From:	Wilson, Ashley
To:	Wagner, Christine
Cc:	Non-responsive based on revised scope [redacted]; Scurato, Jesse; Van Reed, Paul
Subject:	Case# 47768, SDG# C0AB6 - Validated Data for Shiloh Church Road Site
Date:	Friday, September 21, 2018 4:00:00 PM
Attachments:	47768 C0AB6 ltr.pdf image001.png 47768_C0AB6_DVR.pdf 47768_C0AB6_SSR.pdf EQuIS 1_47768_C0AB6_Validated.xls EQuIS 2_47768_C0AB6_Validated.xls EQuIS 3_47768_C0AB6_Validated.xls EQuIS_47768_C0AB6_Validated.xls

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Christine Wagner
US EPA Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

Christine,

Attached to this message you will find electronic files containing the validation report and validated data for Shiloh Church Road Site, Case# 47768, SDG# C0AB6. The validation of this case was completed by the Region III Environmental Services Assistance Team (ESAT).

Please contact ESAT's RPO, Brandon McDonald by phone at 410-305-2607 or e-mail at McDonald.Brandon@epa.gov if additional assistance is needed.

TO # 0002 TDF # 0818101

Ashley Wilson | Research Technician | 410-305-3013 | Wilson.Ashley@epa.gov
ICF | 701 Mapes Road, Fort Meade, MD 20755-5350

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Environmental Sciences Center
701 Mapes Road
Fort Meade, Maryland 20755-5350

DATE: 9/21/2018

SUBJECT: Region III Data QA Review

FROM: Brandon McDonald
Region III ESAT RPO (3EA22)

TO: CHRIS WAGNER
Hazardous Site Cleanup Division (HSCD)

Attached is the data validation report for the SHILOH CHURCH ROAD SITE site for RAS# 47768; SDG# C0AB6 completed by the Region III Environmental Services Assistance Team (ESAT) contractor, ICF International, under the direction of Region III EAID.

If you have any questions regarding this review, please call Brandon McDonald at (410) 305-2607 or you can call Eric Graybill at (410)-305-2665.

Attachment

cc: [redacted] WESTON SOLUTIONS)
[redacted] (WESTON SOLUTIONS)

TO: #0002 TDF: #0818101

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ICF
ESAT Region 3
US Environmental Protection Agency Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Phone 410-305-3012

Date: September 11, 2018

To: Brandon McDonald
ESAT Region 3 Project Officer

From: [redacted]
Validator

[redacted]
Reviewer

Subject: Organic Data Validation (S4VEM)
Shilo Church Road
47768, C0AB6

Overview

This data package consisted of five (5) water samples analyzed for semivolatile and Aroclor analytes.

Analyses were performed by Chemtech Consulting Group (CHM) according to Contract Laboratory Program (CLP) Statement of Work (SOW) SOM02.4.

Data were validated according to the National Functional Guidelines for Organic Superfund Methods Data Review and applicable USEPA Region 3 modifications. Electronic validation was performed by the Electronic Data eXchange & Evaluation System (EXES). The validation report has been assigned the Superfund Data Validation Label S4VEM (Stage_4_Validation_Electronic_Manual).

The following validation narrative is an evaluation of laboratory reported data based on the electronic data package available through the EXES Data Manager dated August 16, 2018.

Summary

A significant data quality outlier regarding a Deuterated Monitoring Compound (DMC) recovery in semivolatile sample C0AC1 was identified that resulted in rejection of several anlytes in this sample. Less significant data quality outliers were identified resulting in estimation of sample results including but not limited to technical holding time in semivolatiles and surrogate recoveries in Aroclors as detailed below.

Major Problem

Recovery of DMC 4-Nitrophenol-$_{d4}$ was <10% in semivolatile sample C0AC1. No positive results were reported for analytes associated with this DMC. Quantitation limits for analytes associated with this DMC in this sample have been rejected and qualified “R”.

Minor Problems

Semivolatile samples C0AB6 and C0AC0 collected 7/23/18 were extracted 7/31/18. The technical extraction holding time of 7 days from the date of sample collection has been exceeded by 1 day. Positive results and quantitation limits in these samples have been qualified “J” and “UJ”, respectively.

Recoveries of surrogate decachlorobiphenyl were outside the lower control limit on both columns in Aroclor sample C0AB6. No positive results were reported for this sample. Quantitation limits for Aroclors in this sample have been qualified “UJ”.

Notes

Detected concentrations for target analytes less than Contract Required Quantitation Limit (CRQL) are estimated and have been qualified “J”.

Laboratory blanks were free of contamination in both fractions.

Recoveries of spiked Aroclors in Laboratory Control Samples (LCS) were within control limits.

Tentatively Identified Compounds (TICs) are not reviewed by data validators. The validation qualifiers are applied by EXES electronic validation based on laboratory qualifiers. By definition, all compounds identified as TICs should be treated as tentative identifications and all reported results should be considered estimated.

Manual integrations were performed and identified by the laboratory. A subset of these was evaluated by the reviewer, and were found to be accurate and consistent. No action was taken by the reviewer based on manual integrations.

Glossary of Organic Data Qualifier Codes

Validation Qualifiers	In order of descending precedence. Only one of these qualifiers may apply to any result.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.

Additional Qualifiers	Additional qualifiers may be combined with other qualifiers.
N	The analyte has been “tentatively identified” or “presumptively” as present.
B	The result is presumed a blank contaminant. This qualifier is used for drinking water samples only.
C	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatography/Mass Spectrometry (GC/MS). This qualifier may be added to other qualifiers.
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed. This qualifier may be added to other qualifiers.

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: ABLK31	Method: Aroclors	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: ALCS31	Method: Aroclors	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	1.4		ug/L	1.4		1.0	YES	S4VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1260	Spike	1.3		ug/L	1.3		1.0	YES	S4VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AB6	Method: Aroclors	Matrix: Water	MA Number:
Sample Location: SCR	pH: 6	Sample Date: 07/23/2018	Sample Time: 10:40:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1221	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1260	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1262	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	UJ	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AB6	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location: SCR	pH: 6	Sample Date: 07/23/2018	Sample Time: 10:40:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	UJ	ug/L	2.0	U	1.0	YES	S4VEM
Benzaldehyde	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Phenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
2-Chlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylphenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Acetophenone	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4-Methylphenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Hexachloroethane	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Nitrobenzene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Isophorone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitrophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Naphthalene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Chloroaniline	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Caprolactam	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitroaniline	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Dimethylphthalate	Target	1.6	J	ug/L	1.6	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Acenaphthylene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
3-Nitroaniline	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Acenaphthene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4-Nitrophenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Dibenzofuran	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Diethylphthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Fluorene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Nitroaniline	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Atrazine	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Pentachlorophenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Phenanthrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Anthracene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Fluoranthene	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Pyrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Chrysene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Octadecanoic acid	TIC	4.2	J	ug/L	4.2	J	1.0	YES	NV
Total Alkanes	TIC	23		ug/L	23		1.0	YES	NV
n-Hexadecanoic acid	TIC	7.4	J	ug/L	7.4	J	1.0	YES	NV

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC0	Method: Aroclors	Matrix: Water	MA Number:
Sample Location: SCR	pH: 6	Sample Date: 07/23/2018	Sample Time: 11:20:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	5.1		ug/L	5.1		1.0	YES	S4VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC0	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location: SCR	pH: 6	Sample Date: 07/23/2018	Sample Time: 11:20:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	UJ	ug/L	2.0	U	1.0	YES	S4VEM
Benzaldehyde	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Phenol	Target	1.4	J	ug/L	1.4	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
2-Chlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylphenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Acetophenone	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4-Methylphenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Hexachloroethane	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Nitrobenzene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Isophorone	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitrophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Naphthalene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Chloroaniline	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Caprolactam	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitroaniline	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Dimethylphthalate	Target	2.3	J	ug/L	2.3	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Acenaphthylene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
3-Nitroaniline	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Acenaphthene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4-Nitrophenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Dibenzofuran	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Diethylphthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Fluorene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Nitroaniline	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Atrazine	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Pentachlorophenol	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Phenanthrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Anthracene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Fluoranthene	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Pyrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Chrysene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	10	UJ	ug/L	10	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	UJ	ug/L	5.0	U	1.0	YES	S4VEM
Total Alkanes	TIC	11		ug/L	11		1.0	YES	NV
n-Hexadecanoic acid	TIC	4.4	J	ug/L	4.4	J	1.0	YES	NV

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC1	Method: Aroclors	Matrix: Water	MA Number:
Sample Location: SCR	pH: 5	Sample Date: 07/24/2018	Sample Time: 16:30:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC1	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location: SCR	pH: 5	Sample Date: 07/24/2018	Sample Time: 16:30:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chloroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitroaniline	Target	5.0	R	ug/L	5.0	U	1.0	YES	S4VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3-Nitroaniline	Target	10	R	ug/L	10	U	1.0	YES	S4VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	10	R	ug/L	10	U	1.0	YES	S4VEM
4-Nitrophenol	Target	10	R	ug/L	10	U	1.0	YES	S4VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Nitroaniline	Target	10	R	ug/L	10	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluoranthene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
n-Hexadecanoic acid	TIC	5.7	J	ug/L	5.7	J	1.0	YES	NV
Octadecanoic acid	TIC	4.2	J	ug/L	4.2	J	1.0	YES	NV
Total Alkanes	TIC	11		ug/L	11		1.0	YES	NV

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC3	Method: Aroclors	Matrix: Water	MA Number:
Sample Location: L.P.B.M. HW	pH: 5	Sample Date: 07/25/2018	Sample Time: 15:05:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC3	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location: L.P.B.M. HW	pH: 5	Sample Date: 07/25/2018	Sample Time: 15:05:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chloroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluoranthene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Total Alkanes	TIC			ug/L			1.0	YES	NV

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC4	Method: Aroclors	Matrix: Water	MA Number:
Sample Location: L.P.B.M. HW	pH: 5	Sample Date: 07/25/2018	Sample Time: 15:10:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: C0AC4	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location: L.P.B.M. HW	pH: 5	Sample Date: 07/25/2018	Sample Time: 15:10:00
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chloroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluoranthene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Total Alkanes	TIC			ug/L			1.0	YES	NV

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Sample Number: SBLK30	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture:		% Solids: 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chloroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE Project | **GroupID: 47768/EPW14030/C0AB6** | **Lab Name: Chemtech Consulting Group**

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Fluoranthene	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Total Alkanes	TIC			ug/L			1.0	YES	NV

Sample Summary Report

USEPA CLP COC (REGION COPY)

DateShipped: 25-Jul-18
CarrierName: FedEx
AirbillNo: 7722 1310 1385

CHAIN OF CUSTODY RECORD

Shiloh Church Road/VA
Case #: 47768
Cooler #: 02

No: 3-07-25-18-110521-0014

Lab: Chemtech Consulting Group
Lab Contact: [redacted]
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
SCR-0718-SW01-00	C0AB6	Water/ START ([redacted])	Grab	ICP-PCBs(21)	1146 (None), 1147 (None) (2)	SCR	07-23-2018 10:40	Field Sample
SCR-0718-SS03-0000-00	C0AB7	Soil/ START ([redacted])	Grab	ICP-PCBs(21)	1161 (None) (1)	SCR	07-25-2018 09:19	Field Sample
SCR-0718-SS01-0606-00	C0AB8	Sediment/ START ([redacted])	Grab	ICP-PCBs(21)	1168 (None) (1)	SCR	07-24-2018 16:30	Field Sample
SCR-0718-SS02-0000-00	C0AB9	Soil/ START ([redacted])	Grab	ICP-PCBs(21)	1175 (None) (1)	SCR	07-25-2018 09:05	Field Sample
SCR-0718-SW02-00	C0AC0	Water/ START ([redacted])	Grab	ICP-PCBs(21)	1177 (None), 1178 (None) (2)	SCR	07-23-2018 11:20	Field Sample
SCR-0718-SW03-00	C0AC1	Water/ START ([redacted])	Grab	ICP-PCBs(21)	1186 (None), 1187 (None) (2)	SCR	07-24-2018 16:30	Field Sample

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: ICP-PCBs=CLP ICP-MPCBs by SOM02.4

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

USEPA CLP COC (REGION COPY)

DateShipped: 25-Jul-18
CarrierName: FedEx
AirbillNo: 7722 1310 1216

CHAIN OF CUSTODY RECORD

Shiloh Church Road/VA
Case #: 47768
Cooler #: 03

No: 3-07-25-18-111008-0015

Lab: Chemtech Consulting Group
Lab Contact: [redacted]
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
SCR-0718-SW01-00	C0AB6	Water/ START ([redacted]	Grab	TAL SVOA(21)	1150 (None), 1151 (None) (2)	SCR	07-23-2018 10:40	Field Sample
SCR-0718-SS03-0000-00	C0AB7	Soil/ START [redacted])	Grab	TAL SVOA(21)	1160 (None) (1)	SCR	07-25-2018 09:19	Field Sample
SCR-0718-SS01-0606-00	C0AB8	Sediment/ START [redacted]	Grab	TAL SVOA(21)	1167 (None) (1)	SCR	07-24-2018 16:30	Field Sample
SCR-0718-SS02-0000-00	C0AB9	Soil/ START [redacted])	Grab	TAL SVOA(21)	1174 (None) (1)	SCR	07-25-2018 09:05	Field Sample
SCR-0718-SW02-00	C0AC0	Water/ START ([redacted]	Grab	TAL SVOA(21)	1180 (None), 1181 (None) (2)	SCR	07-23-2018 11:20	Field Sample
SCR-0718-SW03-00	C0AC1	Water/ START [redacted]	Grab	TAL SVOA(21)	1189 (None), 1190 (None) (2)	SCR	07-24-2018 16:30	Field Sample

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL SVOA=TAL SVOCs by SOM02.4	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

USEPA CLP COC (REGION COPY)

DateShipped: 26-Jul-18
CarrierName: FedEx
AirbillNo: 7728 2439 8406

CHAIN OF CUSTODY RECORD

Shiloh Church Road/VA
Case #: 47768
Cooler #: 07

No: 3-07-26-18-112456-0019

Lab: Chemtech Consulting Group
Lab Contact: [redacted]
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
SCR-072518-RW-013	C0AC3	Water/ START [redacted]	Grab	ICP-PCBs(21), TAL SVOA(21)	1204 (None), 1205 (None), 1208 (None), 1209 (None) (4)	L.P.B.M. HW	07-25-2018 15:05	Field Sample
SCR-072518-RW-013D	C0AC4	Water/ START [redacted]	Grab	ICP-PCBs(21), TAL SVOA(21)	1213 (None), 1214 (None), 1216 (None), 1217 (None) (4)	L.P.B.M. HW	07-25-2018 15:10	Field Sample

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: ICP-PCBs=CLP ICP-MPCBs by SOM02.4, TAL SVOA=TAL SVOCs by SOM02.4	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Cas No.: 47768 MA No. : SDG No.: C0AB6

SOW No. : SOM02.4

EPA Sample No.	Lab Sample ID	Analysis Method					
		Trace VOA	Low Med VOA	SVOA	SVOA SIM	PEST	ARO
C0AB6	J4175-01			X			X
C0AC0	J4175-02			X			X
C0AC1	J4175-03			X			X
C0AC3	J4175-04			X			X
C0AC4	J4175-05			X			X

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative.Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee,as verified by the following signature.

Signature: Non-responsive based on revised scope [redacted] Name: Non-responsive based on revised scope [redacted]

Date: 8/15/18 Title: QA/QC/DCO

CHEMTECH

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 47768
SDG: C0AB6
CONTRACT: EPW14030
LAB CODE: CHM
CHEMTECH PROJECT: J4175
MODIFICATION REF. NUMBER: N/A

Sample ID	EPA Sample ID	pH
J4175-01	C0AB6	
J4175-02	C0AC0	
J4175-03	C0AC1	
J4175-04	C0AC3	
J4175-05	C0AC4	

3 Water samples were delivered to the laboratory intact on 07/26/2018.
2 Water samples were delivered to the laboratory intact on 07/27/2018.

Test requested on the Chain of Custody was Semivolatile Organic and Aroclors by Method SOM02.4.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.7, 3.3 degrees Celsius for the samples received on 07/26/2018 and 2.2 degrees Celsius for the samples received on 07/27/2018.

Shipping Discrepancies and/or QC issues:

Issue: Laboratory QC is scheduled for water ARO analysis; however, no sample has been designated for laboratory QC on the COCs received on 7/26/2018 and 7/27/2018. Sufficient volume for laboratory QC was not received for any of the samples in these shipments. The laboratory would like to confirm if they may proceed without laboratory QC for water ARO samples in SDG C0AB6.

Resolution: Per Region 3, the laboratory may proceed with the analysis off the ARO water samples in SDG C0AB6 without performing laboratory QC. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Semivolatiles

The samples were analyzed on instrument BNA_M using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semivolatile Organic samples for Water were extracted by Method SOM02.4 on 07/31/18.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for C0AC1 [4-Chloroaniline-d4 - 0%, 4-Nitrophenol-d4 - 9%], C0AC3 [4-Chloroaniline-d4 - 0%] and C0AC4 [4-Chloroaniline-d4 - 0%]. As per method four surrogates are allowed to fail. No further corrective action was taken.

The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The initial Calibration met requirements.
The Continuous Calibration met the requirements.
The Tuning criteria met requirements.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

$$\text{Concentration ug/L} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vo)\,(Vi)}$$

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
DF= Dilution factor
Vt = Volume of the concentrated extract in uL

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)

Example calculation of **C0AB6** for Dimethylphthalate**:**

Ax = 18411
Ais = 129062

Is = 20
Vo = 1000
Vi = 1
Vt = 1000
RRF =1.805
GPC = 1
DF= 1

$$\text{Concentration ug/L} = \frac{(18411)(20)(1000)(1)(1)}{(129062)(1.805)(1000)(1)}$$

= 1.6 ug/L

RRF Calculation of standard 20 ppb for **Naphthalene** with M instrument for method 07/13/18

$$\text{RRF} = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

= 249237/243579 X 20/20

= 1.023 (Reported RRF)

Aroclors:

The analyses were performed on instrument GCECD_R. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.

Samples were analyzed on a single injection dual column system. To distinguish the second column analysis from the first column a -2 suffix was added to the file id on the form 8 and form 1. This referrers to forms were both columns are reported. Form 1s for the IBLK, MS, MSD and ALCS have the -2 on the form.

Aroclor sample were extracted by Method SOM02.4 on 07/31/2018 and analyzed on 08/02/2018. All the samples were subjected to a Sulfuric acid cleanup. The samples were extracted and analyzed within contractual holding time.

The Surrogate recoveries met the requirements except for C0AB6 DCB [19%, 20%].
The SOW allows one surrogate to fail to meet the criteria per column. (Section 11.3.6 of Exhibit D Aroclor Analysis). No further corrective action was taken.

The Retention Times met requirements.
The Laboratory Control Sample met requirements.

The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuing Calibrations met the requirements.

QC samples volume was not received to perform the MS/MSD analysis. Please see the communication with Region in reference to this in the shipping and QC discrepancies section.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation for Concentration in Water Samples:

$$\text{Concentration ug/L} = \frac{(Ax)\ (Vt)\ (DF)\ (GPC)}{(CF)\ (Vo)\ (Vi)}$$

Where,

Ax = Response (peak area or height) of the compound to be measured.
CF = Mean Calibration Factor from the initial calibration (area/ng).
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL
$GPC = \frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)
Vin = Volume of extract loaded onto GPC column.
Vout = Volume of extract collected after GPC cleanup.
DF = Dilution Factor.

Example of AR1254 calculation for Peak 1

Calibration factor Peak 1 100ppb ISTD= $\frac{\text{peak area}}{\text{Mass injected ng}}$
Column 2

$$= \frac{329400000}{0.100}$$

= 3294000000 calibration factor for Peak 1 100ppb AR1254

Average of 5 peaks = 2690237613

Sample C0AC0

Ax = 1153500000
CF = 2690237613

Vt = 10000
Vi = 1.0
Vo = 1000
GPC = 1.0
DF = 1.0

$$\text{Concentration ug/L} = \frac{(Ax)\,(Vt)\,(DF)\,(GPC)}{(CF)\,(Vo)\,(Vi)}$$

$$= \frac{(1153500000)(10000)(1.0)(1.0)}{(2690237613)(1.0)(1000)}$$

Peak 1 = 4.2877

Average of 5 peaks = 5.1142

Reported results = 5.1 ug/L

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature: [redacted] Name: [redacted]

Date: 8/15/18 Title: Document Control Officer

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Manual Integration Report

Sequence:	BM071318	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD00529/ SSTD00529	BM015938.D	2-Nitroaniline	[redacted]	7/16/2018 3:28:11 PM	[redacted]	7/16/2018 3:29:05 PM	Peak Integrated by Software incorrectly
SSTD01030/ SSTD01030	BM015939.D	Phenanthrene	[redacted]	7/16/2018 3:28:16 PM	[redacted]	7/16/2018 3:29:07 PM	Peak Integrated by Software incorrectly
SSTD01030/ SSTD01030	BM015939.D	Phenanthrene-d10	[redacted]	7/16/2018 3:28:16 PM	[redacted]	7/16/2018 3:29:07 PM	Peak Integrated by Software incorrectly
SSTD04032/ SSTD04032	BM015941.D	2,2"-oxybis(1-Chloroprop ane)	[redacted]	7/16/2018 3:28:19 PM	[redacted]	7/16/2018 3:29:10 PM	Peak Integrated by Software incorrectly
SSTD08033/ SSTD08033	BM015942.D	Caprolactam	[redacted]	7/16/2018 3:28:21 PM	[redacted]	7/16/2018 3:29:12 PM	Peak Integrated by Software incorrectly
SSTD16034/ SSTD16034	BM015943.D	4-Nitroaniline	[redacted]	7/16/2018 3:28:23 PM	[redacted]	7/16/2018 3:29:15 PM	Peak Integrated by Software incorrectly
SSTD16034/ SSTD16034	BM015943.D	Caprolactam	[redacted]	7/16/2018 3:28:23 PM	[redacted]	7/16/2018 3:29:15 PM	Peak Integrated by Software incorrectly
SSTDICV020/ SICV35	BM015944.D	Benzo(b)fluoranthene	[redacted]	7/16/2018 3:28:26 PM	[redacted]	7/16/2018 3:29:17 PM	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	BM080118	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020/ SSTD02052	BM016135.D	Benzo(b)fluoranthene	Non-responsive based [redacted]	8/2/2018 1:55:00 PM	Non-responsive based [redacted]	8/2/2018 2:18:53 PM	Peak Integrated by Software incorrectly
PB111630BL/ SBLK30	BM016138.D	4-Nitrophenol-d4	[redacted]	8/2/2018 1:55:07 PM	[redacted]	8/2/2018 2:19:00 PM	Peak Integrated by Software incorrectly
PB111630BL/ SBLK30	BM016138.D	Phenanthrene-d10	[redacted]	8/2/2018 1:55:07 PM	[redacted]	8/2/2018 2:19:00 PM	Peak Integrated by Software incorrectly
J4175-03/ C0AC1	BM016139.D	1,4-Dioxane-d8	[redacted]	8/2/2018 1:55:48 PM	[redacted]	8/2/2018 2:19:07 PM	Peak Integrated by Software incorrectly
J4175-03/ C0AC1	BM016139.D	4-Nitrophenol-d4	[redacted]	8/2/2018 1:55:48 PM	[redacted]	8/2/2018 2:19:07 PM	Peak Integrated by Software incorrectly
J4175-03/ C0AC1	BM016139.D	Phenanthrene-d10	[redacted]	8/2/2018 1:55:48 PM	[redacted]	8/2/2018 2:19:07 PM	Peak Integrated by Software incorrectly
J4175-04/ C0AC3	BM016140.D	4-Nitrophenol-d4	[redacted]	8/2/2018 1:55:51 PM	[redacted]	8/2/2018 2:19:10 PM	Peak Integrated by Software incorrectly
J4175-04/ C0AC3	BM016140.D	Phenanthrene-d10	[redacted]	8/2/2018 1:55:51 PM	[redacted]	8/2/2018 2:19:10 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02053	BM016142.D	2,2"-oxybis(1-Chloropropane)	[redacted]	8/2/2018 1:55:56 PM	[redacted]	8/2/2018 2:19:19 PM	Peak Integrated by Software incorrectly
J4175-05/ C0AC4	BM016143.D	4-Nitrophenol-d4	[redacted]	8/2/2018 1:55:59 PM	[redacted]	8/2/2018 2:19:22 PM	Peak Integrated by Software incorrectly
J4175-05/ C0AC4	BM016143.D	Phenanthrene-d10	[redacted]	8/2/2018 1:55:59 PM	[redacted]	8/2/2018 2:19:22 PM	Peak Integrated by Software incorrectly
J4175-02/ C0AC0	BM016156.D	4-Nitrophenol-d4	[redacted]	8/2/2018 1:56:21 PM	[redacted]	8/2/2018 2:19:42 PM	Peak Integrated by Software incorrectly
J4175-01/ C0AB6	BM016157.D	4-Nitrophenol-d4	[redacted]	8/2/2018 1:56:24 PM	[redacted]	8/2/2018 2:19:44 PM	Peak Integrated by Software incorrectly

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Sequence:	BM080118	Instrument	BNA_m

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4175-01/ C0AB6	BM016157.D	Phenanthrene-d10	[redacted]	8/2/2018 1:56:24 PM	[redacted]	8/2/2018 2:19:44 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02054	BM016158.D	4-Bromophenyl-phenylether	[redacted]	8/2/2018 1:56:26 PM	[redacted]	8/2/2018 2:19:46 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02054	BM016158.D	Caprolactam	[redacted]	8/2/2018 1:56:26 PM	[redacted]	8/2/2018 2:19:46 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02054	BM016158.D	Phenanthrene	[redacted]	8/2/2018 1:56:26 PM	[redacted]	8/2/2018 2:19:46 PM	Peak Integrated by Software incorrectly
SSTDCCC020EC/ SSTD02054	BM016158.D	Phenanthrene-d10	[redacted]	8/2/2018 1:56:26 PM	[redacted]	8/2/2018 2:19:46 PM	Peak Integrated by Software incorrectly

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Sequence:	PR080218	Instrument	ECD_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660ICC800/ AR1660401	PR031033.D	AR-1016-3 #2	Non-responsive based on [redacted]	8/2/2018 8:11:04 AM	Non-responsive base [redacted]	8/2/2018 9:41:57	Peak Integrated by Software incorrectly
AR1660ICC800/ AR1660401	PR031033.D	Tetrachloro-m-xylene #2	[redacted]	8/2/2018 8:11:04 AM	[redacted]	8/2/2018 9:41:57	Peak Integrated by Software incorrectly
AR1660ICC1600 / AR1660501	PR031034.D	AR-1016-3 #2	[redacted]	8/2/2018 8:11:05 AM	[redacted]	8/2/2018 9:41:57	Peak Integrated by Software incorrectly
AR1242ICC100/ AR1242101	PR031037.D	AR-1242-4 #2	[redacted]	8/2/2018 8:11:06 AM	[redacted]	8/2/2018 9:41:58	Peak Integrated by Software incorrectly
AR1242ICC100/ AR1242101	PR031037.D	AR-1242-5 #2	[redacted]	8/2/2018 8:11:06 AM	[redacted]	8/2/2018 9:41:58	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031030.D	AR-1016-3 #2	[redacted]	8/2/2018 8:11:03 AM	[redacted]	8/2/2018 9:41:55	Peak Integrated by Software incorrectly
AR1248ICC200/ AR1248201	PR031043.D	AR-1248-4 #2	[redacted]	8/2/2018 8:11:09 AM	[redacted]	8/2/2018 9:42:00	Peak Integrated by Software incorrectly
AR1248ICC400/ AR1248301	PR031044.D	AR-1248-4 #2	[redacted]	8/2/2018 8:11:11 AM	[redacted]	8/2/2018 9:42:02	Peak Integrated by Software incorrectly
AR1248ICC100/ AR1248101	PR031042.D	AR-1248-4 #2	[redacted]	8/2/2018 8:11:08 AM	[redacted]	8/2/2018 9:41:59	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	PR080418	Instrument	ECD_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AIBLK68/ AIBLK68	PR031080.D	Decachlorobiphenyl #2	Non-responsive based on [redacted]	8/6/2018 3:26:00 PM	Non-responsive [redacted]	8/6/2018 3:37:23	Peak Integrated by Software incorrectly
AIBLK68/ AIBLK68	PR031080.D	Tetrachloro-m-xylene #2	[redacted]	8/6/2018 3:26:00 PM	[redacted]	8/6/2018 3:37:23	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660360	PR031081.D	Tetrachloro-m-xylene	[redacted]	8/6/2018 3:26:01 PM	[redacted]	8/6/2018 3:37:24	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-2	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-3	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-4	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-4 #2	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-5	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-5 #2	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	Tetrachloro-m-xylene	[redacted]	8/6/2018 3:26:02 PM	[redacted]	8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254360	PR031083.D	Tetrachloro-m-xylene	[redacted]	8/6/2018 3:26:04 PM	[redacted]	8/6/2018 3:37:28	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1016-1	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1016-2	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly

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Sequence:	PR080418	Instrument	ECD_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
PB111631BS/ ALCS31	PR031085.D	AR-1016-3	Non-responsive based [redacted]	8/13/2018 8:28:20 AM	Non-responsive bas [redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1016-4	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1016-5	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-1	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-1 #2	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-2	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-2 #2	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-3	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-3 #2	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
PB111631BS/ ALCS31	PR031085.D	AR-1260-4	[redacted]	8/13/2018 8:28:20 AM	[redacted]	8/13/2018 8:28:56	Peak Integrated by Software incorrectly
J4175-01/ C0AB6	PR031086.D	Tetrachloro-m-xylene	[redacted]	8/6/2018 3:26:07 PM	[redacted]	8/6/2018 3:37:39	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660361	PR031096.D	Tetrachloro-m-xylene #2	[redacted]	8/6/2018 3:26:38 PM	[redacted]	8/6/2018 3:37:59	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660362	PR031122.D	Tetrachloro-m-xylene #2	[redacted]	8/6/2018 3:26:59 PM	[redacted]	8/6/2018 3:38:32	Peak Integrated by Software incorrectly

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Sequence:	PR080418	Instrument	ECD_r

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AR1242CCC400 / AR1242362	PR031123.D	AR-1242-4 #2	[redacted]	8/6/2018 3:27:00 PM	[redacted]	8/6/2018 3:38:33	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242362	PR031123.D	AR-1242-5 #2	[redacted]	8/6/2018 3:27:00 PM	[redacted]	8/6/2018 3:38:33	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242362	PR031123.D	Tetrachloro-m-xylene #2	[redacted]	8/6/2018 3:27:00 PM	[redacted]	8/6/2018 3:38:33	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-1 #2	[redacted]	8/6/2018 3:27:02 PM	[redacted]	8/6/2018 3:38:34	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-2	[redacted]	8/6/2018 3:27:02 PM	[redacted]	8/6/2018 3:38:34	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-2 #2	[redacted]	8/6/2018 3:27:02 PM	[redacted]	8/6/2018 3:38:34	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-3	[redacted]	8/6/2018 3:27:02 PM	[redacted]	8/6/2018 3:38:34	Peak Integrated by Software incorrectly

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Manual Integration Report

Sequence:	PR080518	Instrument	ECD_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4175-02/ C0AC0	PR031141.D	AR-1254-2	Non-responsive based [redacted]	8/6/2018 3:23:55 PM	Non-responsive b [redacted]	8/7/2018 9:26:34	Peak Integrated by Software incorrectly
J4175-02/ C0AC0	PR031141.D	AR-1254-3	[redacted]	8/6/2018 3:23:55 PM	[redacted]	8/7/2018 9:26:34	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-1	[redacted]	8/6/2018 3:25:27 PM	[redacted]	8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-1 #2	[redacted]	8/6/2018 3:25:27 PM	[redacted]	8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-2	[redacted]	8/6/2018 3:25:27 PM	[redacted]	8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-2 #2	[redacted]	8/6/2018 3:25:27 PM	[redacted]	8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-3 #2	[redacted]	8/6/2018 3:25:27 PM	[redacted]	8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	Tetrachloro-m-xylene #2	[redacted]	8/6/2018 3:25:27 PM	[redacted]	8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254366	PR031167.D	Decachlorobiphenyl #2	[redacted]	8/6/2018 3:25:28 PM	[redacted]	8/7/2018 9:26:54	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254367	PR031174.D	Decachlorobiphenyl #2	[redacted]	8/8/2018 12:06:45 PM	[redacted]	8/8/2018 12:06:54	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-1	[redacted]	8/6/2018 3:25:31 PM	[redacted]	8/7/2018 9:26:57	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-1 #2	[redacted]	8/6/2018 3:25:31 PM	[redacted]	8/7/2018 9:26:57	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-2	[redacted]	8/6/2018 3:25:31 PM	[redacted]	8/7/2018 9:26:57	Peak Integrated by Software incorrectly

CHEMTECH
284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Manual Integration Report

Sequence:	PR080518	Instrument	ECD_r

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-2 #2	Non-responsive [redacted]	8/6/2018 3:25:31 PM	Non-respon [redacted]	8/7/2018 9:26:57	Peak Integrated by Software incorrectly

FORM 2A-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract: EPW14030

Lab Code : CHM Case No.: 47768 MA No.: SDG No.: C0AB6

Analytical Method : SVOA Level :

Matrix : Water

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
C0AB6	68	67	68	74	76	78	78	73	77
C0AC0	72	62	67	72	70	74	75	69	77
C0AC1	89	15	71	63	39	83	83	69	0 *
C0AC3	91	17	80	69	43	91	97	81	0 *
C0AC4	92	19	97	82	51	107	107	92	0 *
SBLK30	85	71	82	83	76	88	88	79	96

	QC LIMITS
DMC1 (DXE) = 1,4-Dioxane-d8	40 - 110
DMC2 (PHL) = Phenol-d5	10 - 130
DMC3 (BCE) = Bis(2-Chloroethyl)ether-d8	25 - 120
DMC4 (2CP) = 2-Chlorophenol-d4	20 - 130
DMC5 (4MP) = 4-Methylphenol-d8	25 - 125
DMC6 (NBZ) = Nitrobenzene-d5	20 - 125
DMC7 (2NP) = 2-Nitrophenol-d4	20 - 130
DMC8 (DCP) = 2,4-Dichlorophenol-d3	20 - 120
DMC9 (4CA) = 4-Chloroaniline-d4	1 - 146

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030
Lab Code : CHM Case No.: 47768 MA No.: _____ SDG No.: C0AB6
Analytical Method : SVOA Level : _____
Matrix : Water

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
C0AB6	75	77	63	72	60	75	88	71	0
C0AC0	73	74	58	68	58	72	86	66	0
C0AC1	81	82	9 *	79	63	78	97	78	2
C0AC3	92	94	11	88	78	96	111	91	1
C0AC4	102	104	12	97	85	103	124	98	1
SBLK30	87	90	66	82	69	90	103	85	0

		QC LIMITS
DMC10 (DMP)	= Dimethylphthalate-d6	25 - 130
DMC11 (ACY)	= Acenaphthylene-d8	10 - 130
DMC12 (4NP)	= 4-Nitrophenol-d4	10 - 150
DMC13 (FLR)	= Fluorene-d10	25 - 125
DMC14 (NMP)	= 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC)	= Anthracene-d10	25 - 130
DMC16 (PYR)	= Pyrene-d10	15 - 130
DMC17 (BAP)	= Benzo(a)pyrene-d12	20 - 130

EPA SAMPLE NO.

SBLK30

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 47768
MA No. : _____ sdg no.: C0AB6
Analytical Method: SVOA
Level : _____
Matrix : Water
Lab Sample ID: PB111630BL
Instrument ID: BNA_M
Lab File ID : BM016138.D
Extraction Type : CONH
Date Extracted : 07/31/2018
GC Column ( ) : ZB-GR ID : 0.25 (mm)
Date Analyzed : 08/01/2018
GC Column ( ) : _____ ID : _____ (mm)
Time Analyzed : 13:16
Heated Purge: (Y/N) _____ Cleanup(Y/N): N
Cleanup Types : _____

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
C0AC1	J4175-03	BM016139.D	08/01/2018 13:52
C0AC3	J4175-04	BM016140.D	08/01/2018 14:29
C0AC4	J4175-05	BM016143.D	08/01/2018 17:33
C0AC0	J4175-02	BM016156.D	08/02/2018 01:30
C0AB6	J4175-01	BM016157.D	08/02/2018 02:06

FORM 2C-OR
SURROGATE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030

Lab Code: CHM Case No.: 47768 MA No.: SDG No.: C0AB6

Analytical Method: ARO

Matrix: Water

GC Column(1) : ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)

EPA SAMPLE	SUR(TCX)1-1 %R	SUR(TCX)1-2 %R	SUR(DCB)2-1 %R	SUR(DCB)2-2 %R	OTHER (1)	OTHER (2)	TOT OUT
ABLK31	113	111	117	121			0
ALCS31	114	107	117	118			0
C0AB6	36	32	19 *	20 *			2
C0AC0	41	44	31	32			0
C0AC1	69	70	61	64			0
C0AC3	83	78	98	101			0
C0AC4	108	104	119	123			0

	QC LIMITS
TCX = Tetrachloro-m-xylene	(30-150)
DCB = Decachlorobiphenyl	(30-150)

FORM 3B-OR
LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

ALCS31

Lab Name : Chemtech Consulting Group Contract : EPW14030

Lab Code : CHM Case No. : 47768 MA No. : SDG No.: C0AB6

Analytical Method: ARO

Matrix : Water Lab Sample ID : PB111631BS

LCS Lot No. : PP13959 Date Extracted : 07/31/2018

Concentration Units (ug/L,mg/L,ug/kg): ug/L

Instrument ID (1) : ECD_R GC Column (1) : ZB-MR1 ID : 0.32 (mm)

Date Analyzed (1) : 08/02/2018

ANALYTE	AMOUNT ADDED	AMOUNT RECOVERED	% R	QC LIMITS
AR1016	1.0	1.5	149	50-150
AR1260	1.0	1.4	136	50-150

Instrument ID (2) : ECD_R GC Column (2) : ZB-MR2 ID : 0.32 (mm)

Date Analyzed (2) : 08/02/2018

ANALYTE	AMOUNT ADDED	AMOUNT RECOVERED	% R	QC LIMITS
AR1016	1.0	1.4	145	50-150
AR1260	1.0	1.3	133	50-150

EPA SAMPLE NO.

ABLK31

FORM 4-OR
METHOD BLANK SUMMARY

Lab Name : Chemtech Consulting Group
Contract : EPW14030
Lab Code: CHM Case No.: 47768
MA No.: SDG No.: C0AB6
Analytical Method: ARO
Level :
Matrix : Water
Lab Sample ID : PB111631BL
Instrument ID: ECD_R
Lab File ID : PR031084.D
Extraction Type: SEPF
Date Extracted : 07/31/2018
GC Column (1) : ZB-MR1 ID : 0.32 (mm)
Date Analyzed : 08/02/2018
GC Column (2) : ZB-MR2 ID : 0.32 (mm)
Time Analyzed : 18:53
Heated Purge : (Y/N) Cleanup(Y/N) : Y
Cleanup Types : Acid

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
ALCS31	PB111631BS	PR031085.D	08/02/2018 19:08
C0AB6	J4175-01	PR031086.D	08/02/2018 19:22
C0AC1	J4175-03	PR031088.D	08/02/2018 19:51
C0AC3	J4175-04	PR031089.D	08/02/2018 20:05
C0AC4	J4175-05	PR031090.D	08/02/2018 20:20
C0AC0	J4175-02	PR031141.D	08/03/2018 15:26

Non-responsive based on revised scope

From: Non-responsive based on revised scope
Sent: Monday, July 30, 2018 3:52 PM
To: Non-responsive based on revised scope
Cc: Burman.Jarmael (Burman.Jarmael@epa.gov); roberson.sharon@epa.gov
Subject: Region 03 | Case 47768 | Lab CHM | Issue Insufficient volume | FINAL
Attachments: J4178_201872711944.pdf; 47768-0727-2.pdf; 47768-0726.pdf

Good afternoon Non-responsi

Issue: Laboratory QC is scheduled for water ARO analysis; however, no sample has been designated for laboratory QC on the COCs received on 7/26/2018 and 7/27/2018. Sufficient volume for laboratory QC was not received for any of the samples in these shipments. The laboratory would like to confirm if they may proceed without laboratory QC for water ARO samples in SDG C0AB6.
Resolution: Per Region 3, the laboratory may proceed with the analysis off the ARO water samples in SDG C0AB6 without performing laboratory QC. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please note that the laboratory will have to contact the Regional CLP COR and the appropriate ASB CLP COR should any defects need to be waived for this issue.

Thanks,
Non-responsive based on revised scope n
Environmental Analyst – EPA Regions 3, 6, and 9
General Dynamics Information Technology
6361 Walker Lane
Alexandria, VA 22310 | Non-responsive based on revised scope
Non-responsive based on revised scop | www.gdit.com

GENERAL DYNAMICS
Information Technology

From: Burman, Jarmael <Burman.Jarmael@epa.gov>
Sent: Monday, July 30, 2018 3:00 PM
To: Non-responsive based on revised scope
Subject: RE: NEW ISSUE | Case 47768 | Lab CHM | Issue Insufficient volume

NoNon-responsive based

Have the laboratory proceed with the analysis off the samples without performing laboratory QC, due to insufficient sample volume, and make note of the issue in their SDG Narrative.

Jarmael A. Burman
US EPA Region 3 - CLP PO/RSCC/DDS
701 Mapes Road
Fort Meade, Maryland 20755-5350
(410) 305-2743 (office)
(410) 305-3095 (fax)

US EPA Region 3 Analytical Request (ARF) Report

CT Number: CT8495 | Date Receipt: 07/12/2018 | Sample(s) Shipping Dates Start: 07/23/2018 End: 08/17/2018 | ARF Status: IN PROGRESS

Site: SHILOH CHURCH ROAD SITE | Site Activity: REMOVAL ASSESSMENT (RS) | Program: SUPERFUND (RAS AND/OR DAS)

Street: [redacted] SHILOH CHURCH ROAD | City: NATHALIE | State: VA | Zip: 24577

Account No: 2018-T-03-N-303DC6-A38Q-RS-00 | SPILL ID: A38Q | OPERABLE UNIT: 00 | EPA ID (aka CERCLIS):

QA Title: | QA Date Approved:

EPA Project Lead:	CHRIS WAGNER	Phone:	804-698-4164	Cell Phone #:	- -	E-mail:	WAGNER.CHRISTINE@EPA.GOV
Site Leader:	[redacted]	Phone:	[redacted]	Cell Phone #:	[redacted]	E-mail:	[redacted]
Request Preparer:	[redacted] THEW	Phone:	[redacted]	Cell Phone #:	[redacted]	E-mail:	Non-responsive based on revised scope
Contractor:	WESTON SOLUTIONS	EPA CO/PO:	RYAN PARKER			Equivalent method substitution allowed:	YES

Special Instructions:

WATER SAMPLES WILL INCLUDE BOTH GROUNDWATER AND SURFACE WATER SAMPLES.
SAMPLING WILL BE SPLIT INTO TWO DIFFERENT WEEKS, SOIL/SEDIMENT SAMPLING, ASSOCIATED QC SAMPLING, AND SURFACE WATER SAMPLING IS SCHEDULED FOR THE WEEK OF JULY 23. GROUNDWATER SAMPLING AND POTENTIALLY ANY REMAINING SURFACE WATER SAMPLING IS SCHEDULED FOR THE WEEK OF AUGUST 13.

Comments:

DAS	RAS	Lab Assigned	QTY	Matrix	Parameter	Requested Method	Accepted Method	Validation Level	Unvalidated Data Due	Final Report Due	EDD Required
	47768	CHM	50	SOIL/SEDIMENT	VOLATILE ORGANIC COMPOUNDS (VOC)	SOM02.4 (LOW/MID)	SOM02.4 (LOW/MID)	M3	21	45	Y
	47768	CHEM	50	SOIL/SEDIMENT	SEMIVOLATILES (SVOCS)	SOM02.4	SOM02.4	M3	21	45	Y
	47768	CHEM	50	SOIL/SEDIMENT	PCB AROCLORS	SOM02.4	SOM02.4	M3	21	45	Y
	47768	BON	50	SOIL/SEDIMENT	METALS (TOTAL)	ISM02.4 ICP-AES	ISM02.4 ICP-AES	IM2	21	45	Y
	47768	CHEM	9	WATER	VOLATILE ORGANIC COMPOUNDS (VOC)	SOM02.4 (LOW/MID)	SOM02.4 (LOW/MID)	M3	21	45	Y
	47768	CHEM	9	WATER	SEMIVOLATILES (SVOCS)	SOM02.4	SOM02.4	M3	21	45	Y
	47768	CHEM	9	WATER	PCB AROCLORS	SOM02.4	SOM02.4	M3	21	45	Y
	47768	BON	9	WATER	METALS (TOTAL)	ISM02.4 ICP-AES	ISM02.4 ICP-AES	IM2	21	45	Y
	47768	BON	9	WATER	MERCURY (TOTAL)	ISM02.4	ISM02.4	IM2	21	45	Y
	47768	CHEM	8	DRINKING WATER	VOLATILE ORGANIC COMPOUNDS (VOC) TRACE	SOM02.4 (TRACE)	SOM02.4 (TRACE)	M3	21	45	Y

US EPA Region 3 Analytical Request (ARF) Report

CT Number: CT8495 | Date Receipt: 07/12/2018 | Sample(s) Shipping Dates Start: 07/23/2018 End: 08/17/2018 | ARF Status: IN PROGRESS

DAS	RAS	Lab Assigned	QTY	Matrix	Parameter	Requested Method	Accepted Method	Validation Level	Unvalidated Data Due	Final Report Due	EDD Required
	47768	CHEM	8	DRINKING WATER	SEMIVOLATILES (SVOCS)	SOM02.4	SOM02.4	M3	21	45	Y
	47768	CHEM	8	DRINKING WATER	PCB AROCLORS	SOM02.4	SOM02.4	M3	21	45	Y
	47768	BON	8	DRINKING WATER	METALS (TOTAL)	ISM02.4 ICP-MS	ISM02.4 ICP-MS	IM2	21	45	Y
	47768	BON	8	DRINKING WATER	MERCURY (TOTAL)	ISM02.4	ISM02.4	IM2	21	45	Y
	47768	CHEM	9	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	VOLATILE ORGANIC COMPOUNDS (VOC) TRACE	SOM02.4 (TRACE)	SOM02.4 (TRACE)	M3	21	45	Y
	47768	CHEM	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	SEMIVOLATILES (SVOCS)	SOM02.4	SOM02.4	M3	21	45	Y
	47768	CHEM	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	PCB AROCLORS	SOM02.4	SOM02.4	M3	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	METALS (TOTAL)	ISM02.4 ICP-AES	ISM02.4 ICP-AES	IM2	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	MERCURY (TOTAL)	ISM02.4	ISM02.4	IM2	21	45	Y
	47768	BON	9	WATER	METALS (DISSOLVED)	ISM02.4 ICP-AES	ISM02.4 ICP-AES	IM2	21	45	Y
	47768	BON	9	WATER	MERCURY (DISSOLVED)	ISM02.4	ISM02.4	IM2	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	METALS (DISSOLVED)	ISM02.4 ICP-AES	ISM02.4 ICP-AES	IM2	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	MERCURY (DISSOLVED)	ISM02.4	ISM02.4	IM2	21	45	Y
	47768	BON	50	SOIL/SEDIMENT	MERCURY (TOTAL)	ISM02.4	ISM02.4	IM2	21	45	Y