

Chemical Analysis Report

SO-DIST-2019-06-28-01

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

Event Description: **CALOOSA LT**
Request ID: **RQ-2019-06-10-08**
Customer: **SO-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 26-JUL-2019 11:46

A handwritten signature in black ink, appearing to read "Liang Lin", 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 and Nutrients.

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 by the Florida Department of Health Environmental Laboratory Certification Program 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: USGSStation-PuntaBlanca

Collection Date/Time: 06/27/2019 10:05

Field ID: G3SD0108

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099456	SM 2320 B-97	Total Alkalinity	127		mg CaCO3/L	P366672	
	SM 4500 F-C-97	Fluoride	0.86		mg F/L	P366859	
2099460	SM 5310 B-00 dissolved	Organic Carbon	7.6		mg C/L	P366727	
2099464	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P366786	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P366769	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P366686	
	EPA 365.1 Rev. 2.0	Total-P	0.083		mg P/L	P366561	
	SM 5310 B-00	Organic Carbon	7.7		mg C/L	P366727	
2099468	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.057		mg P/L	P366507	
2099531	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P366605	
		Zinc	15	U	ug/L	P366605	
	EPA 200.8 Rev. 5.4	Arsenic	3.11		ug/L	P366605	
		Cadmium	0.080	U	ug/L	P366605	
		Chromium	1.6	U	ug/L	P366605	
		Copper	1.6	U	ug/L	P366605	
		Lead	0.80	U	ug/L	P366605	
		Nickel	2.0	U	ug/L	P366605	
		Silver	0.040	U	ug/L	P366605	

Sample Location: USGS Station-ShellPoint

Collection Date/Time: 06/27/2019 10:30

Field ID: G3SD0109

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099457	SM 2320 B-97	Total Alkalinity	124		mg CaCO3/L	P366672	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P366859	
2099461	SM 5310 B-00 dissolved	Organic Carbon	4.6		mg C/L	P366727	
2099465	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P366786	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P366769	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P366686	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P366561	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P366727	
2099469	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P366507	
2099532	EPA 200.7 Rev. 4.4	Iron	120	U	ug/L	P366605	
		Zinc	20	U	ug/L	P366605	
	EPA 200.8 Rev. 5.4	Arsenic	3.02		ug/L	P366605	
		Cadmium	0.080	U	ug/L	P366605	
		Chromium	1.6	U	ug/L	P366605	
		Copper	1.6	U	ug/L	P366605	
		Lead	2.0	U	ug/L	P366605	
		Nickel	2.0	U	ug/L	P366605	
		Silver	0.040	U	ug/L	P366605	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: The sample required dilution for iron and zinc due to matrix interference.

EPA 200.8 Rev. 5.4: The sample required dilution for lead due to matrix interference.

Sample Location: Marker # 76

Collection Date/Time: 06/27/2019 10:55

Field ID: G3SD0110

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099458	SM 2320 B-97	Total Alkalinity	131		mg CaCO3/L	P366672	
	SM 4500 F-C-97	Fluoride	0.58		mg F/L	P366859	
2099462	SM 5310 B-00 dissolved	Organic Carbon	11		mg C/L	P366727	
2099466	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P366788	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P366769	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P366686	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P366561	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P366727	
2099470	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.093		mg P/L	P366507	
2099533	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P366605	
		Zinc	15	U	ug/L	P366605	
	EPA 200.8 Rev. 5.4	Arsenic	3.17		ug/L	P366605	
		Cadmium	0.080	U	ug/L	P366605	
		Chromium	1.6	U	ug/L	P366605	
		Copper	1.6	U	ug/L	P366605	
		Lead	0.80	U	ug/L	P366605	
		Nickel	2.0	U	ug/L	P366605	
		Silver	0.040	U	ug/L	P366605	

Sample Location: Marker # 52

Collection Date/Time: 06/27/2019 11:25

Field ID: G3SD0111

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099459	SM 2320 B-97	Total Alkalinity	140		mg CaCO3/L	P366737	RPD
	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P366744	
2099463	SM 5310 B-00 dissolved	Organic Carbon	15		mg C/L	P366632	
2099467	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P366788	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P366888	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P366686	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P366561	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P366632	
2099471	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P366507	
2099534	EPA 200.7 Rev. 4.4	Iron	130		ug/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.63		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	1.53		ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.64	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: US 41, Marker # 38

Collection Date/Time: 06/27/2019 11:50

Field ID: G3SD0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099472	SM 5310 B-00 dissolved	Organic Carbon	9.9		mg C/L	P366632	
2099480	EPA 350.1 Rev. 2.0	Ammonia-N	0.045		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P366729	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P366562	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P366632	
2099488	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P366505	
2099535	EPA 200.7 Rev. 4.4	Calcium	62.0		mg/L	P366628	
		Iron	260		ug/L	P366628	
		Magnesium	49.4		mg/L	P366628	
		Potassium	18.2		mg/L	P366628	
		Sodium	359		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.57		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.49	I	ug/L	P366628	
		Copper	1.71		ug/L	P366628	
		Lead	0.21	I	ug/L	P366893	
		Nickel	0.75	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: Marker # 28

Collection Date/Time: 06/27/2019 12:00

Field ID: G3SD0113

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099473	SM 5310 B-00 dissolved	Organic Carbon	18		mg C/L	P366632	
2099481	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P366729	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P366562	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P366632	
2099489	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P366505	
2099536	EPA 200.7 Rev. 4.4	Calcium	55.0		mg/L	P366628	
		Iron	370		ug/L	P366628	
		Magnesium	20.4		mg/L	P366628	
		Potassium	9.0		mg/L	P366628	
		Sodium	120		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.49		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.58	I	ug/L	P366628	
		Copper	3.38		ug/L	P366628	
		Lead	0.21	I	ug/L	P366893	
		Nickel	0.76	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: Marker # 22

Collection Date/Time: 06/27/2019 12:15

Field ID: G3SD0114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099474	SM 5310 B-00 dissolved	Organic Carbon	18		mg C/L	P366632	
2099482	EPA 350.1 Rev. 2.0	Ammonia-N	0.096		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P366729	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P366632	
2099490	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.15		mg P/L	P366505	
2099537	EPA 200.7 Rev. 4.4	Calcium	53.2		mg/L	P366628	
		Iron	270		ug/L	P366628	
		Magnesium	11.0		mg/L	P366628	
		Potassium	5.9		mg/L	P366628	
		Sodium	43.1		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.25		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	1.29		ug/L	P366628	
		Lead	0.38	I	ug/L	P366893	
		Nickel	0.70	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: Old Swing Bridge

Collection Date/Time: 06/27/2019 12:22

Field ID: G3SD0115

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099475	SM 5310 B-00 dissolved	Organic Carbon	18		mg C/L	P366632	
2099483	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P366730	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P366632	
2099491	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.15		mg P/L	P366505	
2099538	EPA 200.7 Rev. 4.4	Calcium	55.4		mg/L	P366628	
		Iron	270		ug/L	P366628	
		Magnesium	10.3		mg/L	P366628	
		Potassium	5.6		mg/L	P366628	
		Sodium	38.1		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.22		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.41	I	ug/L	P366628	
		Copper	1.16		ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.69	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: MidChannel@OrangeRiver

Collection Date/Time: 06/27/2019 12:35

Field ID: G3SD0116

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099476	SM 5310 B-00 dissolved	Organic Carbon	18		mg C/L	P366632	
2099484	EPA 350.1 Rev. 2.0	Ammonia-N	0.098		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P366730	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P366632	
2099492	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P366505	
2099539	EPA 200.7 Rev. 4.4	Calcium	58.8		mg/L	P366628	
		Iron	280		ug/L	P366628	
		Magnesium	9.86		mg/L	P366628	
		Potassium	5.1		mg/L	P366628	
		Sodium	33.2		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.18		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	1.18		ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.67	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: Upstream of Power Plant

Collection Date/Time: 06/27/2019 12:45

Field ID: G3SD0117

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099477	SM 5310 B-00 dissolved	Organic Carbon	18		mg C/L	P366632	
2099485	EPA 350.1 Rev. 2.0	Ammonia-N	0.098		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P366730	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P366632	
2099493	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P366505	
2099540	EPA 200.7 Rev. 4.4	Calcium	57.5		mg/L	P366628	
		Iron	250		ug/L	P366628	
		Magnesium	9.73		mg/L	P366628	
		Potassium	5.2		mg/L	P366628	
		Sodium	32.5		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.15		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	1.12		ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.69	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: Mid Channel off Oxbow

Collection Date/Time: 06/27/2019 13:00

Field ID: G3SD0118

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099478	SM 5310 B-00 dissolved	Organic Carbon	21		mg C/L	P366632	
2099486	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P366787	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P366770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P366730	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P366632	
2099494	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.085		mg P/L	P366505	
2099541	EPA 200.7 Rev. 4.4	Calcium	56.0		mg/L	P366628	
		Iron	330		ug/L	P366628	
		Magnesium	8.73		mg/L	P366628	
		Potassium	5.5		mg/L	P366628	
		Sodium	26.9		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	2.05		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	0.99		ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.63	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: Mid channel off point

Collection Date/Time: 06/27/2019 13:10

Field ID: G3SD0119

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099479	SM 5310 B-00 dissolved	Organic Carbon	22		mg C/L	P366632	
2099487	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P366776	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P366771	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P366730	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P366632	
2099495	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.067		mg P/L	P366505	
2099542	EPA 200.7 Rev. 4.4	Calcium	55.7		mg/L	P366628	
		Iron	360		ug/L	P366628	
		Magnesium	8.36		mg/L	P366628	
		Potassium	5.2		mg/L	P366628	
		Sodium	26.3		mg/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	1.94		ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	0.85		ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.61	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366628	

Sample Location: USGSStation-PuntaBlanca

Collection Date/Time: 06/27/2019 10:15

Field ID: FB_06272019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2099496	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P366737	RPD
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P366744	
2099497	SM 5310 B-00 dissolved	Organic Carbon	0.59	I	mg C/L	P366632	
2099498	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P366776	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P366771	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P366730	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P366679	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P366632	
2099499	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P366506	
2099543	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P366628	
		Zinc	5.0	U	ug/L	P366628	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P366628	
		Cadmium	0.020	U	ug/L	P366628	
		Chromium	0.40	U	ug/L	P366628	
		Copper	0.40	U	ug/L	P366628	
		Lead	0.20	U	ug/L	P366628	
		Nickel	0.50	U	ug/L	P366628	
		Silver	0.010	U	ug/L	P366628	

Ref. Method and Comment:

SM 5310 B-00 dissolved: The result was confirmed on 07/03/2019.

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366605

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: P366628

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	36		ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366605

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366628

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.76		ug/L
Nickel	0.81	I	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Component	Result	Code	Units
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366776

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366786

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366787

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366788

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366769

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366770

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366771

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366888

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366686

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366729

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366730

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366561

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366562

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366679

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366505

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366506

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366507

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

Reference Method: SM 2320 B-97
Batch ID: P366672

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

Reference Method: SM 2320 B-97
Batch ID: P366737

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

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P366744

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P366859

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P366632

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

Reference Method: SM 5310 B-00
Batch ID: P366727

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

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366632

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

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366727

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: P366605

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	80 - 120
Zinc	99.4		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	103		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	101		P	85 - 115
Sodium	101		P	85 - 115
Zinc	94.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366605

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	106		P	85 - 115
Copper	99.3		P	85 - 115
Lead	99.8		P	85 - 115
Nickel	100		P	85 - 115
Silver	98.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	105		P	85 - 115
Copper	99.5		P	85 - 115
Lead	100		P	85 - 115
Nickel	101		P	85 - 115
Silver	98.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	103		P	85 - 115
Nickel	104		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366776

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366786

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366787

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366788

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366769

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366770

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366771

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366888

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366729

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	103		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366730

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366561

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366562

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366679

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366505

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366506

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366507

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

Reference Method: SM 2320 B-97
Batch ID: P366672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P366737

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P366744

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P366859

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P366632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P366727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.1		P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366605

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099531	Iron	101		P	70 - 130
2099531	Zinc	98.2		P	70 - 130
2099533	Iron	99.1	105	P/P	70 - 130
2099533	Zinc	101	101	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099614	Calcium	102		P	80 - 120
2099614	Iron	101		P	80 - 120
2099614	Magnesium	102		P	80 - 120
2099614	Potassium	100		P	80 - 120
2099614	Sodium	101		P	80 - 120
2099614	Zinc	96.3		P	80 - 120
2100039	Calcium	102		P	80 - 120
2100039	Iron	105	104	P/P	80 - 120
2100039	Magnesium	102		P	80 - 120
2100039	Potassium	101	100	P/P	80 - 120
2100039	Sodium	103		P	80 - 120
2100039	Zinc	94.0	94.4	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366605

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099531	Arsenic	103		P	80 - 120
2099531	Cadmium	88.5		P	80 - 120
2099531	Chromium	85.8		P	80 - 120
2099531	Copper	94.3		P	80 - 120
2099531	Lead	105		P	80 - 120
2099531	Nickel	100		P	80 - 120
2099531	Silver	87.6		P	80 - 120
2099533	Arsenic	109	108	P/P	80 - 120
2099533	Cadmium	92.2	92.1	P/P	80 - 120
2099533	Chromium	90.0	87.8	P/P	80 - 120
2099533	Copper	88.3	86.3	P/P	80 - 120
2099533	Lead	106	104	P/P	80 - 120
2099533	Nickel	102	100	P/P	80 - 120
2099533	Silver	91.1	90.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099614	Arsenic	102		P	80 - 120
2099614	Cadmium	99.9		P	80 - 120
2099614	Chromium	104		P	80 - 120
2099614	Copper	99.4		P	80 - 120
2099614	Lead	98.7		P	80 - 120
2099614	Nickel	99.5		P	80 - 120
2099614	Silver	97.0		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100039	Arsenic	104	106	P/P	80 - 120
2100039	Cadmium	103	105	P/P	80 - 120
2100039	Chromium	107	107	P/P	80 - 120
2100039	Copper	99.4	101	P/P	80 - 120
2100039	Lead	98.3	100	P/P	80 - 120
2100039	Nickel	100	101	P/P	80 - 120
2100039	Silver	97.4	97.0	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099538	Lead	107		P	80 - 120
2099538	Nickel	99.6		P	80 - 120
2100834	Lead	96.6	96.3	P/P	80 - 120
2100834	Nickel	101	102	P/P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366776

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099706	Ammonia-N	105	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099464	Ammonia-N	107	108	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099406	Ammonia-N	102	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099466	Ammonia-N	105	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099330	Kjeldahl Nitrogen	93.2	93.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099406	Kjeldahl Nitrogen	98.7	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099601	Kjeldahl Nitrogen	105	91.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099564	Kjeldahl Nitrogen	92.3	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099452	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099375	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099483	NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099334	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099374	Total-P	102	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099353	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099495	O-Phosphate-P	95.5	95.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099604	O-Phosphate-P	95.1	96.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366507

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099565	O-Phosphate-P	96.1	97.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P366744

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2098934	Fluoride	98.1	98.1	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P366859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099567	Fluoride	98.1	98.1	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P366632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099480	Organic Carbon	94.0	94.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P366727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099646	Organic Carbon	94.7	95.6	P/P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099480	Organic Carbon	94.0	94.8	P/P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099646	Organic Carbon	94.7	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099533	Iron	5.43	Spike	P	0 - 20
2099533	Zinc	0.679	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100039	Calcium	0.134	Spike	P	0 - 20
2100039	Iron	0.945	Spike	P	0 - 20
2100039	Magnesium	0.196	Spike	P	0 - 20
2100039	Potassium	0.482	Spike	P	0 - 20
2100039	Sodium	0.540	Spike	P	0 - 20
2100039	Zinc	0.470	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099533	Arsenic	1.25	Spike	P	0 - 20
2099533	Cadmium	0.116	Spike	P	0 - 20
2099533	Chromium	2.51	Spike	P	0 - 20
2099533	Copper	2.07	Spike	P	0 - 20
2099533	Lead	2.10	Spike	P	0 - 20
2099533	Nickel	1.70	Spike	P	0 - 20
2099533	Silver	0.917	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100039	Arsenic	1.64	Spike	P	0 - 20
2100039	Cadmium	1.61	Spike	P	0 - 20
2100039	Chromium	0.0356	Spike	P	0 - 20
2100039	Copper	1.42	Spike	P	0 - 20
2100039	Lead	2.05	Spike	P	0 - 20
2100039	Nickel	0.905	Spike	P	0 - 20
2100039	Silver	0.446	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100834	Lead	0.331	Spike	P	0 - 20
2100834	Nickel	0.609	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099706	Ammonia-N	1.35	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099464	Ammonia-N	0.908	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099406	Ammonia-N	2.25	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099466	Ammonia-N	1.85	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099330	Kjeldahl Nitrogen	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099406	Kjeldahl Nitrogen	1.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099601	Kjeldahl Nitrogen	8.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099564	Kjeldahl Nitrogen	4.40	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099452	NO2NO3-N	0.449	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099375	NO2NO3-N	0.966	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099483	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099334	Total-P	0.737	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099374	Total-P	2.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099353	Total-P	1.66	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099495	O-Phosphate-P	0.246	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099604	O-Phosphate-P	1.27	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099565	O-Phosphate-P	1.55	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P366672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099566	Total Alkalinity	0.276	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P366737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2098934	Total Alkalinity	5.55	Sample	F	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P366744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2098934	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P366859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099567	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P366632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099480	Organic Carbon	0.453	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P366727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099646	Organic Carbon	0.727	Spike	P	0 - 20

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099480	Organic Carbon	0.453	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099646	Organic Carbon	0.727	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 Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A92447

Included Lab Sample IDs: 2099468, 2099469, 2099470, 2099471, 2099488, 2099489, 2099490, 2099491, 2099492, 2099493, 2099494, 2099495, 2099499

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	95.6	95.7	P/P	90 - 110
O-Phosphate-P	96.8	96.9	P/P	90 - 110
O-Phosphate-P	96.9	95.6	P/P	90 - 110
O-Phosphate-P	98.9	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92503

Included Lab Sample IDs: 2099466, 2099467, 2099480, 2099481

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

Reference Method: SM 5310 B-00

Run ID: A92510

Included Lab Sample IDs: 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	97.4	P/P	90 - 110
Organic Carbon	96.2	96.6	P/P	90 - 110
Organic Carbon	96.6	95.2	P/P	90 - 110

Reference Method: SM 5310 B-00 dissolved

Run ID: A92510

Included Lab Sample IDs: 2099463, 2099472, 2099473, 2099474, 2099475, 2099476, 2099477, 2099478, 2099479, 2099497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	97.4	P/P	90 - 110
Organic Carbon	96.6	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92520

Included Lab Sample IDs: 2099464, 2099465

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

Reference Method: SM 2320 B-97

Run ID: A92529

Included Lab Sample IDs: 2099456, 2099457, 2099458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110
Total Alkalinity	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92533

Included Lab Sample IDs: 2099464, 2099465, 2099466, 2099467

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92533

Included Lab Sample IDs: 2099464, 2099465, 2099466, 2099467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92556

Included Lab Sample IDs: 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498

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

Reference Method: SM 5310 B-00

Run ID: A92558

Included Lab Sample IDs: 2099464, 2099465, 2099466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	94.2	P/P	90 - 110

Reference Method: SM 5310 B-00 dissolved

Run ID: A92558

Included Lab Sample IDs: 2099460, 2099461, 2099462

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	94.2	P/P	90 - 110
Organic Carbon	96.6	95.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A92563

Included Lab Sample IDs: 2099459, 2099496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	105	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A92563

Included Lab Sample IDs: 2099459, 2099496

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92578

Included Lab Sample IDs: 2099487, 2099498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	106	P/P	90 - 110
Ammonia-N	106	107	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92579

Included Lab Sample IDs: 2099464, 2099465, 2099466, 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	104	P/P	90 - 110
Ammonia-N	106	107	P/P	90 - 110
Ammonia-N	106	107	P/P	90 - 110
Ammonia-N	107	106	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92582

Included Lab Sample IDs: 2099531, 2099532, 2099533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	102	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Zinc	100	99.8	P/P	90 - 110
Zinc	100	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92583

Included Lab Sample IDs: 2099534, 2099535, 2099536, 2099537, 2099538, 2099539, 2099540, 2099541, 2099542, 2099543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Iron	103	102	P/P	95 - 105
Magnesium	101	102	P/P	90 - 110
Potassium	102	103	P/P	90 - 110
Sodium	101	102	P/P	90 - 110
Zinc	98.2	98.9	P/P	95 - 105
Zinc	98.9	97.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92586

Included Lab Sample IDs: 2099531, 2099532, 2099533, 2099534, 2099535, 2099536, 2099537, 2099538, 2099539, 2099540, 2099541, 2099542, 2099543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.9	P/P	90 - 110
Arsenic	103	103	P/P	90 - 110
Arsenic	99.8	101	P/P	90 - 110
Cadmium	100	99.3	P/P	90 - 110
Cadmium	98.6	99.2	P/P	90 - 110
Cadmium	99.3	98.6	P/P	90 - 110
Chromium	101	102	P/P	90 - 110
Chromium	102	98.2	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Copper	98.5	99.2	P/P	90 - 110
Copper	99.2	97.6	P/P	90 - 110
Copper	99.7	99.0	P/P	90 - 110
Lead	97.4	98.4	P/P	90 - 110
Lead	98.0	96.4	P/P	90 - 110
Lead	98.4	97.2	P/P	90 - 110
Nickel	98.8	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92586

Included Lab Sample IDs: 2099531, 2099532, 2099533, 2099534, 2099535, 2099536, 2099537, 2099538, 2099539, 2099540, 2099541, 2099542, 2099543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	99.7	100	P/P	90 - 110
Silver	94.4	94.5	P/P	90 - 110
Silver	94.5	94.5	P/P	90 - 110
Silver	95.3	94.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92606

Included Lab Sample IDs: 2099464, 2099465, 2099466, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.7	95.0	P/P	90 - 110
Kjeldahl Nitrogen	91.8	97.0	P/P	90 - 110
Kjeldahl Nitrogen	95.0	91.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92608

Included Lab Sample IDs: 2099482, 2099483, 2099484, 2099485, 2099486, 2099487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	101	P/P	90 - 110
Total-P	101	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92622

Included Lab Sample IDs: 2099498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A92633

Included Lab Sample IDs: 2099456, 2099457, 2099458

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92668

Included Lab Sample IDs: 2099532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	91.8	92.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92675

Included Lab Sample IDs: 2099467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92719

Included Lab Sample IDs: 2099535, 2099536, 2099537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	96.6	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92748

Included Lab Sample IDs: 2099534, 2099535, 2099536, 2099537, 2099538, 2099539, 2099540, 2099541, 2099542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	100	98.8	P/P	90 - 110
Nickel	98.8	96.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A93004

Included Lab Sample IDs: 2099533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	102	101	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			Precision SMP	MS
			LCS				
EPA 200.7 Rev. 4.4	Calcium	102	102	102			0.134
	Iron	105	101	99.1	105		5.43
	Iron	103	101	105	104		0.945
	Magnesium	102	102	102			0.196
	Potassium	101	100	101	100		0.482
	Sodium	101	101	103			0.540
	Zinc	99.4	98.2	101	101		0.679
	Zinc	94.9	96.3	94.0	94.4		0.470
EPA 200.8 Rev. 5.4	Arsenic	104	103	109	108		1.25
	Arsenic	104	102	104	106		1.64
	Cadmium	102	92.2	92.1	88.5		0.116
	Cadmium	101	99.9	103	105		1.61
	Chromium	106	85.8	90.0	87.8		2.51
	Chromium	105	104	107	107		0.0356
	Copper	99.3	94.3	88.3	86.3		2.07
	Copper	99.5	99.4	99.4	101		1.42
	Lead	99.8	105	106	104		2.10
	Lead	100	98.7	98.3	100		2.05
	Lead	103	107	96.6	96.3		0.331
	Nickel	100	100	102	100		1.70
	Nickel	101	99.5	100	101		0.905
	Nickel	104	99.6	101	102		0.609
	Silver	98.0	91.1	90.3	87.6		0.917
	Silver	98.9	97.0	97.4	97.0		0.446
EPA 350.1 Rev. 2.0	Ammonia-N	103	105	104			1.35
	Ammonia-N	104	107	108			0.908
	Ammonia-N	105	102	105			2.25
	Ammonia-N	107	105	107			1.85
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.5	93.2	93.2			0.0
	Kjeldahl Nitrogen	95.9	98.7	102			1.84
	Kjeldahl Nitrogen	103	105	91.0			8.50
	Kjeldahl Nitrogen	100	92.3	97.6			4.40
EPA 353.2 Rev. 2.0	NO2NO3-N	101	103	103			0.449
	NO2NO3-N	103	103	104			0.966
	NO2NO3-N	104	99.0	99.0			0.0
EPA 365.1 Rev. 2.0	Total-P	102	104	104			0.737
	Total-P	104	102	99.5			2.75
	Total-P	100	104	102			1.66
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	95.5	95.9			0.246
	O-Phosphate-P	97.6	95.1	96.7			1.27
	O-Phosphate-P	99.1	96.1	97.6			1.55
SM 2320 B-97	Total Alkalinity	103				0.276	
	Total Alkalinity	104				5.55	
SM 4500 F-C-97	Fluoride	99.6	98.1	98.1			0.0
	Fluoride	101	98.1	98.1			0.0
SM 5310 B-00	Organic Carbon	95.4	94.0	94.8			0.453
	Organic Carbon	94.1	94.7	95.6			0.727
SM 5310 B-00 dissolved	Organic Carbon	95.4	94.0	94.8			0.453
	Organic Carbon	94.1	94.7	95.6			0.727

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
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Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2099531, 2099532, 2099533, 2099534, 2099535, 2099536, 2099537, 2099538, 2099539, 2099540, 2099541, 2099542, 2099543
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2099531, 2099532, 2099533, 2099534, 2099535, 2099536, 2099537, 2099538, 2099539, 2099540, 2099541, 2099542, 2099543
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2099464, 2099465, 2099466, 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2099464, 2099465, 2099466, 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2099464, 2099465, 2099466, 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2099464, 2099465, 2099466, 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2099468, 2099469, 2099470, 2099471, 2099488, 2099489, 2099490, 2099491, 2099492, 2099493, 2099494, 2099495, 2099499
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2099456, 2099457, 2099458, 2099459, 2099496
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2099456, 2099457, 2099458, 2099459, 2099496
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2099464, 2099465, 2099466, 2099467, 2099480, 2099481, 2099482, 2099483, 2099484, 2099485, 2099486, 2099487, 2099498
SM 5310 B-00 dissolved / E31780	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2099460, 2099461, 2099462, 2099463, 2099472, 2099473, 2099474, 2099475, 2099476, 2099477, 2099478, 2099479, 2099497

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.7 Rev. 4.4	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/05/2019 13:35	Vijayalakshmi Reddy	2099531
	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/05/2019 14:51	Vijayalakshmi Reddy	2099532
	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/05/2019 15:03	Vijayalakshmi Reddy	2099533
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 11:57	Betina Topolski	2099543
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 12:38	Betina Topolski	2099534
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 13:20	Betina Topolski	2099535
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 13:32	Betina Topolski	2099535
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 13:37	Betina Topolski	2099536
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 13:45	Betina Topolski	2099537
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 13:51	Betina Topolski	2099538
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 13:58	Betina Topolski	2099539
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 14:06	Betina Topolski	2099540
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 14:20	Betina Topolski	2099541
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/05/2019 14:25	Betina Topolski	2099542
EPA 200.8 Rev. 5.4	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/04/2019 07:49	Robert K Palmer	2099531
	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/04/2019 08:18	Robert K Palmer	2099532
	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/04/2019 08:28	Robert K Palmer	2099533
	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/09/2019 15:21	Robert K Palmer	2099532
	06/28/2019	07/02/2019 13:45	Elliott D. Healy	07/24/2019 15:09	Robert K Palmer	2099533
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/03/2019 21:59	Robert K Palmer	2099543
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/03/2019 23:05	Robert K Palmer	2099534
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/03/2019 23:15	Robert K Palmer	2099535
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/03/2019 23:53	Robert K Palmer	2099536
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/04/2019 00:02	Robert K Palmer	2099537
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/04/2019 00:12	Robert K Palmer	2099538
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/04/2019 00:21	Robert K Palmer	2099539
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/04/2019 00:31	Robert K Palmer	2099540
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/04/2019 00:40	Robert K Palmer	2099541
	06/28/2019	07/02/2019 16:55	Elliott D. Healy	07/04/2019 00:50	Robert K Palmer	2099542
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/11/2019 18:58	Robert K Palmer	2099535
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/11/2019 19:05	Robert K Palmer	2099536
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/11/2019 19:12	Robert K Palmer	2099537
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 15:02	Robert K Palmer	2099534
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 15:09	Robert K Palmer	2099535
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 15:16	Robert K Palmer	2099536
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 15:23	Robert K Palmer	2099537
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 15:29	Robert K Palmer	2099538
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 15:56	Robert K Palmer	2099539
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 16:03	Robert K Palmer	2099540
	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 16:10	Robert K Palmer	2099541

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.8 Rev. 5.4 EPA 350.1 Rev. 2.0	06/28/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 16:17	Robert K Palmer	2099542
	06/28/2019			07/05/2019 13:26	Ping Hua	2099464
	06/28/2019			07/05/2019 13:55	Ping Hua	2099465
	06/28/2019			07/05/2019 14:05	Ping Hua	2099480
	06/28/2019			07/05/2019 14:07	Ping Hua	2099481
	06/28/2019			07/05/2019 14:14	Ping Hua	2099482
	06/28/2019			07/05/2019 14:16	Ping Hua	2099483
	06/28/2019			07/05/2019 14:17	Ping Hua	2099484
	06/28/2019			07/05/2019 14:19	Ping Hua	2099485
	06/28/2019			07/05/2019 14:20	Ping Hua	2099486
	06/28/2019			07/05/2019 14:26	Ping Hua	2099466
	06/28/2019			07/05/2019 14:37	Ping Hua	2099467
	06/28/2019			07/06/2019 10:32	Ping Hua	2099487
	06/28/2019			07/06/2019 10:50	Ping Hua	2099498
	06/28/2019			07/08/2019 13:15	Virginia P. Brown	2099464
EPA 351.2 Rev. 2.0	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:16	Virginia P. Brown	2099465
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:18	Virginia P. Brown	2099466
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:36	Virginia P. Brown	2099480
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:38	Virginia P. Brown	2099481
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:40	Virginia P. Brown	2099482
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:41	Virginia P. Brown	2099483
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:43	Virginia P. Brown	2099484
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:47	Virginia P. Brown	2099485
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:49	Virginia P. Brown	2099486
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:54	Virginia P. Brown	2099487
	06/28/2019	07/05/2019 13:30	Adrian Shelby	07/08/2019 13:55	Virginia P. Brown	2099498
	06/28/2019	07/09/2019 12:45	Adrian Shelby	07/10/2019 09:59	Joseph Suarez	2099467
	06/28/2019	07/03/2019 09:55		07/03/2019 09:55	Beverly Y. Sanders	2099464
	06/28/2019			07/03/2019 09:56	Beverly Y. Sanders	2099465
	06/28/2019			07/03/2019 09:57	Beverly Y. Sanders	2099466
	06/28/2019			07/03/2019 09:58	Beverly Y. Sanders	2099467
	06/28/2019			07/03/2019 16:58	Lauren Lees	2099480
	06/28/2019			07/03/2019 17:00	Lauren Lees	2099481
	06/28/2019			07/03/2019 17:01	Lauren Lees	2099482
	06/28/2019			07/03/2019 18:13	Lauren Lees	2099483
	06/28/2019			07/03/2019 18:18	Lauren Lees	2099484
	06/28/2019			07/03/2019 18:19	Lauren Lees	2099485
	06/28/2019			07/03/2019 18:21	Lauren Lees	2099486
	06/28/2019			07/03/2019 18:22	Lauren Lees	2099487
	06/28/2019			07/03/2019 18:23	Lauren Lees	2099498
EPA 353.2 Rev. 2.0	06/28/2019			07/03/2019 18:23	Lauren Lees	2099498

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EPA 365.1 Rev. 2.0	06/28/2019	07/01/2019 12:00	Lipi Saha	07/02/2019 14:02	Rosalyn Ballman	2099466
	06/28/2019	07/01/2019 12:00	Lipi Saha	07/02/2019 14:04	Rosalyn Ballman	2099467
	06/28/2019	07/01/2019 12:00	Lipi Saha	07/02/2019 14:23	Rosalyn Ballman	2099480
	06/28/2019	07/01/2019 12:00	Lipi Saha	07/02/2019 14:24	Rosalyn Ballman	2099481
	06/28/2019	07/01/2019 12:00	Lipi Saha	07/02/2019 16:28	Rosalyn Ballman	2099464
	06/28/2019	07/01/2019 12:00	Lipi Saha	07/02/2019 16:29	Rosalyn Ballman	2099465
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 14:36	Rosalyn Ballman	2099482
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 14:37	Rosalyn Ballman	2099483
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 14:40	Rosalyn Ballman	2099484
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 14:42	Rosalyn Ballman	2099485
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 14:43	Rosalyn Ballman	2099486
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 14:44	Rosalyn Ballman	2099487
	06/28/2019	07/03/2019 12:30	Lipi Saha	07/08/2019 16:03	Rosalyn Ballman	2099498
	06/28/2019			06/28/2019 15:54	Jhamieka S. Greenwood	2099495
EPA 365.1 Rev. 2.0 dissolved	06/28/2019			06/28/2019 16:45	Jhamieka S. Greenwood	2099468
	06/28/2019			06/28/2019 16:52	Jhamieka S. Greenwood	2099499
	06/28/2019			06/28/2019 16:53	Jhamieka S. Greenwood	2099469
	06/28/2019			06/28/2019 16:54	Jhamieka S. Greenwood	2099470
	06/28/2019			06/28/2019 16:55	Jhamieka S. Greenwood	2099471
	06/28/2019			06/28/2019 17:04	Jhamieka S. Greenwood	2099488
	06/28/2019			06/28/2019 17:05	Jhamieka S. Greenwood	2099489
	06/28/2019			06/28/2019 17:06	Jhamieka S. Greenwood	2099490
	06/28/2019			06/28/2019 17:07	Jhamieka S. Greenwood	2099491
	06/28/2019			06/28/2019 17:08	Jhamieka S. Greenwood	2099492, 2099493
	06/28/2019			06/28/2019 17:09	Jhamieka S. Greenwood	2099494
	06/28/2019			07/02/2019 20:53	Dale L. Simmons	2099458
	06/28/2019			07/03/2019 00:21	Dale L. Simmons	2099456
	06/28/2019			07/03/2019 00:33	Dale L. Simmons	2099457
SM 2320 B-97	06/28/2019			07/04/2019 11:13	Dale L. Simmons	2099496
	06/28/2019			07/04/2019 11:26	Dale L. Simmons	2099459
	06/28/2019			07/04/2019 11:13	Dale L. Simmons	2099496
	06/28/2019			07/04/2019 11:26	Dale L. Simmons	2099459
	06/28/2019			07/09/2019 06:27	Dale L. Simmons	2099456
SM 4500 F-C-97	06/28/2019			07/09/2019 06:32	Dale L. Simmons	2099457
	06/28/2019			07/09/2019 06:36	Dale L. Simmons	2099458
	06/28/2019			07/01/2019 10:15	Madeline Funaro	2099480
	06/28/2019			07/01/2019 11:50	Madeline Funaro	2099467
	06/28/2019			07/02/2019 02:23	Madeline Funaro	2099481
SM 5310 B-00	06/28/2019			07/02/2019 02:37	Madeline Funaro	2099482
	06/28/2019			07/02/2019 02:50	Madeline Funaro	2099483

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	06/28/2019			07/02/2019 03:06	Madeline Funaro	2099484
	06/28/2019			07/02/2019 03:20	Madeline Funaro	2099485
	06/28/2019			07/02/2019 03:34	Madeline Funaro	2099486
	06/28/2019			07/02/2019 03:47	Madeline Funaro	2099487
	06/28/2019			07/02/2019 04:14	Madeline Funaro	2099498
	06/28/2019			07/03/2019 11:51	Madeline Funaro	2099464
	06/28/2019			07/04/2019 12:07	Madeline Funaro	2099465
	06/28/2019			07/04/2019 12:20	Madeline Funaro	2099466
SM 5310 B-00 dissolved	06/28/2019			07/01/2019 11:37	Madeline Funaro	2099463
	06/28/2019			07/02/2019 01:00	Madeline Funaro	2099476
	06/28/2019			07/02/2019 01:13	Madeline Funaro	2099477
	06/28/2019			07/02/2019 01:27	Madeline Funaro	2099478
	06/28/2019			07/02/2019 02:10	Madeline Funaro	2099479
	06/28/2019			07/02/2019 04:01	Madeline Funaro	2099497
	06/28/2019			07/02/2019 12:04	Madeline Funaro	2099472
	06/28/2019			07/02/2019 12:17	Madeline Funaro	2099473
	06/28/2019			07/02/2019 12:33	Madeline Funaro	2099474
	06/28/2019			07/02/2019 12:47	Madeline Funaro	2099475
	06/28/2019			07/03/2019 10:24	Madeline Funaro	2099460
	06/28/2019			07/03/2019 10:40	Madeline Funaro	2099461
	06/28/2019			07/03/2019 11:36	Madeline Funaro	2099462