SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51860
SDG: YE5X7
CONTRACT: 68HERH20D0011
LAB CODE: ACE
LAB ORDER ID: P5324
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P5324-01	YE5X5	
P5324-02	YE5X7	
P5324-03	YE5Y1	
P5324-04	YE5X6	
P5324-05MS	YE5X6MS	
P5324-06MSD	YE5X6MSD	
P5324-07	YE5X8	
P5324-08	YE5X9	
P5324-09	YE5Z7	
P5324-10	YE695	
P5324-11	YE5Z8	
P5324-12	YE5Z9	
P5324-13	YE600	
P5324-14	YE601	
P5324-15	YE630	
P5324-16	YE631	
P5324-17	YE635	
P5324-18	YE642	
P5324-19	YE643	
P5324-20	YE644	
P5324-21	YE645	
P5324-22	YE646	

14 Soil samples were delivered to the laboratory intact on 12/18/2024.
08 Soil samples were delivered to the laboratory intact on 12/20/2024.

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 2.0, 2.1, 2.4, degree Celsius for the samples received on 12/18/2024, 1.9, 2.0, degree Celsius for the samples received on 12/20/2024

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.

Semis volatile Organic for soil sample was extracted by Method SFAM01.1 on 12/18/2024 and 12/23/2024, 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 criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS {YE5X6MS} recovery met the requirements for all compounds.
The MSD {YE5X6MSD} recovery met the requirements for all compounds.
The RPD {YE5X6MSD} RPD met the requirements for all compounds.
The Blank Spike for {PB165796BS} 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 SOIL Sample:

Concentration ug/Kg,

$$\text{(dry weight basis)} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(RRF)\,(Vi)\,(Wt)\,(D)}$$

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.
Vi = Volume of extract injected in microliters (uL)
Vt = Volume of concentrated extract in microliters (uL)
Wt = Weight of the original sample extracted in g
Df = Dilution factor
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.

D= 100 - %moisture

100

No positive target compounds were detected in the samples.

RRF Calculation of standard 20 ppb for 1,4-Dioxane with G instrument for method 12/11/2024.

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

= 36937/134078 X 20/8

= 0.689 (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 Soil sample was extracted by Method SFAM01.1 on 12/23/2024. The analysis of SVOCMS Grop3 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 {YE5X6MS} recovery met the requirements for all compounds.
The MSD {YE5X6MSD} recovery met the requirements for all compounds.
The RPD {YE5X6MSD} RPD met the requirements for all compounds
The Blank Spike for {PB165797BS} 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 SOIL Sample:

Concentration ug/Kg,

(dry weight basis) = $\frac{(Ax)\ (Is)\ (Vt)\ (DF)\ (GPC)}{(Ais)\ (\overline{RRF})\ (Vi)\ (Wt)\ (D)}$

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.
Vi = Volume of extract injected in microliters (uL)
Vt = Volume of concentrated extract in microliters (uL)
Wt = Weight of the original sample extracted in g
Df = Dilution factor
RRF = Mean Relative Response Factor determined from the initial calibration standard.
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.
D= $\frac{100 - \%moisture}{100}$

Example calculation of YE5X5 for 1,4-Dioxane:

Ax = 347
Ais = 3029
Is = 0.4
Vi = 1
Vt = 500
Wt = 30.1
Df = 1
RRF = 0.539
GPC = 2
D= 0.790

Concentration

(dry weight basis) ug/Kg = $\frac{(347)\ (0.4)\ (500)\ (1)\ (2)}{(3029)\ (0.539)\ (1)\ (30.1)\ (0.790)}$

= 3.6 ug/Kg

RRF Calculation of standard 0.4 ppb for **1,4-Dioxane** with M instrument for method 12/18/2024.

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

= 3185/4849 X 0.4/0.4

= 0.657 (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.