On February 24, the San Francisco Chronicle carried a major feature about "a menancing new pollutant" found in the San Francisco Bay area. The article was based on marine life research carried out by Dr. Robert Risebrough of the University of California. It stated that residues of polychlorinated biphenyl (PCB) were killing certain marine birds and posed a long-term threat to humans.

Monsanto manufactures polychlorinated biphenyls and markets these under our Aroclor trade name. We, therefore, would like to present some additional facts.

The work done by Dr. Risebrough dates back to earlier research by other scientists who in the course of analyzing for pesticide residues in wildlife, soil and water encountered certain unknown or interfering substances at parts per billion levels.

Several years ago, two Swedish scientists at Stockholm University's Institution of Analytical Chemistry, Professor Gunnar Widmark and Soren Jensen, reported identification of the other substances which were appearing during analysis of chlorinated pesticide residues as polychlorinated biphenyls or PCB. Since PCB's are not pesticides and are not deliberately distributed throughout our environment it was postulated that the source must be the industrial wastes of PCB users.

Dr. Risebrough's more recent work reports the identification of PCB, along with DDT and DDE pesticides, in the tissues of birds and fish on the West Coast.

A principal market for PCB is in electrical applications where they are used as insulating fluids for transformers and capacitors. In this use, the chemical is completely sealed in metal containers. Another market is for heat transfer applications where the PCB fluid functions in a closed system. PCB's are also used in several applications wherein the chemical is incorporated into polymers as an integral part of the solid material.

To our knowledge, polychlorinated biphenyls are not sprayed or dusted on crops, woodlands or any other areas, as are pesticides. It is, therefore, extremely difficult to conceive how commercially produced and industrially used PCB can show up in wildlife as DDT and other pesticides appear to do. This raises a question as to whether the substances reported in the Swedish work, and now in California, are in fact PCB's or whether they are materials which were not considered or which might have been derived by metabolism of other materials in the marine environment.

The polychlorinated biphenyls are not "highly toxic" chemicals. Compared to the thousands of industrial chemicals and home products, PCB's are not hazardous unless they are mishandled or misused. During more than thirty years of U.S. production and use, cases of any toxic effect have been extremely rare -- and then only when the simple precautions recommended for use were not followed.

In order to resolve questions which have been raised, Monsanto is engaged in a research program to confirm the identity of the compounds reported to be PCB by the Swedish and California scientists by precise analysis of environmental samples of water, air, soil and wildlife and by metabolic studies under laboratory conditions. Also underway are studies to determine the biological effects of deliberate administration of PCB's and chlorinated pesticides to several species of fish, terrestrial and aquatic birds and to several mammalian species. Special emphasis is being directed toward endocrinological effects, mineral metabolism and general reproduction physiology.

Monsanto cooperates, on a regular basis, with federal, state and university laboratories in their analyses of chlorinated hydrocarbon residues and will continue to exercise the highest degree of control in its manufacturing, shipping and storage of PCB. In the functional fluids market, we have carried out a program for several years for the reclamation of used PCB's to avoid disposal of these valuable materials.

The source of the marine life residue identified as PCB is not definitely established. It will take extensive research, on a worldwide basis, to confirm or deny the initial scientific conclusions. The results of our investigations will be released when definitive conclusions can be reached.

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