SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51814
SDG: E1L62
CONTRACT: 68HERH20D0011
LAB CODE: ACE
LAB ORDER ID: P4534
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P4534-01	E1L62	
P4534-02	E1L63	
P4534-03MS	E1L63MS	
P4534-04MSD	E1L63MSD	
P4534-05	E1L65	
P4534-06	E1L67	
P4534-07	E1L78	
P4534-08	E1L98	
P4534-09	E1LB1	
P4534-10	E1LB2	
P4534-11	E1LB3	
P4534-12	E1L80	
P4534-13	E1L84	
P4534-14	E1L86	
P4534-15	E1L88	
P4534-16	E1L95	
P4534-17	E1L64	

12 Water samples were delivered to the laboratory intact on 10/24/2024.
05 Water samples were delivered to the laboratory intact on 10/25/2024.

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 3.2, 2.1, 4.2 degree Celsius for the samples received on 10/24/2024, 2.4, 2.8 degree Celsius for the samples received on 10/25/2024.

Shipping Discrepancies and/or QC issues:

Issue 01: All samples are scheduled for 1,4-Dioxane and 1,4-Dioxane by SIM analyses, but 1,4-Dioxane by SIM analysis is not listed on the COC for SDG E1L62.

Resolution 01: Per Region 5, the laboratory will analyze the samples for both 1,4-Dioxane and 1,4-Dioxane by SIM analysis. This resolution can be applied to all samples for this Case.

Semivolatiles:

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 10/24/2024, 10/25/2024, 10/26/2024 and 10/28/2024 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 {E1L63MS} recovery met the requirements for all compounds.
The MSD {E1L63MSD} recovery met the requirements for all compounds.
The RPD {E1L63MSD} RPD met the requirements for all compounds
The Blank Spike for {PB164417BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164423BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164446BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164464BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164473BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164482BS} 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:

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

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 M instrument for method 10/26/2024.

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

= 49556/227528 X 20/8

= 0.545 (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.

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 10/24/2024, 10/25/2024, 10/26/2024 and 10/28/2024. 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 {E1L63MS} recovery met the requirements for all compounds.
The MSD {E1L63MSD} recovery met the requirements for all compounds.
The RPD {E1L63MSD} RPD met the requirements for all compounds
The Blank Spike for {PB164418BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164424BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164447BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164465BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164475BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB164483BS} 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.

Samples E1L86 has the concentration of target compound below method detection limits; therefore it is not reported as Hit in Form1.

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 E1L64 for 1,4-Dioxane:

Ax = 469
Ais = 7481
Is = 0.4
DF = 1
Vo = 1000
Vi = 1
Vt = 1000
RRF = 0.455
GPC = 1

$$\text{Concentration ug/L} = \frac{(469)\,(0.4)\,(1000)\,(1)\,(1)}{(7481)\,(0.455)\,(1000)\,(1)}$$

$$= 0.060 \text{ ug/L}$$

RRF Calculation of standard 0.4 ppb for **1,4-dioxane** with N instrument for method 10/31/2024.

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

= 3390/7288 X 0.4/0.4

= 0.465 (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.