October 23, 1970

Herbert E. Stokinger, Ph.D.
Division of Occupational Health
1014 Broadway
Cincinnati, Ohio 45202

Dear Herb:

Confirming our telephone conversation, I am forwarding to you, either by U. S. Mail or personal messenger, reports on the status of our PCB studies. If our industrial hygienist, Dr. Carl Bohl, goes up to Kettering Laboratories for this weekend, he will hand carry the reports and possibly deliver them to you at your home over this weekend. If he does not go to Cincinnati, I will put them in the mail.

The reports are entitled as follows:

A. "Status Summary Two-Year Chronic Oral Toxicity Study of: Aroclor 1242, 1254, 1260 in Beagle Dogs"

B. Same as above for albino rats

C. "Three-Generation Reproduction Study in Albino Rats" with the same three compounds

D. "Toxicity, Reproduction and Residue Study" of the three compounds "in White Leghorn Chickens"

You will recall I provided you with the detailed status reports on the chronic studies earlier this summer. The current reports represent the results on the dog studies through 12 months of the 24 months of testing.

In the case of the rats, the report represents the results after 15 months of the 24 months and includes the micropathology study of the animals sacrificed at 3, 6 and 12 months.

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The rat reproduction study presents the results through the first generation.

The study on the leghorn chickens is complete insofar as Dr. Calandra's results are concerned. The tissue residue analyses will not be completed for a number of months. Joe and his associates have nearly 1,000 cubic feet of tissues in cold storage awaiting analysis by our lab here in St. Louis. We are about to start on some of these tissues and plan to give priority to the tissues from those animals sacrificed in the chronic rat study.

I hope you will feel free to discuss these reports with Joe, Otis Fancher or Kep.

As I told you on the phone, we have given copies of this report to Garth Fitzhugh and provided copies for the toxicologists in USDA and our friends at the Patuxent Lab of the Fish and Wildlife Service. In each case we have attempted to put the reports in the hands of people we thought were best qualified to evaluate the data from such studies. Secondly, we have urged that the results or the reports indicated therein not be widely distributed. The latter request is based solely on the hope that references to the data in publications will be minimal until such time as the investigators can publish the results in an appropriate journal. Bio-Test has submitted an abstract of a paper which hopefully can be presented at the next SOT meeting followed by early publication in Toxicology and Applied Pharmacology. We have not intended in any way to restrict use of the data for any official government purpose.

I have enclosed with this letter a copy of the recent publication by Peakall and Linder in Bio-Science entitled, "Polychlorinated Biphenyls--Another Long-Life Widespread Chemical in the Environment". We believe this to be the best most recent review of the literature on the PCB situation.

Beginning on page 960, I have underlined some sentences and added a reference number in the margin. My comments which follow are not intended to be of a "nit-picking" nature but represent some questions in my mind in the case of item 1, 2 and 3 and statements on comparative toxicity (items 4 through 8).

In the case of number 1, the statement that "no definite work has been done to establish $LD_{50}$ values for the various formulations of PCB's" is erroneous if the author is referring to formulations made and distributed by Monsanto. We do have range-finding toxicity data on all of our functional fluid formulations for example. Although these data have not been published in technical journals, they appear in our technical bulletins and have been widely disseminated to medical and industrial hygiene personnel of our customers.

Item number 2 presents rat oral lethal doses that surprise us. None of our acute studies indicate such low doses. Further, we have been told that in studies beginning last year, FDA had found $LD_{50}$'s comparable to those which have been determined for us by several laboratories including Kettering as well as Younger Laboratories.

In connection with item 3, I have enclosed a Xerox copy of pages 50 and 51 from our technical bulletin O/PL-306. I find no reference in the bulletin that we mentioned "100 ppm diet had no effect on rats". To my knowledge the current issue of this bulletin was published in late 1966. I can find no indication that we had previous editions with this number. Additionally, Dr. Kelly and I can't believe that we could have made such a reference in previous bulletins since our records and recollections indicate that we had no knowledge of any study of this type prior to the time of the current work underway at Bio-Test.

As indicated above the remaining five items are underlined just as a matter of convenience to locate for you references to PCB versus DDT toxicity. I guess I should add that item 6 does not relate to DDT but instead compares our product with samples of two competitive products.

I have enclosed a copy of my letter to Dr. Lee in reply to his request for permission to discuss the PCB toxicity data with Dr. Calandra and comments concerning the position paper enclosed with his letter to you of October 14.

Sincerely,

Elmer P. Wheeler
Manager, Environmental Health

EPW:ju
c.c. Dr. Joseph C. Calandra
Prof. G. Fred Lee
Dr. Donald I. Mount
Mr. William B. Papageorge