

SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC CASE: 51945 SDG: EH8Z0 CONTRACT: 68HERH20D0011 LAB CODE: ACE CHEMTECH PROJECT: Q1059 MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	рН
Q1059-01	BH8Z0	1.0
Q1059-01DL	BH8Z0DL	1.0
Q1059-02	BH8Z1	1.0
Q1059-02DL	BH8Z1DL	1.0
Q1059-03	BH8Z2	1.0
Q1059-04	BH8Z3	1.0
Q1059-05	BH8Z4	1.0
Q1059-06	BH8Z5	1.0
Q1059-07	BH8Z6	1.0
Q1059-08	BH8Z7	1.0
Q1059-09	BH8Z8	1.0
Q1059-10	BH8Z9	1.0
Q1059-11	BHSL1	1.0
Q1059-12	BHSL2	1.0
Q1059-13	BHSL3	1.0
Q1059-14	BHSL5	1.0
Q1059-15	BHSL6	1.0
Q1059-16	BHSL7	1.0
Q1059-17	BHSL8	1.0
Q1059-18	BHSM0	1.0
Q1059-19	BHSM1	1.0
Q1059-20	BHSM2	1.0



2 of 5

20 Water samples were delivered to the laboratory intact on 07/19/2024.

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 2.1 degree Celsius for the samples received on 01/10/2024.

Shipping Discrepancies and/or QC issues:

ISSUE: "Lab has received water samples for TVOA analysis and Lab has screened the samples BH8Z2, BH8Z7. In screening analysis, samples were found positive with high concentration of target analytes for possible contamination due to color of the sample as you can see attached image. Therefore, as a precautionary step, the Lab has analyzed the sample BH8Z0 at lower dilution and found more than three surrogate recoveries outside of QC limit. The Lab has performed the analysis for the samples BH8Z0 and BH8Z1 in a continuous analytical sequence. These Samples are found positive with high concentration of multiple analysis and required dilution analysis to bring target analytes within calibration range as you can see attached quant report. In this case, the lab would like to confirm that the lab will report the sample BH8Z0 with surrogate failure, both sample further dilution and the sample BH8Z0 and BH8Z1 without instrument blank in final electronic deliverables."

<u>REGION</u>: Per sampler, the color is likely not due to high concentrations, but rather a residual CarbStrate product that is injected into the aquifer. Please note the following. Please advise the laboratory to proceed and detail rational for any deviation from the SOW instructions in their SDG narrative.

<u>QSS INPUT</u>: The laboratory is expected to comply with the SFAM01.1 SOW requirements described in Exhibit D Sections 11.3 and 11.4.

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 BH8Z0 [1,1,2,2-Tetrachloroethane-d2 - 148%, 1,2-Dichlorobenzene-d4 - 121%, 1,2-Dichloroethane-d4 - 139%, 2-Butanone-d5 - 134% and 2-Hexanone-d5 - 133%]. As per method, up to three surrogates are allowed to fail Lab has received water samples for TVOA analysis and Lab has analyzed the sample BH8Z0 at lower dilution and found more than three surrogate recoveries outside of QC limit,Therfore lab reported the sample BH8Z0 with surrogate failure, in 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 initial Calibration criteria met requirements.

The Continuing End Calibration (VSTD005099) file ID VU062728.D met the requirements except for Bromomethane (-58.4%). 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 End Calibration (VSTD005101) file ID VU062754.D met the requirements except for Bromomethane (-55.7%). 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 (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 Continuing End 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.

Lab has received water samples for TVOA analysis and Lab has screened the samples BH8Z2, BH8Z7. In screening analysis, samples were found positive with high concentration of target analytes for possible contamination due to color, These Samples are found positive with high concentration of multiple analysis Therefore, as a precautionary step Lab Reported Diluted analysis in Final Hard Copy, Please see EPA communication after SDG Narrative.

Samples BH8Z0, BH8Z1 were diluted due to high concentrations.

The Samples BH8Z0, BH8Z1 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.

4 of 5

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation:

Low/Med Water Level Calculation

Concentration in ug/L = (Ax) (Is) (DF)(Ais) (RRF) (Vo)

Where,

Ax = Area of the characteristic ion (EICP) for the compound to be measured. Ais = 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. Vo = Total volume of water purged, in mL. DF = Dilution Factor

Example calculation of **BH8Z0** for **Vinyl chloride**:

Ax= 11922 Is = 125 RRF= 0.360 DF= 1 Ais= 62656 Vo. = 25 Concentration in ug/L = (11922)(125)(1)(62656)(0.360)(25)

Reported Result = 2.64 ug/L

Final Reported Result = 2.6 ug/L

Relative Response Factor = Dichlorodifluoromethane: RUN VU010225 for 0.5 ppb

RRF= <u>Area of compound</u> X <u>Conc. of Internal Standard</u> Area of Internal Standard Conc. of Compound

 $RRF = \frac{4870}{100728} X \frac{5.0}{0.5}$



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.

SignatureName: Nimisha Pandya.Date:Title: Document Control Officer.

5 of 5