

Chemical Analysis Report

SE-DIST-2018-11-16-01

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

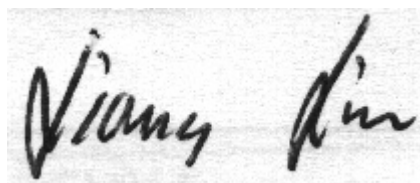
Event Description: **SMP- Fort Pierce**
Request ID: **RQ-2018-11-12-14**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Fort Pierce, FL 34945
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-DEC-2018 14:24

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

Case Narrative

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

Results for the following analytical groups are included in this report: 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: C-25 CANAL WEST @ GODWIN

Collection Date/Time: 11/15/2018 12:20

Field ID: G2SE0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042323	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P354883	
	EPA 300.0 Rev. 2.1	Chloride	160		mg Cl/L	P355452	
		Sulfate	54		mg SO4/L	P355455	
	SM 2120 B	Color (true)	68		PCU	P354841	
	SM 2320 B-97	Total Alkalinity	170		mg CaCO3/L	P355189	
	SM 2540 C-97	TDS	550		mg/L	P355139	
	SM 2540 D-97	TSS	3	I	mg/L	P354863	
	SM 4500 F-C-97	Fluoride	0.36		mg F/L	P355192	
2042324	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P355075	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P355099	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P355256	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P355028	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P355171	
2042325	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P354844	

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

Sample Location: C-25 CANAL WEST @ GODWIN

Collection Date/Time: 11/15/2018 12:25

Field ID: DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042320	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P354883	
	EPA 300.0 Rev. 2.1	Chloride	170		mg Cl/L	P355287	
		Sulfate	57		mg SO4/L	P355290	
	SM 2120 B	Color (true)	68		PCU	P354841	
	SM 2320 B-97	Total Alkalinity	170		mg CaCO3/L	P355189	
	SM 2540 C-97	TDS	568		mg/L	P355139	
	SM 2540 D-97	TSS	3	IA	mg/L	P354863	
	SM 4500 F-C-97	Fluoride	0.35		mg F/L	P355192	
2042321	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P355075	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P354979	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P355256	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P355028	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P355171	
2042322	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P354844	

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

Sample Location: DI SOURCE

Collection Date/Time: 11/15/2018 12:30

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042338	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P354883	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P355190	
	SM 2540 D-97	TSS	2	U	mg/L	P354863	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P355193	
2042339	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P355068	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P355099	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P355256	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P355028	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P355171	
2042340	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354844	
2042356	EPA 8321B	2,4-D	0.0020	U	ug/L	P354744	
		Sucralose**	0.010	U	ug/L	P355085	
		Bentazon	8.0E-04	U	ug/L	P354744	
		MCP	0.0020	U	ug/L	P354744	
		Triclopyr**	0.0040	U	ug/L	P354744	
		Imidacloprid	0.0020	U	ug/L	P354744	
		Diuron	0.0020	U	ug/L	P354744	
		Pyraclostrobin**	0.0020	U	ug/L	P354744	
		Primidone**	0.0040	U	ug/L	P354744	
		Linuron	0.0040	U	ug/L	P354744	
		Acetaminophen**	0.0080	U	ug/L	P354744	
		Fenuron	0.016	U	ug/L	P354744	
		Imazapyr**	0.0040	U	ug/L	P354744	
		Carbamazepine**	8.0E-04	U	ug/L	P354744	
		Fluridone**	4.0E-04	U	ug/L	P354744	
		Hydrocodone**	8.0E-04	U	ug/L	P354744	
		Naproxen**	0.0080	U	ug/L	P354744	
		Ibuprofen**	0.020	U	ug/L	P354744	
		Acesulfame K**	0.10	U	ug/L	P354971	
2042359	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P355002	
		Zinc	5.0	U	ug/L	P355002	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P355002	
		Cadmium	0.020	U	ug/L	P355002	
		Chromium	0.40	U	ug/L	P355002	
		Copper	0.20	U	ug/L	P355002	
		Lead	0.050	U	ug/L	P355002	
		Nickel	0.20	U	ug/L	P355002	
		Silver	0.010	U	ug/L	P355002	

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

Sample Location: MOORES CREEK @ 2nd

Collection Date/Time: 11/15/2018 13:45

Field ID: G2SE0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042332	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P354883	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P355203	
	SM 2540 D-97	TSS	5	I	mg/L	P354864	
	SM 4500 F-C-97	Fluoride	0.94		mg F/L	P355278	
2042334	EPA 350.1 Rev. 2.0	Ammonia-N	0.054		mg N/L	P355076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P354977	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P355142	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P355022	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P354967	
2042336	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.050		mg P/L	P354845	
2042354	EPA 8321B	2,4-D	0.0039	I	ug/L	P354744	
		Sucralose**	0.098		ug/L	P355085	
		Bentazon	0.0010	I	ug/L	P354744	
		MCP	0.0020	U	ug/L	P354744	
		Triclopyr**	0.0040	U	ug/L	P354744	
		Imidacloprid	0.0038	I	ug/L	P354744	
		Diuron	0.0020	U	ug/L	P354744	
		Pyraclostrobin**	0.0020	U	ug/L	P354744	
		Primidone**	0.0040	U	ug/L	P354744	
		Linuron	0.0040	U	ug/L	P354744	
		Acetaminophen**	0.0080	U	ug/L	P354744	
		Fenuron	0.016	U	ug/L	P354744	
		Imazapyr**	0.0052	I	ug/L	P354744	
		Carbamazepine**	8.0E-04	U	ug/L	P354744	
		Fluridone**	0.0011	I	ug/L	P354744	
		Hydrocodone**	8.0E-04	U	ug/L	P354744	
		Naproxen**	0.0080	U	ug/L	P354744	
		Ibuprofen**	0.020	U	ug/L	P354744	
		Acesulfame K**	0.10	U	ug/L	P354971	
2042358	EPA 200.7 Rev. 4.4	Iron	120	U	ug/L	P354983	
		Zinc	20	U	ug/L	P354983	
	EPA 200.8 Rev. 5.4	Arsenic	2.31		ug/L	P354983	
		Cadmium	0.080	U	ug/L	P354983	
		Chromium	1.6	U	ug/L	P354983	
		Copper	0.83	I	ug/L	P354983	
		Lead	0.50	U	ug/L	P354983	
		Nickel	0.80	U	ug/L	P354983	
		Silver	0.040	U	ug/L	P354983	

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

Sample Location: MOORES CREEK @ 7th

Collection Date/Time: 11/15/2018 14:00

Field ID: G2SE0016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042333	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P354883	
	SM 2320 B-97	Total Alkalinity	134		mg CaCO3/L	P355203	
	SM 2540 D-97	TSS	6	I	mg/L	P354864	
	SM 4500 F-C-97	Fluoride	0.64		mg F/L	P355278	
2042335	EPA 350.1 Rev. 2.0	Ammonia-N	0.080		mg N/L	P355076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P354977	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P355143	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P355022	
	SM 5310 B-00	Organic Carbon	6.1		mg C/L	P355174	
2042337	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.072		mg P/L	P354845	
2042355	EPA 8321B	2,4-D	0.012		ug/L	P354744	
		Sucralose**	0.24		ug/L	P355085	
		Bentazon	0.0016	I	ug/L	P354744	
		MCP	0.0023	I	ug/L	P354744	
		Triclopyr**	0.0040	U	ug/L	P354744	
		Imidacloprid	0.0081		ug/L	P354744	
		Diuron	0.0038	I	ug/L	P354744	
		Pyraclostrobin**	0.0020	U	ug/L	P354744	
		Primidone**	0.0040	U	ug/L	P354744	
		Linuron	0.0040	U	ug/L	P354744	
		Acetaminophen**	0.0080	U	ug/L	P354744	
		Fenuron	0.016	U	ug/L	P354744	
		Imazapyr**	0.0098	I	ug/L	P354744	
		Carbamazepine**	9.9E-04	I	ug/L	P354744	
		Fluridone**	0.0021		ug/L	P354744	
		Hydrocodone**	8.0E-04	U	ug/L	P354744	
		Naproxen**	0.0080	U	ug/L	P354744	
		Ibuprofen**	0.020	U	ug/L	P354744	
		Acesulfame K**	0.17	I	ug/L	P354971	

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

Sample Location: FIVE-MILE CREEK @ OKEECHOBEE

Collection Date/Time: 11/15/2018 14:40

Field ID: G2SE0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042329	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P354883	
	EPA 300.0 Rev. 2.1	Chloride	360		mg Cl/L	P355287	
		Sulfate	110		mg SO4/L	P355290	
	SM 2120 B	Color (true)	33		PCU	P354841	
	SM 2320 B-97	Total Alkalinity	208		mg CaCO3/L	P355190	
	SM 2540 C-97	TDS	880		mg/L	P355139	
	SM 2540 D-97	TSS	16		mg/L	P354863	
	SM 4500 F-C-97	Fluoride	0.55		mg F/L	P355193	
2042330	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P355068	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P355099	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P355256	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P355028	
	SM 5310 B-00	Organic Carbon	8.6		mg C/L	P355171	
2042331	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061		mg P/L	P354844	

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

Sample Location: TEN-MILE CREEK @ GORDY

Collection Date/Time: 11/15/2018 15:10

Field ID: G2SE0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2042326	EPA 180.1 Rev. 2.0	Turbidity	2.9	A	NTU	P354884	
	EPA 300.0 Rev. 2.1	Chloride	610		mg Cl/L	P355287	
		Sulfate	120		mg SO4/L	P355290	
	SM 2120 B	Color (true)	32	A	PCU	P354841	
	SM 2320 B-97	Total Alkalinity	187		mg CaCO3/L	P355190	
	SM 2540 C-97	TDS	1.27E+03		mg/L	P355139	
	SM 2540 D-97	TSS	5	I	mg/L	P354863	
	SM 4500 F-C-97	Fluoride	0.48		mg F/L	P355193	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P355075	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P355099	
2042327	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P355256	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P355028	
	SM 5310 B-00	Organic Carbon	9.2		mg C/L	P355171	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.066		mg P/L	P354844	
	EPA 200.7 Rev. 4.4	Calcium	113		mg/L	P355002	
2042357		Iron	190		ug/L	P355002	
		Magnesium	47.6		mg/L	P355002	
		Potassium	10.0		mg/L	P355002	
		Sodium	292		mg/L	P355002	
		Zinc	5.0	U	ug/L	P355002	
	EPA 200.8 Rev. 5.4	Arsenic	1.0		ug/L	P355002	
		Cadmium	0.020	U	ug/L	P355002	
		Chromium	0.40	U	ug/L	P355002	
		Copper	1.09		ug/L	P355002	
		Lead	0.080	I	ug/L	P355002	
		Nickel	0.30	I	ug/L	P355002	
		Silver	0.010	U	ug/L	P355002	

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354883

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354884

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354983

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355002

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: P354983

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355002

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355287

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355290

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355452

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355455

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355068

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355075

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354977

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354979

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355099

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355142

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355143

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355256

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355022

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355028

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354844

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354845

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

Reference Method: EPA 8321B
Batch ID: P354744

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	8.0E-04	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P354744

Component	Result	Code	Units
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P354971

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P355085

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P354841

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P355189

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

Reference Method: SM 2320 B-97
Batch ID: P355190

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

Reference Method: SM 2320 B-97
Batch ID: P355203

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P355139

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354863

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354864

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P355192

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P355193

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P355278

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P354967

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

Reference Method: SM 5310 B-00
Batch ID: P355171

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

Reference Method: SM 5310 B-00
Batch ID: P355174

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	96.3		P	85 - 115
Zinc	89.6		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	96.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	107		P	85 - 115
Chromium	108		P	85 - 115
Copper	102		P	85 - 115
Lead	101		P	85 - 115
Nickel	102		P	85 - 115
Silver	99.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	106		P	85 - 115
Cadmium	99.7		P	85 - 115
Chromium	99.8		P	85 - 115
Copper	103		P	85 - 115
Lead	94.5		P	85 - 115
Nickel	102		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355290

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355452

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355455

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355075

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354977

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354979

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355099

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355142

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355143

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355256

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355022

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355028

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354844

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354845

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

Reference Method: EPA 8321B
Batch ID: P354744

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.9		P	40 - 150
Acetaminophen	96.2		P	30 - 150
Bentazon	83.4		P	30 - 150
Carbamazepine	74.3		P	40 - 150
Diuron	68.8		P	40 - 150
Fenuron	84.7		P	40 - 150
Fluridone	94.8		P	40 - 150
Hydrocodone	85.3		P	40 - 150
Ibuprofen	70.3		P	40 - 150
Imazapyr	74.2		P	40 - 150
Imidacloprid	97.6		P	40 - 160
Linuron	58.2		P	40 - 150
MCPP	96.8		P	40 - 150
Naproxen	81.4		P	40 - 150
Primidone	64.0		P	40 - 150
Pyraclostrobin	71.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P354744

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Triclopyr	60.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354971

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	97.8		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P354841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P355189

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P355190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P355203

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.7		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P355192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P355193

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P355278

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.2		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355171

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041951	Iron	97.4	99.8	P/P	70 - 130
2041951	Zinc	93.5	93.6	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042008	Calcium	102		P	80 - 120
2042008	Iron	99.7		P	80 - 120
2042008	Magnesium	102		P	80 - 120
2042008	Potassium	98.8		P	80 - 120
2042008	Sodium	100		P	80 - 120
2042008	Zinc	97.3		P	80 - 120
2042120	Calcium	96.2		P	80 - 120
2042120	Iron	92.5	101	P/P	80 - 120
2042120	Magnesium	95.4		P	80 - 120
2042120	Potassium	94.2	102	P/P	80 - 120
2042120	Sodium	97.3		P	80 - 120
2042120	Zinc	94.0	94.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041951	Arsenic	112	114	P/P	80 - 120
2041951	Cadmium	98.4	101	P/P	80 - 120
2041951	Chromium	87.9	89.4	P/P	80 - 120
2041951	Copper	101	101	P/P	80 - 120
2041951	Lead	106	109	P/P	80 - 120
2041951	Nickel	103	105	P/P	80 - 120
2041951	Silver	90.4	92.1	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042008	Arsenic	101		P	80 - 120
2042008	Cadmium	98.1		P	80 - 120
2042008	Chromium	97.8		P	80 - 120
2042008	Copper	97.1		P	80 - 120
2042008	Lead	93.9		P	80 - 120
2042008	Nickel	97.3		P	80 - 120
2042008	Silver	102		P	80 - 120
2042120	Arsenic	105	106	P/P	80 - 120
2042120	Cadmium	102	99.9	P/P	80 - 120
2042120	Chromium	96.9	97.2	P/P	80 - 120
2042120	Copper	98.0	98.3	P/P	80 - 120
2042120	Lead	95.3	95.6	P/P	80 - 120
2042120	Nickel	97.4	98.0	P/P	80 - 120
2042120	Silver	100	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042091	Chloride	103		P	90 - 110
2042180	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042091	Sulfate	102		P	90 - 110
2042180	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042124	Chloride	100		P	90 - 110
2042937	Chloride	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355455

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042124	Sulfate	98.4		P	90 - 110
2042937	Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042330	Ammonia-N	93.6	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042244	Ammonia-N	95.0	96.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041856	Ammonia-N	98.5	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041885	Kjeldahl Nitrogen	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354979

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042182	Kjeldahl Nitrogen	93.2	97.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042327	Kjeldahl Nitrogen	95.9	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355142

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041885	NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042335	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042294	NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042912	Total-P	94.2	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042327	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P354744

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042354	2,4-D	103	99.6	P/P	40 - 150
2042354	Acetaminophen	114	117	P/P	30 - 150
2042354	Bentazon	45.6	50.4	P/P	30 - 150
2042354	Carbamazepine	75.5	79.1	P/P	40 - 150
2042354	Diuron	66.9	69.6	P/P	40 - 150
2042354	Fenuron	79.6	82.6	P/P	40 - 150
2042354	Fluridone	88.3	103	P/P	40 - 150
2042354	Hydrocodone	80.1	80.7	P/P	40 - 150
2042354	Ibuprofen	81.7	90.2	P/P	40 - 150
2042354	Imazapyr	92.9	82.5	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P354744

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042354	Imidacloprid	131	131	P/P	40 - 160
2042354	Linuron	64.7	64.6	P/P	40 - 150
2042354	MCP	142	131	P/P	40 - 150
2042354	Naproxen	86.2	71.7	P/P	40 - 150
2042354	Primidone	70.7	72.9	P/P	40 - 150
2042354	Pyraclostrobin	51.6	51.7	P/P	40 - 150
2042354	Triclopyr	97.7	89.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354971

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042005	Acesulfame K	137	131	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042005	Sucralose	85.2	101	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P355192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042491	Fluoride	102	102	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P355193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042533	Fluoride	101	102	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P355278

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041897	Fluoride	99.8	99.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041879	Organic Carbon	93.5	92.6	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355171

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042318	Organic Carbon	109		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P355174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2042335	Organic Carbon	93.7	94.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042282	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042326	Turbidity	7.33	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041951	Iron	2.38	Spike	P	0 - 20
2041951	Zinc	0.0281	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042120	Calcium	6.39	Spike	P	0 - 20
2042120	Iron	8.78	Spike	P	0 - 20
2042120	Magnesium	10.1	Spike	P	0 - 20
2042120	Potassium	4.61	Spike	P	0 - 20
2042120	Sodium	5.69	Spike	P	0 - 20
2042120	Zinc	0.739	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041951	Arsenic	1.83	Spike	P	0 - 20
2041951	Cadmium	3.00	Spike	P	0 - 20
2041951	Chromium	1.61	Spike	P	0 - 20
2041951	Copper	0.595	Spike	P	0 - 20
2041951	Lead	2.26	Spike	P	0 - 20
2041951	Nickel	1.53	Spike	P	0 - 20
2041951	Silver	1.81	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042120	Arsenic	0.372	Spike	P	0 - 20
2042120	Cadmium	1.88	Spike	P	0 - 20
2042120	Chromium	0.253	Spike	P	0 - 20
2042120	Copper	0.379	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042120	Lead	0.289	Spike	P	0 - 20
2042120	Nickel	0.555	Spike	P	0 - 20
2042120	Silver	1.41	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042091	Chloride	1.72	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042091	Sulfate	0.192	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042937	Chloride	0.659	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042937	Sulfate	0.561	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042330	Ammonia-N	4.49	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042244	Ammonia-N	0.989	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041856	Ammonia-N	0.0635	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041885	Kjeldahl Nitrogen	1.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042182	Kjeldahl Nitrogen	4.26	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042327	Kjeldahl Nitrogen	4.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355142

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041885	NO2NO3-N	0.959	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042335	NO2NO3-N	0.468	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042294	NO2NO3-N	0.746	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042912	Total-P	0.259	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P355028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042327	Total-P	0.334	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P354844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042295	O-Phosphate-P	0.314	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P354845

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042311	O-Phosphate-P	0.352	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P354744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042354	2,4-D	3.35	Spike	P	0 - 30
2042354	Acetaminophen	2.12	Spike	P	0 - 30
2042354	Bentazon	9.54	Spike	P	0 - 30
2042354	Carbamazepine	4.66	Spike	P	0 - 30
2042354	Diuron	3.84	Spike	P	0 - 30
2042354	Fenuron	3.73	Spike	P	0 - 30
2042354	Fluridone	15.6	Spike	P	0 - 30
2042354	Hydrocodone	0.769	Spike	P	0 - 30
2042354	Ibuprofen	9.96	Spike	P	0 - 30
2042354	Imazapyr	11.1	Spike	P	0 - 30
2042354	Imidacloprid	0.375	Spike	P	0 - 30
2042354	Linuron	0.0690	Spike	P	0 - 30
2042354	MCPP	7.96	Spike	P	0 - 30
2042354	Naproxen	18.4	Spike	P	0 - 30
2042354	Primidone	3.13	Spike	P	0 - 30
2042354	Pyraclostrobin	0.156	Spike	P	0 - 30
2042354	Triclopyr	8.41	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P354971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042005	Acesulfame K	4.13	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P355085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P355085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042005	Sucralose	16.6	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P354841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042326	Color (true)	8.93	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P355189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042491	Total Alkalinity	0.155	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P355190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042533	Total Alkalinity	0.00789	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P355203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041897	Total Alkalinity	0.439	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P355139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042063	TDS	3.11	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P355192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042491	Fluoride	0.463	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P355193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042533	Fluoride	0.463	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P355278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041897	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P354967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041879	Organic Carbon	0.770	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P355171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042318	Organic Carbon	0.573	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P355174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2042335	Organic Carbon	0.731	Spike	P	0 - 20

* 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: 2042354
Field Sample ID: G2SE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.8	P	30 - 160
EPA 8321B	Diuron-d6	76.9	P	30 - 160
EPA 8321B	Endothall-d6	76.1	P	40 - 160
EPA 8321B	Endothall-d6	76.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	71.8	P	30 - 160
EPA 8321B	Primidone-d5	65.8	P	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	40 - 160
EPA 8321B	Sucralose-d6	95.8	P	40 - 160

Lab Sample ID: 2042355
Field Sample ID: G2SE0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.4	P	30 - 160
EPA 8321B	Diuron-d6	73.7	P	30 - 160
EPA 8321B	Endothall-d6	71.4	P	40 - 160
EPA 8321B	Endothall-d6	71.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	81.2	P	30 - 160
EPA 8321B	Primidone-d5	85.4	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160

Lab Sample ID: 2042356
Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.8	P	30 - 160
EPA 8321B	Diuron-d6	94.2	P	30 - 160
EPA 8321B	Endothall-d6	84.6	P	40 - 160
EPA 8321B	Endothall-d6	84.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	90.1	P	30 - 160
EPA 8321B	Primidone-d5	81.1	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	40 - 160
EPA 8321B	Sucralose-d6	104	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A87829

Included Lab Sample IDs: 2042320, 2042323, 2042326, 2042329

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.2	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A87830

Included Lab Sample IDs: 2042322, 2042325, 2042328, 2042331, 2042336, 2042337, 2042340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	98.1	P/P	90 - 110
O-Phosphate-P	99.6	98.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A87844

Included Lab Sample IDs: 2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338

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

Reference Method: SM 5310 B-00

Run ID: A87888

Included Lab Sample IDs: 2042334

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.4	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87911

Included Lab Sample IDs: 2042321, 2042334, 2042335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	102	P/P	90 - 110
Kjeldahl Nitrogen	96.2	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87941

Included Lab Sample IDs: 2042330, 2042339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	95.2	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A87945

Included Lab Sample IDs: 2042354, 2042355, 2042356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	112	81.8	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87946

Included Lab Sample IDs: 2042321, 2042324, 2042327, 2042334, 2042335

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87946

Included Lab Sample IDs: 2042321, 2042324, 2042327, 2042334, 2042335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	99.6	P/P	90 - 110
Ammonia-N	99.6	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87950

Included Lab Sample IDs: 2042321, 2042324, 2042327, 2042330, 2042335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.4	P/P	90 - 110
Total-P	99.4	99.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87958

Included Lab Sample IDs: 2042357, 2042359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	101	P/P	90 - 110
Arsenic	98.9	99.7	P/P	90 - 110
Cadmium	94.7	96.3	P/P	90 - 110
Cadmium	95.4	96.7	P/P	90 - 110
Chromium	96.7	97.0	P/P	90 - 110
Chromium	96.9	96.9	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Copper	97.6	99.1	P/P	90 - 110
Lead	92.7	94.4	P/P	90 - 110
Lead	93.7	94.6	P/P	90 - 110
Nickel	98.3	98.4	P/P	90 - 110
Nickel	99.7	100	P/P	90 - 110
Silver	97.6	99.1	P/P	90 - 110
Silver	97.9	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87959

Included Lab Sample IDs: 2042334, 2042339

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87965

Included Lab Sample IDs: 2042324, 2042327, 2042330, 2042339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.9	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87974

Included Lab Sample IDs: 2042334, 2042335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87974

Included Lab Sample IDs: 2042334, 2042335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A87982

Included Lab Sample IDs: 2042357, 2042358, 2042359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.9	103	P/P	90 - 110
Iron	101	103	P/P	95 - 105
Iron	97.1	102	P/P	90 - 110
Iron	98.3	99.8	P/P	90 - 110
Magnesium	97.5	102	P/P	90 - 110
Potassium	97.7	102	P/P	90 - 110
Sodium	99.5	103	P/P	90 - 110
Zinc	98.8	93.1	P/P	90 - 110
Zinc	99.0	96.5	P/P	95 - 105
Zinc	99.3	94.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A87989

Included Lab Sample IDs: 2042321, 2042324, 2042327, 2042330, 2042335, 2042339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.3	95.8	P/P	90 - 110
Organic Carbon	95.8	95.7	P/P	90 - 110
Organic Carbon	96.0	96.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87993

Included Lab Sample IDs: 2042320, 2042323, 2042326, 2042329

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

Reference Method: SM 2320 B-97

Run ID: A87997

Included Lab Sample IDs: 2042320, 2042323, 2042326, 2042329, 2042338

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.0	P/P	90 - 110
Total Alkalinity	98.8	101	P/P	90 - 110
Total Alkalinity	99.0	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A87997

Included Lab Sample IDs: 2042320, 2042323, 2042326, 2042329, 2042338

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

Reference Method: SM 2320 B-97

Run ID: A87999

Included Lab Sample IDs: 2042332, 2042333

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

Reference Method: EPA 8321B

Run ID: A88012

Included Lab Sample IDs: 2042354, 2042355, 2042356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	114	107	P/P	50 - 150
Acetaminophen	109	114	P/P	60 - 160
Bentazon	112	119	P/P	50 - 160
Carbamazepine	104	118	P/P	60 - 160
Diuron	98.4	99.7	P/P	60 - 150
Fenuron	105	115	P/P	60 - 150
Fluridone	112	91.2	P/P	60 - 160
Hydrocodone	100	119	P/P	60 - 150
Ibuprofen	82.5	83.4	P/P	50 - 160
Imazapyr	91.4	90.0	P/P	50 - 150
Imidacloprid	105	109	P/P	60 - 160
Linuron	90.1	99.4	P/P	60 - 150
MCPP	88.4	114	P/P	50 - 150
Naproxen	91.6	73.2	P/P	50 - 160
Primidone	107	154	P/P	60 - 160
Pyraclostrobin	104	65.1	P/P	60 - 150
Triclopyr	96.3	96.0	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88017

Included Lab Sample IDs: 2042321, 2042324, 2042327, 2042330, 2042339

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

Reference Method: EPA 8321B

Run ID: A88023

Included Lab Sample IDs: 2042354, 2042355, 2042356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	78.5	85.6	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A88028

Included Lab Sample IDs: 2042332, 2042333

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A88076

Included Lab Sample IDs: 2042358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	103	P/P	90 - 110
Cadmium	104	103	P/P	90 - 110
Chromium	104	100	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Silver	97.9	97.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A88345

Included Lab Sample IDs: 2042358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	104	105	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						0.0	
	Turbidity						7.33	
EPA 200.7 Rev. 4.4	Calcium	102		102	96.2			6.39
	Iron	96.3		97.4	99.8			2.38
	Iron	104		99.7	92.5	101		8.78
	Magnesium	100		102	95.4			10.1
	Potassium	102		98.8	94.2	102		4.61
	Sodium	102		100	97.3			5.69
	Zinc	89.6		93.5	93.6			0.0281
	Zinc	96.3		97.3	94.0	94.7		0.739
EPA 200.8 Rev. 5.4	Arsenic	103		112	114			1.83
	Arsenic	106		101	105	106		0.372
	Cadmium	107		98.4	101			3.00
	Cadmium	99.7		98.1	102	99.9		1.88
	Chromium	108		87.9	89.4			1.61
	Chromium	99.8		97.8	96.9	97.2		0.253
	Copper	102		101	101			0.595
	Copper	103		97.1	98.0	98.3		0.379
	Lead	101		106	109			2.26
	Lead	94.5		93.9	95.3	95.6		0.289
	Nickel	102		103	105			1.53
	Nickel	102		97.3	97.4	98.0		0.555
	Silver	99.2		90.4	92.1			1.81
	Silver	105		102	100	101		1.41
EPA 300.0 Rev. 2.1	Chloride	99.8		103	102		1.72	
	Chloride	98.3		98.0	100		0.659	
	Sulfate	99.4		102	101		0.192	
	Sulfate	98.8		98.5	98.4		0.561	
EPA 350.1 Rev. 2.0	Ammonia-N	96.9		93.6	101			4.49
	Ammonia-N	99.8		95.0	96.0			0.989
	Ammonia-N	95.2		98.5	98.6			0.0635
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.9		101	103			1.94
	Kjeldahl Nitrogen	107		93.2	97.9			4.26
	Kjeldahl Nitrogen	102		95.9	103			4.59
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5		99.0	100			0.959
	NO2NO3-N	99.0		101	101			0.468
	NO2NO3-N	99.0		100	101			0.746
EPA 365.1 Rev. 2.0	Total-P	97.0		94.2	94.4			0.259
	Total-P	103		103	102			0.334
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102						0.314
	O-Phosphate-P	98.2						0.352
EPA 8321B	2,4-D	79.9		103	99.6			3.35
	Acesulfame K	94.5		137	131			4.13
	Acetaminophen	96.2		114	117			2.12
	Bentazon	83.4		45.6	50.4			9.54
	Carbamazepine	74.3		75.5	79.1			4.66
	Diuron	68.8		66.9	69.6			3.84
	Fenuron	84.7		79.6	82.6			3.73
	Fluridone	94.8		88.3	103			15.6
	Hydrocodone	85.3		80.1	80.7			0.769
	Ibuprofen	70.3		90.2	81.7			9.96
	Imazapyr	74.2		92.9	82.5			11.1
	Imidacloprid	97.6		131	131			0.375
	Linuron	58.2		64.7	64.6			0.0690

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	MCCP	96.8	142	131		7.96
	Naproxen	81.4	86.2	71.7		18.4
	Primidone	64.0	70.7	72.9		3.13
	Pyraclostrobin	71.8	51.6	51.7		0.156
	Sucralose	97.8	85.2	101		16.6
	Triclopyr	60.6	97.7	89.9		8.41
SM 2120 B	Color (true)	99.3			8.93	
SM 2320 B-97	Total Alkalinity	100			0.155	
	Total Alkalinity	101			0.0078	
	Total Alkalinity	99.7			0.439	
SM 2540 C-97	TDS				3.11	
SM 4500 F-C-97	Fluoride	99.8	102	102		0.463
	Fluoride	103	101	102		0.463
	Fluoride	98.9	99.8	99.8		0.0
SM 5310 B-00	Organic Carbon	93.2	93.5	92.6		0.770
	Organic Carbon	97.6	109			0.573
	Organic Carbon	96.6	93.7	94.5		0.731

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2042357, 2042358, 2042359
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2042357, 2042358, 2042359
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2042320, 2042323, 2042326, 2042329
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2042320, 2042323, 2042326, 2042329
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2042321, 2042324, 2042327, 2042330, 2042334, 2042335, 2042339
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2042321, 2042324, 2042327, 2042330, 2042334, 2042335, 2042339
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2042321, 2042324, 2042327, 2042330, 2042334, 2042335, 2042339
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2042321, 2042324, 2042327, 2042330, 2042334, 2042335, 2042339
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2042322, 2042325, 2042328, 2042331, 2042336, 2042337, 2042340
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2042354, 2042355, 2042356
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2042354, 2042355, 2042356
SM 2120 B / E31780	True Color measured at 450 nm	2042320, 2042323, 2042326, 2042329
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2042320, 2042323, 2042326, 2042329
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2042321, 2042324, 2042327, 2042330, 2042334, 2042335, 2042339

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	11/16/2018			11/16/2018 16:18	Megan Treadwell	2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338
EPA 200.7 Rev. 4.4	11/16/2018	11/20/2018 14:40	Elliott D. Healy	11/28/2018 00:41	Betina Topolski	2042358
	11/16/2018	11/20/2018 17:25	Elliott D. Healy	11/27/2018 14:27	Betina Topolski	2042359
	11/16/2018	11/20/2018 17:25	Elliott D. Healy	11/27/2018 17:42	Betina Topolski	2042357
	11/16/2018	11/20/2018 17:25	Elliott D. Healy	11/27/2018 17:49	Betina Topolski	2042357
EPA 200.8 Rev. 5.4	11/16/2018	11/20/2018 14:40	Elliott D. Healy	11/30/2018 04:45	Allison Taylor	2042358
	11/16/2018	11/20/2018 14:40	Elliott D. Healy	11/30/2018 09:44	Allison Taylor	2042358
	11/16/2018	11/20/2018 14:40	Elliott D. Healy	12/13/2018 03:27	Allison Taylor	2042358
	11/16/2018	11/20/2018 17:25	Elliott D. Healy	11/27/2018 03:21	Robert K Palmer	2042359
	11/16/2018	11/20/2018 17:25	Elliott D. Healy	11/27/2018 07:01	Robert K Palmer	2042357
EPA 300.0 Rev. 2.1	11/16/2018			11/29/2018 09:29	Lipi Saha	2042320
	11/16/2018			11/29/2018 10:05	Lipi Saha	2042326
	11/16/2018			11/29/2018 10:17	Lipi Saha	2042329
	11/16/2018			12/01/2018 05:44	Lipi Saha	2042323
EPA 350.1 Rev. 2.0	11/16/2018			11/19/2018 16:19	Ping Hua	2042321
	11/16/2018			11/19/2018 16:21	Ping Hua	2042324
	11/16/2018			11/19/2018 16:22	Ping Hua	2042327
	11/16/2018			11/19/2018 16:27	Ping Hua	2042334
	11/16/2018			11/19/2018 16:39	Ping Hua	2042335
	11/16/2018			11/21/2018 15:09	Adrian Shelby	2042330
	11/16/2018			11/21/2018 15:13	Adrian Shelby	2042339
	11/16/2018	11/20/2018 10:20	Adrian Shelby	11/21/2018 10:21	Joseph Suarez	2042334
EPA 351.2 Rev. 2.0	11/16/2018	11/20/2018 10:20	Adrian Shelby	11/21/2018 10:23	Joseph Suarez	2042335
	11/16/2018	11/20/2018 10:30	Adrian Shelby	11/21/2018 11:19	Joseph Suarez	2042321
	11/16/2018	11/26/2018 16:00	Adrian Shelby	11/27/2018 09:43	Joseph Suarez	2042324
	11/16/2018	11/26/2018 16:00	Adrian Shelby	11/27/2018 09:45	Joseph Suarez	2042327
	11/16/2018	11/26/2018 16:00	Adrian Shelby	11/27/2018 09:49	Joseph Suarez	2042330
	11/16/2018	11/26/2018 16:00	Adrian Shelby	11/27/2018 09:51	Joseph Suarez	2042339
	11/16/2018	11/26/2018 16:00	Adrian Shelby	11/27/2018 12:07	Lauren Bottorf	2042334
EPA 353.2 Rev. 2.0	11/16/2018			11/27/2018 12:14	Lauren Bottorf	2042335
	11/16/2018			11/28/2018 12:14	Lauren Bottorf	2042339
	11/16/2018			11/28/2018 12:15	Lauren Bottorf	2042321
	11/16/2018			11/28/2018 12:17	Lauren Bottorf	2042324
	11/16/2018			11/28/2018 12:19	Lauren Bottorf	2042327
	11/16/2018			11/28/2018 12:20	Lauren Bottorf	2042330
	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 10:40	Beverly Y. Sanders	2042335
EPA 365.1 Rev. 2.0	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 10:49	Beverly Y. Sanders	2042327
	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 10:58	Beverly Y. Sanders	2042321
	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 10:59	Beverly Y. Sanders	2042324
	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 10:59	Beverly Y. Sanders	2042324

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 11:00	Beverly Y. Sanders	2042330
	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 14:49	Beverly Y. Sanders	2042334
	11/16/2018	11/21/2018 13:00	Sima Feizi	11/26/2018 14:56	Beverly Y. Sanders	2042339
EPA 365.1 Rev. 2.0 dissolved	11/16/2018			11/16/2018 16:53	Jhamieka S. Greenwood	2042322
	11/16/2018			11/16/2018 16:54	Jhamieka S. Greenwood	2042325
	11/16/2018			11/16/2018 16:56	Jhamieka S. Greenwood	2042328
	11/16/2018			11/16/2018 16:57	Jhamieka S. Greenwood	2042331
	11/16/2018			11/16/2018 17:04	Jhamieka S. Greenwood	2042340
	11/16/2018			11/16/2018 17:06	Jhamieka S. Greenwood	2042337
	11/16/2018			11/16/2018 17:07	Jhamieka S. Greenwood	2042336
	11/16/2018			11/16/2018 17:07	Jhamieka S. Greenwood	2042336
EPA 8321B	11/16/2018	11/21/2018 07:30	Rebecca Ware	11/21/2018 12:22	Rebecca Ware	2042354
	11/16/2018	11/21/2018 07:30	Rebecca Ware	11/21/2018 12:35	Rebecca Ware	2042355
	11/16/2018	11/21/2018 07:30	Rebecca Ware	11/21/2018 12:49	Rebecca Ware	2042356
	11/16/2018	11/21/2018 07:30	Rebecca Ware	11/28/2018 09:56	Rebecca Ware	2042354
	11/16/2018	11/21/2018 07:30	Rebecca Ware	11/28/2018 10:10	Rebecca Ware	2042355
	11/16/2018	11/21/2018 07:30	Rebecca Ware	11/28/2018 10:23	Rebecca Ware	2042356
	11/16/2018	11/21/2018 10:00	Hoor Shaik	11/28/2018 04:48	Juyoung Kim	2042354
	11/16/2018	11/21/2018 10:00	Hoor Shaik	11/28/2018 05:38	Juyoung Kim	2042355
	11/16/2018	11/21/2018 10:00	Hoor Shaik	11/28/2018 05:54	Juyoung Kim	2042356
SM 2120 B	11/16/2018			11/16/2018 16:29	Chelsea Hernandez	2042320
	11/16/2018			11/16/2018 16:30	Chelsea Hernandez	2042323
	11/16/2018			11/16/2018 16:32	Chelsea Hernandez	2042326, 2042329
SM 2320 B-97	11/16/2018			11/21/2018 19:15	Dale L. Simmons	2042332
	11/16/2018			11/21/2018 19:26	Dale L. Simmons	2042333
	11/16/2018			11/27/2018 10:17	Dale L. Simmons	2042320
	11/16/2018			11/27/2018 10:27	Dale L. Simmons	2042323
	11/16/2018			11/27/2018 12:44	Dale L. Simmons	2042338
	11/16/2018			11/27/2018 15:19	Dale L. Simmons	2042329
	11/16/2018			11/27/2018 15:29	Dale L. Simmons	2042326
	11/16/2018			11/16/2018 17:06	Yijie Li	2042320, 2042323, 2042326, 2042329
SM 2540 C-97	11/16/2018			11/16/2018 17:06	Yijie Li	2042320, 2042323, 2042326, 2042329, 2042332, 2042333, 2042338
SM 4500 F-C-97	11/16/2018			11/27/2018 10:17	Dale L. Simmons	2042320
	11/16/2018			11/27/2018 10:27	Dale L. Simmons	2042323
	11/16/2018			11/27/2018 12:44	Dale L. Simmons	2042338
	11/16/2018			11/27/2018 15:19	Dale L. Simmons	2042329
	11/16/2018			11/27/2018 15:29	Dale L. Simmons	2042326
	11/16/2018			11/29/2018 04:01	Dale L. Simmons	2042332
	11/16/2018			11/29/2018 04:05	Dale L. Simmons	2042333
	11/16/2018			11/20/2018 08:22	Megan Treadwell	2042334
SM 5310 B-00	11/16/2018			11/20/2018 08:22	Megan Treadwell	2042334

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	11/16/2018			11/21/2018 16:16	Megan Treadwell	2042321
	11/16/2018			11/21/2018 16:58	Megan Treadwell	2042324
	11/16/2018			11/21/2018 17:38	Megan Treadwell	2042327
	11/16/2018			11/21/2018 17:51	Megan Treadwell	2042330
	11/16/2018			11/21/2018 18:05	Megan Treadwell	2042339
	11/16/2018			11/22/2018 07:20	Megan Treadwell	2042335