SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49716
SDG: BFXR4
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: M4686
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
M4686-01	BFXR4	1.0
M4686-02	BG1X5	1.0
M4686-03	BG1Z1	1.0
M4686-04	BG1Z2	1.0
M4686-04DL	BG1Z2DL	1.0
M4686-05	BG1Z3	1.0
M4686-05DL	BG1Z3DL	1.0
M4686-06	BG1Z4	1.0
M4686-06DL	BG1Z4DL	1.0
M4686-07	BG1Z5	1.0
M4686-08	BG1Z6	1.0
M4686-09	BG1Z7	1.0
M4686-10	BG1Z8	1.0
M4686-11	BG1Z9	1.0
M4686-11DL	BG1Z9DL	1.0
M4686-12	BG200	1.0
M4686-13	BG201	1.0
M4686-14	BG202	1.0
M4686-14DL	BG202DL	1.0
M4686-15	BG211	1.0
M4686-16	BG212	1.0
M4686-17	BG213	1.0
M4686-17DL	BG213DL	1.0
M4686-18	BG214	1.0
M4686-19	BG215	1.0
M4686-20	BG216	1.0

20 Water samples were delivered to the laboratory intact on 11/12/2021.

Test requested on the Chain of Custody was Trace-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 2.4 degree Celsius for the samples received on 11/12/2021.

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.

Trace 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 Trap was supplied by OI Analytical, OI #10 Trap, OI Eclipse 4660 Concentrator.
The analysis of VOC-TRACE-SFAM was based on method SFAM01.1_Trace.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for
BG1Z4 [Benzene-d6 - 69%, Toluene-d8 - 63%],
BG1Z5 [Toluene-d8 - 67%],
BG1Z6 [Toluene-d8 - 68%],
BG1Z7 [Toluene-d8 - 69%],
BG202 [Benzene-d6 - 69%, Toluene-d8 - 64%],
BG211 [Toluene-d8 - 66%],
BG215 [Toluene-d8 - 70%] and
BG216 [Toluene-d8 - 69%]. As per method, up to three surrogates are allowed to fail. No corrective action was taken.

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

The Continuing Calibration met requirements.
The Continuing Calibration (VSTD005124) file ID VU045804.D met the requirements except for Bromochloromethane (21.8%). As per method, up to two target analyte in closing CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

The Closing Continuing Calibration (VSTD005129) file ID VU045881.D met the requirements except for Bromomethane (-53.2%). As per method, up to two target analyte in closing CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

The Blank analysis indicated presence of Methylene chloride [0.86ug/L] FileID:VU045805.D (VBLK036) {VU1116WBL01} due to possible lab contamination. As per method, less than 2 times the respective CRQL is allowed to fail for Methylene chloride. Therefore, no further corrective action was taken.

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

Samples BG1Z2, BG1Z3, BG1Z4, BG1Z9, BG202 and BG213 were diluted due to high concentrations.

The Sample #BG1Z7, BG212 have the concentration of target compound below Method detection limits, therefore it is not reported as Hit in Form1

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

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.
Is = 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 **BG1Z5** for **Trichloroethene**:

Ax = 63688
Is = 125
RRF=0.360
DF = 1
Ais = 98463
Vo. = 25

$$\text{Concentration in ug/L} = \frac{(63688)\,(125)\,(1)}{(98463)\,(0.360)\,(25)}$$

Reported Result = 9.0ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VU111521** for **0.5** ppb

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

$$RRF = \frac{3723}{96864} X \frac{5.0}{0.5}$$

RRF=0.384

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.