



## SDG NARRATIVE

**LAB NAME: Alliance Technical Group, LLC**

**CASE: 51802**

**SDG: C0CF5**

**CONTRACT: 68HERH20D0011**

**LAB CODE: ACE**

**LAB ORDER ID: P4644**

**MODIFICATION REF. NUMBER: NA**

Sample ID	EPA Sample ID	pH
P4644-01	C0CF5	
P4644-02MS	C0CF5MS	
P4644-03MSD	C0CF5MSD	
P4644-04	C0CP5	
P4644-05	C0CE8	
P4644-06	C0CQ8	
P4644-07	C0CQ4	
P4644-08	C0CG1	
P4644-09	C0CE9	
P4644-10	C0CF1	
P4644-11	C0CF4	
P4644-12	C0CP6	
P4644-13	C0CC0	
P4644-14	C0CC9	
P4644-15	C0CF0	
P4644-16	C0CG3	
P4644-17	C0CH2	
P4644-18	C0CP1	
P4644-19	C0CE3	
P4644-20	C0CQ1	

04 Water samples were delivered to the laboratory intact on 10/31/2024.

16 Water samples were delivered to the laboratory intact on 11/01/2024.

Test requested on the Chain of Custody was Semivolatile Organic, Pesticide and Aroclor by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.7, 1.5, 2.1 degree Celsius for the samples received on 10/31/2024. The samples temperature



was 3.4, 3.6, 2.3, 2.5, 3.0, 2.6, 3.3, 2.4, 3.1, 2.8, 2.7, 3.2 degree Celsius for the samples received on 10/01/2024.

**Shipping Discrepancies and/or QC issues:**

Issue: The laboratory received one broken amber bottle each for samples C0CE9, C0CF1, C0CG3 and C0CQ1, and two broken amber bottles for sample C0CP1. The remaining sample containers were received in good condition. There is no evidence of cross contamination and there is sufficient volume to proceed with the analysis, but not enough volume to analyze any possible re-extractions/ reanalyses.

Resolution: Per SFAM0.1.1 Exhibit A, Section 5.4.2., the laboratory will 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\_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\_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 11/01/2024, 11/03/2024, 11/04/2024, The analysis of SVOC-SFAM was based on method SFAM01.1\_SVOC.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for, C0CP1 [4-Nitrophenol-d4 - 7%] and C0CQ1 [4-Nitrophenol-d4 - 6%]. As per method four surrogates are allowed to fail. Therefore no further corrective action was taken.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The Blank Spike for {PB164612BS} recoveries met the requirements for all compounds.

The Blank Spike for {PB164614BS} recoveries met the requirements for all compounds.

The Blank Spike for {PB164615BS} recoveries met the requirements for all compounds.

The Blank Spike for {PB164671BS} 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.

Samples C0CG3 has the concentration of target compound below method detection limits; therefore it is not reported as Hit in Form1.

### Concentration of Water Sample:

Concentration ug/L =  $\frac{(A_x) (I_s) (V_t) (DF) (GPC)}{(A_{is}) (RRF) (V_o) (V_i)}$

Where,

A<sub>x</sub> = Area of the characteristic ion for the compound to be measured.

A<sub>is</sub> = Area of the characteristic ion for the internal standard.

I<sub>s</sub> = Amount of internal standard injected in ng.

V<sub>o</sub> = Volume of water extracted in mL.

V<sub>i</sub> = Volume of extract injected in uL.

V<sub>t</sub> = Volume of the concentrated extract in uL

RRF = Mean Relative Response Factor determined from the initial calibration standard.

GPC =  $\frac{V_{in}}{V_{out}}$  = GPC factor (If no GPC is performed, GPC=1)

V<sub>out</sub> = Volume of extract collected after GPC cleanup.

### No positive target compounds were detected in the samples.

RRF Calculation of standard 20 ppb for **Naphthalene** with P instrument for method 10/07/2024.

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

= 326983/315808 X 20/20

= 1.035 (Reported RRF)

### Pesticides:

The analyses for Pesticides were performed on instrument ECD\_D. The front column is ZB-Multi-Residue-2 which is 30 meters, 0.32 mm ID, 0.2 um df. The rear column ZB-Multi-Residue-1 which is 30 meters, 0.32 mm ID, 0.50 um df.

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 where both columns are reported. Form 1s for the IBLK and PLCS are referenced as IBLK(1)/IBLK(2), MS(1)/MS(2), MSD(1)/MSD(2) and PLCS01(1) / PLCS01(2) respectively.

Pesticide sample was extracted by method SFAM01.1 on 11/05/2024 and analyzed on 11/05 and 11/06/2024. The sample was extracted and analyzed within contractual holding time.

The Surrogate recoveries met the acceptable criteria except for C0CP5 [Decachlorobiphenyl(1) - 26%, Decachlorobiphenyl(2) - 29%],  
The SOW allows one surrogate to fail to meet the criteria per column. ((Please See Section 11.3.6 of Exhibit D Pesticide Analysis).

C0CF5MS met the requirements.  
C0CF5MSD met the requirements.  
The RPD met the requirements

The Blank analysis did not indicate the presence of lab contamination.  
Blank and Laboratory Control Sample met the requirements.  
Retention Times met the requirements.  
Florisil check met the requirements.  
Resolution Check met the requirements.  
The Retention Times were acceptable for all samples.  
The Initial Calibration met the requirements.  
The Individual Mix A met the requirements.  
The Individual Mix B met the requirements.  
The PEM met the requirement.

Sample C0CE9, C0CQ1 have the concentration of target compound - Heptachlor epoxide,  
Sample C0CF4 has the concentration of target compound - Endosulfan II,  
Sample C0CP6 has the concentration of target compound - Endosulfan II and trans-chlordane,

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.

### **Calculation for the Concentration in Water Samples**

$$\text{Concentration ug/L} = \frac{(A_x) (V_t) (DF) (GPC)}{(CF) (V_o) (V_i)}$$

Where,

A<sub>x</sub> = Response (peak area or height) of the compound to be measured.

CF = Mean Calibration Factor from the initial calibration (area/ng).

V<sub>o</sub> = Volume of water extracted in mL.

V<sub>i</sub> = Volume of extract injected in uL.

V<sub>t</sub> = Volume of the concentrated extract in uL

$$GPC = \frac{V_{in}}{V_{out}} = \text{GPC factor (If no GPC is performed, GPC=1)}$$

V<sub>in</sub> = Volume of extract loaded onto GPC column.

Vout = Volume of extract collected after GPC cleanup.

### Example of Endosulfan I calculation

Calibration Factor Calculation Endosulfan I in the first column

Calibration factor (CF) =  $\frac{\text{peak area}}{\text{Mass injected in ng}}$

$$= \frac{9516108}{5\text{ng}}$$

$$= 1903220$$

Mean Calibration Factor = average of 5 point calibration factor

$$= 2025530$$

No target **Pesticides** were detected in the samples.

### Aroclors:

The analyses were performed on instrument GCECD\_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 where 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 05/11/2024 and analyzed on 05/11/2024. 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.

C0CF5MS met the requirements.

C0CF5MSD 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.

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

### Calculation for Concentration in Water Samples:

$$\text{Concentration ug/L} = \frac{(A_x) (V_t) (DF) (GPC)}{(CF) (V_o) (V_i)}$$

Where,

A<sub>x</sub> = Response (peak area or height) of the compound to be measured.

CF = Mean Calibration Factor from the initial calibration (area/ng).

V<sub>o</sub> = Volume of water extracted in mL.

V<sub>i</sub> = Volume of extract injected in uL.

V<sub>t</sub> = Volume of the concentrated extract in uL

GPC =  $\frac{V_{in}}{V_{out}}$  = GPC factor (If no GPC is performed, GPC=1)

V<sub>in</sub> = Volume of extract loaded onto GPC column.

V<sub>out</sub> = Volume of extract collected after GPC cleanup.

DF = Dilution Factor.

### Example of AR1260 calculation for Peak 1

Calibration factor Peak 1 100ppb ISTD=  $\frac{\text{peak area}}{\text{Mass injected ng}}$   
Column1

$$= \frac{4574028}{0.100}$$

= 45740280 calibration factor for Peak 1 100ppb

Average of 5 peaks = 39861589

No target **Aroclors** were detected in the samples.



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.