SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51782
SDG: GCPA2
CONTRACT: 68HERH20D0011
LAB CODE: ACE
LAB ORDER ID: P4800
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P4800-01	GCPA2	1.0
P4800-02	GCPA3	1.0
P4800-03	GCPA4	1.0
P4800-04	GCPA5	1.0
P4800-05	GCPA6	1.0
P4800-06	GCPA7	1.0
P4800-07	GCPA8	1.0
P4800-08	GCPA9	1.0
P4800-08DL	GCPA9DL	1.0
P4800-09	GCPB0	1.0
P4800-09DL	GCPB0DL	1.0
P4800-10	GCPB1	1.0
P4800-10DL	GCPB1DL	1.0
P4800-11	GCPB2	1.0
P4800-12	GCPB3	1.0
P4800-13	GCPB4	1.0
P4800-14	GCPB5	1.0
P4800-15MS	GCPB5MS	1.0
P4800-16MSD	GCPB5MSD	1.0
P4800-17	GCPB6	1.0
P4800-17RE	GCPB6RE	1.0
P4800-18	GCPB7	1.0
P4800-18DL	GCPB7DL	1.0
P4800-19	GCPB8	1.0
P4800-20	GCPB9	1.0
P4800-21	GCPC0	1.0
P4800-22	GCPC2	1.0

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

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 2.3 degree Celsius for the samples received on 11/09/2024.

Shipping Discrepancies and/or QC issues:

Issue 01: "Lab has analyzed undiluted TVOA analysis for the samples GCPB0 & GCPB1 in a continuous analytical sequence. Both samples found positive with high concentration of target analytes detected and required dilution as well. Due to continuous analytical sequence, instrument blank was not analyzed in between the samples. In this case, lab will report undiluted TVOA analysis without instrument blank in between the samples and further dilution in final electronic deliverables.

Resolution 01: "The laboratory shall document the occurrence in the case narrative and continue with the analysis of the samples."

Issue 02: "Lab has received water samples for TVOA analysis. Lab has analyzed sample GCPB6 for TVOA analysis and Lab has used one of the vials for the analysis. Sample found positive for Acetone as having very high concentration of target analytes as you can see attached quant report of Vial A. Lab has used Vial B for dilution analysis to bring target analyte within calibration range. However, dilution analysis there was no any detection of Acetone in 40x therefore lab has performed the lower dilution of 20x as well. Therefore, further confirmation, Lab has used 3rd vial (Vial C) to confirm the Acetone concentration where sample is having Acetone just above the highest standard as you can see attached quant reports. Now, Lab doesn't have any sample volume left to perform the analysis therefor lab would like to confirm that how should lab proceed with the reporting of this sample for final data?

Resolution 02: "Based on the information provided in the email and the attachments by the lab. The region would request that the lab report the analytical results for GCPB6 as follows:
Vial A – trichloroethene and tetrachloroethene results
Vial C – Acetone (qualified appropriately)

The lab shall fully document the occurrences and actions taken for this sample in the case narrative. The lab shall move forward with the analysis of the remaining samples."

QSS INPUT: The laboratory is recommended to include all two analyses in the data deliverables for results from vials A and C. Per the Region, the acetone result or methylene chloride (if >=MDL) from vial C and the other analytes from vial A.

LAB: This can't be reported as per SEDD structure. Either Vial A or Vial B can be reported in final reported results.

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,
CPB5 [1,2-Dichlorobenzene-d4 - 76% and Toluene-d8 - 65%],
GCPB6RE [Toluene-d8 – 61%,1,2-Dichlorobenzene-d4 – 69%,1,1-Dichloroethene-d2 – 56%,Chloroform-d – 63%,1,2-Dichloroethane-d4 – 69%, Benzene-d6 -63 %],
As per method, up to three surrogates are allowed to fail. No corrective action was taken.
For Sample GCPB6RE First analysis Required higher dilution, as corrective action this sample was reanalyzed, however reanalyzed was fail for Surrogate and both run are reported,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 MS {GCPB5MS} recovery met the requirements for all compounds.
The MSD {GCPB5MSD} recovery met the requirements for all compounds.
The RPD {GCPB5MSD} RPD met the requirements for all compounds.

The initial Calibration criteria met requirements.

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 (VSTD005144) file ID VU061779.D met the requirements except for Carbon disulfide (-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 Blank analysis did not indicate the presence of lab contamination.
The storage blank analysis did not indicate the presence of lab contamination.

Samples GCPA9, GCPB0, GCPB1 and GCPB7 were diluted due to high concentrations.

The sample GCPB0 was analyzed following the analysis of GCPA9. Both samples had common hit of compound with concentration above calibration levels for Tetrachloroethene, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The Samples GCPB0 and GCPB1 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.

Lab has received water samples for TVOA analysis. Lab has analyzed sample GCPB6 for TVOA analysis and Lab has used one of the vials for the analysis, Sample found positive for Acetone as having very high concentration of target for vial A, Lab has used Vial B for dilution analysis to bring target analyte within calibration range. However, dilution analysis there was no any detection of Acetone in 40x therefore lab has performed the lower dilution of 20x as well. Therefore, further confirmation , Lab has used 3rd vial (Vial C) to confirm the Acetone concentration where sample is having Acetone just above the highest standard, Now, Lab doesn't have any sample volume left to perform the analysis therefor lab Lab Reported Vial A and Vial C as a Confirmation run in final Hard Copy,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

$$\text{Concentration in ug/L} = \frac{(Ax)\,(Is)\,(DF)}{(Ais)\,(RRF)\,(Vo)}$$

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 **GCPA2** for **Acetone**:

Ax= 26269
Is = 125
RRF= 0.043
DF= 1
Ais= 191397
Vo. = 25

$$\text{Concentration in ug/L} = \frac{(26269)\,(125)\,(1)}{(191397)(0.043)(25)}$$

Reported Result = 15.96 ug/L

Final Reported Result = 16 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

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.