

Chemical Analysis Report

WQAP-2017-09-25-01

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

Event Description: **SMP 2017 kit A-b/t/m PCR-FILTER & PCR-HF183
(3603_Boggy, 3389_Sugar, 3480_Bethel)**
Request ID: **RQ-2017-09-25-25**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
MS #3560
Tallahassee, FL 32399-2400
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 17-OCT-2017 15:26



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 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: SUGAR CRK @ SUWANNEE RIVER

Collection Date/Time: 09/25/2017 11:45

Field ID: G1TLHR0047-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931251	EPA 180.1 Rev. 2.0	Turbidity	4.2	A	NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P332302	
	SM 2120 B	Color (true)	130	A	PCU	P332276	
	SM 2320 B-97	Total Alkalinity	47		mg CaCO3/L	P332630	
	SM 2540 C-97	TDS	121	A	mg/L	P332560	
	SM 2540 D-97	TSS	3	IA	mg/L	P332586	
	SM 4500 F-C-97	Fluoride	0.50		mg F/L	P332634	
1931255	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P332537	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P332361	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P332606	
	EPA 365.1 Rev. 2.0	Total-P	0.93		mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P332408	
1931259	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.85		mg P/L	P332271	
1931275	EPA 8321B	Sucralose**	0.037	I	ug/L	P332225	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332226	
		Diuron	0.0051		ug/L	P332226	
		Fenuron	0.0080	U	ug/L	P332226	
		Imidacloprid	0.016		ug/L	P332226	
		Bentazon	8.0E-04	U	ug/L	P332226	MS
		Linuron	0.0040	U	ug/L	P332226	
		Acetaminophen**	0.0080	U	ug/L	P332226	
		MCP	0.0020	U	ug/L	P332226	
		Carbamazepine**	4.0E-04	U	ug/L	P332226	
		Triclopyr**	0.0040	U	ug/L	P332226	
		Primidone**	0.0040	U	ug/L	P332226	
		Fluridone**	4.0E-04	U	ug/L	P332226	

Ref. Method and Comment:

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

USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: BETHEL CRK @ MILL CRK

Collection Date/Time: 09/25/2017 13:00

Field ID: G1TLHR0062-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931252	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P332302	
	SM 2120 B	Color (true)	880		PCU	P332276	
	SM 2320 B-97	Total Alkalinity	31		mg CaCO3/L	P332630	
	SM 2540 C-97	TDS	172		mg/L	P332560	
	SM 2540 D-97	TSS	3	I	mg/L	P332586	
	SM 4500 F-C-97	Fluoride	0.056	I	mg F/L	P332634	
1931256	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P332537	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P333127	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P332606	

Field ID: G1TLHR0062-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931256	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	61		mg C/L	P332408	
1931260	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P332271	
1931276	EPA 8321B	Sucralose**	0.010	U	ug/L	P332225	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332226	
		Diuron	8.0E-04	U	ug/L	P332226	
		Fenuron	0.0080	U	ug/L	P332226	
		Imidacloprid	8.0E-04	U	ug/L	P332226	
		Bentazon	8.0E-04	U	ug/L	P332226	MS
		Linuron	0.0040	U	ug/L	P332226	
		Acetaminophen**	0.0080	U	ug/L	P332226	
		MCP	0.0020	U	ug/L	P332226	
		Carbamazepine**	4.0E-04	U	ug/L	P332226	
		Triclopyr**	0.0040	U	ug/L	P332226	
		Primidone**	0.0040	U	ug/L	P332226	
		Fluridone**	4.0E-04	U	ug/L	P332226	

Ref. Method and Comment:

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

USGS O-2060-01: Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample. Results confirmed in re-extraction.

Sample Location: BETHEL CRK @ MILL CRK DUPE

Collection Date/Time: 09/25/2017 13:15

Field ID: G1TLHR0062-2017-02 DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931253	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P332302	
	SM 2120 B	Color (true)	890		PCU	P332276	
	SM 2320 B-97	Total Alkalinity	31		mg CaCO3/L	P332631	
	SM 2540 C-97	TDS	171		mg/L	P332560	
	SM 2540 D-97	TSS	3	I	mg/L	P332586	
	SM 4500 F-C-97	Fluoride	0.056	I	mg F/L	P332635	
1931257	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P332537	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P333127	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P332606	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	61		mg C/L	P332408	
1931261	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P332271	
1931277	EPA 8321B	Sucralose**	0.010	U	ug/L	P332225	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332226	
		Diuron	8.0E-04	U	ug/L	P332226	
		Fenuron	0.0080	U	ug/L	P332226	
		Imidacloprid	8.0E-04	U	ug/L	P332226	
		Bentazon	8.0E-04	U	ug/L	P332226	MS
		Linuron	0.0040	U	ug/L	P332226	

Field ID: G1TLHR0062-2017-02 DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931277	USGS O-2060-01	Acetaminophen**	0.0080	U	ug/L	P332226	
		MCP	0.0020	U	ug/L	P332226	
		Carbamazepine**	4.0E-04	U	ug/L	P332226	
		Triclopyr**	0.0040	U	ug/L	P332226	
		Primidone**	0.0040	U	ug/L	P332226	
		Fluridone**	4.0E-04	U	ug/L	P332226	

Ref. Method and Comment:

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

USGS O-2060-01: Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample. Results confirmed in re-extraction.

Sample Location: FIELD BLANK #5 (BETHAL CRK @ MILL CRK) Collection Date/Time: 09/25/2017 13:19

Field ID: FIELD BLANK #5 (BETHAL CRK @ M

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931254	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P332302	
	SM 2120 B	Color (true)	2.5	U	PCU	P332279	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P332631	
	SM 2540 C-97	TDS	15	U	mg/L	P332559	
	SM 2540 D-97	TSS	2	U	mg/L	P332584	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P332635	
1931258	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P332537	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P332973	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332606	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P332408	
1931262	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332271	
1931278	EPA 8321B	Sucralose**	0.010	U	ug/L	P332225	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332226	
		Diuron	8.0E-04	U	ug/L	P332226	
		Fenuron	0.0080	U	ug/L	P332226	
		Imidacloprid	8.0E-04	U	ug/L	P332226	
		Bentazon	8.0E-04	U	ug/L	P332226	MS
		Linuron	0.0040	U	ug/L	P332226	
		Acetaminophen**	0.0080	U	ug/L	P332226	
		MCP	0.0020	U	ug/L	P332226	
		Carbamazepine**	4.0E-04	U	ug/L	P332226	
		Triclopyr**	0.0040	U	ug/L	P332226	
		Primidone**	0.0040	U	ug/L	P332226	
		Fluridone**	4.0E-04	U	ug/L	P332226	

Ref. Method and Comment:

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

USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P332253

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332302

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332537

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332361

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332973

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333127

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332606

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P332225

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P332276

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P332279

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P332630

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

Reference Method: SM 2320 B-97
Batch ID: P332631

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

Reference Method: SM 2540 C-97
Batch ID: P332559

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P332560

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332584

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332586

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P332634

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P332635

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P332408

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

Reference Method: USGS O-2060-01
Batch ID: P332226

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	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332537

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332361

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332973

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: P333127

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.0		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P332225

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	105		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P332630

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P332631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P332634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P332635

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

Reference Method: SM 5310 B-00
Batch ID: P332408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P332226

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.9		P	40 - 150
Acetaminophen	139		P	30 - 150
Bentazon	47.7		P	40 - 150
Carbamazepine	118		P	40 - 150
Diuron	102		P	40 - 150
Fenuron	109		P	40 - 150
Fluridone	120		P	40 - 150
Imidacloprid	97.8		P	40 - 160
Linuron	106		P	40 - 150
MCP	79.1		P	40 - 150
Primidone	100		P	40 - 150
Triclopyr	72.5		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930998	Chloride	95.6		P	90 - 110
1930999	Chloride	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931255	Ammonia-N	100	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332361

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931241	Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332973

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932846	Kjeldahl Nitrogen	101	94.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934448	Kjeldahl Nitrogen	95.8	93.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931186	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931320	Total-P	97.1	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931323	O-Phosphate-P	95.4	96.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P332225

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931706	Sucralose	40.2	42.5	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P332634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931817	Fluoride	97.2	98.4	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P332635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931611	Fluoride	95.8	96.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P332408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931188	Organic Carbon	94.1	94.2	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P332226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931706	2,4-D	61.9	64.6	P/P	40 - 150
1931706	Acetaminophen	88.5	88.5	P/P	30 - 150
1931706	Bentazon	23.7	24.1	F/F	40 - 150
1931706	Carbamazepine	92.7	89.6	P/P	40 - 150
1931706	Diuron	72.1	73.7	P/P	40 - 150
1931706	Fenuron	90.0	87.9	P/P	40 - 150
1931706	Fluridone	50.4	43.2	P/P	40 - 150
1931706	Linuron	87.8	90.6	P/P	40 - 150
1931706	MCPD	64.9	65.0	P/P	40 - 150
1931706	Primidone	103	102	P/P	40 - 150
1931706	Triclopyr	55.0	54.9	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P332253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931251	Turbidity	1.44	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P332302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930998	Chloride	1.93	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P332537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931255	Ammonia-N	0.578	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P332361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931241	Kjeldahl Nitrogen	0.633	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P332973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932846	Kjeldahl Nitrogen	3.81	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934448	Kjeldahl Nitrogen	1.32	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931186	NO2NO3-N	0.763	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931320	Total-P	1.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931323	O-Phosphate-P	0.939	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P332225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931706	Sucralose	0.847	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P332276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931251	Color (true)	4.12	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P332279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931543	Color (true)	1.22	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P332630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931817	Total Alkalinity	0.414	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P332631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931611	Total Alkalinity	0.333	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P332559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930888	TDS	6.26	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P332560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931251	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P332634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931817	Fluoride	0.990	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P332635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931611	Fluoride	0.495	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P332408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931188	Organic Carbon	0.0262	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P332226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931706	2,4-D	3.03	Spike	P	0 - 30
1931706	Acetaminophen	0.0452	Spike	P	0 - 30
1931706	Bentazon	0.719	Spike	P	0 - 30
1931706	Carbamazepine	3.23	Spike	P	0 - 30
1931706	Diuron	2.08	Spike	P	0 - 30
1931706	Fenuron	2.43	Spike	P	0 - 30
1931706	Fluridone	10.3	Spike	P	0 - 30
1931706	Imidacloprid	4.13	Spike	P	0 - 30
1931706	Linuron	3.12	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P332226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931706	MCP	0.154	Spike	P	0 - 30
1931706	Primidone	0.775	Spike	P	0 - 30
1931706	Triclopyr	0.255	Spike	P	0 - 30

* 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: 1931275
Field Sample ID: G1TLHR0047-2017-02

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	78.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.2	P	30 - 160
EPA 8321B	Diuron-d6	66.1	P	30 - 160
EPA 8321B	Primidone-d5	98.4	P	30 - 160
EPA 8321B	Sucralose-d6	80.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	63.1	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	78.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	93.2	P	30 - 160
USGS O-2060-01	Diuron-d6	66.1	P	30 - 160
USGS O-2060-01	Primidone-d5	98.4	P	30 - 160
USGS O-2060-01	Sucralose-d6	80.8	P	40 - 160

Lab Sample ID: 1931276
Field Sample ID: G1TLHR0062-2017-02

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	129	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.0	P	30 - 160
EPA 8321B	Diuron-d6	72.5	P	30 - 160
EPA 8321B	Primidone-d5	93.5	P	30 - 160
EPA 8321B	Sucralose-d6	49.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	74.6	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	129	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	92.0	P	30 - 160
USGS O-2060-01	Diuron-d6	72.5	P	30 - 160
USGS O-2060-01	Primidone-d5	93.5	P	30 - 160
USGS O-2060-01	Sucralose-d6	49.8	P	40 - 160

Lab Sample ID: 1931277
Field Sample ID: G1TLHR0062-2017-02 DUPE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.1	P	30 - 160
EPA 8321B	Diuron-d6	63.7	P	30 - 160
EPA 8321B	Primidone-d5	89.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1931277

Field Sample ID: G1TLHR0062-2017-02 DUPE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	41.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	68.5	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	124	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	82.1	P	30 - 160
USGS O-2060-01	Diuron-d6	63.7	P	30 - 160
USGS O-2060-01	Primidone-d5	89.1	P	30 - 160
USGS O-2060-01	Sucralose-d6	41.7	P	40 - 160

Lab Sample ID: 1931278

Field Sample ID: FIELD BLANK #5 (BETHAL CRK @ M

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	126	P	30 - 160
EPA 8321B	Carbamazepine-d10	110	P	30 - 160
EPA 8321B	Diuron-d6	90.2	P	30 - 160
EPA 8321B	Primidone-d5	97.6	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	40 - 160
USGS O-2060-01	2,4-D-d3	65.6	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	126	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	110	P	30 - 160
USGS O-2060-01	Diuron-d6	90.2	P	30 - 160
USGS O-2060-01	Primidone-d5	97.6	P	30 - 160
USGS O-2060-01	Sucralose-d6	112	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A79147

Included Lab Sample IDs: 1931251, 1931252, 1931253, 1931254

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A79162

Included Lab Sample IDs: 1931251, 1931252, 1931253, 1931254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A79167

Included Lab Sample IDs: 1931259, 1931260, 1931261, 1931262

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A79170

Included Lab Sample IDs: 1931251, 1931252, 1931253, 1931254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	101	P/P	90 - 115
Color (true)	97.9	99.3	P/P	85 - 115

Reference Method: SM 5310 B-00

Run ID: A79215

Included Lab Sample IDs: 1931255, 1931256, 1931257, 1931258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.4	94.2	P/P	90 - 110
Organic Carbon	94.2	93.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79232

Included Lab Sample IDs: 1931255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.4	98.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79256

Included Lab Sample IDs: 1931276, 1931277, 1931278

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	112	96.8	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79267

Included Lab Sample IDs: 1931255, 1931256, 1931257, 1931258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.8	P/P	90 - 110
Ammonia-N	99.1	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79287

Included Lab Sample IDs: 1931255

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79298

Included Lab Sample IDs: 1931255, 1931256, 1931257, 1931258

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79299

Included Lab Sample IDs: 1931256, 1931257, 1931258

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

Reference Method: SM 2320 B-97

Run ID: A79305

Included Lab Sample IDs: 1931251, 1931252, 1931253, 1931254

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

Reference Method: SM 4500 F-C-97

Run ID: A79305

Included Lab Sample IDs: 1931251, 1931252, 1931253, 1931254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	99.1	P/P	90 - 110
Fluoride	99.1	99.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79376

Included Lab Sample IDs: 1931275, 1931276, 1931277, 1931278

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.8	93.1	P/P	50 - 150
2,4-D	92.4	89.8	P/P	50 - 150
Acetaminophen	102	103	P/P	60 - 150
Acetaminophen	103	107	P/P	60 - 150
Bentazon	100	96.2	P/P	50 - 150
Bentazon	96.2	96.1	P/P	50 - 150
Carbamazepine	106	109	P/P	60 - 150
Carbamazepine	109	106	P/P	60 - 150
Diuron	102	111	P/P	60 - 150
Diuron	107	102	P/P	60 - 150
Fenuron	101	101	P/P	60 - 150
Fenuron	102	101	P/P	60 - 150
Fluridone	119	121	P/P	60 - 160
Fluridone	121	117	P/P	60 - 160
Imidacloprid	100	93.8	P/P	60 - 150
Imidacloprid	93.8	100	P/P	60 - 150
Linuron	103	112	P/P	60 - 150
Linuron	96.1	103	P/P	60 - 150
MCPP	106	98.3	P/P	50 - 150
MCPP	98.3	97.0	P/P	50 - 150
Primidone	107	94.0	P/P	60 - 150
Primidone	94.0	108	P/P	60 - 150
Triclopyr	102	105	P/P	50 - 150
Triclopyr	105	97.3	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A79451
Included Lab Sample IDs: 1931275

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	90.6	81.6	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A79459
Included Lab Sample IDs: 1931258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A79520
Included Lab Sample IDs: 1931256, 1931257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	97.3	P/P	90 - 110
Kjeldahl Nitrogen	95.0	102	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					1.44	
EPA 300.0 Rev. 2.1	Chloride	98.8	95.6	95.8		1.93	
EPA 350.1 Rev. 2.0	Ammonia-N	101	100	99.8			0.578
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	102	101			0.633
	Kjeldahl Nitrogen	102	101	94.2			3.81
	Kjeldahl Nitrogen	98.5	95.8	93.5			1.32
EPA 353.2 Rev. 2.0	NO2NO3-N	105	104	105			0.763
EPA 365.1 Rev. 2.0	Total-P	98.1	97.1	98.1			1.00
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.0	95.4	96.3			0.939
EPA 8321B	Sucralose	105	40.2	42.5			0.847
SM 2120 B	Color (true)					4.12	
	Color (true)					1.22	
SM 2320 B-97	Total Alkalinity	101				0.414	
	Total Alkalinity	102				0.333	
SM 2540 C-97	TDS					6.26	
	TDS					3.31	
SM 4500 F-C-97	Fluoride	96.7	97.2	98.4			0.990
	Fluoride	97.2	95.8	96.3			0.495
SM 5310 B-00	Organic Carbon	94.8	94.1	94.2			0.0262
USGS O-2060-01	2,4-D	71.9	61.9	64.6			3.03
	Acetaminophen	139	88.5	88.5			0.0452
	Bentazon	47.7	23.7	24.1			0.719
	Carbamazepine	118	92.7	89.6			3.23
	Diuron	102	72.1	73.7			2.08

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
USGS O-2060-01	Fenuron	109	90.0	87.9			2.43
	Fluridone	120	50.4	43.2			10.3
	Imidacloprid	97.8					4.13
	Linuron	106	87.8	90.6			3.12
	MCP	79.1	64.9	65.0			0.154
	Primidone	100	103	102			0.775
	Triclopyr	72.5	55.0	54.9			0.255

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1931251, 1931252, 1931253, 1931254
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1931251, 1931252, 1931253, 1931254
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1931255, 1931256, 1931257, 1931258
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1931255, 1931256, 1931257, 1931258
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1931255, 1931256, 1931257, 1931258
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1931255, 1931256, 1931257, 1931258
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1931259, 1931260, 1931261, 1931262
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1931275, 1931276, 1931277, 1931278
SM 2120 B / E31780	True Color measured at 450 nm	1931251, 1931252, 1931253, 1931254
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1931251, 1931252, 1931253, 1931254
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1931251, 1931252, 1931253, 1931254
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1931251, 1931252, 1931253, 1931254
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1931251, 1931252, 1931253, 1931254
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1931255, 1931256, 1931257, 1931258
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1931275, 1931276, 1931277, 1931278
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1931275, 1931276, 1931277, 1931278

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	09/25/2017			09/26/2017 15:39	Tanya Welborn	1931251, 1931252, 1931253, 1931254
EPA 300.0 Rev. 2.1	09/25/2017			09/26/2017	Julia Storbeck	1931251, 1931252, 1931253, 1931254
EPA 350.1 Rev. 2.0	09/25/2017			09/29/2017	Sofia Elnemr	1931255, 1931256, 1931257, 1931258
EPA 351.2 Rev. 2.0	09/25/2017	09/28/2017	Sofia Elnemr	09/29/2017	Joseph Suarez	1931255
	09/25/2017	10/09/2017	Virginia P. Brown	10/10/2017	Virginia P. Brown	1931258
	09/25/2017	10/11/2017	Adrian Shelby	10/12/2017	Joseph Suarez	1931256, 1931257
EPA 353.2 Rev. 2.0	09/25/2017			10/03/2017	Beverly Y. Sanders	1931255, 1931256, 1931257, 1931258
EPA 365.1 Rev. 2.0	09/25/2017	09/28/2017	Sima Feizi	10/02/2017	Lipi Saha	1931255
	09/25/2017	09/28/2017	Sima Feizi	10/03/2017	Lipi Saha	1931256, 1931257, 1931258
EPA 365.1 Rev. 2.0 dissolved	09/25/2017			09/26/2017 15:02	Megan Treadwell	1931259
	09/25/2017			09/26/2017 15:03	Megan Treadwell	1931260
	09/25/2017			09/26/2017 15:04	Megan Treadwell	1931261
	09/25/2017			09/26/2017 15:05	Megan Treadwell	1931262
EPA 8321B	09/25/2017	09/29/2017	Hoor Shaik	09/30/2017	Mohammad Ghaffari	1931276, 1931277, 1931278
	09/25/2017	09/29/2017	Hoor Shaik	10/09/2017	Juyoung Kim	1931275
SM 2120 B	09/25/2017			09/26/2017 15:24	DeAsia Armster	1931251
	09/25/2017			09/26/2017 15:58	DeAsia Armster	1931252
	09/25/2017			09/26/2017 15:59	DeAsia Armster	1931253
	09/25/2017			09/26/2017 16:03	DeAsia Armster	1931254
SM 2320 B-97	09/25/2017			10/02/2017	Dale L. Simmons	1931251, 1931252, 1931253, 1931254
SM 2540 C-97	09/25/2017			09/27/2017	Yijie Li	1931251, 1931252, 1931253, 1931254
SM 2540 D-97	09/25/2017			09/27/2017	Yijie Li	1931251, 1931252, 1931253, 1931254
SM 4500 F-C-97	09/25/2017			10/02/2017	Dale L. Simmons	1931251, 1931252, 1931253, 1931254
SM 5310 B-00	09/25/2017			09/28/2017	Ping Hua	1931255, 1931256, 1931257, 1931258
USGS O-2060-01	09/25/2017	09/29/2017	Hoor Shaik	10/03/2017	Julie Michelle Frank	1931275, 1931276, 1931277, 1931278