

**SDG NARRATIVE****LAB NAME: CHEMTECH CONSULTING GROUP****CASE: 49777****SDG: H4633****CONTRACT: 68HERH20D0011****LAB CODE: CHM****CHEMTECH PROJECT: M4664****MODIFICATION REF. NUMBER: NA**

Sample ID	EPA Sample ID	pH
M4664-01	H4633	1.0
M4664-02	H4649	1.0
M4664-03MS	H4649MS	1.0
M4664-04MSD	H4649MSD	1.0
M4664-05	H4668	1.0
M4664-05DL	H4668DL	1.0
M4664-06	H4676	1.0
M4664-06DL	H4676DL	1.0
M4664-07	H4677	1.0
M4664-08	H4678	1.0
M4664-09	H4679	1.0
M4664-09DL	H4679DL	1.0
M4664-10	H4680	1.0
M4664-10DL	H4680DL	1.0
M4664-11	H4681	1.0
M4664-11DL	H4681DL	1.0
M4664-12	H4682	1.0
M4664-13	H4684	1.0
M4664-13DL	H4684DL	1.0

13 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 3.4 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.

**Discrepancies with tags, jars, and/or COC**

**Issue 2:** The laboratory received one cooler under airbill 2859 2506 3339, but the COC doesn't list any airbill information.

**Resolution 2:** In accordance with previous direction from Region 8, 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:** LAB: Lab is sending email with regards to case 49777 & SDG H4633.

Lab has received water samples for TVOA analysis. Lab has analyzed undiluted samples H4679, H4680 & H4681 in a continuous analytical sequence for TVOA analysis. Samples found positive with elevated target analytes detected from calibration range and samples required dilution as you can see attached quant reports for the samples. However, Instrument blanks were not analyzed in between the samples to confirm the possible carryover of the target analytes due to continuous analytical sequence therefore lab would like to confirm that lab will report the undiluted TVOA analysis without instrument blanks in between the samples and further dilution analysis in Hardcopy and SEDD. Please note that there is not any QC failure associated to these analysis.

**Resolution 3:** Region: "The approach outlined below by the lab 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 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 H4682 [Chloroform-d - 70%]. 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.

The H4649MS recoveries met the requirements for all compounds.

The H4649MSD recoveries met the acceptable requirements.

The RPD met criteria.

Instrument Performance Check met requirements.

The Tuning criteria met requirements.

The Initial Calibration met requirements.

The Continuing Calibration met requirements.

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 did not indicate the presence of lab contamination.

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

Samples H4668, H4676, H4679, H4680, H4681 and H4684 were diluted due to high concentrations.

The sample H4676 was analyzed following the analysis of H4668. Both samples had common hit of compound with concentration above calibration levels for Vinyl chloride and cis-1,2-Dichloroethene, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The sample H4677 was analyzed following the analysis of H4676. Samples H4676 had hit of compounds Vinyl chloride and cis-1,2-Dichloroethene with concentration above calibration levels. Sample H4677 have not detected of the compounds Vinyl chloride and cis-1,2-Dichloroethene. Therefore, as per method no instrument blank was required and not analyzed.

The Samples H4679, H4680 & H4681 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:**

$$\text{Concentration in ug/L} = \frac{(A_x) (I_s) (DF)}{(A_{is}) (RRF) (V_o)}$$

Where,

A<sub>x</sub> = Area of the characteristic ion (EICP) for the compound to be measured.

A<sub>is</sub> = Area of the characteristic ion (EICP) for the internal standard.

I<sub>s</sub> = Amount of internal standard added in ng.

RRF = Mean Relative Response Factor from the initial calibration standard.

V<sub>o</sub> = Total volume of water purged, in mL.

DF = Dilution Factor.

Example Calculation for sample **H4668** for **Trichloroethene**:

$$A_x = 16776$$

$$I_s = 125$$

$$RRF = 0.360$$

$$DF = 1$$

Ais = 101390

Vo. = 25

$$\text{Concentration in ug/L} = \frac{(16776) (125) (1)}{(101390) (0.360) (25)}$$

Reported Result = 2.3ug/L

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

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

$$\text{RRF} = \frac{3723}{96864} \times \frac{5.0}{0.5}$$

$$\text{RRF}=0.384$$

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.