TRANSCRIPT OF ELMER WHEELER'S COMMENTS ON "SOUNDINGS"

Broadcast over Canadian Broadcasting Company
Week of January 4, 1970

Moderator: "There is the problem - multiple problems really - expressed as clearly as our best scientists can state them, but what about the manufacturers? Are they aware of the PCB problem and what are they doing?"

"Well, the major manufacturer in North America, and probably the largest in the world, is the Monsanto Company in St.Louis, Missouri. The Canadian Monsanto people put me in touch by phone with Mr. Elmer Wheeler, Manager of Environmental Health in the Medical Department at Monsanto in the U.S."(Phone call received by Wheeler on 12-8-69)

Wheeler: "Our program consists of a number of steps. One is to cooperate with the many people in the Universities and the government agencies that are studying the problem of the interference of PCB in the pesticide residue analysis. This means corresponding with these people, providing them with samples of our material and in the cases that it appears that it will be helpful to ourselves as well as the people that are doing the research, personal visits to compare the analytical techniques as we understand them with what techniques they may be using. In addition, we are working with all of the users of our materials to insure that they are aware that the PCB's have been causing concern of a lot of people because of what appears to be their presence with DDT and persistent pesticide residues, to insure that the users will not permit the escape of these materials into the environment."

Moderator: "Not permit the escape of these materials into the environment. Let me interject here with a remark from Dr. Ernest Hays, Chairman of the Chemistry Department at St. Mary's University. Dr. Hays worked in private industry for some years. He is vitally interested in all forms of pollution."

Hays: "If PCB is used as a heat exchange medium, for example in reactors, you are always going to lose it by leakage -- you can't avoid it. So if you use it, you are going to lose it and if you lose it, it ends up in your rivers and oceans and then it is so dilute I don't think that you can ever recover it no matter how good your technique."

Wheeler: "Thirdly, we have an extensive toxicity research program underway to convince ourselves and the scientific community that these materials, if they are being found, are not a serious toxicity problem."

Moderator: "You say if they are being found, do you think there is any doubt about that fear?"

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Wheeler: "Yes, and I think our doubts are shared by many of the scientists that are involved in the studies that are going on independent of any effort on Monsanto's part to encourage such research. There are papers in preparation, for example to be published, which still raise many questions as to the positive identification of these materials as they have been reported in the literature. The gas chromatography techniques and the treatment of the residue samples to make it possible to do these samples in the equipment available still leaves questions in the minds of many scientists as to whether the materials that have been reported in all instances are PCB's or some other organic chlorine compound."

Moderator: "Your statement that I have in front of me here, however, says some qualified scientists using the latest laboratory equipment have correctly identified the substances as being PCB's."

Wheeler: "That's right, but what I am saying I think, Mr. Copeland, is that not all of the scientists that have published the results of their research have correctly identified the interfering substances as PCB's. I am not the analytical chemist that is as knowledgeable about this as some of our other people, but as I mentioned earlier, I have copies of reports done by university people that indicate and point out the lack of positive identification that has been reported in some cases. In other words, there are many questions yet to be answered as to whether the presence is as widespread as one might be led to believe. This is not to say that there have not been instances where identification has not been positive."

Moderator: "So Monsanto agrees that PCB has been found in bird and animal tissues as stated in scientific reports from Sweden, Holland, the U.K., the United States and Canada. These reports also point out that while PCB is not particularly toxic to man or land mammals, it is toxic to marine creatures."

Wheeler: "One does not, as a rule, take an industrial chemical and expose people to it because it has not been the scheme of things to do so in the past. What we will be doing 20 years from now I haven't the foggiest idea. But, one does the best with what tools one has and this, in the case of toxicity, is to do work with the types of animals that have been studied over the many, many years and where there have been extrapolations made, then as the degree of hazard or degree of toxicity in terms of possible human exposure. Now we have not undertaken, up to this point, difinitive work on birds or on fish or marine environment creatures. We know from the number of samples that we have provided to the various governmental and university

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Wheeler: laboratories here and abroad that there is more work going on than we could possibly hope to undertake ourselves through our own facilities or through consulting facilities. We fully expect within the next 6 months that there will be a plethora of reports that will provide data for everybody that we couldn't possibly have hoped to obtain ourselves."

Moderator: "Would you agree that there is some kind of reasonable doubt about the safety of PCB in our environment similar to DDT?"

Wheeler: "Similar to DDT?"

Moderator: "Yes."

Wheeler: "I don't know that I can agree to the reasonable doubt. I think that the PCB's are implicated in a problem which concerns other chlorinated hydrocarbon materials. I am not even sure that the other materials should be indicted as much as they have been, frankly, and this may be contrary to your understanding and certainly the political impression of DDT, etc. such that anybody who says today there hasn't been an effect from DDT may sound a little stupid, but there are still many scientists who do not agree that the chlorinated pesticides have been the threat to mankind, the animals or beasts, or fish as one might be led to believe. So with that doubt, I have to say I believe that there has got to be much more learned about the presence of PCB and the possible effects of the PCB's before one can make any kind of a statement as to whether it is a problem or not."

Moderator: "But, Sir, if we are still learning, should we be using them?"

Wheeler: "I would think so, yes, on the basis that up to the moment what we seem to have is principally negative information, but God help us if we ever have to get to the point where all the negatives have to be proven by some type of experiment or development that, at the moment, appears to be impossible to do. There is a threat to the whole chemical industry and to mankind, if it will, based on what some people seem to believe need to be positive assurance of safety and I don't think that the world is ever going to be able to prove that everything we use is absolutely safe. I think then, instead, we have to rely on judgment by the best scientists in the world and, if there are risks,

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Wheeler: then the risks have to be evaluated. I would hasten to add, I don't think that there is any risk whatsoever in terms of any injury to humans in the case of PCB's. Whether or not there is a possibility of an effect on some species of wildlife remains to be proven.

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