SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49836
SDG: BGZ13
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: N1295
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
N1295-01	BGZ13	
N1295-02	BGZ14	
N1295-03	BGZ15	
N1295-04	BGZ16	
N1295-05	BGZ17	
N1295-06	BGZ18	
N1295-07	BGZ19	
N1295-08	BGZ20	
N1295-08DL	BGZ20DL	
N1295-09	BGZ21	
N1295-10	BGZ23	
N1295-11MS	BGZ23MS	
N1295-12MSD	BGZ23MSD	
N1295-13	BGZ24	
N1295-13DL	BGZ24DL	
N1295-14	BGZ25	
N1295-14DL	BGZ25DL	

14 Soil samples were delivered to the laboratory intact on 01/26/2022.

Test requested on the Chain of Custody was Aroclor Organic 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 2.3 degree Celsius for the samples received on 01/26/2022.

Shipping Discrepancies and/or QC issues:
Issue 1: Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolutions 1: The laboratory will note the samples with the missing tags in the SDG Narrative and proceed with the analysis of the samples. The resolution will be applied to all samples received for this Case.

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 01/31/2022 and analyzed on 02/01, 02/02/2022. 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.
BGZ23MS met the requirements except for AR1260 on the first column 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).
BGZ23MSD met the requirements except for AR1260 on the first column 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.
Samples BGZ20, BGZ24 and BGZ25 were diluted due to high concentrations.

Samples BGZ17, BGZ23, BGZ23MS and BGZ23MSD failed to meet the %D for the results between the two columns Criteria.

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

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

DF = Dilution Factor

Example of AR1254 calculation for Peak 1

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

$= \frac{20323640}{0.100}$

= 203236400 calibration factor for Peak 1 100ppb

Average of 5 peaks = 173282514

Sample BGZ23
Ax = 57732922
CF = 173282514
Vt = 10000
Vi = 1.0
Ws = 30.1
D = 1.0
GPC = 1.0
DF = 0.778

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

$= \frac{(57732922)\ (10000)\ (1.0)\ (1.0)}{(173282514)\ (1.0)\ (30.1)\ (0.778)}$

Peak 1 = 142.27

Average of 5 peaks = 135.83

Reported results = 140 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.