

Chemical Analysis Report

WQAP-2017-07-07-01

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

Event Description: **run 10**
Request ID: **RQ-2017-07-03-14**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Tampa, FL 33637
Attn: Judy Ashton

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 28-JUL-2017 13:46

A handwritten signature in black ink, appearing to read "Colin Wright", is positioned on a light gray rectangular background.

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: Clam Bayou

Collection Date/Time: 07/06/2017 09:55

Field ID: G5SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911729	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P328131	
	SM 2320 B-97	Total Alkalinity	96	A	mg CaCO3/L	P328319	
	SM 2540 D-97	TSS	4	I	mg/L	P328654	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P328323	
1911732	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P328408	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P328479	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P328336	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P328259	
	SM 5310 B-00	Organic Carbon	7.5		mg C/L	P328791	
1911735	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.083		mg P/L	P328125	

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: Clam Bayou

Collection Date/Time: 07/06/2017 09:55

Field ID: G5SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911755	EPA 8321B	Sucralose**	0.15		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.042		ug/L	P328267	
		Diuron	0.016		ug/L	P328267	
		Fenuron	0.0080	U	ug/L	P328267	
		Imidacloprid	0.026		ug/L	P328267	
		Bentazon	0.0025	I	ug/L	P328267	
		Linuron	0.0040	U	ug/L	P328267	
		Acetaminophen**	0.0080	U	ug/L	P328267	
		MCP	0.0083		ug/L	P328267	
		Carbamazepine**	4.0E-04	U	ug/L	P328267	
		Triclopyr**	0.0040	U	ug/L	P328267	
		Primidone**	0.0040	U	ug/L	P328267	
		Fluridone**	0.0088		ug/L	P328267	

Ref. Method and Comment:

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

Sample Location: PP Ditch # 1

Collection Date/Time: 07/06/2017 10:45

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911730	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P328131	
	SM 2320 B-97	Total Alkalinity	138		mg CaCO3/L	P328319	
	SM 2540 D-97	TSS	4	I	mg/L	P328654	
	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P328323	
1911733	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P328409	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P328481	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036		mg N/L	P328336	

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911733	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P328259	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P328791	
1911736	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.057		mg P/L	P328126	

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: PP Ditch # 1

Collection Date/Time: 07/06/2017 10:45

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911756	EPA 8321B	Sucralose**	1.5		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.35		ug/L	P328373	
		Diuron	0.033		ug/L	P328267	
		Fenuron	0.0080	U	ug/L	P328267	
		Imidacloprid	0.073		ug/L	P328267	
		Bentazon	0.063		ug/L	P328267	
		Linuron	0.0040	U	ug/L	P328267	
		Acetaminophen**	0.0080	U	ug/L	P328267	
		MCP	0.0068	I	ug/L	P328267	
		Carbamazepine**	0.0030		ug/L	P328267	
		Triclopyr**	0.0040	U	ug/L	P328267	
		Primidone**	0.0088	I	ug/L	P328267	
		Fluridone**	0.032		ug/L	P328267	

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

Sample Location: McKay Tidal

Collection Date/Time: 07/06/2017 11:25

Field ID: G5SW0126

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911757	EPA 8321B	Sucralose**	1.3		ug/L	P327821	
	USGS O-2060-01	2,4-D	1.2		ug/L	P328373	
		Diuron	0.045		ug/L	P328267	
		Fenuron	0.0080	U	ug/L	P328267	
		Imidacloprid	0.028		ug/L	P328267	
		Bentazon	0.060		ug/L	P328267	
		Linuron	0.0040	U	ug/L	P328267	
		Acetaminophen**	0.0080	U	ug/L	P328267	
		MCP	0.0046	I	ug/L	P328267	
		Carbamazepine**	0.0035		ug/L	P328267	
		Triclopyr**	0.0040	U	ug/L	P328267	
		Primidone**	0.0054	I	ug/L	P328267	
		Fluridone**	0.055		ug/L	P328267	

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

Sample Location: Alligator Crk

Collection Date/Time: 07/06/2017 12:05

Field ID: G1SW0062

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911758	EPA 8321B	Sucralose**	1.0		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.015		ug/L	P328267	
		Diuron	0.010		ug/L	P328267	
		Fenuron	0.0080	U	ug/L	P328267	
		Imidacloprid	0.087		ug/L	P328267	
		Bentazon	0.025		ug/L	P328267	
		Linuron	0.0040	U	ug/L	P328267	
		Acetaminophen**	0.0080	U	ug/L	P328267	
		MCP	0.0061	I	ug/L	P328267	
		Carbamazepine**	0.0013	I	ug/L	P328267	
		Triclopyr**	0.0040	U	ug/L	P328267	
		Primidone**	0.0040	U	ug/L	P328267	
		Fluridone**	0.19		ug/L	P328267	

Ref. Method and Comment:

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

Sample Location: Mullet Crk Tidal

Collection Date/Time: 07/06/2017 12:35

Field ID: G5SW0055

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911759	EPA 8321B	Sucralose**	1.7		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.034		ug/L	P328267	
		Diuron	0.0061		ug/L	P328267	
		Fenuron	0.0080	U	ug/L	P328267	
		Imidacloprid	0.15		ug/L	P328267	
		Bentazon	0.10		ug/L	P328267	
		Linuron	0.0040	U	ug/L	P328267	
		Acetaminophen**	0.0080	U	ug/L	P328267	
		MCP	0.035		ug/L	P328267	
		Carbamazepine**	0.0017		ug/L	P328267	
		Triclopyr**	0.0040	U	ug/L	P328267	
		Primidone**	0.0040	U	ug/L	P328267	
		Fluridone**	0.046		ug/L	P328267	

Ref. Method and Comment:

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

Sample Location: Mullet Crk Tidal

Collection Date/Time: 07/06/2017 12:35

Field ID: G5SW0055

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911731	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P328131	
	SM 2320 B-97	Total Alkalinity	101		mg CaCO3/L	P328319	
	SM 2540 D-97	TSS	3	IA	mg/L	P328654	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P328323	

Field ID: G5SW0055

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911734	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P328222	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P328343	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P328492	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P328444	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P328791	
1911737	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.081		mg P/L	P328126	

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P328131

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P328222

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P328408

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P328409

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P328343

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P328479

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P328481

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328336

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328492

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328259

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328444

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328125

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328126

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

Reference Method: EPA 8321B
Batch ID: P327821

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P328319

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

Reference Method: SM 2540 D-97
Batch ID: P328654

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P328323

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P328791

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

Reference Method: USGS O-2060-01
Batch ID: P328267

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
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P328373

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328408

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328409

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328343

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328479

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328481

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328336

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328492

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: P328259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328444

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	94.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328126

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P327821

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	85.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P328319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P328323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P328791

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P328267

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	114		P	40 - 150
Acetaminophen	126		P	30 - 150
Bentazon	94.3		P	40 - 150
Carbamazepine	125		P	40 - 150
Diuron	128		P	40 - 150
Fenuron	128		P	40 - 150
Fluridone	127		P	40 - 150
Imidacloprid	118		P	40 - 160
Linuron	129		P	40 - 150
MCPP	109		P	40 - 150
Primidone	117		P	40 - 150
Triclopyr	115		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P328373

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911734	Ammonia-N	98.6	97.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911663	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911814	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911302	Kjeldahl Nitrogen	102	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911703	Kjeldahl Nitrogen	96.9	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911994	Kjeldahl Nitrogen	101	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911704	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911734	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911774	Total-P	101	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911990	Total-P	91.8	90.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911735	O-Phosphate-P	98.8	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328126

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911736	O-Phosphate-P	96.1	93.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P327821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910706	Sucralose	75.8	87.2	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P328323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911729	Fluoride	98.7	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P328791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911705	Organic Carbon	100		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P328267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911688	2,4-D	125	110	P/P	40 - 150
1911688	Acetaminophen	114	96.4	P/P	30 - 150
1911688	Bentazon	71.5	86.8	P/P	40 - 150
1911688	Diuron	92.5	97.0	P/P	40 - 150
1911688	Fenuron	99.9	88.6	P/P	40 - 150
1911688	Fluridone	78.1	75.8	P/P	40 - 150
1911688	Linuron	127	127	P/P	40 - 150
1911688	MCP	133	120	P/P	40 - 150
1911688	Primidone	129	118	P/P	40 - 150
1911688	Triclopyr	115	107	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P328373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912651	2,4-D	101	114	P/P	40 - 150

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P328131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911661	Turbidity	0.769	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911734	Ammonia-N	0.927	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911663	Ammonia-N	0.515	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911814	Ammonia-N	1.31	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911302	Kjeldahl Nitrogen	2.24	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911703	Kjeldahl Nitrogen	0.474	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911994	Kjeldahl Nitrogen	1.54	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911704	NO2NO3-N	0.368	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911734	NO2NO3-N	0.784	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911774	Total-P	3.39	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911990	Total-P	1.10	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911735	O-Phosphate-P	2.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911736	O-Phosphate-P	1.58	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P327821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910706	Sucralose	13.6	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P328319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911729	Total Alkalinity	0.157	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P328323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911729	Fluoride	0.979	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P328791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911705	Organic Carbon	0.122	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P328267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911688	2,4-D	11.4	Spike	P	0 - 30
1911688	Acetaminophen	17.0	Spike	P	0 - 30
1911688	Bentazon	16.1	Spike	P	0 - 30
1911688	Carbamazepine	8.58	Spike	P	0 - 30
1911688	Diuron	4.14	Spike	P	0 - 30
1911688	Fenuron	12.0	Spike	P	0 - 30
1911688	Fluridone	2.82	Spike	P	0 - 30
1911688	Imidacloprid	8.36	Spike	P	0 - 30
1911688	Linuron	0.567	Spike	P	0 - 30
1911688	MCP	10.2	Spike	P	0 - 30
1911688	Primidone	4.59	Spike	P	0 - 30
1911688	Triclopyr	7.43	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P328373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912651	2,4-D	6.78	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: 1911755
Field Sample ID: G5SW0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	114	P	40 - 160
USGS O-2060-01	2,4-D-d3	130	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	97.8	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	97.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	118	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	118	P	30 - 160
USGS O-2060-01	Diuron-d6	91.9	P	30 - 160
USGS O-2060-01	Diuron-d6	91.9	P	30 - 160
USGS O-2060-01	Primidone-d5	109	P	30 - 160
USGS O-2060-01	Primidone-d5	109	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1911756
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	86.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	121	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	85.4	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	85.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	105	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	105	P	30 - 160
USGS O-2060-01	Diuron-d6	66.8	P	30 - 160
USGS O-2060-01	Diuron-d6	66.8	P	30 - 160
USGS O-2060-01	Primidone-d5	85.2	P	30 - 160
USGS O-2060-01	Primidone-d5	85.2	P	30 - 160

Lab Sample ID: 1911757
Field Sample ID: G5SW0126

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	99.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	160	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	105	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	105	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	136	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	136	P	30 - 160
USGS O-2060-01	Diuron-d6	88.5	P	30 - 160
USGS O-2060-01	Diuron-d6	88.5	P	30 - 160
USGS O-2060-01	Primidone-d5	89.5	P	30 - 160
USGS O-2060-01	Primidone-d5	89.5	P	30 - 160

Lab Sample ID: 1911758
Field Sample ID: G1SW0062

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	95.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	123	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	86.7	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	86.7	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	105	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	105	P	30 - 160
USGS O-2060-01	Diuron-d6	71.3	P	30 - 160
USGS O-2060-01	Diuron-d6	71.3	P	30 - 160
USGS O-2060-01	Primidone-d5	90.3	P	30 - 160
USGS O-2060-01	Primidone-d5	90.3	P	30 - 160

Lab Sample ID: 1911759
Field Sample ID: G5SW0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	94.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	127	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	39.1	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	39.1	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	97.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	97.0	P	30 - 160
USGS O-2060-01	Diuron-d6	66.3	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1911759
Field Sample ID: G5SW0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Diuron-d6	66.3	P	30 - 160
USGS O-2060-01	Primidone-d5	90.0	P	30 - 160
USGS O-2060-01	Primidone-d5	90.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A77592
Included Lab Sample IDs: 1911735, 1911736, 1911737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.4	96.6	P/P	90 - 110
O-Phosphate-P	96.8	96.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A77595
Included Lab Sample IDs: 1911729, 1911730, 1911731

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A77630
Included Lab Sample IDs: 1911734

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.8	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A77651
Included Lab Sample IDs: 1911729, 1911730, 1911731

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

Reference Method: SM 4500 F-C-97
Run ID: A77651
Included Lab Sample IDs: 1911729, 1911730, 1911731

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	99.5	P/P	90 - 110
Fluoride	98.5	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A77655
Included Lab Sample IDs: 1911732, 1911733

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77670

Included Lab Sample IDs: 1911732, 1911733

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77680

Included Lab Sample IDs: 1911732, 1911733

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77696

Included Lab Sample IDs: 1911734

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.0	94.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77706

Included Lab Sample IDs: 1911734

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77707

Included Lab Sample IDs: 1911734

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77721

Included Lab Sample IDs: 1911732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.3	93.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77729

Included Lab Sample IDs: 1911733

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.9	93.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A77777

Included Lab Sample IDs: 1911755, 1911756, 1911757, 1911758, 1911759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	121	82.1	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A77777

Included Lab Sample IDs: 1911755, 1911756, 1911757, 1911758, 1911759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	82.1	118	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A77819

Included Lab Sample IDs: 1911732, 1911733, 1911734

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	97.4	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A77880

Included Lab Sample IDs: 1911755, 1911756, 1911757, 1911758, 1911759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	90.9	P/P	50 - 150
2,4-D	108	101	P/P	50 - 150
2,4-D	90.9	83.2	P/P	50 - 150
Acetaminophen	95.2	99.3	P/P	60 - 150
Acetaminophen	99.3	97.2	P/P	60 - 150
Bentazon	108	100	P/P	50 - 150
Bentazon	91.5	108	P/P	50 - 150
Carbamazepine	100	92.5	P/P	60 - 150
Carbamazepine	92.5	82.9	P/P	60 - 150
Diuron	91.9	81.9	P/P	60 - 150
Diuron	99.3	91.9	P/P	60 - 150
Fenuron	101	86.8	P/P	60 - 150
Fenuron	86.8	84.7	P/P	60 - 150
Fluridone	117	89.4	P/P	60 - 160
Fluridone	89.4	103	P/P	60 - 160
Imidacloprid	85.1	92.8	P/P	60 - 150
Imidacloprid	93.7	71.4	P/P	60 - 150
Linuron	110	93.8	P/P	60 - 150
Linuron	93.8	95.4	P/P	60 - 150
MCPP	93.1	93.5	P/P	50 - 150
MCPP	93.5	85.8	P/P	50 - 150
MCPP	96.7	93.5	P/P	50 - 150
Primidone	105	89.1	P/P	60 - 150
Primidone	89.1	69.6	P/P	60 - 150
Triclopyr	101	88.8	P/P	50 - 150
Triclopyr	90.2	84.7	P/P	50 - 150
Triclopyr	97.2	90.2	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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					0.769	
EPA 350.1 Rev. 2.0	Ammonia-N	98.7	98.6	97.1			0.927
	Ammonia-N	100	102	103			0.515
	Ammonia-N	102	101	103			1.31
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	102	99.8			2.24
	Kjeldahl Nitrogen	101	96.9	97.7			0.474
	Kjeldahl Nitrogen	105	101	99.3			1.54
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	101			0.368
	NO2NO3-N	102	104	103			0.784
EPA 365.1 Rev. 2.0	Total-P	99.4	101	95.9			3.39
	Total-P	98.7	91.8	90.8			1.10
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	94.9	98.8	95.0			2.11
	O-Phosphate-P	99.9	96.1	93.7			1.58
EPA 8321B	Sucralose	85.2	75.8	87.2			13.6
SM 2320 B-97	Total Alkalinity	105				0.157	
SM 4500 F-C-97	Fluoride	97.5	98.7	100			0.979
SM 5310 B-00	Organic Carbon	96.8	100				0.122
USGS O-2060-01	2,4-D	114	125	110			11.4
	2,4-D	97.2	101	114			6.78
	Acetaminophen	126	114	96.4			17.0
	Bentazon	94.3	71.5	86.8			16.1
	Carbamazepine	125					8.58
	Diuron	128	92.5	97.0			4.14
	Fenuron	128	99.9	88.6			12.0
	Fluridone	127	78.1	75.8			2.82
	Imidacloprid	118					8.36
	Linuron	129	127	127			0.567
	MCP	109	133	120			10.2
	Primidone	117	129	118			4.59
	Triclopyr	115	115	107			7.43

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1911729, 1911730, 1911731
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1911732, 1911733, 1911734
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1911732, 1911733, 1911734
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1911732, 1911733, 1911734
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1911732, 1911733, 1911734
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1911735, 1911736, 1911737
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1911755, 1911756, 1911757, 1911758, 1911759
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1911729, 1911730, 1911731
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1911729, 1911730, 1911731
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1911729, 1911730, 1911731
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1911732, 1911733, 1911734
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1911755, 1911756, 1911757, 1911758, 1911759

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1911755, 1911756, 1911757, 1911758, 1911759

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	07/07/2017			07/07/2017 15:38	DeAsia Armster	1911729, 1911730, 1911731
EPA 350.1 Rev. 2.0	07/07/2017			07/10/2017	Sofia Elnemr	1911734
	07/07/2017			07/12/2017	Sofia Elnemr	1911732, 1911733
EPA 351.2 Rev. 2.0	07/07/2017	07/12/2017	Adrian Shelby	07/13/2017	Joseph Suarez	1911734
	07/07/2017	07/13/2017	Adrian Shelby	07/14/2017	Joseph Suarez	1911732, 1911733
EPA 353.2 Rev. 2.0	07/07/2017			07/12/2017	Beverly Y. Sanders	1911732, 1911733
	07/07/2017			07/14/2017	Beverly Y. Sanders	1911734
EPA 365.1 Rev. 2.0	07/07/2017	07/11/2017	Vijayalakshmi Reddy	07/12/2017	Lipi Saha	1911732, 1911733
	07/07/2017	07/13/2017	Adrian Shelby	07/14/2017	Lipi Saha	1911734
EPA 365.1 Rev. 2.0 dissolved	07/07/2017			07/07/2017 13:15	Anthony C. Onicha	1911735
	07/07/2017			07/07/2017 13:19	Anthony C. Onicha	1911736
	07/07/2017			07/07/2017 13:52	Anthony C. Onicha	1911737
EPA 8321B	07/07/2017	07/13/2017	Mohammad Ghaffari	07/14/2017	Mohammad Ghaffari	1911755, 1911756, 1911757, 1911758, 1911759
SM 2320 B-97	07/07/2017			07/11/2017	Dale L. Simmons	1911729, 1911730, 1911731
SM 2540 D-97	07/07/2017			07/11/2017	Yijie Li	1911729, 1911730, 1911731
SM 4500 F-C-97	07/07/2017			07/11/2017	Dale L. Simmons	1911729, 1911730, 1911731
SM 5310 B-00	07/07/2017			07/18/2017	Sofia Elnemr	1911732, 1911733, 1911734
USGS O-2060-01	07/07/2017	07/12/2017	Hoor Shaik	07/20/2017	Juyoung Kim	1911755, 1911756, 1911757, 1911758, 1911759