

Chemical Analysis Report

NW-DIST-2017-08-08-02

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

Event Description: **Laurel Hill Run WBID 42 100 101 35A 49 92 117**
Request ID: **RQ-2017-08-07-26**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government St
Suite 208A
Pensacola, FL 32502-5794
Attn: Michael King

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

Certified by: Colin Wright, Program Administrator

Date Certified: 06-SEP-2017 14:07



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: 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: Pond Creek in McCloud Bay @ Hwy 393

Collection Date/Time: 08/07/2017 11:10

Field ID: G4NW0349

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919547	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P329985	
		Sulfate	1.3		mg SO4/L	P329987	
	SM 2120 B	Color (true)	60		PCU	P329856	
	SM 2320 B-97	Total Alkalinity	4.1		mg CaCO3/L	P330089	
	SM 2540 C-97	TDS	38		mg/L	P330225	
	SM 2540 D-97	TSS	9	I	mg/L	P330233	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330091	
1919556	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P330137	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P330014	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.30		mg N/L	P330100	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P330164	
1919565	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P329846	

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: Long Creek upstream of Long Road

Collection Date/Time: 08/07/2017 11:50

Field ID: G4NW0308

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919548	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	3.5		mg Cl/L	P329985	
		Sulfate	0.55		mg SO4/L	P329987	
	SM 2120 B	Color (true)	62		PCU	P329856	
	SM 2320 B-97	Total Alkalinity	2.4	I	mg CaCO3/L	P330089	
	SM 2540 C-97	TDS	31		mg/L	P330226	
	SM 2540 D-97	TSS	8	I	mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330091	
1919557	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P330137	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P330014	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	5.1		mg C/L	P330164	
1919566	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P329846	

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: Pine Log Creek upstream of Long Road

Collection Date/Time: 08/07/2017 12:10

Field ID: G4NW0315

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919549	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	3.2		mg Cl/L	P329985	
		Sulfate	1.1		mg SO4/L	P329987	

Field ID: G4NW0315

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919549	SM 2120 B	Color (true)	65	A	PCU	P329856	
	SM 2320 B-97	Total Alkalinity	6.1		mg CaCO3/L	P330089	
	SM 2540 C-97	TDS	45		mg/L	P330226	
	SM 2540 D-97	TSS	9	I	mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330091	
1919558	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P330137	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P330014	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	5.4		mg C/L	P330164	
1919567	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P329847	

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: East Br. Pine Log Creek

Collection Date/Time: 08/07/2017 12:50

Field ID: G4NW0208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919550	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P329985	
		Sulfate	0.27	I	mg SO4/L	P329987	
	SM 2120 B	Color (true)	120		PCU	P329856	
	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P330089	
	SM 2540 C-97	TDS	47		mg/L	P330226	
	SM 2540 D-97	TSS	3	I	mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.037	I	mg F/L	P330091	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P330137	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P330014	
1919559	EPA 353.2 Rev. 2.0	NO2NO3-N	0.019		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P330164	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018	J	mg P/L	P329847	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: Container cap was loose on receipt and sample volume was low indicating sample integrity may be compromised.

Sample Location: Eight Mile Ck. @ CR 181

Collection Date/Time: 08/07/2017 13:20

Field ID: G3NW0136

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919551	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	2.6		mg Cl/L	P329985	
		Sulfate	0.86		mg SO4/L	P329987	
	SM 2120 B	Color (true)	160		PCU	P329856	
	SM 2320 B-97	Total Alkalinity	5.8		mg CaCO3/L	P330089	
	SM 2540 C-97	TDS	45		mg/L	P330226	

Field ID: G3NW0136

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919551	SM 2540 D-97	TSS	7	I	mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330091	
1919560	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P330137	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P330016	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.091		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P330164	
1919569	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329847	

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: Caney Creek @ Hwy 2A

Collection Date/Time: 08/07/2017 13:55

Field ID: G4NW0397

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919552	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	5.2		mg Cl/L	P329985	
		Sulfate	0.55		mg SO4/L	P329987	
	SM 2120 B	Color (true)	65		PCU	P329856	
	SM 2320 B-97	Total Alkalinity	5.5		mg CaCO3/L	P330089	
	SM 2540 C-97	TDS	32		mg/L	P330226	
	SM 2540 D-97	TSS	5	I	mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.036	I	mg F/L	P330091	
1919561	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P330138	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P330016	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	5.7		mg C/L	P330164	
1919570	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P329847	

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: Turkey Creek @ Williams Rd.

Collection Date/Time: 08/07/2017 14:35

Field ID: G4NW0409

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919553	EPA 180.1 Rev. 2.0	Turbidity	31		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P329985	
		Sulfate	1.3		mg SO4/L	P329987	
	SM 2120 B	Color (true)	39		PCU	P329858	
	SM 2320 B-97	Total Alkalinity	2.9		mg CaCO3/L	P330090	
	SM 2540 C-97	TDS	33		mg/L	P330226	
	SM 2540 D-97	TSS	56		mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330092	
1919562	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P330368	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P330016	

Field ID: G4NW0409

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919562	EPA 353.2 Rev. 2.0	NO2NO3-N	0.44		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	6.0		mg C/L	P330165	
1919571	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P329847	

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: Turkey Creek @ Williams Rd.

Collection Date/Time: 08/07/2017 14:35

Field ID: G4NW0409

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919629	EPA 8321B	Sucralose**	0.016	I	ug/L	P330674	
	USGS O-2060-01	2,4-D	0.014		ug/L	P329841	
		Diuron	9.1E-04	I	ug/L	P329841	
		Fenuron	0.0080	U	ug/L	P329841	
		Imidacloprid	0.0064		ug/L	P329841	
		Bentazon	0.0020	I	ug/L	P329841	MS
		Linuron	0.0040	U	ug/L	P329841	
		Acetaminophen**	0.0080	U	ug/L	P329841	
		MCP	0.0020	U	ug/L	P329841	
		Carbamazepine**	4.0E-04	U	ug/L	P329841	
		Triclopyr**	0.0040	U	ug/L	P329841	
		Primidone**	0.0040	U	ug/L	P329841	
		Fluridone**	4.0E-04	U	ug/L	P329841	

Ref. Method and Comment:

EPA 8321B: MS recoveries are not available due to technical difficulties. Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Turkey Creek @ Williams Rd. Duplicate

Collection Date/Time: 08/07/2017 14:40

Field ID: G4NW0409DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919554	EPA 180.1 Rev. 2.0	Turbidity	30		NTU	P329895	
	EPA 300.0 Rev. 2.1	Chloride	4.7		mg Cl/L	P329985	
		Sulfate	1.4		mg SO4/L	P329987	
	SM 2120 B	Color (true)	43		PCU	P329858	
	SM 2320 B-97	Total Alkalinity	2.8		mg CaCO3/L	P330090	
	SM 2540 C-97	TDS	28		mg/L	P330226	
	SM 2540 D-97	TSS	57		mg/L	P330234	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330092	
1919563	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P330368	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P330016	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.44		mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P330032	
	SM 5310 B-00	Organic Carbon	6.0		mg C/L	P330165	
1919572	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P329847	

Field ID: G4NW0409DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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: Turkey Creek @ Williams Rd. Duplicate

Collection Date/Time: 08/07/2017 14:40

Field ID: G4NW0409DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919630	EPA 8321B	Sucralose**	0.031	I	ug/L	P330674	
	USGS O-2060-01	2,4-D	0.016		ug/L	P329841	
		Diuron	9.4E-04	I	ug/L	P329841	
		Fenuron	0.0080	U	ug/L	P329841	
		Imidacloprid	0.0062		ug/L	P329841	
		Bentazon	0.0022	I	ug/L	P329841	MS
		Linuron	0.0040	U	ug/L	P329841	
		Acetaminophen**	0.0080	U	ug/L	P329841	
		MCP	0.0020	U	ug/L	P329841	
		Carbamazepine**	4.0E-04	U	ug/L	P329841	
		Triclopyr**	0.0040	U	ug/L	P329841	
		Primidone**	0.0040	U	ug/L	P329841	
		Fluridone**	4.0E-04	U	ug/L	P329841	

Ref. Method and Comment:
 EPA 8321B: MS recoveries are not available due to technical difficulties. Results confirmed in re-extraction.
 USGS O-2060-01: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Field Blank

Collection Date/Time: 08/07/2017 14:45

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919555	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P329896	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P329985	
		Sulfate	0.20	U	mg SO4/L	P329987	
	SM 2120 B	Color (true)	2.5	U	PCU	P329857	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P330090	
	SM 2540 C-97	TDS	15	U	mg/L	P330221	
	SM 2540 D-97	TSS	2	U	mg/L	P330229	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330092	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P330138	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P330016	
1919564	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P330101	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P330036	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P330165	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329847	

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

Sample Location: Field Blank

Collection Date/Time: 08/07/2017 14:45

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919631	EPA 8321B	Sucralose**	0.010	UJ	ug/L	P330308	MS, RPD, SUR
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P329841	
		Diuron	8.0E-04	U	ug/L	P329841	
		Fenuron	0.0080	U	ug/L	P329841	
		Imidacloprid	8.0E-04	U	ug/L	P329841	
		Bentazon	8.0E-04	U	ug/L	P329841	MS
		Linuron	0.0040	U	ug/L	P329841	
		Acetaminophen**	0.0080	U	ug/L	P329841	
		MCP	0.0020	U	ug/L	P329841	
		Carbamazepine**	4.0E-04	U	ug/L	P329841	
		Triclopyr**	0.0040	U	ug/L	P329841	
		Primidone**	0.0040	U	ug/L	P329841	
		Fluridone**	4.0E-04	U	ug/L	P329841	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Sucralose-d6 surrogate spike recovery exceeding the control limits.

USGS O-2060-01: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Non-Conformance Report

NCR ID: 6595

Event(s)

NW-DIST-2017-08-08-02

Job(s)

TLH-2017-08-08-35

Sample(s)

1919568

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Sample Integrity

Observation: Sample container received with loose cap.

Sample arrived with low sample volume.

Resolution: The appropriate supervisor (Virginia Brown) was notified. Data will be qualified as appropriate.

Authorized by/Date: Bettina S. Steinbock 8/29/2017

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: P329895

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P329896

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329985

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329987

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330137

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330138

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330014

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330016

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330100

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330101

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: P330032

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330036

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329846

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329847

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

Reference Method: EPA 8321B
Batch ID: P330308

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P330674

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P329856

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P329857

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P329858

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P330089

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

Reference Method: SM 2320 B-97
Batch ID: P330090

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

Reference Method: SM 2540 C-97
Batch ID: P330221

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P330225

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P330226

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330229

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330233

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330234

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P330091

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
 Batch ID: P330092

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P330164

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

Reference Method: SM 5310 B-00
 Batch ID: P330165

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

Reference Method: USGS O-2060-01
 Batch ID: P329841

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P329985

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329987

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330137

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330138

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	102		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: P330014

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330016

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330100

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: P330101

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: P330032

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330036

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329846

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329847

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

Reference Method: EPA 8321B
Batch ID: P330308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	147		P	40 - 150

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

Reference Method: SM 2320 B-97
Batch ID: P330089

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

Reference Method: SM 2320 B-97
Batch ID: P330090

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

Reference Method: SM 4500 F-C-97
Batch ID: P330091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P330092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P330164

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

Reference Method: SM 5310 B-00
Batch ID: P330165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.3		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	103		P	40 - 150
Acetaminophen	76.0		P	30 - 150
Bentazon	101		P	40 - 150
Carbamazepine	88.2		P	40 - 150
Diuron	81.5		P	40 - 150
Fenuron	82.1		P	40 - 150
Fluridone	111		P	40 - 150
Imidacloprid	81.2		P	40 - 160
Linuron	83.1		P	40 - 150
MCPP	91.6		P	40 - 150
Primidone	84.5		P	40 - 150
Triclopyr	90.3		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919548	Chloride	99.0		P	90 - 110
1919711	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919548	Sulfate	98.1		P	90 - 110
1919711	Sulfate	95.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919557	Ammonia-N	100	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330138

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919561	Ammonia-N	103	104	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: P330014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919557	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330016

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919561	Kjeldahl Nitrogen	108	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919542	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330101

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919559	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919556	Total-P	95.8	94.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330036

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919797	Total-P	96.1	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919392	O-Phosphate-P	94.7	95.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919570	O-Phosphate-P	96.5	97.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P330308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919629	Sucralose	103	166	P/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P330091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919541	Fluoride	96.1	96.1	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P330092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919795	Fluoride	99.1	103	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P330164

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919209	Organic Carbon	101		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P330165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919562	Organic Carbon	99.3	99.5	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919076	Acetaminophen	98.2	96.7	P/P	30 - 150
1919076	Bentazon	38.2	38.8	F/F	40 - 150
1919076	Carbamazepine	83.9	72.7	P/P	40 - 150
1919076	Diuron	48.5	53.8	P/P	40 - 150
1919076	Fenuron	73.4	64.3	P/P	40 - 150
1919076	Fluridone	67.7	55.6	P/P	40 - 150
1919076	Imidacloprid	139	123	P/P	40 - 160
1919076	Linuron	62.3	65.5	P/P	40 - 150
1919076	MCP	121	111	P/P	40 - 150
1919076	Primidone	102	80.3	P/P	40 - 150
1919076	Triclopyr	112	123	P/P	40 - 150

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P329895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919541	Turbidity	1.46	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P329896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919648	Turbidity	3.00	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919711	Chloride	6.48	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919711	Sulfate	1.53	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919557	Ammonia-N	1.82	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919561	Ammonia-N	0.882	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: P330014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919557	Kjeldahl Nitrogen	0.0407	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330016

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919561	Kjeldahl Nitrogen	1.43	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919542	NO2NO3-N	0.623	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330101

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919559	NO2NO3-N	0.443	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919556	Total-P	1.55	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330036

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919797	Total-P	1.62	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919392	O-Phosphate-P	0.870	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919570	O-Phosphate-P	0.412	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P330308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919629	Sucralose	41.8	Spike	F	0 - 30

Quality Assurance Report Precision

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

Reference Method: SM 2120 B
Batch ID: P329856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919549	Color (true)	1.54	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P329857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919711	Color (true)	3.66	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P329858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919711	Color (true)	4.80	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P330089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919541	Total Alkalinity	0.350	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P330090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919795	Total Alkalinity	0.115	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P330221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918929	TDS	1.79	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P330225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919372	TDS	3.42	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P330226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919732	TDS	3.02	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P330091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919541	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
 Batch ID: P330092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919795	Fluoride	2.40	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P330164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919209	Organic Carbon	0.721	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P330165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919562	Organic Carbon	0.194	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P329841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919076	2,4-D	0.984	Spike	P	0 - 30
1919076	Acetaminophen	1.46	Spike	P	0 - 30
1919076	Bentazon	0.907	Spike	P	0 - 30
1919076	Carbamazepine	13.8	Spike	P	0 - 30
1919076	Diuron	7.89	Spike	P	0 - 30
1919076	Fenuron	13.2	Spike	P	0 - 30
1919076	Fluridone	11.9	Spike	P	0 - 30
1919076	Imidacloprid	9.50	Spike	P	0 - 30
1919076	Linuron	4.98	Spike	P	0 - 30
1919076	MCP	9.09	Spike	P	0 - 30
1919076	Primidone	24.0	Spike	P	0 - 30
1919076	Triclopyr	8.97	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: 1919629
Field Sample ID: G4NW0409

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	100	P	30 - 160
EPA 8321B	Primidone-d5	83.0	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	40 - 160
EPA 8321B	Sucralose-d6	100	P	40 - 160
USGS O-2060-01	2,4-D-d3	113	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	113	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	104	P	30 - 160
USGS O-2060-01	Diuron-d6	100	P	30 - 160
USGS O-2060-01	Primidone-d5	83.0	P	30 - 160
USGS O-2060-01	Sucralose-d6	117	P	40 - 160
USGS O-2060-01	Sucralose-d6	100	P	40 - 160

Lab Sample ID: 1919630
Field Sample ID: G4NW0409DUPLICATE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.4	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	40 - 160
EPA 8321B	Sucralose-d6	110	P	40 - 160
USGS O-2060-01	2,4-D-d3	138	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	127	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	90.4	P	30 - 160
USGS O-2060-01	Diuron-d6	78.6	P	30 - 160
USGS O-2060-01	Primidone-d5	108	P	30 - 160
USGS O-2060-01	Sucralose-d6	131	P	40 - 160
USGS O-2060-01	Sucralose-d6	110	P	40 - 160

Lab Sample ID: 1919631
Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	86.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.4	P	30 - 160
EPA 8321B	Diuron-d6	90.8	P	30 - 160
EPA 8321B	Primidone-d5	88.8	P	30 - 160
EPA 8321B	Sucralose-d6	166	F	40 - 160
USGS O-2060-01	2,4-D-d3	80.1	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	86.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	89.4	P	30 - 160
USGS O-2060-01	Diuron-d6	90.8	P	30 - 160
USGS O-2060-01	Primidone-d5	88.8	P	30 - 160
USGS O-2060-01	Sucralose-d6	166	F	40 - 160

Quality Assurance Report Calibration Verification

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A78260

Included Lab Sample IDs: 1919565, 1919566, 1919567, 1919568, 1919569, 1919570, 1919571, 1919572, 1919573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	98.8	P/P	90 - 110
O-Phosphate-P	99.2	99.3	P/P	90 - 110
O-Phosphate-P	99.3	98.8	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A78262

Included Lab Sample IDs: 1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115
Color (true)	101	98.8	P/P	85 - 115
Color (true)	98.8	100	P/P	85 - 115
Color (true)	99.7	102	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78270

Included Lab Sample IDs: 1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	103	P/P	90 - 110
Chloride	103	106	P/P	90 - 110
Sulfate	103	102	P/P	90 - 110
Sulfate	99.8	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78275

Included Lab Sample IDs: 1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555

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

Reference Method: SM 2320 B-97

Run ID: A78343

Included Lab Sample IDs: 1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.5	P/P	90 - 110
Total Alkalinity	99.5	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78343

Included Lab Sample IDs: 1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	99.1	P/P	90 - 110
Fluoride	99.1	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78348

Included Lab Sample IDs: 1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110
Total-P	99.8	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78349

Included Lab Sample IDs: 1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78366

Included Lab Sample IDs: 1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78372

Included Lab Sample IDs: 1919556, 1919557, 1919558, 1919559

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

Reference Method: SM 5310 B-00

Run ID: A78375

Included Lab Sample IDs: 1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78383

Included Lab Sample IDs: 1919560, 1919561, 1919562, 1919563, 1919564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	107	P/P	90 - 110
Kjeldahl Nitrogen	98.1	109	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A78403

Included Lab Sample IDs: 1919629, 1919630, 1919631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	112	112	P/P	50 - 150
Acetaminophen	79.4	77.7	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A78403

Included Lab Sample IDs: 1919629, 1919630, 1919631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	102	110	P/P	50 - 150
Carbamazepine	86.8	81.9	P/P	60 - 150
Diuron	79.9	86.2	P/P	60 - 150
Fenuron	79.9	85.4	P/P	60 - 150
Fluridone	110	120	P/P	60 - 160
Imidacloprid	90.9	82.5	P/P	60 - 150
Linuron	84.1	117	P/P	60 - 150
MCP	99.9	93.0	P/P	50 - 150
Primidone	92.6	100	P/P	60 - 150
Triclopyr	96.4	151	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A78449

Included Lab Sample IDs: 1919631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	116	106	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78450

Included Lab Sample IDs: 1919562, 1919563

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

Reference Method: EPA 8321B

Run ID: A78750

Included Lab Sample IDs: 1919629, 1919630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	120	121	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				1.46	
	Turbidity				3.00	
EPA 300.0 Rev. 2.1	Chloride	100	96.3 99.0		6.48	
	Sulfate	99.2	95.5 98.1		1.53	
EPA 350.1 Rev. 2.0	Ammonia-N	99.7	100 98.5			1.82
	Ammonia-N	102	103 104			0.882
	Ammonia-N	97.8	98.5 104			3.58
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0	103 102			0.0407
	Kjeldahl Nitrogen	106	108 106			1.43

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 353.2 Rev. 2.0	NO2NO3-N	106		100	102		0.623
	NO2NO3-N	106		104	103		0.443
EPA 365.1 Rev. 2.0	Total-P	94.0		95.8	94.2		1.55
	Total-P	97.0		96.1	97.9		1.62
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4		94.7	95.7		0.870
	O-Phosphate-P	106		96.5	97.0		0.412
EPA 8321B	Sucralose	147		103	166		41.8
	Sucralose	90.3	92.2			2.12	
SM 2120 B	Color (true)						1.54
	Color (true)						3.66
	Color (true)						4.80
SM 2320 B-97	Total Alkalinity	102					0.350
	Total Alkalinity	102					0.115
SM 2540 C-97	TDS						1.79
	TDS						3.42
	TDS						3.02
SM 4500 F-C-97	Fluoride	95.9		96.1	96.1		0.0
	Fluoride	97.9		99.1	103		2.40
SM 5310 B-00	Organic Carbon	98.5		101			0.721
	Organic Carbon	98.3		99.3	99.5		0.194
USGS O-2060-01	2,4-D	103					0.984
	Acetaminophen	76.0		96.7	98.2		1.46
	Bentazon	101		38.2	38.8		0.907
	Carbamazepine	88.2		83.9	72.7		13.8
	Diuron	81.5		48.5	53.8		7.89
	Fenuron	82.1		64.3	73.4		13.2
	Fluridone	111		67.7	55.6		11.9
	Imidacloprid	81.2		123	139		9.50
	Linuron	83.1		62.3	65.5		4.98
	MCP	91.6		121	111		9.09
	Primidone	84.5		80.3	102		24.0
	Triclopyr	90.3		112	123		8.97

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1919565, 1919566, 1919567, 1919568, 1919569, 1919570, 1919571, 1919572, 1919573
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1919629, 1919630, 1919631
SM 2120 B / E31780	True Color measured at 450 nm	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1919629, 1919630, 1919631
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1919629, 1919630, 1919631

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	08/08/2017			08/08/2017 17:09	DeAsia Armster	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
EPA 300.0 Rev. 2.1	08/08/2017			08/09/2017	Julia Storbeck	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
EPA 350.1 Rev. 2.0	08/08/2017			08/10/2017	Sofia Elnemr	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919564
EPA 351.2 Rev. 2.0	08/08/2017	08/10/2017	Adrian Shelby	08/16/2017	Sofia Elnemr	1919562, 1919563
EPA 351.2 Rev. 2.0	08/08/2017			08/14/2017	Joseph Suarez	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
EPA 353.2 Rev. 2.0	08/08/2017			08/11/2017	Beverly Y. Sanders	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
EPA 365.1 Rev. 2.0	08/08/2017	08/10/2017	Sima Feizi	08/11/2017	Lipi Saha	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562, 1919563, 1919564
EPA 365.1 Rev. 2.0 dissolved	08/08/2017			08/08/2017 14:45	Ping Hua	1919570
	08/08/2017			08/08/2017 15:06	Ping Hua	1919565
	08/08/2017			08/08/2017 15:07	Ping Hua	1919566
	08/08/2017			08/08/2017 15:08	Ping Hua	1919567
	08/08/2017			08/08/2017 15:09	Ping Hua	1919568
	08/08/2017			08/08/2017 15:10	Ping Hua	1919569
	08/08/2017			08/08/2017 15:16	Ping Hua	1919573
	08/08/2017			08/08/2017 15:29	Ping Hua	1919571
	08/08/2017			08/08/2017 15:30	Ping Hua	1919572
EPA 8321B	08/08/2017	08/16/2017	Mohammad Ghaffari	08/16/2017	Julie Michelle Frank	1919631
	08/08/2017	08/16/2017	Mohammad Ghaffari	09/01/2017	Julie Michelle Frank	1919629, 1919630
SM 2120 B	08/08/2017			08/08/2017 14:28	Tanya Welborn	1919547
	08/08/2017			08/08/2017 14:29	Tanya Welborn	1919548
	08/08/2017			08/08/2017 14:31	Tanya Welborn	1919549, 1919550
	08/08/2017			08/08/2017 14:33	Tanya Welborn	1919552
	08/08/2017			08/08/2017 14:38	Tanya Welborn	1919555
	08/08/2017			08/08/2017 14:48	Tanya Welborn	1919551
	08/08/2017			08/08/2017 15:25	Tanya Welborn	1919553, 1919554
SM 2320 B-97	08/08/2017			08/10/2017	Dale L. Simmons	1919547, 1919548, 1919549, 1919550, 1919551, 1919552
	08/08/2017			08/11/2017	Dale L. Simmons	1919553, 1919554, 1919555
SM 2540 C-97	08/08/2017			08/09/2017	Yijie Li	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	08/08/2017			08/09/2017	Yijie Li	1919547, 1919548, 1919549, 1919550, 1919551, 1919552, 1919553, 1919554, 1919555
SM 4500 F-C-97	08/08/2017			08/10/2017	Dale L. Simmons	1919547, 1919548, 1919549, 1919550, 1919551, 1919552
	08/08/2017			08/11/2017	Dale L. Simmons	1919553, 1919554, 1919555
SM 5310 B-00	08/08/2017			08/11/2017	Sofia Elnemr	1919556, 1919557, 1919558, 1919559, 1919560, 1919561, 1919562
	08/08/2017			08/12/2017	Sofia Elnemr	1919563, 1919564
USGS O-2060-01	08/08/2017	08/10/2017	Hoor Shaik	08/11/2017	Juyoung Kim	1919629, 1919630, 1919631