

Chemical Analysis Report

SE-DIST-2017-09-21-01

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

Event Description: **SMP-G1 Okeechobee Run**
Request ID: **RQ-2017-09-11-16**
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

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: Liang Lin, Environmental Administrator

Date Certified: 11-OCT-2017 14:31

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

NON-CONFORMANCE REPORT INCLUDED

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: Otter Creek @ 441

Collection Date/Time: 09/20/2017 10:10

Field ID: G1SE0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930529	EPA 180.1 Rev. 2.0	Turbidity	8.4		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P332154	
		Sulfate	11		mg SO4/L	P332156	
	SM 2120 B	Color (true)	310		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	72		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	234	A	mg/L	P332769	
	SM 2540 D-97	TSS	10	A	mg/L	P332222	
	SM 4500 F-C-97	Fluoride	0.082	I	mg F/L	P332132	
1930530	EPA 350.1 Rev. 2.0	Ammonia-N	0.27		mg N/L	P332334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P332287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P332456	
	EPA 365.1 Rev. 2.0	Total-P	0.90		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P332238	
1930531	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.78		mg P/L	P332054	
1930562	EPA 8321B	Sucralose**	0.010	U	ug/L	P332050	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332073	
		Diuron	8.0E-04	U	ug/L	P332073	
		Fenuron	0.0080	U	ug/L	P332073	
		Imidacloprid	0.0013	I	ug/L	P332073	MS
		Bentazon	8.0E-04	U	ug/L	P332073	MS
		Linuron	0.0040	U	ug/L	P332073	
		Acetaminophen**	0.013	IJ	ug/L	P332073	LCS
		MCP	0.0020	U	ug/L	P332073	
		Carbamazepine**	4.0E-04	U	ug/L	P332073	
		Triclopyr**	0.0040	U	ug/L	P332073	
		Primidone**	0.0040	U	ug/L	P332073	
		Fluridone**	4.0E-04	U	ug/L	P332073	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Popash Slough @ SR-70

Collection Date/Time: 09/20/2017 10:50

Field ID: G1SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930508	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	57		mg Cl/L	P332153	
		Sulfate	6.2		mg SO4/L	P332155	
	SM 2120 B	Color (true)	450		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	41		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	212		mg/L	P332768	
	SM 2540 D-97	TSS	8	I	mg/L	P332221	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P332132	
1930509	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P332334	

Field ID: G1SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930509	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P332287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332455	
	EPA 365.1 Rev. 2.0	Total-P	0.99		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	34		mg C/L	P332238	
1930510	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.69		mg P/L	P332055	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Taylor Creek @ SR 70

Collection Date/Time: 09/20/2017 11:15

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930520	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P332153	
		Sulfate	38		mg SO4/L	P332155	
	SM 2120 B	Color (true)	260		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	300		mg/L	P332768	
	SM 2540 D-97	TSS	10	I	mg/L	P332221	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P332132	
1930523	EPA 350.1 Rev. 2.0	Ammonia-N	0.68		mg N/L	P332334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.5		mg N/L	P332287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P332456	
	EPA 365.1 Rev. 2.0	Total-P	0.62		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	32		mg C/L	P332238	
1930526	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.36		mg P/L	P332054	
1930559	EPA 8321B	Sucralose**	0.057		ug/L	P332050	
	USGS O-2060-01	2,4-D	0.031		ug/L	P332073	
		Diuron	0.0014	I	ug/L	P332073	
		Fenuron	0.0080	U	ug/L	P332073	
		Imidacloprid	0.0033		ug/L	P332073	MS
		Bentazon	3.2		ug/L	P332073	MS
		Linuron	0.0040	U	ug/L	P332073	
		Acetaminophen**	0.0080	UJ	ug/L	P332073	LCS
		MCP	0.0020	U	ug/L	P332073	
		Carbamazepine**	9.0E-04	I	ug/L	P332073	
		Triclopyr**	0.0040	U	ug/L	P332073	
		Primidone**	0.0040	U	ug/L	P332073	
		Fluridone**	4.0E-04	U	ug/L	P332073	
		Calcium	59.6		mg/L	P332020	
		Iron	2.46E+03		ug/L	P332020	
1930563	EPA 200.7 Rev. 4.4	Magnesium	6.13		mg/L	P332020	
		Potassium	5.2		mg/L	P332020	
		Sodium	26.7		mg/L	P332020	

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930563	EPA 200.7 Rev. 4.4	Zinc	6.2	I	ug/L	P332020	
	EPA 200.8 Rev. 5.4	Arsenic	2.25		ug/L	P332020	
		Cadmium	0.020	U	ug/L	P332020	
		Chromium	0.75	I	ug/L	P332020	
		Copper	0.56	I	ug/L	P332020	
		Lead	0.14	I	ug/L	P332020	
		Nickel	0.95		ug/L	P332020	
		Silver	0.010	U	ug/L	P332020	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 353.2 Rev. 2.0: The result was confirmed on 09/29/2017.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Taylor Creek @ SR 70

Collection Date/Time: 09/20/2017 11:25

Field ID: G1SE0011-DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930521	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P332153	
		Sulfate	38		mg SO4/L	P332155	
	SM 2120 B	Color (true)	260		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	322		mg/L	P332769	
	SM 2540 D-97	TSS	9	I	mg/L	P332222	
	SM 4500 F-C-97	Fluoride	0.086	I	mg F/L	P332132	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.68		mg N/L	P332334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P332287	
1930524	EPA 353.2 Rev. 2.0	NO2NO3-N	0.019		mg N/L	P332456	
	EPA 365.1 Rev. 2.0	Total-P	0.63		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	31		mg C/L	P332238	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.36		mg P/L	P332054	
	dissolved						
1930560	EPA 8321B	Sucralose**	0.050		ug/L	P332050	
	USGS O-2060-01	2,4-D	0.029		ug/L	P332073	
1930564		Diuron	0.0012	I	ug/L	P332073	
		Fenuron	0.0080	U	ug/L	P332073	
		Imidacloprid	0.0032	I	ug/L	P332073	MS
		Bentazon	2.9		ug/L	P332073	MS
		Linuron	0.0040	U	ug/L	P332073	
		Acetaminophen**	0.0080	UJ	ug/L	P332073	LCS
		MCP	0.0020	U	ug/L	P332073	
		Carbamazepine**	8.6E-04	I	ug/L	P332073	
		Triclopyr**	0.0040	U	ug/L	P332073	
		Primidone**	0.0040	U	ug/L	P332073	
		Fluridone**	4.0E-04	U	ug/L	P332073	
	EPA 200.7 Rev. 4.4	Calcium	59.6		mg/L	P332020	
		Iron	2.51E+03		ug/L	P332020	

Field ID: G1SE0011-DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930564	EPA 200.7 Rev. 4.4	Magnesium	6.19		mg/L	P332020	
		Potassium	5.2		mg/L	P332020	
		Sodium	27.0		mg/L	P332020	
		Zinc	5.0	U	ug/L	P332020	
	EPA 200.8 Rev. 5.4	Arsenic	2.32		ug/L	P332020	
		Cadmium	0.020	U	ug/L	P332020	
		Chromium	0.74	I	ug/L	P332020	
		Copper	0.50	I	ug/L	P332020	
		Lead	0.12	I	ug/L	P332020	
		Nickel	0.79	I	ug/L	P332020	
		Silver	0.010	U	ug/L	P332020	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 353.2 Rev. 2.0: The result was confirmed on 09/29/2017.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Mosquito Creek @ SR 710

Collection Date/Time: 09/20/2017 12:30

Field ID: G1SE0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930517	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P332153	
		Sulfate	13		mg SO4/L	P332155	
		Color (true)	370	A	PCU	P332024	
	SM 2320 B-97	Total Alkalinity	58		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	240		mg/L	P332768	
	SM 2540 D-97	TSS	7	I	mg/L	P332221	
	SM 4500 F-C-97	Fluoride	0.081	I	mg F/L	P332132	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.070		mg N/L	P332334	
		Kjeldahl Nitrogen	2.8		mg N/L	P332287	
1930518	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332455	
	EPA 365.1 Rev. 2.0	Total-P	0.98		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	38		mg C/L	P332238	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.68		mg P/L	P332054	
	dissolved						
1930519	EPA 8321B	Sucralose**	0.014	I	ug/L	P332050	
	USGS O-2060-01	2,4-D	0.014		ug/L	P332073	
1930558		Diuron	8.0E-04	U	ug/L	P332073	
		Fenuron	0.0080	U	ug/L	P332073	
		Imidacloprid	8.0E-04	U	ug/L	P332073	MS
		Bentazon	8.0E-04	U	ug/L	P332073	MS
		Linuron	0.0040	U	ug/L	P332073	
		Acetaminophen**	0.021	IJ	ug/L	P332073	LCS
		MCP	0.0020	U	ug/L	P332073	
		Carbamazepine**	4.0E-04	U	ug/L	P332073	
		Triclopyr**	0.0040	U	ug/L	P332073	
		Primidone**	0.0040	U	ug/L	P332073	

Field ID: G1SE0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930558	USGS O-2060-01	Fluridone**	4.0E-04	U	ug/L	P332073	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Site Nubbin Slough

Collection Date/Time: 09/20/2017 12:45

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930511	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P332153	
		Sulfate	19		mg SO4/L	P332155	
	SM 2120 B	Color (true)	500		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	47		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	214		mg/L	P332768	
	SM 2540 D-97	TSS	2	U	mg/L	P332221	
	SM 4500 F-C-97	Fluoride	0.095	I	mg F/L	P332132	
1930513	EPA 350.1 Rev. 2.0	Ammonia-N	1.1		mg N/L	P332334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.9		mg N/L	P332287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P332455	
	EPA 365.1 Rev. 2.0	Total-P	0.70		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	38		mg C/L	P332238	
1930515	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.60		mg P/L	P332055	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Henry Creek @ Hwy 710

Collection Date/Time: 09/20/2017 13:00

Field ID: G1SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930522	EPA 180.1 Rev. 2.0	Turbidity	6.7		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	98		mg Cl/L	P332153	
		Sulfate	14		mg SO4/L	P332155	
	SM 2120 B	Color (true)	730		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	45		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	321		mg/L	P332769	
	SM 2540 D-97	TSS	4	I	mg/L	P332222	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P332132	
1930525	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P332334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.8		mg N/L	P332287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332456	
	EPA 365.1 Rev. 2.0	Total-P	0.98		mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	50		mg C/L	P332238	
1930528	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.79		mg P/L	P332054	
1930561	EPA 8321B	Sucralose**	0.010	U	ug/L	P332050	

Field ID: G1SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930561	USGS O-2060-01	2,4-D	0.017		ug/L	P332073	
		Diuron	8.0E-04	U	ug/L	P332073	
		Fenuron	0.0080	U	ug/L	P332073	
		Imidacloprid	0.0066		ug/L	P332073	MS
		Bentazon	8.0E-04	U	ug/L	P332073	MS
		Linuron	0.0040	U	ug/L	P332073	
		Acetaminophen**	0.016	IJ	ug/L	P332073	LCS
		MCP	0.0020	U	ug/L	P332073	
		Carbamazepine**	4.0E-04	U	ug/L	P332073	
		Triclopyr**	0.0040	U	ug/L	P332073	
		Primidone**	0.0040	U	ug/L	P332073	
		Fluridone**	4.0E-04	U	ug/L	P332073	
1930565	EPA 200.7 Rev. 4.4	Calcium	22.2		mg/L	P332020	
		Iron	2.52E+03		ug/L	P332020	
		Magnesium	9.59		mg/L	P332020	
		Potassium	7.6		mg/L	P332020	
		Sodium	55.3		mg/L	P332020	
		Zinc	5.0	U	ug/L	P332020	
	EPA 200.8 Rev. 5.4	Arsenic	1.91		ug/L	P332020	
		Cadmium	0.020	U	ug/L	P332020	
		Chromium	1.2	I	ug/L	P332020	
		Copper	1.17		ug/L	P332020	
		Lead	0.30		ug/L	P332020	
		Nickel	0.60	I	ug/L	P332020	
		Silver	0.010	U	ug/L	P332020	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Lettuce Creek @ Hwy 710

Collection Date/Time: 09/20/2017 13:15

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930512	EPA 180.1 Rev. 2.0	Turbidity	7.8		NTU	P332015	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P332153	
		Sulfate	3.2		mg SO4/L	P332155	
		Color (true)	560		PCU	P332022	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P332129	
	SM 2540 C-97	TDS	165		mg/L	P332768	
	SM 2540 D-97	TSS	8	I	mg/L	P332221	
	SM 4500 F-C-97	Fluoride	0.072	I	mg F/L	P332132	
1930514	EPA 350.1 Rev. 2.0	Ammonia-N	0.008	Y	mg N/L	P332334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.3	Y	mg N/L	P332287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	UY	mg N/L	P332455	
	EPA 365.1 Rev. 2.0	Total-P	1.3	Y	mg P/L	P332231	
	SM 5310 B-00	Organic Carbon	45	Y	mg C/L	P332238	

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1930516	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	1.1		mg P/L	P332054	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample. The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 353.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 365.1 Rev. 2.0: Total-P: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

SM 5310 B-00: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

Non-Conformance Report

NCR ID: 6646

Event(s)

SE-DIST-2017-09-21-01

Job(s)

TLH-2017-09-21-23

Sample(s)

1930514

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory with sulfuric acid on 09-21-17.

Authorized by/Date: Joshua Ayres 9/25/2017

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry Colin Wright (850) 245-8085
Biology Cheryl Swanson (850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P332015

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P332020

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: P332020

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P332020

Component	Result	Code	Units
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332153

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332154

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332155

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332156

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332334

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332287

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332455

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332456

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332231

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332055

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

Reference Method: EPA 8321B
Batch ID: P332050

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P332022

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P332024

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P332129

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

Reference Method: SM 2540 C-97
Batch ID: P332768

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P332769

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P332221

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332222

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P332132

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P332238

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

Reference Method: USGS O-2060-01
Batch ID: P332073

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P332020

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	105		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	97.4		P	85 - 115
Sodium	103		P	85 - 115
Zinc	99.3		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P332020

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	96.2		P	85 - 115
Copper	99.0		P	85 - 115
Lead	97.1		P	85 - 115
Nickel	101		P	85 - 115
Silver	99.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332153

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332154

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	94.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332155

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332156

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332334

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332455

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332456

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: P332231

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332054

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332055

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

Reference Method: EPA 8321B
Batch ID: P332050

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	70.7		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P332129

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

Reference Method: SM 4500 F-C-97
Batch ID: P332132

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P332238

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P332073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.3		P	40 - 150
Acetaminophen	152		F	30 - 150
Bentazon	65.7		P	40 - 150
Carbamazepine	148		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P332073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	125		P	40 - 150
Fenuron	122		P	40 - 150
Fluridone	135		P	40 - 150
Imidacloprid	112		P	40 - 160
Linuron	125		P	40 - 150
MCP	82.6		P	40 - 150
Primidone	117		P	40 - 150
Triclopyr	78.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P332020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929868	Calcium	105		P	80 - 120
1929868	Iron	109		P	80 - 120
1929868	Magnesium	108		P	80 - 120
1929868	Potassium	99.7		P	80 - 120
1929868	Sodium	102		P	80 - 120
1929868	Zinc	104		P	80 - 120
1930318	Calcium	103		P	80 - 120
1930318	Iron	104	108	P/P	80 - 120
1930318	Magnesium	99.8	107	P/P	80 - 120
1930318	Potassium	96.7	100	P/P	80 - 120
1930318	Sodium	102	102	P/P	80 - 120
1930318	Zinc	98.4	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P332020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929868	Arsenic	103		P	80 - 120
1929868	Cadmium	105		P	80 - 120
1929868	Chromium	99.8		P	80 - 120
1929868	Copper	98.4		P	80 - 120
1929868	Lead	100		P	80 - 120
1929868	Nickel	100		P	80 - 120
1929868	Silver	99.8		P	80 - 120
1930318	Arsenic	101	102	P/P	80 - 120
1930318	Cadmium	104	107	P/P	80 - 120
1930318	Chromium	99.6	101	P/P	80 - 120
1930318	Copper	95.2	94.8	P/P	80 - 120
1930318	Lead	98.3	99.4	P/P	80 - 120
1930318	Nickel	98.0	97.8	P/P	80 - 120
1930318	Silver	99.6	99.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332153

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930281	Chloride	96.4		P	90 - 110
1930512	Chloride	94.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930588	Chloride	97.2		P	90 - 110
1930643	Chloride	97.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930281	Sulfate	94.2		P	90 - 110
1930512	Sulfate	94.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332156

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930588	Sulfate	96.8		P	90 - 110
1930643	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930501	Ammonia-N	99.7	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332455

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930457	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930590	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930500	Total-P	98.4	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P332054

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930852	O-Phosphate-P	95.5	95.7	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P332050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930507	Sucralose	61.0	66.5	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P332132

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930384	Fluoride	95.9	97.0	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P332238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930501	Organic Carbon	93.8	94.4	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P332073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930506	2,4-D	49.8	60.0	P/P	40 - 150
1930506	Acetaminophen	104	125	P/P	30 - 150
1930506	Bentazon	41.9	39.5	P/F	40 - 150
1930506	Carbamazepine	136	144	P/P	40 - 150
1930506	Diuron	94.5	106	P/P	40 - 150
1930506	Fenuron	104	111	P/P	40 - 150
1930506	Fluridone	110	130	P/P	40 - 150
1930506	Imidacloprid	252	268	F/F	40 - 160
1930506	Linuron	101	123	P/P	40 - 150
1930506	MCP	65.4	73.5	P/P	40 - 150
1930506	Primidone	134	148	P/P	40 - 150
1930506	Triclopyr	60.8	63.1	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P332015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930508	Turbidity	2.20	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P332020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930318	Calcium	0.392	Spike	P	0 - 20
1930318	Iron	3.29	Spike	P	0 - 20
1930318	Magnesium	3.42	Spike	P	0 - 20
1930318	Potassium	2.90	Spike	P	0 - 20
1930318	Sodium	0.325	Spike	P	0 - 20
1930318	Zinc	1.74	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P332020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930318	Arsenic	0.973	Spike	P	0 - 20
1930318	Cadmium	2.95	Spike	P	0 - 20
1930318	Chromium	1.26	Spike	P	0 - 20
1930318	Copper	0.401	Spike	P	0 - 20
1930318	Lead	1.16	Spike	P	0 - 20
1930318	Nickel	0.193	Spike	P	0 - 20
1930318	Silver	0.0510	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332153

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930281	Chloride	3.77	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930588	Chloride	1.28	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930281	Sulfate	2.33	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332156

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930588	Sulfate	1.84	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930501	Ammonia-N	0.378	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930523	Kjeldahl Nitrogen	2.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930457	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930590	NO2NO3-N	0.976	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930500	Total-P	1.78	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930852	O-Phosphate-P	0.209	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930460	O-Phosphate-P	0.338	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P332050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930507	Sucralose	8.66	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P332022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930499	Color (true)	0.268	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P332024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930517	Color (true)	1.22	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P332129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930384	Total Alkalinity	0.314	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P332768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930498	TDS	2.41	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P332769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930529	TDS	2.56	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P332221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930498	TSS	3.77	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P332222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930529	TSS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P332132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930384	Fluoride	1.04	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P332238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930501	Organic Carbon	0.399	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P332073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930506	2,4-D	4.29	Spike	P	0 - 30
1930506	Acetaminophen	18.2	Spike	P	0 - 30
1930506	Bentazon	3.23	Spike	P	0 - 30
1930506	Carbamazepine	5.64	Spike	P	0 - 30
1930506	Diuron	10.4	Spike	P	0 - 30
1930506	Fenuron	7.13	Spike	P	0 - 30
1930506	Fluridone	16.5	Spike	P	0 - 30
1930506	Imidacloprid	5.18	Spike	P	0 - 30
1930506	Linuron	19.2	Spike	P	0 - 30
1930506	MCP	11.6	Spike	P	0 - 30
1930506	Primidone	9.88	Spike	P	0 - 30
1930506	Triclopyr	3.62	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: 1930558
Field Sample ID: G1SE0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	95.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.3	P	30 - 160
EPA 8321B	Diuron-d6	51.2	P	30 - 160
EPA 8321B	Primidone-d5	91.6	P	30 - 160
EPA 8321B	Sucralose-d6	55.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	68.0	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	95.9	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	67.3	P	30 - 160
USGS O-2060-01	Diuron-d6	51.2	P	30 - 160
USGS O-2060-01	Primidone-d5	91.6	P	30 - 160
USGS O-2060-01	Sucralose-d6	55.7	P	40 - 160

Lab Sample ID: 1930559
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	86.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.0	P	30 - 160
EPA 8321B	Diuron-d6	56.6	P	30 - 160
EPA 8321B	Primidone-d5	98.2	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1930559
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	69.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	79.2	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	86.9	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	73.0	P	30 - 160
USGS O-2060-01	Diuron-d6	56.6	P	30 - 160
USGS O-2060-01	Primidone-d5	98.2	P	30 - 160
USGS O-2060-01	Sucralose-d6	69.1	P	40 - 160

Lab Sample ID: 1930560
Field Sample ID: G1SE0011-DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	85.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.4	P	30 - 160
EPA 8321B	Diuron-d6	60.6	P	30 - 160
EPA 8321B	Primidone-d5	95.6	P	30 - 160
EPA 8321B	Sucralose-d6	56.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	77.5	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	85.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	71.4	P	30 - 160
USGS O-2060-01	Diuron-d6	60.6	P	30 - 160
USGS O-2060-01	Primidone-d5	95.6	P	30 - 160
USGS O-2060-01	Sucralose-d6	56.6	P	40 - 160

Lab Sample ID: 1930561
Field Sample ID: G1SE0002

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	133	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.1	P	30 - 160
EPA 8321B	Diuron-d6	65.3	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	52.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	89.6	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	133	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	86.1	P	30 - 160
USGS O-2060-01	Diuron-d6	65.3	P	30 - 160
USGS O-2060-01	Primidone-d5	104	P	30 - 160
USGS O-2060-01	Sucralose-d6	52.6	P	40 - 160

Lab Sample ID: 1930562
Field Sample ID: G1SE0007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.4	P	30 - 160
EPA 8321B	Diuron-d6	63.4	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	54.3	P	40 - 160
USGS O-2060-01	2,4-D-d3	80.7	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	100	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	86.4	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1930562
Field Sample ID: G1SE0007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Diuron-d6	63.4	P	30 - 160
USGS O-2060-01	Primidone-d5	110	P	30 - 160
USGS O-2060-01	Sucralose-d6	54.3	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78987

Included Lab Sample IDs: 1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Chloride	103	102	P/P	90 - 110
Chloride	103	103	P/P	90 - 110
Chloride	104	102	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110
Sulfate	103	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A79066

Included Lab Sample IDs: 1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529

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

Reference Method: SM 2120 B

Run ID: A79069

Included Lab Sample IDs: 1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	105	105	P/P	85 - 115
Color (true)	106	105	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A79079

Included Lab Sample IDs: 1930510, 1930515, 1930516, 1930519, 1930526, 1930527, 1930528, 1930531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	98.3	P/P	90 - 110
O-Phosphate-P	98.3	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79116

Included Lab Sample IDs: 1930563, 1930564, 1930565

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79116

Included Lab Sample IDs: 1930563, 1930564, 1930565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	103	103	P/P	90 - 110
Potassium	99.3	99.4	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	101	97.7	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A79117

Included Lab Sample IDs: 1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79117

Included Lab Sample IDs: 1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	98.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A79154

Included Lab Sample IDs: 1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.3	96.5	P/P	90 - 110
Organic Carbon	96.5	96.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79179

Included Lab Sample IDs: 1930558, 1930559, 1930560, 1930561, 1930562

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	92.7	P/P	50 - 150
Acetaminophen	102	98.1	P/P	60 - 150
Bentazon	146	143	P/P	50 - 150
Bentazon	146	141	P/P	50 - 150
Carbamazepine	111	111	P/P	60 - 150
Diuron	99.3	101	P/P	60 - 150
Fenuron	100	98.4	P/P	60 - 150
Fluridone	111	113	P/P	60 - 160
Imidacloprid	97.2	101	P/P	60 - 150
Linuron	104	107	P/P	60 - 150
MCPP	96.5	102	P/P	50 - 150
Primidone	106	105	P/P	60 - 150
Triclopyr	99.0	106	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79185

Included Lab Sample IDs: 1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79185

Included Lab Sample IDs: 1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	104	P/P	90 - 110
Total-P	101	101	P/P	90 - 110
Total-P	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79196

Included Lab Sample IDs: 1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79198

Included Lab Sample IDs: 1930563, 1930564, 1930565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	104	103	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Silver	99.3	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79210

Included Lab Sample IDs: 1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.5	P/P	90 - 110
Kjeldahl Nitrogen	97.1	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79230

Included Lab Sample IDs: 1930558, 1930559, 1930560, 1930561, 1930562

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.9	99.9	P/P	60 - 150
Sucralose	99.9	98.6	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79237

Included Lab Sample IDs: 1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530

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

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.20	
EPA 200.7 Rev. 4.4	Calcium	104	105	103				0.392
	Iron	105	109	104	108			3.29
	Magnesium	106	108	99.8	107			3.42
	Potassium	97.4	99.7	96.7	100			2.90
	Sodium	103	102	102	102			0.325
	Zinc	99.3	104	98.4	100			1.74
EPA 200.8 Rev. 5.4	Arsenic	103	103	101	102			0.973
	Cadmium	102	105	104	107			2.95
	Chromium	96.2	99.8	99.6	101			1.26
	Copper	99.0	98.4	95.2	94.8			0.401
	Lead	97.1	100	98.3	99.4			1.16
	Nickel	101	100	98.0	97.8			0.193
	Silver	99.3	99.8	99.6	99.6			0.0510
EPA 300.0 Rev. 2.1	Chloride	99.0	96.4	94.7			3.77	
	Chloride	94.5	97.2	97.4			1.28	
	Sulfate	96.6	94.2	94.5			2.33	
	Sulfate	93.0	96.8	95.8			1.84	
EPA 350.1 Rev. 2.0	Ammonia-N	100	99.7	100				0.378
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.6						2.85
EPA 353.2 Rev. 2.0	NO2NO3-N	104	100	102				0.990
	NO2NO3-N	102	102	103				0.976
EPA 365.1 Rev. 2.0	Total-P	99.5	98.4	101				1.78
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	95.5	95.7				0.209
	O-Phosphate-P	98.3						0.338
EPA 8321B	Sucralose	70.7	61.0	66.5				8.66
SM 2120 B	Color (true)						0.268	
	Color (true)						1.22	
SM 2320 B-97	Total Alkalinity	101					0.314	
SM 2540 C-97	TDS						2.41	
	TDS						2.56	
SM 2540 D-97	TSS						3.77	
	TSS						0.0	
SM 4500 F-C-97	Fluoride	97.0	95.9	97.0				1.04
SM 5310 B-00	Organic Carbon	94.4	93.8	94.4				0.399
USGS O-2060-01	2,4-D	86.3	49.8	60.0				4.29
	Acetaminophen	152	104	125				18.2
	Bentazon	65.7	41.9	39.5				3.23
	Carbamazepine	148	136	144				5.64
	Diuron	125	94.5	106				10.4
	Fenuron	122	104	111				7.13
	Fluridone	135	110	130				16.5
	Imidacloprid	112	252	268				5.18
	Linuron	125	101	123				19.2
	MCP	82.6	65.4	73.5				11.6
	Primidone	117	134	148				9.88
	Triclopyr	78.8	60.8	63.1				3.62

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1930563, 1930564, 1930565
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1930563, 1930564, 1930565
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1930510, 1930515, 1930516, 1930519, 1930526, 1930527, 1930528, 1930531
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1930558, 1930559, 1930560, 1930561, 1930562
SM 2120 B / E31780	True Color measured at 450 nm	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1930558, 1930559, 1930560, 1930561, 1930562
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1930558, 1930559, 1930560, 1930561, 1930562

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/21/2017			09/21/2017 15:31	DeAsia Armster	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
EPA 200.7 Rev. 4.4	09/21/2017	09/21/2017	Elliott D. Healy	09/22/2017	Betina Topolski	1930563, 1930564, 1930565
EPA 200.8 Rev. 5.4	09/21/2017	09/21/2017	Elliott D. Healy	09/27/2017	Nadine Brooks	1930563, 1930564, 1930565
EPA 300.0 Rev. 2.1	09/21/2017			09/22/2017	Julia Storbeck	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
EPA 350.1 Rev. 2.0	09/21/2017			09/26/2017	Sofia Elnemr	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 351.2 Rev. 2.0	09/21/2017	09/26/2017	Adrian Shelby	09/28/2017	Joseph Suarez	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 353.2 Rev. 2.0	09/21/2017			09/29/2017	Beverly Y. Sanders	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 365.1 Rev. 2.0	09/21/2017	09/26/2017	Sima Feizi	09/27/2017	Lipi Saha	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
EPA 365.1 Rev. 2.0 dissolved	09/21/2017			09/21/2017 19:31	Megan Treadwell	1930510
	09/21/2017			09/21/2017 19:37	Megan Treadwell	1930515, 1930516
	09/21/2017			09/21/2017 19:38	Megan Treadwell	1930519
	09/21/2017			09/21/2017 19:39	Megan Treadwell	1930526
	09/21/2017			09/21/2017 19:40	Megan Treadwell	1930527
	09/21/2017			09/21/2017 19:41	Megan Treadwell	1930528
	09/21/2017			09/21/2017 19:42	Megan Treadwell	1930531
EPA 8321B	09/21/2017	09/25/2017	Fe-Val Siddell	09/29/2017	Juyoung Kim	1930558, 1930559, 1930560, 1930561, 1930562
SM 2120 B	09/21/2017			09/21/2017 16:08	Julia Storbeck	1930517
	09/21/2017			09/21/2017 16:09	Julia Storbeck	1930508
	09/21/2017			09/21/2017 16:10	Julia Storbeck	1930511, 1930512
	09/21/2017			09/21/2017 16:12	Julia Storbeck	1930520
	09/21/2017			09/21/2017 16:13	Julia Storbeck	1930521
	09/21/2017			09/21/2017 16:15	Julia Storbeck	1930522
	09/21/2017			09/21/2017 16:16	Julia Storbeck	1930529
SM 2320 B-97	09/21/2017			09/23/2017	Dale L. Simmons	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 2540 C-97	09/21/2017			09/25/2017	DeAsia Armster	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 2540 D-97	09/21/2017			09/25/2017	DeAsia Armster	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 4500 F-C-97	09/21/2017			09/23/2017	Dale L. Simmons	1930508, 1930511, 1930512, 1930517, 1930520, 1930521, 1930522, 1930529
SM 5310 B-00	09/21/2017			09/25/2017	Ping Hua	1930509, 1930513, 1930514, 1930518, 1930523, 1930524, 1930525, 1930530
USGS O-2060-01	09/21/2017	09/25/2017	Hoor Shaik	09/28/2017	Julie Michelle Frank	1930558
	09/21/2017	09/25/2017	Hoor Shaik	09/29/2017	Julie Michelle Frank	1930559, 1930560, 1930561, 1930562