



MANUFACTURING CHEMISTS ASSOCIATION

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November 18, 1974

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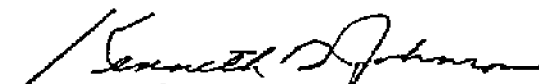
To: Technical Task Group on Vinyl Chloride Research

Subject: Report on Meeting of TTGVCR Delegation with Representatives of the Rall Committee

Gentlemen:

Distributed herewith are copies of Dr. Torkelson's letter of November 13, 1974, summarizing the events of the subject meeting, which was held at the National Institutes for Health last November 7.

Sincerely,


Kenneth D. Johnson, Ph.D.
Technical Project Manager
Vinyl Chloride Research

KDJ/mb

Enclosure

cc: Mr. A. W. Barnes
D. P. Duffield, M.D.
Dr. Tiziano Garlanda

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THE DOW CHEMICAL COMPANY

BENNETT BUILDING
 2030 DOW CENTER
 MIDLAND, MICHIGAN 48840

November 12, 1974

Mr. Kenneth D. Johnson
Manufacturing Chemists' Association
1825 Connecticut Ave., N.W.
Washington, D.C. 20009

Dear Ken:

I've attempted to summarize the results of the meeting with the Rall Committee in Bethesda, November 7, 1974. Those, in addition to Dr. Rall, Mr. Kusnetz, you and I, were Dr. E. J. Fairchild from NIOSH, Dr. M. A. Mehlman of HEW, Dr. L. Plumlee of the EPA, Dr. G. Flamm of the NCI and Dr. J. Peters of the NCI. Hehir of the CPSC had to cancel at the last minute because of budget problems.

The meeting opened with Dr. Joe Wagoner of NIOSH, who stopped in to deliver some papers, being asked to summarize the results of their epidemiology study. Dr. Wagoner indicated that they had looked at two of the five facilities which they considered to have had the most intense exposures to Vinyl Chloride. These included the B. F. Goodrich plant in Louisville and the Firestone plant in Pottstown. They studied the mortality in men who had had five or more years exposure to Vinyl Chloride starting at least ten years ago. They looked at 900 employees of which 285 were lost to follow up. Assuming that all 285 (or 31%) were still alive, they found that they had 109 deaths with 105 expected. He reported that virtually no effects were noted for the first 19 years. Death records were compared to the standardized mortality rate (SMR) for the average white male population. Other information was summarized as follows:

	<u>Observed/615 Men</u>	<u>Expected/900 Men</u>
Total Deaths	109	105
Total Cancer Deaths	31*	19.7*
Liver Cancer (Total)	6*	0.5
Liver Angiosarcoma	5	---
Brain (Astrocytoma)	4	0.73
Lung Cancer	10	6.4
Lymphoma	4	2

*P < 0.05

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Since the 285 were considered as though they were all still alive (probably erroneous), the actual number of deaths have been underestimated and will increase while the expected will remain the same. Hence the significance can only increase.

Dr. Wagoner then went on to point out that the agreement between the data on the rat, mouse and hamsters was very good. Man had an eleven-fold increase in angiosarcomas which have been observed in all three species and five-fold increase in primary brain tumors which were seen in the rat by Maltoni. Lung tumors also appeared to be increased.

Dr. Wagoner reported that Maurey Johnson of B. F. Goodrich had told him that there was a third confirmed case of angiosarcoma in the Louisville area. He also said that Dr. Maltoni had reported two new cases in Italy. They had found a case of death due to angiosarcoma in a man who had worked less than five years prior to 1954. This man died about 1970.

Dr. Wagoner also indicated that there was to be a news release that Dr. Popper from Mt. Sinai was to work with NIOSH in reviewing pathological sections from suspected Vinyl Chloride victims as well as other problems, such as hepatic disease in anesthesiologists. He also said they were giving a grant to the University of Michigan to do a bioassay of carcinogenesis in anesthetic agents.

Apparently a large clinical study has been made of the Pottstown employees with cooperation between CDC and the University of North Carolina. Four hundred men are apparently involved. Liver scans, sputum cytology, pulmonary function and other parameters have been determined. Additional data are available at Ashtabula and Avon Lake as well as the Union Carbide plant where Tabershaw-Cooper is to do its follow-up. Wagoner made a point that TCA can use the NIOSH microfilms.

A 2 1/2 week industrial hygiene survey had been made at a Union Carbide plant where it was found that time weighted averages of 2 to 5 ppm appeared likely, but that peak values exceeded these levels considerably whenever there was a malfunction. It was also reported that a Yugoslavian report indicated that five angiosarcomas occurred in a group of about 70 workers. This report is apparently not yet available.

Dr. Wagoner said that Maurey Johnson had the latest data summarizing the NIOSH epidemiology. In answer to Ken Johnson's question as to whether there was an up-to-date case registry, Dr. Wagoner indicated that there was not. (Although you have been trying to get this summary, I'm to try also. Maybe between us we can pry it out.)

The study of beauticians at Salt Lake is proceeding and at the present time there appears to be cytological changes in beauticians as compared

to general clerks in stores. Case Western Reserve is looking at cosmologists in the Cleveland area. Both of these studies are just underway.

A question was asked whether Henry Falk of CDC was still trying to get histories on all angiosarcoma deaths. There was some confusion as to the status of this work.

Plumlee of EPA reported that some tissue culture work is being done at Fredrick by Ruben Pienta, a Litton employee who is working for John Cooper at NCI. This is part of the carcinogenesis program at NCI.

At this point a review was made of the current status of animal studies in Europe and the U.S. It was pointed out that there was possibly becoming too much redundancy in animal experimentation and that more animal work might be wasteful in terms of inhalation chamber capacity and, particularly, of histopathological capacity. The group generally agreed that it might be more profitable to consider other types of studies and other compounds rather than doing more long term inhalation work on Vinyl Chloride at this time.

Four protocols were discussed. (1) The protocol for the work now being done by Industrial Bio-Test at the present time. A summary of mortality data was presented. It was indicated that an extensive 12-month report would be available in about 2 months. This was to include cytological (lymphocyte transformation) as well as histopathological examination of rats from all exposure levels. (2) The second protocol was proposed by the MCA Technical Task Group on Vinyl Chloride at its most recent meeting. (3) The third protocol was a slight modification developed by Torkelson which included hamsters and two groups of rats, half of which were exposed for six months and the other half for the full 12 months. The start of the exposure of the mice would be 6 months after the rats and hamsters so that all groups would end up simultaneously. (4) The fourth protocol was for an acute exposure in which rats were to be exposed for 1 hour at 10,000 ppm and then observed for 2 years. It was pointed out that a lower concentration might be more appropriate for the acute study. In addition it was considered desirable to wait until metabolic data were available before pursuing more animal studies in the U.S.

Dr. Rall indicated that he would take these protocols to his entire committee and that MCA can expect a written reply on the desirability of additional animal studies. I indicated that the MCA committee would obviously have the prerogative of taking the advice of the Rall Committee or proceeding in its own manner.

The EPA has sent a report to its consultants in regard to setting Emission Limits. This NERC report is available from the Contact Office

Mr. Kenneth Johnson

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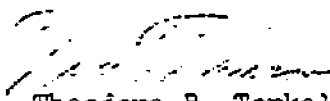
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of Dr. John Finklay. It was dated October 1 and came out of the Research Triangle at North Carolina. The title is "Environmental Aspects of Vinyl - Polyvinyl Chloride".

There was also a paper authored by Ralph Wands and Joan Broome September 24-26, 1974. A copy is attached.

The meeting concluded with the indication that Dr. Rall will provide a comment from his entire committee in the near future.

Sincerely,


Theodore R. Torkelson
Corporate Medical Department

TRT:kjf

cc: Mr. Howard L. Kusnetz
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encl.

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