FOR MONSANTO CORP.

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P.C.B. DISCUSSION

GLEN PAULSON: Good evening. This is Glen Paulson with another perspective on the Environment. A few weeks ago now I mentioned on this program the recent action by the Federal Food and Drug Administration concerning potention source of food contaminates called poly chlorinated befenols or PCB's for short. This food contanimate has cropped up in the news from time to time over the last few years now. It's a chemical that's much like DDT, a chlorinated hydrocarbon pesticide that everyone I'm sure is familiar with. Just as DDT is, so the poly chlorinated byfenols are toxic to living things. They are toxic both in the short run and even more troubling in a long term sense. Also they're quite persistent; that is they do not easily decay when they escape into the environment and their patterns of use indicates that from time to time it has been very likely that food stuffs have been contaminated by them for other reasons. I also mentioned at that time that Congressman William Ryan from Manhattan had been very prominent over the last several years now in trying to bring to public attention the potential hazards of PCB's and also attempting to force the Federal Government into some sort of recognition of the potential seriousness of this environmental and public health hazard.

In that context I'm very pleased to have as my guest tonight Congressman Ryan, who I've asked to join me to discuss bothe current action by the FDA that are dealing with at least a portion of the PCB contamination problem and also the history of his involvement with it, the way that it has now reached the stage of Federal action by the FDA, if not by anybody else, and what conclusions he draws on the general problem of toxic chemicals, food contaminates and other environmental hazards. Congressman Ryan, I'm pleased to have you with me. I'd like to ask you first, what's your opinion of the adequacy or lack of adequacy of the recent FDA proposed regulations?

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CONGRESSMAN RYAN: It's a pleasure to be with you, Dr. Paulson, on this program, and knowing of your own deep involvement with environmental questions and issues.

The FDA finally did move to pose a partial ban on PCB's. This came about as a result of Federal pressure and the fact that there was wide spread contamination of poultry, chickens and turkeys which forced the public attention and that could not be ignored. What the FDA did was to ban the use of PCB in food processing plants and in food packaging materials. That's a partial ban. In my opinion it does go far enough because it only covers one area in which this chemical has been known to seep into the environment. I have advocated the complete and total ban and distribution of PCB's in interstate commerce in this country.

PAULSON: Let me interrupt to make one point. You mentioned that the ban, the FDA ban, deals with the use of PCB's in food processing plants and in pickaging materials, such as plastics I know have PCB's added. I should mention, I didn't earlier, that PCB's are really not used as a pesticide. They don't find their way into foods because of farmers spraying them on the fields. It's a much more indirect route. PCB's are not used in agriculture in any significent way as an insect killing agent. I wonder if you could discuss exactly where PCB's are used? Who it is that makes them, how they are used and the patterns of use that are not dealt with by the FDA ban?

RYAN: At this time PCB's are not used in agriculture although prior to the summer of 1970 they were advertised by the manufacturer and proposed as an extendor(?) in pesticides. And the Department of Agriculture under pressure at that time did ban their use in pesticides. But no government agency responded at all until I requested that there be governmental action to cope with this problem. PCB's are chlorinated byfenols manufactured in the form a fluid by Monsanto Chemical Corporation and Monsanto has a monoply in this country on the manufacture of this chemical, so there's no competition and therefore it's a chemical which could be easily controlled in terms of distribution and it's use since it's not widely manufactured by other companies.

Monsanto originally made this product for use in transformers and to keep as a heat resistant fluid to be used in transformers and heat transfer agents and so forth. But at some point discovered that it had a quality which could be used as a plasticizer or as a life extendive for instance in pesticides. So it advertised within the industry that PCB's could be used as a plasticizer; rain coats, wearing apparel as a (unclear) to used in the manufacture

of carbon paper, food packaging, plastics, a great variety of things, which made possible then for them to seep into the environment in a number of ways.

PAULSON: Let me interrupt for one second to point out that anyone in the audience that knows about plastics knows that they are polymers; that is poly many things linked together. Certain other substances are added as plasticizers or additives to plastics which can make the final plastic more flexible or more brittle and add different properties. PCB's fall in this category, but unlike the basic ingredient of the plastic, the PCB's are not hooked into the structure of the plastics. It's more like they're dissolved in the plastic. Their chemical structure is not changed and just as they were dissolved in the plastics in the first place, they can in fact evaporate from the plastic and this in fact is the basic source of the contamination. In the case of a food wrapping plastic, for example, if there were PCB's in it, just the contact with the meat would allow the transfer into the meat. If the PCB's are present in a plastic that's used in a small case or a small storage area, the PCB's can evaporate and unfortunately, because of their chemical properties, PCB's find that if they do evaporate into the air, there are certain pressures, chemical pressures, if you will, on the PCB's to actually go into fatty tissue and into food stuffs in that sense. Thus when they are released into the environment they're not uniformly spread around but they tend to concentrate back into living things, much in the way that DDT and other pesticides do.

RYAN: ...and they appear in a variety of products and find their way into food stuffs in a surprising number of ways. For instance in the course of our investigation of PCB's and plasticity and it's availibilite is in the environment, we discovered that PCB's have been used in a paint which was applied to the inside of silos on a farm in Ohio and in Wisconsin and the silos were stored with corn or grain and was used for feed for cattle. The cattle ate the corn that was stored in the silos and the result was that the milk became contaminated with PCB's and in several instances was taken off the market by the local state agricultural agencies. That's one example of how PCB's found their way into food chains. This was ...

PAULSON: This was some time ago, if I'm not mistaken.

RYAN: This was several years ago and again, although they were notified and on notice of this condition the Federal Food and Drug Administration took no action or attempt to control it. Again, in the Fall of 1970, in upper New York State, Rockland County, a number of chickens which had been purchased by the Campbell Food Company for the manufacture of soups were discovered to be contaminated with PCB's.

The result was that some hundred and forty thousand chickens were buried and the New York State Department of Markets and Agriculture even imposed a temporary ban on the transportation of chickens in that area for several weeks in order to find out how wide spread this contamination was. Here again the Federal government took no action and made no statement releasing this information. We had to learn about it from sources which were outside the government which led to our case.

PAULSON: Now during this time, this is all over really the last several years now, four, five years or so, what... I mean can you give us an idea of what you were doing? You've already pointed out that the Federal government did not see fit to make this information readily available but nevertheless you found out about it. I know that you in your office were moving aggressively to try to get something done about this, but can you give us in the last few minutes we have some idea what your efforts were and how successful you were able to move the Federal government.

RYAN: Yes. Prior to this instance of food contamination which I related, we became very much concerned about this chemical and about the potential hazard. We went to industry sources that was being widely advertised by Monsanto for its various uses and we knew through scientific reasons of scientists who had studied the effect of PCB's on fish and wildlife that it was very toxic and could be very potentially harmful. Therefore in the Spring of 1970, two years ago, I called upon Monsanto to see the manufacture of PCB's and I called upon them to release production figures, sales figures, so that we would be able to estimate and evaluate the extent of which PCB's had been produced into the environment. In the meantime, I called upon all agencies of the Federal government which had any jurisdiction over the problem to take immediate action, such as the Department of Agriculture, which did react later on, and ban PCB's as an extendive in pesticides, and I called upon the Department of the Interior, to it's Fish and Wildlife Division to take action. I called upon the FDA to ban the use of PCB's at food tolerance levels and I called upon the present Environmental Commission at that time before the EPA was created to conduct a thorough research study and report it's findings of the extent of PCB's in the environment and what the threat was. I found that government agencies were very unresponsive. At first Monsanto Corporation was completely uncooperative, but we kept the pressures on them. We kept exposing the danger as we saw it and then as these incidents of food contamination developed, although an effort was made within the Government and on the part of Monsanto to conceal the event, nevertheless we were able to force them out into the open, bring it to the public's attention, through the press and this in turn generated more pressure on the Federal agencies.

PAULSON: I think it's fair to say that without your beginning efforts in this that the sensitivity of the press to these more recent food contamination events would have been much, much less than what it is. Essentially you sort of started the ball rolling and made the issue respectable, but in the last minute or two available to us I'd like you to give an assesment, now you said that it was really fully two years ago that you requested a series of steps by Monsanto and by various Federal agencies to do various things. We now recently see two years later that the FDA has done two of these things that you asked. But how about the other requests? Are there still really outstanding portions of your original requests of two years ago that have not been dealt with?

RYAN: Yes. I think that the principal one is the ban on PCB's. I'm of the opinion that it should be banned completely, because there's no way really to prevent them from escaping into the environment. Under pressure the Monsanto Corporation finally said, after a year and a half of correspondence back and forth, visits to my office, pressure we put on them, that they would cease manufacturing PCB's except one used in closed circuit conditions and conditions where they claimed that it was possible to completely control the products from the time it entered the machinery that it was used in until it was spent and taken back, they agreed to take it back themselves, the spent material and dispose of it in a furnace they built especially to deal with this after it was brought to public attention. But in view of the fact that the contamination in North Carolina and Georgia came about from the leaking of this fluid out of the heat transfer units in the processing plants, I became convinced that we would have to ban it completely. Because there was no way to guarantee that once the chemical was out of the hands of the manufacturer and into the hands of the user that it wouldn't find its way one way or another out where it could cause public contamination.

PAULSON: I'm going to have to break into this absolutely fascinating topic to me and I'm sure to the audience as well, but our time is up. I guess the general conclusion we can draw is that once again, as in so many environmental problems that I discuss every week on this program, we see a step, in this case by a Federal agency which is not adequate. There are steps left undone. We see a step by the manufacturer of the toxic chemical which as you just pointed out which still leaves many problems unsolved. This is unfortunately all too common a condition in environmental problems. I would like to thank you Congressman Ryan for being my guest today.

This has been Glen Paulson with another perspective on the environment. Good night.