

Monsanto

FROM (NAME & LOCATION):

V. W. Saeger - T2B

DATE : October 4, 1976

SUBJECT :

REFERENCE :

TO : J. Wood - B2SD

CC: J. P. Mieux - T2F
D. Hicks - T2F
V. W. Saeger - T2B
R. E. Keller - T1B

*PCB
Biodegradation*

At Jim Mieux's request, Orville Hicks and I have reviewed Prof. Armstrong's affidavit. The following paragraphs give our consensus.

The results obtained by Prof. Armstrong in his study of the anaerobic degradation of PCBs are not unexpected. The overall conclusion of Prof. Armstrong that PCB degradation in anaerobic sediment is negligible is probably valid, but it would have been much better if the conclusion was based on more precise analytical data at several different PCB levels. At the 50 µg level studied, the precision of the recovery data should have been much better. The rather erratic recovery data shown in Tables 2, 2-A, 2-B, and 2-C for Aroclor 1016, Aroclor 1232, and Aroclor 1254 are possibly due to the use of a 1-µl injection. A reproducible 1µl injection is difficult to achieve with a standard type syringe. In Table 4, data for Aroclor 1254 in which 5-µl injections were used show much better reproducibility. In regard to the perchlorination procedure used for intermediate sampling points, (Table 1), it is important to recognize that the perchlorination of interfering components as biphenyl, methylbiphenyl, etc. can lead to high values.

In addition to the analytical area, I feel sufficient detail on the sampling and handling of the sediments are not included in this affidavit. There was also no apparent use of sterile controls as a check on non-biological losses.

V. W. Saeger

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