

**SDG NARRATIVE****LAB NAME: Alliance Technical Group, LLC****CASE: 51870****SDG: H46R0****CONTRACT: 68HERH20D0011****LAB CODE: ACE****LAB ORDER ID: P4827****MODIFICATION REF. NUMBER: NA**

Sample ID	EPA Sample ID	pH
P4827-01	H46R0	1.0
P4827-02	H46W2	1.0
P4827-02DL	H46W2DL	1.0
P4827-03	H46W3	1.0
P4827-03RE	H46W3RE	1.0
P4827-04	H46W5	1.0
P4827-05	H46W6	1.0
P4827-05DL	H46W6DL	1.0
P4827-06	H46W7	1.0
P4827-07	H46W8	1.0
P4827-08	H46W9	1.0
P4827-08DL	H46W9DL	1.0
P4827-09	H46X0	1.0
P4827-09DL	H46X0DL	1.0

09 Water samples were delivered to the laboratory intact on 11/13/2024.

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 11/13/2024.

Shipping Discrepancies and/or QC issues:

Issue 01: SDG H46R0 is open for water samples listed on the COC for TVOA Laboratory QC. However, a sample was not designated for Laboratory QC and the laboratory did not receive enough volume for Laboratory QC. Therefore, the laboratory would like to proceed without Laboratory QC. In addition, the laboratory would like confirm that any SEDD defect associated to Laboratory QC will be considered invalid.

Resolution 01: Per Region 8, proceeding without Laboratory QC is acceptable. The Region confirms that any SEDD defect associated with this issue will be considered invalid. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

Issue 02: “Lab has analyzed sample H46W3 for TVOA analysis. For this analysis, Lab has previously analyzed sample was having high concentration of MTBE and instrument blank was not analyzed before the sample H46W3. Therefore, as a corrective action, Lab has reanalyzed the sample to confirm the MTBE concentration. However, reanalysis confirms the concentration of MTBE and also sample has surrogate recovery outside the QC limits. In this case, Lab has done further corrective action and perform the second re-analysis but due to instrument error the data was not collected for the reanalysis. In this case, lab will report first analysis and second analysis with surrogate failure for final electronic deliverables.

Resolution 02: “Please proceed as indicated by the laboratory.”

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.

The Surrogate recoveries met the acceptable criteria except for,
H46W3RE [1,1-Dichloroethene-d2 - 144%, Benzene-d6 - 133%, Toluene-d8 - 138%, Vinyl Chloride-d3 - 136%],
H46W9DL [Chloroethane-d5 - 60%],
H46X0DL [Chloroethane-d5 - 60%],
As per method, up to three surrogates are allowed to fail. No corrective action was taken.

Lab has analyzed sample H46W3 for TVOA analysis. For this analysis, Lab has previously analyzed sample was having high concentration of MTBE and instrument blank was not analyzed before the sample H46W3. Therefore, as a corrective action, Lab has reanalyzed the sample to confirm the MTBE concentration. However, reanalysis confirms the concentration of MTBE and also sample has surrogate recovery outside the QC limits, therefore Lab Reported first analysis and second analysis with surrogate failure for final hard Copy, Please see EPA communication after SDG Narrative.

The Internal Standards Areas met the acceptable requirements.
Instrument Performance Check met requirements.
The Retention Times met requirements.
The Tuning criteria met requirements.

The %RSD met requirement for initial Calibration except for 1,1,2,2-Tetrachloroethane (20.9%) for the initial calibration dated 11/20/2024 with U instrument, As per method, the %RSD up to two Compounds are allowed to fail to meet the minimum criteria as long as the compound meets the maximum of 40% RSD. No further corrective action was taken.

The Continuing Calibration (VSTD005142) file ID VU061755.D met the requirements except for 1,1-Dichloroethene-d2 (-28.4%). 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 Continuing Calibration (VSTD005156) file ID VU061933.D met the requirements except for 1,2-Dichloropropane-d6 (24.6%). 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 did not indicate the presence of lab contamination.
The storage blank analysis did not indicate the presence of lab contamination.

Samples H46W2, H46W6, H46W9 and H46X0 were diluted due to high concentrations.

The sample H46X0 was analyzed following the analysis of H46W9. Both samples had common hit of compound with concentration above calibration levels for cis-1,2-Dichloroethene and Trichloroethene, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The Continuing Calibration file id (VSTD005143) VU061777.D was analyzed following the analysis of H46X0 which had concentration above calibration levels for cis-1,2-Dichloroethene and Trichloroethene. A sample was reanalyzed at a diluted. The associate calibration is passing for this compound; therefore no instrument blank was required.

The sample H46W3 was analyzed following the analysis of H46W2. Sample H46W2 had hit of compound Methyl tert-butyl Ether with Concentration above calibration levels. Sample H46W3 had Concentration of Compound Methyl tert-butyl Ether which is above Calibration level, as a Corretive action sample H46W3 was reanalysis and both the run are Reported.

The sample H46W7 was analyzed following the analysis of H46W6. Samples H46W6 had hit of compound cis-1,2-Dichloroethene with concentration above calibration levels. Sample H46W7 have not detected of the compound cis-1,2-Dichloroethene. 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:

Low/Med Water Level 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.

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 of **H46R0** for **Acetone**:

$$A_x = 14783$$

$$I_s = 125$$

$$RRF = 0.043$$

$$DF = 1$$

$$A_{is} = 167839$$

$$V_o = 25$$

$$\text{Concentration in ug/L} = \frac{(14783) (125) (1)}{(167839)(0.043)(25)}$$

$$\text{Reported Result} = 10.24 \text{ ug/L}$$

$$\text{Final Reported Result} = 10 \text{ ug/L}$$

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VU111324** for **0.5** ppb

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

$$RRF = \frac{6608}{195642} \times \frac{5.0}{0.5}$$

$$RRF = 0.338$$



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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.