

**SDG NARRATIVE****LAB NAME: Alliance Technical Group, LLC****CASE: 51376****SDG: GCQ67****CONTRACT: 68HERH20D0011****LAB CODE: ACE****LAB ORDER ID: Q1071****MODIFICATION REF. NUMBER: NA**

Sample ID	EPA Sample ID	Test	pH
Q1071-01	GCQ67		1.0
Q1071-01DL	GCQ67DL	TVOA	1.0
Q1071-02	GCQ68		1.0
Q1071-02DL	GCQ68DL	TVOA	1.0
Q1071-03	GCQ69		1.0
Q1071-03DL	GCQ69DL	TVOA	1.0
Q1071-04	GCQ70		1.0
Q1071-04DL	GCQ70DL	TVOA	1.0
Q1071-05	GCQ71		1.0
Q1071-05DL	GCQ71DL	TVOA	1.0
Q1071-06	GCQ72		1.0
Q1071-06DL	GCQ72DL	TVOA	1.0
Q1071-07	GCQ73		1.0
Q1071-07DL	GCQ73DL	TVOA	1.0
Q1071-08	GCQ74		1.0
Q1071-08DL	GCQ74DL	TVOA	1.0
Q1071-09	GCQ75		1.0
Q1071-09DL	GCQ75DL	TVOA	1.0
Q1071-10	GCQ76		1.0
Q1071-10DL	GCQ76DL	TVOA	1.0
Q1071-11	GCQ77		1.0
Q1071-11DL	GCQ77DL	TVOA	1.0
Q1071-12MS	GCQ77MS		1.0
Q1071-13MSD	GCQ77MSD		1.0
Q1071-14	GCQ78		1.0
Q1071-14DL	GCQ78DL	TVOA	1.0
Q1071-15	GCQ79		1.0
Q1071-15DL	GCQ79DL	TVOA	1.0
Q1071-16	GCQ80		1.0

Q1071-16DL	GCQ80DL	TVOA	1.0
Q1071-17	GCQ81		1.0
Q1071-18	GCQ82		1.0
Q1071-19	GCQ83		1.0
Q1071-20	GCQ84		1.0

20 Water samples were delivered to the laboratory intact on 01/13/2025.

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 1.3 degree Celsius for the samples received on 01/13/2025.

### Shipping Discrepancies and/or QC issues:

**Issue 01:** “Lab is sending this email with regards to case 51376.

Lab has received water samples for TVOA analysis. Lab has analyzed samples for TVOA analysis for the samples in a continuous analytical sequence where samples are having high concentrations of target analytes and required dilution as well as you can review attached quant reports for the samples. Due to continuous analytical sequence, instrument blank was not analyzed in between the samples therefore lab would like to confirm that lab will report undiluted TVOA analysis without instrument blank in between the samples and further dilution analysis for final electronic deliverables. Please note that there is no any additional Lab QC failure associated to undiluted and dilution analysis for the samples as per attached.

**Resolution 01:** “The labs approach outlined below is acceptable and they should proceed accordingly. Please have them thoroughly document the occurrences in the case narrative.”

### 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.

Holding Times were met requirement.

The Surrogate recoveries met the acceptable criteria Except for,  
GCQ68DL [1,1-Dichloroethene-d2 - 55%, Chloroethane-d5 - 63%, Toluene-d8 - 66%],  
GCQ69DL [1,1-Dichloroethene-d2 - 53%, Chloroethane-d5 - 60%, Toluene-d8 - 66%],  
GCQ73DL [1,1-Dichloroethene-d2 - 52%, Chloroethane-d5 - 61%, Toluene-d8 - 65%],  
GCQ78 [2-Butanone-d5 - 131%],  
GCQ84 [2-Butanone-d5 - 131%],

As per method, up to three surrogates are allowed to fail. No corrective action was taken.

The Internal Standards Areas met the acceptable requirements.

Instrument Performance Check met requirements.

The Retention Times met requirements.

The Tuning criteria met requirements.

The MS {GCQ77MS} recovery met the requirements for all compounds.

The MSD {GCQ77MSD} recovery met the requirements for all compounds.

The RPD {GCQ77MSD} RPD met the requirements for all compounds.

The Continuing Calibration (VSTD005102) file ID VU062756.D met the requirements except for Vinyl Chloride-d3 (-37.4%) and 1,1-Dichloroethene-d2 (-30.5%). 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 (VSTD005103) file ID VU062779.D met the requirements except for Vinyl Chloride-d3 (-36.4%) and 1,1-Dichloroethene-d2 (-26.1%). 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 End Continuing Calibration (VSTD005104) file ID VU062803.D met the requirements except for 2-Butanone (-73.8%) and 2-Butanone-d5 (-69.4%). 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 Blank analysis did not indicate the presence of lab contamination.

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

Samples GCQ67, GCQ68, GCQ69, GCQ70, GCQ71, GCQ72, GCQ73, GCQ74, GCQ75, GCQ76, GCQ77, GCQ78, GCQ79 and GCQ80 were diluted due to high concentrations.

The Samples GCQ68, GCQ69, GCQ70, GCQ71, GCQ72, GCQ73, GCQ74, GCQ75, GCQ76 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.

The sample GCQ77MS was analyzed following the analysis GCQ77. This sample GCQ77 had concentration for above calibration levels for Chloroethane, 1,1-Dichloroethene, 1,1-Dichloroethane and cis-1,2-Dichloroethene. The following sample was QC samples; therefore no corrective action was required.

The Samples GCQ78, GCQ79 and GCQ80 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:

#### Low/Med Water Level 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.

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 of **GCQ67** for **Vinyl chloride**:

$$A_x = 7678$$

$$I_s = 125$$

$$RRF = 0.360$$

$$DF = 1$$

$$A_{is} = 95032$$

$$V_o = 25$$

$$\text{Concentration in ug/L} = \frac{(7678) (125) (1)}{(95032) (0.360) (25)}$$

$$\text{Reported Result} = 1.12 \text{ ug/L}$$

$$\text{Final Reported Result} = 1.1 \text{ ug/L}$$

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VU010225** for **0.5** ppb

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



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$$\text{RRF} = \frac{4870}{100728} \times \frac{5.0}{0.5}$$

$$\text{RRF} = 0.483$$

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.