

Chemical Analysis Report

NE-DIST-2021-11-05-01

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

Event Description: **LSJR East**
Request ID: **RQ-2021-11-01-33**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 24-NOV-2021 10:51

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Greenfield cr. at Hodges rd

Collection Date/Time: 11/04/2021 11:05

Field ID: G2NE1145

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288505	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P406083	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P406346	
		Sulfate	51		mg SO4/L	P406349	
	SM 2120 B-2011	Color (true)	55	A	PCU	P406079	
	SM 2320 B-2011	Total Alkalinity	104		mg CaCO3/L	P406161	
	SM 2540 C-2011	TDS	276	A	mg/L	P406557	
	SM 2540 D-2011	TSS	5	IA	mg/L	P406563	
	SM 4500 F-C-2011	Fluoride	0.082	I	mg F/L	P406164	
2288506	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P406590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P406415	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P406232	
	EPA 365.1 Rev. 2.0	Total-P	0.086		mg P/L	P406143	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P406158	
2288507	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P406076	
2288530	EPA 200.7 Rev. 4.4	Barium	41.3		ug/L	P406091	
		Calcium	56.2		mg/L	P406091	
		Iron	230		ug/L	P406091	
		Magnesium	7.75		mg/L	P406091	
		Manganese	20.6		ug/L	P406091	
		Potassium	2.7		mg/L	P406091	
		Sodium	23.4		mg/L	P406091	
	EPA 200.8 Rev. 5.4	Zinc	5.9	I	ug/L	P406091	
		Aluminum	183		ug/L	P406091	
		Antimony	0.071	I	ug/L	P406091	
		Arsenic	0.65		ug/L	P406091	
		Beryllium	0.023	I	ug/L	P406091	
		Boron**	31.0		ug/L	P406091	
		Cadmium	0.020	U	ug/L	P406091	
		Chromium	0.51	I	ug/L	P406091	
		Copper	17.8		ug/L	P406091	
		Lead	0.20	U	ug/L	P406091	
		Nickel	0.50	U	ug/L	P406091	
		Selenium	0.20	U	ug/L	P406091	MS
		Silver	0.010	U	ug/L	P406091	
		Thallium	0.10	U	ug/L	P406091	
	SM 2340B	Hardness	172		mg/L	P406091	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample. The copper result was confirmed on 11/19/2021.

Sample Location: BIG POTTSBURG CR BOWDEN RD

Collection Date/Time: 11/04/2021 12:05

Field ID: 20030068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288526	EPA 8276	Chlordane	2.6	U	ng/L	P406320	
		Toxaphene	15	U	ng/L	P406320	

Sample Location: DRAINAGE DITCH PARENTAL HOME RD

Collection Date/Time: 11/04/2021 12:25

Field ID: 20030071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288511	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P406083	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P406346	
		Sulfate	37		mg SO4/L	P406349	
	SM 2120 B-2011	Color (true)	27		PCU	P406079	
	SM 2320 B-2011	Total Alkalinity	141		mg CaCO3/L	P406161	
	SM 2540 C-2011	TDS	295		mg/L	P406557	
	SM 2540 D-2011	TSS	2	I	mg/L	P406563	
	SM 4500 F-C-2011	Fluoride	0.21		mg F/L	P406164	
2288512	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P406590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P406496	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P406232	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P406152	
	SM 5310 B-2011	Organic Carbon	7.4		mg C/L	P406158	
2288513	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P406076	
2288528	EPA 8321B	2,4-D	0.016		ug/L	P406048	
		Acesulfame K	0.13	I	ug/L	P405994	
		2,4,5-T	0.0040	U	ug/L	P406048	
		AMPA	0.86		ug/L	P405994	
		Acetaminophen	0.0080	U	ug/L	P406048	
		Acetamiprid	0.0020	U	ug/L	P406048	
		Endothall	0.25	U	ug/L	P405994	
		Glufosinate	0.10	U	ug/L	P405994	
		Glyphosate	0.79		ug/L	P405994	
		Afidopyropen	0.0020	U	ug/L	P406048	
		Bentazon	0.040		ug/L	P406048	
		Sucralose	0.15		ug/L	P405994	
		Benzovindiflupyr	0.0020	U	ug/L	P406048	
		Carbamazepine	8.0E-04	U	ug/L	P406048	
		Clothianidin	0.0020	U	ug/L	P406048	
		Dinotefuran	0.0020	U	ug/L	P406048	
		Diuron	0.011		ug/L	P406048	
		Fenuron	0.016	U	ug/L	P406048	
		Fluridone	0.0013	I	ug/L	P406048	
		Imazapyr	0.12		ug/L	P406048	
		Hydrocodone	0.0020	U	ug/L	P406048	
		Ibuprofen	0.020	U	ug/L	P406048	
		Imidacloprid	0.010		ug/L	P406048	MS
		Linuron	0.0040	U	ug/L	P406048	
		Mandestrobin	0.0020	U	ug/L	P406048	
		MCP	0.0040	U	ug/L	P406048	
		Naproxen	0.0080	U	ug/L	P406048	
		Primidone	0.0040	U	ug/L	P406048	
		Pyraclostrobin	0.0020	U	ug/L	P406048	

Field ID: 20030071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288528	EPA 8321B	Silvex	0.0040	U	ug/L	P406048	
		Thiamethoxam	0.0021	I	ug/L	P406048	
		Tolfenpyrad	0.0020	U	ug/L	P406048	
		Triclopyr	0.0040	U	ug/L	P406048	

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: LITTLE POTTSBURG CREEK AT EMERSON

Collection Date/Time: 11/04/2021 12:55

Field ID: 20030070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288508	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P406083	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P406346	
		Sulfate	61		mg SO4/L	P406349	
	SM 2120 B-2011	Color (true)	22		PCU	P406079	
	SM 2320 B-2011	Total Alkalinity	183		mg CaCO3/L	P406161	
	SM 2540 C-2011	TDS	352		mg/L	P406557	
	SM 2540 D-2011	TSS	3	I	mg/L	P406563	
	SM 4500 F-C-2011	Fluoride	0.27		mg F/L	P406164	
2288509	EPA 350.1 Rev. 2.0	Ammonia-N	0.081		mg N/L	P406590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P406496	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P406232	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P406143	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P406158	
2288510	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.042		mg P/L	P406076	
2288527	EPA 8321B	2,4-D	0.0055	I	ug/L	P406048	
		Acesulfame K	0.61		ug/L	P405994	
		2,4,5-T	0.0040	U	ug/L	P406048	
		AMPA	0.38	I	ug/L	P405994	
		Acetaminophen	0.33	V	ug/L	P406048	
		Acetamiprid	0.0020	U	ug/L	P406048	
		Endothall	0.25	U	ug/L	P405994	
		Glufosinate	0.10	U	ug/L	P405994	
		Glyphosate	0.66		ug/L	P405994	
		Afidopyropen	0.0020	U	ug/L	P406048	
		Bentazon	0.040		ug/L	P406048	
		Sucralose	0.85		ug/L	P405994	
		Benzovindiflupyr	0.0020	U	ug/L	P406048	
		Carbamazepine	0.0028	I	ug/L	P406048	
		Clothianidin	0.0029	I	ug/L	P406048	
		Dinotefuran	0.0032	I	ug/L	P406048	
		Diuron	0.015		ug/L	P406048	
		Fenuron	0.016	U	ug/L	P406048	
		Fluridone	0.0070		ug/L	P406048	
		Imazapyr	0.19		ug/L	P406048	
		Hydrocodone	0.0020	U	ug/L	P406048	
		Ibuprofen	0.020	U	ug/L	P406048	
		Imidacloprid	0.022		ug/L	P406048	MS
		Linuron	0.0040	U	ug/L	P406048	
		Mandestrobin	0.0020	U	ug/L	P406048	
		MCPP	0.0040	U	ug/L	P406048	
		Naproxen	0.0080	U	ug/L	P406048	
		Primidone	0.0094	I	ug/L	P406048	
		Pyraclostrobin	0.0020	U	ug/L	P406048	

Field ID: 20030070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288527	EPA 8321B	Silvex	0.0040	U	ug/L	P406048	
		Thiamethoxam	0.0020	U	ug/L	P406048	
		Tolfenpyrad	0.0020	U	ug/L	P406048	
		Triclopyr	0.0040	U	ug/L	P406048	
2288531	EPA 200.7 Rev. 4.4	Barium	46.9		ug/L	P406091	
		Calcium	78.7		mg/L	P406091	
		Iron	640		ug/L	P406091	
		Magnesium	15.2		mg/L	P406091	
		Manganese	45.0		ug/L	P406091	
		Potassium	3.2		mg/L	P406091	
		Sodium	36.4		mg/L	P406091	
	EPA 200.8 Rev. 5.4	Zinc	9.2	I	ug/L	P406091	
		Aluminum	20		ug/L	P406091	
		Antimony	0.13	I	ug/L	P406091	
		Arsenic	0.77		ug/L	P406091	
		Beryllium	0.010	U	ug/L	P406091	
		Boron**	53.9		ug/L	P406091	
		Cadmium	0.020	U	ug/L	P406091	
		Chromium	0.40	U	ug/L	P406091	
		Copper	1.33		ug/L	P406091	
		Lead	0.20	U	ug/L	P406091	
		Nickel	1.8	I	ug/L	P406091	
		Selenium	0.20	U	ug/L	P406091	MS
		Silver	0.010	U	ug/L	P406091	
		Thallium	0.10	U	ug/L	P406091	
	SM 2340B	Hardness	259		mg/L	P406091	

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: V - due to acetaminophen being detected in the method blank slightly above the MDL. Results confirmed in re-extraction beyond holding time for acetaminophen (0.33 Q ug/L).

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample.

Sample Location: FB-11042021

Collection Date/Time: 11/04/2021 13:05

Field ID: FB-11042021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288514	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P406083	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P406346	
		Sulfate	0.20	U	mg SO4/L	P406524	
		Color (true)	2.5	U	PCU	P406079	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P406161	
	SM 2540 C-2011	TDS	15	U	mg/L	P406557	
	SM 2540 D-2011	TSS	2	U	mg/L	P406563	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P406164	
2288515	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P406590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P406496	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P406232	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P406152	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P406158	
2288516	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406076	
2288529	EPA 8321B	2,4-D	0.0020	U	ug/L	P406048	
		Acesulfame K	0.10	U	ug/L	P405994	
		2,4,5-T	0.0040	U	ug/L	P406048	
		AMPA	0.10	U	ug/L	P405994	
		Acetaminophen	0.0080	U	ug/L	P406048	
		Acetamiprid	0.0020	U	ug/L	P406048	
		Endothall	0.25	U	ug/L	P405994	
		Glufosinate	0.10	U	ug/L	P405994	
		Glyphosate	0.10	U	ug/L	P405994	
		Afidopyrophen	0.0020	U	ug/L	P406048	
		Bentazon	8.0E-04	U	ug/L	P406048	
		Sucralose	0.010	U	ug/L	P405994	
		Benzovindiflupyr	0.0020	U	ug/L	P406048	
		Carbamazepine	8.0E-04	U	ug/L	P406048	
		Clothianidin	0.0020	U	ug/L	P406048	
		Dinotefuran	0.0020	U	ug/L	P406048	
		Diuron	0.0020	U	ug/L	P406048	
		Fenuron	0.016	U	ug/L	P406048	
		Fluridone	8.0E-04	U	ug/L	P406048	
		Imazapyr	0.0040	U	ug/L	P406048	
		Hydrocodone	0.0020	U	ug/L	P406048	
		Ibuprofen	0.020	U	ug/L	P406048	
		Imidacloprid	0.0020	U	ug/L	P406048	MS
		Linuron	0.0040	U	ug/L	P406048	
		Mandestrobin	0.0020	U	ug/L	P406048	
		MCPD	0.0040	U	ug/L	P406048	
		Naproxen	0.0080	U	ug/L	P406048	
		Primidone	0.0040	U	ug/L	P406048	
		Pyraclostrobin	0.0020	U	ug/L	P406048	

Field ID: FB-11042021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2288529	EPA 8321B	Silvex	0.0040	U	ug/L	P406048	
		Thiamethoxam	0.0020	U	ug/L	P406048	
		Tolfenpyrad	0.0020	U	ug/L	P406048	
		Triclopyr	0.0040	U	ug/L	P406048	
2288532	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P406091	
		Calcium	0.075	U	mg/L	P406091	
		Iron	30	U	ug/L	P406091	
		Magnesium	0.040	U	mg/L	P406091	
		Manganese	1.0	U	ug/L	P406091	
		Potassium	0.30	U	mg/L	P406091	
		Sodium	0.50	U	mg/L	P406091	
		Zinc	5.0	U	ug/L	P406091	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P406091	
		Antimony	0.050	U	ug/L	P406091	
		Arsenic	0.050	U	ug/L	P406091	
		Beryllium	0.010	U	ug/L	P406091	
		Boron**	2.0	U	ug/L	P406091	
		Cadmium	0.020	U	ug/L	P406091	
		Chromium	0.40	U	ug/L	P406091	
		Copper	0.40	U	ug/L	P406091	
		Lead	0.20	U	ug/L	P406091	
		Nickel	0.50	U	ug/L	P406091	
		Selenium	0.20	U	ug/L	P406091	MS
		Silver	0.010	U	ug/L	P406091	
		Thallium	0.10	U	ug/L	P406091	
	SM 2340B	Hardness	0.35	U	mg/L	P406091	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P406083

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P406091

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P406091

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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
Copper	0.40	U	ug/L
Lead	0.20	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: P406346

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406349

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406524

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406590

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406415

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406496

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406232

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406143

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406152

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406076

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

Reference Method: EPA 8276
Batch ID: P406320

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: P405994

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P405994

Component	Result	Code	Units
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

Reference Method: EPA 8321B
Batch ID: P406048

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.037		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	0.0040	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 2120 B-2011
Batch ID: P406079

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P406161

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P406557

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P406563

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P406164

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P406158

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	105		P	85 - 115
Calcium	105		P	85 - 115
Iron	110		P	85 - 115
Magnesium	104		P	85 - 115
Manganese	104		P	85 - 115
Potassium	101		P	85 - 115
Sodium	103		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P406091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	103		P	85 - 115
Beryllium	101		P	85 - 115
Boron	101		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	96.6		P	85 - 115
Copper	101		P	85 - 115
Lead	96.5		P	85 - 115
Nickel	100		P	85 - 115
Selenium	101		P	85 - 115
Silver	101		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406346

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406349

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406524

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P406590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.2		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406415

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406496

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406232

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406143

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406152

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406076

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

Reference Method: EPA 8276
Batch ID: P406320

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	115	109	P/P	56 - 117
Toxaphene	107	93.5	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P405994

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.6		P	40 - 150
AMPA	104		P	40 - 160
Endothall	77.4		P	40 - 150
Glufosinate	102		P	40 - 160
Glyphosate	108		P	40 - 160
Sucralose	79.5		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P406048

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	120		P	40 - 150
2,4,5-T	114		P	40 - 150
Acetaminophen	107		P	30 - 150
Acetamiprid	93.9		P	40 - 150
Afidopyropen	81.7		P	40 - 150
Bentazon	111		P	30 - 150
Benzovindiflupyr	82.3		P	40 - 150
Carbamazepine	106		P	40 - 150
Clothianidin	105		P	40 - 150
Dinotefuran	92.4		P	40 - 150
Diuron	78.9		P	40 - 150
Fenuron	102		P	40 - 150
Fluridone	101		P	40 - 150
Hydrocodone	99.3		P	40 - 150
Ibuprofen	91.5		P	40 - 150
Imazapyr	100		P	40 - 150
Imidacloprid	97.7		P	40 - 150
Linuron	94.4		P	40 - 150
Mandestrobin	95.1		P	40 - 150
MCPP	115		P	40 - 150
Naproxen	87.9		P	40 - 150
Primidone	112		P	40 - 150
Pyraclostrobin	84.0		P	40 - 150
Silvex	90.9		P	40 - 150
Thiamethoxam	106		P	40 - 150
Tolfenpyrad	46.5		P	30 - 150
Triclopyr	115		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P406079

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

Reference Method: SM 2320 B-2011

Batch ID: P406161

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.4		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P406164

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P406158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288351	Barium	104	101	P/P	80 - 120
2288351	Calcium	102		P	80 - 120
2288351	Iron	108	105	P/P	80 - 120
2288351	Manganese	101	97.8	P/P	80 - 120
2288351	Sodium	101		P	80 - 120
2288351	Zinc	101	97.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P406091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288351	Aluminum	100	101	P/P	80 - 120
2288351	Antimony	109	109	P/P	80 - 120
2288351	Arsenic	106	106	P/P	80 - 120
2288351	Beryllium	98.5	101	P/P	80 - 120
2288351	Cadmium	106	104	P/P	80 - 120
2288351	Chromium	101	99.9	P/P	80 - 120
2288351	Copper	98.4	98.3	P/P	80 - 120
2288351	Lead	99.5	99.6	P/P	80 - 120
2288351	Nickel	98.9	100	P/P	80 - 120
2288351	Selenium	72.8	74.6	F/F	80 - 120
2288351	Silver	101	101	P/P	80 - 120
2288351	Thallium	111	113	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288354	Chloride	100		P	90 - 110
2288799	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288354	Sulfate	107		P	90 - 110
2288799	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289326	Sulfate	102		P	90 - 110
2289343	Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P406590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288722	Ammonia-N	95.0	97.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406415

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288506	Kjeldahl Nitrogen	99.6	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406496

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288509	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288414	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288416	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288512	Total-P	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288381	O-Phosphate-P	95.2	95.3	P/P	90 - 110

Reference Method: EPA 8276
Batch ID: P406320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288337	Chlordane	87.4	108	P/P	47 - 128
2288337	Toxaphene	91.6	92.7	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P405994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288290	Acesulfame K	135	122	P/P	40 - 150
2288290	AMPA	95.7	87.5	P/P	40 - 160
2288290	Endothall	87.8	88.3	P/P	40 - 150
2288290	Glufosinate	97.7	91.5	P/P	40 - 160
2288290	Glyphosate	91.7	89.5	P/P	40 - 160
2288290	Sucralose	83.1	80.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P406048

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288322	2,4-D	121	127	P/P	40 - 150
2288322	2,4,5-T	123	116	P/P	40 - 150
2288322	Acetaminophen	112	112	P/P	30 - 150
2288322	Acetamiprid	98.9	89.1	P/P	40 - 150
2288322	Afidopyropen	82.0	72.6	P/P	40 - 150
2288322	Bentazon	80.6	74.8	P/P	30 - 150
2288322	Benzovindiflupyr	91.6	86.7	P/P	40 - 150
2288322	Carbamazepine	113	112	P/P	40 - 150
2288322	Clothianidin	123	123	P/P	40 - 150
2288322	Dinotefuran	118	116	P/P	40 - 150
2288322	Diuron	85.9	83.6	P/P	40 - 150
2288322	Fenuron	96.5	98.6	P/P	40 - 150
2288322	Fluridone	101	97.6	P/P	40 - 150
2288322	Hydrocodone	112	111	P/P	40 - 150
2288322	Ibuprofen	84.8	92.3	P/P	40 - 150
2288322	Imazapyr	83.8	98.8	P/P	40 - 150
2288322	Imidacloprid	160	156	F/F	40 - 150
2288322	Linuron	76.9	72.3	P/P	40 - 150
2288322	Mandestrobin	95.8	90.7	P/P	40 - 150
2288322	MCCP	127	123	P/P	40 - 150
2288322	Naproxen	74.2	97.4	P/P	40 - 150
2288322	Primidone	103	102	P/P	40 - 150
2288322	Pyraclostrobin	82.3	79.6	P/P	40 - 150
2288322	Silvex	105	108	P/P	40 - 150
2288322	Thiamethoxam	148	143	P/P	40 - 150
2288322	Tolfenpyrad	56.4	57.7	P/P	30 - 150
2288322	Triclopyr	114	114	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P406164

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288265	Fluoride	99.3	99.8	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P406158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2288313	Organic Carbon	97.5	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P406083

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288354	Turbidity	1.67	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406091

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288351	Barium	2.70	Spike	P	0 - 20
2288351	Calcium	2.79	Spike	P	0 - 20
2288351	Iron	2.72	Spike	P	0 - 20
2288351	Magnesium	3.00	Spike	P	0 - 20
2288351	Manganese	2.71	Spike	P	0 - 20
2288351	Potassium	2.85	Spike	P	0 - 20
2288351	Sodium	2.17	Spike	P	0 - 20
2288351	Zinc	3.58	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P406091

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288351	Aluminum	1.08	Spike	P	0 - 20
2288351	Antimony	0.145	Spike	P	0 - 20
2288351	Arsenic	0.0384	Spike	P	0 - 20
2288351	Beryllium	2.79	Spike	P	0 - 20
2288351	Boron	1.15	Spike	P	0 - 20
2288351	Cadmium	1.65	Spike	P	0 - 20
2288351	Chromium	1.08	Spike	P	0 - 20
2288351	Copper	0.146	Spike	P	0 - 20
2288351	Lead	0.173	Spike	P	0 - 20
2288351	Nickel	1.52	Spike	P	0 - 20
2288351	Selenium	2.46	Spike	P	0 - 20
2288351	Silver	0.661	Spike	P	0 - 20
2288351	Thallium	0.964	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406346

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288354	Chloride	1.76	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406349

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288354	Sulfate	1.82	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289326	Sulfate	1.03	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288722	Ammonia-N	2.57	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288506	Kjeldahl Nitrogen	2.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288509	Kjeldahl Nitrogen	0.964	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288414	NO2NO3-N	0.943	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288416	Total-P	0.894	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288512	Total-P	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288381	O-Phosphate-P	0.105	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P406320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288337	Chlordane	21.0	Spike	P	0 - 30
2288337	Toxaphene	1.22	Spike	P	0 - 30
LFB	Chlordane	5.52	LCS	P	0 - 30
LFB	Toxaphene	13.5	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P405994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288290	Acesulfame K	9.85	Spike	P	0 - 30
2288290	AMPA	8.87	Spike	P	0 - 30
2288290	Endothall	0.498	Spike	P	0 - 30
2288290	Glufosinate	6.49	Spike	P	0 - 30
2288290	Glyphosate	2.45	Spike	P	0 - 30
2288290	Sucralose	3.46	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P406048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288322	2,4-D	4.93	Spike	P	0 - 30
2288322	2,4,5-T	6.28	Spike	P	0 - 30
2288322	Acetaminophen	0.152	Spike	P	0 - 30
2288322	Acetamiprid	10.5	Spike	P	0 - 30
2288322	Afidopyropen	12.1	Spike	P	0 - 30
2288322	Bentazon	7.42	Spike	P	0 - 30
2288322	Benzovindiflupyr	5.47	Spike	P	0 - 30
2288322	Carbamazepine	0.724	Spike	P	0 - 30
2288322	Clothianidin	0.123	Spike	P	0 - 30
2288322	Dinotefuran	1.42	Spike	P	0 - 30
2288322	Diuron	2.61	Spike	P	0 - 30
2288322	Fenuron	2.17	Spike	P	0 - 30
2288322	Fluridone	3.48	Spike	P	0 - 30
2288322	Hydrocodone	1.01	Spike	P	0 - 30
2288322	Ibuprofen	8.49	Spike	P	0 - 30
2288322	Imazapyr	14.8	Spike	P	0 - 30
2288322	Imidacloprid	2.12	Spike	P	0 - 30
2288322	Linuron	6.12	Spike	P	0 - 30
2288322	Mandestrobin	5.45	Spike	P	0 - 30
2288322	MCPP	3.30	Spike	P	0 - 30
2288322	Naproxen	27.0	Spike	P	0 - 30
2288322	Primidone	0.733	Spike	P	0 - 30
2288322	Pyraclostrobin	3.25	Spike	P	0 - 30
2288322	Silvex	2.67	Spike	P	0 - 30
2288322	Thiamethoxam	3.78	Spike	P	0 - 30
2288322	Tolfenpyrad	2.25	Spike	P	0 - 30
2288322	Triclopyr	0.272	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P406079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288505	Color (true)	0.680	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P406161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288265	Total Alkalinity	2.66	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P406557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288505	TDS	1.81	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P406164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288265	Fluoride	0.498	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P406158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2288313	Organic Carbon	0.610	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2288526
Field Sample ID: 20030068

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	65.2	P	29 - 92.0
EPA 8276	PCNB	67.2	P	43 - 134

Lab Sample ID: 2288527
Field Sample ID: 20030070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	75.0	P	30 - 160
EPA 8321B	Endothall-d6	67.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.4	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	81.8	P	30 - 160

Lab Sample ID: 2288528
Field Sample ID: 20030071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	77.6	P	30 - 160
EPA 8321B	Endothall-d6	68.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.6	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	83.2	P	30 - 160

Lab Sample ID: 2288529
Field Sample ID: FB-11042021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160
EPA 8321B	Endothall-d6	68.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	112	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.7	P	30 - 160
EPA 8321B	Primidone-d5	77.0	P	30 - 160
EPA 8321B	Sucralose-d6	79.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A108751

Included Lab Sample IDs: 2288507, 2288510, 2288513, 2288516

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	99.8	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A108753

Included Lab Sample IDs: 2288505, 2288508, 2288511, 2288514

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A108757

Included Lab Sample IDs: 2288505, 2288508, 2288511, 2288514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A108759

Included Lab Sample IDs: 2288527, 2288528, 2288529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.3	93.3	P/P	60 - 160
Endothall	70.3	66.3	P/P	60 - 160
Sucralose	77.6	76.2	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A108764

Included Lab Sample IDs: 2288527, 2288528, 2288529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	101	P/P	60 - 160
Glufosinate	101	95.5	P/P	60 - 160
Glyphosate	105	106	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A108782

Included Lab Sample IDs: 2288530, 2288531, 2288532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	103	105	P/P	95 - 105
Barium	104	107	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Calcium	104	105	P/P	95 - 105
Iron	103	104	P/P	90 - 110
Iron	105	106	P/P	95 - 105
Magnesium	102	103	P/P	90 - 110
Magnesium	104	105	P/P	95 - 105
Manganese	103	104	P/P	95 - 105
Manganese	103	104	P/P	90 - 110
Potassium	100	102	P/P	95 - 105
Potassium	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A108782

Included Lab Sample IDs: 2288530, 2288531, 2288532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	102	104	P/P	95 - 105
Sodium	104	104	P/P	90 - 110
Zinc	101	101	P/P	90 - 110
Zinc	104	102	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A108787

Included Lab Sample IDs: 2288505, 2288508, 2288511, 2288514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.0	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A108787

Included Lab Sample IDs: 2288505, 2288508, 2288511, 2288514

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

Reference Method: SM 5310 B-2011

Run ID: A108789

Included Lab Sample IDs: 2288506, 2288509, 2288512, 2288515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	96.8	P/P	90 - 110
Organic Carbon	98.0	97.6	P/P	90 - 110
Organic Carbon	99.6	98.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A108811

Included Lab Sample IDs: 2288530, 2288531, 2288532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	102	P/P	90 - 110
Aluminum	99.9	100	P/P	90 - 110
Antimony	100	104	P/P	90 - 110
Antimony	99.5	100	P/P	90 - 110
Arsenic	103	99.2	P/P	90 - 110
Arsenic	99.2	100	P/P	90 - 110
Beryllium	98.5	104	P/P	90 - 110
Beryllium	98.6	98.5	P/P	90 - 110
Boron	100	106	P/P	90 - 110
Boron	106	104	P/P	90 - 110
Cadmium	99.8	101	P/P	90 - 110
Cadmium	100	99.8	P/P	90 - 110
Chromium	94.1	94.3	P/P	90 - 110
Chromium	94.3	99.0	P/P	90 - 110
Copper	96.0	97.8	P/P	90 - 110
Copper	99.1	96.0	P/P	90 - 110
Lead	92.7	91.8	P/P	90 - 110
Lead	92.7	92.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A108811

Included Lab Sample IDs: 2288530, 2288531, 2288532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	95.7	96.5	P/P	90 - 110
Nickel	98.1	95.7	P/P	90 - 110
Selenium	100	97.9	P/P	90 - 110
Selenium	97.9	101	P/P	90 - 110
Silver	90.4	90.6	P/P	90 - 110
Silver	90.6	90.9	P/P	90 - 110
Thallium	100	97.9	P/P	90 - 110
Thallium	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A108827

Included Lab Sample IDs: 2288506, 2288509, 2288512, 2288515

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

Reference Method: EPA 8321B

Run ID: A108877

Included Lab Sample IDs: 2288527, 2288528, 2288529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.7	118	P/P	50 - 150
2,4,5-T	83.8	91.1	P/P	50 - 150
Acetaminophen	112	119	P/P	60 - 160
Acetamiprid	105	101	P/P	50 - 150
Afidopyropen	88.8	105	P/P	50 - 150
Bentazon	113	117	P/P	50 - 160
Benzovindiflupyr	109	105	P/P	50 - 150
Carbamazepine	102	105	P/P	60 - 150
Clothianidin	106	117	P/P	60 - 150
Dinotefuran	105	114	P/P	50 - 150
Diuron	97.6	108	P/P	60 - 160
Fenuron	104	101	P/P	60 - 150
Fluridone	114	108	P/P	60 - 160
Hydrocodone	101	103	P/P	60 - 150
Ibuprofen	62.5	99.9	P/P	50 - 160
Imazapyr	89.5	97.0	P/P	50 - 150
Imidacloprid	104	109	P/P	60 - 150
Linuron	112	108	P/P	60 - 150
Mandestrobin	108	104	P/P	50 - 150
MCPP	89.5	99.3	P/P	50 - 150
Naproxen	130	84.6	P/P	50 - 160
Primidone	86.7	86.3	P/P	60 - 150
Pyraclostrobin	101	104	P/P	60 - 150
Silvex	82.5	76.9	P/P	50 - 150
Thiamethoxam	118	110	P/P	50 - 150
Tolfenpyrad	104	98.1	P/P	60 - 150
Triclopyr	85.3	88.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A108889

Included Lab Sample IDs: 2288506, 2288509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A108894

Included Lab Sample IDs: 2288512, 2288515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.8	97.0	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A108904

Included Lab Sample IDs: 2288526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.8		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A108907

Included Lab Sample IDs: 2288505, 2288508, 2288511, 2288514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.5	100	P/P	90 - 110
Sulfate	99.4	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A108965

Included Lab Sample IDs: 2288506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.4	97.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A108975

Included Lab Sample IDs: 2288514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	101	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109003

Included Lab Sample IDs: 2288509, 2288512, 2288515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.8	99.4	P/P	90 - 110
Kjeldahl Nitrogen	99.4	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A109005

Included Lab Sample IDs: 2288506, 2288509, 2288512, 2288515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	98.6	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		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.67	
EPA 200.7 Rev. 4.4	Barium	105		104	101			2.70
	Calcium	105		102				2.79
	Iron	110		108	105			2.72
	Magnesium	104						3.00
	Manganese	104		101	97.8			2.71
	Potassium	101						2.85
	Sodium	103		101				2.17
	Zinc	103		101	97.7			3.58
EPA 200.8 Rev. 5.4	Aluminum	103		100	101			1.08
	Antimony	105		109	109			0.145
	Arsenic	103		106	106			0.0384
	Beryllium	101		98.5	101			2.79
	Boron	101						1.15
	Cadmium	101		106	104			1.65
	Chromium	96.6		101	99.9			1.08
	Copper	101		98.4	98.3			0.146
	Lead	96.5		99.5	99.6			0.173
	Nickel	100		98.9	100			1.52
	Selenium	101		72.8	74.6			2.46
	Silver	101		101	101			0.661
	Thallium	105		111	113			0.964
EPA 300.0 Rev. 2.1	Chloride	97.7		100	97.2		1.76	
	Sulfate	98.6		107	102		1.82	
	Sulfate	101		102	96.4		1.03	
EPA 350.1 Rev. 2.0	Ammonia-N	96.2		95.0	97.6			2.57
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.3		99.6	104			2.51
	Kjeldahl Nitrogen	102		101	102			0.964
EPA 353.2 Rev. 2.0	NO2NO3-N	104		101	102			0.943
EPA 365.1 Rev. 2.0	Total-P	102		105	106			0.894
	Total-P	102		104	103			1.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6		95.2	95.3			0.105
EPA 8276	Chlordane	115	109	87.4	108	5.52		21.0
	Toxaphene	107	93.5	91.6	92.7	13.5		1.22
EPA 8321B	2,4-D	120		121	127			4.93
	2,4,5-T	114		123	116			6.28
	Acesulfame K	92.6		135	122			9.85
	Acetaminophen	107		112	112			0.152
	Acetamiprid	93.9		98.9	89.1			10.5
	Afidopyropen	81.7		82.0	72.6			12.1
	AMPA	104		95.7	87.5			8.87
	Bentazon	111		80.6	74.8			7.42
	Benzovindiflupyr	82.3		91.6	86.7			5.47
	Carbamazepine	106		113	112			0.724
	Clothianidin	105		123	123			0.123
	Dinotefuran	92.4		118	116			1.42
	Diuron	78.9		85.9	83.6			2.61
	Endothall	77.4		87.8	88.3			0.498
	Fenuron	102		96.5	98.6			2.17
	Fluridone	101		101	97.6			3.48
	Glufosinate	102		97.7	91.5			6.49
	Glyphosate	108		91.7	89.5			2.45
	Hydrocodone	99.3		112	111			1.01
	Ibuprofen	91.5		84.8	92.3			8.49

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imazapyr	100	83.8	98.8		14.8
	Imidacloprid	97.7	160	156		2.12
	Linuron	94.4	76.9	72.3		6.12
	Mandestrobin	95.1	95.8	90.7		5.45
	MCPP	115	127	123		3.30
	Naproxen	87.9	74.2	97.4		27.0
	Primidone	112	103	102		0.733
	Pyraclostrobin	84.0	82.3	79.6		3.25
	Silvex	90.9	105	108		2.67
	Sucralose	79.5	83.1	80.2		3.46
	Thiamethoxam	106	148	143		3.78
	Tolfenpyrad	46.5	56.4	57.7		2.25
	Triclopyr	115	114	114		0.272
SM 2120 B-2011	Color (true)	101			0.680	
SM 2320 B-2011	Total Alkalinity	98.4			2.66	
SM 2540 C-2011	TDS				1.81	
SM 4500 F-C-2011	Fluoride	102	99.3	99.8		0.498
SM 5310 B-2011	Organic Carbon	97.0	97.5	98.2		0.610

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2288505, 2288508, 2288511, 2288514
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2288530, 2288531, 2288532
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2288530, 2288531, 2288532
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2288505, 2288508, 2288511, 2288514
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2288505, 2288508, 2288511, 2288514
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2288506, 2288509, 2288512, 2288515
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2288506, 2288509, 2288512, 2288515
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2288506, 2288509, 2288512, 2288515
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2288506, 2288509, 2288512, 2288515
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2288507, 2288510, 2288513, 2288516
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2288526
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2288527, 2288528, 2288529
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2288505, 2288508, 2288511, 2288514
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2288505, 2288508, 2288511, 2288514
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2288530, 2288531, 2288532
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2288505, 2288508, 2288511, 2288514
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2288505, 2288508, 2288511, 2288514
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2288505, 2288508, 2288511, 2288514
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2288506, 2288509, 2288512, 2288515

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	11/05/2021			11/05/2021 15:09	Khloe J Berg	2288505, 2288508, 2288511, 2288514
EPA 200.7 Rev. 4.4	11/05/2021	11/08/2021 09:50	Emily M Philpot	11/08/2021 18:51	Josef B Mick	2288532
	11/05/2021	11/08/2021 09:50	Emily M Philpot	11/08/2021 22:14	Josef B Mick	2288530
	11/05/2021	11/08/2021 09:50	Emily M Philpot	11/08/2021 22:21	Josef B Mick	2288531
EPA 200.8 Rev. 5.4	11/05/2021	11/08/2021 09:50	Emily M Philpot	11/09/2021 16:48	Alexander Thompson	2288532
	11/05/2021	11/08/2021 09:50	Emily M Philpot	11/09/2021 19:12	Alexander Thompson	2288530
	11/05/2021	11/08/2021 09:50	Emily M Philpot	11/09/2021 19:22	Alexander Thompson	2288531
EPA 300.0 Rev. 2.1	11/05/2021			11/12/2021 19:28	James L Waggeberby	2288505
	11/05/2021			11/12/2021 19:40	James L Waggeberby	2288508
	11/05/2021			11/12/2021 19:52	James L Waggeberby	2288511
	11/05/2021			11/12/2021 20:04	James L Waggeberby	2288514
	11/05/2021			11/17/2021 18:02	Roberta Tatti	2288514
EPA 350.1 Rev. 2.0	11/05/2021			11/19/2021 13:06	Ping Hua	2288506
	11/05/2021			11/19/2021 13:07	Ping Hua	2288509
	11/05/2021			11/19/2021 13:08	Ping Hua	2288512
	11/05/2021			11/19/2021 13:16	Ping Hua	2288515
EPA 351.2 Rev. 2.0	11/05/2021	11/17/2021 12:10	Benjamin T. Nordmann	11/18/2021 10:48	Alexandra J Mattheus	2288506
	11/05/2021	11/18/2021 12:33	Benjamin T. Nordmann	11/19/2021 12:40	Alexandra J Mattheus	2288509
	11/05/2021	11/18/2021 12:33	Benjamin T. Nordmann	11/19/2021 12:48	Alexandra J Mattheus	2288512
	11/05/2021	11/18/2021 12:33	Benjamin T. Nordmann	11/19/2021 12:50	Alexandra J Mattheus	2288515
EPA 353.2 Rev. 2.0	11/05/2021			11/10/2021 09:45	Beverly Y. Sanders	2288506
	11/05/2021			11/10/2021 09:46	Beverly Y. Sanders	2288509
	11/05/2021			11/10/2021 09:47	Beverly Y. Sanders	2288512
	11/05/2021			11/10/2021 09:49	Beverly Y. Sanders	2288515
EPA 365.1 Rev. 2.0	11/05/2021	11/09/2021 13:49	Simonne.V. Calhoun	11/12/2021 14:32	Sarah A Nixon	2288506
	11/05/2021	11/09/2021 13:49	Simonne.V. Calhoun	11/12/2021 14:33	Sarah A Nixon	2288509
	11/05/2021	11/10/2021 14:25	Simonne.V. Calhoun	11/12/2021 16:43	Sarah A Nixon	2288515
	11/05/2021	11/10/2021 14:25	Simonne.V. Calhoun	11/12/2021 16:45	Sarah A Nixon	2288512
EPA 365.1 Rev. 2.0 dissolved	11/05/2021			11/05/2021 14:47	James L Waggeberby	2288507
	11/05/2021			11/05/2021 14:48	James L Waggeberby	2288510
	11/05/2021			11/05/2021 14:49	James L Waggeberby	2288513
	11/05/2021			11/05/2021 14:50	James L Waggeberby	2288516
EPA 8276	11/05/2021	11/09/2021 09:00	Julie Wi	11/14/2021 18:06	Arthur Maknenko	2288526
EPA 8321B	11/05/2021	11/05/2021 12:00	Juyoung Kim	11/05/2021 14:20	Juyoung Kim	2288527
	11/05/2021	11/05/2021 12:00	Juyoung Kim	11/05/2021 14:30	Juyoung Kim	2288528
	11/05/2021	11/05/2021 12:00	Juyoung Kim	11/05/2021 14:41	Juyoung Kim	2288529
	11/05/2021	11/05/2021 12:00	Juyoung Kim	11/05/2021 15:03	Manjita Shrestha	2288527
	11/05/2021	11/05/2021 12:00	Juyoung Kim	11/05/2021 15:18	Manjita Shrestha	2288528
	11/05/2021	11/05/2021 12:00	Juyoung Kim	11/05/2021 15:32	Manjita Shrestha	2288529
	11/05/2021	11/08/2021 09:00	Hoor Shaik	11/09/2021 10:43	Juyoung Kim	2288527

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	11/05/2021	11/08/2021 09:00	Hoor Shaik	11/09/2021 11:18	Juyoung Kim	2288528
	11/05/2021	11/08/2021 09:00	Hoor Shaik	11/09/2021 11:52	Juyoung Kim	2288529
SM 2120 B-2011	11/05/2021			11/05/2021 15:53	Benjamin T. Nordmann	2288505, 2288508
	11/05/2021			11/05/2021 15:54	Benjamin T. Nordmann	2288511, 2288514
SM 2320 B-2011	11/05/2021			11/08/2021 21:49	Dale L. Simmons	2288505
	11/05/2021			11/08/2021 22:03	Dale L. Simmons	2288508
	11/05/2021			11/08/2021 22:16	Dale L. Simmons	2288511
	11/05/2021			11/08/2021 22:25	Dale L. Simmons	2288514
SM 2340B	11/05/2021			11/08/2021 18:51	Josef B Mick	2288532
	11/05/2021			11/08/2021 22:14	Josef B Mick	2288530
	11/05/2021			11/08/2021 22:21	Josef B Mick	2288531
SM 2540 C-2011	11/05/2021			11/10/2021 13:21	Yijie Li	2288505, 2288508, 2288511, 2288514
SM 2540 D-2011	11/05/2021			11/10/2021 13:21	Yijie Li	2288505, 2288508, 2288511, 2288514
SM 4500 F-C-2011	11/05/2021			11/08/2021 21:49	Dale L. Simmons	2288505
	11/05/2021			11/08/2021 22:03	Dale L. Simmons	2288508
	11/05/2021			11/08/2021 22:16	Dale L. Simmons	2288511
	11/05/2021			11/08/2021 22:25	Dale L. Simmons	2288514
SM 5310 B-2011	11/05/2021			11/08/2021 20:52	Khloe J Berg	2288509
	11/05/2021			11/09/2021 00:02	Khloe J Berg	2288506
	11/05/2021			11/09/2021 00:15	Khloe J Berg	2288512
	11/05/2021			11/09/2021 00:54	Khloe J Berg	2288515