SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49691
SDG: YATH7
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: M4109
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
M4109-01	YATH7	1.0
M4109-02	YATH8	1.0
M4109-03	YATH9	1.0
M4109-04	YATJ0	1.0
M4109-05	YATJ1	1.0
M4109-06	YATJ2	1.0
M4109-07	YATJ3	1.0
M4109-08	YATJ4	1.0
M4109-09	YATJ5	1.0
M4109-10	YATJ6	1.0
M4109-10DL	YATJ6DL	1.0
M4109-11	YATJ7	1.0
M4109-12	YATJ8	1.0
M4109-13	YATJ9	1.0
M4109-13DL	YATJ9DL	1.0
M4109-14MS	YATJ9MS	1.0
M4109-15MSD	YATJ9MSD	1.0
M4109-16	YATK0	1.0
M4109-17	YATK1	1.0
M4109-17DL	YATK1DL	1.0

17 Water samples were delivered to the laboratory intact on 10/06/2021.

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 2.7 degree Celsius for the samples received on 10/06/2021.

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.

Discrepancies with tags, jars, and/or COC
Issue 2: The laboratory received samples under Case 49691 with the attached COC; however, this COC is missing the Case number. The laboratory would like to confirm whether these samples are for Case 49691.

Resolution 2: Per Region 9, the Case number for this COC should be 49691. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Damaged samples
Issue 3: The laboratory received one broken sample vial for sample YATJ3; however, the laboratory has confirmed that the other two sample containers are intact and that there is enough (remaining) volume to perform sample analysis and scheduled laboratory QC, and analyze any possible re-extractions/reanalyses.

Resolution 3: The laboratory will proceed per SOW SFAM01.1 section 5.4.2.

Issue 4:"Lab has received samples YATJ3 and YATJ4 for TVOA analysis and samples were received with unusual pink colored water as you can see attached image of the samples therefore these samples are not plausible to analyzed undiluted due to colored matrix therefore lab has analyzed these two samples with most plausible dilution factor 10x for TVOA analysis. However, three surrogates have very poor recoveries and two of them are not even recovered due to unknown matrix interference as you can see attached quant reports for your reference. In this case, lab will report both samples with 10x dilution analysis as first analysis with three surrogates outside the QC limits. Please note that there is no any other QC failure associated to these analysis.

Region: "Please have the lab cancel the VOC analysis for the "pink" samples. This pink color indicates the presence of potassium permanganate and the client does not need these analyzed. The field samplers may not have seen the pink color in the field."

Lab: "Lab has already analyzed these samples therefore lab will report the data in hardcopy and SEDD."

Resolution 4: "Since the samples have been analyzed, it looks like the only option here is to report the results."

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 except for
YATJ3 [1,1-Dichloroethene-d2 - 38%, trans-1,3-Dichloropropene-d4 - 0%, Vinyl Chloride-d3 - 0%],
YATJ4 [1,1-Dichloroethene-d2 - 3%, trans-1,3-Dichloropropene-d4 - 0% and Vinyl Chloride-d3 - 0%].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 YATJ9MS recoveries met the requirements for all compounds.
The YATJ9MSD recoveries met the acceptable requirements.
The RPD met criteria.
The Tuning criteria met requirements.
The Initial Calibration met requirements.

The Continuing Calibration met requirements.
The Continuing Calibration (VSTD005305) file ID VV022718.D met the requirements except for Benzene-d6 (-20.6%). 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 Continuing Calibration (VSTD005310) file ID VV022806.D met the requirements except for 1,1,2,2-Tetrachloroethane (26.1%). 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 [0.17ug/L] FileID:VV022807.D (VBLK225) {VV1014WBL02} 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 Toluene [0.17ug/L] FileID: VV022808.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.

Samples YATJ6, YATJ9 and YATK1 were diluted due to high concentrations.

The sample YATJ9MS was analyzed following the analysis YATJ9. This sample YATJ9 had concentration for above calibration levels for Trichloroethene. The following sample was QC samples; therefore no corrective action was required.

Samples YATJ3 and YATJ4 for TVOA analysis and samples were received with unusual pink colored water, lab has analyzed these two samples with most plausible dilution factor 10x for TVOA analysis, due to matrix interference, three surrogates have very poor recoveries and two of them are not even recovered, in this case lab has reported both samples with 10x dilution analysis as first 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:

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 **YATH7** for **Trichloroethene**:

Ax = 84674
Is = 125
RRF=0.366
DF = 1
Ais = 118401
Vo. = 25

Concentration in ug/L = $\frac{(84674)\ (125)\ (1)}{(118401)\ (0.366)\ (25)}$

Reported Result = 9.8ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VV100721** for **0.5** ppb

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

RRF = $\frac{5315}{131296}$ X $\frac{5.0}{0.5}$

RRF= 0.405

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.