AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_SourceWater

Facility: Ravenna Army Ammunition Plant

Event: Spring 2013 RI/SI Sampling Event

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corporation, Cincinnati, OH

Data Review Contractor: ECC

SDG: 240-21987-1_79_SourceWater_TB_1, Certified - 6/10/2013 by frederickroche

QC Level: ADR

Project Manager: Al Easterday

Data Reviewer: Samir A. Naguib

Data Reviewer Title: Sr. QA Chemist

Date of Review Report: June 11, 2013

Samples Included in SDG 240-21987-1_79_SourceWater_TB_1

Analytical Method/ Leach Method	Normal Water Samples	Field QC Water Samples
E353.2/NONE	1	0
M8015D/NONE	1	0
M8015V/NONE	2	0
SW6020/NONE	1	0
SW7196A/NONE	1	0
SW7470A/NONE	1	0
SW8081/NONE	1	0

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Analytical Method/ Leach Method	Normal Water Samples	Field QC Water Samples
SW8082/NONE	1	0
SW8151/NONE	1	0
SW8260B/NONE	2	0
SW8270C/NONE	1	0
SW8330B/NONE	1	0

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corporation, Cincinnati, OH; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-21987-1_79_SourceWater_TB_1. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Field Blank

Field Duplicate RPD

Initial Calibration Verification

Lab Replicate RPD

Material Blank

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 23 results (10.31%) out of the 223 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
E353.2	
M8015D	

M8015V	
SW6020	
SW7470A	
SW8081	
SW8260B	
SW8270C	
SW8330B	
SW7196A	
SW8082	
SW8151	

11-Jun-2013

Reviewed by Samir A. Naguib, Sr. QA Chemist

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Reason and Comment Code Definitions

O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD
P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds LinearCalibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degreec C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degreec C.
Y1	False Positive
Y2	Data rejected due to radiological anomolies
Z	LCS RPD
Z2	Analyte not confirmed on second column
Z3	High percent moisture in sample.

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Flag Code and Definitions	
Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Batch Report

Test Method: E353.2; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
13190	12938	NA	LABQC	WQ	LABQC	MB 320-12877/1-B		1/1	25-Mar-2013 8:23 AM	25-Mar-2013 8:23 AM	25-Mar-2013 12:47 PM	LB
	12938	NA	LABQC	WQ	LABQC	LCS 320-12877/2-B		1/1	25-Mar-2013 8:23 AM	25-Mar-2013 8:23 AM	25-Mar-2013 12:49 PM	BS
	12938	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	25-Mar-2013 8:23 AM	25-Mar-2013 12:51 PM	N
	12938	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	25-Mar-2013 8:23 AM	25-Mar-2013 12:53 PM	MS
	12938	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	25-Mar-2013 8:23 AM	25-Mar-2013 12:55 PM	SD
Test Method: M8015D; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
78992	78624	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	18-Mar-2013 10:31 AM	21-Mar-2013 5:45 PM	N
Test Method: M8015V; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
79100	79100	NA	LABQC	WQ	LABQC	MB 240-79100/38		1/1	23-Mar-2013 8:14 AM	23-Mar-2013 8:14 AM	23-Mar-2013 8:14 AM	LB
	79100	NA	LABQC	WQ	LABQC	LCS 240-79100/39		1/1	23-Mar-2013 8:51 AM	23-Mar-2013 8:51 AM	23-Mar-2013 8:51 AM	BS
	79100	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	23-Mar-2013 9:27 AM	23-Mar-2013 9:27 AM	N
	79100	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	23-Mar-2013 10:03 AM	23-Mar-2013 10:03 AM	MS
	79100	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	23-Mar-2013 10:40 AM	23-Mar-2013 10:40 AM	SD
	79100	NA	79-LL3-DU1-SB3	WG	079-0009-0001-TB TRIP BLANK	240-21987-3		1/1	14-Mar-2013 8:00 AM	23-Mar-2013 11:16 AM	23-Mar-2013 11:16 AM	N

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Batch Report

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68058	66565	NA	LABQC	WQ	LABQC	MB 180-66565/1-A		1/1	18-Mar-2013 1:02 PM	18-Mar-2013 1:02 PM	01-Apr-2013 3:24 PM	LB
	66565	NA	LABQC	WQ	LABQC	LCS 180-66565/2-A		1/1	18-Mar-2013 1:02 PM	18-Mar-2013 1:02 PM	01-Apr-2013 3:29 PM	BS
	66565	NA	LABQC	WQ	LABQC	LCSD 180-66565/3-A		1/1	18-Mar-2013 1:02 PM	18-Mar-2013 1:02 PM	01-Apr-2013 3:34 PM	BD
	66565	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	18-Mar-2013 1:02 PM	01-Apr-2013 3:42 PM	N

Test Method: SW7196A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
78405	78405	NA	LABQC	WQ	LABQC	MB 240-78405/8		1/1	14-Mar-2013 5:42 PM	14-Mar-2013 5:42 PM	14-Mar-2013 5:42 PM	LB
	78405	NA	LABQC	WQ	LABQC	LCS 240-78405/9		1/1	14-Mar-2013 5:43 PM	14-Mar-2013 5:43 PM	14-Mar-2013 5:43 PM	BS
	78405	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	14-Mar-2013 5:44 PM	14-Mar-2013 5:44 PM	N
	78405	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	14-Mar-2013 5:46 PM	14-Mar-2013 5:46 PM	MS
	78405	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	14-Mar-2013 5:47 PM	14-Mar-2013 5:47 PM	SD

Test Method: SW7470A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
78674	78432	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	15-Mar-2013 12:45 PM	18-Mar-2013 5:49 PM	N

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
79056	78726	NA	LABQC	WQ	LABQC	LCS 240-78726/3-A		1/1	19-Mar-2013 9:10 AM	19-Mar-2013 9:10 AM	21-Mar-2013 5:16 PM	BS
	78726	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	19-Mar-2013 9:10 AM	21-Mar-2013 5:36 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Batch Report

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
79056	78726	NA	LABQC	WQ	LABQC	MB 240-78726/2-A		1/1	19-Mar-2013 9:10 AM	19-Mar-2013 9:10 AM	21-Mar-2013 5:56 PM	LB

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
79577	78721	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	19-Mar-2013 8:52 AM	27-Mar-2013 10:07 AM	N
	78721	NA	LABQC	WQ	LABQC	MB 240-78721/17-A		1/1	19-Mar-2013 8:52 AM	19-Mar-2013 8:52 AM	27-Mar-2013 12:28 PM	LB
	78721	NA	LABQC	WQ	LABQC	LCS 240-78721/18-A		1/1	19-Mar-2013 8:52 AM	19-Mar-2013 8:52 AM	27-Mar-2013 2:59 PM	BS

Test Method: SW8151; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
79197	78626	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	18-Mar-2013 10:35 AM	22-Mar-2013 8:57 PM	N
	78626	NA	LABQC	WQ	LABQC	MB 240-78626/3-A		1/1	18-Mar-2013 10:35 AM	18-Mar-2013 10:35 AM	22-Mar-2013 9:21 PM	LB
	78626	NA	LABQC	WQ	LABQC	LCS 240-78626/4-A		1/1	18-Mar-2013 10:35 AM	18-Mar-2013 10:35 AM	22-Mar-2013 9:44 PM	BS

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
79725	79725	NA	LABQC	WQ	LABQC	LCS 240-79725/4		1/1	28-Mar-2013 10:02 AM	28-Mar-2013 10:02 AM	28-Mar-2013 10:02 AM	BS
	79725	NA	LABQC	WQ	LABQC	MB 240-79725/6		1/1	28-Mar-2013 10:55 AM	28-Mar-2013 10:55 AM	28-Mar-2013 10:55 AM	LB
	79725	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	28-Mar-2013 11:21 AM	28-Mar-2013 11:21 AM	N
	79725	NA	79-LL3-DU1-SB2	WG	079-0008-0001-TB TRIP BLANK	240-21987-2		1/1	14-Mar-2013 8:00 AM	28-Mar-2013 11:47 AM	28-Mar-2013 11:47 AM	N
	79725	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	28-Mar-2013 1:33 PM	28-Mar-2013 1:33 PM	MS

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Batch Report

Test Method: SW8260B; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
79725	79725	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	28-Mar-2013 1:59 PM	28-Mar-2013 1:59 PM	SD

Test Method: SW8270C; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
79745	78456	NA	LABQC	WQ	LABQC	MB 240-78456/17-A		1/1	15-Mar-2013 8:45 AM	15-Mar-2013 8:45 AM	28-Mar-2013 12:06 PM	LB
	78456	NA	LABQC	WQ	LABQC	LCS 240-78456/18-A		1/1	15-Mar-2013 8:45 AM	15-Mar-2013 8:45 AM	28-Mar-2013 12:29 PM	BS
	78456	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 AM	15-Mar-2013 8:45 AM	28-Mar-2013 12:53 PM	N

Test Method: SW8330B; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
12703	12565	NA	LABQC	WQ	LABQC	MB 320-12565/1-A		1/1	19-Mar-2013 1:52 PM	19-Mar-2013 1:52 PM	21-Mar-2013 12:51 PM	LB
	12565	NA	LABQC	WQ	LABQC	LCS 320-12565/2-A		1/1	19-Mar-2013 1:52 PM	19-Mar-2013 1:52 PM	21-Mar-2013 1:31 PM	BS
	12565	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		2/1	14-Mar-2013 12:00 AM	19-Mar-2013 1:52 PM	21-Mar-2013 2:11 PM	N
12714	12568	NA	LABQC	WQ	LABQC	MB 320-12568/1-A		1/1	19-Mar-2013 2:18 PM	19-Mar-2013 2:18 PM	21-Mar-2013 1:01 PM	LB
	12568	NA	LABQC	WQ	LABQC	LCS 320-12568/2-A		1/1	19-Mar-2013 2:18 PM	19-Mar-2013 2:18 PM	21-Mar-2013 1:16 PM	BS
	12568	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	19-Mar-2013 2:18 PM	21-Mar-2013 1:45 PM	MS
	12568	NA	79-LL3-DU1-SB1	WG	079-0007-0001-SOURCEWATER	240-21987-1		1/1	14-Mar-2013 12:00 PM	19-Mar-2013 2:18 PM	21-Mar-2013 2:00 PM	SD
12878	12568	NA	LABQC	WQ	LABQC	MB 320-12568/1-A		2/1	19-Mar-2013 2:18 PM	19-Mar-2013 2:18 PM	22-Mar-2013 3:32 PM	LB
	12568	NA	79-841-DU1-SB	WG	079-0007-0001-SOURCEWATER	240-21987-1		3/1	14-Mar-2013 12:00 AM	19-Mar-2013 2:18 PM	22-Mar-2013 3:53 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Field Batch Report

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

QC Outlier Report

Test/Prep/Leach	QC Element	Sample ID/ Lab Sample ID	Run# / Dil'n	Analyte	Result (Units)	Qualifier	Warning Limits	Control Limits	Reason	Comment	Rule	Action Level
M8015V / SW5030B/NONE	Blank	MB 240-79100/38 (LB) / MB 240-79100/38	1 / 1.00	Petroleum Hydrocarbons C6-C12	57.2 (UG/L)	U/None	< 25	< 100	L		1	57.2
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Aluminum	4.6 (UG/L)	U/None	< 2.6	< 30	L		1	4.59
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Barium	0.18 (UG/L)	U/None	< 0.098	< 10	L		1	0.181
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Copper	0.32 (UG/L)	U/None	< 0.24	< 2	L		1	0.315
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Lead	0.24 (UG/L)	U/None	< 0.15	< 1	L		1	0.236
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Manganese	0.31 (UG/L)	U/None	< 0.16	< 5	L		1	0.314
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Potassium	40.6 (UG/L)	U/None	< 32	< 100	L		1	40.6
SW6020 / TOTAL/NONE	Blank	MB 180-66565/1-A (LB) / MB 180-66565/1-A	1 / 1.00	Sodium	67.4 (UG/L)	U/None	< 27	< 100	L		1	67.4
SW8151 / METHOD/NONE	LCS Recovery	LCS 240-78626/4-A (BS) / LCS 240-78626/4-A	1 / 1.00	2,4,5-T (Trichlorophenoxyacetic Acid)	111 (PERCENT)	J/U	35 - 110	35 - 110	C			
SW8151 / METHOD/NONE	LCS Recovery	LCS 240-78626/4-A (BS) / LCS 240-78626/4-A	1 / 1.00	Dichloroprop	126 (PERCENT)	J/U	70 - 120	70 - 120	C			
SW8260B / SW5030B/NONE	Blank	MB 240-79725/6 (LB) / MB 240-79725/6	1 / 1.00	Methylene Chloride	0.34 (UG/L)	U/None	< 0.33	< 1	L		2	0.688
SW8260B / SW5030B	Test Hold Time	079-0008-0001-TB TRI (N) / 240-21987-2	1 / 1.00	All in Run	14.2 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
SW8270C / SW3510/NONE	Blank	MB 240-78456/17-A (LB) / MB 240-78456/17-A	1 / 1.00	bis(2-Ethylhexyl) Phthalate	0.86 (UG/L)	U/None	< 0.8	< 2	L		5	4.28
SW8270C / SW3510/NONE	LCS Recovery	LCS 240-78456/18-A (BS) / LCS 240-78456/18-A	1 / 1.00	Cresols, m & p	67.0 (PERCENT)	J/UJ	70 - 130	70 - 130	C			

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
M8015V/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Petroleum Hydrocarbons C6-C12	100	74.0	100 U	+	UG/L	L
M8015V/NONE	WG	079-0009-0001-TB TRIP BLANK	240-21987-3	N	Petroleum Hydrocarbons C6-C12	100	81.0	100 U	+	UG/L	L
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Arsenic	1.0	0.48	0.48 J		UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Chromium	2.0	1.3	1.3 J		UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Cobalt	0.50	0.054	0.054 J		UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Copper	2.0	1.4	2.0 U	+	UG/L	L/B2
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Thallium	1.0	0.11	0.11 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8081/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Methoxychlor	0.10	0.10	0.10 UJ		UG/L	V2
SW8081/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Toxaphene	2.0	2.0	2.0 UJ		UG/L	V1
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8151/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Dalapon	2.0	0.55	2.0 U		UG/L	P1/Y1
SW8151/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	MCPA	400	400	400 UJ		UG/L	J
SW8151/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	MCPP	400	400	400 UJ		UG/L	J
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8260B/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Carbon Tetrachloride	1.0	1.0	1.0 UJ		UG/L	V2
SW8260B/NONE	WG	079-0008-0001-TB TRIP BLANK	240-21987-2	N	Carbon Tetrachloride	1.0	1.0	1.0 UJ		UG/L	V2
SW8260B/NONE	WG	079-0008-0001-TB TRIP BLANK	240-21987-2	N	Chloroform	1.0	0.31	0.31 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	2,4-Dimethylphenol	2.0	2.0	2.0 UJ		UG/L	V1

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	2,4-Dinitrophenol	5.1	5.1	5.1 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	2-Chlorophenol	1.0	1.0	1.0 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	2-Methylphenol (o-Cresol)	1.0	1.0	1.0 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	2-Nitrophenol	2.0	2.0	2.0 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	3,3'-Dichlorobenzidine	5.1	5.1	5.1 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	4,6-Dinitro-2-Methylphenol	5.1	5.1	5.1 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	4-Nitroaniline	2.0	2.0	2.0 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	4-Nitrophenol	5.1	5.1	5.1 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	bis(2-Ethylhexyl) Phthalate	2.0	0.91	2.0 U	+	UG/L	L
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	n-Nitrosodiphenylamine	1.0	1.0	1.0 UJ		UG/L	J
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Pentachlorophenol	5.1	5.1	5.1 UJ		UG/L	V1
SW8270C/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Phenol	1.0	1.0	1.0 UJ		UG/L	V1

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Arsenic	1.0	0.48	0.48 J	UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Barium	10.0	41.0	41.0	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Calcium	100	65000	65000	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Cobalt	0.50	0.054	0.054 J	UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Chromium	2.0	1.3	1.3 J	UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Iron	50.0	590	590	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Potassium	100	2500	2500	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Magnesium	100	27000	27000	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Manganese	5.0	94.0	94.0	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Sodium	100	37000	37000	UG/L	
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Thallium	1.0	0.11	0.11 J	UG/L	TR
SW6020/NONE	WG	079-0007-0001-SOURCEWATER	240-21987-1	N	Zinc	5.0	5.1	5.1	UG/L	

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	WG	079-0008-0001-TB TRIP BLANK	240-21987-2	N	Chloroform	1.0	0.31	0.31 J	UG/L	TR

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Rejected Results

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Anomalies Count

SDG Name: 240-21987-1_79_SourceWater_TB_1

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
M8015D/SW3520C/NONE	1	2
SW6020/TOTAL/NONE	1	1
SW8081/SW3520C/NONE	1	5
SW8082/SW3520C/NONE	1	7
SW8260B/SW5030B/NONE	2	2
SW8270C/SW3510/NONE	1	4
SW8330B/METHOD/NONE	1	3

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Reporting Anomalies

SDG Name: 240-21987-1_79_SourceWater_TB_1

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
M8015D/NONE	079-0007-0001-SOURCEWATER	N	1	C10-C20 Diesel Range Organics	490 U	230	490	0.5	UG/L
M8015D/NONE	079-0007-0001-SOURCEWATER	N	1	C20-C34 Motor Oil Range Organics	490 U	230	490	0.5	UG/L
Test Leach	**FieldSample ID**	**Type**	**Dilution**	**Analyte**	**Result**	**DL**	**RL**	**Project RL**	**Units**
SW6020/NONE	079-0007-0001-SOURCEWATER	N	1	Cadmium	1 U	0.13	1	0.5	UG/L
Test Leach	**FieldSample ID**	**Type**	**Dilution**	**Analyte**	**Result**	**DL**	**RL**	**Project RL**	**Units**
SW8081/NONE	079-0007-0001-SOURCEWATER	N	1	Aldrin	0.05 U	0.0082	0.05	0.03	UG/L
SW8081/NONE	079-0007-0001-SOURCEWATER	N	1	alpha-BHC (alpha-Hexachlorocyclohexane)	0.05 U	0.007	0.05	0.03	UG/L
SW8081/NONE	079-0007-0001-SOURCEWATER	N	1	Dieldrin	0.05 U	0.0075	0.05	0.03	UG/L
SW8081/NONE	079-0007-0001-SOURCEWATER	N	1	Heptachlor	0.05 U	0.008	0.05	0.03	UG/L
SW8081/NONE	079-0007-0001-SOURCEWATER	N	1	Heptachlor Epoxide	0.05 U	0.0071	0.05	0.03	UG/L
Test Leach	**FieldSample ID**	**Type**	**Dilution**	**Analyte**	**Result**	**DL**	**RL**	**Project RL**	**Units**
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1016 (Arochlor 1016)	0.5 U	0.17	0.5	0.2	UG/L
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1221 (Arochlor 1221)	0.5 U	0.13	0.5	0.2	UG/L
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1232 (Arochlor 1232)	0.5 U	0.16	0.5	0.2	UG/L
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1242 (Arochlor 1242)	0.5 U	0.22	0.5	0.2	UG/L
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1248 (Arochlor 1248)	0.5 U	0.1	0.5	0.2	UG/L
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1254 (Arochlor 1254)	0.5 U	0.16	0.5	0.2	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Reporting Anomalies

SDG Name: 240-21987-1_79_SourceWater_TB_1

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	079-0007-0001-SOURCEWATER	N	1	PCB-1260 (Arochlor 1260)	0.5 U	0.17	0.5	0.2	UG/L
Test Leach	**FieldSample ID**	**Type**	**Dilution**	**Analyte**	**Result**	**DL**	**RL**	**Project RL**	**Units**
SW8260B/NONE	079-0007-0001-SOURCEWATER	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	079-0008-0001-TB TRIP BLANK	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
Test Leach	**FieldSample ID**	**Type**	**Dilution**	**Analyte**	**Result**	**DL**	**RL**	**Project RL**	**Units**
SW8270C/NONE	079-0007-0001-SOURCEWATER	N	1	2,4,5-Trichlorophenol	5.1 U	0.3	5.1	5	UG/L
SW8270C/NONE	079-0007-0001-SOURCEWATER	N	1	2,4,6-Trichlorophenol	5.1 U	0.81	5.1	5	UG/L
SW8270C/NONE	079-0007-0001-SOURCEWATER	N	1	3,3'-Dichlorobenzidine	5.1 UJ	0.37	5.1	5	UG/L
SW8270C/NONE	079-0007-0001-SOURCEWATER	N	1	Pentachlorophenol	5.1 UJ	2.4	5.1	5	UG/L
Test Leach	**FieldSample ID**	**Type**	**Dilution**	**Analyte**	**Result**	**DL**	**RL**	**Project RL**	**Units**
SW8330B/NONE	079-0007-0001-SOURCEWATER	N	1	2-Nitrotoluene	0.51 U	0.09	0.51	0.2	UG/L
SW8330B/NONE	079-0007-0001-SOURCEWATER	N	1	3-Nitrotoluene	0.51 U	0.058	0.51	0.2	UG/L
SW8330B/NONE	079-0007-0001-SOURCEWATER	N	1	4-Nitrotoluene	0.51 U	0.09	0.51	0.2	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Worksheet

SDG Name: 240-21987-1_79_SourceWater_TB_1

Method: E353.2

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were sample reciept temperatures met?	•			
Were QAPP specified RLs achieved?	•			
Were all QAPP specified target analytes reported?	•			
Was the initial calibration curve within QAPP acceptance limits?	•			
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	•			
Were ICV/CCV results within QAPP acceptance limits?	•			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the ICB/CCB/method blank?		•		
Was a field blank collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Was a LCS prepared and analyzed with each batch?	•			
Were the LCS recoveries within QAPP acceptance limits?	•			
Was a duplicate sample prepared and analyzed with each batch?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were the MS/MSD recoveries and RPDs within QAPP acceptance limits?	•			
Were sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			

Method: M8015D

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	•			
Were samples preserved properly and received in good condition?	•			
Were sample reciept temperatures met?	•			
Were holding times for prep and analysis met?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	•			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Was the CCV %D within criteria (%D =20%)?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?		•		
Was a field blank (equipment or trip) collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)		•		LCS was extracted with preparation batch.
Were the LCS recoveries within QAPP acceptance limits?		•		
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?			•	
Were all QAPP-specified target analytes reported?	•			
Were reported sample concentrations within calibration range?	•			
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were sample prepration sheets present and filled out appropriately?	•			
Were instrument run logs present and filled out appropriately?	•			

Method: M8015V

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	•			
Were samples preserved properly and received in good condition?	•			
Were sample reciept temperatures met?	•			
Were holding times for prep and analysis met?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	•			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Was the CCV %D within criteria (%D =20%)?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?	•			MB 240-79100/38: C6-C12 was detected above the MDL but below RL.
Was a field blank (equipment or trip) collected and analyzed?	•			
Were target analytes reported in the field blank analyses above the MDL?		•		
Were surrogate recoveries within QAPP acceptance limits?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	•			LCS was analyzed with each analytical batch.
Were the LCS recoveries within QAPP acceptance limits?	•			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	•			
Were all QAPP-specified target analytes reported?	•			
Were reported sample concentrations within calibration range?	•			
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were sample prepration sheets present and filled out appropriately?	•			
Were instrument run logs present and filled out appropriately?	•			

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Method: SW6020

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were sample reciept temperatures met?	•			
Were QAPP specified RLs achieved?	•			
Were all QAPP specified target analytes reported?	•			
Was the initial calibration curve within QAPP acceptance limits?	•			
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	•			
Were ICV/CCV results within QAPP acceptance limits?	•			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the ICB/CCB/method blank?	•			CCB1: Cu, K, and Na were detected above MDL but below RL. 2. MB 180-66565/1-A: Al, Ba, Cu, Mn, Na, Pb, and K were detected above MDL but below RL.
Was a field blank collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Was an Interference Check Standard (ICS) run at the beginning and end of every run?	•			
Was the ICS recovery within QAPP acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within criteria?	•			
Was a LCS prepared and analyzed with each batch?	•			LCS and LCSD were digested in the preparation batch : 66565.
Were the LCS recoveries within QAPP acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were the MS/MSD within QAPP acceptance limits?			•	
Was a serial dilution prepared and analyzed with each batch?	•			
Was the serial dilution within QAPP acceptance limits?	•			
Were sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			

Method: SW7196A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were sample reciept temperatures met?	•			
Were QAPP specified RLs achieved?	•			
Were all QAPP specified target analytes reported?	•			
Was the initial calibration curve within QAPP acceptance limits?	•			
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	•			
Were ICV/CCV results within QAPP acceptance limits?	•			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the ICB/CCB/method blank?		•		
Was a field blank collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Was the ICS recovery within QAPP acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within criteria?			•	
Was a LCS prepared and analyzed with each batch?	•			
Were the LCS recoveries within QAPP acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were the MS/MSD within QAPP acceptance limits?	•			
Were sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			

Method: SW7470A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			

Method: SW7470A

Review Questions	Yes	No	NA	Comment
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were sample reciept temperatures met?	•			
Were QAPP specified RLs achieved?	•			
Were all QAPP specified target analytes reported?	•			
Was the initial calibration curve within QAPP acceptance limits?	•			
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	•			
Were ICV/CCV results within QAPP acceptance limits?	•			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	•			
Was a method blank prepared and analyzed with each batch?	•	•		
Were target analytes detected in the ICB/CCB/method blank?		•		
Was a field blank collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Was the ICS recovery within QAPP acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within criteria?			•	
Was a LCS prepared and analyzed with each batch?	•			
Were the LCS recoveries within QAPP acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were the MS/MSD within QAPP acceptance limits?			•	
Were sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			

Method: SW8081

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	•			
Were samples preserved properly and received in good condition?	•			
Were sample reciept temperatures met?	•			

Method: SW8081

Review Questions	Yes	No	NA	Comment
Were holding times for prep and analysis met?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?		•		Toxaphene %D=38.9%.
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Was the CCV %D within criteria (%D =20%)?	•			CCV 240-7956/14: Methoxychlor %D=20.2%
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?		•		
Was a field blank (equipment or trip) collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	•			LCS was extracted with each preparation batch.
Were the LCS recoveries within QAPP acceptance limits?	•			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	
Were the Breakdown products within QAPP acceptance limits?	•			
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?			•	
Were all QAPP-specified target analytes reported?	•			
Were reported sample concentrations within calibration range?	•			
Were RPDs between primary and confirmation columns < 40%?			•	All Pesticides compounds in the samples were reported as non-detects.
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were sample prepration sheets present and filled out appropriately?	•			
Were instrument run logs present and filled out appropriately?	•			

Method: SW8082

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	•			
Were samples preserved properly and received in good condition?	•			
Were sample reciept temperatures met?	•			
Were holding times for prep and analysis met?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	•			15%
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Was the CCV %D within criteria (%D =20%)?	•			15%
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?		•		
Was a field blank (equipment or trip) collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	•			LCS was extracted with each preparation batch.
Were the LCS recoveries within QAPP acceptance limits?	•			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	
Were the Breakdown products within QAPP acceptance limits?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?			•	
Were all QAPP-specified target analytes reported?	•			
Were reported sample concentrations within calibration range?	•			
Were RPDs between primary and confirmation columns < 40%?			•	All PCBs were reported as non-detect.
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			

Method: SW8082

Review Questions	Yes	No	NA	Comment
Were sample prepration sheets present and filled out appropriately?	•			
Were instrument run logs present and filled out appropriately?	•			

Method: SW8151

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	•			
Were samples preserved properly and received in good condition?	•			
Were sample reciept temperatures met?	•			
Were holding times for prep and analysis met?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	•			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Was the CCV %D within criteria (%D =20%)?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?		•		
Was a field blank (equipment or trip) collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	•			LCS was extracted with each preparation batch.
Were the LCS recoveries within QAPP acceptance limits?		•		LCS 240-78626/4-A: Dichlorprop and 2,4,5-T were recovered above the QC limits. No qualifications were required due to these compounds were not detected in the native sample.
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	
Were the Breakdown products within QAPP acceptance limits?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?			•	

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Method: SW8151

Review Questions	Yes	No	NA	Comment
Were all QAPP-specified target analytes reported?	•			
Were reported sample concentrations within calibration range?	•			
Were RPDs between primary and confirmation columns < 40%?		•		240-21987-1: Dalapon RPD was 56%. False Positive.
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were sample prepration sheets present and filled out appropriately?	•			
Were instrument run logs present and filled out appropriately?	•			

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were sample reciept temperatures met?	•			
Were QAPP specified PQLs achieved?	•			
Were all QAPP-specified target analytes reported?	•			
Was the GC/MS system properly tuned based on method criteria?	•			
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?	•			
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?	•			
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?	•			
If a linear regression curve was used, was the correlation coefficient within criteria?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria?	•			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?	•			

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Did the CCCs have a %Difference within QAPP acceptance limits?	•			
Were the average RFs for the SPCCs within QAPP acceptance limits?				
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?		•		CCV 240-79725/2: Carbon tetrachloride: %D= 24.4.
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?	•			
Were the retention times for all IS compounds within QAPP acceptance limits?	•			
Are the area counts of all IS compounds within QAPP acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?	•			MB 240-79725/6: Methylene chloride was detected above the MDL but below the RL.
Was a field blank (equipment or trip) collected and analyzed at the required frequency?	•			
Were target analytes reported in the field blank analyses above the MDL?	•			079-0008-0001-TB (Trip Blank): Chloroform was detected above the MDL but below the RL.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS was analyzed with each analytical batch.
Were the LCS/LCSD recoveries within QAPP acceptance limits?			•	
Were the LCS/LCSD RPDs within QAPP acceptance limits?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Was a MS/MSD pair prepared with each batch?	•			
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	•			
Were surrogate recoveries within QAPP acceptance limits?	•			
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were instrument run logs present and filled out appropriately?	•			
Were sample prepration sheets present and filled out appropriately?	•			

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were sample reciept temperatures met?	•			
Were QAPP specified PQLs achieved?	•			
Were all QAPP-specified target analytes reported?	•			
Was the GC/MS system properly tuned based on method criteria?	•			
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?	•			
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?	•			
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?	•			
If a linear regression curve was used, was the correlation coefficient within criteria?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria?		•		ICV 240-79445/12: %Ds for several compounds were >20%. All non-detects compounds were qualified (UJ).
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Did the CCCs have a %Difference within QAPP acceptance limits?	•			
Were the average RFs for the SPCCs within QAPP acceptance limits?	•			
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?	•			
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?	•			
Were the retention times for all IS compounds within QAPP acceptance limits?	•			
Are the area counts of all IS compounds within QAPP acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?	•			MB 240-78456/17-A: Bis (2-ethylhexyl) phthalate was detected above the MDL but below the RL.
Was a field blank (equipment or trip) collected and analyzed at the required frequency?			•	

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Were target analytes reported in the field blank analyses above the MDL?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS was extracted with each preparation batch.
Were the LCS/LCSD recoveries within QAPP acceptance limits?	•			
Were the LCS/LCSD RPDs within QAPP acceptance limits?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	
Are all samples associated with QC non-compliances flagged appropriately?			•	
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Was a MS/MSD pair prepared with each batch?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?			•	
Were surrogate recoveries within QAPP acceptance limits?	•			
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were instrument run logs present and filled out appropriately?	•			
Were sample prepration sheets present and filled out appropriately?	•			

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	•			
Were samples preserved properly and received in good condition?	•			
Were sample reciept temperatures met?	•			
Were holding times for prep and analysis met?	•			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	•			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	•			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	•			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	•			
Was the CCV a mid-level standard from the initial calibration curve?	•			
Was the CCV %D within criteria (%D =20%)?	•			

AUTOMATED DATA REVIEW SUMMARY for 240-21987-1_79_SourceWater_TB_1

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes detected in the method blank above the MDL?		•		
Was a field blank (equipment or trip) collected and analyzed?			•	
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	•			LCS was extracted with each preparation batch.
Were the LCS recoveries within QAPP acceptance limits?	•			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	
Is the MS/MSD parent sample the one designated by the sampling team?			•	
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	•			MS and MSD were performed on Nitroguanidine only.
Were all QAPP-specified target analytes reported?	•			
Were reported sample concentrations within calibration range?	•			
Were RPDs between primary and confirmation columns < 40%?		•		240-21987-1: Nitroguanidine was not confirmed on the column Hyrdo RP80A.
Did PDA spectra for reported compounds match associated standard spectra?			•	
Are all samples associated with QC non-compliances flagged appropriately?	•			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were sample prepration sheets present and filled out appropriately?	•			
Were instrument run logs present and filled out appropriately?	•			