

Chemical Analysis Report

SW-DIST-2019-04-23-01

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

Event Description: **SMP - Gap Cr, Nonsense, Braden, Rattlesnake, Cedar**
Request ID: **RQ-2019-04-22-04**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 16-MAY-2019 16:26



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: GAP CREEK @ 45TH ST

Collection Date/Time: 04/22/2019 12:20

Field ID: G2SW0030

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080124	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P362739	
	EPA 300.0 Rev. 2.1	Chloride	51		mg Cl/L	P362962	
		Sulfate	140		mg SO4/L	P362966	
	SM 2120 B	Color (true)	42	A	PCU	P362702	
	SM 2320 B-97	Total Alkalinity	156		mg CaCO3/L	P363244	
	SM 2540 C-97	TDS	492		mg/L	P363104	
	SM 2540 D-97	TSS	2	I	mg/L	P363053	
2080128	SM 4500 F-C-97	Fluoride	0.71		mg F/L	P363250	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P363031	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P362990	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P363077	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P362898	
2080132	SM 5310 B-00	Organic Carbon	12		mg C/L	P362921	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P362735	
2080156	EPA 8321B	2,4-D	0.16		ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	1.1		ug/L	P362741	
		Sucralose**	0.21		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.044		ug/L	P362672	
		Glyphosate**	2.2		ug/L	P362741	
		Carbamazepine**	8.0E-04	U	ug/L	P362672	
		Diuron	0.0064	I	ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	0.12		ug/L	P362672	
		Imazapyr**	0.70		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.0085		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCP	0.0028	I	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

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: GAP CREEK @ 45TH ST

Collection Date/Time: 04/22/2019 12:25

Field ID: G2SW0030_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080125	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P362739	
	EPA 300.0 Rev. 2.1	Chloride	51		mg Cl/L	P362962	
		Sulfate	140		mg SO4/L	P362966	
	SM 2120 B	Color (true)	41		PCU	P362702	
	SM 2320 B-97	Total Alkalinity	156		mg CaCO3/L	P363244	
	SM 2540 C-97	TDS	475		mg/L	P363104	
	SM 2540 D-97	TSS	3	I	mg/L	P363053	
	SM 4500 F-C-97	Fluoride	0.72		mg F/L	P363250	
2080129	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P363031	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P362990	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P363021	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P362898	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P362921	
2080133	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P362735	
2080157	EPA 8321B	2,4-D	0.17		ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	1.1		ug/L	P362741	
		Sucralose**	0.21		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.043		ug/L	P362672	
		Glyphosate**	2.0		ug/L	P362741	
		Carbamazepine**	8.0E-04	U	ug/L	P362672	
		Diuron	0.0061	I	ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	0.12		ug/L	P362672	
		Imazapyr**	0.71		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.0096		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCP	0.0029	I	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

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: FIELD_BLANK

Collection Date/Time: 04/22/2019 08:00

Field ID: FB 04222019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080126	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P362739	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P362963	
		Sulfate	0.20	U	mg SO4/L	P362967	
		Color (true)	2.5	U	PCU	P362702	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P363244	
	SM 2540 C-97	TDS	15	U	mg/L	P363099	
	SM 2540 D-97	TSS	2	U	mg/L	P363049	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P363250	
2080130	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P363031	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P362990	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P363077	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P362939	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P362921	
2080134	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P362735	
2080158	EPA 8321B	2,4-D	0.0020	U	ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	0.10	U	ug/L	P362741	
		Sucralose**	0.010	U	ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	8.0E-04	U	ug/L	P362672	
		Glyphosate**	0.10	U	ug/L	P362741	
		Carbamazepine**	8.0E-04	U	ug/L	P362672	
		Diuron	0.0020	U	ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	8.0E-04	U	ug/L	P362672	
		Imazapyr**	0.0040	U	ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.0020	U	ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCPP	0.0020	U	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

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: GAP CREEK AT 37TH ST. EAST

Collection Date/Time: 04/22/2019 11:45

Field ID: G2SW0110

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080127	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P362739	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P362963	
		Sulfate	120		mg SO4/L	P362967	
	SM 2120 B	Color (true)	43		PCU	P362702	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P363244	
	SM 2540 C-97	TDS	468	A	mg/L	P363104	
	SM 2540 D-97	TSS	2	IA	mg/L	P363053	
2080131	SM 4500 F-C-97	Fluoride	0.69		mg F/L	P363250	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P363031	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P362990	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P363077	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P362898	
2080135	SM 5310 B-00	Organic Carbon	12		mg C/L	P362921	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.23		mg P/L	P362735	
2080159	EPA 8321B	2,4-D	0.15		ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	1.2		ug/L	P362741	
		Sucralose**	0.26		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.016		ug/L	P362672	
		Glyphosate**	2.3		ug/L	P362741	
		Carbamazepine**	9.0E-04	I	ug/L	P362672	
		Diuron	0.0080		ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	0.20		ug/L	P362672	
		Imazapyr**	0.52		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.013		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCP	0.0021	I	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

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: BRADEN RIVER @ CYPRESS BEND PARK

Collection Date/Time: 04/22/2019 10:05

Field ID: G2SW0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080160	EPA 8321B	2,4-D	0.048		ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	0.59		ug/L	P362741	
		Sucralose**	1.2		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.042		ug/L	P362672	
		Glyphosate**	0.46		ug/L	P362741	
		Carbamazepine**	0.0019	I	ug/L	P362672	
		Diuron	0.061		ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	0.056		ug/L	P362672	
		Imazapyr**	0.26		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.014		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCPP	0.0020	U	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0041	I	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

Sample Location: CEDAR CREEK @ SADDLEHORN

Collection Date/Time: 04/22/2019 11:00

Field ID: G2SW0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080161	EPA 8321B	2,4-D	0.026		ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	1.6		ug/L	P362741	
		Sucralose**	0.026	I	ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.027		ug/L	P362672	
		Glyphosate**	2.2		ug/L	P362741	
		Carbamazepine**	8.0E-04	U	ug/L	P362672	
		Diuron	0.0022	I	ug/L	P362672	
		Fenuron	0.018	I	ug/L	P362672	
		Fluridone**	0.42		ug/L	P362672	
		Imazapyr**	0.22		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.016		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCPP	0.0020	U	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

Sample Location: NONSENSE @ TARA PRESERVE

Collection Date/Time: 04/22/2019 10:30

Field ID: G2SW0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080162	EPA 8321B	2,4-D	0.021		ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	0.82		ug/L	P362741	
		Sucralose**	0.12		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.021		ug/L	P362672	
		Glyphosate**	0.91		ug/L	P362741	
		Carbamazepine**	8.0E-04	U	ug/L	P362672	
		Diuron	0.0072	I	ug/L	P362672	
		Fenuron	0.021	I	ug/L	P362672	
		Fluridone**	0.32		ug/L	P362672	
		Imazapyr**	0.17		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.015		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCPP	0.0020	U	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

Sample Location: RATTLESNAKE SLOUGH @ 74TH

Collection Date/Time: 04/22/2019 11:20

Field ID: G2SW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2080163	EPA 8321B	2,4-D	0.0046	I	ug/L	P362672	
		Acesulfame K**	0.10	U	ug/L	P362741	
		AMPA**	7.9		ug/L	P362741	
		Sucralose**	0.26		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.022		ug/L	P362672	
		Glyphosate**	25		ug/L	P362741	
		Carbamazepine**	9.8E-04	I	ug/L	P362672	
		Diuron	0.0047	I	ug/L	P362672	
		Fenuron	0.022	I	ug/L	P362672	
		Fluridone**	0.35		ug/L	P362672	
		Imazapyr**	12		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.071		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCPP	0.0020	U	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362739

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362963

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362967

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363031

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362990

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363021

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363077

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362898

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362939

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362735

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

Reference Method: EPA 8321B
Batch ID: P362672

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
MCP	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: P362741

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: P362702

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P363244

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P363099

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P363104

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P363049

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P363053

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P363250

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P362921

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: P362962

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P362963

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P362966

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P362967

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P363031

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P362990

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: P363021

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P363077

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: P362898

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362939

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362735

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.4		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P362672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.3		P	40 - 150
Acetaminophen	94.9		P	30 - 150
Bentazon	87.5		P	30 - 150
Carbamazepine	98.4		P	40 - 150
Diuron	88.9		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	107		P	40 - 150
Hydrocodone	107		P	40 - 150
Ibuprofen	64.7		P	40 - 150
Imazapyr	103		P	40 - 150
Imidacloprid	106		P	40 - 150
Linuron	78.2		P	40 - 150
MCPP	81.4		P	40 - 150
Naproxen	80.1		P	40 - 150
Primidone	63.3		P	40 - 150
Pyraclostrobin	69.5		P	40 - 150
Triclopyr	51.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	131		P	40 - 150
Endothall	107		P	40 - 150
Glufosinate	125		P	40 - 150
Glyphosate	121		P	40 - 140
Sucralose	95.3		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P362702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	104		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P363244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P363250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P362921

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079904	Chloride	100		P	90 - 110
2080052	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080178	Chloride	103		P	90 - 110
2080307	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079904	Sulfate	103		P	90 - 110
2080052	Sulfate	98.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080178	Sulfate	104		P	90 - 110
2080307	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080055	Ammonia-N	99.7	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080128	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363021

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080129	NO2NO3-N	97.2	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080131	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080129	Total-P	94.2	93.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080502	Total-P	99.3	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080057	O-Phosphate-P	97.2	98.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P362672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079939	2,4-D	73.8	77.8	P/P	40 - 150
2079939	Acetaminophen	102	114	P/P	30 - 150
2079939	Bentazon	69.3	74.6	P/P	30 - 150
2079939	Carbamazepine	92.9	98.8	P/P	40 - 150
2079939	Diuron	68.7	68.0	P/P	40 - 150
2079939	Fenuron	121	142	P/P	40 - 150
2079939	Fluridone	137	147	P/P	40 - 150
2079939	Hydrocodone	94.6	102	P/P	40 - 150
2079939	Ibuprofen	55.1	66.7	P/P	40 - 150
2079939	Imazapyr	75.8	101	P/P	40 - 150
2079939	Imidacloprid	143	155	P/F	40 - 150
2079939	Linuron	61.6	59.2	P/P	40 - 150
2079939	MCP	75.3	89.0	P/P	40 - 150
2079939	Naproxen	48.7	55.6	P/P	40 - 150
2079939	Primidone	88.5	81.7	P/P	40 - 150
2079939	Pyraclostrobin	75.5	81.7	P/P	40 - 150
2079939	Triclopyr	43.4	46.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080156	Acesulfame K	102	79.1	P/P	40 - 150
2080156	AMPA	61.2	66.5	P/P	40 - 150
2080156	Endothall	87.0	114	P/P	40 - 150
2080156	Glufosinate	95.6	97.2	P/P	40 - 150
2080156	Glyphosate	124	123	P/P	40 - 140
2080156	Sucralose	103	105	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P363250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080052	Fluoride	98.9	98.9	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P362921

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080055	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080090	Turbidity	1.29	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080052	Chloride	0.0676	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080307	Chloride	1.59	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080052	Sulfate	0.544	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080307	Sulfate	1.92	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080055	Ammonia-N	0.379	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080128	Kjeldahl Nitrogen	0.902	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080129	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P363077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080131	NO2NO3-N	0.404	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P362898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080129	Total-P	0.407	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P362939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080502	Total-P	2.32	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P362735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080057	O-Phosphate-P	1.13	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P362672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079939	2,4-D	5.20	Spike	P	0 - 30
2079939	Acetaminophen	11.2	Spike	P	0 - 30
2079939	Bentazon	7.39	Spike	P	0 - 30
2079939	Carbamazepine	6.15	Spike	P	0 - 30
2079939	Diuron	0.993	Spike	P	0 - 30
2079939	Fenuron	16.2	Spike	P	0 - 30
2079939	Fluridone	7.34	Spike	P	0 - 30
2079939	Hydrocodone	7.27	Spike	P	0 - 30
2079939	Ibuprofen	18.0	Spike	P	0 - 30
2079939	Imazapyr	26.6	Spike	P	0 - 30
2079939	Imidacloprid	8.02	Spike	P	0 - 30
2079939	Linuron	3.96	Spike	P	0 - 30
2079939	MCPP	16.6	Spike	P	0 - 30
2079939	Naproxen	13.3	Spike	P	0 - 30
2079939	Primidone	7.98	Spike	P	0 - 30
2079939	Pyraclostrobin	7.90	Spike	P	0 - 30
2079939	Triclopyr	7.05	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P362741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P362741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080156	Acesulfame K	25.0	Spike	P	0 - 30
2080156	AMPA	2.96	Spike	P	0 - 30
2080156	Endothall	26.8	Spike	P	0 - 30
2080156	Glufosinate	1.60	Spike	P	0 - 30
2080156	Glyphosate	0.186	Spike	P	0 - 30
2080156	Sucralose	2.19	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P362702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080124	Color (true)	1.07	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P363244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080052	Total Alkalinity	0.476	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P363099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079680	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P363104

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080127	TDS	6.19	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P363250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080052	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P362921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080055	Organic Carbon	0.164	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: 2080156
Field Sample ID: G2SW0030

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.1	P	30 - 160
EPA 8321B	Diuron-d6	63.2	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	124	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	124	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.6	P	30 - 160
EPA 8321B	Primidone-d5	84.1	P	30 - 160
EPA 8321B	Sucralose-d6	98.2	P	30 - 160
EPA 8321B	Sucralose-d6	98.2	P	30 - 160

Lab Sample ID: 2080157
Field Sample ID: G2SW0030_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	130	P	30 - 160
EPA 8321B	Acetaminophen-d4	71.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.5	P	30 - 160
EPA 8321B	Diuron-d6	62.1	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.6	P	30 - 160
EPA 8321B	Primidone-d5	78.2	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2080158
Field Sample ID: FB 04222019

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.2	P	30 - 160
EPA 8321B	Diuron-d6	86.8	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	113	P	30 - 160
EPA 8321B	Ibuprofen-d3	57.4	P	30 - 160
EPA 8321B	Primidone-d5	72.6	P	30 - 160
EPA 8321B	Sucralose-d6	99.1	P	30 - 160
EPA 8321B	Sucralose-d6	99.1	P	30 - 160

Lab Sample ID: 2080159
Field Sample ID: G2SW0110

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	85.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2080159
Field Sample ID: G2SW0110

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	79.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.7	P	30 - 160
EPA 8321B	Diuron-d6	71.5	P	30 - 160
EPA 8321B	Endothall-d6	99.6	P	30 - 160
EPA 8321B	Endothall-d6	99.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	121	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.1	P	30 - 160
EPA 8321B	Primidone-d5	65.7	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2080160
Field Sample ID: G2SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	65.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	71.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.7	P	30 - 160
EPA 8321B	Diuron-d6	75.1	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	49.5	P	30 - 160
EPA 8321B	Primidone-d5	64.4	P	30 - 160
EPA 8321B	Sucralose-d6	99.7	P	30 - 160
EPA 8321B	Sucralose-d6	99.7	P	30 - 160

Lab Sample ID: 2080161
Field Sample ID: G2SW0018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.6	P	30 - 160
EPA 8321B	Diuron-d6	60.8	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	114	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	114	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.2	P	30 - 160
EPA 8321B	Primidone-d5	71.2	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2080162
Field Sample ID: G2SW0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.0	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2080162
Field Sample ID: G2SW0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	88.3	P	30 - 160
EPA 8321B	Diuron-d6	77.4	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.8	P	30 - 160
EPA 8321B	Primidone-d5	72.6	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2080163
Field Sample ID: G2SW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	84.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.1	P	30 - 160
EPA 8321B	Diuron-d6	81.9	P	30 - 160
EPA 8321B	Endothall-d6	95.5	P	30 - 160
EPA 8321B	Endothall-d6	95.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	149	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	149	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.5	P	30 - 160
EPA 8321B	Primidone-d5	80.3	P	30 - 160
EPA 8321B	Sucralose-d6	98.7	P	30 - 160
EPA 8321B	Sucralose-d6	98.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A90941

Included Lab Sample IDs: 2080124, 2080125, 2080126, 2080127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	105	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A90950

Included Lab Sample IDs: 2080132, 2080133, 2080134, 2080135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.7	P/P	90 - 110
O-Phosphate-P	98.7	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A90951

Included Lab Sample IDs: 2080124, 2080125, 2080126, 2080127

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

Reference Method: EPA 8321B

Run ID: A90991

Included Lab Sample IDs: 2080156, 2080157, 2080158, 2080159, 2080160, 2080161, 2080162, 2080163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	97.9	99.4	P/P	60 - 160
Sucralose	99.9	97.9	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A91035

Included Lab Sample IDs: 2080128, 2080129, 2080130, 2080131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	104	P/P	90 - 110
Organic Carbon	105	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91039

Included Lab Sample IDs: 2080129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	98.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A91050

Included Lab Sample IDs: 2080124, 2080125, 2080126, 2080127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Chloride	103	103	P/P	90 - 110
Sulfate	104	104	P/P	90 - 110
Sulfate	104	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91070

Included Lab Sample IDs: 2080128, 2080129, 2080130, 2080131

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91075

Included Lab Sample IDs: 2080128, 2080129, 2080131

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91076

Included Lab Sample IDs: 2080130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	98.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A91087

Included Lab Sample IDs: 2080156, 2080157, 2080158, 2080159, 2080160, 2080161, 2080162, 2080163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	61.1	P/P	60 - 160
Acesulfame K	87.5	102	P/P	60 - 160
Endothall	72.7	92.7	P/P	60 - 160
Endothall	92.7	94.8	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91088

Included Lab Sample IDs: 2080128, 2080130, 2080131

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

Reference Method: EPA 8321B

Run ID: A91091

Included Lab Sample IDs: 2080156, 2080157, 2080158, 2080159, 2080160, 2080161, 2080162, 2080163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	134	82.9	P/P	60 - 160
AMPA	82.9	121	P/P	60 - 160
Glufosinate	101	126	P/P	60 - 160
Glufosinate	126	101	P/P	60 - 160
Glyphosate	108	83.6	P/P	60 - 160
Glyphosate	83.6	120	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91098

Included Lab Sample IDs: 2080128, 2080129, 2080130, 2080131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	101	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A91158

Included Lab Sample IDs: 2080124, 2080125, 2080126, 2080127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	100	P/P	90 - 110
Total Alkalinity	99.5	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A91158

Included Lab Sample IDs: 2080124, 2080125, 2080126, 2080127

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

Reference Method: EPA 8321B

Run ID: A91231

Included Lab Sample IDs: 2080158, 2080159, 2080160, 2080161, 2080162, 2080163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.7	98.4	P/P	50 - 150
Acetaminophen	131	135	P/P	60 - 160
Bentazon	112	103	P/P	50 - 160
Carbamazepine	92.6	113	P/P	60 - 150
Diuron	111	119	P/P	60 - 150
Fenuron	105	107	P/P	60 - 150
Fluridone	82.4	113	P/P	60 - 160
Hydrocodone	101	113	P/P	60 - 150
Ibuprofen	76.0	70.6	P/P	50 - 160
Imazapyr	97.1	109	P/P	50 - 150
Imidacloprid	99.1	112	P/P	60 - 150
Linuron	90.2	79.8	P/P	60 - 150
MCPP	94.9	96.3	P/P	50 - 150
Naproxen	63.5	77.5	P/P	50 - 160
Primidone	82.6	118	P/P	60 - 150
Pyraclostrobin	85.8	105	P/P	60 - 150
Triclopyr	95.7	96.9	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A91289

Included Lab Sample IDs: 2080161, 2080162, 2080163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	99.5	104	P/P	60 - 160
Imazapyr	108	98.4	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A91328
 Included Lab Sample IDs: 2080157

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	83.6	120	P/P	60 - 160

Reference Method: EPA 8321B
 Run ID: A91432
 Included Lab Sample IDs: 2080156, 2080157

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.8	92.2	P/P	50 - 150
Acetaminophen	102	101	P/P	60 - 160
Bentazon	109	134	P/P	50 - 160
Carbamazepine	104	102	P/P	60 - 150
Diuron	107	105	P/P	60 - 150
Fenuron	99.2	102	P/P	60 - 150
Fluridone	102	103	P/P	60 - 160
Hydrocodone	103	100	P/P	60 - 150
Ibuprofen	97.9	86.9	P/P	50 - 160
Imazapyr	94.5	106	P/P	50 - 150
Imidacloprid	103	100	P/P	60 - 150
Linuron	98.7	98.1	P/P	60 - 150
MCP	102	107	P/P	50 - 150
Naproxen	109	75.2	P/P	50 - 160
Primidone	94.4	97.2	P/P	60 - 150
Pyraclostrobin	98.2	96.2	P/P	60 - 150
Triclopyr	105	98.4	P/P	50 - 150

* 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				1.29	
EPA 300.0 Rev. 2.1	Chloride	100	98.6	100	0.0676	
	Chloride	103	104	103	1.59	
	Sulfate	103	98.2	103	0.544	
	Sulfate	103	103	104	1.92	
EPA 350.1 Rev. 2.0	Ammonia-N	102	99.7	100		0.379
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108	105	104		0.902
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.2	97.2		0.0
	NO2NO3-N	102	102	102		0.404
EPA 365.1 Rev. 2.0	Total-P	102	94.2	93.5		0.407
	Total-P	99.8	99.3	102		2.32
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4	97.2	98.3		1.13
EPA 8321B	2,4-D	74.3	73.8	77.8		5.20
	Acesulfame K	104	102	79.1		25.0
	Acetaminophen	94.9	102	114		11.2
	AMPA	131	61.2	66.5		2.96
	Bentazon	87.5	69.3	74.6		7.39
	Carbamazepine	98.4	92.9	98.8		6.15
	Diuron	88.9	68.7	68.0		0.993
	Endothall	107	87.0	114		26.8
	Fenuron	114	121	142		16.2
	Fluridone	107	137	147		7.34
	Glufosinate	125	95.6	97.2		1.60
	Glyphosate	121	124	123		0.186
	Hydrocodone	107	94.6	102		7.27
	Ibuprofen	64.7	55.1	66.7		18.0
	Imazapyr	103	75.8	101		26.6
	Imidacloprid	106	143	155		8.02
	Linuron	78.2	61.6	59.2		3.96
	MCPP	81.4	75.3	89.0		16.6
	Naproxen	80.1	48.7	55.6		13.3
	Primidone	63.3	88.5	81.7		7.98
	Pyraclostrobin	69.5	75.5	81.7		7.90
	Sucralose	95.3	103	105		2.19
	Triclopyr	51.5	43.4	46.5		7.05
SM 2120 B	Color (true)	104			1.07	
SM 2320 B-97	Total Alkalinity	101			0.476	
SM 2540 C-97	TDS				0.0	
	TDS				6.19	
SM 4500 F-C-97	Fluoride	97.2	98.9	98.9		0.0
SM 5310 B-00	Organic Carbon	101	103	102		0.164

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2080124, 2080125, 2080126, 2080127
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2080124, 2080125, 2080126, 2080127
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2080124, 2080125, 2080126, 2080127
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2080128, 2080129, 2080130, 2080131

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2080128, 2080129, 2080130, 2080131
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2080128, 2080129, 2080130, 2080131
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2080128, 2080129, 2080130, 2080131
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2080132, 2080133, 2080134, 2080135
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2080156, 2080157, 2080158, 2080159, 2080160, 2080161, 2080162, 2080163
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2080156, 2080157, 2080158, 2080159, 2080160, 2080161, 2080162, 2080163
SM 2120 B / E31780	True Color measured at 450 nm	2080124, 2080125, 2080126, 2080127
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2080124, 2080125, 2080126, 2080127
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2080124, 2080125, 2080126, 2080127
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2080124, 2080125, 2080126, 2080127
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2080124, 2080125, 2080126, 2080127
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2080128, 2080129, 2080130, 2080131

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	04/23/2019			04/23/2019 17:05	Adrian Shelby	2080124, 2080125, 2080126, 2080127
EPA 300.0 Rev. 2.1	04/23/2019			04/26/2019 23:35	Lipi Saha	2080124
	04/23/2019			04/26/2019 23:47	Lipi Saha	2080125
	04/23/2019			04/27/2019 02:00	Lipi Saha	2080126
	04/23/2019			04/27/2019 02:12	Lipi Saha	2080127
EPA 350.1 Rev. 2.0	04/23/2019			04/26/2019 12:18	Ping Hua	2080131
	04/23/2019			04/26/2019 12:27	Ping Hua	2080128
	04/23/2019			04/26/2019 12:28	Ping Hua	2080129
	04/23/2019			04/26/2019 12:33	Ping Hua	2080130
EPA 351.2 Rev. 2.0	04/23/2019	04/29/2019 13:15	Adrian Shelby	04/30/2019 11:35	Joseph Suarez	2080128
	04/23/2019	04/29/2019 13:15	Adrian Shelby	04/30/2019 11:39	Joseph Suarez	2080129
	04/23/2019	04/29/2019 13:15	Adrian Shelby	04/30/2019 11:41	Joseph Suarez	2080130
	04/23/2019	04/29/2019 13:15	Adrian Shelby	04/30/2019 11:42	Joseph Suarez	2080131
EPA 353.2 Rev. 2.0	04/23/2019			04/26/2019 14:01	Beverly Y. Sanders	2080129
	04/23/2019			04/30/2019 10:09	Beverly Y. Sanders	2080131
	04/23/2019			04/30/2019 10:18	Beverly Y. Sanders	2080128
	04/23/2019			04/30/2019 10:19	Beverly Y. Sanders	2080130
EPA 365.1 Rev. 2.0	04/23/2019	04/26/2019 14:10	Sima Feizi	04/29/2019 12:53	Rosalyn Ballman	2080129
	04/23/2019	04/26/2019 14:10	Sima Feizi	04/29/2019 13:01	Rosalyn Ballman	2080128
	04/23/2019	04/26/2019 14:10	Sima Feizi	04/29/2019 13:02	Rosalyn Ballman	2080131
	04/23/2019	04/26/2019 14:10	Sima Feizi	04/29/2019 15:51	Rosalyn Ballman	2080130
EPA 365.1 Rev. 2.0 dissolved	04/23/2019			04/23/2019 16:06	Jhamieka S. Greenwood	2080134
	04/23/2019			04/23/2019 16:14	Jhamieka S. Greenwood	2080132
	04/23/2019			04/23/2019 16:15	Jhamieka S. Greenwood	2080133
	04/23/2019			04/23/2019 16:16	Jhamieka S. Greenwood	2080135
EPA 8321B	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 06:39	Rebecca Ware	2080156
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 07:26	Rebecca Ware	2080157
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 07:38	Rebecca Ware	2080158
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 07:50	Rebecca Ware	2080159
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 08:02	Rebecca Ware	2080160
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 08:13	Rebecca Ware	2080161
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 08:25	Rebecca Ware	2080162
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 08:37	Rebecca Ware	2080163
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 11:55	Rebecca Ware	2080156
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 13:24	Rebecca Ware	2080157
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 13:38	Rebecca Ware	2080158
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 13:52	Rebecca Ware	2080159
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 14:06	Rebecca Ware	2080160
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 14:20	Rebecca Ware	2080161
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 14:33	Rebecca Ware	2080162

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 14:47	Rebecca Ware	2080163
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 18:00	Rebecca Ware	2080156
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 18:33	Rebecca Ware	2080157
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 18:41	Rebecca Ware	2080158
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 18:49	Rebecca Ware	2080159
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 18:57	Rebecca Ware	2080160
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 19:06	Rebecca Ware	2080161
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 19:14	Rebecca Ware	2080162
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 19:22	Rebecca Ware	2080163
	04/23/2019	04/29/2019 07:50	Hoor Shaik	05/02/2019 08:07	Juyoung Kim	2080158
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 08:42	Juyoung Kim	2080159
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 09:17	Juyoung Kim	2080160
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 11:00	Juyoung Kim	2080161
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 11:35	Juyoung Kim	2080162
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 12:10	Juyoung Kim	2080163
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/04/2019 00:40	Juyoung Kim	2080161
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/04/2019 01:14	Juyoung Kim	2080162
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/04/2019 01:49	Juyoung Kim	2080163
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/15/2019 04:47	Juyoung Kim	2080156
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/15/2019 05:22	Juyoung Kim	2080157
SM 2120 B	04/23/2019			04/23/2019 16:19	Mariam Hanna	2080124
	04/23/2019			04/23/2019 16:20	Mariam Hanna	2080125
	04/23/2019			04/23/2019 16:21	Mariam Hanna	2080126, 2080127
SM 2320 B-97	04/23/2019			05/01/2019 23:59	Dale L. Simmons	2080126
	04/23/2019			05/02/2019 00:12	Dale L. Simmons	2080124
	04/23/2019			05/02/2019 00:25	Dale L. Simmons	2080125
	04/23/2019			05/02/2019 02:00	Dale L. Simmons	2080127
SM 2540 C-97	04/23/2019			04/24/2019 15:30	Yijie Li	2080124, 2080125, 2080126, 2080127
SM 2540 D-97	04/23/2019			04/24/2019 15:30	Yijie Li	2080124, 2080125, 2080126, 2080127
SM 4500 F-C-97	04/23/2019			05/01/2019 23:59	Dale L. Simmons	2080126
	04/23/2019			05/02/2019 00:12	Dale L. Simmons	2080124
	04/23/2019			05/02/2019 00:25	Dale L. Simmons	2080125
	04/23/2019			05/02/2019 02:00	Dale L. Simmons	2080127
SM 5310 B-00	04/23/2019			04/26/2019 01:27	Julia Storbeck	2080128
	04/23/2019			04/26/2019 01:40	Julia Storbeck	2080129
	04/23/2019			04/26/2019 02:16	Julia Storbeck	2080130
	04/23/2019			04/26/2019 02:28	Julia Storbeck	2080131