

Chemical Analysis Report

NE-DIST-2018-07-12-01

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

Event Description: **LSJR North Salt**
Request ID: **RQ-2018-06-25-06**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
Jacksonville, FL 32256-7577
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Date Certified: 27-JUL-2018 11:48



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: 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 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: MONCRIEF CREEK @ LEM TURNER RD

Collection Date/Time: 07/11/2018 09:20

Field ID: 20030114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2006628	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P348339	
	SM 2320 B-97	Total Alkalinity	91		mg CaCO3/L	P348511	
	SM 2540 D-97	TSS	15		mg/L	P348616	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P348515	
2006630	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P348706	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P348767	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P348416	
	EPA 365.1 Rev. 2.0	Total-P	0.27		mg P/L	P348497	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P348457	
2006632	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P348345	
2006656	EPA 8321B	2,4-D	0.057		ug/L	P348297	
		Bentazon	0.0058		ug/L	P348297	
		MCP	0.0025	I	ug/L	P348297	
		Triclopyr**	0.0040	U	ug/L	P348297	
		Imidacloprid	0.020		ug/L	P348297	
		Diuron	0.0073	I	ug/L	P348297	
		Pyraclostrobin**	0.0020	U	ug/L	P348297	
		Primidone**	0.0040	U	ug/L	P348297	
		Linuron	0.0040	U	ug/L	P348297	
		Acetaminophen**	0.0080	U	ug/L	P348297	RPD
		Fenuron	0.016	U	ug/L	P348297	
		Imazapyr**	0.14		ug/L	P348297	
		Carbamazepine**	9.6E-04	I	ug/L	P348297	
		Fluridone**	0.065		ug/L	P348297	
		Hydrocodone**	8.0E-04	U	ug/L	P348297	
		Sucralose**	0.29		ug/L	P348187	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: RIBAUT RIVER @ HARBOR VIEW BOAT RAMP

Collection Date/Time: 07/11/2018 09:50

Field ID: G2NE1161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2006619	EPA 180.1 Rev. 2.0	Turbidity	16	A	NTU	P348339	
	SM 2320 B-97	Total Alkalinity	78		mg CaCO3/L	P348511	
	SM 2540 D-97	TSS	16		mg/L	P348616	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P348515	
2006622	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P348706	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P348477	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P348416	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P348497	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P348457	
2006625	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.053		mg P/L	P348345	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: RIBAUTL RIVER @ US 1

Collection Date/Time: 07/11/2018 10:30

Field ID: 20030133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2006620	EPA 180.1 Rev. 2.0	Turbidity	8.1		NTU	P348339	
	SM 2320 B-97	Total Alkalinity	91		mg CaCO3/L	P348511	
	SM 2540 D-97	TSS	6	I	mg/L	P348616	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P348515	
2006623	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P348706	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P348477	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P348416	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P348497	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P348457	
2006626	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.067		mg P/L	P348345	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: DEER CR @ TALLEYRAND AVE

Collection Date/Time: 07/11/2018 11:00

Field ID: 20030792

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2006629	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P348339	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P348512	
	SM 2540 D-97	TSS	3	I	mg/L	P348616	
	SM 4500 F-C-97	Fluoride	0.46		mg F/L	P348516	
2006631	EPA 350.1 Rev. 2.0	Ammonia-N	0.29		mg N/L	P348775	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P348768	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.31		mg N/L	P348574	
	EPA 365.1 Rev. 2.0	Total-P	0.076		mg P/L	P348591	MS
	SM 5310 B-00	Organic Carbon	6.1		mg C/L	P348457	
2006633	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P348350	
2006657	EPA 8321B	2,4-D	0.0040	I	ug/L	P348297	
		Bentazon	8.0E-04	U	ug/L	P348297	
		MCP	0.0020	U	ug/L	P348297	
		Triclopyr**	0.0040	U	ug/L	P348297	
		Imidacloprid	0.0053	I	ug/L	P348297	
		Diuron	0.010		ug/L	P348297	
		Pyraclostrobin**	0.0020	U	ug/L	P348297	
		Primidone**	0.0040	U	ug/L	P348297	
		Linuron	0.0040	U	ug/L	P348297	
		Acetaminophen**	0.014	I	ug/L	P348297	RPD
		Fenuron	0.016	U	ug/L	P348297	
		Imazapyr**	0.13		ug/L	P348297	
		Carbamazepine**	4.8E-04	I	ug/L	P348297	
		Fluridone**	4.0E-04	U	ug/L	P348297	
		Hydrocodone**	8.0E-04	U	ug/L	P348297	
		Sucralose**	0.13		ug/L	P348187	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: DUNN CREEK @ FAYE RD

Collection Date/Time: 07/11/2018 11:40

Field ID: 20030140

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2006621	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P348339	
	SM 2320 B-97	Total Alkalinity	68		mg CaCO3/L	P348511	
	SM 2540 D-97	TSS	19		mg/L	P348616	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P348515	
2006624	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P348775	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P348612	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P348574	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P348591	MS
	SM 5310 B-00	Organic Carbon	16		mg C/L	P348457	
2006627	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.055		mg P/L	P348350	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Field Blank

Collection Date/Time: 07/11/2018 12:45

Field ID: FIELD BLANK 71118

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2006634	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P348339	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P348512	
	SM 2540 D-97	TSS	2	U	mg/L	P348616	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P348516	
2006635	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P348706	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P348767	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P348416	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P348500	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P348458	
2006636	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P348345	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348339

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348706

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348775

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348477

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348612

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348767

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348768

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348416

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348574

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348497

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348500

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348591

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348345

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348350

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

Reference Method: EPA 8321B
Batch ID: P348187

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P348297

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P348511

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2320 B-97
Batch ID: P348512

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-97
Batch ID: P348616

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P348515

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P348516

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P348457

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

Reference Method: SM 5310 B-00
Batch ID: P348458

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348706

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348775

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348477

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348612

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348767

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348416

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348574

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348497

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348500

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	91.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348345

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348350

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

Reference Method: EPA 8321B
Batch ID: P348187

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	123		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P348297

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	40 - 150
Acetaminophen	98.4		P	30 - 150
Bentazon	107		P	30 - 150
Carbamazepine	93.9		P	40 - 150
Diuron	105		P	40 - 150
Fenuron	108		P	40 - 150
Fluridone	96.7		P	40 - 150
Hydrocodone	105		P	40 - 150
Imazapyr	96.8		P	40 - 150
Imidacloprid	97.7		P	40 - 160
Linuron	91.3		P	40 - 150
MCPP	100		P	40 - 150
Primidone	92.1		P	40 - 150
Pyraclostrobin	95.8		P	40 - 150
Triclopyr	103		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P348511

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P348512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P348515

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P348516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P348457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P348458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006542	Ammonia-N	99.1	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2007453	Ammonia-N	99.7	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006623	Kjeldahl Nitrogen	92.2	93.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006784	Kjeldahl Nitrogen	94.6	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006744	Kjeldahl Nitrogen	102	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2007810	Kjeldahl Nitrogen	99.0	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006455	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006565	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006622	Total-P	94.4	98.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006666	Total-P	94.6	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006566	Total-P	87.6	87.1	F/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006667	O-Phosphate-P	94.9	95.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348350

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006633	O-Phosphate-P	95.5	96.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P348187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006352	Sucralose	108	110	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P348297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006852	Acetaminophen	96.9	70.1	P/P	30 - 150
2006852	Bentazon	74.0	74.1	P/P	30 - 150
2006852	Carbamazepine	85.0	69.5	P/P	40 - 150
2006852	Diuron	89.0	68.9	P/P	40 - 150
2006852	Fenuron	95.8	83.9	P/P	40 - 150
2006852	Fluridone	99.5	73.7	P/P	40 - 150
2006852	Hydrocodone	60.6	80.9	P/P	40 - 150
2006852	Imazapyr	113	109	P/P	40 - 150
2006852	Imidacloprid	156	132	P/P	40 - 160
2006852	Linuron	73.0	70.5	P/P	40 - 150
2006852	MCP	139	136	P/P	40 - 150
2006852	Primidone	102	83.0	P/P	40 - 150
2006852	Pyraclostrobin	93.5	94.0	P/P	40 - 150
2006852	Triclopyr	137	136	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P348516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006737	Fluoride	99.5	100	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P348457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006530	Organic Carbon	99.9		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P348458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2006666	Organic Carbon	97.4	99.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006619	Turbidity	6.81	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006542	Ammonia-N	0.483	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P348775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2007453	Ammonia-N	0.767	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348477

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006623	Kjeldahl Nitrogen	0.444	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006784	Kjeldahl Nitrogen	2.65	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006744	Kjeldahl Nitrogen	2.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2007810	Kjeldahl Nitrogen	0.960	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006455	NO2NO3-N	0.985	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006565	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006622	Total-P	3.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006666	Total-P	4.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P348591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006566	Total-P	0.618	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006667	O-Phosphate-P	0.179	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348350

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006633	O-Phosphate-P	0.539	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P348187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006352	Sucralose	1.90	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P348297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006852	2,4-D	2.38	Spike	P	0 - 30
2006852	Acetaminophen	32.1	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P348297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006852	Bentazon	0.226	Spike	P	0 - 30
2006852	Carbamazepine	20.1	Spike	P	0 - 30
2006852	Diuron	25.5	Spike	P	0 - 30
2006852	Fenuron	13.2	Spike	P	0 - 30
2006852	Fluridone	29.0	Spike	P	0 - 30
2006852	Hydrocodone	28.7	Spike	P	0 - 30
2006852	Imazapyr	3.55	Spike	P	0 - 30
2006852	Imidacloprid	17.1	Spike	P	0 - 30
2006852	Linuron	3.52	Spike	P	0 - 30
2006852	MCPP	2.04	Spike	P	0 - 30
2006852	Primidone	20.4	Spike	P	0 - 30
2006852	Pyraclostrobin	0.472	Spike	P	0 - 30
2006852	Triclopyr	0.447	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P348511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006963	Total Alkalinity	0.276	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P348512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006737	Total Alkalinity	0.472	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
Batch ID: P348515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006963	Fluoride	0.470	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P348516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006737	Fluoride	0.519	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P348457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006530	Organic Carbon	0.872	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P348458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2006666	Organic Carbon	1.05	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2006656
Field Sample ID: 20030114

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.9	P	30 - 160
EPA 8321B	Diuron-d6	60.2	P	30 - 160
EPA 8321B	Primidone-d5	82.7	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Lab Sample ID: 2006657
Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.9	P	30 - 160
EPA 8321B	Diuron-d6	57.8	P	30 - 160
EPA 8321B	Primidone-d5	96.6	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A85185

Included Lab Sample IDs: 2006619, 2006620, 2006621, 2006628, 2006629, 2006634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A85186

Included Lab Sample IDs: 2006625, 2006626, 2006627, 2006632, 2006633, 2006636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.3	96.2	P/P	90 - 110
O-Phosphate-P	97.2	98.5	P/P	90 - 110
O-Phosphate-P	97.6	97.7	P/P	90 - 110
O-Phosphate-P	98.5	96.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85220

Included Lab Sample IDs: 2006622, 2006623, 2006630, 2006635

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

Reference Method: EPA 8321B

Run ID: A85232

Included Lab Sample IDs: 2006656, 2006657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	96.1	P/P	50 - 150
2,4-D	108	100	P/P	50 - 150
Acetaminophen	110	104	P/P	60 - 160
Bentazon	129	121	P/P	50 - 150
Bentazon	132	129	P/P	50 - 150
Carbamazepine	110	110	P/P	60 - 160
Diuron	120	119	P/P	60 - 150
Fenuron	107	110	P/P	60 - 150
Fluridone	112	109	P/P	60 - 160
Hydrocodone	113	110	P/P	60 - 150
Imazapyr	103	85.6	P/P	50 - 150
Imidacloprid	96.4	94.4	P/P	60 - 150
Linuron	102	104	P/P	60 - 150
Linuron	104	106	P/P	60 - 150
MCP	96.3	97.4	P/P	50 - 150
MCP	97.4	97.6	P/P	50 - 150
Primidone	92.9	96.4	P/P	60 - 150
Pyraclostrobin	105	104	P/P	60 - 150
Pyraclostrobin	106	105	P/P	60 - 150
Triclopyr	100	84.8	P/P	50 - 160
Triclopyr	84.8	89.9	P/P	50 - 160

Reference Method: SM 5310 B-00

Run ID: A85237

Included Lab Sample IDs: 2006622, 2006623, 2006624, 2006630, 2006631, 2006635

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

Reference Method: SM 5310 B-00

Run ID: A85237

Included Lab Sample IDs: 2006622, 2006623, 2006624, 2006630, 2006631, 2006635

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

Reference Method: SM 2320 B-97

Run ID: A85254

Included Lab Sample IDs: 2006619, 2006620, 2006621, 2006628, 2006629, 2006634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A85254

Included Lab Sample IDs: 2006619, 2006620, 2006621, 2006628, 2006629, 2006634

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85262

Included Lab Sample IDs: 2006622, 2006623, 2006630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.3	P/P	90 - 110
Total-P	98.3	98.4	P/P	90 - 110
Total-P	99.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85268

Included Lab Sample IDs: 2006624, 2006631

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85271

Included Lab Sample IDs: 2006635

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85294

Included Lab Sample IDs: 2006622, 2006623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.2	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85298

Included Lab Sample IDs: 2006624

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85302

Included Lab Sample IDs: 2006631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85319

Included Lab Sample IDs: 2006656, 2006657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	122	113	P/P	60 - 160
Sucralose	131	122	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A85320

Included Lab Sample IDs: 2006622, 2006623, 2006630, 2006635

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A85346

Included Lab Sample IDs: 2006624, 2006631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85352

Included Lab Sample IDs: 2006624

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.7	93.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85379

Included Lab Sample IDs: 2006630, 2006631, 2006635

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.9	97.0	P/P	90 - 110
Kjeldahl Nitrogen	97.0	93.4	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					6.81	
EPA 350.1 Rev. 2.0	Ammonia-N	102	99.1	98.5			0.483
	Ammonia-N	99.0	99.7	98.9			0.767
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	92.2	93.0			0.444
	Kjeldahl Nitrogen	101	94.6	98.7			2.65
	Kjeldahl Nitrogen	95.4	102	99.5			2.50
	Kjeldahl Nitrogen	96.9	99.0	100			0.960
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	101	102			0.985
	NO ₂ NO ₃ -N	101	102	102			0.980
EPA 365.1 Rev. 2.0	Total-P	96.8	94.4	98.8			3.22
	Total-P	95.8	94.6	99.3			4.21
	Total-P	91.8	87.6	87.1			0.618
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.8	94.9	95.1			0.179
	O-Phosphate-P	99.1	95.5	96.1			0.539
EPA 8321B	2,4-D	104					2.38
	Acetaminophen	98.4	70.1	96.9			32.1
	Bentazon	107	74.0	74.1			0.226
	Carbamazepine	93.9	69.5	85.0			20.1
	Diuron	105	68.9	89.0			25.5
	Fenuron	108	83.9	95.8			13.2
	Fluridone	96.7	73.7	99.5			29.0
	Hydrocodone	105	80.9	60.6			28.7
	Imazapyr	96.8	113	109			3.55
	Imidacloprid	97.7	132	156			17.1
	Linuron	91.3	73.0	70.5			3.52
	MCPP	100	139	136			2.04
	Primidone	92.1	83.0	102			20.4
	Pyraclostrobin	95.8	93.5	94.0			0.472
	Sucralose	123	108	110			1.90
	Triclopyr	103	137	136			0.447
SM 2320 B-97	Total Alkalinity	102				0.276	
	Total Alkalinity	102				0.472	
SM 4500 F-C-97	Fluoride	98.5					0.470
	Fluoride	99.4	99.5	100			0.519
SM 5310 B-00	Organic Carbon	98.0	99.9				0.872
	Organic Carbon	99.9	97.4	99.0			1.05

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2006619, 2006620, 2006621, 2006628, 2006629, 2006634
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2006622, 2006623, 2006624, 2006630, 2006631, 2006635
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2006622, 2006623, 2006624, 2006630, 2006631, 2006635
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2006622, 2006623, 2006624, 2006630, 2006631, 2006635
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2006622, 2006623, 2006624, 2006630, 2006631, 2006635
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2006625, 2006626, 2006627, 2006632, 2006633, 2006636
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2006656, 2006657

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2006619, 2006620, 2006621, 2006628, 2006629, 2006634
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2006619, 2006620, 2006621, 2006628, 2006629, 2006634
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2006619, 2006620, 2006621, 2006628, 2006629, 2006634
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2006622, 2006623, 2006624, 2006630, 2006631, 2006635

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	07/12/2018			07/12/2018 17:20	William L. Brown IV	2006619, 2006620, 2006621, 2006628, 2006629, 2006634
EPA 350.1 Rev. 2.0	07/12/2018			07/18/2018 12:32	Ping Hua	2006622
	07/12/2018			07/18/2018 12:33	Ping Hua	2006623
	07/12/2018			07/18/2018 12:35	Ping Hua	2006630
	07/12/2018			07/18/2018 12:36	Ping Hua	2006635
	07/12/2018			07/19/2018 12:50	Ping Hua	2006624
	07/12/2018			07/19/2018 12:51	Ping Hua	2006631
EPA 351.2 Rev. 2.0	07/12/2018	07/16/2018 11:30	Adrian Shelby	07/18/2018 10:45	Joseph Suarez	2006622
	07/12/2018	07/16/2018 11:30	Adrian Shelby	07/18/2018 10:46	Joseph Suarez	2006623
	07/12/2018	07/18/2018 15:30	Adrian Shelby	07/19/2018 11:50	Joseph Suarez	2006624
	07/12/2018	07/19/2018 14:00	Adrian Shelby	07/20/2018 10:43	Joseph Suarez	2006630
	07/12/2018	07/19/2018 14:00	Adrian Shelby	07/20/2018 10:44	Joseph Suarez	2006635
	07/12/2018	07/19/2018 14:00	Adrian Shelby	07/20/2018 11:08	Joseph Suarez	2006631
EPA 353.2 Rev. 2.0	07/12/2018			07/13/2018 12:40	Lauren Bottorf	2006635
	07/12/2018			07/13/2018 12:46	Lauren Bottorf	2006622
	07/12/2018			07/13/2018 12:47	Lauren Bottorf	2006623
	07/12/2018			07/13/2018 12:48	Lauren Bottorf	2006630
	07/12/2018			07/17/2018 11:34	Lauren Bottorf	2006624
	07/12/2018			07/17/2018 11:35	Lauren Bottorf	2006631
EPA 365.1 Rev. 2.0	07/12/2018	07/16/2018 13:20	Sima Feizi	07/17/2018 08:23	Beverly Y. Sanders	2006622
	07/12/2018	07/16/2018 13:20	Sima Feizi	07/17/2018 08:36	Beverly Y. Sanders	2006623
	07/12/2018	07/16/2018 13:20	Sima Feizi	07/17/2018 08:40	Beverly Y. Sanders	2006630
	07/12/2018	07/16/2018 13:20	Sima Feizi	07/17/2018 13:23	Beverly Y. Sanders	2006635
	07/12/2018	07/17/2018 13:30	Sima Feizi	07/18/2018 08:57	Beverly Y. Sanders	2006624
	07/12/2018	07/17/2018 13:30	Sima Feizi	07/18/2018 11:26	Beverly Y. Sanders	2006631
EPA 365.1 Rev. 2.0 dissolved	07/12/2018			07/12/2018 17:15	Julia Storbeck	2006633
	07/12/2018			07/12/2018 17:37	Julia Storbeck	2006636
	07/12/2018			07/12/2018 17:41	Julia Storbeck	2006625
	07/12/2018			07/12/2018 17:42	Julia Storbeck	2006626
	07/12/2018			07/12/2018 17:47	Julia Storbeck	2006632
	07/12/2018			07/12/2018 18:07	Julia Storbeck	2006627
EPA 8321B	07/12/2018	07/13/2018 10:00	Hoor Shaik	07/14/2018 15:03	Juyoung Kim	2006656
	07/12/2018	07/13/2018 10:00	Hoor Shaik	07/14/2018 16:12	Juyoung Kim	2006657
	07/12/2018	07/13/2018 10:00	Hoor Shaik	07/15/2018 08:21	Juyoung Kim	2006656
	07/12/2018	07/13/2018 10:00	Hoor Shaik	07/15/2018 08:56	Juyoung Kim	2006657
	07/12/2018	07/16/2018 11:00	Juyoung Kim	07/17/2018 01:32	Mohammad Ghaffari	2006656
	07/12/2018	07/16/2018 11:00	Juyoung Kim	07/17/2018 02:02	Mohammad Ghaffari	2006657
SM 2320 B-97	07/12/2018			07/14/2018 03:34	Dale L. Simmons	2006619
	07/12/2018			07/14/2018 03:44	Dale L. Simmons	2006620

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	07/12/2018			07/14/2018 03:55	Dale L. Simmons	2006628
	07/12/2018			07/14/2018 04:19	Dale L. Simmons	2006621
	07/12/2018			07/14/2018 06:15	Dale L. Simmons	2006634
	07/12/2018			07/14/2018 09:43	Dale L. Simmons	2006629
SM 2540 D-97	07/12/2018			07/13/2018 17:35	William L. Brown IV	2006619, 2006620, 2006621, 2006628, 2006629, 2006634
SM 4500 F-C-97	07/12/2018			07/14/2018 03:34	Dale L. Simmons	2006619
	07/12/2018			07/14/2018 03:44	Dale L. Simmons	2006620
	07/12/2018			07/14/2018 03:55	Dale L. Simmons	2006628
	07/12/2018			07/14/2018 04:19	Dale L. Simmons	2006621
	07/12/2018			07/14/2018 06:15	Dale L. Simmons	2006634
SM 5310 B-00	07/12/2018			07/14/2018 09:43	Dale L. Simmons	2006629
	07/12/2018			07/13/2018 20:00	Megan Treadwell	2006622
	07/12/2018			07/13/2018 20:12	Megan Treadwell	2006623
	07/12/2018			07/13/2018 20:27	Megan Treadwell	2006624
	07/12/2018			07/13/2018 20:39	Megan Treadwell	2006630
	07/12/2018			07/13/2018 20:51	Megan Treadwell	2006631
	07/12/2018			07/13/2018 22:47	Megan Treadwell	2006635