

D.V.N. Hardy, London

21st February, 1967

Sweden, Areolar

DVNH/AMW

Dr. R. Ernest Kelly, St. Louis

D. Wood, Brussels  
G.R. Buchanan, St. Louis  
J. Filer, Brussels  
E. Wilde, St. Louis

Re your memo of February 10th 1967 addressed to D. Wood, I am following up your request for information concerning the work at Monks Wood Experimental Station and at the Laboratory of the Government Chemist. We think that all this work is comparatively recent, and I cite below two recent communications from the latter.

1. "Organochlorine Pesticides in the Atmospheric Environment" by T.C. Abbot, R.B. Harrison, J.O'G. Tatton and J. Thompson, Nature 208, 25.12.1965 No. 5017 p. 1317-8.
2. "Organochlorine Pesticides in the Atmosphere" by D.C. Abbot, R.B. Harrison, J.O'G. Tatton and J. Thompson, Nature 211, 16.7.1966 No. 5046, p.259-261.

Photostat copies of these are attached for your convenience.

I have also been in touch with Mr. Richardson of Shell, to whom I supplied the samples of pure Areolar components, and he reports that the characteristics of the unknown material in the organochlorine residues are quite different from those of any of the chlorinated biphenyls I submitted to him. He also said that he is carrying out metabolic experiments on fowls and that the chlorinated biphenyls appear substantially unchanged in the egg. I told him that Jensen has been asking for pure samples of Areolar constituents, and we came to the conclusion that Jensen must therefore have jumped the gun in blaming chlorinated biphenyls. Richardson is going to see Jensen around March 2nd and they will discuss the position and Richardson's latest results. The situation will be reported to me on Richardson's return and I will pass it on directly to you.

*D.V.N.*  
D.V.N. HARDY

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St. Louis

February 21, 1967

G. R. Buchanan - CBUCH

R. E. Keller - QUEENY

Mr. Gene Wilde  
GHILD

I talked to Dave Wood in Brussels this morning and I list below the salient features of our conversation:

1. He has 90% of the information asked for in my letter of February 10 and will have the rest obtained in the next day or so and will forward the bundle to me. It should arrive within a week.
2. His customers in Europe are seemingly less concerned than they were, especially since there has been no particular government activity and no increase in the newspaper articles. The customers would like some reassurance on the toxicity of Aroclor (I explained to Dave that there just was no information available on the action of nanograms of Aroclor in the human body over a lifetime). There is no toxicological work going on at present in Sweden and it appears there is some likelihood that it will not be able to obtain financing and might not be done. Everybody over there is 100% convinced that what Jenssen and Widmark found was Aroclor.
3. There is no necessity at present for anyone from St. Louis to contact the Swedish people. In fact, it would be unwise at present.

I am to get in touch with Mr. Wood after I receive the bundle of information he is sending me. Unless something unusual happens in the United States, I would be of the opinion that we should do no further action until we have time to evaluate this information.

R. Emmet Kelly, M. D.

RER/in

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INSTITUTE OF ANALYTICAL CHEMISTRY  
UNIVERSITY OF STOCKHOLM  
Regeringsgatan 50, Stockholm 50, Sweden

Stockholm, February 27, 1967

Mr Gene C. Wilde  
Plasticizer Sales Dept.  
Monsanto Co  
800 Lindbergh Bld  
St Louis, Missouri 63166, USA

Dear Mr Wilde,

Thank you for your letter of January 24, which was on my desk when I returned from a lecture trip to Germany. During this trip I gave a lecture at Bayer AG, Leverkusen, a company manufacturing polychlorinated biphenyls under the trade name of Clophen A 50 and A 30. During the intense discussion which followed my lecture there were no objections to our analytical findings except for the possibility of one of the PCB isomers to be formed at the decomposition of Lindane; over three chloro benzene. Although we do not have a scientific proof against this assumption made by an application chemist of Bayer -- I think the reaction is very unlikely and only responsible for one of the PCB isomers; -- The chromatogram added to this letter demonstrates the increase of the higher chlorinated PCB's through a food chain and the decrease of the lower ones; this is against the "lindane-theory". Remark also the non-presence of PCB in a non-aquatic animal.

At present we are discussing the plans for the toxicological investigations to be done in collaboration with prof. Bo Holmstedt, head of the Toxicological Dept. of the Carolin Institute. However, it is my firm impression that the toxicological work to be done is of such a great extent that it has to be divided between more toxicological laboratories. Moreover, more analytical work has to be done to aid the toxicological work.

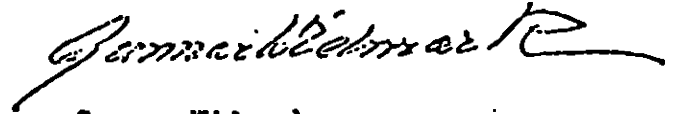
During my visit to Germany your Swedish representant, Rising and Strand Co (Mr O. Palm) has been in contact with Mr Sören Jensen of this institute. At their discussion Mr Palm was given a manuscript of a lecture which Mr Jensen recently gave for the board of the Swedish Committee of Natural Resources. A copy of this lecture has been sent to Monsanto. It has to be

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underlined that, according to the agreement between these two gentlemen,  
this manuscript must only be in use inside Monsanto. Please inform your  
colleagues of Monsanto of this limitation.

Sincerely Yours



Gunnar Widmark

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Fig. 7.

Residue analysis of body fat.

Gas chromatograms demonstrating

ecological potentiation in

nature. a) Elk

b) Sea eagle

c) Pike (mixture of  
100 individuals)

d) Salmon, juv.

