SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 50325
SDG: A42P0
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: N4908
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
N4908-01	A42P0	
N4908-02	A42S4	
N4908-03	A42M4	
N4908-04	A42N1	
N4908-05	A42N2	
N4908-06	A42R6	
N4908-07	A42N7	
N4908-08	A42Q1	
N4908-09	A42Q4	
N4908-10	A42Q5	
N4908-11	A42N5	
N4908-12	A42N6	
N4908-13	A42S1	
N4908-14	A42S2	
N4908-15	A42L4	
N4908-16MS	A42L4MS	
N4908-17MSD	A42L4MSD	
N4908-18	A42L5	
N4908-19	A42P3	

2 Water samples were delivered to the laboratory intact on 09/29/2022.
17 Water samples were delivered to the laboratory intact on 09/30/2022.

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

Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.1, 2.6 degree Celsius for the samples received on 09/29/2022, 1.7, 1.6, 2.2, 2.8 degree Celsius for the samples received on 09/30/2022.

Aroclors:

The analyses were performed on instrument GCECD_Q. 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 10/01/2022 and analyzed on 10/05/2022. 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 except for
A42L4 [Tetrachloro-m-xylene(1) - 166%] and
A42L5 [Decachlorobiphenyl(1) - 29%, Decachlorobiphenyl(2) - 28%]. The SOW allows one surrogate to fail to meet the criteria per column. ((Please See Section 11.3.6 of Exhibit D Aroclor Analysis).
A42L4MS met the requirements except for AR1016 on both columns due to sample matrix interference. No corrective action is required for failure to meet the MS/MSD criteria by the SOW. (Section 12.2.5.5 of Exhibit D Aroclor Analysis).

A42L4MSD met the requirements except for AR1016 on both columns due to sample matrix interference. No corrective action is required for failure to meet the MS/MSD criteria by the SOW. (Section 12.2.5.5 of Exhibit D Aroclor Analysis).
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 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 = Vin = GPC factor (If no GPC is performed, GPC=1)
Vout

Vin = Volume of extract loaded onto GPC column.
Vout = Volume of extract collected after GPC cleanup.
DF = Dilution Factor.

Example of AR1016 calculation for Peak 1

Calibration factor Peak 1 100ppb ISTD= peak area
Column1 Mass injected ng

= 49809613
0.100

= 498096130 calibration factor for Peak 1 100ppb

Average of 5 peaks = 419387507

Sample **A42P3**
Ax = 413323095
CF = 419387507
Vt = 10000
Vo = 1.0
Vi = 1000
GPC = 1.0
DF = 1.0

Concentration ug/L = (Ax) (Vt) (DF) (GPC)
(CF) (Vo) (Vi)

= (413323095) (10000) (1.0) (1.0)
(419387507) (1.0) (1000)

Peak 1 = 9.86

Average of 5 peaks = 9.66

Reported results = 9.7 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 _____ Name: Nimisha Pandya.

Date: _____ Title: Document Control Officer.