Monsanto

FROM (NAME & LOCATION) Medical Department

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cc: John Durland - Tokyo

SUBJECT Status of Aroclor Toxicity Studies

REFERENCE

TO :

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The following represents a resume of the studies which have been done and which are underway at Industrial Bio-Test Lab on the Aroclors:

I. Aroclors 1242, 1254, and 1260 -

A. Two-year chronic feeding studies in rats and dogs - The animals completed their two years on the test diet of 1, 10, and 100/ppm late in May. Half of the surviving rats were sacrificed for micropathology examination of the tissues. The remainder will be sacrificed after an additional 30 and 60 days on diets free of the test compounds to determine the rate of clearance of PCB's in the tissues. A similar procedure is being followed with the dogs.

The tissue examination and the complete reports should be available about September 1, 1971.

II. B. Three generation rat reproduction studies - The final report is in preparation and should be available about July 1.

C. Chicken and egg production studies - Work has been completed and reports received on the studies done with the three materials.

D. Sub-acute fish toxicity studies - We should receive a protocol of these studies within the next two weeks. In the meantime, we will arrange to contact other laboratories to determine what work is underway at government laboratories in Columbia, Missouri and Duluth, Minnesota. It may be that data which we think are necessary have been generated in these labs.

E. Teratology studies in rats - The work has been completed and final reports are in preparation.

II. Current studies on additional Aroclors:

A. 90-day studies in dogs - These are underway for MCS 1016, Aroclor 1221, and Aroclors 5432, and 5442. The final reports should be received by October 1.

B. 90-day studies in rats - Status same as with dogs.

C. Chicken and egg production studies - Because of the current business climate it had been decided to defer these studies. We have now asked Industrial Bio-Test to select appropriate feeding levels based on the work done with the previous Aroclors (including 5460). I expect we should be able to start these studies between July 15 and 31.

III. Interpretation of the data - Dr. Keplinger of Industrial Bio-Test gave a paper at the March meeting of the Society of Toxicology which represented the results of the studies at that time. A copy is attached. There is no indication that the concluding months of the studies will markedly change the results.

You will recall that Bio-Test repeated the chicken work with Aroclor 1242 at feeding levels of 2, 4 and 8/ppm since the attached summary report shows they found an effect at the 10/ppm level. At the levels of 2, 4 and 8/ppm the only effect noted was a slightly lower percent of hatchability in the 4 & 8/ppm birds. There was no effect on egg production, specific gravity or eggshell thickness at any of the three levels.

In the work currently underway, we expect Aroclors 5432, and 5442 to be less toxic than Aroclor 1254 in the rats, dogs and chickens. MCS 1016 should be about as toxic as 1242 in the chickens and less toxic in the rats and dogs.

Since 1242 was more toxic to chickens than 1254 and 1260, it is possible that Aroclor 1221 will be more toxic in chickens but like MCS 1016, less toxic in rats and dogs.

Elmer P. Wheeler

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