symptoms were observed after a few months, and more significantly, these low levels of PCB caused marked effect on reproduction. After three matings with male monkeys, only 12.5% of the 5 ppm PCB dietary group and 37.5% of the 2.5 ppm group were pregnant as compared to 90% pregnancies with a comparable control group. 16/ At the same time, fetuses that were born were significantly smaller in size and continued to ingest high PCB levels from the nursed milk of their mothers. 17/ These effects at low PCB levels are particularly important to note, since the present Food and Drug Administration tolerance limit for PCB residue in fish and shellfish is 5 ppm, 18/ and were based on an assumption of a higher no-effect level.

Of serious concern is a recent study conducted by a group of research investigators at the Center for Disease Control, Atlanta, Georgia, the U.S. Environmental Protection Agency, the National Cancer Institute and the Johns Hopkins University School of Medicine. 19/ They observed that when Sherman strain female rats were fed 100 ppm of PCB (Aroclor 1260) for about 21 months, 26 of 184 of the experimental animals examined had malignant liver tumors (hepatocellular carcinoma), whereas only 1 of 173 control animals had the same disease. At the same time 146 of the experimental and none of the control animals had tumorous lesions (neo-plastic nodules) in the liver. That PCB's can cause malignancies in experimental animals is not altogether surprising, since it has been pointed out in the studies with rhesus monkeys that PCB is metabolized to a potent carcinogenic intermediate compound, the arene oxides: 20/

16/ J.R. Allen, "Response of the Nonhuman Primate to Polychlorinated Biphenyl Exposure," Federation Proceedings, 34, 1675, 1975

17/ J.R. Allen, University of Wisconsin Medical School, Regional Primate Research Center, Madison, Wisconsin, private communication.

18/ Federal Register, Vol. 38, No. 129, p. 18096, July 6, 1973.

19/ R.D. Kimbrough, R.A. Squire, R.E. Linder, J.D. Strandberg, R.J. Montali and V.W. Burse, "Induction of Liver Tumors in Sherman Strain Female Rats by Polychlorinated Biphenyl Aroclor 1260," preprint of study obtained from R.D. Kimbrough, Center for Disease Control, Atlanta, Georgia.

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20/ Op. cit., Allen, Federation Proceedings, p. 1679.

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