

Chemical Analysis Report

SE-DIST-2017-08-10-01

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

Event Description: **SMP- G4 Dade Orange Run**
Request ID: **RQ-2017-07-17-12**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 06-SEP-2017 11:30



Case Narrative

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

Results for the following analytical groups are included in this report: Metals, 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: 1CWW @ South Shore Pelican Harbour

Collection Date/Time: 08/09/2017 10:25

Field ID: G4SE0099

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920651	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P330069	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P330297	
	SM 2540 D-97	TSS	4	I	mg/L	P330306	
	SM 4500 F-C-97	Fluoride	0.94		mg F/L	P330299	
1920653	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P330156	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P330186	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P330378	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P330113	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P330332	
1920655	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P330057	

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: 1CWW 79 St. Causeway East

Collection Date/Time: 08/09/2017 10:40

Field ID: 28040332

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920652	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P330069	
	SM 2320 B-97	Total Alkalinity	131		mg CaCO3/L	P330297	
	SM 2540 D-97	TSS	5	I	mg/L	P330306	
	SM 4500 F-C-97	Fluoride	0.94		mg F/L	P330299	
1920654	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P330156	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	I	mg N/L	P330186	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P330378	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P330113	
	SM 5310 B-00	Organic Carbon	3.7		mg C/L	P330332	
1920656	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P330057	

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: C-8/Biscayne Canal

Collection Date/Time: 08/09/2017 11:00

Field ID: G4SEBS04

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920642	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P330068	
	EPA 300.0 Rev. 2.1	Chloride	58		mg Cl/L	P330085	
		Sulfate	17		mg SO4/L	P330087	
	SM 2120 B	Color (true)	31		PCU	P330050	
	SM 2320 B-97	Total Alkalinity	199		mg CaCO3/L	P330296	
	SM 2540 C-97	TDS	340		mg/L	P330443	
	SM 2540 D-97	TSS	2	U	mg/L	P330303	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P330611	
1920644	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P330368	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P330128	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P330290	

Field ID: G4SEBS04

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920644	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P330211	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P330412	
1920646	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P330056	
1920679	EPA 8321B	Sucralose**	0.57		ug/L	P330674	
	USGS O-2060-01	2,4-D	0.016		ug/L	P330060	
		Diuron	0.0092		ug/L	P330060	
		Fenuron	0.0080	U	ug/L	P330060	
		Imidacloprid	0.012		ug/L	P330060	MS
		Bentazon	0.017		ug/L	P330060	
		Linuron	0.0040	U	ug/L	P330060	
		Acetaminophen**	0.0080	U	ug/L	P330060	
		MCP	0.0020	U	ug/L	P330060	
		Carbamazepine**	0.012		ug/L	P330060	
		Triclopyr**	0.0040	U	ug/L	P330060	
		Primidone**	0.0040	U	ug/L	P330060	
		Fluridone**	0.0030		ug/L	P330060	
1920688	EPA 200.7 Rev. 4.4	Calcium	81.3		mg/L	P330182	
		Iron	48	I	ug/L	P330182	
		Magnesium	6.05		mg/L	P330182	
		Potassium	2.8		mg/L	P330182	
		Sodium	37.9		mg/L	P330182	
		Zinc	5.0	U	ug/L	P330182	
	EPA 200.8 Rev. 5.4	Arsenic	1.35		ug/L	P330182	
		Cadmium	0.020	U	ug/L	P330182	
		Chromium	0.40	U	ug/L	P330182	
		Copper	0.73	I	ug/L	P330182	
		Lead	0.11	I	ug/L	P330182	
		Nickel	0.52	I	ug/L	P330182	
		Selenium	0.20	U	ug/L	P330182	
		Silver	0.010	U	ug/L	P330182	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS recoveries are not available due to technical difficulties.

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

Sample Location: C-8/Biscayne Canal

Collection Date/Time: 08/09/2017 11:10

Field ID: G4SEBS04_DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920643	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P330068	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P330085	
		Sulfate	17		mg SO4/L	P330087	
		Color (true)	32		PCU	P330050	
	SM 2320 B-97	Total Alkalinity	201		mg CaCO3/L	P330296	
	SM 2540 C-97	TDS	336		mg/L	P330443	

Field ID: G4SEBS04_DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920643	SM 2540 D-97	TSS	2	U	mg/L	P330303	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P330611	
1920645	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P330368	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P330128	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P330290	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P330211	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P330412	
1920647	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P330056	
1920680	EPA 8321B	Sucralose**	0.48		ug/L	P330674	
	USGS O-2060-01	2,4-D	0.017		ug/L	P330060	
		Diuron	0.0091		ug/L	P330060	
		Fenuron	0.0080	U	ug/L	P330060	
		Imidacloprid	0.012		ug/L	P330060	MS
		Bentazon	0.016		ug/L	P330060	
		Linuron	0.0040	U	ug/L	P330060	
		Acetaminophen**	0.0080	U	ug/L	P330060	
		MCP	0.0020	U	ug/L	P330060	
		Carbamazepine**	0.012		ug/L	P330060	
		Triclopyr**	0.0040	U	ug/L	P330060	
		Primidone**	0.0040	U	ug/L	P330060	
		Fluridone**	0.0031		ug/L	P330060	
1920689	EPA 200.7 Rev. 4.4	Calcium	80.0		mg/L	P330182	
		Iron	47	I	ug/L	P330182	
		Magnesium	5.73		mg/L	P330182	
		Potassium	2.8		mg/L	P330182	
		Sodium	35.7		mg/L	P330182	
		Zinc	5.0	U	ug/L	P330182	
	EPA 200.8 Rev. 5.4	Arsenic	1.34		ug/L	P330182	
		Cadmium	0.020	U	ug/L	P330182	
		Chromium	0.40	U	ug/L	P330182	
		Copper	0.71	I	ug/L	P330182	
		Lead	0.082	I	ug/L	P330182	
		Nickel	0.51	I	ug/L	P330182	
		Selenium	0.20	U	ug/L	P330182	
		Silver	0.010	U	ug/L	P330182	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS recoveries are not available due to technical difficulties.

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

Sample Location: Arch Creek (Upper Seg.)

Collection Date/Time: 08/09/2017 11:40

Field ID: 42009060

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920636	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P330068	

Field ID: 42009060

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920636	SM 2320 B-97	Total Alkalinity	200		mg CaCO3/L	P330297	
	SM 2540 D-97	TSS	4	IA	mg/L	P330306	
	SM 4500 F-C-97	Fluoride	0.49	I	mg F/L	P330299	
1920638	EPA 350.1 Rev. 2.0	Ammonia-N	0.61		mg N/L	P330156	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P330320	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P330378	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P330113	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P330560	
1920640	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P330057	
1920677	EPA 8321B	Sucralose**	0.63		ug/L	P330674	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P330060	
		Diuron	0.0043		ug/L	P330060	
		Fenuron	0.0080	U	ug/L	P330060	
		Imidacloprid	0.0011	I	ug/L	P330060	MS
		Bentazon	0.0020	I	ug/L	P330060	
		Linuron	0.0040	U	ug/L	P330060	
		Acetaminophen**	0.0080	U	ug/L	P330060	
		MCP	0.0020	U	ug/L	P330060	
		Carbamazepine**	0.010		ug/L	P330060	
		Triclopyr**	0.0040	U	ug/L	P330060	
		Primidone**	0.018		ug/L	P330060	
		Fluridone**	8.1E-04	I	ug/L	P330060	

Ref. Method and Comment:

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

EPA 8321B: MS recoveries are not available due to technical difficulties.

Sample Location: 1CWW(Miami-Dade Northern Seg.)

Collection Date/Time: 08/09/2017 12:05

Field ID: G4SE0063

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920648	EPA 180.1 Rev. 2.0	Turbidity	1.3	A	NTU	P330069	
	SM 2320 B-97	Total Alkalinity	188		mg CaCO3/L	P330192	
	SM 2540 D-97	TSS	2	I	mg/L	P330304	
	SM 4500 F-C-97	Fluoride	0.34		mg F/L	P330400	
1920649	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P330156	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P330186	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.097		mg N/L	P330378	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P330113	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P330412	
1920650	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P330057	
1920690	EPA 200.7 Rev. 4.4	Iron	140		ug/L	P330182	
		Zinc	5.0	U	ug/L	P330182	
	EPA 200.8 Rev. 5.4	Arsenic	1.43		ug/L	P330182	
		Cadmium	0.020	U	ug/L	P330182	
		Chromium	0.40	U	ug/L	P330182	

Field ID: G4SE0063

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920690	EPA 200.8 Rev. 5.4	Copper	0.69	I	ug/L	P330182	
		Lead	0.14	I	ug/L	P330182	
		Nickel	0.20	U	ug/L	P330182	
		Silver	0.010	U	ug/L	P330182	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Olea River (Upper Seg.)

Collection Date/Time: 08/09/2017 12:15

Field ID: 42009058

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1920637	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P330068	
	SM 2320 B-97	Total Alkalinity	182		mg CaCO3/L	P330192	
	SM 2540 D-97	TSS	2	IA	mg/L	P330303	
	SM 4500 F-C-97	Fluoride	0.39		mg F/L	P330400	
1920639	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P330156	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P330186	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P330378	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P330113	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P330412	
1920641	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P330057	
1920678	EPA 8321B	Sucralose**	0.12		ug/L	P330674	
	USGS O-2060-01	2,4-D	0.026		ug/L	P330060	
		Diuron	0.0031	I	ug/L	P330060	
		Fenuron	0.0080	U	ug/L	P330060	
		Imidacloprid	0.0049		ug/L	P330060	MS
		Bentazon	0.013		ug/L	P330060	
		Linuron	0.0040	U	ug/L	P330060	
		Acetaminophen**	0.0080	U	ug/L	P330060	
		MCP	0.0020	U	ug/L	P330060	
		Carbamazepine**	0.0011	I	ug/L	P330060	
		Triclopyr**	0.0040	U	ug/L	P330060	
		Primidone**	0.0040	U	ug/L	P330060	
		Fluridone**	0.0078		ug/L	P330060	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS recoveries are not available due to technical difficulties.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P330068

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330069

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330182

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330182

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330085

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330087

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330156

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330368

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330128

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330186

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330320

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330290

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330378

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330113

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330056

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330057

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: P330674

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P330050

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P330192

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

Reference Method: SM 2320 B-97
Batch ID: P330296

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

Reference Method: SM 2320 B-97
Batch ID: P330297

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

Reference Method: SM 2540 C-97
Batch ID: P330443

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330303

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330304

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330306

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P330299

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P330400

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P330611

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P330332

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

Reference Method: SM 5310 B-00
Batch ID: P330412

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

Reference Method: SM 5310 B-00
Batch ID: P330560

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

Reference Method: USGS O-2060-01
Batch ID: P330060

Component	Result	Code	Units
2,4-D	8.0E-04	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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	108		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	101		P	85 - 115
Sodium	99.6		P	85 - 115
Zinc	99.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	108		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	103		P	85 - 115
Copper	102		P	85 - 115
Lead	99.5		P	85 - 115
Nickel	105		P	85 - 115
Selenium	106		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330085

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330087

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330156

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: P330368

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330128

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330186

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: P330320

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330113

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330056

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330057

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

Reference Method: EPA 8321B
Batch ID: P330674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	90.3	92.2	P/P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P330192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P330296

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

Reference Method: SM 2320 B-97
Batch ID: P330297

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P330299

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P330400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P330611

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

Reference Method: SM 5310 B-00
Batch ID: P330332

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

Reference Method: SM 5310 B-00
Batch ID: P330412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.6		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P330560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P330060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	75.7		P	40 - 150
Acetaminophen	93.1		P	30 - 150
Bentazon	67.3		P	40 - 150
Carbamazepine	101		P	40 - 150
Diuron	96.6		P	40 - 150
Fenuron	89.9		P	40 - 150
Fluridone	86.6		P	40 - 150
Imidacloprid	69.0		P	40 - 160
Linuron	83.2		P	40 - 150
MCP	73.5		P	40 - 150
Primidone	85.1		P	40 - 150
Triclopyr	67.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920853	Calcium	103		P	80 - 120
1920853	Iron	107		P	80 - 120
1920853	Magnesium	106		P	80 - 120
1920853	Potassium	103		P	80 - 120
1920853	Sodium	99.5		P	80 - 120
1920853	Zinc	104		P	80 - 120
1920976	Calcium	102		P	80 - 120
1920976	Iron	102	104	P/P	80 - 120
1920976	Magnesium	100		P	80 - 120
1920976	Potassium	96.3	98.0	P/P	80 - 120
1920976	Sodium	99.5		P	80 - 120
1920976	Zinc	96.9	98.5	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920853	Arsenic	105		P	80 - 120
1920853	Cadmium	99.6		P	80 - 120
1920853	Chromium	95.9		P	80 - 120
1920853	Copper	97.6		P	80 - 120
1920853	Lead	98.1		P	80 - 120
1920853	Nickel	101		P	80 - 120
1920853	Selenium	104		P	80 - 120
1920853	Silver	98.6		P	80 - 120
1920976	Arsenic	104	103	P/P	80 - 120
1920976	Cadmium	101	100	P/P	80 - 120
1920976	Chromium	96.4	97.3	P/P	80 - 120
1920976	Copper	95.6	94.4	P/P	80 - 120
1920976	Lead	96.6	97.0	P/P	80 - 120
1920976	Nickel	97.4	97.3	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920976	Selenium	102	103	P/P	80 - 120
1920976	Silver	98.5	98.9	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920584	Chloride	104		P	90 - 110
1920590	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920584	Sulfate	104		P	90 - 110
1920590	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330156

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920276	Ammonia-N	96.2	97.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330368

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920644	Ammonia-N	98.5	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330128

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920644	Kjeldahl Nitrogen	96.9	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920649	Kjeldahl Nitrogen	99.7	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921267	Kjeldahl Nitrogen	100	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920448	NO2NO3-N	100	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920639	NO2NO3-N	108	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330113

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920638	Total-P	97.0	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920644	Total-P	91.6	94.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920647	O-Phosphate-P	90.8	93.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920641	O-Phosphate-P	93.0	95.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P330299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920154	Fluoride	98.5	96.2	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P330400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920970	Fluoride	97.5	99.5	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P330611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921152	Fluoride	97.1	97.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P330332

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920161	Organic Carbon	98.5	101	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P330560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921407	Organic Carbon	92.4	91.8	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P330060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1920478	2,4-D	81.6	85.6	P/P	40 - 150
1920478	Acetaminophen	92.9	93.9	P/P	30 - 150
1920478	Bentazon	42.9	45.4	P/P	40 - 150
1920478	Carbamazepine	96.8	99.2	P/P	40 - 150
1920478	Diuron	78.5	82.9	P/P	40 - 150
1920478	Fenuron	84.2	107	P/P	40 - 150
1920478	Fluridone	65.4	76.1	P/P	40 - 150
1920478	Imidacloprid	165	178	F/F	40 - 160
1920478	Linuron	82.8	93.1	P/P	40 - 150
1920478	MCPP	59.0	63.1	P/P	40 - 150
1920478	Primidone	105	113	P/P	40 - 150
1920478	Triclopyr	56.1	63.7	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920625	Turbidity	2.07	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920648	Turbidity	7.58	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920976	Calcium	2.93	Spike	P	0 - 20
1920976	Iron	1.86	Spike	P	0 - 20
1920976	Magnesium	3.01	Spike	P	0 - 20
1920976	Potassium	1.16	Spike	P	0 - 20
1920976	Sodium	1.58	Spike	P	0 - 20
1920976	Zinc	1.59	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920976	Arsenic	1.09	Spike	P	0 - 20
1920976	Cadmium	1.04	Spike	P	0 - 20
1920976	Chromium	0.884	Spike	P	0 - 20
1920976	Copper	1.32	Spike	P	0 - 20
1920976	Lead	0.407	Spike	P	0 - 20
1920976	Nickel	0.143	Spike	P	0 - 20
1920976	Selenium	0.148	Spike	P	0 - 20
1920976	Silver	0.382	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920584	Chloride	0.503	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920584	Sulfate	1.71	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330156

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920276	Ammonia-N	0.954	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330368

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920644	Ammonia-N	3.58	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330128

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920644	Kjeldahl Nitrogen	6.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920649	Kjeldahl Nitrogen	1.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921267	Kjeldahl Nitrogen	0.766	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920448	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920639	NO2NO3-N	0.602	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920638	Total-P	0.406	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920644	Total-P	2.63	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920647	O-Phosphate-P	2.50	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920641	O-Phosphate-P	2.34	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P330674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Sucralose	2.12	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P330050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920596	Color (true)	1.40	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P330192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920970	Total Alkalinity	0.0123	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P330296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921152	Total Alkalinity	0.440	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P330297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920154	Total Alkalinity	0.121	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P330443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920784	TDS	3.64	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P330299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920154	Fluoride	1.48	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P330400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920970	Fluoride	0.946	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P330611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921152	Fluoride	0.0	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P330332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920161	Organic Carbon	1.79	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P330412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920626	Organic Carbon	0.235	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P330560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921407	Organic Carbon	0.492	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P330060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1920478	2,4-D	4.78	Spike	P	0 - 30
1920478	Acetaminophen	1.06	Spike	P	0 - 30
1920478	Bentazon	5.63	Spike	P	0 - 30
1920478	Carbamazepine	2.44	Spike	P	0 - 30
1920478	Diuron	5.43	Spike	P	0 - 30
1920478	Fenuron	23.9	Spike	P	0 - 30
1920478	Fluridone	15.1	Spike	P	0 - 30
1920478	Imidacloprid	7.63	Spike	P	0 - 30
1920478	Linuron	11.7	Spike	P	0 - 30
1920478	MCP	6.66	Spike	P	0 - 30
1920478	Primidone	7.89	Spike	P	0 - 30
1920478	Triclopyr	12.7	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: 1920677
Field Sample ID: 42009060

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	96.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.8	P	30 - 160
EPA 8321B	Diuron-d6	80.3	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	66.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	77.1	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1920677
Field Sample ID: 42009060

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Acetaminophen-d4	96.6	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	97.8	P	30 - 160
USGS O-2060-01	Diuron-d6	80.3	P	30 - 160
USGS O-2060-01	Primidone-d5	102	P	30 - 160
USGS O-2060-01	Sucralose-d6	66.1	P	40 - 160

Lab Sample ID: 1920678
Field Sample ID: 42009058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	88.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.4	P	30 - 160
EPA 8321B	Diuron-d6	78.7	P	30 - 160
EPA 8321B	Primidone-d5	107	P	30 - 160
EPA 8321B	Sucralose-d6	87.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	88.9	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	88.6	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	90.4	P	30 - 160
USGS O-2060-01	Diuron-d6	78.7	P	30 - 160
USGS O-2060-01	Primidone-d5	107	P	30 - 160
USGS O-2060-01	Sucralose-d6	87.7	P	40 - 160

Lab Sample ID: 1920679
Field Sample ID: G4SEBS04

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	96.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.5	P	30 - 160
EPA 8321B	Diuron-d6	76.8	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Sucralose-d6	80.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	88.9	P	40 - 160
USGS O-2060-01	2,4-D-d3	134	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	96.7	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	92.5	P	30 - 160
USGS O-2060-01	Diuron-d6	76.8	P	30 - 160
USGS O-2060-01	Primidone-d5	115	P	30 - 160
USGS O-2060-01	Sucralose-d6	80.4	P	40 - 160

Lab Sample ID: 1920680
Field Sample ID: G4SEBS04_DUPE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.5	P	30 - 160
EPA 8321B	Diuron-d6	75.2	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	63.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	81.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	126	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	88.7	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	92.5	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1920680
Field Sample ID: G4SEBS04_DUPE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Diuron-d6	75.2	P	30 - 160
USGS O-2060-01	Primidone-d5	113	P	30 - 160
USGS O-2060-01	Sucralose-d6	63.7	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A78270
Included Lab Sample IDs: 1920642, 1920643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Sulfate	103	103	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A78336
Included Lab Sample IDs: 1920642, 1920643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A78337
Included Lab Sample IDs: 1920640, 1920641, 1920646, 1920647, 1920650, 1920655, 1920656

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	98.9	P/P	90 - 110
O-Phosphate-P	98.6	99.1	P/P	90 - 110
O-Phosphate-P	98.9	98.6	P/P	90 - 110
O-Phosphate-P	99.1	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A78339
Included Lab Sample IDs: 1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A78369
Included Lab Sample IDs: 1920638, 1920639, 1920649, 1920653, 1920654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.7	P/P	90 - 110
Ammonia-N	98.1	97.5	P/P	90 - 110
Ammonia-N	99.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78378

Included Lab Sample IDs: 1920638, 1920639, 1920649, 1920653, 1920654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	101	P/P	90 - 110
Total-P	101	99.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78396

Included Lab Sample IDs: 1920637, 1920648

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.8	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78416

Included Lab Sample IDs: 1920688, 1920689, 1920690

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.8	101	P/P	90 - 110
Iron	99.0	101	P/P	90 - 110
Magnesium	98.3	100	P/P	90 - 110
Potassium	97.1	98.8	P/P	90 - 110
Sodium	96.8	98.2	P/P	90 - 110
Zinc	101	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78424

Included Lab Sample IDs: 1920644, 1920645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78427

Included Lab Sample IDs: 1920636, 1920642, 1920643, 1920651, 1920652

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	100	P/P	90 - 110
Total Alkalinity	103	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78427

Included Lab Sample IDs: 1920636, 1920651, 1920652

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78436

Included Lab Sample IDs: 1920644, 1920645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A78438

Included Lab Sample IDs: 1920653, 1920654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78446

Included Lab Sample IDs: 1920639, 1920649, 1920653, 1920654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.6	98.6	P/P	90 - 110
Kjeldahl Nitrogen	98.6	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78448

Included Lab Sample IDs: 1920688, 1920689, 1920690

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	101	P/P	90 - 110
Arsenic	106	103	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Cadmium	103	101	P/P	90 - 110
Chromium	100	99.4	P/P	90 - 110
Chromium	102	100	P/P	90 - 110
Copper	101	99.1	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	96.6	97.1	P/P	90 - 110
Lead	98.0	96.6	P/P	90 - 110
Nickel	102	99.6	P/P	90 - 110
Nickel	103	102	P/P	90 - 110
Selenium	105	104	P/P	90 - 110
Selenium	105	105	P/P	90 - 110
Silver	97.5	97.5	P/P	90 - 110
Silver	98.5	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78450

Included Lab Sample IDs: 1920644, 1920645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.7	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78451

Included Lab Sample IDs: 1920644, 1920645

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78455

Included Lab Sample IDs: 1920638, 1920639, 1920649, 1920653, 1920654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78462

Included Lab Sample IDs: 1920638

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

Reference Method: SM 4500 F-C-97

Run ID: A78465

Included Lab Sample IDs: 1920637, 1920648

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

Reference Method: SM 5310 B-00

Run ID: A78471

Included Lab Sample IDs: 1920639, 1920644, 1920645, 1920649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	97.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A78526

Included Lab Sample IDs: 1920638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	95.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78552

Included Lab Sample IDs: 1920642, 1920643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	103	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A78596

Included Lab Sample IDs: 1920677, 1920678, 1920679, 1920680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	80.1	80.7	P/P	50 - 150
Acetaminophen	77.8	77.2	P/P	60 - 150
Bentazon	96.5	96.2	P/P	50 - 150
Carbamazepine	80.0	82.0	P/P	60 - 150
Diuron	84.4	86.7	P/P	60 - 150
Fenuron	88.8	88.5	P/P	60 - 150
Fluridone	102	97.1	P/P	60 - 160
Imidacloprid	74.7	74.5	P/P	60 - 150
Linuron	90.4	99.0	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A78596

Included Lab Sample IDs: 1920677, 1920678, 1920679, 1920680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCP	65.5	65.3	P/P	50 - 150
Primidone	79.5	81.8	P/P	60 - 150
Triclopyr	74.0	72.8	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A78750

Included Lab Sample IDs: 1920677, 1920678, 1920679, 1920680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	121	120	P/P	60 - 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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.07	
	Turbidity							7.58	
EPA 200.7 Rev. 4.4	Calcium	103		103	102				2.93
	Iron	108		107	102	104			1.86
	Magnesium	102		106	100				3.01
	Potassium	101		103	96.3	98.0			1.16
	Sodium	99.6		99.5	99.5				1.58
	Zinc	99.3		104	96.9	98.5			1.59
EPA 200.8 Rev. 5.4	Arsenic	108		105	104	103			1.09
	Cadmium	103		99.6	101	100			1.04
	Chromium	103		95.9	96.4	97.3			0.884
	Copper	102		97.6	95.6	94.4			1.32
	Lead	99.5		98.1	96.6	97.0			0.407
	Nickel	105		101	97.4	97.3			0.143
	Selenium	106		104	102	103			0.148
	Silver	101		98.6	98.5	98.9			0.382
EPA 300.0 Rev. 2.1	Chloride	102		104	103			0.503	
	Sulfate	103		104	103			1.71	
EPA 350.1 Rev. 2.0	Ammonia-N	100		96.2	97.3				0.954
	Ammonia-N	97.8		98.5	104				3.58
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		96.9	107				6.12
	Kjeldahl Nitrogen	102		99.7	98.2				1.12
	Kjeldahl Nitrogen	104		100	99.1				0.766
EPA 353.2 Rev. 2.0	NO2NO3-N	106		100	100				0.0
	NO2NO3-N	106		108	106				0.602
EPA 365.1 Rev. 2.0	Total-P	98.2		97.0	97.4				0.406
	Total-P	95.7		91.6	94.2				2.63
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		90.8	93.1				2.50
	O-Phosphate-P	98.1		93.0	95.2				2.34
EPA 8321B	Sucralose	90.3	92.2				2.12		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 2120 B	Color (true)				1.40	
SM 2320 B-97	Total Alkalinity	103			0.0123	
	Total Alkalinity	102			0.440	
	Total Alkalinity	103			0.121	
SM 2540 C-97	TDS				3.64	
SM 4500 F-C-97	Fluoride	95.6	98.5 96.2			1.48
	Fluoride	98.3	97.5 99.5			0.946
	Fluoride	97.2	97.1 97.1			0.0
SM 5310 B-00	Organic Carbon	101	98.5 101			1.79
	Organic Carbon	92.6				0.235
	Organic Carbon	95.6	92.4 91.8			0.492
USGS O-2060-01	2,4-D	75.7	81.6 85.6			4.78
	Acetaminophen	93.1	92.9 93.9			1.06
	Bentazon	67.3	42.9 45.4			5.63
	Carbamazepine	101	96.8 99.2			2.44
	Diuron	96.6	78.5 82.9			5.43
	Fenuron	89.9	84.2 107			23.9
	Fluridone	86.6	65.4 76.1			15.1
	Imidacloprid	69.0	165 178			7.63
	Linuron	83.2	82.8 93.1			11.7
	MCP	73.5	59.0 63.1			6.66
	Primidone	85.1	105 113			7.89
	Triclopyr	67.8	56.1 63.7			12.7

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1920688, 1920689, 1920690
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1920688, 1920689, 1920690
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1920642, 1920643
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1920642, 1920643
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1920638, 1920639, 1920644, 1920645, 1920649, 1920653, 1920654
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1920638, 1920639, 1920644, 1920645, 1920649, 1920653, 1920654
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1920638, 1920639, 1920644, 1920645, 1920649, 1920653, 1920654
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1920638, 1920639, 1920644, 1920645, 1920649, 1920653, 1920654
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1920640, 1920641, 1920646, 1920647, 1920650, 1920655, 1920656
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1920677, 1920678, 1920679, 1920680
SM 2120 B / E31780	True Color measured at 450 nm	1920642, 1920643
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1920642, 1920643
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1920638, 1920639, 1920644, 1920645, 1920649, 1920653, 1920654
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1920677, 1920678, 1920679, 1920680
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1920677, 1920678, 1920679, 1920680

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	08/10/2017			08/10/2017 16:33	DeAsia Armster	1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652
EPA 200.7 Rev. 4.4	08/10/2017	08/14/2017	Elliott D. Healy	08/15/2017	Betina Topolski	1920688, 1920689, 1920690
EPA 200.8 Rev. 5.4	08/10/2017	08/14/2017	Elliott D. Healy	08/16/2017	Nadine Brooks	1920688, 1920689, 1920690
EPA 300.0 Rev. 2.1	08/10/2017			08/10/2017	Julia Storbeck	1920642, 1920643
EPA 350.1 Rev. 2.0	08/10/2017			08/11/2017	Sofia Elnemr	1920638, 1920639, 1920649, 1920653, 1920654
	08/10/2017			08/16/2017	Sofia Elnemr	1920644, 1920645
EPA 351.2 Rev. 2.0	08/10/2017	08/14/2017	Adrian Shelby	08/16/2017	Joseph Suarez	1920644, 1920645
	08/10/2017	08/15/2017	Adrian Shelby	08/16/2017	Joseph Suarez	1920639, 1920649, 1920653, 1920654
	08/10/2017	08/16/2017	Adrian Shelby	08/17/2017	Joseph Suarez	1920638
EPA 353.2 Rev. 2.0	08/10/2017			08/16/2017	Beverly Y. Sanders	1920644, 1920645
	08/10/2017			08/17/2017	Beverly Y. Sanders	1920638, 1920639, 1920649, 1920653, 1920654
EPA 365.1 Rev. 2.0	08/10/2017	08/11/2017	Sima Feizi	08/14/2017	Lipi Saha	1920638, 1920639, 1920649, 1920653, 1920654
	08/10/2017	08/15/2017	Sima Feizi	08/16/2017	Lipi Saha	1920644, 1920645
EPA 365.1 Rev. 2.0 dissolved	08/10/2017			08/10/2017 14:59	Anthony C. Onicha	1920647
	08/10/2017			08/10/2017 15:08	Anthony C. Onicha	1920641
	08/10/2017			08/10/2017 15:25	Anthony C. Onicha	1920640
	08/10/2017			08/10/2017 15:26	Anthony C. Onicha	1920646, 1920650
	08/10/2017			08/10/2017 15:32	Anthony C. Onicha	1920655, 1920656
EPA 8321B	08/10/2017	08/23/2017	Julie Michelle Frank	09/01/2017	Julie Michelle Frank	1920677, 1920678, 1920679, 1920680
SM 2120 B	08/10/2017			08/10/2017 15:25	Tanya Welborn	1920642
	08/10/2017			08/10/2017 15:26	Tanya Welborn	1920643
SM 2320 B-97	08/10/2017			08/14/2017	Dale L. Simmons	1920637, 1920648
	08/10/2017			08/15/2017	Dale L. Simmons	1920642, 1920643
	08/10/2017			08/16/2017	Dale L. Simmons	1920636, 1920651, 1920652
SM 2540 C-97	08/10/2017			08/11/2017	DeAsia Armster	1920642, 1920643
SM 2540 D-97	08/10/2017			08/11/2017	DeAsia Armster	1920636, 1920637, 1920642, 1920643, 1920648, 1920651, 1920652
SM 4500 F-C-97	08/10/2017			08/15/2017	Dale L. Simmons	1920636, 1920651, 1920652
	08/10/2017			08/17/2017	Dale L. Simmons	1920637, 1920648
	08/10/2017			08/18/2017	Dale L. Simmons	1920642, 1920643
SM 5310 B-00	08/10/2017			08/16/2017	Ping Hua	1920639, 1920644, 1920645, 1920649
	08/10/2017			08/16/2017	Sofia Elnemr	1920653, 1920654
	08/10/2017			08/19/2017	Ping Hua	1920638
USGS O-2060-01	08/10/2017	08/15/2017	Hoor Shaik	08/18/2017	Juyoung Kim	1920677, 1920678, 1920679, 1920680