

Chemical Analysis Report

SE-DIST-2022-02-22-01

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

Event Description: **Port Mayaca 2022**

Request ID: **RQ-2022-02-21-52**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 16-MAR-2022 09:53



Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: Nubbin Slough 1.4 miles upstream of 710

Collection Date/Time: 02/21/2022 09:15

Field ID: G1SE0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307011	EPA 8321B	2,4-D	0.0020	U	ug/L	P410241	
		Acesulfame K	0.10	U	ug/L	P410177	
		2,4,5-T	0.0040	U	ug/L	P410241	
		AMPA	0.10	U	ug/L	P410177	
		Acetaminophen	0.0080	U	ug/L	P410241	
		Acetamiprid	0.0020	U	ug/L	P410241	
		Endothall	0.25	U	ug/L	P410177	
		Glufosinate	0.10	U	ug/L	P410177	
		Glyphosate	0.10	U	ug/L	P410177	
		Afidopyropen	0.0020	U	ug/L	P410241	
		Bentazon	8.0E-04	U	ug/L	P410241	
		Sucralose	0.010	U	ug/L	P410177	
		Benzovindiflupyr	0.0020	U	ug/L	P410241	
		Carbamazepine	8.0E-04	U	ug/L	P410241	
		Clothianidin	0.0020	U	ug/L	P410241	
		Dinotefuran	0.0020	U	ug/L	P410241	
		Diuron	0.0020	U	ug/L	P410241	
		Fenuron	0.016	U	ug/L	P410241	
		Fluridone	8.0E-04	U	ug/L	P410241	
		Imazapyr	0.023		ug/L	P410241	
		Hydrocodone	0.0020	U	ug/L	P410241	
		Ibuprofen	0.020	U	ug/L	P410241	
		Imidacloprid	0.0020	U	ug/L	P410241	MS
		Linuron	0.0040	U	ug/L	P410241	
		Mandestrobin	0.0020	U	ug/L	P410241	
		MCPP	0.0020	U	ug/L	P410241	
		Naproxen	0.0080	U	ug/L	P410241	
		Primidone	0.0040	U	ug/L	P410241	
		Pyraclostrobin	0.0020	U	ug/L	P410241	
		Silvex	0.0040	U	ug/L	P410241	
		Thiamethoxam	0.0020	U	ug/L	P410241	MS
		Tolfenpyrad	0.0020	U	ug/L	P410241	
		Triclopyr	0.0040	U	ug/L	P410241	
2307016	EPA 200.7 Rev. 4.4	Calcium	38.0		mg/L	P410276	
		Iron	380		ug/L	P410276	
		Magnesium	9.71		mg/L	P410276	
		Potassium	38.4		mg/L	P410276	
		Sodium	52.5		mg/L	P410276	
		Strontium	783		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	1.3	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Aluminum	525		ug/L	P410276	

Field ID: G1SE0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307016	EPA 200.8 Rev. 5.4	Antimony	0.056	I	ug/L	P410276	
		Arsenic	0.39		ug/L	P410276	
		Barium	19.8		ug/L	P410276	
		Beryllium	0.012	I	ug/L	P410276	
		Boron**	66.1		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.72	I	ug/L	P410276	
		Cobalt	0.188		ug/L	P410276	
		Copper	0.44	I	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	16.1		ug/L	P410276	
		Molybdenum	0.21	I	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	135		mg/L	P410276	

Ref. Method and Comment:

EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Nubbin Slough upstream of STA

Collection Date/Time: 02/21/2022 09:40

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307015	EPA 200.7 Rev. 4.4	Calcium	18.4		mg/L	P410276	
		Iron	1.61E+03		ug/L	P410276	
		Magnesium	4.63		mg/L	P410276	
		Potassium	14.0		mg/L	P410276	
		Sodium	19.5		mg/L	P410276	
		Strontium	115		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	2.4	I	ug/L	P410276	
		Vanadium	4.8	I	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Aluminum	494		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	1.50		ug/L	P410276	
		Barium	20.5		ug/L	P410276	
		Beryllium	0.038	I	ug/L	P410276	
		Boron**	35.9		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	2.2		ug/L	P410276	
		Cobalt	0.278		ug/L	P410276	
		Copper	0.47	I	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	18.5		ug/L	P410276	
		Molybdenum	0.68		ug/L	P410276	
		Nickel	0.61	I	ug/L	P410276	
		Selenium	0.33	I	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	65.1		mg/L	P410276	

Sample Location: L-65 upstream of S-153

Collection Date/Time: 02/21/2022 10:40

Field ID: G1SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2306951	DEP SOP: NU-094-1	Color (true)**	99		PCU	P410196	
	EPA 180.1 Rev. 2.0	Turbidity	0.60	I	NTU	P410202	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P410287	
		Sulfate	35		mg SO4/L	P410286	
	SM 2320 B-2011	Total Alkalinity	183		mg CaCO3/L	P410562	
	SM 2540 C-2011	TDS	500		mg/L	P410637	
	SM 2540 D-2011	TSS	2	U	mg/L	P410499	
	SM 4500 F-C-2011	Fluoride	0.24		mg F/L	P410567	
2306953	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P410573	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P410219	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.077		mg N/L	P410433	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P410211	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P410454	
2306955	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P410205	
2307013	EPA 200.7 Rev. 4.4	Calcium	77.8		mg/L	P410276	
		Iron	240		ug/L	P410276	
		Magnesium	14.1		mg/L	P410276	
		Potassium	6.4		mg/L	P410276	
		Sodium	85.4		mg/L	P410276	
		Strontium	1.92E+03		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Titanium	1.3	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
		Aluminum	46		ug/L	P410276	
		Antimony	0.056	I	ug/L	P410276	
		Arsenic	0.82		ug/L	P410276	
		Barium	27.3		ug/L	P410276	
		Beryllium	0.010	I	ug/L	P410276	
		Boron**	82.9		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.54	I	ug/L	P410276	
		Cobalt	0.108		ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	4.22		ug/L	P410276	
		Molybdenum	0.52	I	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.27	I	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	252		mg/L	P410276	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: S-153 Unnamed creek @ 710

Collection Date/Time: 02/21/2022 11:30

Field ID: G4SE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2306952	DEP SOP: NU-094-1	Color (true)**	70		PCU	P410196	
	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P410202	
	EPA 300.0 Rev. 2.1	Chloride	430		mg Cl/L	P410287	
		Sulfate	160		mg SO4/L	P410286	
	SM 2320 B-2011	Total Alkalinity	141		mg CaCO3/L	P410562	
	SM 2540 C-2011	TDS	1.05E+03		mg/L	P410637	
	SM 2540 D-2011	TSS	11		mg/L	P410499	
	SM 4500 F-C-2011	Fluoride	0.66		mg F/L	P410567	
2306954	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P410573	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P410282	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P410433	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P410211	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P410454	
2306956	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P410205	
2307014	EPA 200.7 Rev. 4.4	Calcium	64.4		mg/L	P410276	
		Iron	130		ug/L	P410276	
		Magnesium	45.6		mg/L	P410276	
		Potassium	10.7		mg/L	P410276	
		Sodium	240		mg/L	P410276	
		Strontium	9.97E+03		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Titanium	1.5	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
		Aluminum	96		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.36		ug/L	P410276	
		Barium	27.7		ug/L	P410276	
		Beryllium	0.010	U	ug/L	P410276	
		Boron**	231		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.40	U	ug/L	P410276	
		Cobalt	0.073	I	ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	7.73		ug/L	P410276	
		Molybdenum	0.15	U	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	349		mg/L	P410276	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lettuce Creek @ 710

Collection Date/Time: 02/21/2022 10:00

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2306957	DEP SOP: NU-094-1	Color (true)**	160		PCU	P410196	
	EPA 180.1 Rev. 2.0	Turbidity	3.4	A	NTU	P410202	
	EPA 300.0 Rev. 2.1	Chloride	64		mg Cl/L	P410287	
		Sulfate	13		mg SO4/L	P410286	
	SM 2320 B-2011	Total Alkalinity	129		mg CaCO3/L	P410562	
	SM 2540 C-2011	TDS	305		mg/L	P410637	
	SM 2540 D-2011	TSS	2	I	mg/L	P410499	
2306958	SM 4500 F-C-2011	Fluoride	0.15		mg F/L	P410567	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P410573	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P410219	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.063		mg N/L	P410433	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P410211	
2306959	SM 5310 B-2011	Organic Carbon	28		mg C/L	P410454	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.19		mg P/L	P410205	
2307012	EPA 8321B	2,4-D	0.020	U	ug/L	P410241	
		Acesulfame K	0.10	U	ug/L	P410177	
		2,4,5-T	0.040	U	ug/L	P410241	
		AMPA	0.21	I	ug/L	P410177	
		Acetaminophen	0.0080	U	ug/L	P410241	
		Acetamiprid	0.0020	U	ug/L	P410241	
		Endothall	0.25	U	ug/L	P410177	
		Glufosinate	0.10	U	ug/L	P410177	
		Glyphosate	0.64		ug/L	P410177	
		Afidopyrophen	0.0020	U	ug/L	P410241	
		Bentazon	0.0080	U	ug/L	P410241	
		Sucralose	0.010	U	ug/L	P410177	
		Benzovindiflupyr	0.0020	U	ug/L	P410241	
		Carbamazepine	8.0E-04	U	ug/L	P410241	
		Clothianidin	0.0020	U	ug/L	P410241	
		Dinotefuran	0.0020	U	ug/L	P410241	
		Diuron	0.0020	U	ug/L	P410241	
		Fenuron	0.016	U	ug/L	P410241	
		Fluridone	8.0E-04	U	ug/L	P410241	
		Imazapyr	0.0040	U	ug/L	P410241	
		Hydrocodone	0.0020	U	ug/L	P410241	
		Ibuprofen	0.020	U	ug/L	P410241	
		Imidacloprid	0.0020	U	ug/L	P410241	MS
		Linuron	0.0040	U	ug/L	P410241	
		Mandestrobin	0.0020	U	ug/L	P410241	
		MCP	0.020	U	ug/L	P410241	
		Naproxen	0.0080	U	ug/L	P410241	
		Primidone	0.0040	U	ug/L	P410241	
		Pyraclostrobin	0.0020	U	ug/L	P410241	

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307012	EPA 8321B	Silvex	0.040	U	ug/L	P410241	
		Thiamethoxam	0.0020	U	ug/L	P410241	MS
		Tolfenpyrad	0.0020	U	ug/L	P410241	
		Triclopyr	0.040	U	ug/L	P410241	
2307017	EPA 200.7 Rev. 4.4	Calcium	50.5		mg/L	P410276	
		Iron	960		ug/L	P410276	
		Magnesium	7.99		mg/L	P410276	
		Potassium	3.3		mg/L	P410276	
		Sodium	38.5		mg/L	P410276	
		Strontium	560		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	1.5	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Aluminum	112		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.79		ug/L	P410276	
		Barium	27.8		ug/L	P410276	
		Beryllium	0.018	I	ug/L	P410276	
		Boron**	54.7		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	1.1	I	ug/L	P410276	
		Cobalt	0.221		ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
	SM 2340B	Lead	0.20	U	ug/L	P410276	
		Manganese	42.6		ug/L	P410276	
		Molybdenum	0.21	I	ug/L	P410276	
		Nickel	0.52	I	ug/L	P410276	
		Selenium	0.28	I	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
		Hardness	159		mg/L	P410276	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample. Some MDLs are elevated due to required dilution of sample matrix.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P410196

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410202

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410276

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: P410276

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: P410286

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: P410287

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410282

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410433

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410205

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

Reference Method: EPA 8321B
Batch ID: P410177

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P410241

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P410562

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

Reference Method: SM 2540 C-2011

Batch ID: P410637

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P410499

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P410567

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P410454

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: P410196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410202

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	106		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	104		P	85 - 115
Sodium	99.8		P	85 - 115
Strontium	99.3		P	85 - 115
Tin	101		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	93.6		P	85 - 115
Zinc	98.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.5		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	102		P	85 - 115
Barium	103		P	85 - 115
Beryllium	101		P	85 - 115
Boron	99.3		P	85 - 115
Cadmium	97.5		P	85 - 115
Chromium	97.4		P	85 - 115
Cobalt	98.1		P	85 - 115
Copper	98.0		P	85 - 115
Lead	99.5		P	85 - 115
Manganese	96.9		P	85 - 115
Molybdenum	99.3		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	99.1		P	85 - 115
Silver	103		P	85 - 115
Thallium	98.1		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410286

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410287

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410282

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410433

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.4		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P410177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	88.0		P	40 - 150
Endothall	95.0		P	40 - 150
Glufosinate	99.4		P	40 - 150
Glyphosate	87.9		P	40 - 150
Sucralose	71.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P410241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	30 - 160
2,4,5-T	76.9		P	30 - 160
Acetaminophen	77.4		P	30 - 150
Acetamiprid	92.8		P	30 - 160
Afidopyropen	69.4		P	30 - 160
Bentazon	38.8		P	30 - 150
Benzovindiflupyr	91.3		P	30 - 160
Carbamazepine	100		P	30 - 160
Clothianidin	102		P	30 - 160
Dinotefuran	106		P	30 - 160
Diuron	88.0		P	30 - 160
Fenuron	125		P	30 - 160
Fluridone	108		P	30 - 160
Hydrocodone	102		P	30 - 160
Ibuprofen	90.5		P	30 - 160
Imazapyr	105		P	30 - 160
Imidacloprid	108		P	30 - 160
Linuron	95.0		P	30 - 160
Mandestrobin	99.6		P	30 - 160
MCPP	122		P	30 - 160
Naproxen	83.1		P	30 - 160
Primidone	77.4		P	30 - 160
Pyraclostrobin	87.4		P	30 - 160
Silvex	77.6		P	30 - 160
Thiamethoxam	102		P	30 - 160
Tolfenpyrad	46.5		P	30 - 160
Triclopyr	79.0		P	30 - 160

Reference Method: SM 2320 B-2011

Batch ID: P410562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.2		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P410567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P410454

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: P410276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306588	Calcium	97.0		P	80 - 120
2306588	Iron	104		P	80 - 120
2306588	Magnesium	97.6		P	80 - 120
2306588	Potassium	101		P	80 - 120
2306588	Sodium	98.5		P	80 - 120
2306588	Strontium	98.2		P	80 - 120
2306588	Tin	99.3		P	80 - 120
2306588	Titanium	101		P	80 - 120
2306588	Vanadium	94.7		P	80 - 120
2306588	Zinc	97.4		P	80 - 120
2306932	Calcium	98.7		P	80 - 120
2306932	Iron	104	106	P/P	80 - 120
2306932	Magnesium	103	105	P/P	80 - 120
2306932	Potassium	98.4	100	P/P	80 - 120
2306932	Sodium	98.0		P	80 - 120
2306932	Strontium	97.1	99.0	P/P	80 - 120
2306932	Tin	99.0	99.8	P/P	80 - 120
2306932	Titanium	101	102	P/P	80 - 120
2306932	Vanadium	94.0	94.6	P/P	80 - 120
2306932	Zinc	99.6	99.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P410276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306588	Aluminum	99.5		P	80 - 120
2306588	Antimony	102		P	80 - 120
2306588	Arsenic	101		P	80 - 120
2306588	Barium	102		P	80 - 120
2306588	Beryllium	105		P	80 - 120
2306588	Boron	108		P	80 - 120
2306588	Cadmium	100		P	80 - 120
2306588	Chromium	96.9		P	80 - 120
2306588	Cobalt	94.6		P	80 - 120
2306588	Copper	94.3		P	80 - 120
2306588	Lead	100		P	80 - 120
2306588	Manganese	96.8		P	80 - 120
2306588	Molybdenum	101		P	80 - 120
2306588	Nickel	94.2		P	80 - 120
2306588	Selenium	95.2		P	80 - 120
2306588	Silver	103		P	80 - 120
2306588	Thallium	101		P	80 - 120
2306932	Aluminum	99.8	99.8	P/P	80 - 120
2306932	Antimony	102	103	P/P	80 - 120
2306932	Arsenic	103	103	P/P	80 - 120
2306932	Barium	102	104	P/P	80 - 120
2306932	Beryllium	102	103	P/P	80 - 120
2306932	Boron	102	103	P/P	80 - 120
2306932	Cadmium	102	102	P/P	80 - 120
2306932	Chromium	97.7	99.2	P/P	80 - 120
2306932	Cobalt	97.4	98.4	P/P	80 - 120
2306932	Copper	96.8	96.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306932	Lead	99.9	101	P/P	80 - 120
2306932	Manganese	97.8	98.9	P/P	80 - 120
2306932	Molybdenum	101	103	P/P	80 - 120
2306932	Nickel	97.9	98.9	P/P	80 - 120
2306932	Selenium	98.1	99.3	P/P	80 - 120
2306932	Silver	101	102	P/P	80 - 120
2306932	Thallium	99.2	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301844	Sulfate	97.8		P	90 - 110
2301846	Sulfate	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301844	Chloride	95.1		P	90 - 110
2301846	Chloride	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307141	Ammonia-N	97.8	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306923	Kjeldahl Nitrogen	94.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306954	Kjeldahl Nitrogen	100	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306806	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306923	Total-P	107	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306924	O-Phosphate-P	97.3	98.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P410177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306763	Acesulfame K	66.1	66.0	P/P	40 - 150
2306763	AMPA	60.9	63.6	P/P	40 - 150
2306763	Endothall	140	108	P/P	40 - 150
2306763	Glufosinate	83.7	89.1	P/P	40 - 150
2306763	Glyphosate	68.6	75.6	P/P	40 - 150
2306763	Sucralose	72.2	64.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P410241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306763	2,4-D	129	125	P/P	30 - 160
2306763	2,4,5-T	97.4	114	P/P	30 - 160
2306763	Acetaminophen	89.8	77.2	P/P	30 - 150
2306763	Acetamiprid	97.5	87.0	P/P	30 - 160
2306763	Afidopyrophen	77.6	65.6	P/P	30 - 160
2306763	Benzovindiflupyr	107	86.3	P/P	30 - 160
2306763	Carbamazepine	108	95.8	P/P	30 - 160
2306763	Clothianidin	109	92.0	P/P	30 - 160
2306763	Dinotefuran	143	117	P/P	30 - 160
2306763	Diuron	87.0	77.6	P/P	30 - 160
2306763	Fenuron	125	104	P/P	30 - 160
2306763	Fluridone	121	108	P/P	30 - 160
2306763	Hydrocodone	108	97.4	P/P	30 - 160
2306763	Ibuprofen	87.3	73.7	P/P	30 - 160
2306763	Imazapyr	119	91.5	P/P	30 - 160
2306763	Imidacloprid	222	195	F/F	30 - 160
2306763	Linuron	97.1	97.4	P/P	30 - 160
2306763	Mandestrobin	112	100	P/P	30 - 160
2306763	MCPP	135	135	P/P	30 - 160
2306763	Naproxen	82.2	73.1	P/P	30 - 160
2306763	Primidone	114	84.6	P/P	30 - 160
2306763	Pyraclostrobin	108	90.9	P/P	30 - 160
2306763	Silvex	106	116	P/P	30 - 160
2306763	Thiamethoxam	166	152	F/P	30 - 160
2306763	Tolfenpyrad	65.7	55.4	P/P	30 - 160
2306763	Triclopyr	104	100	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P410567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307391	Fluoride	98.4	98.4	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P410454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306981	Organic Carbon	101		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P410196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307140	Color (true)	1.17	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306957	Turbidity	10.4	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306932	Calcium	1.28	Spike	P	0 - 20
2306932	Iron	1.63	Spike	P	0 - 20
2306932	Magnesium	1.21	Spike	P	0 - 20
2306932	Potassium	1.45	Spike	P	0 - 20
2306932	Sodium	0.689	Spike	P	0 - 20
2306932	Strontium	1.88	Spike	P	0 - 20
2306932	Tin	0.817	Spike	P	0 - 20
2306932	Titanium	0.309	Spike	P	0 - 20
2306932	Vanadium	0.613	Spike	P	0 - 20
2306932	Zinc	0.108	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306932	Aluminum	0.00249	Spike	P	0 - 20
2306932	Antimony	1.22	Spike	P	0 - 20
2306932	Arsenic	0.259	Spike	P	0 - 20
2306932	Barium	1.89	Spike	P	0 - 20
2306932	Beryllium	0.549	Spike	P	0 - 20
2306932	Boron	0.993	Spike	P	0 - 20
2306932	Cadmium	0.0492	Spike	P	0 - 20
2306932	Chromium	1.59	Spike	P	0 - 20
2306932	Cobalt	0.986	Spike	P	0 - 20
2306932	Copper	0.0328	Spike	P	0 - 20
2306932	Lead	1.04	Spike	P	0 - 20
2306932	Manganese	0.861	Spike	P	0 - 20
2306932	Molybdenum	1.23	Spike	P	0 - 20
2306932	Nickel	0.973	Spike	P	0 - 20
2306932	Selenium	1.16	Spike	P	0 - 20
2306932	Silver	0.532	Spike	P	0 - 20
2306932	Thallium	3.59	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301844	Sulfate	0.467	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301844	Chloride	0.575	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307141	Ammonia-N	1.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306923	Kjeldahl Nitrogen	5.20	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306954	Kjeldahl Nitrogen	1.73	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306806	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306923	Total-P	4.23	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306924	O-Phosphate-P	1.53	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P410177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306763	Acesulfame K	0.166	Spike	P	0 - 30
2306763	AMPA	4.10	Spike	P	0 - 30
2306763	Endothall	25.5	Spike	P	0 - 30
2306763	Glufosinate	6.29	Spike	P	0 - 30
2306763	Glyphosate	8.08	Spike	P	0 - 30
2306763	Sucralose	11.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P410241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306763	2,4-D	2.47	Spike	P	0 - 30
2306763	2,4,5-T	15.4	Spike	P	0 - 30
2306763	Acetaminophen	15.1	Spike	P	0 - 30
2306763	Acetamiprid	11.4	Spike	P	0 - 30
2306763	Afidopyropen	16.8	Spike	P	0 - 30
2306763	Bentazon	1.31	Spike	P	0 - 30
2306763	Benzovindiflupyr	21.5	Spike	P	0 - 30
2306763	Carbamazepine	12.0	Spike	P	0 - 30
2306763	Clothianidin	17.2	Spike	P	0 - 30
2306763	Dinotefuran	20.0	Spike	P	0 - 30
2306763	Diuron	11.4	Spike	P	0 - 30
2306763	Fenuron	19.0	Spike	P	0 - 30
2306763	Fluridone	11.0	Spike	P	0 - 30
2306763	Hydrocodone	10.0	Spike	P	0 - 30
2306763	Ibuprofen	16.9	Spike	P	0 - 30
2306763	Imazapyr	13.8	Spike	P	0 - 30
2306763	Imidacloprid	13.1	Spike	P	0 - 30
2306763	Linuron	0.248	Spike	P	0 - 30
2306763	Mandestrobin	11.3	Spike	P	0 - 30
2306763	MCPP	0.504	Spike	P	0 - 30
2306763	Naproxen	11.7	Spike	P	0 - 30
2306763	Primidone	29.4	Spike	P	0 - 30
2306763	Pyraclostrobin	17.4	Spike	P	0 - 30
2306763	Silvex	9.36	Spike	P	0 - 30
2306763	Thiamethoxam	9.07	Spike	P	0 - 30
2306763	Tolfenpyrad	17.1	Spike	P	0 - 30
2306763	Triclopyr	3.32	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P410562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307391	Total Alkalinity	0.0712	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P410637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306929	TDS	2.00	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P410567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307391	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306981	Organic Carbon	0.213	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2307011
Field Sample ID: G1SE0031

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	117	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.3	P	30 - 160
EPA 8321B	Diuron-d6	83.3	P	30 - 160
EPA 8321B	Endothall-d6	123	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.3	P	30 - 160
EPA 8321B	Primidone-d5	114	P	30 - 160
EPA 8321B	Sucralose-d6	69.2	P	30 - 160

Lab Sample ID: 2307012
Field Sample ID: G1SE0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	147	P	30 - 160
EPA 8321B	Acetaminophen-d4	143	P	30 - 160
EPA 8321B	Carbamazepine-d10	156	P	30 - 160
EPA 8321B	Diuron-d6	117	P	30 - 160
EPA 8321B	Endothall-d6	97.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	138	P	30 - 160
EPA 8321B	Primidone-d5	143	P	30 - 160
EPA 8321B	Sucralose-d6	85.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110543

Included Lab Sample IDs: 2306951, 2306952, 2306957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	98.9	P/P	90 - 110
Sulfate	100	99.8	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A110549

Included Lab Sample IDs: 2306951, 2306952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	100	P/P	85 - 115

Reference Method: DEP SOP: NU-094-1

Run ID: A110550

Included Lab Sample IDs: 2306957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.6	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110551

Included Lab Sample IDs: 2306951, 2306952, 2306957

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A110552

Included Lab Sample IDs: 2306955, 2306956, 2306959

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110586

Included Lab Sample IDs: 2306953, 2306954, 2306958

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110609

Included Lab Sample IDs: 2307013, 2307014, 2307015, 2307016, 2307017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.6	98.5	P/P	90 - 110
Antimony	95.2	94.8	P/P	90 - 110
Arsenic	98.3	97.8	P/P	90 - 110
Barium	98.0	96.4	P/P	90 - 110
Beryllium	98.5	102	P/P	90 - 110
Boron	98.7	101	P/P	90 - 110
Cadmium	97.8	98.1	P/P	90 - 110
Chromium	94.9	94.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110609

Included Lab Sample IDs: 2307013, 2307014, 2307015, 2307016, 2307017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cobalt	94.6	93.5	P/P	90 - 110
Copper	95.2	94.2	P/P	90 - 110
Lead	96.1	97.5	P/P	90 - 110
Manganese	95.4	94.2	P/P	90 - 110
Molybdenum	96.9	97.4	P/P	90 - 110
Nickel	95.6	95.1	P/P	90 - 110
Selenium	97.4	97.0	P/P	90 - 110
Silver	93.1	93.6	P/P	90 - 110
Thallium	99.4	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110616

Included Lab Sample IDs: 2307011, 2307012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	82.9	91.3	P/P	60 - 160
Glufosinate	92.5	114	P/P	60 - 160
Glyphosate	81.1	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A110619

Included Lab Sample IDs: 2307011, 2307012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	106	P/P	60 - 160
Endothall	100	123	P/P	60 - 160
Sucralose	94.0	73.3	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A110643

Included Lab Sample IDs: 2307011, 2307012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.6	92.8	P/P	50 - 150
2,4,5-T	127	125	P/P	50 - 150
Acetaminophen	107	102	P/P	60 - 160
Acetamiprid	101	108	P/P	50 - 150
Afidopyropen	115	104	P/P	50 - 150
Bentazon	96.9	111	P/P	50 - 160
Benzovindiflupyr	101	107	P/P	50 - 160
Carbamazepine	106	106	P/P	60 - 150
Clothianidin	102	106	P/P	60 - 150
Dinotefuran	109	110	P/P	50 - 150
Diuron	101	108	P/P	60 - 160
Fenuron	110	110	P/P	60 - 150
Fluridone	116	125	P/P	60 - 160
Hydrocodone	110	109	P/P	60 - 150
Ibuprofen	119	65.4	P/P	50 - 160
Imazapyr	107	118	P/P	50 - 150
Imidacloprid	108	112	P/P	60 - 150
Linuron	122	128	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A110643

Included Lab Sample IDs: 2307011, 2307012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mandestrobin	103	106	P/P	50 - 150
MCPD	122	117	P/P	50 - 150
Naproxen	88.0	73.1	P/P	50 - 160
Primidone	86.5	120	P/P	60 - 150
Pyraclostrobin	109	106	P/P	60 - 150
Silvex	106	102	P/P	50 - 150
Thiamethoxam	112	117	P/P	50 - 150
Tolfenpyrad	121	120	P/P	60 - 150
Triclopyr	120	110	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110649

Included Lab Sample IDs: 2306953, 2306958

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.1	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110660

Included Lab Sample IDs: 2306953, 2306954, 2306958

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	97.5	97.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110664

Included Lab Sample IDs: 2306953, 2306954, 2306958

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110673

Included Lab Sample IDs: 2307013, 2307014, 2307015, 2307016, 2307017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.6	97.8	P/P	90 - 110
Calcium	97.8	98.3	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Iron	103	101	P/P	90 - 110
Magnesium	101	98.9	P/P	90 - 110
Magnesium	99.0	101	P/P	90 - 110
Potassium	97.5	98.8	P/P	90 - 110
Potassium	98.8	97.7	P/P	90 - 110
Sodium	98.3	98.4	P/P	90 - 110
Sodium	98.4	98.5	P/P	90 - 110
Strontium	98.0	97.5	P/P	90 - 110
Strontium	98.2	98.0	P/P	90 - 110
Tin	98.6	98.8	P/P	90 - 110
Tin	98.8	98.6	P/P	90 - 110
Titanium	99.4	99.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110673

Included Lab Sample IDs: 2307013, 2307014, 2307015, 2307016, 2307017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Titanium	99.6	99.1	P/P	90 - 110
Vanadium	97.9	98.8	P/P	90 - 110
Vanadium	98.8	98.2	P/P	90 - 110
Zinc	100	99.3	P/P	90 - 110
Zinc	98.6	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110687

Included Lab Sample IDs: 2307012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.6	87.8	P/P	50 - 150
2,4,5-T	96.8	93.7	P/P	50 - 150
Bentazon	87.8	88.3	P/P	50 - 160
MCP	99.4	111	P/P	50 - 150
Silvex	85.7	82.4	P/P	50 - 150
Triclopyr	91.0	102	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110688

Included Lab Sample IDs: 2306954

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	99.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110710

Included Lab Sample IDs: 2306951, 2306952, 2306957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.6	95.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110710

Included Lab Sample IDs: 2306951, 2306952, 2306957

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110711

Included Lab Sample IDs: 2306953, 2306954, 2306958

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110759

Included Lab Sample IDs: 2307014, 2307016

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110759

Included Lab Sample IDs: 2307014, 2307016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	98.0	101	P/P	90 - 110
Sodium	98.7	98.5	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				
DEP SOP: NU-094-1	Color (true)	98.7				1.17	
EPA 180.1 Rev. 2.0	Turbidity	97.4				10.4	
EPA 200.7 Rev. 4.4	Calcium	100	97.0	98.7			1.28
	Iron	106	104	104	106		1.63
	Magnesium	105	97.6	103	105		1.21
	Potassium	104	101	98.4	100		1.45
	Sodium	99.8	98.5	98.0			0.689
	Strontium	99.3	98.2	97.1	99.0		1.88
	Tin	101	99.3	99.0	99.8		0.817
	Titanium	101	101	101	102		0.309
	Vanadium	93.6	94.7	94.0	94.6		0.613
	Zinc	98.4	97.4	99.6	99.7		0.108
EPA 200.8 Rev. 5.4	Aluminum	99.5	99.8	99.8	99.5		0.0024
	Antimony	100	102	103	102		1.22
	Arsenic	102	103	103	101		0.259
	Barium	103	102	104	102		1.89
	Beryllium	101	102	103	105		0.549
	Boron	99.3	102	103	108		0.993
	Cadmium	97.5	102	102	100		0.0492
	Chromium	97.4	97.7	99.2	96.9		1.59
	Cobalt	98.1	97.4	98.4	94.6		0.986
	Copper	98.0	96.8	96.7	94.3		0.0328
	Lead	99.5	99.9	101	100		1.04
	Manganese	96.9	97.8	98.9	96.8		0.861
	Molybdenum	99.3	101	103	101		1.23
	Nickel	99.9	97.9	98.9	94.2		0.973
	Selenium	99.1	98.1	99.3	95.2		1.16
	Silver	103	101	102	103		0.532
	Thallium	98.1	99.2	103	101		3.59
EPA 300.0 Rev. 2.1	Chloride	99.1	95.1	97.6		0.575	
	Sulfate	99.6	97.8	97.8		0.467	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	97.8	99.6			1.70
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.4	94.5	100			5.20
	Kjeldahl Nitrogen	107	100	103			1.73
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	99.5	99.0			0.504
EPA 365.1 Rev. 2.0	Total-P	108	107	102			4.23
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4	97.3	98.8			1.53
EPA 8321B	2,4-D	108	129	125			2.47
	2,4,5-T	76.9	97.4	114			15.4
	Acesulfame K	106	66.1	66.0			0.166
	Acetaminophen	77.4	89.8	77.2			15.1
	Acetamiprid	92.8	97.5	87.0			11.4
	Afidopyropen	69.4	77.6	65.6			16.8
	AMPA	88.0	60.9	63.6			4.10
	Bentazon	38.8					1.31
	Benzovindiflupyr	91.3	107	86.3			21.5
	Carbamazepine	100	108	95.8			12.0
	Clothianidin	102	109	92.0			17.2
	Dinotefuran	106	143	117			20.0
	Diuron	88.0	87.0	77.6			11.4
	Endothall	95.0	140	108			25.5
	Fenuron	125	125	104			19.0
	Fluridone	108	121	108			11.0
	Glufosinate	99.4	83.7	89.1			6.29

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Glyphosate	87.9	68.6	75.6		8.08
	Hydrocodone	102	108	97.4		10.0
	Ibuprofen	90.5	87.3	73.7		16.9
	Imazapyr	105	119	91.5		13.8
	Imidacloprid	108	222	195		13.1
	Linuron	95.0	97.1	97.4		0.248
	Mandestrobin	99.6	112	100		11.3
	MCPP	122	135	135		0.504
	Naproxen	83.1	82.2	73.1		11.7
	Primidone	77.4	114	84.6		29.4
	Pyraclostrobin	87.4	108	90.9		17.4
	Silvex	77.6	106	116		9.36
	Sucralose	71.8	72.2	64.3		11.1
	Thiamethoxam	102	166	152		9.07
	Tolfenpyrad	46.5	65.7	55.4		17.1
	Triclopyr	79.0	104	100		3.32
SM 2320 B-2011	Total Alkalinity	98.2			0.0712	
SM 2540 C-2011	TDS				2.00	
SM 4500 F-C-2011	Fluoride	99.0	98.4	98.4		0.0
SM 5310 B-2011	Organic Carbon	97.8	101			0.213

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2306951, 2306952, 2306957
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2306951, 2306952, 2306957
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2307013, 2307014, 2307015, 2307016, 2307017
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2307013, 2307014, 2307015, 2307016, 2307017
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2306951, 2306952, 2306957
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2306951, 2306952, 2306957
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2306953, 2306954, 2306958
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2306953, 2306954, 2306958
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2306953, 2306954, 2306958
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2306953, 2306954, 2306958
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2306955, 2306956, 2306959
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2307011, 2307012
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2306951, 2306952, 2306957
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2307013, 2307014, 2307015, 2307016, 2307017
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2306951, 2306952, 2306957
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2306951, 2306952, 2306957
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2306951, 2306952, 2306957
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2306953, 2306954, 2306958

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	02/22/2022			02/22/2022 15:36	Samantha L Bates	2306951
	02/22/2022			02/22/2022 15:37	Samantha L Bates	2306952
	02/22/2022			02/22/2022 16:33	Samantha L Bates	2306957
EPA 180.1 Rev. 2.0	02/22/2022			02/22/2022 14:07	Khloe J Berg	2306957
	02/22/2022			02/22/2022 14:19	Khloe J Berg	2306951
	02/22/2022			02/22/2022 14:22	Khloe J Berg	2306952
EPA 200.7 Rev. 4.4	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 14:01	Josef B Mick	2307013
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 14:09	Josef B Mick	2307014
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 14:17	Josef B Mick	2307015
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 14:58	Josef B Mick	2307016
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 15:06	Josef B Mick	2307017
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	03/04/2022 00:43	Josef B Mick	2307014
EPA 200.8 Rev. 5.4	02/22/2022	02/24/2022 10:25	Megan Whitefoot	03/04/2022 00:51	Josef B Mick	2307016
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 20:55	McKinley C Carter	2307013
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 21:04	McKinley C Carter	2307014
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 21:13	McKinley C Carter	2307015
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 21:22	McKinley C Carter	2307016
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 21:31	McKinley C Carter	2307017
EPA 300.0 Rev. 2.1	02/22/2022			02/23/2022 18:25	Roberta Tatti	2306951
	02/22/2022			02/23/2022 18:37	Roberta Tatti	2306952
	02/22/2022			02/23/2022 18:48	Roberta Tatti	2306957
EPA 350.1 Rev. 2.0	02/22/2022			03/02/2022 10:42	Ping Hua	2306953
	02/22/2022			03/02/2022 10:44	Ping Hua	2306954
	02/22/2022			03/02/2022 10:45	Ping Hua	2306958
EPA 351.2 Rev. 2.0	02/22/2022	02/24/2022 12:59	Samantha L Bates	02/25/2022 15:07	Samantha L Bates	2306953
	02/22/2022	02/24/2022 12:59	Samantha L Bates	02/25/2022 15:09	Samantha L Bates	2306958
	02/22/2022	02/25/2022 10:06	Samantha L Bates	03/01/2022 12:09	Alexandra J Mattheus	2306954
EPA 353.2 Rev. 2.0	02/22/2022			02/28/2022 11:43	Beverly Y. Sanders	2306953
	02/22/2022			02/28/2022 11:44	Beverly Y. Sanders	2306954
	02/22/2022			02/28/2022 11:45	Beverly Y. Sanders	2306958
EPA 365.1 Rev. 2.0	02/22/2022	02/23/2022 15:05	Simonne.V. Calhoun	02/24/2022 11:19	Shengyu Ding	2306953
	02/22/2022	02/23/2022 15:05	Simonne.V. Calhoun	02/24/2022 11:20	Shengyu Ding	2306954
	02/22/2022	02/23/2022 15:05	Simonne.V. Calhoun	02/24/2022 11:21	Shengyu Ding	2306958
EPA 365.1 Rev. 2.0 dissolved	02/22/2022			02/22/2022 16:09	James L Waggeberby	2306955
	02/22/2022			02/22/2022 16:10	James L Waggeberby	2306956
	02/22/2022			02/22/2022 16:12	James L Waggeberby	2306959
EPA 8321B	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/23/2022 11:19	Manjita Shrestha	2307011
	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/23/2022 11:30	Manjita Shrestha	2307012
	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/23/2022 13:16	Umesh Chiluwal	2307011
	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/23/2022 13:31	Umesh Chiluwal	2307012

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/22/2022	02/24/2022 09:00	June Rhew	02/26/2022 06:09	Juyoung Kim	2307011
	02/22/2022	02/24/2022 09:00	June Rhew	02/26/2022 06:44	Juyoung Kim	2307012
	02/22/2022	02/24/2022 09:00	June Rhew	03/01/2022 12:29	Juyoung Kim	2307012
SM 2320 B-2011	02/22/2022			02/28/2022 20:08	Dale L. Simmons	2306952
	02/22/2022			02/28/2022 20:44	Dale L. Simmons	2306951
	02/22/2022			02/28/2022 20:59	Dale L. Simmons	2306957
SM 2340B	02/22/2022			02/28/2022 14:01	Josef B Mick	2307013
	02/22/2022			02/28/2022 14:09	Josef B Mick	2307014
	02/22/2022			02/28/2022 14:17	Josef B Mick	2307015
	02/22/2022			02/28/2022 14:58	Josef B Mick	2307016
	02/22/2022			02/28/2022 15:06	Josef B Mick	2307017
SM 2540 C-2011	02/22/2022			02/23/2022 15:49	Yijie Li	2306951, 2306952, 2306957
SM 2540 D-2011	02/22/2022			02/23/2022 15:49	Yijie Li	2306951, 2306952, 2306957
SM 4500 F-C-2011	02/22/2022			02/28/2022 20:08	Dale L. Simmons	2306952
	02/22/2022			02/28/2022 20:44	Dale L. Simmons	2306951
	02/22/2022			02/28/2022 20:59	Dale L. Simmons	2306957
SM 5310 B-2011	02/22/2022			02/28/2022 15:17	Touraj Touran	2306953
	02/22/2022			02/28/2022 15:31	Touraj Touran	2306954
	02/22/2022			02/28/2022 15:46	Touraj Touran	2306958