SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49868
SDG: GBCW9
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: N1480
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
N1480-01	GBCW9	1.0
N1480-02MS	GBCW9MS	1.0
N1480-03MSD	GBCW9MSD	1.0
N1480-04	GBCX0	1.0
N1480-05	GBCX1	1.0
N1480-06	GBCX2	1.0
N1480-07	GBCX3	1.0
N1480-08	GBCX4	1.0
N1480-09	GBCX6	
N1480-11	GBCX7	1.0
N1480-12	GBCX8	1.0
N1480-12DL	GBCX8DL	1.0
N1480-13	GBCX9	1.0
N1480-13DL	GBCX9DL	1.0
N1480-14	GBCY0	1.0
N1480-14DL	GBCY0DL	1.0
N1480-15	GBCY1	1.0
N1480-16	GBCY2	1.0
N1480-17	GBCY3	1.0
N1480-18	GBCY4	1.0
N1480-19	GBCY5	1.0
N1480-20	GBCY6	1.0

9 Water samples were delivered to the laboratory intact on 02/10/2022.
10 Water samples were delivered to the laboratory intact on 02/11/2022.

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 2.1 degree Celsius for the samples received on 02/10/2022, 2.4 degree Celsius for the samples

received on 02/11/2022.

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: Lab: "Lab is sending this email with regards to case 49868 and SDG GBCW9.

Lab has received samples for TVOA analysis and as a precautionary step, lab has analyzed sample GBCX8 with dilution factor 4x for TVOA analysis. However, sample found positive with high concentration of target analyte found elevated from calibration range and required further dilution to bring target analyte within calibration range as you can see attached form-1 with quant report therefore lab would like to confirm that lab will report 4x dilution analysis as first analysis and further dilution analysis in Hardcopy and SEDD.

Resolutions 2: Region: Based on the information provided by the lab, they may proceed as outlined in their email below. Please have them document the issue in the case narrative and proceed with the analysis.

Trace Volatiles:

The analysis performed on instrument MSVOA_V 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 for
GBCW9 [1,1-Dichloroethene-d2 - 53%],
GBCX0 [1,1-Dichloroethene-d2 - 52%],
GBCX1 [1,1-Dichloroethene-d2 - 53%],
GBCX2 [1,1-Dichloroethene-d2 - 54%],
GBCX3 [1,1-Dichloroethene-d2 - 55%],
GBCX4 [1,1-Dichloroethene-d2 - 54%],
GBCX7 [1,1-Dichloroethene-d2 - 53%],
GBCX8DL [1,1-Dichloroethene-d2 - 54%],
GBCX9 [1,1-Dichloroethene-d2 - 52%],
GBCY0 [1,1-Dichloroethene-d2 - 51%],
GBCY1 [1,1,2,2-Tetrachloroethane-d2 - 125%, 1,2-Dichlorobenzene-d4 - 122%],
GBCY2 [1,1,2,2-Tetrachloroethane-d2 - 129%, 1,2-Dichlorobenzene-d4 - 123%, 2-Butanone-d5 - 132%],
GBCY3 [1,1,2,2-Tetrachloroethane-d2 - 124%],
GBCY4 [1,1,2,2-Tetrachloroethane-d2 - 129%, 1,2-Dichlorobenzene-d4 - 124% and 2-

Butanone-d5 - 135%].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 GBCW9MS recoveries met the requirements for all compounds.
The GBCW9MSD recoveries met the acceptable requirements.
The RPD met criteria.

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

The Blank analysis indicated presence of Chloroform[0.14ug/L] FileID: VV024618.D (VBLK303) { VV0211WBL02} due to possible lab contamination. As per method, less than the respective CRQL is allowed to fail for Chloroform. Therefore no further corrective action was taken..
The storage blank analysis met requirements.

The Blank analysis indicated presence of Chloroform[0.1ug/L] FileID: VV024644.D (VBLK304) {VV0214WBL01} due to possible lab contamination. As per method, less than the respective CRQL is allowed to fail for Chloroform. Therefore no further corrective action was taken.

The storage blank analysis indicated presence of Chloroform [0.15ug/L] FileID: VV024725.D {VHBLK001} due to lab contamination. As per method, less than the respective CRQL is allowed to fail for Chloroform. Therefore no further corrective action was taken.

The sample GBCX8 was initially diluted at 4X and analyzed as first analysis, as precautionary steps. However, sample found positive with extremely elevated target analytes detected from calibration range and required further dilution; therefore lab was report both 4x dilution analysis as first analysis and further dilution in hardcopy. Please see EPA communication after SDG Narrative.

Samples GBCX8, GBCX9 and GBCY0 were diluted due to high concentrations.

The sample GBCY0 was analyzed following the analysis of GBCX9. Both samples had common hit of compound with concentration above calibration levels for Chlorobenzene, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The Continuing Calibration file id (VSTD005307) VV024641.Dwas analyzed following the analysis of GBCY0 which had concentration above calibration levels for Chlorobenzene. A sample was reanalyzed at a diluted. The associate calibration is passing for this compound; therefore no instrument blank was required.

The sample VHBLK001 was analyzed following the analysis of GBCX8. Sample GBCX8 had hit of compound Chlorobenzene with concentration above calibration levels. Sample VHBLK001 had concentration of this compound 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 **GBCX9** for **Benzene**:

Ax = 128912
Is = 125
RRF=1.951
DF = 1
Ais = 119815
Vo. = 25

$$\text{Concentration in ug/L} = \frac{(128912)\,(125)\,(1)}{(119815)\,(1.951)\,(25)}$$

Reported Result =2.8 ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VV020922** for **0.5** ppb

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

$$RRF = \frac{11035}{163207} \times \frac{5.0}{0.5}$$

RRF= 0.676

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.

222123

Signature _____ Name: Nimisha Pandya.

Date: _____ Title: Document Control Officer.