SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51782
SDG: GCP55
CONTRACT: 68HERH20D0011
LAB CODE: ACE
LAB ORDER ID: P4744
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P4744-01	GCP55	
P4744-02	GCP56	
P4744-03	GCP57	
P4744-04	GCP58	
P4744-05	GCP59	
P4744-06	GCP60	
P4744-07	GCP61	
P4744-08	GCP62	
P4744-09	GCP63	
P4744-10	GCP64	
P4744-11	GCP65	
P4744-12	GCP66	
P4744-13	GCP67	
P4744-14	GCP68	
P4744-15	GCP70	
P4744-16	GCP71	
P4744-17	GCP72	
P4744-18MS	GCP72MS	
P4744-19MSD	GCP72MSD	
P4744-20	GCP73	
P4744-21	GCP74	
P4744-22	GCP75	

22 Water samples were delivered to the laboratory intact on 11/07/2024.

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 2.4, 2.3, 1.9, 2.1, 2.5 degree Celsius for the samples received on 11/07/2024.

Shipping Discrepancies and/or QC issues:

Issue 01: The airbill number listed on the attached COC and the airbill number that the samples were received under are different. The laboratory would like to know how to proceed.

Resolution 01: Per Region 7, an updated COC is attached with the correct aribill number. The correct airbill labels are listed below. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

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_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 11/07/2024, 11/08/2024, 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 {GCP72MS} recovery met the requirements for all compounds.
The MSD {GCP72MSD} recovery met the requirements for all compounds.
The RPD {GCP72MSD} RPD met the requirements for all compounds
The Blank Spike for {PB164770BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164772BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164776BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164778BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164806BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164811BS} 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.

Concentration of Water Sample:

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 = $\frac{Vin}{}$ = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.

Example calculation of GCP62 for 1,4-Dioxane:

Ax = 5514
Ais = 132485
Is = 20
DF = 1
Vo = 1000
Vi = 1
Vt = 1000
RRF = 0.545
GPC = 1

Concentration ug/L = $\frac{(5514)\ (20)\ (1000)\ (1)\ (1)}{(132485)\ (0.545)\ (1000)\ (1)}$

= 1.5 ug/L

RRF Calculation of standard 20 ppb for **1,4-Dioxane** with P instrument for method 11/09/2024.

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

= 10486/53999 X 20/8

= 0.485 (Reported RRF)

Semivolatiles SIM:

The samples were analyzed on instrument BNA_N 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 11/07/2024, 11/08/2024. 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 {GCP72MS} recovery met the requirements for all compounds.
The MSD {GCP72MSD} recovery met the requirements for all compounds.
The RPD {GCP72MSD} RPD met the requirements for all compounds
The Blank Spike for {PB164771BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164773BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164777BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164779BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164807BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164812BS} 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 = Vin = GPC factor (If no GPC is performed, GPC=1)
Vout

Example calculation of GCP55 for 1,4-Dioxane:

Ax = 166
Ais = 2468
Is = 0.4
DF = 1
Vo = 1000
Vi = 1
Vt = 1000
RRF = 0.417
GPC = 1

Concentration ug/L = (166) (0.4) (1000) (1) (1)
(2468) (0.417) (1000) (1)

= 0.060 ug/L

RRF Calculation of standard 0.4 ppb for **1,4-dioxane** with N instrument for method 11/09/2024.

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

= 652/1555 X 0.4/0.4

= 0.419 (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.