SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 50542
SDG: EXHG0
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: O1602
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
O1602-01	EXHG0	
O1602-02	EXHG1	
O1602-03	EXHG2	
O1602-04	EXHG3	
O1602-05	EXHG4	
O1602-06	EXHG5	
O1602-07	EXHG6	
O1602-08	EXHG7	
O1602-09	EXHG8	
O1602-10	EXHG9	
O1602-11	EXHH0	
O1602-12MS	EXHH0MS	
O1602-13MSD	EXHH0MSD	

13 soil samples were delivered to the laboratory intact on 02/17/2023.

Test requested on the Chain of Custody was Aroclor by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 3.1 and 2.9 degree Celsius for the samples received on 02/17/2023.

Shipping Discrepancies and/or QC issues:
Issue1: No airbill listed on the COC.

Resolution1: In accordance with previous direction from Region 5, the laboratory will note the discrepancy in the SDG Narrative and proceed with the analysis of the samples. The resolution will be applied to all COCs received for this Case.

Issue2: Samples in SDG EXHG0 are scheduled for laboratory QC, however no sample was designated for QC on the COC. The laboratory has selected sample EXHH0 with extra volume for QC. This sample is not a blank, PE or rinsate.

Resolution2: Per SFAM01.1 Exhibit A, Section 5.5.4.1, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

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.

The sample was 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 1. These refer to forms were both columns are reported. Form 1s for the IBLK and ALCS are referenced as IBLK(1)/IBLK(2), MS(1)/MS(2), MSD(1)/MSD(2) and ALCS01(1)/ALCS01(2) respectively.

Aroclor sample was extracted by Method SFAM01.1 on 02/20/2023 and analyzed on 02/21/2023. All the samples were subjected to a Sulfuric acid cleanup. The sample was extracted and analyzed within contractual holding time.

The Surrogate recoveries met the acceptable criteria.
EXHH0MS met the requirements.
EXHH0MSD met the requirements.
The RPD met the 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.
The Retention Times were acceptable for all samples.

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

Calculation for Concentration in Soil samples:

$$\text{Concentration ug/Kg (Dry weight basis)} = \frac{(Ax)\,(Vt)\,(DF)\,(GPC)}{(CF)\,(Vi)\,(Ws)\,(D)}$$

Where,
Ax = Response (peak area or height) of the compound to be measured.
CF = Mean Calibration Factor from the initial calibration (area/ng).
Vt = Volume of the concentrated extract in uL
Vi = Volume of extract injected (uL). (If a single injection is made onto two columns, use ½ the volume in the syringe as the volume injected onto each column).
Ws = Weight of sample extracted (g).

$$D = \%\text{ dry weight or } \frac{100 - \%\text{Moisture}}{100}$$

$$GPC = \frac{Vin}{Vout} = \text{GPC factor (If no GPC is performed, GPC=1)}$$

DF = Dilution Factor

Example of AR1248 calculation for Peak 1

Calibration factor Peak 1 100ppb ISTD= $\frac{\text{peak area}}{\text{Mass injected ng}}$
Column2

$= \frac{9555066}{0.100}$

= 95550660 calibration factor for Peak 1 100ppb

Average of 5 peaks = 86831550

Sample EXHG2
Ax = 7958347
CF = 86831550
Vt = 10000
Vi = 1.0
Ws = 30.1
D = 0.849
GPC = 1.0
DF = 1.0

Concentration ug/Kg (Dry weight basis) = $\frac{(Ax)\ (Vt)\ (DF)\ (GPC)}{(CF)\ (Vi)\ (Ws)\ (D)}$

$= \frac{(7958347)\ (10000)\ (1.0)\ (1.0)}{(86831550)\ (1.0)\ (30.1)\ 0.849)}$

Peak 1 =35.87

Average of 5 peaks = 40.25

Reported results = 40 ug/kg

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 _____ Name: Nimisha Pandya.

Date: _____ Title: Document Control Officer.