SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49354
SDG: EW106
CONTRACT: EPW14030
LAB CODE: CHM
CHEMTECH PROJECT: M1656
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	Test	pH
M1656-01	EW106		1.0
M1656-01DL	EW106DL	VOC	1.0
M1656-02	EW108		1.0
M1656-02DL	EW108DL	VOC	1.0
M1656-03	EW110		1.0

3 Water samples were delivered to the laboratory intact on 03/11/2021.

Test requested on the Chain of Custody was Volatile Organic by Method SOM02.4.

The temperature of the samples was measured using an I R Gun. The samples temperature was 3.4 degree Celsius for the samples received on 03/11/2021.

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

Resolution 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: All COCs are missing the air bill number.

Resolution 2: In accordance with previous direction from Region 5, the laboratory will note the discrepancy in the SDG Narrative and proceed with the analysis of the samples. The resolution will be applied to all COCs received for this Case.

Issue 3: TVOA analysis is scheduled but the COC mentions VOA. The laboratory would like to confirm that they may proceed as scheduled.

Resolution 3: Per Region 5, the laboratory will note the issue in the SDG Narrative and proceed with analysis.

Issue 4: This Case is scheduled for 14 TAT but the COC mentioned 21 days. The laboratory would like to confirm that they may proceed as scheduled.

Resolution 4: Per Region 5, the laboratory will note the issue in the SDG Narrative and proceed with analysis.

Issue 5: The laboratory received 6 water samples scheduled for TVOA analysis and laboratory QC is scheduled; however, the laboratory did not receive extra volume for any sample to perform QC. The laboratory requests confirmation that they may proceed without laboratory QC.

Resolution 5: Per Region 5, the laboratory will proceed without laboratory QC, note the issue in the SDG Narrative, and proceed with analysis.

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-Low Level -15 was based on method SOM02.4_Trace.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for
EW106 [1,1-Dichloroethene-d2 - 57%],
EW110 [1,2-Dichlorobenzene-d4 - 127%]. As per method, up to three surrogates are allowed to fail. No corrective action was taken.

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

The Blank analysis did not indicate the presence of lab contamination.

The storage blank analysis indicated presence of Methylene chloride [0.16ug/L] FileID: VU042671.D {VHBLK01} due to 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.

Samples EW106, EW108 were diluted due to high concentrations.

The sample EW108 was analyzed following the analysis of EW106. Both samples had common hit of compound with concentration above calibration levels for cis-1,2-Dichloroethene. It was reanalyzed at a diluted. As per method no instrument blank was required.

The sample EW110 was analyzed following the analysis of EW108. Sample EW108 had hit of compounds cis-1,2-Dichloroethene, Trichloroethene and Tetrachloroethene with concentration above calibration levels. Sample EW110 had concentration of these compounds which is below CRQL. Therefore, as per method no instrument blank was required.

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 **EW106** for **Vinyl chloride**:

Ax = 86123
Is = 125
RRF= 0.442
DF = 1
Ais = 87151
Vo. = 25

$$\text{Concentration in ug/L} = \frac{(86123)\,(125)\,(1)}{(87151)(0.442)(25)}$$

$$= 11.2\text{ug/L}$$

Reported Result = 11ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VU030221** for **0.5** ppb

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

$$RRF = \frac{4736}{111450} \times \frac{5.0}{0.5}$$

RRF= 0.425

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