

Chemical Analysis Report

NW-DIST-2022-01-26-01

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

Event Description: **Walton Bay Run**
Request ID: **RQ-2022-01-24-41**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 16-FEB-2022 14:42

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, 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: Bay Branch below Coy Burgess Loop

Collection Date/Time: 01/25/2022 10:25

Field ID: G3NW0231

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301688	EPA 8321B	2,4-D	0.0020	U	ug/L	P408990	
		Acesulfame K	0.11	I	ug/L	P409043	
		2,4,5-T	0.0040	U	ug/L	P408990	
		AMPA	0.10	U	ug/L	P409043	
		Acetaminophen	0.0080	U	ug/L	P408990	
		Acetamiprid	0.0020	U	ug/L	P408990	
		Endothall	0.25	U	ug/L	P409043	MS
		Glufosinate	0.10	U	ug/L	P409043	
		Glyphosate	0.10	U	ug/L	P409043	
		Afidopyropen	0.0020	U	ug/L	P408990	
		Bentazon	8.0E-04	U	ug/L	P408990	
		Sucralose	0.10		ug/L	P409043	
		Benzovindiflupyr	0.0020	U	ug/L	P408990	
		Carbamazepine	8.0E-04	U	ug/L	P408990	
		Clothianidin	0.0020	U	ug/L	P408990	
		Dinotefuran	0.0020	U	ug/L	P408990	
		Diuron	0.0020	U	ug/L	P408990	
		Fenuron	0.016	U	ug/L	P408990	
		Fluridone	8.0E-04	U	ug/L	P408990	
		Imazapyr	0.014	I	ug/L	P408990	
		Hydrocodone	0.0020	U	ug/L	P408990	
		Ibuprofen	0.020	U	ug/L	P408990	
		Imidacloprid	0.0087		ug/L	P408990	MS
		Linuron	0.0040	U	ug/L	P408990	
		Mandestrobin	0.0020	U	ug/L	P408990	
		MCPP	0.0020	U	ug/L	P408990	
		Naproxen	0.0080	U	ug/L	P408990	
		Primidone	0.0040	U	ug/L	P408990	
		Pyraclostrobin	0.0020	U	ug/L	P408990	
		Silvex	0.0040	U	ug/L	P408990	
		Thiamethoxam	0.0020	U	ug/L	P408990	MS
		Tolfenpyrad	0.0020	U	ug/L	P408990	
		Triclopyr	0.0040	U	ug/L	P408990	
2301693	EPA 200.7 Rev. 4.4	Calcium	4.37		mg/L	P409121	
		Iron	450		ug/L	P409121	
		Magnesium	0.96		mg/L	P409121	
		Potassium	0.45	I	mg/L	P409121	
		Sodium	2.3		mg/L	P409121	
		Strontium	12.1		ug/L	P409121	
		Tin	3.0	U	ug/L	P409121	
		Titanium	1.7	I	ug/L	P409121	
		Vanadium	2.0	U	ug/L	P409121	
		Zinc	5.2	I	ug/L	P409121	
	EPA 200.8 Rev. 5.4	Aluminum	281		ug/L	P409121	

Field ID: G3NW0231

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301693	EPA 200.8 Rev. 5.4	Antimony	0.085	I	ug/L	P409121	
		Arsenic	0.20	I	ug/L	P409121	
		Barium	12.4		ug/L	P409121	
		Beryllium	0.022	I	ug/L	P409121	
		Boron**	7.6	I	ug/L	P409121	
		Cadmium	0.020	U	ug/L	P409121	
		Chromium	0.40	U	ug/L	P409121	
		Cobalt	0.127		ug/L	P409121	
		Copper	0.40	U	ug/L	P409121	
		Lead	0.27	I	ug/L	P409121	
		Manganese	14.8		ug/L	P409121	
		Molybdenum	0.15	U	ug/L	P409121	
		Nickel	0.50	U	ug/L	P409121	
		Selenium	0.20	U	ug/L	P409121	
		Silver	0.010	U	ug/L	P409121	
		Thallium	0.10	U	ug/L	P409121	

Ref. Method and Comment:

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

Sample Location: Bay Branch upstream of HWY 331

Collection Date/Time: 01/25/2022 10:45

Field ID: G3NW0171

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301689	EPA 8321B	2,4-D	0.0020	U	ug/L	P408990	
		Acesulfame K	0.10	U	ug/L	P409043	
		2,4,5-T	0.0040	U	ug/L	P408990	
		AMPA	0.10	U	ug/L	P409043	
		Acetaminophen	0.0080	U	ug/L	P408990	
		Acetamiprid	0.0020	U	ug/L	P408990	
		Endothall	0.25	U	ug/L	P409043	MS
		Glufosinate	0.10	U	ug/L	P409043	
		Glyphosate	0.10	U	ug/L	P409043	
		Afidopyropen	0.0020	U	ug/L	P408990	
		Bentazon	8.0E-04	U	ug/L	P408990	
		Sucralose	0.15		ug/L	P409043	
		Benzovindiflupyr	0.0020	U	ug/L	P408990	
		Carbamazepine	0.0023	I	ug/L	P408990	
		Clothianidin	0.0020	U	ug/L	P408990	
		Dinotefuran	0.0020	U	ug/L	P408990	
		Diuron	0.0020	U	ug/L	P408990	
		Fenuron	0.016	U	ug/L	P408990	
		Fluridone	8.0E-04	U	ug/L	P408990	
		Imazapyr	0.0092	I	ug/L	P408990	
		Hydrocodone	0.0020	U	ug/L	P408990	
		Ibuprofen	0.020	U	ug/L	P408990	
		Imidacloprid	0.0028	I	ug/L	P408990	MS
		Linuron	0.0040	U	ug/L	P408990	
		Mandestrobin	0.0020	U	ug/L	P408990	
		MCPP	0.0020	U	ug/L	P408990	
		Naproxen	0.0080	U	ug/L	P408990	
		Primidone	0.0040	U	ug/L	P408990	
		Pyraclostrobin	0.0020	U	ug/L	P408990	
		Silvex	0.0040	U	ug/L	P408990	
		Thiamethoxam	0.0020	U	ug/L	P408990	MS
		Tolfenpyrad	0.0020	U	ug/L	P408990	
		Triclopyr	0.0040	U	ug/L	P408990	
2301694	EPA 200.7 Rev. 4.4	Calcium	3.53		mg/L	P409121	
		Iron	560		ug/L	P409121	
		Magnesium	0.83		mg/L	P409121	
		Potassium	0.30	U	mg/L	P409121	
		Sodium	2.1		mg/L	P409121	
		Strontium	9.4		ug/L	P409121	
		Tin	3.0	U	ug/L	P409121	
		Titanium	1.5	I	ug/L	P409121	
		Vanadium	2.0	U	ug/L	P409121	
		Zinc	6.1	I	ug/L	P409121	
	EPA 200.8 Rev. 5.4	Aluminum	239		ug/L	P409121	

Field ID: G3NW0171

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301694	EPA 200.8 Rev. 5.4	Antimony	0.073	I	ug/L	P409121	
		Arsenic	0.22		ug/L	P409121	
		Barium	9.44		ug/L	P409121	
		Beryllium	0.014	I	ug/L	P409121	
		Boron**	7.5	I	ug/L	P409121	
		Cadmium	0.020	U	ug/L	P409121	
		Chromium	0.40	U	ug/L	P409121	
		Cobalt	0.063	I	ug/L	P409121	
		Copper	0.40	U	ug/L	P409121	
		Lead	0.21	I	ug/L	P409121	
		Manganese	7.13		ug/L	P409121	
		Molybdenum	0.15	U	ug/L	P409121	
		Nickel	0.50	U	ug/L	P409121	
		Selenium	0.20	U	ug/L	P409121	
		Silver	0.010	U	ug/L	P409121	
		Thallium	0.10	U	ug/L	P409121	

Ref. Method and Comment:

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

Sample Location: Little Alaqua Creek Below 282 Bridge

Collection Date/Time: 01/25/2022 11:20

Field ID: G3NW0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301690	EPA 8321B	2,4-D	0.0020	U	ug/L	P408990	
		Acesulfame K	0.10	U	ug/L	P409043	
		2,4,5-T	0.0040	U	ug/L	P408990	
		AMPA	0.10	U	ug/L	P409043	
		Acetaminophen	0.0080	U	ug/L	P408990	
		Acetamiprid	0.0020	U	ug/L	P408990	
		Endothall	0.25	U	ug/L	P409043	MS
		Glufosinate	0.10	U	ug/L	P409043	
		Glyphosate	0.10	U	ug/L	P409043	
		Afidopyropen	0.0020	U	ug/L	P408990	
		Bentazon	8.0E-04	U	ug/L	P408990	
		Sucralose	0.038	I	ug/L	P409043	
		Benzovindiflupyr	0.0020	U	ug/L	P408990	
		Carbamazepine	8.0E-04	U	ug/L	P408990	
		Clothianidin	0.0020	U	ug/L	P408990	
		Dinotefuran	0.0020	U	ug/L	P408990	
		Diuron	0.0020	U	ug/L	P408990	
		Fenuron	0.016	U	ug/L	P408990	
		Fluridone	8.0E-04	U	ug/L	P408990	
		Imazapyr	0.0040	U	ug/L	P408990	
		Hydrocodone	0.0020	U	ug/L	P408990	
		Ibuprofen	0.020	U	ug/L	P408990	
		Imidacloprid	0.0020	U	ug/L	P408990	MS
		Linuron	0.0040	U	ug/L	P408990	
		Mandestrobin	0.0020	U	ug/L	P408990	
		MCPP	0.0020	U	ug/L	P408990	
		Naproxen	0.0080	U	ug/L	P408990	
		Primidone	0.0040	U	ug/L	P408990	
		Pyraclostrobin	0.0020	U	ug/L	P408990	
		Silvex	0.0040	U	ug/L	P408990	
		Thiamethoxam	0.0020	U	ug/L	P408990	MS
		Tolfenpyrad	0.0020	U	ug/L	P408990	
		Triclopyr	0.0040	U	ug/L	P408990	

Ref. Method and Comment:

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

Sample Location: Little Alaqua Creek above Eglin AFB Road 208 Collection Date/Time: 01/25/2022 11:35

Field ID: G3NW0453

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301691	EPA 8321B	2,4-D	0.0020	U	ug/L	P408990	
		Acesulfame K	0.10	U	ug/L	P409043	
		2,4,5-T	0.0040	U	ug/L	P408990	
		AMPA	0.10	U	ug/L	P409043	
		Acetaminophen	0.0080	U	ug/L	P408990	
		Acetamiprid	0.0020	U	ug/L	P408990	
		Endothall	0.25	U	ug/L	P409043	MS
		Glufosinate	0.10	U	ug/L	P409043	
		Glyphosate	0.10	U	ug/L	P409043	
		Afidopyropen	0.0020	U	ug/L	P408990	
		Bentazon	8.0E-04	U	ug/L	P408990	
		Sucralose	0.010	U	ug/L	P409043	
		Benzovindiflupyr	0.0020	U	ug/L	P408990	
		Carbamazepine	8.0E-04	U	ug/L	P408990	
		Clothianidin	0.0020	U	ug/L	P408990	
		Dinotefuran	0.0020	U	ug/L	P408990	
		Diuron	0.0020	U	ug/L	P408990	
		Fenuron	0.016	U	ug/L	P408990	
		Fluridone	8.0E-04	U	ug/L	P408990	
		Imazapyr	0.0040	U	ug/L	P408990	
		Hydrocodone	0.0020	U	ug/L	P408990	
		Ibuprofen	0.020	U	ug/L	P408990	
		Imidacloprid	0.0020	U	ug/L	P408990	MS
		Linuron	0.0040	U	ug/L	P408990	
		Mandestrobin	0.0020	U	ug/L	P408990	
		MCPP	0.0020	U	ug/L	P408990	
		Naproxen	0.0080	U	ug/L	P408990	
		Primidone	0.0040	U	ug/L	P408990	
		Pyraclostrobin	0.0020	U	ug/L	P408990	
		Silvex	0.0040	U	ug/L	P408990	
		Thiamethoxam	0.0020	U	ug/L	P408990	MS
		Tolfenpyrad	0.0020	U	ug/L	P408990	
		Triclopyr	0.0040	U	ug/L	P408990	

Ref. Method and Comment:

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

Sample Location: Lafayette Creek

Collection Date/Time: 01/25/2022 12:15

Field ID: G3NW0455

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301695	EPA 200.7 Rev. 4.4	Calcium	1.54		mg/L	P409121	
		Iron	140		ug/L	P409121	
		Magnesium	0.48		mg/L	P409121	
		Potassium	0.47	I	mg/L	P409121	
		Sodium	3.0		mg/L	P409121	
		Strontium	6.0	I	ug/L	P409121	
		Tin	3.0	U	ug/L	P409121	
		Titanium	1.6	I	ug/L	P409121	
		Vanadium	2.0	U	ug/L	P409121	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409121	
		Aluminum	141		ug/L	P409121	
		Antimony	0.050	U	ug/L	P409121	
		Arsenic	0.12	I	ug/L	P409121	
		Barium	6.24		ug/L	P409121	
		Beryllium	0.010	U	ug/L	P409121	
		Boron**	10.9		ug/L	P409121	
		Cadmium	0.020	U	ug/L	P409121	
		Chromium	0.40	U	ug/L	P409121	
		Cobalt	0.076	I	ug/L	P409121	
		Copper	0.40	U	ug/L	P409121	
		Lead	0.20	U	ug/L	P409121	
		Manganese	4.03		ug/L	P409121	
		Molybdenum	0.15	U	ug/L	P409121	
		Nickel	0.50	U	ug/L	P409121	
		Selenium	0.20	U	ug/L	P409121	
		Silver	0.010	U	ug/L	P409121	
		Thallium	0.10	U	ug/L	P409121	
	SM 2340B	Hardness	5.8		mg/L	P409121	

Sample Location: Pine Log Creek Upstream of Highway 20

Collection Date/Time: 01/25/2022 13:00

Field ID: G3NW0454

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301696	EPA 200.7 Rev. 4.4	Calcium	1.60		mg/L	P409121	
		Iron	210		ug/L	P409121	
		Magnesium	0.38		mg/L	P409121	
		Potassium	0.30	U	mg/L	P409121	
		Sodium	1.2	I	mg/L	P409121	
		Strontium	6.2	I	ug/L	P409121	
		Tin	3.0	U	ug/L	P409121	
		Titanium	1.5	I	ug/L	P409121	
		Vanadium	2.0	U	ug/L	P409121	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409121	
		Aluminum	170		ug/L	P409121	
		Antimony	0.050	U	ug/L	P409121	
		Arsenic	0.19	I	ug/L	P409121	
		Barium	4.05		ug/L	P409121	
		Beryllium	0.010	U	ug/L	P409121	
		Boron**	7.5	I	ug/L	P409121	
		Cadmium	0.020	U	ug/L	P409121	
		Chromium	0.40	U	ug/L	P409121	
		Cobalt	0.069	I	ug/L	P409121	
		Copper	0.40	U	ug/L	P409121	
		Lead	0.20	U	ug/L	P409121	
		Manganese	8.22		ug/L	P409121	
		Molybdenum	0.15	U	ug/L	P409121	
		Nickel	0.50	U	ug/L	P409121	
		Selenium	0.20	U	ug/L	P409121	
		Silver	0.010	U	ug/L	P409121	
		Thallium	0.10	U	ug/L	P409121	
	SM 2340B	Hardness	5.5		mg/L	P409121	

Sample Location: Seven Runs upstream of Hwy 81

Collection Date/Time: 01/25/2022 13:30

Field ID: G3NW0116

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301692	EPA 8321B	2,4-D	0.0020	U	ug/L	P408990	
		Acesulfame K	0.10	U	ug/L	P409043	
		2,4,5-T	0.0040	U	ug/L	P408990	
		AMPA	0.10	U	ug/L	P409043	
		Acetaminophen	0.0080	U	ug/L	P408990	
		Acetamiprid	0.0020	U	ug/L	P408990	
		Endothall	0.25	U	ug/L	P409043	MS
		Glufosinate	0.10	U	ug/L	P409043	
		Glyphosate	0.10	U	ug/L	P409043	
		Afidopyropen	0.0020	U	ug/L	P408990	
		Bentazon	8.0E-04	U	ug/L	P408990	
		Sucralose	0.020	I	ug/L	P409043	
		Benzovindiflupyr	0.0020	U	ug/L	P408990	
		Carbamazepine	8.0E-04	U	ug/L	P408990	
		Clothianidin	0.0020	U	ug/L	P408990	
		Dinotefuran	0.0020	U	ug/L	P408990	
		Diuron	0.0020	U	ug/L	P408990	
		Fenuron	0.016	U	ug/L	P408990	
		Fluridone	8.0E-04	U	ug/L	P408990	
		Imazapyr	0.0040	U	ug/L	P408990	
		Hydrocodone	0.0020	U	ug/L	P408990	
		Ibuprofen	0.020	U	ug/L	P408990	
		Imidacloprid	0.0020	U	ug/L	P408990	MS
		Linuron	0.0040	U	ug/L	P408990	
		Mandestrobin	0.0020	U	ug/L	P408990	
		MCPP	0.0020	U	ug/L	P408990	
		Naproxen	0.0080	U	ug/L	P408990	
		Primidone	0.0040	U	ug/L	P408990	
		Pyraclostrobin	0.0020	U	ug/L	P408990	
		Silvex	0.0040	U	ug/L	P408990	
		Thiamethoxam	0.0020	U	ug/L	P408990	MS
		Tolfenpyrad	0.0020	U	ug/L	P408990	
		Triclopyr	0.0040	U	ug/L	P408990	

Ref. Method and Comment:

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

Sample Location: Panther Creek upstream of SR280

Collection Date/Time: 01/25/2022 14:00

Field ID: G3NW0061

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301673	DEP SOP: NU-094-1	Color (true)**	33	A	PCU	P409004	
	EPA 180.1 Rev. 2.0	Turbidity	4.2	A	NTU	P409008	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P409417	
		Sulfate	1.6		mg SO4/L	P409420	
	SM 2320 B-2011	Total Alkalinity	2.1	I	mg CaCO3/L	P409140	
	SM 2540 C-2011	TDS	37		mg/L	P409501	
	SM 2540 D-2011	TSS	2	I	mg/L	P409493	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P409145	
2301674	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P409349	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P409232	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P409097	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P409034	
	SM 5310 B-2011	Organic Carbon	3.2		mg C/L	P409765	
2301675	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P409000	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P409004

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409008

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409121

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: P409121

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: P409417

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409420

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409349

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409232

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409097

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409034

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409000

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

Reference Method: EPA 8321B
Batch ID: P408990

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P408990

Component	Result	Code	Units
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: EPA 8321B

Batch ID: P409043

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

Reference Method: SM 2320 B-2011

Batch ID: P409140

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

Reference Method: SM 2540 C-2011

Batch ID: P409501

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P409493

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P409145

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P409765

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: P409004

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	107		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	97.5		P	85 - 115
Sodium	97.7		P	85 - 115
Strontium	98.7		P	85 - 115
Tin	104		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	102		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.7		P	85 - 115
Antimony	97.7		P	85 - 115
Arsenic	101		P	85 - 115
Barium	103		P	85 - 115
Beryllium	100		P	85 - 115
Boron	98.7		P	85 - 115
Cadmium	98.8		P	85 - 115
Chromium	99.0		P	85 - 115
Cobalt	100		P	85 - 115
Copper	101		P	85 - 115
Lead	100		P	85 - 115
Manganese	97.6		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.8		P	85 - 115
Silver	102		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409417

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409420

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409349

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P409232

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P409097

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P409034

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P409000

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8321B

Batch ID: P408990

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	81.9		P	30 - 160
2,4,5-T	74.3		P	30 - 160
Acetaminophen	68.0		P	30 - 160
Acetamiprid	98.0		P	30 - 160
Afidopyropen	78.4		P	30 - 160
Bentazon	86.8		P	30 - 160
Benzovindiflupyr	92.5		P	30 - 160
Carbamazepine	93.9		P	30 - 160
Clothianidin	106		P	30 - 160
Dinotefuran	102		P	30 - 160
Diuron	97.4		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	108		P	30 - 160
Hydrocodone	92.6		P	30 - 160
Ibuprofen	81.6		P	30 - 160
Imazapyr	104		P	30 - 160
Imidacloprid	92.8		P	30 - 160
Linuron	81.2		P	30 - 160
Mandestrobin	103		P	30 - 160
MCPP	111		P	30 - 160
Naproxen	94.5		P	30 - 160
Primidone	90.5		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P408990

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	97.3		P	30 - 160
Silvex	60.0		P	30 - 160
Thiamethoxam	92.9		P	30 - 160
Tolfenpyrad	61.1		P	30 - 160
Triclopyr	76.1		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P409043

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.1		P	40 - 150
AMPA	91.4		P	40 - 150
Endothall	136		P	40 - 150
Glufosinate	97.9		P	40 - 150
Glyphosate	91.2		P	40 - 150
Sucralose	91.7		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P409140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.0		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P409145

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P409765

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P409121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301666	Calcium	102		P	80 - 120
2301666	Iron	110	107	P/P	80 - 120
2301666	Magnesium	104		P	80 - 120
2301666	Potassium	96.9		P	80 - 120
2301666	Sodium	97.4		P	80 - 120
2301666	Strontium	99.8	97.9	P/P	80 - 120
2301666	Tin	103	101	P/P	80 - 120
2301666	Titanium	104	101	P/P	80 - 120
2301666	Vanadium	105	102	P/P	80 - 120
2301666	Zinc	104	101	P/P	80 - 120
2301780	Calcium	106		P	80 - 120
2301780	Iron	110		P	80 - 120
2301780	Magnesium	110		P	80 - 120
2301780	Potassium	101		P	80 - 120
2301780	Sodium	103		P	80 - 120
2301780	Strontium	101		P	80 - 120
2301780	Tin	108		P	80 - 120
2301780	Titanium	103		P	80 - 120
2301780	Vanadium	104		P	80 - 120
2301780	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P409121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301666	Aluminum	97.8	99.8	P/P	80 - 120
2301666	Antimony	99.7	101	P/P	80 - 120
2301666	Arsenic	102	101	P/P	80 - 120
2301666	Barium	102	104	P/P	80 - 120
2301666	Beryllium	101	100	P/P	80 - 120
2301666	Boron	96.0	101	P/P	80 - 120
2301666	Cadmium	98.5	100	P/P	80 - 120
2301666	Chromium	100	102	P/P	80 - 120
2301666	Cobalt	100	101	P/P	80 - 120
2301666	Copper	101	102	P/P	80 - 120
2301666	Lead	101	102	P/P	80 - 120
2301666	Manganese	98.6	99.5	P/P	80 - 120
2301666	Molybdenum	102	103	P/P	80 - 120
2301666	Nickel	100	101	P/P	80 - 120
2301666	Selenium	98.7	99.3	P/P	80 - 120
2301666	Silver	102	103	P/P	80 - 120
2301666	Thallium	109	111	P/P	80 - 120
2301780	Aluminum	101		P	80 - 120
2301780	Antimony	100		P	80 - 120
2301780	Arsenic	99.6		P	80 - 120
2301780	Barium	104		P	80 - 120
2301780	Beryllium	101		P	80 - 120
2301780	Boron	104		P	80 - 120
2301780	Cadmium	101		P	80 - 120
2301780	Chromium	101		P	80 - 120
2301780	Cobalt	99.2		P	80 - 120
2301780	Copper	102		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P409121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301780	Lead	103		P	80 - 120
2301780	Manganese	100		P	80 - 120
2301780	Molybdenum	100		P	80 - 120
2301780	Nickel	101		P	80 - 120
2301780	Selenium	96.3		P	80 - 120
2301780	Silver	103		P	80 - 120
2301780	Thallium	111		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301653	Chloride	95.0		P	90 - 110
2301742	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301653	Sulfate	93.2		P	90 - 110
2301742	Sulfate	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301749	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P409232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301656	Kjeldahl Nitrogen	100	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P409097

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301656	NO2NO3-N	99.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P409034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301608	Total-P	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P409000

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301600	O-Phosphate-P	92.9	94.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P408990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301386	2,4-D	118	135	P/P	30 - 160
2301386	2,4,5-T	80.1	103	P/P	30 - 160
2301386	Acetaminophen	103	104	P/P	30 - 160
2301386	Acetamiprid	109	128	P/P	30 - 160
2301386	Afidopyropen	70.9	83.7	P/P	30 - 160
2301386	Bentazon	38.0	66.4	P/P	30 - 160
2301386	Benzovindiflupyr	87.9	98.6	P/P	30 - 160
2301386	Carbamazepine	98.9	114	P/P	30 - 160
2301386	Clothianidin	132	158	P/P	30 - 160
2301386	Dinotefuran	123	136	P/P	30 - 160
2301386	Diuron	82.7	95.2	P/P	30 - 160
2301386	Fenuron	88.4	102	P/P	30 - 160
2301386	Fluridone	90.8	104	P/P	30 - 160
2301386	Hydrocodone	102	116	P/P	30 - 160
2301386	Ibuprofen	68.8	85.8	P/P	30 - 160
2301386	Imidacloprid	166	195	F/F	30 - 160
2301386	Linuron	67.3	75.3	P/P	30 - 160
2301386	Mandestrobin	90.5	106	P/P	30 - 160
2301386	MCCP	120	136	P/P	30 - 160
2301386	Naproxen	87.9	112	P/P	30 - 160
2301386	Primidone	105	114	P/P	30 - 160
2301386	Pyraclostrobin	86.1	104	P/P	30 - 160
2301386	Silvex	80.8	89.3	P/P	30 - 160
2301386	Thiamethoxam	150	175	P/F	30 - 160
2301386	Tolfenpyrad	54.0	62.5	P/P	30 - 160
2301386	Triclopyr	86.3	104	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P409043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301661	Acesulfame K	100	84.0	P/P	40 - 150
2301661	AMPA	94.5	88.6	P/P	40 - 150
2301661	Endothall	159	164	F/F	40 - 150
2301661	Glufosinate	99.0	82.7	P/P	40 - 150
2301661	Glyphosate	90.4	80.7	P/P	40 - 150
2301661	Sucralose	91.2	96.4	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P409145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301654	Fluoride	99.1	97.8	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P409765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301745	Organic Carbon	93.0	92.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P409004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301673	Color (true)	1.68	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301673	Turbidity	0.720	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301666	Calcium	3.21	Spike	P	0 - 20
2301666	Iron	3.05	Spike	P	0 - 20
2301666	Magnesium	3.71	Spike	P	0 - 20
2301666	Potassium	3.24	Spike	P	0 - 20
2301666	Sodium	2.03	Spike	P	0 - 20
2301666	Strontium	1.86	Spike	P	0 - 20
2301666	Tin	1.87	Spike	P	0 - 20
2301666	Titanium	2.69	Spike	P	0 - 20
2301666	Vanadium	3.44	Spike	P	0 - 20
2301666	Zinc	3.04	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301666	Aluminum	1.99	Spike	P	0 - 20
2301666	Antimony	0.873	Spike	P	0 - 20
2301666	Arsenic	0.130	Spike	P	0 - 20
2301666	Barium	1.92	Spike	P	0 - 20
2301666	Beryllium	0.962	Spike	P	0 - 20
2301666	Boron	3.57	Spike	P	0 - 20
2301666	Cadmium	1.57	Spike	P	0 - 20
2301666	Chromium	1.72	Spike	P	0 - 20
2301666	Cobalt	0.913	Spike	P	0 - 20
2301666	Copper	0.838	Spike	P	0 - 20
2301666	Lead	1.05	Spike	P	0 - 20
2301666	Manganese	0.796	Spike	P	0 - 20
2301666	Molybdenum	0.319	Spike	P	0 - 20
2301666	Nickel	0.523	Spike	P	0 - 20
2301666	Selenium	0.656	Spike	P	0 - 20
2301666	Silver	0.969	Spike	P	0 - 20
2301666	Thallium	1.74	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301653	Chloride	0.275	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301653	Sulfate	0.673	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301749	Ammonia-N	0.729	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301656	Kjeldahl Nitrogen	0.595	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409097

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301656	NO2NO3-N	0.466	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301608	Total-P	0.540	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409000

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301600	O-Phosphate-P	1.71	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P408990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301386	2,4-D	9.90	Spike	P	0 - 30
2301386	2,4,5-T	25.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P408990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301386	Acetaminophen	1.03	Spike	P	0 - 30
2301386	Acetamiprid	15.6	Spike	P	0 - 30
2301386	Afidopyropen	16.6	Spike	P	0 - 30
2301386	Bentazon	5.38	Spike	P	0 - 30
2301386	Benzovindiflupyr	11.5	Spike	P	0 - 30
2301386	Carbamazepine	13.8	Spike	P	0 - 30
2301386	Clothianidin	17.2	Spike	P	0 - 30
2301386	Dinotefuran	9.98	Spike	P	0 - 30
2301386	Diuron	14.0	Spike	P	0 - 30
2301386	Fenuron	14.1	Spike	P	0 - 30
2301386	Fluridone	13.3	Spike	P	0 - 30
2301386	Hydrocodone	12.3	Spike	P	0 - 30
2301386	Ibuprofen	21.9	Spike	P	0 - 30
2301386	Imazapyr	6.57	Spike	P	0 - 30
2301386	Imidacloprid	14.9	Spike	P	0 - 30
2301386	Linuron	11.3	Spike	P	0 - 30
2301386	Mandestrobin	15.4	Spike	P	0 - 30
2301386	MCPP	11.6	Spike	P	0 - 30
2301386	Naproxen	24.0	Spike	P	0 - 30
2301386	Primidone	9.10	Spike	P	0 - 30
2301386	Pyraclostrobin	18.9	Spike	P	0 - 30
2301386	Silvex	10.0	Spike	P	0 - 30
2301386	Thiamethoxam	13.5	Spike	P	0 - 30
2301386	Tolfenpyrad	14.5	Spike	P	0 - 30
2301386	Triclopyr	18.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P409043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301661	Acesulfame K	17.0	Spike	P	0 - 30
2301661	AMPA	6.47	Spike	P	0 - 30
2301661	Endothall	3.00	Spike	P	0 - 30
2301661	Glufosinate	17.9	Spike	P	0 - 30
2301661	Glyphosate	11.2	Spike	P	0 - 30
2301661	Sucralose	5.18	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P409140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301654	Total Alkalinity	0.494	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P409501

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301601	TDS	4.80	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P409145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301654	Fluoride	0.960	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P409765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301745	Organic Carbon	0.802	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2301688

Field Sample ID: G3NW0231

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	135	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	123	P	30 - 160
EPA 8321B	Diuron-d6	86.8	P	30 - 160
EPA 8321B	Endothall-d6	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.3	P	30 - 160
EPA 8321B	Primidone-d5	114	P	30 - 160
EPA 8321B	Sucralose-d6	87.8	P	30 - 160

Lab Sample ID: 2301689

Field Sample ID: G3NW0171

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	70.3	P	30 - 160
EPA 8321B	Endothall-d6	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.5	P	30 - 160
EPA 8321B	Primidone-d5	90.6	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2301690

Field Sample ID: G3NW0065

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	119	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	116	P	30 - 160
EPA 8321B	Diuron-d6	93.9	P	30 - 160
EPA 8321B	Endothall-d6	135	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.5	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	92.2	P	30 - 160

Lab Sample ID: 2301691

Field Sample ID: G3NW0453

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	100	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.3	P	30 - 160
EPA 8321B	Diuron-d6	86.9	P	30 - 160
EPA 8321B	Endothall-d6	138	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.4	P	30 - 160
EPA 8321B	Primidone-d5	89.7	P	30 - 160
EPA 8321B	Sucralose-d6	95.2	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2301692

Field Sample ID: G3NW0116

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	81.7	P	30 - 160
EPA 8321B	Endothall-d6	128	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.3	P	30 - 160
EPA 8321B	Primidone-d5	88.7	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A110055

Included Lab Sample IDs: 2301675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A110056

Included Lab Sample IDs: 2301673

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110058

Included Lab Sample IDs: 2301673

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110085

Included Lab Sample IDs: 2301674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110099

Included Lab Sample IDs: 2301673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.5	96.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110099

Included Lab Sample IDs: 2301673

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110120

Included Lab Sample IDs: 2301693, 2301694, 2301695, 2301696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.8	99.9	P/P	90 - 110
Aluminum	99.5	98.8	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Antimony	99.3	101	P/P	90 - 110
Arsenic	100	100	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Barium	98.4	98.9	P/P	90 - 110
Barium	98.9	99.5	P/P	90 - 110
Beryllium	97.6	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110120

Included Lab Sample IDs: 2301693, 2301694, 2301695, 2301696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	98.0	98.3	P/P	90 - 110
Boron	103	104	P/P	90 - 110
Boron	104	104	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Cadmium	99.9	101	P/P	90 - 110
Chromium	98.5	99.1	P/P	90 - 110
Chromium	99.1	101	P/P	90 - 110
Cobalt	97.5	98.2	P/P	90 - 110
Cobalt	98.2	98.3	P/P	90 - 110
Copper	97.9	98.4	P/P	90 - 110
Copper	98.4	98.8	P/P	90 - 110
Lead	96.8	98.3	P/P	90 - 110
Lead	98.3	97.8	P/P	90 - 110
Manganese	98.5	99.9	P/P	90 - 110
Manganese	99.9	101	P/P	90 - 110
Molybdenum	99.3	99.3	P/P	90 - 110
Molybdenum	99.3	98.2	P/P	90 - 110
Nickel	98.8	99.0	P/P	90 - 110
Nickel	99.1	98.8	P/P	90 - 110
Selenium	98.4	97.8	P/P	90 - 110
Selenium	100	98.4	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	104	104	P/P	90 - 110
Thallium	104	104	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110145

Included Lab Sample IDs: 2301693, 2301694, 2301695, 2301696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	102	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Iron	104	105	P/P	90 - 110
Magnesium	102	104	P/P	90 - 110
Magnesium	104	104	P/P	90 - 110
Potassium	95.8	97.2	P/P	90 - 110
Potassium	97.2	96.8	P/P	90 - 110
Sodium	96.9	97.9	P/P	90 - 110
Sodium	97.9	97.5	P/P	90 - 110
Strontium	98.3	100	P/P	90 - 110
Strontium	100	100	P/P	90 - 110
Tin	101	102	P/P	90 - 110
Tin	102	102	P/P	90 - 110
Titanium	100	101	P/P	90 - 110
Titanium	98.5	100	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Vanadium	98.7	101	P/P	90 - 110
Zinc	102	103	P/P	90 - 110
Zinc	99.8	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A110148

Included Lab Sample IDs: 2301688, 2301689, 2301690, 2301691, 2301692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.2	82.8	P/P	50 - 150
2,4,5-T	102	83.5	P/P	50 - 150
Acetaminophen	106	110	P/P	60 - 160
Acetamiprid	102	105	P/P	50 - 150
Afidopyropen	104	102	P/P	50 - 150
Bentazon	95.8	107	P/P	50 - 160
Benzovindiflupyr	109	103	P/P	50 - 160
Carbamazepine	96.2	96.1	P/P	60 - 150
Clothianidin	98.4	111	P/P	60 - 150
Dinotefuran	112	107	P/P	50 - 150
Diuron	106	103	P/P	60 - 160
Fenuron	116	111	P/P	60 - 150
Fluridone	118	103	P/P	60 - 160
Hydrocodone	97.4	107	P/P	60 - 150
Ibuprofen	101	78.5	P/P	50 - 160
Imazapyr	123	132	P/P	50 - 160
Imidacloprid	96.2	101	P/P	60 - 150
Linuron	113	100	P/P	60 - 150
Mandestrobin	112	114	P/P	50 - 150
MCPP	102	99.8	P/P	50 - 150
Naproxen	130	140	P/P	50 - 160
Primidone	88.9	94.3	P/P	60 - 150
Pyraclostrobin	114	109	P/P	60 - 150
Silvex	89.8	77.9	P/P	50 - 150
Thiamethoxam	98.7	102	P/P	50 - 150
Tolfenpyrad	104	104	P/P	60 - 150
Triclopyr	99.5	100	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A110153

Included Lab Sample IDs: 2301688, 2301689, 2301690, 2301691, 2301692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	96.5	97.0	P/P	60 - 160
AMPA	97.0	92.5	P/P	60 - 160
Glufosinate	102	100	P/P	60 - 160
Glufosinate	95.1	102	P/P	60 - 160
Glyphosate	88.9	93.6	P/P	60 - 160
Glyphosate	93.6	89.9	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110154

Included Lab Sample IDs: 2301673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Sulfate	100	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110173

Included Lab Sample IDs: 2301674

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110182

Included Lab Sample IDs: 2301674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110183

Included Lab Sample IDs: 2301688, 2301689, 2301690, 2301691, 2301692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	80.9	P/P	60 - 160
Acesulfame K	88.1	102	P/P	60 - 160
Endothall	139	125	P/P	60 - 160
Endothall	151	139	P/P	60 - 160
Sucralose	110	97.7	P/P	60 - 160
Sucralose	97.7	104	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110218

Included Lab Sample IDs: 2301674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.7	95.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110374

Included Lab Sample IDs: 2301674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	100	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
DEP SOP: NU-094-1	Color (true)	99.2					1.68	
EPA 180.1 Rev. 2.0	Turbidity						0.720	
EPA 200.7 Rev. 4.4	Calcium	102	102	106				3.21
	Iron	107	110	107	110			3.05
	Magnesium	102	104	110				3.71
	Potassium	97.5	96.9	101				3.24
	Sodium	97.7	97.4	103				2.03
	Strontium	98.7	99.8	97.9	101			1.86
	Tin	104	103	101	108			1.87
	Titanium	102	104	101	103			2.69
	Vanadium	102	105	102	104			3.44
	Zinc	101	104	101	105			3.04
EPA 200.8 Rev. 5.4	Aluminum	99.7	97.8	99.8	101			1.99
	Antimony	97.7	99.7	101	100			0.873
	Arsenic	101	102	101	99.6			0.130
	Barium	103	102	104	104			1.92
	Beryllium	100	101	100	101			0.962
	Boron	98.7	96.0	101	104			3.57
	Cadmium	98.8	98.5	100	101			1.57
	Chromium	99.0	100	102	101			1.72
	Cobalt	100	100	101	99.2			0.913
	Copper	101	101	102	102			0.838
	Lead	100	101	102	103			1.05
	Manganese	97.6	98.6	99.5	100			0.796
	Molybdenum	100	102	103	100			0.319
	Nickel	100	100	101	101			0.523
	Selenium	99.8	98.7	99.3	96.3			0.656
	Silver	102	102	103	103			0.969
	Thallium	103	109	111	111			1.74
EPA 300.0 Rev. 2.1	Chloride	101	95.0	98.6			0.275	
	Sulfate	96.8	93.2	96.3			0.673	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	100	101				0.729
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	100	99.0				0.595
EPA 353.2 Rev. 2.0	NO2NO3-N	100	99.8	100				0.466
EPA 365.1 Rev. 2.0	Total-P	106	105	105				0.540
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	92.9	94.5				1.71
EPA 8321B	2,4-D	81.9	118	135				9.90
	2,4,5-T	74.3	80.1	103				25.0
	Acesulfame K	99.1	100	84.0				17.0
	Acetaminophen	68.0	103	104				1.03
	Acetamiprid	98.0	109	128				15.6
	Afidopyropen	78.4	70.9	83.7				16.6
	AMPA	91.4	94.5	88.6				6.47
	Bentazon	86.8	38.0	66.4				5.38
	Benzovindiflupyr	92.5	87.9	98.6				11.5
	Carbamazepine	93.9	98.9	114				13.8
	Clothianidin	106	132	158				17.2
	Dinotefuran	102	123	136				9.98
	Diuron	97.4	82.7	95.2				14.0
	Endothall	136	159	164				3.00
	Fenuron	103	88.4	102				14.1
	Fluridone	108	90.8	104				13.3
	Glufosinate	97.9	99.0	82.7				17.9
	Glyphosate	91.2	90.4	80.7				11.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Hydrocodone	92.6	102	116		12.3
	Ibuprofen	81.6	68.8	85.8		21.9
	Imazapyr	104				6.57
	Imidacloprid	92.8	166	195		14.9
	Linuron	81.2	67.3	75.3		11.3
	Mandestrobin	103	90.5	106		15.4
	MCCP	111	120	136		11.6
	Naproxen	94.5	87.9	112		24.0
	Primidone	90.5	105	114		9.10
	Pyraclostrobin	97.3	86.1	104		18.9
	Silvex	60.0	80.8	89.3		10.0
	Sucralose	91.7	91.2	96.4		5.18
	Thiamethoxam	92.9	150	175		13.5
	Tolfenpyrad	61.1	54.0	62.5		14.5
	Triclopyr	76.1	86.3	104		18.4
SM 2320 B-2011	Total Alkalinity	99.0			0.494	
SM 2540 C-2011	TDS				4.80	
SM 4500 F-C-2011	Fluoride	97.5	99.1	97.8		0.960
SM 5310 B-2011	Organic Carbon	95.0	93.0	92.2		0.802

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2301673
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2301673
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2301693, 2301694, 2301695, 2301696
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2301693, 2301694, 2301695, 2301696
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2301673
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2301673
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2301674
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2301674
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2301674
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2301674
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2301675
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2301688, 2301689, 2301690, 2301691, 2301692
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2301673
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2301695, 2301696
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2301673
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2301673
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2301673
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2301674

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	01/26/2022			01/26/2022 15:34	Samantha L Bates	2301673
EPA 180.1 Rev. 2.0	01/26/2022			01/26/2022 14:59	Khloe J Berg	2301673
EPA 200.7 Rev. 4.4	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/31/2022 15:08	Josef B Mick	2301693
	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/31/2022 15:47	Josef B Mick	2301694
	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/31/2022 15:53	Josef B Mick	2301695
	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/31/2022 15:58	Josef B Mick	2301696
EPA 200.8 Rev. 5.4	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/28/2022 19:18	Emily M Philpot	2301693
	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/28/2022 19:27	Emily M Philpot	2301694
	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/28/2022 19:36	Emily M Philpot	2301695
	01/26/2022	01/28/2022 10:45	Vijayalakshmi Reddy	01/28/2022 20:30	Emily M Philpot	2301696
EPA 300.0 Rev. 2.1	01/26/2022			02/03/2022 15:55	James L Waggeberby	2301673
EPA 350.1 Rev. 2.0	01/26/2022			02/02/2022 13:54	Ping Hua	2301674
EPA 351.2 Rev. 2.0	01/26/2022	02/02/2022 09:46	Samantha L Bates	02/03/2022 14:57	Alexandra J Mattheus	2301674
EPA 353.2 Rev. 2.0	01/26/2022			01/27/2022 14:32	Nathaniel J Jones	2301674
EPA 365.1 Rev. 2.0	01/26/2022	01/27/2022 17:15	Simonne.V. Calhoun	01/31/2022 16:10	Sarah A Nixon	2301674
EPA 365.1 Rev. 2.0 dissolved	01/26/2022			01/26/2022 14:31	James L Waggeberby	2301675
EPA 8321B	01/26/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 22:05	Juyoung Kim	2301688
	01/26/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 22:40	Juyoung Kim	2301689
	01/26/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 23:15	Juyoung Kim	2301690
	01/26/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 23:49	Juyoung Kim	2301691
	01/26/2022	01/27/2022 09:00	Hoor Shaik	01/31/2022 00:24	Juyoung Kim	2301692
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 14:18	Manjita Shrestha	2301688
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 14:29	Manjita Shrestha	2301689
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 14:39	Manjita Shrestha	2301690
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 15:01	Manjita Shrestha	2301691
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 15:11	Manjita Shrestha	2301692
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 21:40	Manjita Shrestha	2301688
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 21:55	Manjita Shrestha	2301689
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 22:10	Manjita Shrestha	2301690
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 22:39	Manjita Shrestha	2301691
	01/26/2022	01/31/2022 09:00	Manjita Shrestha	01/31/2022 22:54	Manjita Shrestha	2301692
SM 2320 B-2011	01/26/2022			01/27/2022 20:26	Dale L. Simmons	2301673
SM 2340B	01/26/2022			01/31/2022 15:53	Josef B Mick	2301695
	01/26/2022			01/31/2022 15:58	Josef B Mick	2301696
SM 2540 C-2011	01/26/2022			01/28/2022 14:02	Yijie Li	2301673
SM 2540 D-2011	01/26/2022			01/28/2022 14:02	Yijie Li	2301673
SM 4500 F-C-2011	01/26/2022			01/27/2022 20:26	Dale L. Simmons	2301673
SM 5310 B-2011	01/26/2022			02/12/2022 23:36	Touraj Touran	2301674