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Dept. of Medicine & Environmental Health [redacted]-8805

DATE December 30, 1980

SUBJECT General Electric PCB Paper

FROM J. H. Spraul

TO George Roush

I think this is an excellent paper for the purpose that Dr. Casey describes, i.e., for internal management consumption. For external publishing, more technical detail in certain areas would be desirable, particularly on page one (1) discussing the Japanese Yusho incident. The technical analysis concerning the presence of dibenzofurans should be specifically cited.

Jim Spraul's reference to Higuchi's book on PCB Poisoning and Pollution, particularly his reference to page 65, is a misquote. That particular reference stated that the specific materials that had been quoted in the test in that paragraph had been carefully examined to rule out contamination by chlorinated dibenzofurans or benzodioxins. It did not refer to the actual samples of Yusho Rice Oil that caused the outbreak in Japan.

I think that the table on page 12 should be looked at very carefully and conclusions drawn. Specifically, the three studies alleging to show liver cancers in animals, and in fact the only three studies that purport to show cancer as a result of PCB's, all have the same name on them, our friend Renate Kimbrough. I think that a rigid analysis of those three studies as published should be performed by the authors of this paper. This effort should show that these studies are overdrawn as to conclusions. Specifically, hepatomas of mice should be addressed as not representing carinomas but in fact are a benign process.

Furthermore, this study does not address at all the question of PCB contamination of mother's milk and the effects of this or lack of them on the new born. This is a natural area of inquiry as to the persistent effects and the bioconcentration effect of PCB's. The correlation of fat sample levels in humans to blood levels and mother's milk levels should also be addressed, as this has been written about in the literature.

Except for these three minor points which I feel would add to the paper, I feel it's an excellently condensed piece of work and either in present or modified form should be submitted for publication in the referenced press.

Don

Donald L. Coleman, M.D.

/ab

IN-1088 (REV. 2/78)

MONS 001529

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Dept. of Medicine & Environmental Health J. H. Spraul, M.D. -C2WP-8807

DATE December 23, 1980 cc D. L. Coleman, M.D.

SUBJECT General Electric PCB Paper

REFERENCE

TO George Roush, Jr., M.D.

I think this is an excellent article. It seems to have the qualities of a graduate school thesis. I feel it would be good to encourage rapid publication of this paper for several reasons, including the legal implications and the current controversies in science. It would clarify the issue for some physicians who are trying to deal with questionable medical problems related to this subject.

I have no serious misgivings about any section of the paper. There were merely a few editorial and typographical type of changes required.

Originally I had some concerns about the refuting of the Yusho studies on the basis of the dibenzofurans. This statement I make particularly in view of the dismissal of this concept in articles such as the book edited by Higuchi on PCB Poisoning and Pollution, which is published by Academic Press in which they state on Page 65 that the "contamination with dibenzofurans or benzodioxins has been ruled out by careful gas chromatographic examination". The refutation later in the paper, I think, covers this issue adequately, but does not address the fact specifically that some have said "yes" and others have said "no".

Overall, the paper is an excellent presentation of the history, uses, chemical structure, and health effects of PCB's. The extensive clinical studies of General Electric make an excellent case for confirming the lack of health hazards associated with this material.

Particularly, with the likelihood of small studies scattered in various locations that might come out in the future and might indicate an excess of one condition or another without a good, solid statistical base, the material in this particular paper ought to be widely disseminated as soon as possible.

Jim

James H. Spraul, M.D.

/ab

MONS 001530

IN-10M (REV. 2/78)

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THOMAS R. CASEY, M. D.
VICE PRESIDENT AND COMPANY MEDICAL DIRECTOR

December 15, 1980

George Roush, Jr., M. D.
Medical Director
Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, MO 63166

Dear George:

First of all, thanks for agreeing to review and comment on the enclosed paper, "Human Health Effects of Electrical Grade PCBs". The document has had several internal reviews in GE and after a while, you feel like you're drinking your own bath water. That is why we have asked a few who are knowledgeable about PCBs to comment on the accuracy and content of the paper.

As for background, General Electric is frequently called upon to act or comment responsibly in PCB situations and, therefore, we have a need to inform our people and to establish a public posture on the question of human health effects. The authors of the enclosed draft were asked to review GE's experience and the scientific literature and to summarize the relevant health effects data. The paper is intended primarily to acquaint GE managers and Company physicians with appropriate perspectives on PCBs.

I believe I mentioned on the phone that according to your wishes, your comments can either be acknowledged in the paper or remain anonymous. Would you also indicate whether you care to be acknowledged as having reviewed the document.

Again, my thanks for your consideration and cooperation.

Sincerely,

Casey

TRC/je
Enclosure