Inquiry from: David Perlman, a science writer with the San Francisco Chronicle .. (415) 421-1111

Perlman is doing science story on possible pollution of marine wildlife by a chemical element identified as being polychlorinated biphenyls. His story is based on recent studies done by R. W. Risebrough at the University of California at Berkley. (He may have access to other studies, including the original work done in Sweden.)

Risebrough's work was based on chromatographic analysis of animal tissues, following up original work done by others to trace DDT residues. An unidentified element in the analysis is now believed to be polychlorinated biphenyls. Risebrough used our Aroclor 1262 in his tests. His work was presented at a toxicity conference at the University of Rochester in June of 1968; printed in the U.K. magazine Nature on Dec. 14, 1968, and referred to in a Scientific American article in February, 1969.

Perlman understands, and emphasizes, there is no intent to infer that the detected polychlorinated biphenyls are our stuff. But he will mention that the researcher used Aroclor in his tests. He had several questions. This proposed answer was worked out with Jack Garrett in Elmer Wheeler's group -- and checked with Bob Keller and Paul Benignus.

Q. Is Monsanto aware of this problem?

A. Yes, we are aware of this and other studies.

Q. Who else manufactures polychlorinated biphenyls?

A. There are several other producers around the world -- in Germany, Japan, France and Italy. Monsanto is the only U.S. producer.

MONS 058165

Q. How are your Aroclors used?

A. Primarily in two areas -- 1) as dielectric fluids, heat-transfer fluids and hydraulic fluids and 2) as a modifier for corrosion-resistant paints and industrial adhesives and as an extender in elastomers and waxes.

Q. Is Monsanto doing any work on this matter?

A. We are investigating the reports and conducting our own ~~extensive~~ studies. However, our work is not far enough along for ~~any~~ firm conclusions. ~~Some aspects of the matter are puzzling. If the material detected is polychlorinated biphenyls, we are puzzled about the origin of the material found in animal tissue. We can understand the analytic appearance of substances or their metabolites, in exceedingly small amounts below any harmful level, when the substances have been widely used over broad land surfaces -- such as agricultural products. But commercially produced polychlorinated biphenyls are not used in this fashion.~~ We find it difficult to see how detectable quantities of commercial product can appear in the marine environment. One possible answer is that the substance under question occurs from metabolism of natural materials or other unidentified substances. This is one of the points we are investigating.