DRAFT. (DO NOT TYPE)

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Letter to C Tuttle Aerovon.

Dear Cliff

At the recent EIA Washington meeting Dec 8th your committee asked for clarification of detection of various Aroclors in the environment. I will attempt to clarify the situation by way of examples.

Aroclor in water.

Example 1.

Discharge of Aroclor 1016 into a waterway ~~containing existing levels of~~ into which Aroclor 1242 or Aroclor 1254 had previously been discharged.

a). Close to the discharge point and within a short time period it might be possible

If 3 separate samples of Aroclor 1016 / 1242 / 1254 were introduced into ~~an~~ identical environmental water systems after a very long period the residues ~~would~~ might tend to by ~~be~~ GLC to appear ~~very~~ similar and the trace of the residue ~~would~~ might be closest to the trace for Aroclor 1254.

Samples checked at an early stage of the experiment ~~would~~ could be ~~capable of~~ differentiated but after a relatively short period it would be difficult to distinguish Aroclor 1016 / Aroclor 1242.

Example 2. If Aroclor 1016 were added to a water sample already containing Aroclor 1242 / Aroclor 1254 (compared to it would ~~in a relatively short period become~~ be difficult to conclude that Aroclor 1016 had been added.

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Example 3. If Aroclor 1254 was added to a water sample it is extremely unlikely that this would ever be identified as Aroclor 1016 by [illegible]. In a laboratory under UV light it might be possible to remove chlorines but this would not easily occur in nature.

Aroclor in Fish. There are two important points to remember.

1. Accumulation in fat tissue concentrates the chlorinated biphenyl, ~~rather~~ and in GLC traces is analogous to turning up the sensitivity of the instrument increasing the amplitude of the peaks.

2. Higher chlorinated isomers are more readily fat absorbed and slower to disappear

Lower chlorinated isomers are less readily absorbed and faster to disappear.

Example 4 If you put a fish in a tank containing Aroclor 1016 in water and after a relatively short period (say 1 week) carried out a PCB analysis on the ~~liver~~ tissue the trace might be identified as ~~[illegible]~~ [illegible] PCB [illegible] ~~closer to Aroclor 1248~~. The longer the fish is in the water the more the residue will resemble Aroclor 1254.

Probably would take many years.

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