SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51782
SDG: GCPA3
CONTRACT: 68HERH20D0011
LAB CODE: ACE
LAB ORDER ID: P4801
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P4801-01	GCPA2	
P4801-02	GCPA3	
P4801-03	GCPA4	
P4801-04	GCPA5	
P4801-05	GCPA6	
P4801-06	GCPA7	
P4801-07	GCPA8	
P4801-08	GCPA9	
P4801-09	GCPB0	
P4801-10	GCPB1	
P4801-11	GCPB2	
P4801-12	GCPB3	
P4801-13	GCPB4	
P4801-14	GCPB5	
P4801-15MS	GCPB5MS	
P4801-16MSD	GCPB5MSD	
P4801-17	GCPB6	
P4801-18	GCPB7	
P4801-19	GCPB8	
P4801-20	GCPB9	
P4801-21	GCPC0	
P4801-22	GCPC2	

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

Test requested on the Chain of Custody was Semivolatile Organic and Semivolatile Organic-SIM by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.1, 2.5, 1.5, 2.1 degree Celsius for the samples received on 11/09/2024, 3.2,3.3 degree Celsius for the samples received on 11/09/2024

Semivolatiles:

The samples were analyzed on instrument BNA_G using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

The samples were analyzed on instrument BNA_M using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

The samples were analyzed on instrument BNA_P using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semis volatile Organic sample for water sample was extracted by Method SFAM01.1 on 11/11/2024 and 11/12/2024, The analysis of SVOCMS Group4 was based on method SFAM01.1_SVOC.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable except criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
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 Blank Spike for {PB164895BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164897BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164899BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164918BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164920BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164922BS} recoveries met the requirements for all compounds.
The Blank analysis did not indicate the presence of lab contamination.
The Tuning criteria met the requirements.
The Initial Calibration met the requirements.
The Continuous Calibration met the requirements.

PB164897BL analyzed twice in different instrument, first time in BNA_G and Second time in BNA_M. However our sample associated with this BL run in BNA_G, so BNA_M instrument raw data reported as Screening Data in the package.

Concentration of Water Sample:

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

Where,
Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL
RRF = Mean Relative Response Factor determined from the initial calibration standard.
GPC = Vin = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.

No positive target compounds were detected in the samples.

RRF Calculation of standard 20 ppb for **1,4-Dioxane** with G instrument for method 11/06/2024.

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

= 13189/53454 X 20/8

= 0.617 (Reported RRF)

Semivolatiles SIM:

The samples were analyzed on instrument BNA_M using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semis volatile Organic sample for Water sample was extracted by Method SFAM01.1 on 11/11/2024 and 11/12/2024. The analysis of SVOCMS Group3 was based on method SFAM01.1_SVOC.

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
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 Blank Spike for {PB164896BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164898BS} recoveries met the requirements for all compounds.

The Blank Spike for {PB164900BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164903BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164921BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164923BS} recoveries met the requirements for all compounds.
The Blank analysis did not indicate the presence of lab contamination.
The Tuning criteria met requirements.
The Initial Calibration met requirements.
The Continuous Calibration met requirements.

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

Concentration of Water Sample:

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

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL
RRF = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)

Example calculation of GCPC2 for 1,4-Dioxane:

Ax = 1910
Ais = 3184
Is = 0.4
DF = 1
Vo = 1000
Vi = 1
Vt = 1000
RRF = 0.555
GPC = 1

$$\text{Concentration ug/L} = \frac{(1910)\,(0.4)\,(1000)\,(1)\,(1)}{(3184)\,(0.555)\,(1000)\,(1)}$$

= 0.43 ug/L

RRF Calculation of standard 0.4 ppb for **1,4-dioxane** with M instrument for method 11/06/2024.

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

= 2152/3648 X 0.4/0.4

= 0.590 (Reported RRF)

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.