SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49606
SDG: C0AL0
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: M4025
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
M4025-01	C0AL0	1.0
M4025-02	C0AL1	1.0
M4025-03	C0AL3	1.0
M4025-04	C0AM4	1.0
M4025-05	C0AM5	1.0
M4025-06	C0AM6	1.0
M4025-07	C0AM7	1.0
M4025-08	C0AN6	1.0
M4025-09	C0AP4	1.0
M4025-10	C0AP5	1.0
M4025-11	C0AN3	1.0
M4025-12	C0AN4	1.0
M4025-13	C0AN5	1.0
M4025-14	C0AN7	1.0
M4025-14DL	C0AN7DL	1.0
M4025-15	C0AN8	1.0
M4025-15DL	C0AN8DL	1.0
M4025-16	C0AN9	1.0
M4025-17	C0AP0	1.0
M4025-18	C0AP1	1.0
M4025-19	C0AP2	1.0
M4025-20	C0AP3	1.0

20 Water samples were delivered to the laboratory intact on 10/01/2021.

Test requested on the Chain of Custody was Volatile 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 2.8 degree Celsius for the samples received on 10/01/2021.

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.

Low Volatiles:
The analysis performed on instrument MSVOA_U were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI.
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 except for
C0AL3 [1,1-Dichloroethene-d2 - 58%],
C0AM4 [1,1-Dichloroethene-d2 - 57%],
C0AM5 [1,1-Dichloroethene-d2 - 59%],
C0AM6 [1,1-Dichloroethene-d2 - 58%],
C0AM7 [1,1-Dichloroethene-d2 - 59%],
C0AN6 [1,1-Dichloroethene-d2 - 59%],
C0AP4 [1,1-Dichloroethene-d2 - 59%],
C0AP5 [1,1-Dichloroethene-d2 - 59%],
C0AN3 [1,1-Dichloroethene-d2 - 59%],
C0AN4 [1,1-Dichloroethene-d2 - 57%],
C0AN5 [1,1-Dichloroethene-d2 - 59%],
C0AN8DL [1,1-Dichloroethene-d2 - 60%],
C0AN9 [1,1-Dichloroethene-d2 - 57%],
C0AP0 [1,1-Dichloroethene-d2 - 59%],
C0AP2 [1,1-Dichloroethene-d2 - 57%],
C0AP3 [1,1-Dichloroethene-d2 - 58%]..As per method, up to three surrogates are allowed to fail. No corrective action was taken.

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

The Continuing Calibration (VSTD050094) file ID VU045198.D met the requirements except for Chloromethane (-30.6%). As per method, up to two target analyte in CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

The Blank analysis indicated presence of Toluene [0.64ug/L] FileID:VU045136.D (VBLK012) {VU1005WBL01} due to possible lab contamination.
The Blank analysis indicated presence of Toluene [0.61ug/L] FileID:VU045200.D (VBLK021) {VU1007WBL01} due to possible lab contamination.

The Blank analysis indicated presence of Bromomethane [0.65ug/L], Toluene [0.61ug/L] FileID:VU045240.D (VBLK024) {VU1008WBL01} due to possible lab contamination. As per method, less than the respective CRQL is allowed to fail for Toluene, Bromomethane, Therefore no further corrective action was taken

The storage blank analysis indicated presence of Methylene chloride [1.1ug/L], Toluene [0.61ug/L] FileID: VU045264.D {VHBLK001} due to lab contamination. As per method, less than 2 times the respective CRQL is allowed to fail for Methylene chloride, less than the respective CRQL is allowed to fail for Toluene. Therefore no further corrective action was taken.

Samples C0AN7, C0AN8 were diluted due to high concentrations.

The sample C0AN8 was analyzed following the analysis of C0AN7. Both samples had common hit of compound with concentration above calibration levels for Trichloroethene. It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The sample C0AN9 was analyzed following the analysis of C0AN8. Sample C0AN8 had hit of compound Trichloroethene with concentration above calibration levels. Sample C0AN9 had concentration of this compound which is below CRQL. Therefore, as per method no instrument blank was required and not analyzed.

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

Calculation:
Low/Med Water Level Calculation

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

Where,
Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Amount of internal standard added in ng.
RRF = Mean Relative Response Factor from the initial calibration standard.
Vo = Total volume of water purged, in mL.
DF = Dilution Factor

Example Calculation for sample **C0AL3** for **Trichloroethene**

Ax= 41504
Is= 250
RRF= 0.445
DF= 1
Ais= 291622
Vo. = 5

Concentration in ug/L = $\frac{(41504)\ (250\ )\ (1\ )}{(291622)\ (0.445)(5)}$

Reported Result = 16ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VU092321** 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= $\frac{12653}{248013}$X $\frac{50}{5.0}$

RRF= 0.510

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.