SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51952
SDG: A6318
CONTRACT: 68HERH20D0011
LAB CODE: ACE
CHEMTECH PROJECT: Q1248
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	Test
Q1248-01	A6318	
Q1248-01DL	A6318DL	SVOC-SIM
Q1248-02	A6319	
Q1248-02DL	A6319DL	SVOC-SIM
Q1248-03	A6325	
Q1248-04	A6326	
Q1248-05	A6331	
Q1248-06	A6332	
Q1248-07	A6333	
Q1248-08	A6334	
Q1248-09	A6342	
Q1248-10MS	A6342MS	
Q1248-11MSD	A6342MSD	
Q1248-12	A6343	
Q1248-13	A6344	
Q1248-14	A6345	
Q1248-15	A6346	
Q1248-16	A6347	

16 Soil samples were delivered to the laboratory intact on 01/31/2025.

Test requested on the Chain of Custody was Semivolatile Organic, 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 and 1.9 degree Celsius for the samples received on 01/31/2025

Shipping Discrepancies and/or QC issues:

Issue 1: The laboratory is missing instructions for all PT samples for this Case; the laboratory would also like confirmation if the PT samples require PRs.

Resolution 1: Per Region 1, the PT samples do not require preliminary results (PRs). The PT instructions are attached. Please note the issue in the SDG narrative and proceed with analysis of the samples.

Semivolatiles:

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 for for soil sample was extracted by Method SFAM01.1 on 01/31/2025, The analysis of SVO-PAH-SFAM 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 {A6342MS} recovery met the requirements for all compounds.
The MSD {A6342MSD} recovery met the requirements for all compounds.
The MSD {A6342MSD} RPD met the requirements for all compounds.
The Blank Spike for {PB166436BS} 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.

The Sample A6319 has the concentration of target compound below method detection limits; therefore it is not reported as Hit in Form1.

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.

$$D = \frac{100 - \%\text{moisture}}{100}$$

Example calculation of A6318 for Pyrene:

Ax = 514721
Ais = 2103274
Is = 20
Vi = 1
Vt = 500
Wt = 30.1
Df = 1
RRF = 1.291
GPC = 2
D= 1

Concentration

$$\text{(dry weight basis) ug/Kg} = \frac{(514721)\,(20)\,(500)\,(1)\,(2)}{(2103274)\,(1.291)\,(1)\,(30.1)\,(1)}$$

= 130 ug/Kg

RRF Calculation of standard 20 ppb for Naphthalene with P instrument for method 01/29/2025.

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

= 2498726/2130098 X 20/20

= 1.173 (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 Soil sample was extracted by Method SFAM01.1 on 01/31/2025. The analysis of SVOC-SIM-SFAM 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 {A6342MS} recovery met the requirements for all compounds.
The MSD {A6342MSD} recovery met the requirements for all compounds.
The MSD {A6342MSD} RPD met the requirements for all compounds.
The Blank Spike for {PB166437BS} 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 A6318 and A6319 were diluted due to high concentrations.

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

Concentration of SOIL Sample:

Concentration ug/Kg,

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

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 = $\frac{Vin}{\ }$ = 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 A6318 for Pyrene:

Ax = 108665
Ais = 8560
Is = 0.4
Vi = 1
Vt = 500
Wt = 30.1
Df = 1
RRF = 1.587
GPC = 2
D= 1

Concentration

$$\text{(dry weight basis) ug/Kg} = \frac{(108665)\,(0.4)\,(500)\,(1)\,(2)}{(8560)\,(1.587)\,(1)\,(30.1)\,(1)}$$

= 110 ug/Kg

RRF Calculation of standard 0.4 ppb for Naphthalene with N instrument for method 01/21/2025.

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

= 5142/4615 X 0.4/0.4

= 1.114 (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.