Chemical Analysis Report

SW-DIST-2022-04-26-01

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

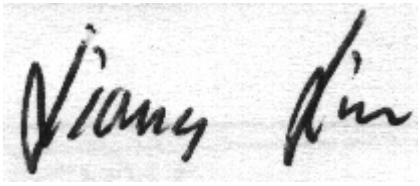
Event Description: **SMP Run 15**
Request ID: **RQ-2022-04-25-39**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Bne Paswater

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

Certified by: Liang Lin, Environmental Administrator

Date Certified: 17-MAY-2022 13:30



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: Wahneta Farm Drain @ 19th St **Collection Date/Time: 04/25/2022 10:55**

Field ID: G3SW0083 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321969	DEP SOP: NU-094-1	Color (true)**	67		PCU	P412920	
	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P412917	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P413252	
		Sulfate	21		mg SO4/L	P413255	
	SM 2320 B-2011	Total Alkalinity	29		mg CaCO3/L	P413551	
	SM 2540 C-2011	TDS	136	A	mg/L	P413421	
	SM 2540 D-2011	TSS	2	I A	mg/L	P413469	
	SM 4500-F- C-2011	Fluoride	0.087	I	mg F/L	P413554	
2321972	EPA 350.1 Rev. 2.0	Ammonia-N	0.084		mg N/L	P413111	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P413273	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P413216	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P413052	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P413244	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch relative percent difference is unavailable because of analytical difficulties.

Sample Location: Saddle Creek @ old Bartow Road **Collection Date/Time: 04/25/2022 11:40**

Field ID: G3SW0024 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321982	EPA 200.7 Rev. 4.4	Calcium	23.8		mg/L	P412937	
		Iron	98	I	ug/L	P412937	
		Magnesium	6.44		mg/L	P412937	
		Potassium	3.2		mg/L	P412937	
		Sodium	14.0		mg/L	P412937	
		Strontium	53.0		ug/L	P412937	
		Tin	3.0	U	ug/L	P412937	
		Titanium	1.5	I	ug/L	P412937	
		Vanadium	2.1	I	ug/L	P412937	
		Zinc	5.0	U	ug/L	P412937	
	EPA 200.8 Rev. 5.4	Aluminum	146		ug/L	P412937	
		Antimony	0.17	I	ug/L	P412937	
		Arsenic	1.37		ug/L	P412937	
		Barium	8.94		ug/L	P412937	
		Beryllium	0.010	U	ug/L	P412937	
		Boron**	19.7		ug/L	P412937	
		Cadmium	0.032	I	ug/L	P412937	
		Chromium	0.40	U	ug/L	P412937	
		Cobalt	0.075	I	ug/L	P412937	
		Copper	0.40	U	ug/L	P412937	
		Lead	0.42		ug/L	P412937	
		Manganese	15.9		ug/L	P412937	
		Molybdenum	0.59	I	ug/L	P412937	
		Nickel	0.50	U	ug/L	P412937	
		Selenium	0.20	U	ug/L	P412937	
		Silver	0.010	U	ug/L	P412937	
		Thallium	0.10	U	ug/L	P412937	

Sample Location: Saddle Creek @ old Bartow Road **Collection Date/Time: 04/25/2022 11:40**

Field ID: G3SW0024 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321970	DEP SOP: NU-094-1	Color (true)**	32	A	PCU	P412923	
	EPA 180.1 Rev. 2.0	Turbidity	20		NTU	P412917	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P413252	
		Sulfate	5.5		mg SO4/L	P413255	
	SM 2320 B-2011	Total Alkalinity	64		mg CaCO3/L	P413551	
	SM 2540 C-2011	TDS	168		mg/L	P413421	
	SM 2540 D-2011	TSS	26	I	mg/L	P413469	
	SM 4500-F- C-2011	Fluoride	0.52		mg F/L	P413554	
2321973	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P413111	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.8		mg N/L	P413273	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413216	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P413052	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P413244	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated because of sample matrix interference.
EPA 351.2 Rev. 2.0: Batch relative percent difference is unavailable because of analytical difficulties.

Sample Location: Reclaimed Mine Cut Lake SE **Collection Date/Time: 04/25/2022 12:40**

Field ID: G3SW0074 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321971	DEP SOP: NU-094-1	Color (true)**	9.7		PCU	P412920	
	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P412917	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P413252	
		Sulfate	0.20	U	mg SO4/L	P413255	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P413551	
	SM 2540 C-2011	TDS	94		mg/L	P413421	
	SM 2540 D-2011	TSS	19	I	mg/L	P413469	
	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P413554	
2321974	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P413111	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P413274	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413216	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P413052	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P413244	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated because of sample matrix interference.

Sample Location: Reclaimed Mine Cut Lake SE **Collection Date/Time: 04/25/2022 12:40**

Field ID: G3SW0074 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321983	EPA 200.7 Rev. 4.4	Calcium	20.3		mg/L	P412937	
		Iron	95	I	ug/L	P412937	
		Magnesium	5.62		mg/L	P412937	
		Potassium	1.8		mg/L	P412937	
		Sodium	8.3		mg/L	P412937	
		Strontium	10.6		ug/L	P412937	
		Tin	3.0	U	ug/L	P412937	
		Titanium	1.1	I	ug/L	P412937	
		Vanadium	2.0	U	ug/L	P412937	
		Zinc	5.0	U	ug/L	P412937	
	EPA 200.8 Rev. 5.4	Aluminum	134		ug/L	P412937	
		Antimony	0.12	I	ug/L	P412937	
		Arsenic	3.27		ug/L	P412937	
		Barium	1.14		ug/L	P412937	
		Beryllium	0.010	U	ug/L	P412937	
		Boron**	16.1		ug/L	P412937	
		Cadmium	0.020	U	ug/L	P412937	
		Chromium	0.40	U	ug/L	P412937	
		Cobalt	0.058	I	ug/L	P412937	
		Copper	0.53	I	ug/L	P412937	
		Lead	0.20	U	ug/L	P412937	
		Manganese	16.5		ug/L	P412937	
		Molybdenum	0.17	I	ug/L	P412937	
		Nickel	0.50	U	ug/L	P412937	
		Selenium	0.20	U	ug/L	P412937	
		Silver	0.010	U	ug/L	P412937	
		Thallium	0.10	U	ug/L	P412937	

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412920

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P412923

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412917

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412937

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: P412937

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413252

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413255

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413111

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413273

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413274

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413216

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413052

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

Reference Method: SM 2320 B-2011
Batch ID: P413551

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

Reference Method: SM 2540 C-2011
Batch ID: P413421

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P413469

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413554

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413244

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: P412920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.3		P	85 - 115

Reference Method: DEP SOP: NU-094-1
Batch ID: P412923

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412917

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412937

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	106		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	105		P	85 - 115
Sodium	103		P	85 - 115
Strontium	103		P	85 - 115
Tin	103		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	96.7		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412937

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.9		P	85 - 115
Antimony	92.8		P	85 - 115
Arsenic	94.4		P	85 - 115
Barium	97.8		P	85 - 115
Beryllium	90.9		P	85 - 115
Boron	92.1		P	85 - 115
Cadmium	93.2		P	85 - 115
Chromium	93.1		P	85 - 115
Cobalt	91.5		P	85 - 115
Copper	89.0		P	85 - 115
Lead	89.7		P	85 - 115
Manganese	92.6		P	85 - 115
Molybdenum	94.2		P	85 - 115
Nickel	92.7		P	85 - 115
Selenium	93.8		P	85 - 115
Silver	93.6		P	85 - 115
Thallium	95.3		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413252

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413255

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413273

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413274

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413052

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

Reference Method: SM 2320 B-2011
Batch ID: P413551

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.3		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P413554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P413244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	87.7		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321958	Calcium	105		P	80 - 120
2321958	Iron	111		P	80 - 120
2321958	Magnesium	106		P	80 - 120
2321958	Potassium	104		P	80 - 120
2321958	Sodium	102		P	80 - 120
2321958	Strontium	106		P	80 - 120
2321958	Tin	107		P	80 - 120
2321958	Titanium	104		P	80 - 120
2321958	Vanadium	100		P	80 - 120
2321958	Zinc	108		P	80 - 120
2321983	Calcium	103		P	80 - 120
2321983	Iron	109	112	P/P	80 - 120
2321983	Magnesium	103		P	80 - 120
2321983	Potassium	106	109	P/P	80 - 120
2321983	Sodium	102		P	80 - 120
2321983	Strontium	105	108	P/P	80 - 120
2321983	Tin	102	106	P/P	80 - 120
2321983	Titanium	103	109	P/P	80 - 120
2321983	Vanadium	99.1	103	P/P	80 - 120
2321983	Zinc	104	109	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321958	Aluminum	102		P	80 - 120
2321958	Antimony	95.7		P	80 - 120
2321958	Arsenic	96.6		P	80 - 120
2321958	Barium	100		P	80 - 120
2321958	Beryllium	90.0		P	80 - 120
2321958	Boron	99.7		P	80 - 120
2321958	Cadmium	96.5		P	80 - 120
2321958	Chromium	96.6		P	80 - 120
2321958	Cobalt	93.5		P	80 - 120
2321958	Copper	92.6		P	80 - 120
2321958	Lead	94.0		P	80 - 120
2321958	Manganese	98.2		P	80 - 120
2321958	Molybdenum	96.4		P	80 - 120
2321958	Nickel	93.8		P	80 - 120
2321958	Selenium	93.5		P	80 - 120
2321958	Silver	95.3		P	80 - 120
2321958	Thallium	99.3		P	80 - 120
2321983	Aluminum	95.1	94.8	P/P	80 - 120
2321983	Antimony	95.3	94.3	P/P	80 - 120
2321983	Arsenic	97.5	95.2	P/P	80 - 120
2321983	Barium	101	100	P/P	80 - 120
2321983	Beryllium	94.9	89.8	P/P	80 - 120
2321983	Boron	93.6	93.4	P/P	80 - 120
2321983	Cadmium	97.1	95.3	P/P	80 - 120
2321983	Chromium	97.0	94.9	P/P	80 - 120
2321983	Cobalt	94.4	92.7	P/P	80 - 120
2321983	Copper	92.4	89.8	P/P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321983	Lead	93.1	91.5	P/P	80 - 120
2321983	Manganese	95.8	93.1	P/P	80 - 120
2321983	Molybdenum	97.9	95.6	P/P	80 - 120
2321983	Nickel	94.1	92.2	P/P	80 - 120
2321983	Selenium	94.4	91.9	P/P	80 - 120
2321983	Silver	94.5	93.6	P/P	80 - 120
2321983	Thallium	99.9	100	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321936	Chloride	99.6		P	90 - 110
2322001	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413255

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321936	Sulfate	96.7		P	90 - 110
2322001	Sulfate	93.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321874	Ammonia-N	100	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322020	Kjeldahl Nitrogen	106		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321889	Kjeldahl Nitrogen	108	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321972	NO2NO3-N	96.2	94.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321972	Total-P	103	103	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P413554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321990	Fluoride	99.0	99.0	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P413244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321994	Organic Carbon	98.1	99.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321991	Color (true)	0.154	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P412923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321970	Color (true)	0.156	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412917

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321936	Turbidity	2.82	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321983	Calcium	3.11	Spike	P	0 - 20
2321983	Iron	2.14	Spike	P	0 - 20
2321983	Magnesium	1.27	Spike	P	0 - 20
2321983	Potassium	2.15	Spike	P	0 - 20
2321983	Sodium	2.07	Spike	P	0 - 20
2321983	Strontium	2.87	Spike	P	0 - 20
2321983	Tin	4.00	Spike	P	0 - 20
2321983	Titanium	5.89	Spike	P	0 - 20
2321983	Vanadium	4.06	Spike	P	0 - 20
2321983	Zinc	4.41	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321983	Aluminum	0.217	Spike	P	0 - 20
2321983	Antimony	1.04	Spike	P	0 - 20
2321983	Arsenic	2.20	Spike	P	0 - 20
2321983	Barium	0.770	Spike	P	0 - 20
2321983	Beryllium	5.44	Spike	P	0 - 20
2321983	Boron	0.170	Spike	P	0 - 20
2321983	Cadmium	1.84	Spike	P	0 - 20
2321983	Chromium	2.21	Spike	P	0 - 20
2321983	Cobalt	1.85	Spike	P	0 - 20
2321983	Copper	2.76	Spike	P	0 - 20
2321983	Lead	1.76	Spike	P	0 - 20
2321983	Manganese	1.99	Spike	P	0 - 20
2321983	Molybdenum	2.25	Spike	P	0 - 20
2321983	Nickel	2.00	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321983	Selenium	2.72	Spike	P	0 - 20
2321983	Silver	0.899	Spike	P	0 - 20
2321983	Thallium	0.0619	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321936	Chloride	0.952	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413255

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321936	Sulfate	0.846	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321874	Ammonia-N	0.379	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321889	Kjeldahl Nitrogen	3.16	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321972	NO2NO3-N	1.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321972	Total-P	0.683	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P413551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P413551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321990	Total Alkalinity	1.68	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P413421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321969	TDS	3.66	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P413554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321990	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P413244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321994	Organic Carbon	0.955	Spike	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A111700
Included Lab Sample IDs: 2321969, 2321970, 2321971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	98.5	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1
Run ID: A111702
Included Lab Sample IDs: 2321969, 2321970, 2321971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	99.8	P/P	85 - 115
Color (true)	99.2	100	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A111715
Included Lab Sample IDs: 2321969, 2321970, 2321971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	101	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A111792
Included Lab Sample IDs: 2321982, 2321983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	104	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Iron	104	105	P/P	90 - 110
Iron	104	104	P/P	90 - 110
Magnesium	104	104	P/P	90 - 110
Magnesium	104	105	P/P	90 - 110
Potassium	103	103	P/P	90 - 110
Potassium	103	104	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Strontium	100	104	P/P	90 - 110
Strontium	104	102	P/P	90 - 110
Tin	99.2	99.7	P/P	90 - 110
Tin	99.7	102	P/P	90 - 110
Titanium	97.5	99.5	P/P	90 - 110
Titanium	99.5	102	P/P	90 - 110
Vanadium	100	101	P/P	90 - 110
Vanadium	101	102	P/P	90 - 110
Zinc	102	105	P/P	90 - 110
Zinc	99.9	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111796
Included Lab Sample IDs: 2321982, 2321983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	95.8	96.9	P/P	90 - 110
Aluminum	97.4	94.8	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111796
Included Lab Sample IDs: 2321982, 2321983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	96.1	96.0	P/P	90 - 110
Antimony	96.9	94.3	P/P	90 - 110
Arsenic	95.8	96.0	P/P	90 - 110
Arsenic	99.0	95.4	P/P	90 - 110
Barium	95.6	96.3	P/P	90 - 110
Barium	98.3	95.8	P/P	90 - 110
Boron	90.3	90.7	P/P	90 - 110
Boron	94.9	93.9	P/P	90 - 110
Cadmium	95.7	94.2	P/P	90 - 110
Cadmium	96.3	95.8	P/P	90 - 110
Chromium	95.6	96.4	P/P	90 - 110
Chromium	96.7	94.8	P/P	90 - 110
Cobalt	92.5	93.2	P/P	90 - 110
Cobalt	95.1	92.6	P/P	90 - 110
Copper	90.7	91.2	P/P	90 - 110
Copper	94.7	90.8	P/P	90 - 110
Lead	90.0	90.6	P/P	90 - 110
Lead	91.5	90.2	P/P	90 - 110
Manganese	96.1	95.9	P/P	90 - 110
Manganese	96.2	94.6	P/P	90 - 110
Molybdenum	94.9	93.8	P/P	90 - 110
Molybdenum	96.4	93.6	P/P	90 - 110
Nickel	93.2	94.0	P/P	90 - 110
Nickel	96.2	92.7	P/P	90 - 110
Selenium	96.3	95.9	P/P	90 - 110
Selenium	98.2	96.1	P/P	90 - 110
Silver	96.2	95.9	P/P	90 - 110
Silver	97.3	95.4	P/P	90 - 110
Thallium	93.9	95.0	P/P	90 - 110
Thallium	95.0	93.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A111801
Included Lab Sample IDs: 2321972, 2321973, 2321974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	97.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111822
Included Lab Sample IDs: 2321982, 2321983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	98.2	99.4	P/P	90 - 110
Beryllium	98.7	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A111841
Included Lab Sample IDs: 2321972, 2321973, 2321974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A111841
Included Lab Sample IDs: 2321972, 2321973, 2321974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	96.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A111856
Included Lab Sample IDs: 2321972, 2321973, 2321974

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111879
Included Lab Sample IDs: 2321973, 2321974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111924
Included Lab Sample IDs: 2321972

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

Reference Method: SM 2320 B-2011
Run ID: A111985
Included Lab Sample IDs: 2321969, 2321970, 2321971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	95.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A111985
Included Lab Sample IDs: 2321969, 2321970, 2321971

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112015
Included Lab Sample IDs: 2321972, 2321973, 2321974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.2	107	P/P	90 - 110
Kjeldahl Nitrogen	98.0	91.1	P/P	90 - 110
Kjeldahl Nitrogen	98.1	98.0	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)	98.3					0.154	
	Color (true)	100					0.156	
EPA 180.1 Rev. 2.0	Turbidity	95.9					2.82	
EPA 200.7 Rev. 4.4	Calcium	107	105	103				3.11
	Iron	106	111	109	112			2.14
	Magnesium	106	106	103				1.27
	Potassium	105	104	106	109			2.15
	Sodium	103	102	102				2.07
	Strontium	103	106	105	108			2.87
	Tin	103	107	102	106			4.00
	Titanium	102	104	103	109			5.89
	Vanadium	96.7	100	99.1	103			4.06
	Zinc	104	108	104	109			4.41
EPA 200.8 Rev. 5.4	Aluminum	93.9	95.1	94.8	102			0.217
	Antimony	92.8	95.3	94.3	95.7			1.04
	Arsenic	94.4	97.5	95.2	96.6			2.20
	Barium	97.8	101	100	100			0.770
	Beryllium	90.9	94.9	89.8	90.0			5.44
	Boron	92.1	93.6	93.4	99.7			0.170
	Cadmium	93.2	97.1	95.3	96.5			1.84
	Chromium	93.1	97.0	94.9	96.6			2.21
	Cobalt	91.5	94.4	92.7	93.5			1.85
	Copper	89.0	92.4	89.8	92.6			2.76
	Lead	89.7	93.1	91.5	94.0			1.76
	Manganese	92.6	95.8	93.1	98.2			1.99
	Molybdenum	94.2	97.9	95.6	96.4			2.25
	Nickel	92.7	94.1	92.2	93.8			2.00
	Selenium	93.8	94.4	91.9	93.5			2.72
	Silver	93.6	94.5	93.6	95.3			0.899
	Thallium	95.3	99.9	100	99.3			0.0619
EPA 300.0 Rev. 2.1	Chloride	100	99.6	97.9			0.952	
	Sulfate	99.7	96.7	93.0			0.846	
EPA 350.1 Rev. 2.0	Ammonia-N	97.2	100	99.6				0.379
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	106					
	Kjeldahl Nitrogen	101	108	102				3.16
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	96.2	94.6				1.13
EPA 365.1 Rev. 2.0	Total-P	104	103	103				0.683
SM 2320 B-2011	Total Alkalinity	97.3					1.68	
SM 2540 C-2011	TDS						3.66	
SM 4500-F- C-2011	Fluoride	100	99.0	99.0				0.0
SM 5310 B-2011	Organic Carbon	87.7	98.1	99.6				0.955

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2321969, 2321970, 2321971
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2321969, 2321970, 2321971
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2321982, 2321983
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2321982, 2321983
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2321969, 2321970, 2321971
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2321969, 2321970, 2321971

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2321972, 2321973, 2321974
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2321972, 2321973, 2321974
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2321972, 2321973, 2321974
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2321972, 2321973, 2321974
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2321969, 2321970, 2321971
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2321969, 2321970, 2321971
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2321969, 2321970, 2321971
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2321969, 2321970, 2321971
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2321972, 2321973, 2321974

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	04/26/2022			04/26/2022 16:15	Anna M. Plaviak	2321969
	04/26/2022			04/26/2022 16:16	Anna M. Plaviak	2321971
	04/26/2022			04/26/2022 16:46	Anna M. Plaviak	2321970
EPA 180.1 Rev. 2.0	04/26/2022			04/26/2022 14:39	Khloe J Berg	2321969
	04/26/2022			04/26/2022 14:40	Khloe J Berg	2321970
	04/26/2022			04/26/2022 14:41	Khloe J Berg	2321971
EPA 200.7 Rev. 4.4	04/26/2022	04/27/2022 10:35	Megan Whitefoot	04/28/2022 20:00	Josef B Mick	2321982
	04/26/2022	04/27/2022 10:35	Megan Whitefoot	04/28/2022 20:39	Josef B Mick	2321983
EPA 200.8 Rev. 5.4	04/26/2022	04/27/2022 10:35	Megan Whitefoot	04/28/2022 17:04	Emily M Philpot	2321983
	04/26/2022	04/27/2022 10:35	Megan Whitefoot	04/28/2022 20:50	Emily M Philpot	2321982
	04/26/2022	04/27/2022 10:35	Megan Whitefoot	04/29/2022 14:57	Alexander Thompson	2321983
	04/26/2022	04/27/2022 10:35	Megan Whitefoot	04/29/2022 16:57	Alexander Thompson	2321982
EPA 300.0 Rev. 2.1	04/26/2022			04/29/2022 23:45	James L Waggerby	2321969
	04/26/2022			04/29/2022 23:57	James L Waggerby	2321970
	04/26/2022			04/30/2022 00:09	James L Waggerby	2321971
EPA 350.1 Rev. 2.0	04/26/2022			04/29/2022 09:57	Judith K. Clark	2321972
	04/26/2022			04/29/2022 09:58	Judith K. Clark	2321973
	04/26/2022			04/29/2022 09:59	Judith K. Clark	2321974
EPA 351.2 Rev. 2.0	04/26/2022	05/04/2022 15:46	Alexandra J Mattheus	05/09/2022 17:31	Samantha L Bates	2321972
	04/26/2022	05/04/2022 15:46	Alexandra J Mattheus	05/09/2022 17:36	Samantha L Bates	2321973
	04/26/2022	05/04/2022 15:46	Alexandra J Mattheus	05/09/2022 18:15	Samantha L Bates	2321974
EPA 353.2 Rev. 2.0	04/26/2022			05/02/2022 09:40	Beverly Y. Sanders	2321972
	04/26/2022			05/02/2022 09:46	Beverly Y. Sanders	2321973
	04/26/2022			05/02/2022 09:47	Beverly Y. Sanders	2321974
EPA 365.1 Rev. 2.0	04/26/2022	04/29/2022 13:00	Simonne.V. Calhoun	05/03/2022 12:22	Sarah A Nixon	2321973
	04/26/2022	04/29/2022 13:00	Simonne.V. Calhoun	05/03/2022 12:23	Sarah A Nixon	2321974
	04/26/2022	04/29/2022 13:00	Simonne.V. Calhoun	05/03/2022 15:06	James L Waggerby	2321972
SM 2320 B-2011	04/26/2022			05/04/2022 03:28	Dale L. Simmons	2321969
	04/26/2022			05/04/2022 03:40	Dale L. Simmons	2321970
	04/26/2022			05/04/2022 03:52	Dale L. Simmons	2321971
SM 2540 C-2011	04/26/2022			04/29/2022 15:42	Yijie Li	2321969, 2321970, 2321971
SM 2540 D-2011	04/26/2022			04/29/2022 15:42	Yijie Li	2321969, 2321970, 2321971
SM 4500-F- C-2011	04/26/2022			05/04/2022 03:28	Dale L. Simmons	2321969
	04/26/2022			05/04/2022 03:40	Dale L. Simmons	2321970
	04/26/2022			05/04/2022 03:52	Dale L. Simmons	2321971
SM 5310 B-2011	04/26/2022			05/02/2022 18:36	Khloe J Berg	2321972
	04/26/2022			05/02/2022 18:50	Khloe J Berg	2321973
	04/26/2022			05/02/2022 19:04	Khloe J Berg	2321974