SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 50826
SDG: H0FA3
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: O3495
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
O3495-01	H0FA3	1.0
O3495-02	H0FA4	1.0
O3495-02DL	H0FA4DL	1.0
O3495-03	H0FA7	1.0
O3495-04MS	H0FA7MS	1.0
O3495-05MSD	H0FA7MSD	1.0
O3495-06	H0FA8	1.0
O3495-07	H0FB0	1.0
O3495-08	H0FB1	1.0
O3495-09	H0FB3	1.0
O3495-09DL	H0FB3DL	1.0
O3495-10	H0FB4	1.0
O3495-10DL	H0FB4DL	1.0
O3495-11	H0FB6	1.0
O3495-12	H0FC1	1.0
O3495-12DL	H0FC1DL	1.0
O3495-13	H0FC2	1.0
O3495-14	H0FC3	1.0
O3495-14DL	H0FC3DL	1.0

14 Water sample was delivered to the laboratory intact on 06/30/2023.

Test requested on the Chain of Custody was Trace-volatile Organic by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.6 degree Celsius for the samples received on 06/30/2023.

Discrepancies with tags, jars and/or COC
Issue: “Lab has received water samples for TVOA analysis. Lab has analyzed undiluted TVOA analysis for the samples H0FC1 & H0FC3 in a continuous analytical sequence. Samples are found positive with extremely high concentration of target analytes detected and required high dilution as you can see attached form-1 with quant reports for your reference. In this case, instrument blank was not analyzed in between the undiluted samples analysis due to continuous

analytical sequence therefore lab would like to confirm that lab will report undiluted TVOA analysis without instrument blank in between the samples and further dilution analysis in electronic deliverables.

Resolution: REGION: “The approach the lab is using for the issue below is acceptable to the Region.”

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 analysis of VOC-SFAM was based on method SFAM01.1_Trace.

Holding Times were met requirement.

The Surrogate recoveries met the acceptable criteria except for,
H0FB3DL [Toluene-d8 - 70%],
H0FB4DL [Toluene-d8 - 67%],
H0FC1 [Toluene-d8 - 69%],
H0FC3 [Toluene-d8 - 67%].
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 Retention Times met requirements.
The Tuning criteria met requirements.

The MS {H0FA7MS} recovery met the requirements for all compounds.
The MSD {H0FA7MSD} recovery met the requirements for all compounds.
The RPD {H0FA7MSD} RPD met the requirements for all compounds .

The Initial Calibration met the requirements.

The Continuing Calibration (VSTD005088) file ID VU054759.D met the requirements except for Dibromochloromethane (21.7%). As per method, up to two target analyte in opening and closing CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

The blank analysis indicate the presence of Tetrachloroethene [0.40ug/L] File ID: VU054711.D {VU0630WBL02} (VBLK013) lab contamination. As per method, less than the respective CRQL is allowed to fail for Tetrachloroethene. Therefore, no further corrective action was taken.

The blank analysis indicate the presence of Methylene chloride [0.58ug/L] File ID: VU054760.D {VU0705WBL01} (VBLK015) lab contamination. As per method, less than the 2 times respective CRQL is allowed to fail for Methylene chloride. Therefore, no further corrective action was taken.

The Storage blank indicate the presence of Methylene chloride [0.62ug/L] File ID: VU054768.D {VHBLK001} 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.

Samples H0FA4, H0FB3, H0FB4, H0FC1 and H0FC3 were diluted due to high concentrations.

The sample H0FB4 was analyzed following the analysis of H0FB3. Both samples had common hit of compound with concentration above calibration levels for Tetrachloroethene, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The Samples H0FC1 and H0FC3 were analyzed back to back in an continuous analytical sequence and samples found positive with high concentration of target analytes are detected and required dilution. However, instrument blanks were not analyzed in between them per SOW due to samples are analyzed in continuous analytical sequence, so Lab has reported both the analysis as undiluted analysis without instrument blanks and further dilution analysis. Please see EPA communication after SDG Narrative.

See **Manual Integration report** for 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 of **H0FA4** for **Chloromethane:**

Ax= 16369
Is = 125
RRF=0.537
DF= 1
Ais= 249959
Vo. = 25

$$\text{Concentration in ug/L} = \frac{(16369)\,(125)\,(40)}{(249959)(0.537)(25)}$$

Reported Result = 0.61 ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VU060723** for **5.0** ppb

RRF= Area of compound X Conc. of Internal Standard
Area of Internal Standard Conc. of Compound

RRF= 12927 X 50
298959 5.0

RRF= 0.432

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.