

Monsanto

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FROM (NAME & LOCATION) M. W. Dietrich - Technology Department - S. Second Street

DATE January 27, 1971

SUBJECT DIBENZOFURANS IN AROCLOR PRODUCTS

REFERENCE R.E.Keller Memo to W.B.Papageorge
10/20/70

TO W. R. Richard
General Offices

cc: W. B. Papageorge - GO
M. W. Farrar - Res. 1
H. S. Bergen - GO
→ E. P. Wheeler - GO *EWHE*
E. S. Tucker - Res. 2
E. M. Emery - Res. 2
R. E. Keller - Res. 1
R. H. Munch - Res. 2
Q. E. Thompson - GO
J. P. Mieure - Res. 2

We initially reported that Aroclor 5442 (Lot AI-9) contained 1-3 ppm tetrachlorodibenzofuran. Additional work by Dr. Mieure has shown that this identification is not conclusive; tetrachloromethylbiphenyl cannot be distinguished from the above dibenzofuran. Since Dr. Mieure has also found methylbiphenyl in Santowax R, chlorinated methylbiphenyls could be expected in Aroclor 5442.

High resolution mass spectrometry at the Physical Sciences Center has been unsuccessful in distinguishing between these materials. We have explored several other approaches to make this identification and feel none have reasonable odds of success. At this time, we plan no additional work on this problem.

Recipients of this memo are asked to delete the identification of "1-3 ppm tetrachlorodibenzofuran in Aroclor 5442, lot AI-9" (memo JPM to REK, 10/20/70) and replace it with 1-3 ppm unidentified tetrachloro compound with molecular weight of 304 (based on Cl = 35.0). The other analyses in that memo including that of 15-30 ppm pentachlorodibenzofuran in Phenecolor DP 6, Prodelec are unchanged. At this higher 15-30 ppm level, an unambiguous identification is possible.

If it becomes necessary to quote a figure for oxygenated impurities in Aroclor 5442, a figure of less than 5 ppm should be safe based on our analyses.

M W Dietrich

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