

Chemical Analysis Report

NE-DIST-2018-07-10-01

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

Event Description: **LSJR West 1 2018**
Request ID: **RQ-2018-06-25-07**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

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: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 26-JUL-2018 14:30



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 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: MCCOYS CR AT LELAND ST

Collection Date/Time: 07/09/2018 12:10

Field ID: 20030725

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2005943	EPA 8321B	2,4-D	0.015		ug/L	P348199	MS
		Sucralose**	0.19		ug/L	P348129	
		Bentazon	0.031		ug/L	P348199	
		MCPP	0.0057	I	ug/L	P348199	MS
		Triclopyr**	0.0040	U	ug/L	P348199	
		Imidacloprid	0.093		ug/L	P348199	
		Diuron	0.0097		ug/L	P348199	
		Pyraclostrobin**	0.0020	U	ug/L	P348199	
		Primidone**	0.0040	U	ug/L	P348199	
		Linuron	0.0040	U	ug/L	P348199	
		Acetaminophen**	0.0080	U	ug/L	P348199	
		Fenuron	0.016	U	ug/L	P348199	
		Imazapyr**	0.21		ug/L	P348199	
		Carbamazepine**	8.9E-04	I	ug/L	P348199	
		Fluridone**	0.16		ug/L	P348199	
		Hydrocodone**	8.0E-04	U	ug/L	P348199	
		Naproxen**	0.0080	U	ug/L	P348199	
		Ibuprofen**	0.020	U	ug/L	P348199	

Sample Location: WILLIAMSON CREEK AT HUGH EDWARDS

Collection Date/Time: 07/09/2018 10:40

Field ID: 20030429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2005944	EPA 8321B	2,4-D	0.0031	I	ug/L	P348199	MS
		Sucralose**	0.23		ug/L	P348129	
		Bentazon	0.0026	I	ug/L	P348199	
		MCP	0.0020	U	ug/L	P348199	MS
		Triclopyr**	0.0040	U	ug/L	P348199	
		Imidacloprid	0.011		ug/L	P348199	
		Diuron	0.0020	U	ug/L	P348199	
		Pyraclostrobin**	0.0020	U	ug/L	P348199	
		Primidone**	0.0040	U	ug/L	P348199	
		Linuron	0.0040	U	ug/L	P348199	
		Acetaminophen**	0.0080	U	ug/L	P348199	
		Fenuron	0.016	U	ug/L	P348199	
		Imazapyr**	0.073		ug/L	P348199	
		Carbamazepine**	4.0E-04	U	ug/L	P348199	
		Fluridone**	0.018		ug/L	P348199	
		Hydrocodone**	8.0E-04	U	ug/L	P348199	
		Naproxen**	0.0080	U	ug/L	P348199	
		Ibuprofen**	0.020	U	ug/L	P348199	

Sample Location: WILLS BR AT LANE AVE

Collection Date/Time: 07/09/2018 11:05

Field ID: 20030095

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2005945	EPA 8321B	2,4-D	0.011		ug/L	P348199	MS
		Sucralose**	2.4		ug/L	P348129	
		Bentazon	0.0097		ug/L	P348199	
		MCP	0.0038	I	ug/L	P348199	MS
		Triclopyr**	0.0040	U	ug/L	P348199	
		Imidacloprid	0.027		ug/L	P348199	
		Diuron	0.024		ug/L	P348199	
		Pyraclostrobin**	0.0020	U	ug/L	P348199	
		Primidone**	0.014	I	ug/L	P348199	
		Linuron	0.0040	U	ug/L	P348199	
		Acetaminophen**	0.066		ug/L	P348199	
		Fenuron	0.016	U	ug/L	P348199	
		Imazapyr**	0.092		ug/L	P348199	
		Carbamazepine**	0.0078		ug/L	P348199	
		Fluridone**	0.015		ug/L	P348199	
		Hydrocodone**	0.0038		ug/L	P348199	
		Naproxen**	0.34		ug/L	P348199	
		Ibuprofen**	0.37	I	ug/L	P348199	

Sample Location: WILLIAMSON CREEK 300M DOWN FROM JAMMES

Collection Date/Time: 07/09/2018 08:45

Field ID: G2NE1165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2005922	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P348181	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P348539	
		Sulfate	15		mg SO4/L	P348545	
	SM 2120 B	Color (true)	49	A	PCU	P348170	
	SM 2320 B-97	Total Alkalinity	84	A	mg CaCO3/L	P348404	
	SM 2540 C-97	TDS	162		mg/L	P348553	
	SM 2540 D-97	TSS	2	I	mg/L	P348559	
	SM 4500 F-C-97	Fluoride	0.075	I	mg F/L	P348408	
2005924	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P348699	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P348568	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P348257	
	EPA 365.1 Rev. 2.0	Total-P	0.051		mg P/L	P348590	
	SM 5310 B-00	Organic Carbon	7.8		mg C/L	P348385	
2005926	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P348228	MS
2005941	EPA 8321B	2,4-D	0.0026	I	ug/L	P348199	MS
		Sucralose**	0.20		ug/L	P348129	
		Bentazon	0.0034		ug/L	P348199	
		MCP	0.0020	U	ug/L	P348199	MS
		Triclopyr**	0.0040	U	ug/L	P348199	
		Imidacloprid	0.012		ug/L	P348199	
		Diuron	0.0028	I	ug/L	P348199	
		Pyraclostrobin**	0.0020	U	ug/L	P348199	
		Primidone**	0.0040	U	ug/L	P348199	
		Linuron	0.0040	U	ug/L	P348199	
		Acetaminophen**	0.0080	U	ug/L	P348199	
		Fenuron	0.016	U	ug/L	P348199	
		Imazapyr**	0.19		ug/L	P348199	
		Carbamazepine**	4.0E-04	U	ug/L	P348199	
		Fluridone**	0.018		ug/L	P348199	
		Hydrocodone**	8.0E-04	U	ug/L	P348199	
		Naproxen**	0.0080	U	ug/L	P348199	
		Ibuprofen**	0.020	U	ug/L	P348199	

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: WILLS BR. NORTH FORK AT OLD
MIDDLEBURG RD.**

Collection Date/Time: 07/09/2018 11:40

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2005923	EPA 180.1 Rev. 2.0	Turbidity	3.4	A	NTU	P348182	
	EPA 300.0 Rev. 2.1	Chloride	47		mg Cl/L	P348539	
		Sulfate	33		mg SO4/L	P348545	
	SM 2120 B	Color (true)	53		PCU	P348170	
	SM 2320 B-97	Total Alkalinity	77		mg CaCO3/L	P348404	
	SM 2540 C-97	TDS	241		mg/L	P348553	
	SM 2540 D-97	TSS	3	I	mg/L	P348559	
	SM 4500 F-C-97	Fluoride	0.073	I	mg F/L	P348408	
2005925	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P348699	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49	J	mg N/L	P348382	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P348257	
	EPA 365.1 Rev. 2.0	Total-P	0.059		mg P/L	P348590	
	SM 5310 B-00	Organic Carbon	8.7		mg C/L	P348385	
2005927	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P348228	MS
2005942	EPA 8321B	2,4-D	0.015		ug/L	P348199	MS
		Sucralose**	0.31		ug/L	P348129	
		Bentazon	0.016		ug/L	P348199	
		MCP	0.0020	U	ug/L	P348199	MS
		Triclopyr**	0.0040	U	ug/L	P348199	
		Imidacloprid	0.012		ug/L	P348199	
		Diuron	0.043		ug/L	P348199	
		Pyraclostrobin**	0.0020	U	ug/L	P348199	
		Primidone**	0.0040	U	ug/L	P348199	
		Linuron	0.0040	U	ug/L	P348199	
		Acetaminophen**	0.0080	U	ug/L	P348199	
		Fenuron	0.016	U	ug/L	P348199	
		Imazapyr**	0.13		ug/L	P348199	
		Carbamazepine**	4.0E-04	U	ug/L	P348199	
		Fluridone**	0.025		ug/L	P348199	
		Hydrocodone**	8.0E-04	U	ug/L	P348199	
		Naproxen**	0.0080	U	ug/L	P348199	
		Ibuprofen**	0.020	U	ug/L	P348199	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: 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: P348181

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348182

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348539

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348545

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348699

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348382

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348568

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348257

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348590

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348228

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

Reference Method: EPA 8321B
Batch ID: P348129

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P348199

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	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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: SM 2120 B
Batch ID: P348170

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P348404

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

Reference Method: SM 2540 C-97
Batch ID: P348553

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P348559

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P348559

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P348408

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P348385

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: P348539

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348699

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348382

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348568

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348257

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: P348590

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348228

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	93.0		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P348129

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	102		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P348199

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	111		P	40 - 150
Acetaminophen	96.2		P	30 - 150
Bentazon	102		P	30 - 150
Carbamazepine	88.1		P	40 - 150
Diuron	79.2		P	40 - 150
Fenuron	108		P	40 - 150
Fluridone	96.1		P	40 - 150
Hydrocodone	95.5		P	40 - 150
Ibuprofen	78.6		P	40 - 150
Imazapyr	106		P	40 - 150
Imidacloprid	107		P	40 - 160
Linuron	91.7		P	40 - 150
MCPP	110		P	40 - 150
Naproxen	110		P	40 - 150
Primidone	99.7		P	40 - 150
Pyraclostrobin	83.0		P	40 - 150
Triclopyr	110		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P348170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.1		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P348404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P348408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P348385

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348539

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005886	Chloride	91.5	98.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005886	Sulfate	90.7	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348699

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005840	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005925	Kjeldahl Nitrogen	90.0	92.8	F/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006831	Kjeldahl Nitrogen	105	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005924	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005924	Total-P	96.6	93.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005893	O-Phosphate-P	86.3	87.8	F/F	90 - 110

Reference Method: EPA 8321B
Batch ID: P348129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005568	Sucralose	92.9	97.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P348199

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005378	2,4-D	151	162	F/F	40 - 150
2005378	Acetaminophen	99.2	83.1	P/P	30 - 150
2005378	Bentazon	84.7	87.2	P/P	30 - 150
2005378	Carbamazepine	79.1	69.1	P/P	40 - 150
2005378	Diuron	66.1	55.9	P/P	40 - 150
2005378	Fenuron	96.6	81.8	P/P	40 - 150
2005378	Fluridone	88.4	76.2	P/P	40 - 150
2005378	Hydrocodone	102	84.9	P/P	40 - 150
2005378	Ibuprofen	67.2	81.6	P/P	40 - 150
2005378	Imazapyr	119	95.9	P/P	40 - 150
2005378	Imidacloprid	145	116	P/P	40 - 160
2005378	Linuron	84.6	74.4	P/P	40 - 150
2005378	MCPP	145	152	P/F	40 - 150
2005378	Naproxen	93.2	91.2	P/P	40 - 150
2005378	Primidone	100	88.9	P/P	40 - 150
2005378	Pyraclostrobin	86.6	71.0	P/P	40 - 150
2005378	Triclopyr	135	149	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P348408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005922	Fluoride	97.5	96.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P348385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2005843	Organic Carbon	99.2	99.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348181

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005886	Turbidity	2.72	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005923	Turbidity	7.65	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005886	Chloride	5.39	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P348545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005886	Sulfate	6.22	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005840	Ammonia-N	0.739	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005925	Kjeldahl Nitrogen	2.10	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006831	Kjeldahl Nitrogen	2.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005924	NO2NO3-N	0.457	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P348590

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005924	Total-P	3.06	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P348228

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005893	O-Phosphate-P	1.72	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P348129

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005568	Sucralose	4.29	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P348199

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005378	2,4-D	7.28	Spike	P	0 - 30
2005378	Acetaminophen	17.7	Spike	P	0 - 30
2005378	Bentazon	2.92	Spike	P	0 - 30
2005378	Carbamazepine	13.2	Spike	P	0 - 30
2005378	Diuron	13.6	Spike	P	0 - 30
2005378	Fenuron	16.6	Spike	P	0 - 30
2005378	Fluridone	14.9	Spike	P	0 - 30
2005378	Hydrocodone	18.3	Spike	P	0 - 30
2005378	Ibuprofen	19.3	Spike	P	0 - 30
2005378	Imazapyr	19.8	Spike	P	0 - 30
2005378	Imidacloprid	16.8	Spike	P	0 - 30
2005378	Linuron	12.8	Spike	P	0 - 30
2005378	MCPP	4.38	Spike	P	0 - 30
2005378	Naproxen	2.12	Spike	P	0 - 30
2005378	Primidone	11.9	Spike	P	0 - 30
2005378	Pyraclostrobin	19.8	Spike	P	0 - 30
2005378	Triclopyr	9.99	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P348170

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005922	Color (true)	0.00809	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P348404

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P348404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005922	Total Alkalinity	1.01	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P348553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005409	TDS	3.00	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P348408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005922	Fluoride	0.998	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P348385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2005843	Organic Carbon	0.432	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: 2005941
Field Sample ID: G2NE1165

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.7	P	30 - 160
EPA 8321B	Diuron-d6	61.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.9	P	40 - 160
EPA 8321B	Primidone-d5	93.1	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	40 - 160

Lab Sample ID: 2005942
Field Sample ID: 20030582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	117	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.4	P	30 - 160
EPA 8321B	Diuron-d6	66.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.3	P	40 - 160
EPA 8321B	Primidone-d5	99.1	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	40 - 160

Lab Sample ID: 2005943
Field Sample ID: 20030725

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.1	P	30 - 160
EPA 8321B	Diuron-d6	56.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	94.8	P	40 - 160
EPA 8321B	Primidone-d5	91.3	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	40 - 160

Lab Sample ID: 2005944
Field Sample ID: 20030429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	62.4	P	30 - 160
EPA 8321B	Diuron-d6	56.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.3	P	40 - 160
EPA 8321B	Primidone-d5	99.6	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	40 - 160

Lab Sample ID: 2005945
Field Sample ID: 20030095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.5	P	30 - 160
EPA 8321B	Diuron-d6	60.6	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2005945
Field Sample ID: 20030095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Ibuprofen-d3	67.3	P	40 - 160
EPA 8321B	Primidone-d5	87.8	P	30 - 160
EPA 8321B	Sucralose-d6	124	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A85119

Included Lab Sample IDs: 2005922, 2005923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A85120

Included Lab Sample IDs: 2005922, 2005923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105
Turbidity	99.5	98.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A85137

Included Lab Sample IDs: 2005926, 2005927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	92.8	91.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85150

Included Lab Sample IDs: 2005924, 2005925

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A85187

Included Lab Sample IDs: 2005922, 2005923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.2	98.8	P/P	90 - 110
Sulfate	96.2	96.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85199

Included Lab Sample IDs: 2005941, 2005942, 2005943, 2005944, 2005945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	112	115	P/P	60 - 150
Acetaminophen	113	112	P/P	60 - 150
Carbamazepine	115	115	P/P	60 - 150
Carbamazepine	115	115	P/P	60 - 150
Diuron	100	105	P/P	60 - 150
Diuron	103	100	P/P	60 - 150
Fenuron	106	106	P/P	60 - 150
Fenuron	107	106	P/P	60 - 150
Fluridone	114	110	P/P	60 - 160
Fluridone	114	114	P/P	60 - 160
Hydrocodone	109	109	P/P	60 - 150
Hydrocodone	109	109	P/P	60 - 150
Imazapyr	118	114	P/P	50 - 150
Imazapyr	98.8	118	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A85199

Included Lab Sample IDs: 2005941, 2005942, 2005943, 2005944, 2005945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imidacloprid	103	104	P/P	60 - 150
Imidacloprid	104	101	P/P	60 - 150
Linuron	110	115	P/P	60 - 150
Linuron	115	110	P/P	60 - 150
Primidone	98.5	97.2	P/P	60 - 150
Primidone	99.9	98.5	P/P	60 - 150
Pyraclostrobin	104	104	P/P	60 - 150
Pyraclostrobin	104	101	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A85202

Included Lab Sample IDs: 2005924, 2005925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.9	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A85217

Included Lab Sample IDs: 2005922, 2005923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A85217

Included Lab Sample IDs: 2005922, 2005923

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

Reference Method: EPA 8321B

Run ID: A85232

Included Lab Sample IDs: 2005941, 2005942, 2005943, 2005944, 2005945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.6	108	P/P	50 - 150
2,4-D	99.3	98.6	P/P	50 - 150
Bentazon	129	136	P/P	50 - 150
Bentazon	136	132	P/P	50 - 150
Ibuprofen	129	95.4	P/P	50 - 150
Ibuprofen	95.4	96.9	P/P	50 - 150
MCP	95.7	97.4	P/P	50 - 150
MCP	97.4	96.3	P/P	50 - 150
Naproxen	73.6	109	P/P	60 - 150
Naproxen	81.2	73.6	P/P	60 - 150
Triclopyr	102	100	P/P	50 - 160
Triclopyr	94.1	102	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A85298
Included Lab Sample IDs: 2005924, 2005925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	96.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A85318
Included Lab Sample IDs: 2005924, 2005925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A85319
Included Lab Sample IDs: 2005941, 2005942, 2005943, 2005944, 2005945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	139	132	P/P	60 - 160
Sucralose	140	139	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A85322
Included Lab Sample IDs: 2005925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.4	94.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A85364
Included Lab Sample IDs: 2005924

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.2	98.4	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		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				2.72	
	Turbidity				7.65	
EPA 300.0 Rev. 2.1	Chloride	95.7	91.5	98.1		5.39
	Sulfate	95.3	90.7	97.0		6.22
EPA 350.1 Rev. 2.0	Ammonia-N	106	101	102		0.739
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	90.0	92.8		2.10
	Kjeldahl Nitrogen	108	105	102		2.06
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	101			0.457
EPA 365.1 Rev. 2.0	Total-P	100	96.6	93.2		3.06
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	93.0	86.3	87.8		1.72
EPA 8321B	2,4-D	111	151	162		7.28
	Acetaminophen	96.2	99.2	83.1		17.7
	Bentazon	102	84.7	87.2		2.92
	Carbamazepine	88.1	79.1	69.1		13.2
	Diuron	79.2	66.1	55.9		13.6
	Fenuron	108	96.6	81.8		16.6
	Fluridone	96.1	88.4	76.2		14.9
	Hydrocodone	95.5	102	84.9		18.3
	Ibuprofen	78.6	67.2	81.6		19.3
	Imazapyr	106	119	95.9		19.8
	Imidacloprid	107	145	116		16.8
	Linuron	91.7	84.6	74.4		12.8
	MCP	110	145	152		4.38
	Naproxen	110	93.2	91.2		2.12
	Primidone	99.7	100	88.9		11.9
	Pyraclostrobin	83.0	86.6	71.0		19.8
	Sucralose	102	92.9	97.1		4.29
	Triclopyr	110	135	149		9.99
SM 2120 B	Color (true)	99.1			0.0080	
SM 2320 B-97	Total Alkalinity	103			1.01	
SM 2540 C-97	TDS				3.00	
SM 4500 F-C-97	Fluoride	98.0	97.5	96.3		0.998
SM 5310 B-00	Organic Carbon	99.0	99.2	99.7		0.432

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2005922, 2005923
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2005922, 2005923
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2005922, 2005923
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2005924, 2005925
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2005924, 2005925
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2005924, 2005925
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2005924, 2005925
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2005926, 2005927
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2005941, 2005942, 2005943, 2005944, 2005945

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2005941, 2005942, 2005943, 2005944, 2005945
SM 2120 B / E31780	True Color measured at 450 nm	2005922, 2005923
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2005922, 2005923
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2005922, 2005923
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2005922, 2005923
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2005922, 2005923
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2005924, 2005925

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	07/10/2018			07/10/2018 17:42	William L. Brown IV	2005922, 2005923
EPA 300.0 Rev. 2.1	07/10/2018			07/13/2018 04:47	Lipi Saha	2005922
	07/10/2018			07/13/2018 04:59	Lipi Saha	2005923
EPA 350.1 Rev. 2.0	07/10/2018			07/17/2018 14:24	Ping Hua	2005924
	07/10/2018			07/17/2018 14:25	Ping Hua	2005925
EPA 351.2 Rev. 2.0	07/10/2018	07/13/2018 10:15	Adrian Shelby	07/18/2018 13:40	Joseph Suarez	2005925
	07/10/2018	07/17/2018 10:30	Adrian Shelby	07/18/2018 16:20	Joseph Suarez	2005924
EPA 353.2 Rev. 2.0	07/10/2018			07/11/2018 13:42	Lauren Bottorf	2005924
	07/10/2018			07/11/2018 13:57	Lauren Bottorf	2005925
EPA 365.1 Rev. 2.0	07/10/2018	07/17/2018 13:30	Sima Feizi	07/18/2018 08:33	Beverly Y. Sanders	2005924
	07/10/2018	07/17/2018 13:30	Sima Feizi	07/18/2018 08:36	Beverly Y. Sanders	2005925
EPA 365.1 Rev. 2.0 dissolved	07/10/2018			07/10/2018 22:47	Anthony C. Onicha	2005926, 2005927
EPA 8321B	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/12/2018 21:33	Juyoung Kim	2005941
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/12/2018 22:07	Juyoung Kim	2005942
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/12/2018 22:42	Juyoung Kim	2005943
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/12/2018 23:17	Juyoung Kim	2005944
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/13/2018 00:26	Juyoung Kim	2005945
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/14/2018 02:22	Juyoung Kim	2005941
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/14/2018 02:56	Juyoung Kim	2005942
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/14/2018 03:31	Juyoung Kim	2005943
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/14/2018 04:05	Juyoung Kim	2005944
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/14/2018 05:15	Juyoung Kim	2005945
	07/10/2018	07/11/2018 14:00	Hoor Shaik	07/14/2018 11:01	Juyoung Kim	2005945
	07/10/2018	07/16/2018 10:00	Mohammad Ghaffari	07/16/2018 18:12	Mohammad Ghaffari	2005941
	07/10/2018	07/16/2018 10:00	Mohammad Ghaffari	07/16/2018 18:27	Mohammad Ghaffari	2005942
	07/10/2018	07/16/2018 10:00	Mohammad Ghaffari	07/16/2018 18:42	Mohammad Ghaffari	2005943
	07/10/2018	07/16/2018 10:00	Mohammad Ghaffari	07/16/2018 18:56	Mohammad Ghaffari	2005944
	07/10/2018	07/16/2018 10:00	Mohammad Ghaffari	07/16/2018 19:26	Mohammad Ghaffari	2005945
SM 2120 B	07/10/2018			07/10/2018 17:18	Tanya Welborn	2005922, 2005923
SM 2320 B-97	07/10/2018			07/13/2018 04:08	Dale L. Simmons	2005922
	07/10/2018			07/13/2018 07:15	Dale L. Simmons	2005923
SM 2540 C-97	07/10/2018			07/11/2018 14:46	Yijie Li	2005922, 2005923
SM 2540 D-97	07/10/2018			07/11/2018 14:46	Yijie Li	2005922, 2005923
SM 4500 F-C-97	07/10/2018			07/13/2018 04:00	Dale L. Simmons	2005922
	07/10/2018			07/13/2018 07:15	Dale L. Simmons	2005923
SM 5310 B-00	07/10/2018			07/12/2018 15:35	Megan Treadwell	2005924
	07/10/2018			07/12/2018 15:47	Megan Treadwell	2005925