

23rd February, 1968

Mr. J. F. Fox

WVH/AS

W.H. Richardson, St. Louis

J. F. Fox	Leader
H. Wood	Deputy
M. Baxter	Deputy
M. Kelly	St. Louis
A. Keller	St. Louis
C. Eaton	St. Louis
L. Parks	St. Louis
G. Wilde	St. Louis

With reference to your letter to Mr. Baxter we note that your available quantities of di- and trichlorodiphenyl isomers are very small indeed. As you know we have already provided samples for Jensen and Widmark (Stockholm), Richardson (Shill, England) and Tilton (Government Laboratory, England), and the residual quantities are now to be reckoned in terms of milligrams. I assume you will be writing appropriately to the Syracuse University Research Corporation.

On your request for information concerning the tests made by the above workers on our samples I can summarize as follows:-

- (a) Jensen and Widmark I have seen no development since Widmark's letter of January 1967 addressed to Gene Wilde.
- (b) Tilton Copies of a paper entitled 'Chlorinated Hydrocarbons in British Wildlife' by A.D. Tilton, J.D. Wilson and J.C.G. Tilton, Nature Vol 216, at 21, 1967 pp. 27-29 were passed to Gene Wilde and Richardson with my letter of 4th November, 1967. This paper confirms the work of Jensen and in particular shows close similarity between the liquid chromatograms of (a) extracts of kestrel liver oil and (b) a commercial polychlorobiphenyl resin.
- (c) Richardson Richardson has not published anything so far, but J. Wilson, also of Shell Research Ltd., Festen Laboratory, Sittingbourne, Kent has published a paper entitled 'Analysis of organochlorine insecticides in wild birds in the United Kingdom, Chemistry and Industry 1967, p. 1974-1986. This is a comprehensive review but as far as I can see it does not suggest that any of the residues contain chlorinated biphenyls.

However, I was in correspondence with Richardson in November, 1967 (copies herewith) which showed that he was satisfied that polychlorobiphenyl was present and that his results are substantially in line with those of Tilton et al. You will note also that he believes that the contamination of bird life is in the valley of our river alluvium.

I have particularly followed up this clue with a view to locating the source of the contamination. There appears to be no operation of any size involving extraction of oil from the river valley. The nearest is at Llangynidr with some 100,000 gallons of oil. In 1967 we found the highest off-take of insecticide from the river to be at least 100,000 gallons in the present year (1968) it is 150,000 gallons. It is difficult to see how this could be the source of the contamination.

I am sure that the Public Health Service are very busy.

Yours faithfully

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