.5	P/P	50 - 150
Imazapyr	79.1	79.1	P/P	50 - 150
Imidacloprid	101	91.6	P/P	60 - 150
Imidacloprid	94.4	85.8	P/P	60 - 150
Linuron	93.2	98.7	P/P	60 - 150
Linuron	99.4	111	P/P	60 - 150
Mandestrobin	115	127	P/P	50 - 150
Mandestrobin	134	129	P/P	50 - 150
MCPP	127	125	P/P	50 - 150
MCPP	129	130	P/P	50 - 150
Naproxen	109	126	P/P	50 - 160
Naproxen	71.3	137	P/P	50 - 160
Primidone	102	97.1	P/P	60 - 150
Primidone	105	104	P/P	60 - 150
Pyraclostrobin	116	136	P/P	60 - 150
Pyraclostrobin	135	137	P/P	60 - 150
Thiamethoxam	101	99.8	P/P	50 - 150
Thiamethoxam	99.7	100	P/P	50 - 150
Tolfenpyrad	126	137	P/P	60 - 150
Tolfenpyrad	156*	146	F/P	60 - 150
Triclopyr	128	134	P/P	50 - 150
Triclopyr	130	129	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A94127
Included Lab Sample IDs: 2116415, 2116416, 2116417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	85.3	65.6	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					4.07	
EPA 300.0 Rev. 2.1	Chloride	101	100	102		0.852	
	Sulfate	101	99.5	101		1.54	
EPA 350.1 Rev. 2.0	Ammonia-N	99.3	96.3	97.2			0.609
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.7	92.2	98.3			5.19
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	102			0.281
EPA 365.1 Rev. 2.0	Total-P	97.9	103	93.9			8.57
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.2	97.4	98.2			0.818
EPA 8321B	2,4-D	145					3.50
	Acesulfame K	91.8	116	110			4.94
	Acetaminophen	81.4	78.5	81.5			3.75
	Acetamiprid	86.3	106	88.4			17.9
	Afidopyropen	95.6	142	133			6.87
	AMPA	58.2	55.2	58.3			4.46
	Bentazon	89.3	65.4	53.2			8.98
	Benzovindiflupyr	95.5	117	102			13.4
	Carbamazepine	100	95.6	91.7			3.91
	Clothianidin	98.5	102	101			1.49
	Dinotefuran	93.9	107	105			2.05
	Diuron	100	86.8	88.1			1.42
	Endothall	107	79.7	92.8			15.2
	Fenuron	106	85.5	81.7			4.52
	Fluridone	106	103	107			2.58
	Glufosinate	113	84.8	77.0			9.59
	Glyphosate	109	75.3	77.9			2.98
	Hydrocodone	92.2	92.1	91.2			1.07
	Ibuprofen	117	125	132			5.56
	Imazapyr	84.2					8.34
	Imidacloprid	104	200	194			2.89
	Linuron	72.6	64.8	68.1			4.99
	Mandestrobin	102	109	99.9			8.27
	MCPP	178	231	224			3.30
	Naproxen	124	97.7	153			44.1
	Primidone	94.9	103	97.3			5.46
	Pyraclostrobin	99.1	122	107			13.0
	Sucralose	125	115	129			11.0
	Thiamethoxam	106	150	138			8.32
	Tolfenpyrad	78.8	88.9	85.2			4.23
	Triclopyr	105	126	157			21.3
SM 2120 B	Color (true)	101				1.79	
SM 2320 B-97	Total Alkalinity	104				1.36	
SM 2540 C-97	TDS					5.45	
SM 4500 F-C-97	Fluoride	98.9	98.5	97.4			0.958
SM 5310 B-00	Organic Carbon	104	105	102			2.08

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2116405
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2116405

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2116405
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2116406
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2116406
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2116406
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2116406
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2116407
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2116415, 2116416, 2116417
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2116415, 2116416, 2116417
SM 2120 B / E31780	True Color measured at 450 nm	2116405
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2116405
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2116405
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2116405
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2116405
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2116406

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	09/04/2019			09/04/2019 16:44	Rosalyn Ballman	2116405
EPA 300.0 Rev. 2.1	09/04/2019			09/06/2019 23:26	Jhamieka S. Greenwood	2116405
EPA 350.1 Rev. 2.0	09/04/2019			09/10/2019 12:04	Ping Hua	2116406
EPA 351.2 Rev. 2.0	09/04/2019	09/05/2019 12:00	Sima Feizi	09/06/2019 15:21	Julia Storbeck	2116406
EPA 353.2 Rev. 2.0	09/04/2019			09/06/2019 09:55	Beverly Y. Sanders	2116406
EPA 365.1 Rev. 2.0	09/04/2019	09/10/2019 09:48	Lipi Saha	09/11/2019 11:11	Rosalyn Ballman	2116406
EPA 365.1 Rev. 2.0 dissolved	09/04/2019			09/04/2019 15:39	Jhamieka S. Greenwood	2116407
EPA 8321B	09/04/2019	09/05/2019 09:00	Fe-Val Siddell	09/06/2019 12:08	Juyoung Kim	2116415
	09/04/2019	09/05/2019 09:00	Fe-Val Siddell	09/06/2019 12:43	Juyoung Kim	2116416
	09/04/2019	09/05/2019 09:00	Fe-Val Siddell	09/09/2019 15:38	Juyoung Kim	2116417
	09/04/2019	09/05/2019 09:00	Fe-Val Siddell	09/09/2019 20:49	Juyoung Kim	2116417
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/06/2019 15:22	Rebecca Ware	2116415
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/06/2019 15:35	Rebecca Ware	2116416
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/06/2019 15:49	Rebecca Ware	2116417
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/09/2019 13:02	Rebecca Ware	2116415
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/09/2019 13:12	Rebecca Ware	2116416
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/09/2019 13:23	Rebecca Ware	2116417
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/18/2019 10:54	Rebecca Ware	2116415
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/18/2019 11:05	Rebecca Ware	2116416
	09/04/2019	09/06/2019 10:30	Rebecca Ware	09/18/2019 11:17	Rebecca Ware	2116417
SM 2120 B	09/04/2019			09/04/2019 17:42	Madeline Funaro	2116405
SM 2320 B-97	09/04/2019			09/06/2019 03:07	Dale L. Simmons	2116405
SM 2540 C-97	09/04/2019			09/09/2019 15:08	Yijie Li	2116405
SM 2540 D-97	09/04/2019			09/09/2019 15:08	Yijie Li	2116405
SM 4500 F-C-97	09/04/2019			09/06/2019 03:07	Dale L. Simmons	2116405
SM 5310 B-00	09/04/2019			09/06/2019 05:29	Madeline Funaro	2116406