SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC
CASE: 51901
SDG: C0AG1
CONTRACT: 68HERH20D0011
LAB CODE: ACE
LAB ORDER ID: P5264
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
P5264-01	C0AG1	
P5264-01DL	C0AG1DL	
P5264-01DL2	C0AG1DL2	
P5264-02	C0AN0	
P5264-02DL	C0AN0DL	
P5264-02DL2	C0AN0DL2	
P5264-03	C0AS2	
P5264-04	C0AS4	
P5264-04DL	C0AS4DL	
P5264-04DL2	C0AS4DL2	
P5264-05	C0AS5	
P5264-05DL	C0AS5DL	
P5264-05DL2	C0AS5DL2	
P5264-06	C0AS6	
P5264-07MS	C0AS6MS	
P5264-08MSD	C0AS6MSD	

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

Test requested on the Chain of Custody was Aroclor by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.1 degree Celsius for the samples received on 12/12/2024.

Shipping Discrepancies and/or QC issues:

Issue 01: “Lab has received soil samples for PCB analysis and samples are having extremely high concentrations of target analytes. Due to very high concentrations of target analytes, samples C0AG1, C0AN0, C0AS4 & C0AS5 has surrogates recoveries are outside the QC limits. Samples are also required multiple dilution to bring target analytes within calibration range as

you can see attached form-1 and Quant reports for your reference. In this case, Lab will report undiluted PCB analysis with surrogates outside the QC limits and further dilution analysis for final electronic deliverables.

Resolution 01: "Have ACE make note of the issue in their SDG Narrative and proceed with the analysis of the samples."

Issue 02: Regarding SDG C0AG1, Laboratory QC is scheduled for ARO analysis, but no QC samples are designated on the COC. The laboratory selected sample C0AS6 to use for Laboratory QC and confirms that the sample is not a blank, rinsate, or PT sample.

Resolution 02: Per SFAM01.1 Exhibit A, Section 5.5.4.1., the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Aroclors:

The analyses were performed on instrument GC ECD_R The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.

The sample was analyzed on a single injection dual column system. To distinguish the second column analysis from the first column a -2 suffix was added to the file id on the form 1. These refer to forms were both columns are reported. Form 1s for the IBLK and ALCS are referenced as IBLK(1)/IBLK(2), MS(1)/MS(2), MSD(1)/MSD(2) and ALCS01(1)/ALCS01(2) respectively.

Aroclor sample was extracted by Method SFAM01.1 on 12/16/2024 and analyzed on 12/16, 12/17 and 12/18/2024, All the samples were subjected to a Sulfuric acid cleanup. The sample was extracted and analyzed within contractual holding time.

The Surrogate recoveries met the acceptable criteria except for
C0AG1 [Tetrachloro-m-xylene(1) - 304% ,Decachlorobiphenyl(1) - 689%,
Decachlorobiphenyl(2) - 559%],
C0AG1DL [Tetrachloro-m-xylene(1) - 459%, Decachlorobiphenyl(1) - 867%,
Decachlorobiphenyl(2) - 699%],
C0AG1DL2 [Tetrachloro-m-xylene(1) - 0%, Tetrachloro-m-xylene(2) - 0%],
Decachlorobiphenyl(1) - 0%, Decachlorobiphenyl(2) - 0%],
C0AN0 [Tetrachloro-m-xylene(1) - 289% ,Decachlorobiphenyl(1) - 535%,
Decachlorobiphenyl(2) - 495%],
C0AN0DL [Tetrachloro-m-xylene(1) - 500%, Decachlorobiphenyl(1) - 768%,
Decachlorobiphenyl(2) - 684%],
C0AN0DL2 [Tetrachloro-m-xylene(1) - 0%, Tetrachloro-m-xylene(2) - 0%],
Decachlorobiphenyl(1) - 0%, Decachlorobiphenyl(2) - 0%],
C0AS2 Decachlorobiphenyl(1) - 313%, Decachlorobiphenyl(2) - 273%],
C0AS4 [Tetrachloro-m-xylene(1) - 313% ,Decachlorobiphenyl(1) - 543%,
Decachlorobiphenyl(2) - 478%],

C0AS4DL [Tetrachloro-m-xylene(1) - 535% ,Decachlorobiphenyl(1) - 723%, Decachlorobiphenyl(2) - 646%],
C0AS4DL2 [Tetrachloro-m-xylene(1) - 0%, Tetrachloro-m-xylene(2) - 0%], Decachlorobiphenyl(1) - 0%, Decachlorobiphenyl(2) - 0%],
C0AS5 [Tetrachloro-m-xylene(2) - 257% ,Decachlorobiphenyl(1) - 217%, Decachlorobiphenyl(2) - 186%],
C0AS5DL [Tetrachloro-m-xylene(2) - 243% ,Decachlorobiphenyl(1) - 280%, Decachlorobiphenyl(2) - 237%],
C0AS5DL2 [Tetrachloro-m-xylene(1) - 0%, Tetrachloro-m-xylene(2) - 0%], Decachlorobiphenyl(1) - 0%, Decachlorobiphenyl(2) - 0%],

The SOW allows one surrogate to fail to meet the criteria per column. ((Please See Section 11.3.6 of Exhibit D Aroclor Analysis).
Please see EPA communication in shipping discrepancy section for surrogate outside the QC limits.

C0AS6MS met the requirements.
C0AS6MSD met the requirements.
The RPD met the requirements.
The Laboratory Control Sample met requirements.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuing Calibrations met the requirements.
The Retention Times were acceptable for all samples.

Samples C0AG1, C0AG1DL, C0AG1DL2, C0AN0, C0AN0DL, C0AN0DL2, C0AS2, C0AS4, C0AS4DL, C0AS4DL2, C0AS5, C0AS5DL, C0AS5DL2, C0AS6MS, C0AS6MSD failed to meet the %D for the results between the two columns Criteria.

Sample C0AG1, C0AG1DL, C0AN0, C0AN0DL, C0AS4, C0AS4DL, C0AS5, C0AS5DL were diluted due to high concentration.

Samples C0AG1, C0AN0, C0AS4, C0AS5 GC/MS confirmation run performed and raw data reported in hard copy.

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

Calculation for Concentration in Soil samples:

$$\text{Concentration ug/Kg (Dry weight basis)} = \frac{(Ax)\,(Vt)\,(DF)\,(GPC)}{(CF)\,(Vi)\,(Ws)\,(D)}$$

Where,
Ax = Response (peak area or height) of the compound to be measured.

CF = Mean Calibration Factor from the initial calibration (area/ng).
Vt = Volume of the concentrated extract in uL
Vi = Volume of extract injected (uL). (If a single injection is made onto two columns, use ½ the volume in the syringe as the volume injected onto each column).
Ws = Weight of sample extracted (g).

D = % dry weight or $\frac{100 - \%Moisture}{100}$
GPC = $\frac{Vin}{Vout}$ = GPC factor (If no GPC is performed, GPC=1)
DF = Dilution Factor

Example of AR1254 calculation for Peak 1

Calibration factor Peak 1 100ppb ISTD= $\frac{\text{peak area}}{\text{Mass injected ng}}$
Column2

$$= \frac{34003385}{0.100}$$

= 340033850 calibration factor for Peak 1 100ppb

Average of 5 peaks = 298387287

Sample **C0AS6**
Ax = 35549677
CF = 298387287
Vt = 10000
Vi = 1.0
Ws = 30.1
D = 0.622
GPC = 1.0
DF = 1.0

Concentration ug/Kg (Dry weight basis) = $\frac{(Ax)\ (Vt)\ (DF)\ (GPC)}{(CF)\ (Vi)\ (Ws)\ (D)}$

$$= \frac{(35549677)\ (10000)\ (1.0)\ (1.0)}{(298387287)\ (1.0)\ (30.1)\ (0.622)}$$

Peak 1 = 63.64

Average of 5 peaks = 104.54

Reported results = 110 ug/kg

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.