

Chemical Analysis Report

SE-DIST-2018-09-18-02

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

Event Description: **SMP- WPB Run**
Request ID: **RQ-2018-09-17-25**
Customer: **SE-DIST**
Project ID: **SMP**

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

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 15-OCT-2018 10:50

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 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 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: ACME South

Collection Date/Time: 09/17/2018 11:10

Field ID: ACME South

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026107	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	57		mg Cl/L	P352258	
		Sulfate	14		mg SO4/L	P352261	
	SM 2120 B	Color (true)	90	A	PCU	P351837	
	SM 2320 B-97	Total Alkalinity	222		mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	370		mg/L	P352289	
	SM 2540 D-97	TSS	6	I	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P352232	
2026108	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P352110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P352064	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.022		mg N/L	P351997	
	EPA 365.1 Rev. 2.0	Total-P	0.082		mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P352125	
2026109	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P351848	

Ref. Method and Comment:

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

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

Sample Location: Lake Wellington

Collection Date/Time: 09/17/2018 11:35

Field ID: Lake Wellington

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026095	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P352257	
		Sulfate	27		mg SO4/L	P352260	
	SM 2120 B	Color (true)	42		PCU	P351836	
	SM 2320 B-97	Total Alkalinity	195		mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	349		mg/L	P352289	
	SM 2540 D-97	TSS	5	I	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P352232	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P352110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P352063	
2026097	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P351997	
	EPA 365.1 Rev. 2.0	Total-P	0.068		mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P352125	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P351848	
	dissolved						

Ref. Method and Comment:

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

Sample Location: Lake Wellington

Collection Date/Time: 09/17/2018 11:35

Field ID: Lake Wellington DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026101	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P352257	
		Sulfate	27		mg SO4/L	P352260	
	SM 2120 B	Color (true)	44		PCU	P351837	
	SM 2320 B-97	Total Alkalinity	195		mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	366		mg/L	P352289	
	SM 2540 D-97	TSS	5	I	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P352232	
2026103	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P352110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P352064	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P351997	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P352125	
2026105	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P351848	

Ref. Method and Comment:

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

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

Sample Location: Lake Wellington

Collection Date/Time: 09/17/2018 11:50

Field ID: Lake Wellington

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026102	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	0.45	I	mg Cl/L	P352352	
		Sulfate	0.20	U	mg SO4/L	P352355	
	SM 2120 B	Color (true)	2.5	U	PCU	P351837	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	15	U	mg/L	P352289	
	SM 2540 D-97	TSS	2	U	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P352232	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P352110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P352064	
2026104	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P351997	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P352125	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P351848	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: The result was confirmed on 09/26/2018.

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

SM 4500 F-C-97: The result was confirmed on 09/19/2018.

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

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 09/25/2018.

Sample Location: South Shore Blvd 2 "ACME North"

Collection Date/Time: 09/17/2018 13:30

Field ID: South Shore Blvd 2 "ACME North"

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026096	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P352257	
		Sulfate	32		mg SO4/L	P352260	
	SM 2120 B	Color (true)	36		PCU	P351837	
	SM 2320 B-97	Total Alkalinity	214		mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	348		mg/L	P352289	
	SM 2540 D-97	TSS	8	I	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P352232	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P352110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P352063	
2026098	EPA 353.2 Rev. 2.0	NO2NO3-N	0.075		mg N/L	P351997	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P352125	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P351848	
	dissolved						

Ref. Method and Comment:

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

Sample Location: C-16 N West of Bellagio

Collection Date/Time: 09/17/2018 13:50

Field ID: C-16 N West of Bellagio

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026092	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P352257	
		Sulfate	11		mg SO4/L	P352260	
	SM 2120 B	Color (true)	35		PCU	P351836	
	SM 2320 B-97	Total Alkalinity	171		mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	253		mg/L	P352289	
	SM 2540 D-97	TSS	3	I	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P352232	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P352109	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P352063	
2026093	EPA 353.2 Rev. 2.0	NO2NO3-N	0.083		mg N/L	P351997	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P352125	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.006	I	mg P/L	P351848	
	dissolved						

Ref. Method and Comment:

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

Sample Location: M-Canal @ Haverhill

Collection Date/Time: 09/17/2018 14:40

Field ID: M-Canal @ Haverhill

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026089	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P351869	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P352257	
		Sulfate	4.3		mg SO4/L	P352260	
		Color (true)	42		PCU	P351836	
	SM 2320 B-97	Total Alkalinity	60		mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	150	A	mg/L	P352289	
	SM 2540 D-97	TSS	5	IA	mg/L	P352450	
	SM 4500 F-C-97	Fluoride	0.070	I	mg F/L	P352232	
2026090	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P352109	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P352063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P351996	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P351899	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P352125	
2026091	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351847	
2026126	EPA 200.7 Rev. 4.4	Calcium	19.8		mg/L	P351923	
		Iron	130		ug/L	P351923	
		Magnesium	3.93		mg/L	P351923	
		Potassium	2.3		mg/L	P351923	
		Sodium	16.3		mg/L	P351923	
		Zinc	5.0	U	ug/L	P351923	
	EPA 200.8 Rev. 5.4	Arsenic	0.41		ug/L	P351923	
		Cadmium	0.020	U	ug/L	P351923	
		Chromium	0.40	U	ug/L	P351923	
		Copper	0.35	I	ug/L	P351923	
		Lead	0.13	I	ug/L	P351923	
		Nickel	0.20	U	ug/L	P351923	
		Silver	0.010	U	ug/L	P351923	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351869

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351923

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: P351923

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 300.0 Rev. 2.1
Batch ID: P352257

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352258

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352260

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352261

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352352

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352355

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352109

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352110

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352064

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351996

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351997

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351899

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351847

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351848

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

Reference Method: SM 2120 B
Batch ID: P351836

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P351837

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P352050

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

Reference Method: SM 2540 C-97
Batch ID: P352289

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352450

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P352125

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: P351923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	98.0		P	85 - 115
Iron	99.2		P	85 - 115
Magnesium	99.9		P	85 - 115
Potassium	97.5		P	85 - 115
Sodium	101		P	85 - 115
Zinc	95.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	110		P	85 - 115
Copper	94.2		P	85 - 115
Lead	107		P	85 - 115
Nickel	96.5		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352257

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352258

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352260

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352261

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.6		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352355

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352110

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352064

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351996

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351997

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351899

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: P351847

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.7		P	90 - 110

Reference Method: SM 2120 B
Batch ID: P351836

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

Reference Method: SM 2120 B
Batch ID: P351837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.0		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P352050

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P352232

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

Reference Method: SM 5310 B-00
Batch ID: P352125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351923

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025412	Calcium	92.7		P	80 - 120
2025412	Iron	93.1		P	80 - 120
2025412	Magnesium	92.7		P	80 - 120
2025412	Potassium	90.2		P	80 - 120
2025412	Sodium	92.6		P	80 - 120
2025412	Zinc	91.5		P	80 - 120
2026027	Calcium	95.6		P	80 - 120
2026027	Iron	98.1	99.4	P/P	80 - 120
2026027	Magnesium	95.4	98.2	P/P	80 - 120
2026027	Potassium	93.6	94.9	P/P	80 - 120
2026027	Sodium	96.8		P	80 - 120
2026027	Zinc	97.5	97.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351923

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025412	Arsenic	102		P	80 - 120
2025412	Cadmium	104		P	80 - 120
2025412	Chromium	110		P	80 - 120
2025412	Copper	94.1		P	80 - 120
2025412	Lead	104		P	80 - 120
2025412	Nickel	97.2		P	80 - 120
2025412	Silver	104		P	80 - 120
2026027	Arsenic	106	106	P/P	80 - 120
2026027	Cadmium	106	105	P/P	80 - 120
2026027	Chromium	112	110	P/P	80 - 120
2026027	Copper	98.1	95.0	P/P	80 - 120
2026027	Lead	104	103	P/P	80 - 120
2026027	Nickel	100	91.5	P/P	80 - 120
2026027	Silver	105	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025864	Chloride	96.1		P	90 - 110
2026007	Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026142	Chloride	98.7		P	90 - 110
2026372	Chloride	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352260

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025864	Sulfate	95.1		P	90 - 110
2026007	Sulfate	99.7		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026142	Sulfate	97.8		P	90 - 110
2026372	Sulfate	96.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026404	Chloride	95.3		P	90 - 110
2026648	Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352355

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026404	Sulfate	95.6		P	90 - 110
2026648	Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026020	Ammonia-N	98.0	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026219	Ammonia-N	98.6	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026093	Kjeldahl Nitrogen	101	98.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351996

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026020	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351997

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026093	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351899

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026090	Total-P	97.0	99.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025902	O-Phosphate-P	96.7	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026094	O-Phosphate-P	97.3	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025892	Fluoride	103	104	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026020	Organic Carbon	98.6	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026036	Turbidity	2.25	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P351923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026027	Calcium	1.34	Spike	P	0 - 20
2026027	Iron	1.33	Spike	P	0 - 20
2026027	Magnesium	1.79	Spike	P	0 - 20
2026027	Potassium	0.781	Spike	P	0 - 20
2026027	Sodium	2.53	Spike	P	0 - 20
2026027	Zinc	0.294	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P351923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026027	Arsenic	0.338	Spike	P	0 - 20
2026027	Cadmium	0.440	Spike	P	0 - 20
2026027	Chromium	1.09	Spike	P	0 - 20
2026027	Copper	3.15	Spike	P	0 - 20
2026027	Lead	0.998	Spike	P	0 - 20
2026027	Nickel	8.90	Spike	P	0 - 20
2026027	Silver	1.77	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025864	Chloride	0.455	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026142	Chloride	0.761	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025864	Sulfate	0.398	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026142	Sulfate	0.932	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026404	Chloride	0.192	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026404	Sulfate	0.288	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026020	Ammonia-N	1.13	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026219	Ammonia-N	1.52	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026093	Kjeldahl Nitrogen	1.39	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026103	Kjeldahl Nitrogen	1.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026020	NO2NO3-N	1.43	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351997

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026093	NO2NO3-N	0.699	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026090	Total-P	2.06	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025902	O-Phosphate-P	0.874	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026094	O-Phosphate-P	0.581	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P351836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026018	Color (true)	2.27	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P351837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026107	Color (true)	0.322	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P352050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025892	Total Alkalinity	0.0542	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P352289

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026089	TDS	0.664	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025892	Fluoride	0.487	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P352125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026020	Organic Carbon	0.299	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: SM 2120 B

Run ID: A86560

Included Lab Sample IDs: 2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115
Color (true)	103	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86562

Included Lab Sample IDs: 2026091, 2026094, 2026099, 2026100, 2026105, 2026106, 2026109

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.8	P/P	90 - 110
O-Phosphate-P	98.6	98.8	P/P	90 - 110
O-Phosphate-P	98.7	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86567

Included Lab Sample IDs: 2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86596

Included Lab Sample IDs: 2026097, 2026098, 2026103, 2026108

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86610

Included Lab Sample IDs: 2026090, 2026093, 2026104

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86615

Included Lab Sample IDs: 2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86620

Included Lab Sample IDs: 2026126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	92.7	92.5	P/P	90 - 110
Iron	93.0	92.9	P/P	90 - 110
Magnesium	90.6	91.0	P/P	90 - 110
Potassium	91.9	93.3	P/P	90 - 110
Sodium	95.3	95.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86620

Included Lab Sample IDs: 2026126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	95.3	98.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A86631

Included Lab Sample IDs: 2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.4	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86651

Included Lab Sample IDs: 2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108

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

Reference Method: SM 5310 B-00

Run ID: A86661

Included Lab Sample IDs: 2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	96.3	P/P	90 - 110
Organic Carbon	96.8	96.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86668

Included Lab Sample IDs: 2026126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.8	98.0	P/P	90 - 110
Cadmium	98.6	98.8	P/P	90 - 110
Chromium	107	109	P/P	90 - 110
Lead	105	105	P/P	90 - 110
Silver	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86677

Included Lab Sample IDs: 2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	100	P/P	90 - 110
Kjeldahl Nitrogen	96.5	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86715

Included Lab Sample IDs: 2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.7	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A86718

Included Lab Sample IDs: 2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Chloride	101	100	P/P	90 - 110
Chloride	99.0	100	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110
Sulfate	98.9	99.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86729

Included Lab Sample IDs: 2026126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	93.8	93.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86802

Included Lab Sample IDs: 2026126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	93.7	91.9	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 180.1 Rev. 2.0	Turbidity					2.25	
EPA 200.7 Rev. 4.4	Calcium	98.0	92.7	95.6			1.34
	Iron	99.2	93.1	98.1	99.4		1.33
	Magnesium	99.9	92.7	95.4	98.2		1.79
	Potassium	97.5	90.2	93.6	94.9		0.781
	Sodium	101	92.6	96.8			2.53
	Zinc	95.8	91.5	97.5	97.8		0.294
EPA 200.8 Rev. 5.4	Arsenic	103	102	106	106		0.338
	Cadmium	105	104	106	105		0.440
	Chromium	110	110	112	110		1.09
	Copper	94.2	94.1	98.1	95.0		3.15
	Lead	107	104	104	103		0.998
	Nickel	96.5	97.2	100	91.5		8.90
	Silver	105	104	105	103		1.77
EPA 300.0 Rev. 2.1	Chloride	98.5	96.1	99.8		0.455	
	Chloride	100	98.7	98.7		0.761	
	Chloride	99.6	95.3	97.8		0.192	
	Sulfate	97.3	95.1	99.7		0.398	
	Sulfate	98.8	97.8	96.7		0.932	
	Sulfate	98.7	95.6	96.8		0.288	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	98.0	99.2			1.13
	Ammonia-N	97.3	98.6	100			1.52
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.7	101	98.9			1.39
	Kjeldahl Nitrogen	104					1.33
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	102			1.43
	NO2NO3-N	100	101	102			0.699
EPA 365.1 Rev. 2.0	Total-P	100	97.0	99.1			2.06
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.7	97.8			0.874
	O-Phosphate-P	97.7	97.3	97.9			0.581
SM 2120 B	Color (true)	101				2.27	
	Color (true)	99.0				0.322	
SM 2320 B-97	Total Alkalinity	102				0.0542	
SM 2540 C-97	TDS					0.664	
SM 4500 F-C-97	Fluoride	96.1	103	104			0.487
SM 5310 B-00	Organic Carbon	97.8	98.6	98.2			0.299

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2026126
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2026126
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2026091, 2026094, 2026099, 2026100, 2026105, 2026106, 2026109
SM 2120 B / E31780	True Color measured at 450 nm	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2026090, 2026093, 2026097, 2026098, 2026103, 2026104, 2026108

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/18/2018			09/18/2018 16:36	Blanca Fach	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
EPA 200.7 Rev. 4.4	09/18/2018	09/19/2018 16:25	Elliott D. Healy	09/20/2018 22:02	Betina Topolski	2026126
EPA 200.8 Rev. 5.4	09/18/2018	09/19/2018 16:25	Elliott D. Healy	09/22/2018 09:18	Allison Taylor	2026126
	09/18/2018	09/19/2018 16:25	Elliott D. Healy	09/26/2018 14:34	Robert K Palmer	2026126
	09/18/2018	09/19/2018 16:25	Elliott D. Healy	09/28/2018 17:19	Allison Taylor	2026126
EPA 300.0 Rev. 2.1	09/18/2018			09/26/2018 02:13	Lipi Saha	2026089
	09/18/2018			09/26/2018 02:25	Lipi Saha	2026092
	09/18/2018			09/26/2018 02:37	Lipi Saha	2026095
	09/18/2018			09/26/2018 03:13	Lipi Saha	2026096
	09/18/2018			09/26/2018 03:25	Lipi Saha	2026101
	09/18/2018			09/26/2018 05:50	Lipi Saha	2026107
	09/18/2018			09/26/2018 20:31	Lipi Saha	2026102
EPA 350.1 Rev. 2.0	09/18/2018			09/21/2018 11:58	Julia Storbeck	2026090
	09/18/2018			09/21/2018 11:59	Julia Storbeck	2026093
	09/18/2018			09/21/2018 12:16	Julia Storbeck	2026097
	09/18/2018			09/21/2018 12:17	Julia Storbeck	2026098
	09/18/2018			09/21/2018 12:19	Julia Storbeck	2026103
	09/18/2018			09/21/2018 12:20	Julia Storbeck	2026108
	09/18/2018			09/21/2018 12:34	Julia Storbeck	2026104
EPA 351.2 Rev. 2.0	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:27	Joseph Suarez	2026090
	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:29	Joseph Suarez	2026093
	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:33	Joseph Suarez	2026097
	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:35	Joseph Suarez	2026098
	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:43	Joseph Suarez	2026103
	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:47	Joseph Suarez	2026104
	09/18/2018	09/21/2018 09:50	Adrian Shelby	09/24/2018 11:49	Joseph Suarez	2026108
EPA 353.2 Rev. 2.0	09/18/2018			09/20/2018 12:20	Lauren Bottorf	2026090
	09/18/2018			09/20/2018 12:27	Lauren Bottorf	2026093
	09/18/2018			09/20/2018 12:33	Lauren Bottorf	2026104
	09/18/2018			09/20/2018 12:34	Lauren Bottorf	2026097
	09/18/2018			09/20/2018 12:35	Lauren Bottorf	2026098
	09/18/2018			09/20/2018 12:37	Lauren Bottorf	2026103
	09/18/2018			09/20/2018 12:38	Lauren Bottorf	2026108
EPA 365.1 Rev. 2.0	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 09:46	Beverly Y. Sanders	2026097
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 09:47	Beverly Y. Sanders	2026098
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 09:48	Beverly Y. Sanders	2026103
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 09:50	Beverly Y. Sanders	2026108
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 13:38	Beverly Y. Sanders	2026104
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 13:39	Beverly Y. Sanders	2026090

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	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 13:40	Beverly Y. Sanders	2026093
EPA 365.1 Rev. 2.0 dissolved	09/18/2018			09/18/2018 17:17	Julia Storbeck	2026094
	09/18/2018			09/18/2018 17:29	Julia Storbeck	2026106
	09/18/2018			09/18/2018 17:31	Julia Storbeck	2026100
	09/18/2018			09/18/2018 17:32	Julia Storbeck	2026105
	09/18/2018			09/18/2018 17:54	Julia Storbeck	2026091
	09/18/2018			09/18/2018 17:55	Julia Storbeck	2026099
	09/18/2018			09/18/2018 17:56	Julia Storbeck	2026109
SM 2120 B	09/18/2018			09/18/2018 15:52	DeAsia Armster	2026089
	09/18/2018			09/18/2018 15:53	DeAsia Armster	2026092, 2026095
	09/18/2018			09/18/2018 15:58	DeAsia Armster	2026096
	09/18/2018			09/18/2018 15:59	DeAsia Armster	2026101, 2026102
	09/18/2018			09/18/2018 16:06	DeAsia Armster	2026107
SM 2320 B-97	09/18/2018			09/20/2018 03:17	Dale L. Simmons	2026089
	09/18/2018			09/20/2018 03:28	Dale L. Simmons	2026092
	09/18/2018			09/20/2018 03:39	Dale L. Simmons	2026095
	09/18/2018			09/20/2018 03:50	Dale L. Simmons	2026096
	09/18/2018			09/20/2018 04:01	Dale L. Simmons	2026101
	09/18/2018			09/20/2018 04:09	Dale L. Simmons	2026102
	09/18/2018			09/20/2018 04:21	Dale L. Simmons	2026107
SM 2540 C-97	09/18/2018			09/21/2018 16:15	Yijie Li	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 2540 D-97	09/18/2018			09/21/2018 16:15	Yijie Li	2026089, 2026092, 2026095, 2026096, 2026101, 2026102, 2026107
SM 4500 F-C-97	09/18/2018			09/25/2018 21:38	Dale L. Simmons	2026089
	09/18/2018			09/25/2018 21:42	Dale L. Simmons	2026092
	09/18/2018			09/25/2018 21:46	Dale L. Simmons	2026095
	09/18/2018			09/25/2018 21:50	Dale L. Simmons	2026096
	09/18/2018			09/25/2018 21:54	Dale L. Simmons	2026101
	09/18/2018			09/25/2018 21:58	Dale L. Simmons	2026102
	09/18/2018			09/25/2018 22:01	Dale L. Simmons	2026107
SM 5310 B-00	09/18/2018			09/22/2018 03:21	Megan Treadwell	2026090
	09/18/2018			09/22/2018 03:33	Megan Treadwell	2026093
	09/18/2018			09/22/2018 03:45	Megan Treadwell	2026097
	09/18/2018			09/22/2018 04:22	Megan Treadwell	2026098
	09/18/2018			09/22/2018 04:34	Megan Treadwell	2026103
	09/18/2018			09/22/2018 04:46	Megan Treadwell	2026104
	09/18/2018			09/22/2018 04:59	Megan Treadwell	2026108