



SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC

CASE: 51834

SDG: E2117

CONTRACT: 68HERH20D0011

LAB CODE: ACE

LAB ORDER ID: P4785

MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P4785-01	E2117	1.0
P4785-02	E27L1	1.0
P4785-03	E27L2	1.0
P4785-04	E27L3	1.0
P4785-05	E27L4	1.0
P4785-06	E27L5	1.0
P4785-07	E27L6	1.0
P4785-08	E27L7	1.0
P4785-09	E27L8	1.0
P4785-10	E27M1	1.0
P4785-10DL	E27M1DL	1.0
P4785-12	E27L9	1.0
P4785-13	E27N6	1.0
P4785-14MS	E27N6MS	1.0
P4785-15MSD	E27N6MSD	1.0
P4785-16	E27N7	1.0
P4785-16DL	E27N7DL	1.0
P4785-17	E27N8	1.0
P4785-17DL	E27N8DL	1.0
P4785-18	E27N9	1.0
P4785-19	E27P0	1.0
P4785-20	E27P1	1.0
P4785-21	E27P2	1.0
P4785-22	E27P3	1.0
P4785-23	E27P4	1.0

10 Water samples were delivered to the laboratory intact on 11/08/2024.

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

Test requested on the Chain of Custody was Volatile Organic by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 1.8 degree Celsius for the samples received on 11/08/2024, 1.8 degree Celsius for the samples received on 11/09/2024.

Shipping Discrepancies and/or QC issues:

Issue 01: “Lab has received water samples for VOA analysis. Lab has performed the analysis for the samples E27M1, E27N7 & E27N8 in a continuous analytical sequence. Samples are found positive with high concentration of multiple analysis and required dilution analysis to bring target analytes within calibration range. In this case, instrument blank was analyzed in between the samples due to continuous analytical sequence therefore lab would like to confirm that lab will report undiluted VOA analysis without instrument blank in between and further dilution in final electronic data.

Resolution 01: “Per the client, the lab’s proposal is acceptable.”

Low Volatiles:

The analysis performed on instrument MSVOA_X 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_LOW

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for,

E27L1 [Toluene-d8 - 76%],

E27L2 [Toluene-d8 - 77%],

E27L3 [Toluene-d8 - 78%],

E27L4 [Chloroethane-d5 - 158%],

E27L5 [1,2-Dichlorobenzene-d4 - 125%, Chloroethane-d5 - 175%],

E27L6 [1,2-Dichlorobenzene-d4 - 122%, Chloroethane-d5 - 163%],

E27L7 [Chloroethane-d5 - 158%],

E27L8 [Chloroethane-d5 - 162%],

E27M1 [Chloroethane-d5 - 171%],

E27N7 [1,2-Dichloropropane-d6 - 66%, Chloroethane-d5 - 171%],

E27N8 [Chloroethane-d5 - 177%],

E27N8DL [1,2-Dichlorobenzene-d4 - 147%],

E27N9 [1,1-Dichloroethene-d2 - 130%, 1,2-Dichloropropane-d6 - 158%, Toluene-d8 - 152%],

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 were met for all samples.

The Tuning criteria met requirements.

The MS {E27N6MS} recovery met the requirements for all compounds.

The MSD {E27N6MSD} recovery met the requirements for all compounds.

The RPD {E27N6MSD} RPD met the requirements for all compounds.

The %RSD met requirement for initial Calibration except for Dibromochloromethane (20.5%) for the initial calibration dated 11/04/2024 with X 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 %RSD met requirement for initial Calibration except for Trichloroethene (21.3%) for the initial calibration dated 11/14/2024 with X 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 (VSTD050787) file ID VX043828.D met the requirements except for Carbon disulfide (-28.2%). 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 (VSTD050790) file ID VX043887.D met the requirements except for Trichloroethene (-52.3%). 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 indicated the presence of lab Contamination.

The Storage blank analysis did not indicated the presence of lab Contamination.

Samples E27M1, E27N7 and E27N8 were diluted due to high concentrations.

The Samples E27M1, E27N7 and E27N8 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_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 for sample: **E27M1** for **1,1-Dichloroethene**:

$$A_x = 17525$$

$$I_s = 250$$

$$RRF = 0.267$$

$$DF = 1$$

$$A_{is} = 260022$$

$$V_o = 5$$

$$\begin{aligned} \text{Concentration in ug/KG} &= \frac{(17525) (250) (1)}{(260022) (0.267) (5)} \\ &= 12.65 \text{ ug/L} \end{aligned}$$

Final Reported Results = 13 ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VX110424** for **5.0** ppb

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

$$RRF = \frac{9818}{318749} \times \frac{50}{5.0}$$

$$RRF = 0.301$$



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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.