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From: F. C. Dehn

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Subject: MCA Vinyl Chloride -
Technical Panel

To: TO THE FILE

Wednesday, October 13, 17 members of the technical panel met in Room 404 at MCA headquarters in Washington. Official minutes of the meeting will be issued by the MCA administrator, Milton Freifeld. This represents my own minutes and impressions.

With regard to finances for vinyl chloride, \$533,000 have been spent \$103,000 remain in the balance. We have prior commitments to about \$27,000. This leaves a current surplus of about \$76,000. A portion of this will be spent in correcting the Equitable Environmental Health, Inc. epidemiological study. There will be funds remaining which may perhaps, if agreed to by management contacts, be directed towards the Tamburro work at the University of Louisville.

The report from Industrial Biostat on the extensive vinyl chloride study conducted at 50, 200, and 2,500 ppm has still not been received. This was judged to be due to the fact that Biostat has considerable trouble because of the Searle work and that their hands are tied. The pathologist would not even venture a guess as to when the report would be issued. Later this month we are scheduled to visit Industrial Biostat to review our own chronic inhalation studies. We plan to go through the work they are doing and record keeping, etc. at that time. It may be that IBT will be getting considerably less of our effort.

Equitable Environmental Health has just recently released their report indicating it to be a final report on the epidemiological study. This is not in agreement with vinyl discussions that have been held with Equitable. There were a number of errors in the way Equitable handled this. The principal technical error being that they lumped the copolymer workers along with the vinyl chloride monomer workers as one group and isolated the PVC workers as a second group. This is not acceptable to anyone on the MCA vinyl committee. Although we do not consider the data to be relevant, I should add that their incidence of angiosarcomas was higher on the group of copolymers workers and the vinyl chloride monomer workers than it was on the PVC worker group. Another meeting of the research coordinators will be called in November to go over the preliminary report by Equitable.

Joe Wagner of NIOSH is now keeping a compilation of all the vinyl chloride monomer angiosarcomas reported. It was emphasized that all companies should keep their records on vinyl chloride workers for a minimum of thirty years. More and more companies are going into microfiche records in which they put all such data on microfiche as well as things like the work pages from all their research laboratory notebooks. With the increased liability that all large companies now face, I recommend that serious consideration be given to help the Division review our present document storage.

It appears as though the metabolism work being done by Dow is really a linear relationship. There was no significant shift found which would show a binding of the macromolecules of DNA. It appears that there is a metabolic change somewhere in the range between 10 and 30 ppm, but it is not at all clear if this is in any way responsible for angiosarcomas. No further work on metabolism is contemplated by the Dow Chemical Company on vinyl chloride.

The Tamburro work at Louisville will be reported every four months. The first report of this should be available for the panel in January. Rather than turn the workings of this Committee over to the Occupational Health Committee, it was felt that it should survive as a vinyl chloride committee because of the significance of this chemical. It was called to the attention of the group that 27 companies supported the earlier vinyl work but only 22 are now supporting the University of Louisville work which is directed primarily towards new efforts to screen and predict occupational illnesses not specifically vinyl chloride. As a result of Dr. Tamburro's work thus far, he has considerable data and evidence which shows that the hands-on physical exam of vinyl chloride workers is of no value. Tamburro is getting his data together for the July report in order to prove this. ICI reportedly has also funded extensive studies on vinyl chloride and has concluded that the liver function and enzyme test are of no value. The best method of monitoring for VCM exposure basis the ICI work are the mutagenic changes that are found in lymphocyte cultures. This work was recently published in the Lancet. In essence, blood samples are taken and separated. The lymphocytes are used to do the mutagenic culture study which shows visible chromosome changes, it appears to be dose related. There is a tendency among American companies represented to reduce the frequency of liver scans. They should normally be done no more than once a year. There seems to be a strong possibility of an alternate using the ultrasonic scans.

Torkelson has volunteered to compile an active list of all the VCM studies in this country and Europe that are currently or have been done. CEIFIC will be contacted to make certain that his compilation of European studies is correct.

With respect to other less specific things but of interest after formal adjournment of the meeting.

The Edgewood Arsenal is doing a study on a short exposure in both large and small doses for the Consumer Product Safety Commission. The thought that these concentration spurts are at 5,000 or 50,000 ppm concentration, the data is reported to show vinyl to be bad.

There is no news information on the Canadian Schwenigan study. The group said that they are surprised about all this. That it will, in their judgement, be exceedingly difficult to perform a good study there since birth certificates are not available unless approved by next of kin in the Province of Quebec.

John Quarle signed the EPA vinyl chloride emission regulations today. It will be published in the Federal Register on Monday, October 18.

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The Port Naches styrene butadiene plant is really being pursued by OCAW and OSHA. They have even gone to the extreme now of taking samples throughout the plant and submitting them for the Ames test.

OSHA's taking greater liberties with their regulations. For example, they now lower limits using as one of their arguments, it is adequate "in our professional judgement" to require lowering the standard. Benzene is one of the more recent examples of this.

The recent JAMA article on Capillary Blood Vessels and Their Potential for Early Detection of Vinyl Chloride Exposure Injury is considered of little value by Goodrich. They sent two of their men that have angiosarcoma attributable to vinyl to the authors of the paper for their examination. In one case, the capillaries would report angiosarcoma and in the other case it was negative.

Dr. Johnson, of Goodrich, also explained Shell of Europe's earlier report and their confirmation that on ingestion the human metabolizes phenyl beta naphthyl amine to the carcinogenic beta naphthyl amine. Although the concentrations are small, i.e. ingestion of 50 micrograms by humans results in a detection of 3-4 micrograms in their urine. Goodrich has stopped the manufacture of phenyl beta naphthyl amine until the situation at their facilities are cleaned up.

Dow looked at the death certificates of all the workers from one of their vinyl plants that they closed in 1956. They found no angiosarcomas (primary or secondary) cause of death; but, the incidence of lung cancer was greater than normal.

The ORC study came up with an excess of mammary tumors in female PVC workers. This coupled with Maltoni's data showing mammary tumors in rats at 1 ppm VCM caused the group to think the standard may be lowered below 1 ppm. I think we must keep women out of VCM no matter what EEO says.



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