WORLD HEALTH ORGANIZATION
Regional Office for Europe

ORGANISATION MONDIALE DE LA SANT
Bureau régional de l'Europe

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Our reference
Notre reference
См. наш номер EURO 3100(?)

23 May 1973

Your reference
Votre reference
На Ваш номер

Dear Dr Holden,

Working Group on Hazards to Health
and Ecological Effects of PCBs in the Environment
[illegible]

Reference is made to your letter of 2[illegible] May 1973.

Please find enclosed a list of experts who have been invited to the above mentioned Working Group.

The selection of PCB's in the group gives highest priority for preparation of criteria documents was made after the following appraisal:

"Polychlorinated biphenyls (PCBs) and related substances and impurities, introduced commercially four decades ago, were not generally regarded as hazardous chemicals or as potential environmental contaminants despite isolated accounts of occupationally linked illness. Serious incidents such as a case of large-scale contamination of cooking oil in Japan in 1968, which affected adversely more than 1000 persons, and a large-scale mortality of fish-eating birds in Great Britain in 1969 led to a rapid increase in the number of studies on the distribution and effects of PCBs. The major uses are for capacitors, plasticisers, carbonless duplicating paper, transformer fluids, hydraulic fluids and lubricants, and heat-transfer fluids. A number of these uses contribute to the leakage of substantial amounts of these highly persistent chemicals into the environment. Both invertebrates and fish accumulate PCBs to levels 10^3 - 10^5 times higher than those in the ambient water. There is further concentration within vertebrate food chains, so that levels in top predators (birds, sharks, seals, etc.) may be 10^7 - 10^8 times higher than those in the ambient water. Fish populations with mean levels of one part per million (ppm) of PCBs have been reported. Much higher levels (1[illegible]-800 ppm) have been reported in fish from highly contaminated inland waters.

Greatest exposure of the general [illegible] population to PCBs appears to be from ingestion of fish. An intake of the order of 5-20 ug/day is likely for the average adult person, but this may [illegible] greatly according to location and dietary preference. Mean levels of PCBs recorded in human fat are of the order of 1[illegible] ppm, and all sections of the population are exposed.

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Mr. A. V. [illegible]
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Faskally, Pitlochry, Perthshire PH16 [illegible]
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Toxicological studies of PCBs are complicated by the fact that each product consists of many isomers with potentially different toxicities. Residues of PCBs have been repeatedly demonstrated in human and adipose tissue but work on their uptake, retention, and excretion is incomplete. Few studies on metabolism have been carried out and metabolites have not as yet been identified although ring-hydroxylated derivates have been reported in one study. PCBs are accumulated slowly by vertebrates including man. PCB levels in some of the more contaminated eco-systems exceed those required for demonstration of an adverse effect on reproduction in laboratory animals. Adverse effects on wild populations of crustaceans, fish and birds appear likely, but are difficult to demonstrate in the presence of other pollutants."

The work of the World Health Organization in this field is naturally coordinate with that of other UN agencies like FAO and UNESCO and with other international organizations like OECD, all of which will be invited to participate in the working group on PCBs. In connexion with specific marine pollution problems close contact is also maintained with ICES.

I hope the information given above will be sufficient to allow you to decide and obtain approval for your participation in the meeting in Brussels. As evident from the invitation, I do feel that your experience and contribution would be valuable for the work of the group. I hope to see you in Brussels.

Yours sincerely,

for Arne Jernelöv
Regional Officer for Promotion
of Environmental Health

... Encl. as mentioned

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