Chemical Analysis Report

WQAP-2016-05-19-02

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

Event Description:	**Central Drainage Ditch, Lake Talquin, Lake Tallavanna and Stafford Creek**
Request ID:	**RQ-2016-05-16-34**
Customer:	**WQAP**
Project ID:	**SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
MS #3560
Tallahassee, FL 32399-2400
Attn: Katrina Sanders

For additional information please contact
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 14-JUN-2016 13:24

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: CENTRAL DRAINAGE DITCH DOWNSTREAM ORANGE AVE. **Collection Date/Time: 05/19/2016 08:15**

Field ID: G1WA0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800644	EPA 8321B	Glyphosate**	10	U	ug/L	P304694	
	USGS O-2060-01	2,4-D	0.12		ug/L	P304693	MS
		Diuron	0.036	J	ug/L	P304693	SUR
		Fenuron	0.0080	UJ	ug/L	P304693	SUR
		2,4,5-T	0.0020	U	ug/L	P304693	
		Acifluorfen	0.0020	U	ug/L	P304693	
		Imidacloprid	0.027	J	ug/L	P304693	MS, SUR
		Bentazon	0.026		ug/L	P304693	MS
		Linuron	0.0040	UJ	ug/L	P304693	SUR
		Acetaminophen**	0.050		ug/L	P304693	
		Carbamazepine**	4.0E-04	U	ug/L	P304693	
		Silvex	0.0020	U	ug/L	P304693	MS
		Primidone**	0.0080	U	ug/L	P304693	
		Fluridone**	4.0E-04	UJ	ug/L	P304693	SUR
1800652	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0019	U	ug/L	P304738	
		Alpha-BHC	0.0019	U	ug/L	P304738	
		Beta-BHC	0.0019	U	ug/L	P304738	
		Delta-BHC	0.0019	U	ug/L	P304738	
		Gamma-BHC	0.0019	U	ug/L	P304738	
		Carbophenothion	0.0058	UJ	ug/L	P304738	CCV
		Chlorothalonil	0.0078	UJ	ug/L	P304738	CCV
		Cypermethrin	0.012	U	ug/L	P304738	
		DDD-p,p'	0.0039	U	ug/L	P304738	
		DDE-p,p'	0.0039	U	ug/L	P304738	
		DDT-p,p'	0.0039	UJ	ug/L	P304738	CCV
		Dicofol	0.023	U	ug/L	P304738	
		Dieldrin	0.0043	U	ug/L	P304738	
		Endosulfan I	0.0019	U	ug/L	P304738	
		Endosulfan II	0.0019	U	ug/L	P304738	
		Endosulfan Sulfate	0.0039	UJ	ug/L	P304738	LCS
		Endrin	0.0039	U	ug/L	P304738	
		Endrin Aldehyde	0.0039	U	ug/L	P304738	
		Heptachlor	0.0019	U	ug/L	P304738	
		Heptachlor Epoxide	0.0019	U	ug/L	P304738	
		Methoxychlor	0.0097	UJ	ug/L	P304738	CCV
		Mirex	0.0039	U	ug/L	P304738	
		Permethrin	0.0097	UJ	ug/L	P304738	CCV
1800656	EPA 8270D	Ametryn	0.32	U	ng/L	P304685	
		Atrazine	160		ng/L	P304685	
		Chlorpyrifos Ethyl	0.098	U	ng/L	P304685	
		Chlorpyrifos Methyl	0.098	U	ng/L	P304685	
		Disulfoton	0.32	U	ng/L	P304685	

Field ID: G1WA0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800656	EPA 8270D	Ethion	0.15	U	ng/L	P304685	
		Ethoprop	0.098	U	ng/L	P304685	
		Hexazinone	0.49	U	ng/L	P304685	
		Malathion	0.34	U	ng/L	P304685	
		Metribuzin	0.20	UJ	ng/L	P304685	RPD
		Mevinphos	0.49	U	ng/L	P304685	
		Norflurazon	0.49	U	ng/L	P304685	
		Phorate	0.24	U	ng/L	P304685	
		Prometryn	0.20	U	ng/L	P304685	
		Simazine	8.6		ng/L	P304685	
		Atrazine Desethyl	12		ng/L	P304685	
		Prometon	83		ng/L	P304685	
		Fipronil	5.0		ng/L	P304685	
		Molinate	0.29	U	ng/L	P304685	
		Pendimethalin	1.5	U	ng/L	P304685	
		Terbufos	0.098	U	ng/L	P304685	
		EPTC	1.2	U	ng/L	P304685	MS
		Terbuthylazine	0.42	U	ng/L	P304685	
		Bromacil	5.6		ng/L	P304685	
		Fipronil Sulfide	0.60		ng/L	P304685	
		Fipronil Sulfone	2.4		ng/L	P304685	
		Alachlor	0.24	U	ng/L	P304685	
		Azinphos Methyl	2.2	U	ng/L	P304685	
		Butylate	0.39	U	ng/L	P304685	MS
		Demeton	0.98	U	ng/L	P304685	
		Diazinon	0.12	U	ng/L	P304685	
		Fenamiphos	0.24	U	ng/L	P304685	
		Fonofos	0.20	U	ng/L	P304685	
		Metalaxyl	0.29	I	ng/L	P304685	
		Metolachlor	1.9		ng/L	P304685	
		Acetochlor	1.1		ng/L	P304685	
		Cyanazine	0.49	U	ng/L	P304685	
		Parathion Ethyl	0.24	U	ng/L	P304685	
		Parathion Methyl	0.24	U	ng/L	P304685	

Ref. Method and Comment:
USGS O-2060-01: MCPP = 0.019 ug/L and triclopyr = 0.59 ug/L.
USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.
DEP SOP: GC-011-5 (based on EPA 608 and 617): MDL for Dieldrin elevated due to matrix interference. Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: CENTRAL DRAINAGE DITCH DOWNSTREAM ORANGE AVE. **Collection Date/Time: 05/19/2016 08:15**

Field ID: G1WA0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800627	EPA 180.1 Rev. 2.0	Turbidity	7.5	A	NTU	P304728	

Field ID: G1WA0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800627	EPA 300.0 Rev. 2.1	Chloride	9.4		mg Cl/L	P305175	
		Sulfate	5.2		mg SO4/L	P305176	
	SM 2120 B	Color (true)	47	A	PCU	P304732	
	SM 2320 B-97	Total Alkalinity	89		mg CaCO3/L	P304957	
	SM 2540 C-97	TDS	126	A	mg/L	P305599	
	SM 2540 D-97	TSS	7	I	mg/L	P305033	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P304959	
1800631	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P305260	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P305224	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P304808	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P305431	
	SM 5310 B-00	Organic Carbon	9.4		mg C/L	P305288	
1800635	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.074		mg P/L	P304725	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: LAKE TALQUIN MIDDLE **Collection Date/Time: 05/19/2016 09:20**

Field ID: G1WA0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800645	EPA 8321B	Glyphosate**	10	U	ug/L	P304694	
	USGS O-2060-01	2,4-D	0.43	J	ug/L	P304693	MS
		Diuron	0.011		ug/L	P304693	
		Fenuron	0.0080	U	ug/L	P304693	
		2,4,5-T	0.0020	U	ug/L	P304693	
		Acifluorfen	0.0020	U	ug/L	P304693	
		Imidacloprid	0.0070	IJ	ug/L	P304693	MS
		Bentazon	0.0098	J	ug/L	P304693	MS
		Linuron	0.0040	U	ug/L	P304693	
		Acetaminophen**	0.0040	U	ug/L	P304693	
		Carbamazepine**	0.0011	I	ug/L	P304693	
		Silvex	0.0020	UJ	ug/L	P304693	MS
		Primidone**	0.0080	U	ug/L	P304693	
		Fluridone**	4.9E-04	I	ug/L	P304693	
1800649	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P304812	
1800653	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0019	U	ug/L	P304738	
		Alpha-BHC	0.0019	U	ug/L	P304738	
		Beta-BHC	0.0019	U	ug/L	P304738	
		Delta-BHC	0.0019	U	ug/L	P304738	
		Gamma-BHC	0.0019	U	ug/L	P304738	
		Carbophenothion	0.0057	UJ	ug/L	P304738	CCV
		Chlorothalonil	0.0077	UJ	ug/L	P304738	CCV
		Cypermethrin	0.011	U	ug/L	P304738	
		DDD-p,p'	0.0038	U	ug/L	P304738	

Field ID: G1WA0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800653	DEP SOP: GC-011-5 (based on EPA 608 and 617)	DDE-p,p'	0.0038	U	ug/L	P304738	
		DDT-p,p'	0.0038	UJ	ug/L	P304738	CCV
		Dicofol	0.023	U	ug/L	P304738	
		Dieldrin	0.0019	U	ug/L	P304738	
		Endosulfan I	0.0019	U	ug/L	P304738	
		Endosulfan II	0.0019	U	ug/L	P304738	
		Endosulfan Sulfate	0.0038	UJ	ug/L	P304738	LCS
		Endrin	0.0038	U	ug/L	P304738	
		Endrin Aldehyde	0.0038	U	ug/L	P304738	
		Heptachlor	0.0019	U	ug/L	P304738	
		Heptachlor Epoxide	0.0019	U	ug/L	P304738	
		Methoxychlor	0.0096	UJ	ug/L	P304738	CCV
		Mirex	0.0038	U	ug/L	P304738	
		Permethrin	0.0096	UJ	ug/L	P304738	CCV
1800657	EPA 8270D	Ametryn	0.31	U	ng/L	P304685	
		Atrazine	45		ng/L	P304685	
		Chlorpyrifos Ethyl	0.096	U	ng/L	P304685	
		Chlorpyrifos Methyl	0.096	U	ng/L	P304685	
		Disulfoton	0.31	U	ng/L	P304685	
		Ethion	0.14	U	ng/L	P304685	
		Ethoprop	0.096	U	ng/L	P304685	
		Hexazinone	0.88	I	ng/L	P304685	
		Malathion	0.33	U	ng/L	P304685	
		Metribuzin	0.48	IJ	ng/L	P304685	RPD
		Mevinphos	0.48	U	ng/L	P304685	
		Norflurazon	0.79	I	ng/L	P304685	
		Phorate	0.24	U	ng/L	P304685	
		Prometryn	0.19	U	ng/L	P304685	
		Simazine	0.48	U	ng/L	P304685	
		Atrazine Desethyl	3.2	I	ng/L	P304685	
		Prometon	0.86	U	ng/L	P304685	
		Fipronil	0.24	U	ng/L	P304685	
		Molinate	0.29	U	ng/L	P304685	
		Pendimethalin	1.4	U	ng/L	P304685	
		Terbufos	0.096	U	ng/L	P304685	
		EPTC	1.2	U	ng/L	P304685	MS
		Terbuthylazine	0.41	U	ng/L	P304685	
		Bromacil	2.8		ng/L	P304685	
		Fipronil Sulfide	0.14	U	ng/L	P304685	
		Fipronil Sulfone	0.14	U	ng/L	P304685	
		Alachlor	0.59	I	ng/L	P304685	
		Azinphos Methyl	2.2	U	ng/L	P304685	
		Butylate	0.38	U	ng/L	P304685	MS
		Demeton	0.96	U	ng/L	P304685	

Field ID: G1WA0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800657	EPA 8270D	Diazinon	0.12	U	ng/L	P304685	
		Fenamiphos	0.24	U	ng/L	P304685	
		Fonofos	0.19	U	ng/L	P304685	
		Metalaxyl	1.8		ng/L	P304685	
		Metolachlor	16		ng/L	P304685	
		Acetochlor	1.0		ng/L	P304685	
		Cyanazine	0.48	U	ng/L	P304685	
		Parathion Ethyl	0.24	U	ng/L	P304685	
		Parathion Methyl	0.24	U	ng/L	P304685	

Ref. Method and Comment:
USGS O-2060-01: Triclopyr = 0.0066 I ug/L. Refer to the narrative for an explanation of QC Codes.
USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.
DEP SOP: GC-011-5 (based on EPA 608 and 617): Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: LAKE TALQUIN MIDDLE **Collection Date/Time: 05/19/2016 09:20**

Field ID: G1WA0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800628	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P304728	
	EPA 300.0 Rev. 2.1	Chloride	7.3		mg Cl/L	P305175	
		Sulfate	2.9		mg SO4/L	P305176	
	SM 2120 B	Color (true)	87		PCU	P304732	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P304957	
	SM 2540 C-97	TDS	56		mg/L	P305599	
	SM 2540 D-97	TSS	8	I	mg/L	P305033	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P304959	
1800632	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P305260	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P305224	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P304808	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P305431	
	SM 5310 B-00	Organic Carbon	9.2		mg C/L	P305288	
1800636	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P304725	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: STAFFORD CREEK 100M UPSTREAM OF SR 69 Collection Date/Time: 05/19/2016 12:06

Field ID: G2WA004 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800646	EPA 8321B	Glyphosate**	10	U	ug/L	P304694	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P304693	MS
		Diuron	0.0020	U	ug/L	P304693	
		Fenuron	0.0080	U	ug/L	P304693	
		2,4,5-T	0.0020	U	ug/L	P304693	
		Acifluorfen	0.0020	U	ug/L	P304693	
		Imidacloprid	0.0040	U	ug/L	P304693	MS

Field ID: G2WA004 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800646	USGS O-2060-01	Bentazon	0.0020	U	ug/L	P304693	MS
		Linuron	0.0040	U	ug/L	P304693	
		Acetaminophen**	0.0040	U	ug/L	P304693	
		Carbamazepine**	4.0E-04	U	ug/L	P304693	
		Silvex	0.0020	U	ug/L	P304693	MS
		Primidone**	0.0080	U	ug/L	P304693	
		Fluridone**	4.0E-04	U	ug/L	P304693	
1800650	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P304812	
1800654	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0019	U	ug/L	P304738	
		Alpha-BHC	0.0019	U	ug/L	P304738	
		Beta-BHC	0.0019	U	ug/L	P304738	
		Delta-BHC	0.0019	U	ug/L	P304738	
		Gamma-BHC	0.0019	U	ug/L	P304738	
		Carbophenothion	0.0058	UJ	ug/L	P304738	CCV
		Chlorothalonil	0.0077	UJ	ug/L	P304738	CCV
		Cypermethrin	0.012	U	ug/L	P304738	
		DDD-p,p'	0.0038	U	ug/L	P304738	
		DDE-p,p'	0.0038	U	ug/L	P304738	
		DDT-p,p'	0.0038	UJ	ug/L	P304738	CCV
		Dicofol	0.023	U	ug/L	P304738	
		Dieldrin	0.0019	U	ug/L	P304738	
		Endosulfan I	0.0019	U	ug/L	P304738	
		Endosulfan II	0.0019	U	ug/L	P304738	
		Endosulfan Sulfate	0.0038	UJ	ug/L	P304738	LCS
		Endrin	0.0038	U	ug/L	P304738	
		Endrin Aldehyde	0.0038	U	ug/L	P304738	
		Heptachlor	0.0019	U	ug/L	P304738	
		Heptachlor Epoxide	0.0019	U	ug/L	P304738	
		Methoxychlor	0.0096	UJ	ug/L	P304738	CCV
		Mirex	0.0038	U	ug/L	P304738	
		Permethrin	0.0096	UJ	ug/L	P304738	CCV
1800658	EPA 8270D	Ametryn	0.32	U	ng/L	P304685	
		Atrazine	0.38	I	ng/L	P304685	
		Chlorpyrifos Ethyl	0.10	U	ng/L	P304685	
		Chlorpyrifos Methyl	0.10	U	ng/L	P304685	
		Disulfoton	0.32	U	ng/L	P304685	
		Ethion	0.15	U	ng/L	P304685	
		Ethoprop	0.10	U	ng/L	P304685	
		Hexazinone	0.50	U	ng/L	P304685	
		Malathion	0.35	U	ng/L	P304685	
		Metribuzin	0.20	UJ	ng/L	P304685	RPD
		Mevinphos	0.50	U	ng/L	P304685	
		Norflurazon	0.50	U	ng/L	P304685	
		Phorate	0.25	U	ng/L	P304685	

Field ID: G2WA004 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800658	EPA 8270D	Prometryn	0.20	U	ng/L	P304685	
		Simazine	0.50	U	ng/L	P304685	
		Atrazine Desethyl	1.5	U	ng/L	P304685	
		Prometon	0.90	U	ng/L	P304685	
		Fipronil	0.25	U	ng/L	P304685	
		Molinate	0.30	U	ng/L	P304685	
		Pendimethalin	1.5	U	ng/L	P304685	
		Terbufos	0.10	U	ng/L	P304685	
		EPTC	1.2	UJ	ng/L	P304685	MS
		Terbuthylazine	0.42	U	ng/L	P304685	
		Bromacil	0.50	U	ng/L	P304685	
		Fipronil Sulfide	0.15	U	ng/L	P304685	
		Fipronil Sulfone	0.15	U	ng/L	P304685	
		Alachlor	0.25	U	ng/L	P304685	
		Azinphos Methyl	2.2	U	ng/L	P304685	
		Butylate	0.40	UJ	ng/L	P304685	MS
		Demeton	1.0	U	ng/L	P304685	
		Diazinon	0.12	U	ng/L	P304685	
		Fenamiphos	0.25	U	ng/L	P304685	
		Fonofos	0.20	U	ng/L	P304685	
		Metalaxyl	0.20	U	ng/L	P304685	
		Metolachlor	3.3		ng/L	P304685	
		Acetochlor	0.25	U	ng/L	P304685	
		Cyanazine	0.50	U	ng/L	P304685	
		Parathion Ethyl	0.25	U	ng/L	P304685	
		Parathion Methyl	0.25	U	ng/L	P304685	

Ref. Method and Comment:
DEP SOP: GC-011-5 (based on EPA 608 and 617): Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: STAFFORD CREEK 100M UPSTREAM OF SR 69 Collection Date/Time: 05/19/2016 12:06

Field ID: G2WA004 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800629	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P304728	
	EPA 300.0 Rev. 2.1	Chloride	7.6		mg Cl/L	P305175	
		Sulfate	1.0		mg SO4/L	P305176	
	SM 2120 B	Color (true)	68		PCU	P304732	
	SM 2320 B-97	Total Alkalinity	21		mg CaCO3/L	P304957	
	SM 2540 C-97	TDS	51		mg/L	P305599	
	SM 2540 D-97	TSS	2	I	mg/L	P305033	
	SM 4500 F-C-97	Fluoride	0.050	I	mg F/L	P304959	
1800633	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P305260	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P305224	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.59		mg N/L	P304808	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P305431	

Field ID: G2WA004 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800633	SM 5310 B-00	Organic Carbon	5.7		mg C/L	P305288	
1800637	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P304725	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: TALLAVANNA LAKE MIDDLE **Collection Date/Time: 05/19/2016 14:15**

Field ID: G1WA0045 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800647	EPA 8321B	Glyphosate**	10	U	ug/L	P304694	
	USGS O-2060-01	2,4-D	0.022		ug/L	P304693	MS
		Diuron	0.0021	I	ug/L	P304693	
		Fenuron	0.0080	U	ug/L	P304693	
		2,4,5-T	0.0020	U	ug/L	P304693	
		Acifluorfen	0.0020	U	ug/L	P304693	
		Imidacloprid	0.015	I	ug/L	P304693	MS
		Bentazon	0.017		ug/L	P304693	MS
		Linuron	0.0040	U	ug/L	P304693	
		Acetaminophen**	0.0040	U	ug/L	P304693	
		Carbamazepine**	4.0E-04	U	ug/L	P304693	
		Silvex	0.0020	U	ug/L	P304693	MS
		Primidone**	0.0080	U	ug/L	P304693	
		Fluridone**	4.0E-04	U	ug/L	P304693	
1800655	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0019	U	ug/L	P304738	
		Alpha-BHC	0.0019	U	ug/L	P304738	
		Beta-BHC	0.0019	U	ug/L	P304738	
		Delta-BHC	0.0019	U	ug/L	P304738	
		Gamma-BHC	0.0019	U	ug/L	P304738	
		Carbophenothion	0.0058	UJ	ug/L	P304738	CCV
		Chlorothalonil	0.0077	UJ	ug/L	P304738	CCV
		Cypermethrin	0.012	U	ug/L	P304738	
		DDD-p,p'	0.0038	U	ug/L	P304738	
		DDE-p,p'	0.0038	U	ug/L	P304738	
		DDT-p,p'	0.0038	UJ	ug/L	P304738	CCV
		Dicofol	0.023	U	ug/L	P304738	
		Dieldrin	0.0019	U	ug/L	P304738	
		Endosulfan I	0.0019	U	ug/L	P304738	
		Endosulfan II	0.0019	U	ug/L	P304738	
		Endosulfan Sulfate	0.0038	UJ	ug/L	P304738	LCS
		Endrin	0.0038	U	ug/L	P304738	
		Endrin Aldehyde	0.0038	U	ug/L	P304738	
		Heptachlor	0.0019	U	ug/L	P304738	
		Heptachlor Epoxide	0.0019	U	ug/L	P304738	
		Methoxychlor	0.0096	UJ	ug/L	P304738	CCV

Field ID: G1WA0045 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800655	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Mirex	0.0038	U	ug/L	P304738	
		Permethrin	0.0096	UJ	ug/L	P304738	CCV
1800659	EPA 8270D	Ametryn	0.31	U	ng/L	P304685	
		Atrazine	69		ng/L	P304685	
		Chlorpyrifos Ethyl	0.17	I	ng/L	P304685	
		Chlorpyrifos Methyl	0.096	U	ng/L	P304685	
		Disulfoton	0.31	U	ng/L	P304685	
		Ethion	0.14	U	ng/L	P304685	
		Ethoprop	0.096	U	ng/L	P304685	
		Hexazinone	0.48	U	ng/L	P304685	
		Malathion	0.34	U	ng/L	P304685	
		Metribuzin	0.19	UJ	ng/L	P304685	RPD
		Mevinphos	0.48	U	ng/L	P304685	
		Norflurazon	0.48	U	ng/L	P304685	
		Phorate	0.24	U	ng/L	P304685	
		Prometryn	0.19	U	ng/L	P304685	
		Simazine	0.48	U	ng/L	P304685	
		Atrazine Desethyl	1.7	I	ng/L	P304685	
		Prometon	0.87	U	ng/L	P304685	
		Fipronil	0.24	U	ng/L	P304685	
		Molinate	0.29	U	ng/L	P304685	
		Pendimethalin	1.4	U	ng/L	P304685	
		Terbufos	0.096	U	ng/L	P304685	
		EPTC	1.2	U	ng/L	P304685	MS
		Terbuthylazine	0.41	U	ng/L	P304685	
		Bromacil	0.48	U	ng/L	P304685	
		Fipronil Sulfide	0.14	U	ng/L	P304685	
		Fipronil Sulfone	0.21	I	ng/L	P304685	
		Alachlor	0.45	I	ng/L	P304685	
		Azinphos Methyl	2.2	U	ng/L	P304685	
		Butylate	0.38	U	ng/L	P304685	MS
		Demeton	0.96	U	ng/L	P304685	
		Diazinon	0.12	U	ng/L	P304685	
		Fenamiphos	0.24	U	ng/L	P304685	
		Fonofos	0.19	U	ng/L	P304685	
		Metalaxyl	30		ng/L	P304685	
		Metolachlor	0.57	I	ng/L	P304685	
		Acetochlor	0.24	U	ng/L	P304685	
		Cyanazine	0.48	U	ng/L	P304685	
		Parathion Ethyl	0.24	U	ng/L	P304685	
		Parathion Methyl	0.24	U	ng/L	P304685	

Field ID: G1WA0045 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

Ref. Method and Comment:
USGS O-2060-01: MCPP = 0.0090 I ug/L. Results confirmed in re-extraction.
USGS O-2060-01: Results confirmed in re-extraction.
DEP SOP: GC-011-5 (based on EPA 608 and 617): Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: TALLAVANNA LAKE MIDDLE **Collection Date/Time: 05/19/2016 14:15**

Field ID: G1WA0045 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1800630	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P304728	
	EPA 300.0 Rev. 2.1	Chloride	7.9		mg Cl/L	P305175	
		Sulfate	14		mg SO4/L	P305176	
	SM 2120 B	Color (true)	42		PCU	P304732	
	SM 2320 B-97	Total Alkalinity	37		mg CaCO3/L	P304957	
	SM 2540 C-97	TDS	83		mg/L	P305599	
	SM 2540 D-97	TSS	12		mg/L	P305033	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P304959	
1800634	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P305260	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P305224	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P304808	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P305431	
	SM 5310 B-00	Organic Carbon	8.5		mg C/L	P305288	
1800638	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P304725	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P304738

Component	Result	Code	Units
Aldrin	0.0020	U	ug/L
Alpha-BHC	0.0020	U	ug/L
Beta-BHC	0.0020	U	ug/L
Carbophenothion	0.0060	U	ug/L
Chlorothalonil	0.0080	U	ug/L
Cypermethrin	0.012	U	ug/L
DDD-p,p'	0.0040	U	ug/L
DDE-p,p'	0.0040	U	ug/L
DDT-p,p'	0.0040	U	ug/L
Delta-BHC	0.0020	U	ug/L
Dicofol	0.024	U	ug/L
Dieldrin	0.0020	U	ug/L
Endosulfan I	0.0020	U	ug/L
Endosulfan II	0.0020	U	ug/L
Endosulfan Sulfate	0.0040	U	ug/L
Endrin	0.0040	U	ug/L
Endrin Aldehyde	0.0040	U	ug/L
Gamma-BHC	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P304738

Component	Result	Code	Units
Heptachlor	0.0020	U	ug/L
Heptachlor Epoxide	0.0020	U	ug/L
Methoxychlor	0.010	U	ug/L
Mirex	0.0040	U	ug/L
Permethrin	0.010	U	ug/L

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304728

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305175

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305176

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305260

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305224

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304808

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305431

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304725

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304725

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

Reference Method: EPA 8270D
Batch ID: P304685

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.10	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	1.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P304694

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P304812

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P304732

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P304957

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

Reference Method: SM 2540 C-97
Batch ID: P305599

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P305033

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P304959

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P305288

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

Reference Method: USGS O-2060-01
Batch ID: P304693

Component	Result	Code	Units
2,4,5-T	0.0020	U	ug/L
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0040	U	ug/L
Acifluorfen	0.0020	U	ug/L
Bentazon	0.0020	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P304693

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Silvex	0.0020	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P304738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	103	91.1	P/P	70 - 130
Alpha-BHC	99.4	90.6	P/P	70 - 130
Beta-BHC	109	107	P/P	70 - 130
DDD-p,p'	124	117	P/P	70 - 130
DDE-p,p'	122	116	P/P	70 - 130
DDT-p,p'	124	121	P/P	70 - 130
Delta-BHC	127	116	P/P	70 - 130
Dieldrin	119	111	P/P	70 - 130
Endosulfan I	118	106	P/P	70 - 130
Endosulfan II	124	116	P/P	70 - 130
Endosulfan Sulfate	128	142	P/F	70 - 130
Endrin	135	131	P/P	81 - 147
Endrin Aldehyde	115	109	P/P	70 - 130
Gamma-BHC	104	93.5	P/P	70 - 130
Heptachlor	108	96.7	P/P	70 - 130
Heptachlor Epoxide	119	107	P/P	70 - 130
Methoxychlor	144	140	P/P	86 - 145

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305175

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305176

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305260

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305224

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305224

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304808

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305431

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304725

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

Reference Method: EPA 8270D
Batch ID: P304685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.5	96.9	P/P	84 - 119
Alachlor	92.8	95.5	P/P	84 - 121
Ametryn	91.4	95.3	P/P	66 - 127
Atrazine	107	110	P/P	72 - 119
Atrazine Desethyl	81.4	82.6	P/P	21 - 111
Azinphos Methyl	113	117	P/P	79 - 185
Bromacil	85.2	82.1	P/P	39 - 122
Butylate	56.5	58.3	P/P	36 - 94.0
Chlorpyrifos Ethyl	87.5	89.0	P/P	54 - 101
Chlorpyrifos Methyl	85.0	86.4	P/P	28 - 114
Cyanazine	148	153	P/P	58 - 201
Demeton	74.0	80.8	P/P	57 - 130
Diazinon	91.4	94.5	P/P	79 - 124
Disulfoton	81.8	97.6	P/P	45 - 140
EPTC	54.9	55.9	P/P	43 - 95.0
Ethion	92.4	96.1	P/P	65 - 125
Ethoprop	83.4	85.5	P/P	69 - 107
Fenamiphos	95.5	101	P/P	78 - 129
Fipronil	92.4	93.2	P/P	62 - 125
Fipronil Sulfide	93.8	89.7	P/P	65 - 119
Fipronil Sulfone	88.7	91.9	P/P	64 - 122
Fonofos	86.7	86.0	P/P	70 - 112
Hexazinone	95.7	99.4	P/P	44 - 147
Malathion	102	104	P/P	72 - 125
Metalaxyl	94.9	99.4	P/P	83 - 113
Metolachlor	93.0	95.7	P/P	85 - 120
Metribuzin	72.7	105	P/P	68 - 129
Mevinphos	91.9	93.5	P/P	35 - 125

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P304685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	66.8	69.3	P/P	51 - 100
Norflurazon	79.8	93.2	P/P	66 - 127
Parathion Ethyl	93.3	95.0	P/P	86 - 108
Parathion Methyl	96.7	104	P/P	87 - 125
Pendimethalin	81.0	80.0	P/P	53 - 136
Phorate	79.9	85.3	P/P	52 - 113
Prometon	91.1	93.6	P/P	67 - 125
Prometryn	92.3	98.9	P/P	73 - 114
Simazine	99.7	106	P/P	66 - 123
Terbufos	83.2	88.3	P/P	58 - 116
Terbuthylazine	97.7	98.2	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P304694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	106		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P304812

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	86.0		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P304957

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P304959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P305288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P304693

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	105		P	40 - 140
2,4-D	116		P	40 - 140
Acetaminophen	116		P	40 - 140
Acifluorfen	112		P	40 - 140
Bentazon	123		P	40 - 140
Carbamazepine	109		P	40 - 140

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P304693

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	119		P	40 - 140
Fenuron	102		P	40 - 140
Fluridone	110		P	40 - 140
Imidacloprid	106		P	40 - 160
Linuron	107		P	40 - 140
Primidone	128		P	40 - 140
Silvex	116		P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P304738

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801101	Aldrin	92.2	89.4	P/P	70 - 130
1801101	Alpha-BHC	91.0	91.5	P/P	70 - 130
1801101	Beta-BHC	107	102	P/P	70 - 130
1801101	DDD-p,p'	112	108	P/P	70 - 130
1801101	DDE-p,p'	112	109	P/P	70 - 130
1801101	DDT-p,p'	118	110	P/P	70 - 130
1801101	Delta-BHC	108	105	P/P	70 - 130
1801101	Dieldrin	96.0	95.9	P/P	70 - 130
1801101	Endosulfan I	104	96.7	P/P	70 - 130
1801101	Endosulfan II	111	107	P/P	70 - 130
1801101	Endosulfan Sulfate	126	118	P/P	70 - 130
1801101	Endrin	124	120	P/P	81 - 147
1801101	Endrin Aldehyde	103	100	P/P	70 - 130
1801101	Gamma-BHC	91.6	87.6	P/P	70 - 130
1801101	Heptachlor	97.6	97.8	P/P	70 - 130
1801101	Heptachlor Epoxide	95.5	91.0	P/P	70 - 130
1801101	Methoxychlor	136	122	P/P	86 - 145

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305175

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800451	Chloride	96.5	97.4	P/P	90 - 110
1800628	Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800451	Sulfate	96.9	98.2	P/P	90 - 110
1800628	Sulfate	98.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305260

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305260

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800632	Ammonia-N	99.4	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305224

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800631	Kjeldahl Nitrogen	106	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800546	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800548	Total-P	102	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800801	O-Phosphate-P	95.8	96.6	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P304685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800658	Acetochlor	98.1	97.5	P/P	84 - 119
1800658	Alachlor	95.9	94.5	P/P	84 - 121
1800658	Ametryn	97.8	104	P/P	66 - 127
1800658	Atrazine	109	111	P/P	72 - 119
1800658	Atrazine Desethyl	71.1	69.0	P/P	21 - 111
1800658	Azinphos Methyl	122	119	P/P	79 - 185
1800658	Bromacil	90.3	94.1	P/P	39 - 122
1800658	Butylate	35.0	45.3	F/P	36 - 94.0
1800658	Chlorpyrifos Ethyl	88.4	89.0	P/P	54 - 101
1800658	Chlorpyrifos Methyl	85.2	86.4	P/P	28 - 114
1800658	Cyanazine	135	154	P/P	58 - 201
1800658	Demeton	84.0	84.6	P/P	57 - 130
1800658	Diazinon	98.8	96.2	P/P	79 - 124
1800658	Disulfoton	89.9	93.6	P/P	45 - 140
1800658	EPTC	33.8	42.4	F/F	43 - 95.0
1800658	Ethion	94.2	91.3	P/P	65 - 125
1800658	Ethoprop	85.0	90.4	P/P	69 - 107
1800658	Fenamiphos	95.1	97.7	P/P	78 - 129
1800658	Fipronil	93.1	95.0	P/P	62 - 125
1800658	Fipronil Sulfide	98.1	101	P/P	65 - 119
1800658	Fipronil Sulfone	92.2	97.2	P/P	64 - 122
1800658	Fonofos	87.8	91.4	P/P	70 - 112

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P304685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800658	Hexazinone	98.4	97.9	P/P	44 - 147
1800658	Malathion	105	107	P/P	72 - 125
1800658	Metalaxyl	96.9	94.6	P/P	83 - 113
1800658	Metolachlor	93.3	92.9	P/P	85 - 120
1800658	Metribuzin	102	105	P/P	68 - 129
1800658	Mevinphos	81.0	94.6	P/P	35 - 125
1800658	Molinate	52.6	61.4	P/P	51 - 100
1800658	Norflurazon	88.8	96.9	P/P	66 - 127
1800658	Parathion Ethyl	95.9	92.7	P/P	86 - 108
1800658	Parathion Methyl	101	107	P/P	87 - 125
1800658	Pendimethalin	82.0	80.5	P/P	53 - 136
1800658	Phorate	78.2	83.0	P/P	52 - 113
1800658	Prometon	96.0	93.2	P/P	67 - 125
1800658	Prometryn	98.2	98.6	P/P	73 - 114
1800658	Simazine	99.1	99.2	P/P	66 - 123
1800658	Terbufos	89.0	90.7	P/P	58 - 116
1800658	Terbuthylazine	98.4	98.2	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P304694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800645	Glyphosate	101	80.2	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P304812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800650	Pyraclostrobin	107	107	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P304959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800300	Fluoride	98.8	98.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P305288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800581	Organic Carbon	97.4	99.1	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P304693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800645	2,4,5-T	111	110	P/P	40 - 140
1800645	2,4-D	192	216	F/F	40 - 140
1800645	Acetaminophen	66.4	80.4	P/P	40 - 140
1800645	Acifluorfen	93.6	118	P/P	40 - 140
1800645	Bentazon	212	210	F/F	40 - 140
1800645	Carbamazepine	74.5	84.1	P/P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P304693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800645	Diuron	65.8	61.4	P/P	40 - 140
1800645	Fenuron	70.4	73.6	P/P	40 - 140
1800645	Fluridone	95.1	97.9	P/P	40 - 140
1800645	Imidacloprid	159	161	P/F	40 - 160
1800645	Linuron	80.8	80.4	P/P	40 - 140
1800645	Primidone	97.2	106	P/P	40 - 140
1800645	Silvex	140	152	P/F	40 - 140

Quality Assurance Report
Precision

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P304738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801101	Aldrin	3.06	Spike	P	0 - 30
1801101	Alpha-BHC	0.526	Spike	P	0 - 30
1801101	Beta-BHC	4.47	Spike	P	0 - 30
1801101	DDD-p,p'	3.77	Spike	P	0 - 30
1801101	DDE-p,p'	3.47	Spike	P	0 - 30
1801101	DDT-p,p'	7.15	Spike	P	0 - 30
1801101	Delta-BHC	2.57	Spike	P	0 - 30
1801101	Dieldrin	0.106	Spike	P	0 - 30
1801101	Endosulfan I	6.98	Spike	P	0 - 30
1801101	Endosulfan II	3.66	Spike	P	0 - 30
1801101	Endosulfan Sulfate	6.53	Spike	P	0 - 30
1801101	Endrin	3.12	Spike	P	0 - 30
1801101	Endrin Aldehyde	2.55	Spike	P	0 - 30
1801101	Gamma-BHC	4.54	Spike	P	0 - 30
1801101	Heptachlor	0.183	Spike	P	0 - 30
1801101	Heptachlor Epoxide	3.54	Spike	P	0 - 30
1801101	Methoxychlor	10.9	Spike	P	0 - 30
LFB	Aldrin	12.6	LCS	P	0 - 30
LFB	Alpha-BHC	9.33	LCS	P	0 - 30
LFB	Beta-BHC	2.58	LCS	P	0 - 30
LFB	DDD-p,p'	5.70	LCS	P	0 - 30
LFB	DDE-p,p'	5.66	LCS	P	0 - 30
LFB	DDT-p,p'	1.81	LCS	P	0 - 30
LFB	Delta-BHC	8.68	LCS	P	0 - 30
LFB	Dieldrin	6.80	LCS	P	0 - 30
LFB	Endosulfan I	10.3	LCS	P	0 - 30
LFB	Endosulfan II	7.08	LCS	P	0 - 30
LFB	Endosulfan Sulfate	9.77	LCS	P	0 - 30
LFB	Endrin	2.93	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.74	LCS	P	0 - 30
LFB	Gamma-BHC	10.7	LCS	P	0 - 30
LFB	Heptachlor	10.9	LCS	P	0 - 30
LFB	Heptachlor Epoxide	11.0	LCS	P	0 - 30
LFB	Methoxychlor	2.57	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800627	Turbidity	1.07	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800451	Chloride	0.588	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800451	Sulfate	1.26	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800632	Ammonia-N	0.204	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305224

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800631	Kjeldahl Nitrogen	4.61	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800546	NO2NO3-N	1.93	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800548	Total-P	2.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800801	O-Phosphate-P	0.832	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P304685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800658	Acetochlor	0.649	Spike	P	0 - 30
1800658	Alachlor	1.45	Spike	P	0 - 30
1800658	Ametryn	5.76	Spike	P	0 - 30
1800658	Atrazine	2.16	Spike	P	0 - 30
1800658	Atrazine Desethyl	3.04	Spike	P	0 - 30
1800658	Azinphos Methyl	2.53	Spike	P	0 - 30
1800658	Bromacil	4.09	Spike	P	0 - 30
1800658	Butylate	25.8	Spike	P	0 - 30
1800658	Chlorpyrifos Ethyl	0.694	Spike	P	0 - 30
1800658	Chlorpyrifos Methyl	1.47	Spike	P	0 - 30
1800658	Cyanazine	12.6	Spike	P	0 - 30
1800658	Demeton	0.671	Spike	P	0 - 30
1800658	Diazinon	2.68	Spike	P	0 - 30
1800658	Disulfoton	3.97	Spike	P	0 - 30
1800658	EPTC	22.5	Spike	P	0 - 30
1800658	Ethion	3.17	Spike	P	0 - 30
1800658	Ethoprop	6.16	Spike	P	0 - 30
1800658	Fenamiphos	2.65	Spike	P	0 - 30
1800658	Fipronil	2.09	Spike	P	0 - 30
1800658	Fipronil Sulfide	2.90	Spike	P	0 - 30
1800658	Fipronil Sulfone	5.32	Spike	P	0 - 30
1800658	Fonofos	4.04	Spike	P	0 - 30
1800658	Hexazinone	0.483	Spike	P	0 - 30
1800658	Malathion	1.65	Spike	P	0 - 30
1800658	Metalaxyl	2.31	Spike	P	0 - 30
1800658	Metolachlor	0.376	Spike	P	0 - 30
1800658	Metribuzin	3.08	Spike	P	0 - 30
1800658	Mevinphos	15.5	Spike	P	0 - 30
1800658	Molinate	15.5	Spike	P	0 - 30
1800658	Norflurazon	8.72	Spike	P	0 - 30
1800658	Parathion Ethyl	3.43	Spike	P	0 - 30
1800658	Parathion Methyl	6.03	Spike	P	0 - 30
1800658	Pendimethalin	1.89	Spike	P	0 - 30
1800658	Phorate	6.03	Spike	P	0 - 30
1800658	Prometon	2.96	Spike	P	0 - 30
1800658	Prometryn	0.327	Spike	P	0 - 30
1800658	Simazine	0.150	Spike	P	0 - 30
1800658	Terbufos	1.90	Spike	P	0 - 30
1800658	Terbuthylazine	0.252	Spike	P	0 - 30
LFB	Acetochlor	1.38	LCS	P	0 - 30
LFB	Alachlor	2.85	LCS	P	0 - 30
LFB	Ametryn	4.14	LCS	P	0 - 30
LFB	Atrazine	2.29	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.48	LCS	P	0 - 30
LFB	Azinphos Methyl	3.39	LCS	P	0 - 30
LFB	Bromacil	3.72	LCS	P	0 - 30
LFB	Butylate	3.25	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.76	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.61	LCS	P	0 - 30
LFB	Cyanazine	3.35	LCS	P	0 - 30
LFB	Demeton	8.74	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P304685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	3.32	LCS	P	0 - 30
LFB	Disulfoton	17.6	LCS	P	0 - 30
LFB	EPTC	1.86	LCS	P	0 - 30
LFB	Ethion	3.92	LCS	P	0 - 30
LFB	Ethoprop	2.52	LCS	P	0 - 30
LFB	Fenamiphos	5.28	LCS	P	0 - 30
LFB	Fipronil	0.822	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.49	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.52	LCS	P	0 - 30
LFB	Fonofos	0.834	LCS	P	0 - 30
LFB	Hexazinone	3.72	LCS	P	0 - 30
LFB	Malathion	2.12	LCS	P	0 - 30
LFB	Metalaxyl	4.59	LCS	P	0 - 30
LFB	Metolachlor	2.96	LCS	P	0 - 30
LFB	Metribuzin	36.3	LCS	F	0 - 30
LFB	Mevinphos	1.69	LCS	P	0 - 30
LFB	Molinate	3.79	LCS	P	0 - 30
LFB	Norflurazon	15.4	LCS	P	0 - 30
LFB	Parathion Ethyl	1.77	LCS	P	0 - 30
LFB	Parathion Methyl	7.55	LCS	P	0 - 30
LFB	Pendimethalin	1.29	LCS	P	0 - 30
LFB	Phorate	6.52	LCS	P	0 - 30
LFB	Prometon	2.72	LCS	P	0 - 30
LFB	Prometryn	6.90	LCS	P	0 - 30
LFB	Simazine	5.98	LCS	P	0 - 30
LFB	Terbufos	6.04	LCS	P	0 - 30
LFB	Terbuthylazine	0.502	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P304694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800645	Glyphosate	22.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P304812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800650	Pyraclostrobin	0.0	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P304732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800627	Color (true)	5.19	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-97
Batch ID: P304957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800300	Total Alkalinity	0.0676	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P305599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800627	TDS	0.791	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P304959

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800300	Fluoride	0.483	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P305288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800581	Organic Carbon	0.990	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P304693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800645	2,4,5-T	1.45	Spike	P	0 - 30
1800645	2,4-D	3.80	Spike	P	0 - 30
1800645	Acetaminophen	19.1	Spike	P	0 - 30
1800645	Acifluorfen	23.1	Spike	P	0 - 30
1800645	Bentazon	1.09	Spike	P	0 - 30
1800645	Carbamazepine	11.9	Spike	P	0 - 30
1800645	Diuron	5.90	Spike	P	0 - 30
1800645	Fenuron	4.44	Spike	P	0 - 30
1800645	Fluridone	2.89	Spike	P	0 - 30
1800645	Imidacloprid	0.959	Spike	P	0 - 30
1800645	Linuron	0.496	Spike	P	0 - 30
1800645	Primidone	8.66	Spike	P	0 - 30
1800645	Silvex	8.50	Spike	P	0 - 30

* 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

Quality Assurance Report
Surrogates

Lab Sample ID: 1800644
Field Sample ID: G1WA0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	84.6	P	50 - 150
USGS O-2060-01	2,4-D-d3	90.6	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	46.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	43.8	P	40 - 160
USGS O-2060-01	Diuron-d6	25.2	F	40 - 150
USGS O-2060-01	Primidone-d5	75.6	P	40 - 150

Lab Sample ID: 1800645
Field Sample ID: G1WA0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	89.8	P	50 - 150
USGS O-2060-01	2,4-D-d3	106	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	65.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	75.2	P	40 - 160
USGS O-2060-01	Diuron-d6	58.2	P	40 - 150
USGS O-2060-01	Primidone-d5	81.0	P	40 - 150

Lab Sample ID: 1800646
Field Sample ID: G2WA004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	107	P	50 - 150
USGS O-2060-01	2,4-D-d3	109	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	80.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	102	P	40 - 160
USGS O-2060-01	Diuron-d6	80.6	P	40 - 150
USGS O-2060-01	Primidone-d5	123	P	40 - 150

Lab Sample ID: 1800647
Field Sample ID: G1WA0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	79.0	P	50 - 150
USGS O-2060-01	2,4-D-d3	104	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	54.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	86.8	P	40 - 160
USGS O-2060-01	Diuron-d6	64.4	P	40 - 150
USGS O-2060-01	Primidone-d5	95.0	P	40 - 150

Lab Sample ID: 1800649
Field Sample ID: G1WA0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	75.4	P	40 - 150

Lab Sample ID: 1800650
Field Sample ID: G2WA004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	83.6	P	40 - 150

Quality Assurance Report
Surrogates

Lab Sample ID: 1800652
Field Sample ID: G1WA0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	56.7	P	44 - 128

Lab Sample ID: 1800653
Field Sample ID: G1WA0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	54.3	P	44 - 128

Lab Sample ID: 1800654
Field Sample ID: G2WA004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	85.7	P	44 - 128

Lab Sample ID: 1800655
Field Sample ID: G1WA0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	64.8	P	44 - 128

Lab Sample ID: 1800656
Field Sample ID: G1WA0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	88.5	P	67 - 131
EPA 8270D	Simazine-d10	123	P	75 - 130

Lab Sample ID: 1800657
Field Sample ID: G1WA0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	92.7	P	67 - 131
EPA 8270D	Simazine-d10	109	P	75 - 130

Lab Sample ID: 1800658
Field Sample ID: G2WA004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	96.6	P	67 - 131
EPA 8270D	Simazine-d10	105	P	75 - 130

Lab Sample ID: 1800659
Field Sample ID: G1WA0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	73.6	P	67 - 131
EPA 8270D	Simazine-d10	104	P	75 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A69604
Included Lab Sample IDs: 1800635, 1800636, 1800637, 1800638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A69605
Included Lab Sample IDs: 1800627, 1800628, 1800629, 1800630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	101	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A69606
Included Lab Sample IDs: 1800627, 1800628, 1800629, 1800630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.1	98.5	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A69629
Included Lab Sample IDs: 1800631, 1800632, 1800633, 1800634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A69675
Included Lab Sample IDs: 1800627, 1800628, 1800629, 1800630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A69675
Included Lab Sample IDs: 1800627, 1800628, 1800629, 1800630

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A69676
Included Lab Sample IDs: 1800627, 1800628, 1800629, 1800630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	97.3	100	P/P	90 - 110
Sulfate	97.7	99.8	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A69682
Included Lab Sample IDs: 1800644, 1800645, 1800646, 1800647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	109	112	P/P	70 - 130
Glyphosate	116	109	P/P	70 - 130

Reference Method: USGS O-2060-01
Run ID: A69699
Included Lab Sample IDs: 1800644, 1800645, 1800646, 1800647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	112	121	P/P	60 - 150
Acetaminophen	121	129	P/P	60 - 150
Carbamazepine	104	105	P/P	60 - 150
Carbamazepine	96.4	104	P/P	60 - 150
Diuron	103	116	P/P	60 - 150
Diuron	116	126	P/P	60 - 150
Fenuron	106	109	P/P	60 - 150
Fenuron	96.8	106	P/P	60 - 150
Fluridone	102	106	P/P	60 - 150
Fluridone	91.6	102	P/P	60 - 150
Imidacloprid	110	112	P/P	60 - 150
Imidacloprid	112	119	P/P	60 - 150
Linuron	109	122	P/P	60 - 150
Linuron	122	118	P/P	60 - 150
Primidone	124	128	P/P	60 - 150
Primidone	128	142	P/P	60 - 150

Reference Method: USGS O-2060-01
Run ID: A69713
Included Lab Sample IDs: 1800644, 1800645, 1800646, 1800647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	106	99.8	P/P	50 - 150
2,4,5-T	113	106	P/P	50 - 150
2,4-D	109	117	P/P	50 - 150
2,4-D	117	119	P/P	50 - 150
Acifluorfen	133	141	P/P	50 - 150
Acifluorfen	141	136	P/P	50 - 150
Bentazon	113	110	P/P	50 - 150
Bentazon	119	113	P/P	50 - 150
Silvex	137	137	P/P	50 - 150
Silvex	137	137	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A69733
Included Lab Sample IDs: 1800649, 1800650

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	89.2	95.6	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A69751
Included Lab Sample IDs: 1800631, 1800632, 1800633, 1800634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	99.9	P/P	90 - 110
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A69765
Included Lab Sample IDs: 1800631, 1800632, 1800633, 1800634

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A69797
Included Lab Sample IDs: 1800631, 1800632, 1800633, 1800634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.2	96.2	P/P	90 - 110
Kjeldahl Nitrogen	96.2	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A69840
Included Lab Sample IDs: 1800631, 1800632, 1800634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.9	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A69851
Included Lab Sample IDs: 1800633

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

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Run ID: A69869
Included Lab Sample IDs: 1800652, 1800653, 1800654, 1800655

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.3	96.1	P/P	85 - 115
Alpha-BHC	91.2	94.0	P/P	85 - 115
Beta-BHC	91.6	93.1	P/P	85 - 115
Carbophenothion	73.3*	100	F/P	90 - 110
Chlorothalonil	109	117*	P/F	90 - 110
Cypermethrin	87.2	115	P/P	85 - 115
DDD-p,p'	97.0	108	P/P	85 - 115
DDE-p,p'	93.0	95.2	P/P	85 - 115
DDT-p,p'	86.4	68.9*	P/F	85 - 115
Delta-BHC	93.3	97.3	P/P	85 - 115
Dicofol	101	93.9	P/P	90 - 110
Dieldrin	92.5	94.9	P/P	85 - 115
Endosulfan I	91.2	93.8	P/P	85 - 115

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Run ID: A69869
Included Lab Sample IDs: 1800652, 1800653, 1800654, 1800655

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan II	92.9	95.8	P/P	85 - 115
Endosulfan Sulfate	92.0	94.8	P/P	85 - 115
Endrin	91.0	96.7	P/P	85 - 115
Endrin Aldehyde	93.3	95.9	P/P	85 - 115
Gamma-BHC	92.8	94.6	P/P	85 - 115
Heptachlor	92.5	93.5	P/P	85 - 115
Heptachlor Epoxide	91.9	94.2	P/P	85 - 115
Methoxychlor	88.1*	70.8*	F/F	90 - 110
Mirex	101	92.1	P/P	90 - 110
Permethrin	81.3*	108	F/P	90 - 110

Reference Method: EPA 8270D
Run ID: A69944
Included Lab Sample IDs: 1800656, 1800657, 1800658, 1800659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	97.9		P	80 - 120
Atrazine	106		P	80 - 120
Atrazine Desethyl	96.5		P	80 - 120
Azinphos Methyl	105		P	80 - 120
Bromacil	96.8		P	80 - 120
Butylate	99.6		P	80 - 120
Chlorpyrifos Ethyl	94.6		P	80 - 120
Chlorpyrifos Methyl	96.3		P	80 - 120
Cyanazine	106		P	80 - 120
Demeton	99.4		P	80 - 120
Diazinon	96.7		P	80 - 120
Disulfoton	97.8		P	80 - 120
EPTC	100		P	80 - 120
Ethion	90.0		P	80 - 120
Ethoprop	95.8		P	80 - 120
Fenamiphos	94.4		P	80 - 120
Fipronil	92.9		P	80 - 120
Fipronil Sulfide	96.2		P	80 - 120
Fipronil Sulfone	95.4		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	96.6		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	93.7		P	80 - 120
Mevinphos	106		P	80 - 120
Molinate	99.0		P	80 - 120
Norflurazon	99.1		P	80 - 120
Parathion Ethyl	95.3		P	80 - 120
Parathion Methyl	94.2		P	80 - 120
Pendimethalin	87.5		P	80 - 120
Phorate	90.8		P	80 - 120
Prometon	104		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A69944
Included Lab Sample IDs: 1800656, 1800657, 1800658, 1800659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Prometryn	98.6		P	80 - 120
Simazine	96.7		P	80 - 120
Terbufos	94.7		P	80 - 120
Terbuthylazine	100		P	80 - 120

Reference Method: EPA 8270D
Run ID: A69946
Included Lab Sample IDs: 1800656, 1800659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	92.0		P	80 - 120
Prometon	92.9		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	103	91.1	92.2	89.4		12.6		3.06
	Alpha-BHC	99.4	90.6	91.0	91.5		9.33		0.526
	Beta-BHC	109	107	107	102		2.58		4.47
	DDD-p,p'	124	117	112	108		5.70		3.77
	DDE-p,p'	122	116	112	109		5.66		3.47
	DDT-p,p'	124	121	118	110		1.81		7.15
	Delta-BHC	127	116	108	105		8.68		2.57
	Dieldrin	119	111	96.0	95.9		6.80		0.106
	Endosulfan I	118	106	104	96.7		10.3		6.98
	Endosulfan II	124	116	111	107		7.08		3.66
	Endosulfan Sulfate	128	142	126	118		9.77		6.53
	Endrin	135	131	124	120		2.93		3.12
	Endrin Aldehyde	115	109	103	100		5.74		2.55
	Gamma-BHC	104	93.5	91.6	87.6		10.7		4.54
	Heptachlor	108	96.7	97.6	97.8		10.9		0.183
	Heptachlor Epoxide	119	107	95.5	91.0		11.0		3.54
	Methoxychlor	144	140	136	122		2.57		10.9
EPA 180.1 Rev. 2.0	Turbidity							1.07	
EPA 300.0 Rev. 2.1	Chloride	99.6		96.5	97.4	98.8			0.588
	Sulfate	98.6		96.9	98.2	98.3			1.26
EPA 350.1 Rev. 2.0	Ammonia-N	100		99.4	99.2				0.204
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.6		106	98.8				4.61
EPA 353.2 Rev. 2.0	NO2NO3-N	103		102	104				1.93
EPA 365.1 Rev. 2.0	Total-P	101		102	105				2.57
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0		95.8	96.6				0.832
EPA 8270D	Acetochlor	95.5	96.9	98.1	97.5		1.38		0.649
	Alachlor	92.8	95.5	95.9	94.5		2.85		1.45

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Ametryn	91.4	95.3	97.8	104	4.14		5.76
	Atrazine	107	110	111	109	2.29		2.16
	Atrazine Desethyl	81.4	82.6	71.1	69.0	1.48		3.04
	Azinphos Methyl	113	117	122	119	3.39		2.53
	Bromacil	85.2	82.1	90.3	94.1	3.72		4.09
	Butylate	56.5	58.3	35.0	45.3	3.25		25.8
	Chlorpyrifos Ethyl	87.5	89.0	88.4	89.0	1.76		0.694
	Chlorpyrifos Methyl	85.0	86.4	85.2	86.4	1.61		1.47
	Cyanazine	148	153	135	154	3.35		12.6
	Demeton	74.0	80.8	84.0	84.6	8.74		0.671
	Diazinon	91.4	94.5	98.8	96.2	3.32		2.68
	Disulfoton	81.8	97.6	89.9	93.6	17.6		3.97
	EPTC	54.9	55.9	33.8	42.4	1.86		22.5
	Ethion	92.4	96.1	94.2	91.3	3.92		3.17
	Ethoprop	83.4	85.5	85.0	90.4	2.52		6.16
	Fenamiphos	95.5	101	95.1	97.7	5.28		2.65
	Fipronil	92.4	93.2	93.1	95.0	0.822		2.09
	Fipronil Sulfide	93.8	89.7	98.1	101	4.49		2.90
	Fipronil Sulfone	88.7	91.9	92.2	97.2	3.52		5.32
	Fonofos	86.7	86.0	87.8	91.4	0.834		4.04
	Hexazinone	95.7	99.4	98.4	97.9	3.72		0.483
	Malathion	102	104	105	107	2.12		1.65
	Metalaxyl	94.9	99.4	96.9	94.6	4.59		2.31
	Metolachlor	93.0	95.7	93.3	92.9	2.96		0.376
	Metribuzin	72.7	105	102	105	36.3		3.08
	Mevinphos	91.9	93.5	81.0	94.6	1.69		15.5
	Molinate	66.8	69.3	52.6	61.4	3.79		15.5
	Norflurazon	79.8	93.2	88.8	96.9	15.4		8.72
	Parathion Ethyl	93.3	95.0	95.9	92.7	1.77		3.43
	Parathion Methyl	96.7	104	101	107	7.55		6.03
	Pendimethalin	81.0	80.0	82.0	80.5	1.29		1.89
	Phorate	79.9	85.3	78.2	83.0	6.52		6.03
	Prometon	91.1	93.6	96.0	93.2	2.72		2.96
	Prometryn	92.3	98.9	98.2	98.6	6.90		0.327
	Simazine	99.7	106	99.1	99.2	5.98		0.150
	Terbufos	83.2	88.3	89.0	90.7	6.04		1.90
	Terbuthylazine	97.7	98.2	98.4	98.2	0.502		0.252
EPA 8321B	Glyphosate	106		101	80.2			22.8
	Pyraclostrobin	86.0		107	107			0.0
SM 2120 B	Color (true)						5.19	
SM 2320 B-97	Total Alkalinity	101					0.0676	
SM 2540 C-97	TDS						0.791	
SM 4500 F-C-97	Fluoride	98.5		98.8	98.2			0.483
SM 5310 B-00	Organic Carbon	99.8		97.4	99.1			0.990
USGS O-2060-01	2,4,5-T	105		111	110			1.45
	2,4-D	116		192	216			3.80
	Acetaminophen	116		66.4	80.4			19.1
	Acifluorfen	112		93.6	118			23.1
	Bentazon	123		212	210			1.09
	Carbamazepine	109		74.5	84.1			11.9
	Diuron	119		65.8	61.4			5.90
	Fenuron	102		70.4	73.6			4.44
	Fluridone	110		95.1	97.9			2.89
	Imidacloprid	106		159	161			0.959

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
USGS O-2060-01	Linuron	107	80.8	80.4			0.496
	Primidone	128	97.2	106			8.66
	Silvex	116	140	152			8.50

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617) / E31780	Organochlorine pesticides (low levels) in water matrices by GC/ECD.	1800652, 1800653, 1800654, 1800655
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1800627, 1800628, 1800629, 1800630
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1800627, 1800628, 1800629, 1800630
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1800627, 1800628, 1800629, 1800630
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1800631, 1800632, 1800633, 1800634
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1800631, 1800632, 1800633, 1800634
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1800631, 1800632, 1800633, 1800634
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1800631, 1800632, 1800633, 1800634
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1800635, 1800636, 1800637, 1800638
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1800656, 1800657, 1800658, 1800659
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1800644, 1800645, 1800646, 1800647
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1800649, 1800650
SM 2120 B / E31780	True Color measured at 450 nm	1800627, 1800628, 1800629, 1800630
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1800627, 1800628, 1800629, 1800630
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1800627, 1800628, 1800629, 1800630
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1800627, 1800628, 1800629, 1800630
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1800627, 1800628, 1800629, 1800630
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1800631, 1800632, 1800633, 1800634
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1800644, 1800645, 1800646, 1800647
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1800644, 1800645, 1800646, 1800647

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617)	05/19/2016	05/23/2016	Rasheda Ghaffari	06/04/2016	Vandana T. Nagar	1800652, 1800653, 1800654, 1800655
EPA 180.1 Rev. 2.0	05/19/2016			05/20/2016 15:55	Sima Feizi	1800627, 1800628, 1800629, 1800630
EPA 300.0 Rev. 2.1	05/19/2016			05/26/2016	Ping Hua	1800627, 1800628, 1800629, 1800630
EPA 350.1 Rev. 2.0	05/19/2016			05/27/2016	Diana M. Turner	1800631, 1800632, 1800633, 1800634
EPA 351.2 Rev. 2.0	05/19/2016	05/31/2016	Sofia Elnemr	06/02/2016	Christopher Armour	1800631, 1800632, 1800633, 1800634
EPA 353.2 Rev. 2.0	05/19/2016			05/23/2016	Peter D. Kaus	1800631, 1800632, 1800633, 1800634
EPA 365.1 Rev. 2.0	05/19/2016	06/02/2016	Vijayalakshmi Reddy	06/02/2016	Rochelle Y Jackson	1800631, 1800632, 1800634
	05/19/2016	06/02/2016	Vijayalakshmi Reddy	06/03/2016	Rochelle Y Jackson	1800633
EPA 365.1 Rev. 2.0 dissolved	05/19/2016			05/20/2016 14:39	Ping Hua	1800635, 1800636
	05/19/2016			05/20/2016 14:40	Ping Hua	1800637
	05/19/2016			05/20/2016 14:41	Ping Hua	1800638
EPA 8270D	05/19/2016	05/23/2016	Fe-Val Siddell	06/07/2016	Irina Carbone	1800656
	05/19/2016	05/23/2016	Fe-Val Siddell	06/08/2016	Irina Carbone	1800656, 1800657, 1800658, 1800659
EPA 8321B	05/19/2016	05/25/2016	Mohammad Ghaffari	05/25/2016	Mohammad Ghaffari	1800644, 1800645, 1800646, 1800647
	05/19/2016	05/26/2016	Hoor Shaik	05/26/2016	Juyoung Kim	1800649, 1800650
SM 2120 B	05/19/2016			05/20/2016 15:30	Rochelle Y Jackson	1800627, 1800628
	05/19/2016			05/20/2016 15:31	Rochelle Y Jackson	1800629
	05/19/2016			05/20/2016 15:32	Rochelle Y Jackson	1800630
SM 2320 B-97	05/19/2016			05/25/2016	Dale L. Simmons	1800627, 1800628, 1800629, 1800630
SM 2540 C-97	05/19/2016			05/23/2016	Sima Feizi	1800627, 1800628, 1800629, 1800630
SM 2540 D-97	05/19/2016			05/23/2016	Sima Feizi	1800627, 1800628, 1800629, 1800630
SM 4500 F-C-97	05/19/2016			05/25/2016	Dale L. Simmons	1800627, 1800628, 1800629, 1800630
SM 5310 B-00	05/19/2016			05/27/2016	Diana M. Turner	1800631, 1800632, 1800633, 1800634
USGS O-2060-01	05/19/2016	05/25/2016	Hoor Shaik	05/25/2016	Juyoung Kim	1800644, 1800645, 1800646, 1800647
	05/19/2016	05/25/2016	Hoor Shaik	05/26/2016	Juyoung Kim	1800644, 1800645, 1800646, 1800647