SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 50214
SDG: C0QB1
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: N4030
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
N4030-01	C0QB0	
N4030-02	C0QB1	
N4030-03	C0QB3	
N4030-04	C0QB4	
N4030-05	C0QB5	

5 Soil samples were delivered to the laboratory intact on 08/03/2022.

Test requested on the Chain of Custody was Volatile Organic and Aroclor by Method SFAM01.0.

Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.5 degree Celsius for the samples received on 08/03/2022.

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.

Issue 2: The laboratory would like to know when they can expect the next shipment under this Case with QC samples for TCLP PEST and ARO.

Resolution 2: Per Regin 3, the laboratory will proceed with the analysis of the remaining samples without performing laboratory QC as the Case is complete. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Low Volatiles:
The analysis performed on instrument MSVOA_W were done using GC column RXI-624SIL MS 30m 0.25mm 1.4 um. Cat#13868.
The analysis of VOC-SFAM was based on method SFAM01.1_LOW.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements
Instrument Performance Check met requirements.
The Retention Times were met for all samples.
The Tuning criteria met requirements.

The Initial Calibration met the requirements.
The Continuing Calibration met the requirements.

The Blank analysis indicated presence of Acetone [6.8ug/Kg] FileID: VW024183.D (VBLK570) {VW0805SBL01} due to possible lab contamination. As per method, less than 2 times the respective CRQL is allowed to fail for Acetone. Therefore no further corrective action was taken.

The Storage blank did not indicate the presence of lab contamination.

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

Calculation:
Low/Med Level Soil/Sediment Calculation

Concentration in ug/Kg dry Weight basis) = $\frac{(A_x)(I_s)(D_f)}{(Ais)(RRF)(Ws)(D)}$ ____

Where,
Ax = Area for the compound to be measured
Ais = Area for the specific internal standard
Is = Amount of internal standard added in Nano grams (ng)
RRF = Relative response factor of the calibration standard.
Df = Dilution factor
Ws= Weight of sample

D= $\frac{100 - \%moisture}{100}$

Example Calculation for sample: **C0QB0** for **Methylene chloride**:

Ax= 26397
Is= 250
RRF= 0.441
DF=1
Ais= 315596
Ws= 4.67
D= 0.893

Concentration in ug/KG = $\frac{(26397)\ (250)\ (1)}{(315596)\ (0.441)\ (4.67)\ (0.893)}$

= 11.37 ug//Kg

Reported Results = 11 ug/Kg

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VW080422** for **5.0** ppb

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

RRF= $\frac{5172}{305549}$ X $\frac{50}{5.0}$

RRF= 0.169

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) and ALCS01(1)/ALCS01(2) respectively.

Aroclor sample was extracted by Method SFAM01.1 on 08/05/2022 and analyzed on 08/10/2022. 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.
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:

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 AR1260 calculation for Peak 1

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

$= \frac{12774840}{0.100}$

= 127748400 calibration factor for Peak 1 100ppb

Average of 5 peaks = 107158341

No target **Aroclors** were detected in the samples.

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.