Chemical Analysis Report

NE-DIST-2023-07-27-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Nassau West 2023**
Request ID: **RQ-2023-07-17-15**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 10-AUG-2023 14:03

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: ST MARYS RIVER AT SR 121 GA LINE **Collection Date/Time: 07/26/2023 13:35**

Field ID: 19010002 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427210	DEP SOP: NU-094-1	Color (true)	390		PCU	P433136	
	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P433138	
	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P433406	
		Sulfate	0.79		mg SO4/L	P433278	
	SM 2320 B-2011	Total Alkalinity	0.75	I	mg CaCO3/L	P433354	
	SM 2540 C-2015	TDS	101		mg/L	P433608	
	SM 2540 D-2015	TSS	4	I	mg/L	P433521	
	SM 4500-F- C-2011	Fluoride	0.037	I	mg F/L	P433357	
2427212	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P433399	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P433218	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P433168	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P433363	
	SM 5310 B-2011	Organic Carbon	37		mg C/L	P433375	
2427222	EPA 200.7 Rev. 4.4	Calcium	3.85		mg/L	P433182	
		Iron	1.32E+03		ug/L	P433182	
		Magnesium	1.38		mg/L	P433182	
		Potassium	0.35	I	mg/L	P433182	
		Sodium	4.3		mg/L	P433182	
		Strontium	12.6		ug/L	P433182	
		Tin	3.0	U	ug/L	P433182	
		Titanium	7.5		ug/L	P433182	
		Vanadium	2.0	U	ug/L	P433182	
		Zinc	5.0	U	ug/L	P433182	
	EPA 200.8 Rev. 5.4	Aluminum	694		ug/L	P433182	
		Antimony	0.050	U	ug/L	P433182	
		Arsenic	0.60		ug/L	P433182	
		Barium	19.0		ug/L	P433182	
		Beryllium	0.047		ug/L	P433182	
		Boron	17.4		ug/L	P433182	
		Cadmium	0.020	U	ug/L	P433182	
		Chromium	0.75	I	ug/L	P433182	
		Cobalt	0.350		ug/L	P433182	
		Copper	0.41	I	ug/L	P433182	
		Lead	0.89		ug/L	P433182	
		Manganese	16.4		ug/L	P433182	
		Molybdenum	0.23	I	ug/L	P433182	
		Nickel	0.73	I	ug/L	P433182	
		Selenium	0.20	U	ug/L	P433182	
		Silver	0.010	U	ug/L	P433182	
		Thallium	0.10	U	ug/L	P433182	
	SM 2340 B-2011	Hardness	15.3		mg/L	P433182	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 08/01/2023.

Sample Location: DEEP CR AT US 90 **Collection Date/Time: 07/26/2023 14:00**

Field ID: 19010085 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427211	DEP SOP: NU-094-1	Color (true)	270		PCU	P433136	
	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P433138	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P433407	
		Sulfate	7.0		mg SO4/L	P433278	
	SM 2320 B-2011	Total Alkalinity	26		mg CaCO3/L	P433354	
	SM 2540 C-2015	TDS	147		mg/L	P433608	
	SM 2540 D-2015	TSS	3	I	mg/L	P433521	
	SM 4500-F- C-2011	Fluoride	0.072	I	mg F/L	P433357	
2427213	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P433445	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P433218	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P433168	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P433152	
	SM 5310 B-2011	Organic Carbon	29		mg C/L	P433375	
2427223	EPA 200.7 Rev. 4.4	Calcium	13.0		mg/L	P433182	
		Iron	1.04E+03		ug/L	P433182	
		Magnesium	2.67		mg/L	P433182	
		Potassium	1.4		mg/L	P433182	
		Sodium	10.5		mg/L	P433182	
		Strontium	69.8		ug/L	P433182	
		Tin	3.0	U	ug/L	P433182	
		Titanium	3.7		ug/L	P433182	
		Vanadium	2.0	U	ug/L	P433182	
		Zinc	6.6	I	ug/L	P433182	
	EPA 200.8 Rev. 5.4	Aluminum	354		ug/L	P433182	
		Antimony	0.17	I	ug/L	P433182	
		Arsenic	0.73		ug/L	P433182	
		Barium	22.5		ug/L	P433182	
		Beryllium	0.028	I	ug/L	P433182	
		Boron	54.1		ug/L	P433182	
		Cadmium	0.020	U	ug/L	P433182	
		Chromium	1.0	I	ug/L	P433182	
		Cobalt	0.192		ug/L	P433182	
		Copper	1.12		ug/L	P433182	
		Lead	0.72		ug/L	P433182	
		Manganese	25.6		ug/L	P433182	
		Molybdenum	1.43		ug/L	P433182	
		Nickel	0.95	I	ug/L	P433182	
		Selenium	0.22	I	ug/L	P433182	
		Silver	0.015	I	ug/L	P433182	
		Thallium	0.10	U	ug/L	P433182	
	SM 2340 B-2011	Hardness	43.5		mg/L	P433182	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: SWIFT CREEK POND CENTER **Collection Date/Time: 07/26/2023 11:05**

Field ID: 21030066 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427214	DEP SOP: NU-094-1	Color (true)	370		PCU	P433136	
	EPA 180.1 Rev. 2.0	Turbidity	8.1		NTU	P433138	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P433407	
		Sulfate	1.0		mg SO4/L	P433278	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P433354	
	SM 2540 C-2015	TDS	75		mg/L	P433608	
	SM 2540 D-2015	TSS	4	I	mg/L	P433521	
	SM 4500-F- C-2011	Fluoride	0.037	I	mg F/L	P433357	
2427215	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P433445	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P433218	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P433168	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P433152	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P433375	
2427224	EPA 200.7 Rev. 4.4	Calcium	2.67		mg/L	P433182	
		Iron	770		ug/L	P433182	
		Magnesium	1.19		mg/L	P433182	
		Potassium	0.30	U	mg/L	P433182	
		Sodium	3.8		mg/L	P433182	
		Strontium	10.7		ug/L	P433182	
		Tin	3.0	U	ug/L	P433182	
		Titanium	2.1	I	ug/L	P433182	
		Vanadium	2.0	U	ug/L	P433182	
		Zinc	5.0	U	ug/L	P433182	
	EPA 200.8 Rev. 5.4	Aluminum	416		ug/L	P433182	
		Antimony	0.050	U	ug/L	P433182	
		Arsenic	0.44		ug/L	P433182	
		Barium	12.1		ug/L	P433182	
		Beryllium	0.023	I	ug/L	P433182	
		Boron	17.7		ug/L	P433182	
		Cadmium	0.020	U	ug/L	P433182	
		Chromium	0.43	I	ug/L	P433182	
		Cobalt	0.213		ug/L	P433182	
		Copper	0.40	U	ug/L	P433182	
		Lead	0.67		ug/L	P433182	
		Manganese	23.5		ug/L	P433182	
		Molybdenum	0.15	U	ug/L	P433182	
		Nickel	0.50	U	ug/L	P433182	
		Selenium	0.20	U	ug/L	P433182	
		Silver	0.010	U	ug/L	P433182	
		Thallium	0.10	U	ug/L	P433182	
	SM 2340 B-2011	Hardness	11.6		mg/L	P433182	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 08/01/2023.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P433136

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433138

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433182

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
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433182

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433278

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: P433406

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433399

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433218

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433168

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Component	Result	Code	Units
Total-P	0.010	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

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

Reference Method: SM 2320 B-2011
Batch ID: P433354

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P433608

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P433521

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P433375

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P433136

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433138

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	109		P	85 - 115
Iron	109		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	103		P	85 - 115
Sodium	107		P	85 - 115
Strontium	102		P	85 - 115
Tin	106		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	102		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	108		P	80 - 120
Antimony	107		P	80 - 120
Arsenic	100		P	80 - 120
Barium	108		P	80 - 120
Beryllium	99.8		P	80 - 120
Boron	111		P	80 - 120
Cadmium	105		P	80 - 120
Chromium	100		P	80 - 120
Cobalt	99.2		P	80 - 120
Copper	96.9		P	80 - 120
Lead	106		P	80 - 120
Manganese	109		P	80 - 120
Molybdenum	103		P	80 - 120
Nickel	98.5		P	80 - 120
Selenium	104		P	80 - 120
Silver	106		P	80 - 120
Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433278

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433406

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433399

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433218

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: P433168

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	93.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

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

Reference Method: SM 2320 B-2011
Batch ID: P433354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.7		P	92 - 105

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P433608

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.3		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P433521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.9		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433375

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427008	Calcium	101		P	80 - 120
2427008	Iron	107	106	P/P	80 - 120
2427008	Magnesium	99.5		P	80 - 120
2427008	Potassium	102	101	P/P	80 - 120
2427008	Sodium	104	104	P/P	80 - 120
2427008	Strontium	100	100	P/P	80 - 120
2427008	Tin	102	99.1	P/P	80 - 120
2427008	Titanium	104	101	P/P	80 - 120
2427008	Vanadium	105	103	P/P	80 - 120
2427008	Zinc	100	96.8	P/P	80 - 120
2427063	Calcium	109		P	80 - 120
2427063	Iron	107		P	80 - 120
2427063	Magnesium	105		P	80 - 120
2427063	Potassium	101		P	80 - 120
2427063	Sodium	104		P	80 - 120
2427063	Strontium	99.8		P	80 - 120
2427063	Tin	105		P	80 - 120
2427063	Titanium	102		P	80 - 120
2427063	Vanadium	102		P	80 - 120
2427063	Zinc	99.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427008	Aluminum	107	107	P/P	80 - 120
2427008	Antimony	109	109	P/P	80 - 120
2427008	Arsenic	102	102	P/P	80 - 120
2427008	Barium	110	110	P/P	80 - 120
2427008	Beryllium	95.7	99.5	P/P	80 - 120
2427008	Boron	108	108	P/P	80 - 120
2427008	Cadmium	106	106	P/P	80 - 120
2427008	Chromium	100	100	P/P	80 - 120
2427008	Cobalt	97.1	96.7	P/P	80 - 120
2427008	Copper	95.4	95.5	P/P	80 - 120
2427008	Lead	106	106	P/P	80 - 120
2427008	Manganese	112	112	P/P	80 - 120
2427008	Molybdenum	106	107	P/P	80 - 120
2427008	Nickel	97.6	97.2	P/P	80 - 120
2427008	Selenium	103	102	P/P	80 - 120
2427008	Silver	107	108	P/P	80 - 120
2427008	Thallium	106	107	P/P	80 - 120
2427063	Aluminum	111		P	80 - 120
2427063	Antimony	109		P	80 - 120
2427063	Arsenic	102		P	80 - 120
2427063	Barium	111		P	80 - 120
2427063	Beryllium	97.0		P	80 - 120
2427063	Boron	112		P	80 - 120
2427063	Cadmium	104		P	80 - 120
2427063	Chromium	102		P	80 - 120
2427063	Cobalt	98.2		P	80 - 120
2427063	Copper	95.7		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427063	Lead	109		P	80 - 120
2427063	Manganese	114		P	80 - 120
2427063	Molybdenum	106		P	80 - 120
2427063	Nickel	97.9		P	80 - 120
2427063	Selenium	105		P	80 - 120
2427063	Silver	110		P	80 - 120
2427063	Thallium	109		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433278

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427188	Sulfate	100		P	90 - 110
2427210	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427181	Chloride	101		P	90 - 110
2427210	Chloride	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427501	Chloride	102		P	90 - 110
2427752	Chloride	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427169	Ammonia-N	99.2	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427257	Ammonia-N	99.0	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427240	Kjeldahl Nitrogen	101	94.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427237	NO2NO3-N	93.8	93.4	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427258	Total-P	109	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427240	Total-P	104	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427094	Fluoride	98.1	97.5	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427096	Organic Carbon	91.8	95.5	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427188	Color (true)	4.00	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427188	Turbidity	3.23	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427008	Calcium	0.826	Spike	P	0 - 20
2427008	Iron	1.54	Spike	P	0 - 20
2427008	Magnesium	1.44	Spike	P	0 - 20
2427008	Potassium	0.327	Spike	P	0 - 20
2427008	Sodium	0.0219	Spike	P	0 - 20
2427008	Strontium	0.358	Spike	P	0 - 20
2427008	Tin	2.79	Spike	P	0 - 20
2427008	Titanium	3.30	Spike	P	0 - 20
2427008	Vanadium	2.53	Spike	P	0 - 20
2427008	Zinc	3.29	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427008	Aluminum	0.149	Spike	P	0 - 20
2427008	Antimony	0.113	Spike	P	0 - 20
2427008	Arsenic	0.329	Spike	P	0 - 20
2427008	Barium	0.191	Spike	P	0 - 20
2427008	Beryllium	3.89	Spike	P	0 - 20
2427008	Boron	0.568	Spike	P	0 - 20
2427008	Cadmium	0.266	Spike	P	0 - 20
2427008	Chromium	0.201	Spike	P	0 - 20
2427008	Cobalt	0.348	Spike	P	0 - 20
2427008	Copper	0.0285	Spike	P	0 - 20
2427008	Lead	0.0783	Spike	P	0 - 20
2427008	Manganese	0.0157	Spike	P	0 - 20
2427008	Molybdenum	0.517	Spike	P	0 - 20
2427008	Nickel	0.415	Spike	P	0 - 20
2427008	Selenium	0.634	Spike	P	0 - 20
2427008	Silver	0.865	Spike	P	0 - 20
2427008	Thallium	0.834	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427188	Sulfate	0.932	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427181	Chloride	0.573	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427501	Chloride	0.0568	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433399

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427169	Ammonia-N	0.501	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427257	Ammonia-N	1.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427240	Kjeldahl Nitrogen	5.23	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427237	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427258	Total-P	0.172	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427240	Total-P	1.63	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P433354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427094	Total Alkalinity	0.634	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P433608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427236	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427094	Fluoride	0.500	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P433375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427096	Organic Carbon	3.16	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A120689
Included Lab Sample IDs: 2427210, 2427211, 2427214

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A120690
Included Lab Sample IDs: 2427210, 2427211, 2427214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A120701
Included Lab Sample IDs: 2427212, 2427213, 2427215

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	94.0	93.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A120732
Included Lab Sample IDs: 2427213, 2427215

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A120749
Included Lab Sample IDs: 2427222, 2427223, 2427224

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	104	103	P/P	90 - 110
Iron	106	104	P/P	90 - 110
Magnesium	104	103	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Sodium	103	102	P/P	90 - 110
Strontium	103	101	P/P	90 - 110
Tin	101	104	P/P	90 - 110
Titanium	99.3	101	P/P	90 - 110
Vanadium	99.2	100	P/P	90 - 110
Zinc	100	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A120750
Included Lab Sample IDs: 2427222, 2427223, 2427224

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	103	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	98.3	97.1	P/P	90 - 110
Barium	103	102	P/P	90 - 110
Beryllium	97.3	98.0	P/P	90 - 110
Boron	101	99.1	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A120750
Included Lab Sample IDs: 2427222, 2427223, 2427224

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	99.1	98.3	P/P	90 - 110
Cobalt	96.5	95.6	P/P	90 - 110
Copper	94.3	93.2	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Manganese	107	107	P/P	90 - 110
Molybdenum	100	98.6	P/P	90 - 110
Nickel	96.0	94.6	P/P	90 - 110
Selenium	102	100	P/P	90 - 110
Silver	98.2	97.6	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A120763
Included Lab Sample IDs: 2427210, 2427211, 2427214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.6	P/P	90 - 110
Chloride	101	102	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A120769
Included Lab Sample IDs: 2427212, 2427213, 2427215

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A120776
Included Lab Sample IDs: 2427223, 2427224

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	93.8	94.0	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A120803
Included Lab Sample IDs: 2427210, 2427211, 2427214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.4	93.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A120803
Included Lab Sample IDs: 2427210, 2427211, 2427214

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A120813
Included Lab Sample IDs: 2427212, 2427213, 2427215

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.8	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A120823
Included Lab Sample IDs: 2427212

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A120846
Included Lab Sample IDs: 2427213, 2427215

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A120855
Included Lab Sample IDs: 2427212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	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		
						LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	99.5					4.00	
EPA 180.1 Rev. 2.0	Turbidity	99.3					3.23	
EPA 200.7 Rev. 4.4	Calcium	109	101	109				0.826
	Iron	109	107	106	107			1.54
	Magnesium	107	99.5	105				1.44
	Potassium	103	102	101	101			0.327
	Sodium	107	104	104	104			0.0219
	Strontium	102	100	100	99.8			0.358
	Tin	106	102	99.1	105			2.79
	Titanium	102	104	101	102			3.30
	Vanadium	102	105	103	102			2.53
	Zinc	103	100	96.8	99.9			3.29
EPA 200.8 Rev. 5.4	Aluminum	108	107	107	111			0.149
	Antimony	107	109	109	109			0.113
	Arsenic	100	102	102	102			0.329
	Barium	108	110	110	111			0.191
	Beryllium	99.8	95.7	99.5	97.0			3.89
	Boron	111	108	108	112			0.568
	Cadmium	105	106	106	104			0.266
	Chromium	100	100	100	102			0.201
	Cobalt	99.2	97.1	96.7	98.2			0.348
	Copper	96.9	95.4	95.5	95.7			0.0285
	Lead	106	106	106	109			0.0783
	Manganese	109	112	112	114			0.0157
	Molybdenum	103	106	107	106			0.517
	Nickel	98.5	97.6	97.2	97.9			0.415
	Selenium	104	103	102	105			0.634
	Silver	106	107	108	110			0.865
	Thallium	103	106	107	109			0.834
EPA 300.0 Rev. 2.1	Chloride	99.7	101	99.6			0.573	
	Chloride	101	102	102			0.0568	
	Sulfate	99.7	100	101			0.932	
EPA 350.1 Rev. 2.0	Ammonia-N	100	99.2	99.8				0.501
	Ammonia-N	98.6	99.0	100				1.08
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	101	94.1				5.23
EPA 353.2 Rev. 2.0	NO2NO3-N	93.0	93.8	93.4				0.480
EPA 365.1 Rev. 2.0	Total-P	107	109	109				0.172
	Total-P	104	104	102				1.63
SM 2320 B-2011	Total Alkalinity	95.7					0.634	
SM 2540 C-2015	TDS	94.3					3.92	
SM 2540 D-2015	TSS	94.9						
SM 4500-F- C-2011	Fluoride	95.4	98.1	97.5				0.500
SM 5310 B-2011	Organic Carbon	93.2	91.8	95.5				3.16

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2427210, 2427211, 2427214
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2427210, 2427211, 2427214
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2427222, 2427223, 2427224
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2427222, 2427223, 2427224

Reference Method Descriptions

Method	Description	Associated Samples
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2427210, 2427211, 2427214
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2427210, 2427211, 2427214
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2427212, 2427213, 2427215
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2427212, 2427213, 2427215
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2427212, 2427213, 2427215
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2427212, 2427213, 2427215
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2427210, 2427211, 2427214
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2427222, 2427223, 2427224
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2427210, 2427211, 2427214
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2427210, 2427211, 2427214
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2427210, 2427211, 2427214
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2427212, 2427213, 2427215

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	07/27/2023			07/27/2023 16:26	Alexis Price	2427210
	07/27/2023			07/27/2023 16:27	Alexis Price	2427211, 2427214
EPA 180.1 Rev. 2.0	07/27/2023			07/27/2023 14:41	Alexis Price	2427210
	07/27/2023			07/27/2023 14:42	Alexis Price	2427211
	07/27/2023			07/27/2023 14:43	Alexis Price	2427214
EPA 200.7 Rev. 4.4	07/27/2023	07/28/2023 12:50	George D Taylor	07/31/2023 20:42	Samatha Luckman	2427222
	07/27/2023	07/28/2023 12:50	George D Taylor	07/31/2023 20:50	Samatha Luckman	2427223
	07/27/2023	07/28/2023 12:50	George D Taylor	07/31/2023 20:57	Samatha Luckman	2427224
EPA 200.8 Rev. 5.4	07/27/2023	07/28/2023 12:50	George D Taylor	07/31/2023 18:31	Conrad Hartmann	2427222
	07/27/2023	07/28/2023 12:50	George D Taylor	07/31/2023 18:40	Conrad Hartmann	2427223
	07/27/2023	07/28/2023 12:50	George D Taylor	07/31/2023 18:49	Conrad Hartmann	2427224
	07/27/2023	07/28/2023 12:50	George D Taylor	08/01/2023 23:35	Conrad Hartmann	2427223
	07/27/2023	07/28/2023 12:50	George D Taylor	08/01/2023 23:44	Conrad Hartmann	2427224
EPA 300.0 Rev. 2.1	07/27/2023			07/31/2023 18:49	James L Waggerby	2427210
	07/27/2023			08/01/2023 00:21	James L Waggerby	2427211
	07/27/2023			08/01/2023 00:36	James L Waggerby	2427214
	07/27/2023			08/02/2023 10:59	James L Waggerby	2427210
	07/27/2023			08/02/2023 20:12	James L Waggerby	2427211
	07/27/2023			08/02/2023 20:27	James L Waggerby	2427214
EPA 350.1 Rev. 2.0	07/27/2023			08/03/2023 13:59	Ping Hua	2427212
	07/27/2023			08/04/2023 10:55	Ping Hua	2427213
	07/27/2023			08/04/2023 10:56	Ping Hua	2427215
EPA 351.2 Rev. 2.0	07/27/2023	07/31/2023 10:34	Dana G. Hughes	08/01/2023 14:49	Samantha L Bates	2427212
	07/27/2023	07/31/2023 10:34	Dana G. Hughes	08/01/2023 14:51	Samantha L Bates	2427213
	07/27/2023	07/31/2023 10:34	Dana G. Hughes	08/01/2023 14:53	Samantha L Bates	2427215
EPA 353.2 Rev. 2.0	07/27/2023			07/28/2023 10:45	Beverly Y. Sanders	2427212
	07/27/2023			07/28/2023 10:46	Beverly Y. Sanders	2427213
	07/27/2023			07/28/2023 10:47	Beverly Y. Sanders	2427215
EPA 365.1 Rev. 2.0	07/27/2023	07/28/2023 14:20	Simonne.V. Calhoun	07/31/2023 12:06	Chandler E Cox	2427213
	07/27/2023	07/28/2023 14:20	Simonne.V. Calhoun	07/31/2023 12:07	Chandler E Cox	2427215
	07/27/2023	08/03/2023 13:11	Simonne.V. Calhoun	08/04/2023 15:12	Chandler E Cox	2427212
SM 2320 B-2011	07/27/2023			08/02/2023 05:05	Dale L. Simmons	2427210
	07/27/2023			08/02/2023 05:19	Dale L. Simmons	2427211
	07/27/2023			08/02/2023 05:28	Dale L. Simmons	2427214
SM 2340 B-2011	07/27/2023			07/31/2023 20:42	Samatha Luckman	2427222
	07/27/2023			07/31/2023 20:50	Samatha Luckman	2427223
	07/27/2023			07/31/2023 20:57	Samatha Luckman	2427224
SM 2540 C-2015	07/27/2023			07/31/2023 14:17	Yijie Li	2427210, 2427211, 2427214
SM 2540 D-2015	07/27/2023			07/31/2023 14:17	Yijie Li	2427210, 2427211, 2427214
SM 4500-F- C-2011	07/27/2023			08/02/2023 05:05	Dale L. Simmons	2427210

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500-F- C-2011	07/27/2023			08/02/2023 05:19	Dale L. Simmons	2427211
	07/27/2023			08/02/2023 05:28	Dale L. Simmons	2427214
SM 5310 B-2011	07/27/2023			08/02/2023 17:42	Elise M. Gillis	2427212
	07/27/2023			08/02/2023 17:57	Elise M. Gillis	2427213
	07/27/2023			08/02/2023 18:12	Elise M. Gillis	2427215