D. R. Bishop - B1ND

Aug. 13, 1975

Mr. K. J. Easley - 1920
Mr. W. B. Papageorge - B2SK
Dr. Cumming Paton - B2SC
Mr. J. L. Wikoff - B2SL
Mr. W. W. Withers - B2SA

Messrs. H. S. Bergen - B2SL
T. H. Bottini - B2CA
W. R. Corey - B2SA
R. G. Potter - B3SA

BCC: Mr. G. D. Ingenthron - C2SA
Mr. J. E. McKee - C2SA
Mr. P. R. Wilkins - 1650

The attached draft (number two) of our preparedness Q&A information on PCBs reflects the comments of Messrs. Bergen, Corey and Papageorge. Comments from the law department are still welcome and indeed needed by Thursday, Aug. 14.

It now appears that EPA Administrator Russell Train will hold his PCB/Toxic Substances Press Conference in Washington, D.C., on Friday, Aug. 15.

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Reacting to pressure from the Chicago regional administrator of the EPA and press coverage from the Great Lakes area, both indicating that PCB contamination is widespread; that control of PCBs is lacking; and that the problem is not confined to the Great Lakes; Russell Train, Federal EPA Administrator, is planning a press conference sometime during the second week of August, probably in Washington, D.C.

At that time he is expected to support the continued use of PCBs in capacitors and transformers but will claim that PCBs are not being adequately controlled, citing the Lakes problem and additional evidence which indicates that PCB levels are rising in the Hudson River, Chesapeake Bay and in Orange County, Calif. He will further exploit this situation to gain public and news media support for the Toxic Substances Control Act which he will claim the Agency desperately needs to control imports and improper use of PCBs.

The national news media and trade press will be present in force and can be expected to seek out Monsanto for comments and reaction. The attached questions are likely to be directed to Monsanto following the press conference. Some of these questions are deliberately tough, even hostile, but that is the way an environmentally oriented newsman or investigative reporter will operate. Our first reaction might well be to eliminate these tough/hostile questions but that won't make them go away so I recommend that we try to structure answers for all of them in order to be properly prepared.

Q1. Would you describe Monsanto's current sales policy for PCBs?

A1. Monsanto has voluntarily restricted the sales of PCBs since the early 1970s to the electrical industry for use as a dielectric (heat transfer) fluid in sealed electrical equipment such as transformers and capacitors - where no acceptable substitutes exist. This program has been reviewed by a Federal Interdepartment Task Force (consisting of the Office of Science and Technology, Council on Environmental Quality, Department of Agriculture, Department of Commerce, the EPA, HEW and the Department of the Interior). The Task Force report, which is a matter of public record, supports our current program.

Q2. How much PCBs does Monsanto produce annually? Where are they manufactured? Who are your customers (by name)?

A2. Under the current program, Monsanto produces approximately 40 million pounds of PCBs per year. PCBs are manufactured at the W. G. Krummrich Plant, in Sauget, Ill. (across the river from St. Louis). We have furnished our PCB customer list to the Federal EPA in Washington, D.C. We would suggest that you contact the Agency for any information regarding PCB end users.

Q3. Monsanto has stated publicly that PCBs are not a major business for the company and that the profits generated from their sale represent less than one-half of one per cent of total Monsanto Company profits. What exactly is your dollar sales volume and profit for PCBs?

A3. We do not break out our profits by specific product but less than one-half of one per cent is fairly accurate for PCBs.

Q4. What sort of products contained PCBs prior to the implementation of your restricted sales program?

A4. 1. Fire resistant industrial hydraulic fluids.
2. Fire resistant industrial heat transfer fluids.
3. Specialty printing inks where the PCBs imparted properties that improved color and clarity in the printing process.
4. Special adhesives (improved consistency and tackiness), special paints and caulking materials (long lasting properties).
5. Plasticizers (improved stability).
6. Carbonless paper.

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Q5. It's been reported that PCBs have been found in the tissue of dead Louisiana brown pelicans, deformed seal pups, falcon eggs and various fish. As the sole U.S. producer of PCBs, what is Monsanto's reaction to this?

A5. Monsanto is most sensitive to potential harm to the environment from its products and takes great care to control their entry. It is very difficult to determine the cause of these abnormalities. As a matter of fact, we do not know of any direct human or animal deaths attributed solely to PCBs. The mere presence of PCBs in animals and fish is not in itself necessarily the cause of the problem because higher levels of PCBs have been detected in otherwise healthy wildlife species.

Q6. It's been reported that PCBs have produced carcinogenic responses in laboratory rats. There have also been occasions where the material has contaminated animal feed which was later accidentally fed to cattle and chickens. What effect has or will this have on the people who unknowingly ate the PCB infested food? Isn't there a chance they might develop cancerous tumors?

A6. In the first place, we know of only one PCB test in one animal strain that tends to suggest a possible carcinogenic relationship and our data does not confirm this test. The levels of PCBs reported in food have been low and are reported by the FDA to be decreasing. It is our understanding that food contaminated with these low levels is considered by the FDA to have no effect on humans. We are not aware of any case relating PCBs to cancer in humans.

Q7. If PCBs are a potential carcinogen, how do your PCB production employes feel about working with the material? What sort of safeguards and monitoring program do you provide for these workers to assure their protection? Have any Monsanto employes involved with the manufacture of PCBs ever developed a liver, bladder or kidney tumor?

A7. PCBs are considered by our production people to be a normal industrial chemical as contrasted to many which are actively toxic. We provide the same safeguards and monitoring program for PCBs as we do for other industrial chemicals. Exposure to the material and its vapors is very limited, protective clothing and related safety equipment is not only provided but required. Proper ventilation is also provided and standard industrial hygiene practices are followed. We perform routine maintenance and safety inspections on all the manufacturing equipment and we continually monitor and sample the workers' environment. To our knowledge, no Monsanto PCB employe has developed any kind of PCB-related cancer. Each plant employe undergoes a thorough, mandatory physical examination every year.

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Q8. What sort of safeguards does Monsanto take at the source of manufacture to prevent PCB pollution?

A8. Monsanto aggressively controls losses to the environment during manufacture. The program is one of containment, backed up by "catch basins." Current measurable losses to the environment are less than 0.001 per cent of total production and no level has been detected in the atmosphere using sampling and analytical methods currently available. In addition, we have installed a special incineration (at our Sauget, Ill., plant) that effectively destroys spent PCB material. This service is further made available to our customers to aid them in their disposal efforts.

Q9. Why has Monsanto continued to manufacture and sell PCBs, even in a restricted way, in the face of overwhelming evidence that clearly indicates this restricted program has not been effective in controlling PCB entry into the environment.

A9. (First, we would challenge the reference to our ineffective program - developed elsewhere in this document.) We continue to manufacture and sell PCBs because the electrical industry has no satisfactory alternate fluid to turn to which meets its needs for a fire resistant dielectric fluid, possessing the safety and reliability features required by current electrical codes. Furthermore, if the electrical industry were denied the use of PCBs, this could require the expenditure of some $1 billion per year in additional electrical equipment and the consumption of 68 million more barrels of oil per year to produce the increased electrical energy needed due to the use of less efficient materials.

Q10. In view of the evidence recently presented by the EPA, regarding the documented and widespread PCB contamination and the apparent lack of control, does Monsanto now plan to reconsider its position and will you voluntarily discontinue production?

A10. In our judgement, our restricted sales program provides benefits in the form of safety, reliability and energy conservation that outweigh by far any risk of potential harm to the environment. Consequently, as long as there is no acceptable, safe, proven alternate material available, we will continue to supply the electrical industry's need for this essential dielectric fluid.

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Q11. I know that PCBs are used in sealed systems in the electrical industry and that Monsanto claims there are presently no proven, effective, fire resistant alternate products available. What then would the electrical industry do if PCBs were banned? What sort of trade offs would be involved in switching to some other product?

A11. The electrical industry would be forced to use fluids which are not fire resistant, forcing up fire insurance rates and obviously compromising safety. Should a ban occur, the impact of PCB transformer unavailability would be felt primarily in terms of disruption of building construction, electrical distribution, and railroad equipment projects. Interruption of the supply of PCB capacitors would impact most heavily on the electrical supply situation, exacerbating the "energy crisis."

PCB transformers are installed in industrial, commercial and residential substation applications and on electrical railway passenger commuter cars serving major population centers. In these applications, the transformers distribute electrical power reliably without risk of fire or explosion and in compliance with specific laws and building and insurance codes. There is no available alternate for these applications. As much as $1 billion of construction projects would be seriously delayed involving schools, factories, office buildings, apartment houses and commuter-trains. Design engineers would have to develop totally new concepts. Existing equipment would have to be retrofitted or replaced. Fire vaults and sprinkler systems would have to be installed.

The PCB capacitors produced in the U.S. annually have a major effect in reducing electrical current which would otherwise have to be generated to serve industrial and public needs. A forced conversion to a non-PCB material would require the replacement of every capacitor (with one, two to four times as large) in every single mercury vapor and multi-tube fluorescent lighting fixture in the U.S. This enormous retrofitting challenge and the obvious hazards that the use of flammable materials would introduce, would bring about serious dislocations in the lighting and air conditioning industries as well.

The electrical industry trade association (EIA) in a report to the EPA dated June, 1975, stated that if PCB capacitors were not available, the increased cost of generators, transformers and other equipment required to handle the resulting

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higher system currents would amount to approximately $1 billion per year. In addition to the equipment costs, there would be important energy losses. It has been calculated that the additional fuel oil that would be required to make up the energy losses would approach 68 million barrels per year.

Q12. Monsanto has repeatedly argued that, because current usage has been restricted to "closed systems," a ban on manufacture would do nothing to correct the environmental contamination. I would like to know how you reconcile this position in the face of documented scientific evidence that repeatedly confirms the presence of increasing levels of PCBs in the Great Lakes, the Hudson River and other bodies of water?

A12. We simply cannot accept the statement that PCB contamination is increasing and, indeed, other government reports show a reduction. Remember that when scientific investigation first indicated that PCBs presented a potential hazard in the environment back in 1971, we not only restricted sales voluntarily to the electrical industry for use in sealed systems, but also reduced the annual production by about 50 per cent at the same time. So we submit that, given these facts, it is highly unlikely that levels can be increasing. Certain of the PCB isomers will persist in the environment for a long time (10 years or longer). What we think we are seeing is a growing number of researchers and independent laboratories, equipped with improved analytical tools and armed with advance knowledge of what to look for, merely confirming the persistence of this material which, until the early 1970s, was being indiscriminately introduced into the environment in large quantities on a routine basis.

Q13. Monsanto may be responsible and conscientious in trying to control PCBs, but what assurance is there that your customers and, in turn their customers, share your concern and are acting in a responsible way? Does any law currently exist that requires your customers to control losses to the environment, either during use or disposal?

A13. Our customers have developed, through the American Standards Institute, guidelines for the proper handling and disposal of PCBs. They have, in turn, shared these guidelines with their customers. Also, through their trade associations, they have an active program to emphasize the need for control of PCBs. Currently there is no law specifically covering PCBs. However, there are numerous state and federal statutes currently in force pertaining to air and water pollution that empower these agencies to regulate effluent discharge.

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Q14. I understand that PCBs are used in the small capacitors found in virtually every fluorescent light fixture used in the United States. These capacitors have a relatively short life. How do you know what happens to them when they wear out and are discarded?

A14. First, allow me to correct you. While premature failures do occur, capacitors are considered long-lived products. The life expectancy of capacitors exceeds 10 years for lighting applications and more than 20 years in electric utility transmission applications. We recommend the use of properly managed and authorized environmental land-fills to safely dispose of worn out capacitors. These are specially designed, constructed and monitored land-fills not to be confused with common garbage dumps. We recognize that many communities do not yet have the capability to construct and operate an approved environmental land-fill. Since the possibility still exists that in these areas, the PCBs in discarded capacitors could eventually find their way into bodies of water, we began, in 1971, production of a modified PCB material, containing fewer of the persistent isomers. Further, the PCBs used in this application are abosrbed onto solid particles in the capacitors and do not easily leach out. This modified product has been universally accepted by the capacitor industry and has greatly reduced the pollution potential from this source.

Q15. Monsanto is referred to as the "sole" U.S. producer. Is this really true? I've been told almost anyone can make PCBs, literally in a bathtub. Have you heard of any "bootleg" production?

A15. We have heard on occasion that others have produced PCBs but this production appears to be sporadic and is difficult if not impossible to trace.

Q16. What about imports? I'm told PCBs are regularly imported, with no restrictions, and they are used in many open product applications. Is this true?

A16. Yes. The EPA has informed us that limited imports of PCBs do enter the country. There are no restrictions on the use of these imported PCBs as far as product application is concerned.

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Q17. If there is no law to assure proper use and disposal by your customers and their customers, no legal means to regulate or ban "bathtub operators" and no control or restrictions on imported material, don't you think some form of legislation is necessary?

A17. (See answer to Question 18).

Q18. The EPA cites the current PCB problem as an example of why the Agency desperately needs the Toxic Substances Control Act. What is Monsanto's position regarding this legislation?

A18. Monsanto Company's corporate policy supports government actions whenever such actions are clearly in the public's best interest and are needed to protect human health and the environment. We recognize that there are certain gaps in existing regulatory controls that fail to provide adequate safeguards in some areas. Consequently we do not oppose the enactment of reasonable toxic substances legislation. At the same time, we object emphatically to any prospective legislation that would impose broad, sweeping controls that overlap and duplicate existing laws. A number of bills (in both the House and Senate) have been proposed and are currently under consideration. Of these, a reasonable bill which would protect human health and the environment is represented by H.R. 5356 which was passed by the House in the 93rd Congress. Monsanto supports the passage of H.R. 5356.

Q19. A recent New York Times article claimed that Canada and Britain have already banned PCBs. Is this true?

A19. No, it is not true. Monsanto sells PCBs to the electrical industries in both Canada and Great Britain in exactly the same restricted way they are sold in the U.S.

Q20. I've heard that a black market has developed in used PCBs. Do you have any knowledge of this?

A20. We have no direct knowledge. However, the EPA has indicated the probable existence of such a black market and we understand the Agency is investigating this situation at the present time.

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Q21. A recent New York Times article cited an incident that occurred in Japan in 1968 in which 16 deaths were attributed to PCB poisoning. Are you familiar with this incident?

A21. Yes...and according to the U.S. Food and Drug Administration, which investigated the so-called "Yoshu Incident," there were no deaths attributed to this incident. The FDA reported that in 1968, about 1,000 people, who had consumed rice oil contaminated with PCBs as a result of an unfortunate industrial accident, exhibited symptoms of dizzyness, nausea, loss of apetite, weakness and dermatological side effects. Babies, whose mothers had been exposed to the contaminated rice oil, were born with darkened skin but, in every case, this condition cleared within three months. (If you would like more information on the "Yoshu Incident," I would suggest you contact Dr. Herbert Bloomenthal, Toxicologist, Bureau of Foods, U.S. Food and Drug Administration, Washington, D.C.)

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