

SDG NARRATIVE**LAB NAME: CHEMTECH CONSULTING GROUP****CASE: 48912****SDG: C0AA4****CONTRACT: EPW14030****LAB CODE: CHM****CHEMTECH PROJECT: L2843****MODIFICATION REF. NUMBER: NA**

Sample ID	EPA Sample ID	pH
L2843-01	C0AA4	1.0
L2843-01DL	C0AA4DL	1.0
L2843-02	C0AA5	1.0
L2843-02DL	C0AA5DL	1.0
L2843-03	C0AA6	1.0
L2843-03DL	C0AA6DL	1.0
L2843-04	C0AA7	1.0
L2843-04DL	C0AA7DL	1.0
L2843-05	C0AA8	1.0
L2843-05DL	C0AA8DL	1.0
L2843-06	C0AB0	1.0
L2843-06DL	C0AB0DL	1.0
L2843-07	C0AB1	1.0
L2843-07DL	C0AB1DL	1.0
L2843-08	C0AB2	1.0
L2843-08DL	C0AB2DL	1.0
L2843-09	C0AB4	1.0
L2843-09DL	C0AB4DL	1.0
L2843-10	C0AB5	1.0
L2843-11	C0AB6	1.0
L2843-11DL	C0AB6DL	1.0

11 Water samples were delivered to the laboratory intact on 06/02/2020.

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

Samples for Volatile Organic analyses were transferred unopened to the Volatile Laboratory.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.8 degree Celsius for the samples received on 06/02/2020.

Issue 1: “Lab has received water samples for VOA analysis and lab has analyzed undiluted analysis as mentioned below in a continuous analytical sequence. All samples are found positive with elevated target analytes detected from calibration range as you can see attached quant reports. However, instrument blanks were not analyzed in between them and these samples are required dilutions to bring target analytes within calibration range therefore lab would like to confirm that lab will report undiluted analysis without instrument blanks in between them and further dilution analysis in hardcopy and SEDD.

L2843-01	02 Jun 2020 21:58	C0AA4	VOA	SAM	1	Need 20X	DILUTION
L2843-02	02 Jun 2020 22:21	C0AA5	VOA	SAM	1	Need 10X	DILUTION
L2843-03	02 Jun 2020 22:44	C0AA6	VOA	SAM	1	Need 10X	DILUTION
L2843-04	02 Jun 2020 23:06	C0AA7	VOA	SAM	1	Need 20X	DILUTION
L2843-07	03 Jun 2020 13:22	C0AB1	VOA	SAM	1	Need 40X	DILUTION
L2843-08	03 Jun 2020 13:45	C0AB2	VOA	SAM	1	Need 10X	DILUTION

Resolution 1: Please inform ChemTech the Region is in agreement with their resolution, as written below; have the laboratory make note of the issue in their SDG Narrative and proceed with the analysis of the samples.

Low 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-TCLVOA-10 was based on method SOM02.4_Low.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

Instrument Performance Check met requirements.

The Retention Times met requirements.

The Tuning criteria met requirements.

The Initial Calibration met the requirements.

Trans-1, 3-Dichloropropene-d4 fails to meet criteria for the minimum RRF for RRF5.0 and RRF10 the calibration standards in the run dated 06/02/2020 with V instrument. As per the method up to two Compounds are allowed to fail to meet the minimum criteria for the RRF as long as the compound meets the maximum of 40% RSD. No further corrective action was taken.

The Continuing Calibration in file id (VSTD05093) VV016450.D which is fail to meet the minimum RRF of 0.200 for Trans-1,3-Dichloropropene-d4. As per method, the % D of 2 Compounds can be fail, therefore no correction required.

The Blank analysis indicated presence of Chloroform [3.3ug/L] FileID:VV016435.D (VBLK64) {VV0603WBL01} 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 Blank analysis indicated presence of Acetone [2.9ug/L] FileID:VV016451.D (VBLK65) {VV0603WBL02} due to possible 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.

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

Samples C0AA4, C0AA5, C0AA6, C0AA7, C0AA8, C0AB0, C0AB1, C0AB2, C0AB4 and C0AB6 were diluted due to high concentrations.

Sample C0AA5 was analyzed following the analysis of C0AA4 which had concentration above calibration levels for Cis-1,2-Dichloroethene and Trichloroethene. These samples analyzed one after another without instrument blank and found positive with extremely high concentration of target compounds and required dilution as well. Sample C0AA5 has positive hit for compound Cis-1,2-Dichloroethene. Both samples were reanalyzed diluted. The instrument blank is not analyzed. Please see EPA communication in shipping discrepancy section.

The sample C0AA6 was analyzed following the analysis of C0AA5. Both samples had common hit of compound with concentration above calibration levels for Trichloroethene. It was reanalyzed diluted. As per method no instrument blank was required.

The sample C0AA7 was analyzed following the analysis of C0AA6. Both samples had common hit of compound with concentration above calibration levels for Cis-1,2-Dichloroethene and Trichloroethene. It was reanalyzed diluted. As per method no instrument blank was required.

Sample C0AA8 was analyzed following the analysis of C0AA7 which had concentration above calibration levels for Cis-1,2-Dichloroethene and Trichloroethene. These samples analyzed one after another without instrument blank and found positive with extremely high concentration of target compounds and required dilution as well. Sample C0AA8 has positive hit for compound Cis-1,2-Dichloroethene. Both samples were reanalyzed diluted. The instrument blank is not analyzed. Please see EPA communication in shipping discrepancy section.

The Continuing Calibration file id (VSTD05092) VV016448.D was analyzed following the analysis of C0AA8 which had concentration above calibration levels for Trichloroethene. A sample was reanalyzed diluted. The associate calibration is passing for this compound; therefore no instrument blank was required.

Sample C0AB2 was analyzed following the analysis of C0AB1 which had concentration above calibration levels for Cis-1,2-Dichloroethene and Trichloroethene. These samples analyzed one after another without instrument blank and found positive with extremely high concentration of target compounds and required dilution as well. Sample C0AB2 has positive hit for compound Cis-1,2-Dichloroethene. Both samples were reanalyzed diluted. The instrument blank is not analyzed. Please see EPA communication in shipping discrepancy section.

The sample C0AB4 was analyzed following the analysis of C0AB2. Both samples had common hit of compound with concentration above calibration levels for Trichloroethene. It was reanalyzed diluted. As per method no instrument blank was required.

The sample C0AB6 was analyzed following the analysis of C0AB4. Both samples had common hit of compound with concentration above calibration levels for Cis-1,2-Dichloroethene and Trichloroethene. It was reanalyzed diluted. As per method no instrument blank was required.

The sample C0AB0 was analyzed following the analysis of C0AB6. Both samples had common hit of compound with concentration above calibration levels for Cis-1,2-Dichloroethene and Trichloroethene. It was reanalyzed diluted. 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:**Low Level Water Calculation**

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

Where,

A_x = Area of the characteristic ion (EICP) for the compound to be measured.

A_{is} = Area of the characteristic ion (EICP) for the internal standard.

I_s = Amount of internal standard added in ng.

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

V_o = Total volume of water purged, in mL.

DF = Dilution Factor.

Example Calculation for sample: **C0AA4** for **Vinyl chloride**.

$$A_x = 275881$$

$$I_s = 250$$

$$RRF = 0.384$$

$$DF = 1$$

$$A_{is} = 394848$$

$$V_o = 5$$

$$\begin{aligned} \text{Concentration in ug/L} &= \frac{(275881) (250) (1)}{(394848) (0.384) (5)} \\ &= 90.971 \text{ ug/L} \end{aligned}$$

$$\text{Reported Results} = 91 \text{ ug/L}$$

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VV060220** for **5.0** ppb

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

$$\text{RRF} = \frac{17448}{382035} \times \frac{50}{5}$$

$$\text{RRF} = 0.457$$

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