E. J. F.
APR 15 1974

THE NEW YORK ACADEMY OF SCIENCES

April 10, 1974

Dr. James Freeman
Allied Chemical Corporation
P.O. Box 1057R - Solvay 1
Morristown, N.J. 07960

Dear Dr. Freeman:

You are cordially invited to participate in a Working Group on Vinyl Chloride - Polyvinyl Chloride on May 10 - 11, 1974 at the Delmonico Hotel, 59th Street and Park Avenue, New York City. As you know, registration starts at 8:00 a.m. on the first day. We are attaching your pocket card; would you please be sure to bring this with you. Besides serving as an identification card, it will expedite registration. The program and other materials will be available for you at the conference.

Attendance is limited to a relatively small group representing diverse fields of interest and space is in great demand. Therefore, should your plans change, kindly let us know at your earliest opportunity.

We look forward with great pleasure to your participation.

Irving J. Selikoff, M.D.
E. Cuyler Hammond, Sc.D.

Cochairmen

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2 East 63rd Street, New York 10021, Phone (212) 838-0230 Cable NYACSCI

THE NEW YORK ACADEMY OF SCIENCES

(Founded in 1817)

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The Sections hold meetings regularly during the academic year, October to May, inclusive, at The New York Academy of Sciences, 2 East Sixty-third Street, New York, N.Y. 10021. Conferences are also held at irregular intervals and announced by special programs.

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ALLIED CHEMICAL CORPORATION

MEMORANDUM

May 29, 1974

MEMO TO FILE

SUBJECT: New York Academy of Sciences Workshop on the Toxicology of Vinyl Chloride

Instead of the expected attendance of less than 250 people, there were about 400 at the meeting. The room was packed and much excitement was evident. The tone of the conference for the first day seemed to be one of presenting the known facts and data as received ~~from~~ to that date without the introduction of hysteria or "political" statements. ~~Through~~ Three (3) speakers made reference to the relationship between arsenic (form unspecified) and angiosarcomas of the liver.

On Saturday, the list of speakers included some union people and some from the NIH & NCI. The tone of these people was very critical of industry, ~~and~~ labor seemed to be using the meeting as a tool to further their cause of sitting and the management table as concerns health issues. When V. K. Rowe of Dow announced that MCA was sponsoring an inhalation study at low levels of VCM ($\leq$ 50 ppm) exposure, several of these people voiced opposition - calling it a "secret" study. Sometime later, M. A. Schneiderman of the NCI criticized the proposed MCA study as being secret and ill-conceived. Many of the NIOSH, NCI and labor group responded by clapping.

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The meeting was well covered by the press, and many statements of the better known speakers were quoted, some erroneously, such as the one that reported that angiosarcomas had been caused

mechanisms were similar and that the "sulphydryl links" were affected.

6. In a question and answer session ~~some~~ a doctor from the Mass. Dept. of IH said that PVC , with no possible exposure to VCM, had caused some health problems in some plant in Mass.

7. Dr. C. Levinsen, International Federation of Chemical and General Workers Unions, Geneva, Switzerland:

   Outlined international labors concern over VC worldwide - Stated.

   a) Economics didn't impress them.

   b) Their goal: to erase the interface to between and labor; "In a few years we'll be on your board of directors."

8. G. Schweitzer of the EPA:

   Indicated that 4-8% of ~~it~~ VC (2×10^6 lb/yr) were lost to the atmosphere during manufacturing operations.
   They want epidemiological studies in adjacent communities
   It was indicated that the National Center for Cancer Studies (Arkansas) is prepared to assist.
   Indicated the $T_{\frac{1}{2}}$ for VCM in air may be on the order of hours.
   "Industry has the responsibility to know the 'fate' of their products."

9. G. Berkel, AFL-CIO:

   Plead for: Laws requiring cancer screening for all new industrial products - medical exams after exposure to VCM has ceased and that the government set up surveillance programs to do so.

in VCM and film plants, when in truth, the only cases have been in the polymer plants. Conversations in the hallways and lounges covered the whole spectrum of thought from those who ridiculed the whole VCM problem as a scare to those that advocate zero tolerance.

Some of the comments made by the various speakers are listed below:

1. Dr. Creech of BFG:

   Carefully outlined the history of the BFG problem and their reaction as he saw it. Additionally, he pointed out the difficulty of preassessing the angiosarcoma condition. Some of the patients had no symptoms whatsoever, others showed some outward sides (at late stages), but liver function tests were still okay.

2. Dr. Miller of Mt. Sinai:

   He had done some study of the lung functions of VCM workers which indicated that after 20 years, most non-smokers have as many lung problems as smokers; indicating occupational disease.

3. Dr. Popper NIH & Mt. Sinai:

   Talked on the alteration in spleen and liver (at autopsy) and indicated that arsenic caused a very similar appearing angiosarcoma.

4. Dr. Gedick of the University of Bonn:

   Again mentioned the arsenic link.

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5. Dr. Gehring Dow:

   Talked on the biochemical studies. He that the $T\frac{1}{2}$(BIO) is about 40-75 minutes and that the ability of rats to metabolize VCM can easily reach saturation. He mentioned the arsenic cancer link and thought that perhaps the

10. A. Mazzocchi - I.U.D.

Political and financial pressures bring solutions to health problems not technical and scientific efforts. He is quite a "hip shooter."

11. E. C. Hammond ACS:

Defined a high level of exposure as any level that causes occupational disease. However, he disagreed strongly with the "zero risks" exposure theory.

12. Sir Richard Doll, Oxford University:

a) Doctors cause more cancers than industry.
i.e. by treatments - Choroblast.

b) Cancer is a proeess rather than an effect.

c) Scored industry for not having ongoing medical programs to detect and predict occupational disease.

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1607

THE NEW YORK ACADEMY OF SCIENCES

2 East Sixty-third Street New York, N.Y. 10021

MAY 10, 11, 1974

WORKING GROUP TOXICITY OF VINYL CHLORIDE — POLYVINYL CHLORIDE

E. Cuyler Hammond, Sc.D., President
Kenneth Wade Thompson, M.D., Acting Associate Executive Director
Herbert J. Kayden, M.D., Chairman, Conference Committee

Co-Sponsors:
American Cancer Society
National Institute of Environmental Health Sciences
National Institute for Occupational Safety and Health
Society for Occupational and Environmental Health

All sessions at
THE DELMONICO HOTEL
Park Avenue at 59th Street
New York, N.Y. 10022

FRIDAY, MAY 10, 1974

CONFERENCE CHAIRMEN:
Irving J. Selikoff, M.D.
Mount Sinai School of Medicine of the City University of New York
and
E. Cuyler Hammond, Sc.D.
American Cancer Society
New York City, N.Y.

8:00 A.M. REGISTRATION

8:45 A.M. GREETINGS FROM THE ACADEMY
E. C. Hammond, Sc.D., President
INTRODUCTORY REMARKS
I. J. Selikoff, M.D., Mount Sinai School of Medicine of the City University of New York

9:00 A.M. MORNING SESSION
SESSION CHAIRMAN
M. M. Key, M.D.
National Institute for Occupational Safety and Health
Rockville, Md

NON-MALIGNANT DISEASE

CHAIRMEN
E. Mastromatteo, M.D.
International Labour Office
Geneva, Switzerland
and
M. N. Johnson, M.D.
B. F. Goodrich Co.
Akron, Ohio

1 a. CLINICAL MANIFESTATIONS AND COURSE OF VINYL CHLORIDE DISEASE
G. Veltman, M.D., C. E. Lange, M.D., S. Jühe, M.D., G. Stein, M.D. and U. Bachner, M.D., University of Bonn, Bonn, Germany

b. FURTHER RESULTS IN POLYVINYL CHLORIDE PRODUCTION WORKERS
C. E. Lange, M.D., S. Jühe, M.D., G. Stein, M.D. and G. Veltman, M.D., University of Bonn, Bonn, Germany

2. DISEASE AMONG VINYL CHLORIDE - POLYVINYL CHLORIDE WORKERS IN ROMANIA — OBSERVATIONS 1963-1973
I. Suciu, M.D., L. Prodran, M.D., E. Ilea, M.D., A. Paduraru, M.D., C. Valaszkai, M.D. and L. Pascu, M.D., Occupational Diseases Clinic, University of Cluj, Romania

FRIDAY, MAY 10, 1974

3. LIVER DAMAGE AMONG POLYVINYL CHLORIDE PRODUCTION WORKERS
J. L. Creech, M.D. and L. Makk, M.D., University of Louisville, Louisville, Ky.

4. ACROOSTEOLYSIS IN VINYL CHLORIDE PLANTS IN JAPAN
H Saksbe, M.D., National Institute of Industrial Health, Kawasaki, Japan

5. PREVALENCE OF DISEASE AMONG VINYL CHLORIDE AND POLYVINYL CHLORIDE WORKERS
R. Lilis, M.D., S. Daum, M.D., H. A. Anderson, M.D., S. A. Fischbein, M.D. and I. J Selikoff, M.D., Mount Sinai School of Medicine of the City University of New York
Discussion opened by:
P. Berk, M.D., National Institute of Arthritis, Metabolic and Digestive Diseases, Bethesda, Maryland and A. Miller, M.D., Mount Sinai School of Medicine of the City University of New York

6. UNUSUAL SPLENOMEGALIC LIVER DISEASE AS EVIDENCED BY PERITONEOSCOPY AND GUIDED LIVER BIOPSY AMONG POLYVINYL CHLORIDE PRODUCTION WORKERS
H J. Marsteller, M.D., W. K. Lefbach, M.D , R Müller, M.D. and P. Gedigk, M.D., University of Bonn, Bonn, Germany.

7. ALTERATIONS OF LIVER AND SPLEEN AMONG WORKERS EXPOSED TO VINYL CHLORIDE
H. Popper, M D., Fogarty Center, National Institutes of Health, Bethesda, Maryland and Mount Sinai School of Medicine of the City University of New York, and L. B. Thomas, M.D , National Cancer Institute, Bethesda, Md.
Discussion opened by:
P. Gedigk, M.D.
University of Bonn
Bonn, Germany

EXPERIMENTAL OBSERVATIONS

CHAIRMAN
E. J. Fairchild, II, Ph.D.
National Institute for Occupational Safety and Health
Rockville, Md.

8. BIOCHEMICAL APPROACHES TO EVALUATION OF BIOLOGICAL EFFECTS OF VINYL CHLORIDE
P. Gehring, Ph.D., Dow Chemical Company, Midland, Michigan

Discussion opened by:
G. Oster, Ph.D., Mount Sinai School of Medicine of the City University of New York
and R. J. Jaeger, Ph.D., Harvard School of Public Health, Boston, Mass.

LUNCHEON

2:00 P.M. AFTERNOON SESSION

SESSION CHAIRMAN
R. S. F. Schilling, M.D.
London School of Hygiene and Tropical Medicine
London, England

NEOPLASTI EFFECTS

CHAIRMAN
J. W. Lloyd, Sc.D.
National Institute for Occupational Safety and Health
Rockville, Md.

9. CHARACTERISTICS OF CASES OF ANGIOSARCOMA OF THE LIVER IN U.S. VINYL CHLORIDE - POLYVINYL CHLORIDE WORKERS

C. W. Heath, Jr., M.D and H. Falk, M.D., Bureau of Epidemiology, Center for Disease Control, Atlanta, Georgia

10. MORTALITY STUDY OF POLYVINYL CHLORIDE WORKERS

J. R. Tabershaw, M.D., and W. Gaffey, Ph D., Tabershaw-Cooper Associates, Inc., Berkeley, California

11. INDUSTRY-WIDE INVESTIGATION OF DISEASE MANIFESTATIONS AMONG WORKERS EMPLOYED IN VINYL CHLORIDE — POLYVINYL CHLORIDE PRODUCTION

J. K. Wagoner, S.D. Hyg., J. Mallov, M.D and W. Stringer, M.D., National Institute for Occupational Safety and Health, Cincinnati, Ohio.

12. MORTALITY EXPERIENCE OF A COHORT OF VINYL CHLORIDE - POLYVINYL CHLORIDE WORKERS, 1946-1973

W. J. Nicholson, Ph.D., E.C. Hammond, Sc.D. and I. J. Selikoff, M.D., Mount Sinai School of Medicine of the City University of New York and the American Cancer Society, New York City, New York.

Discussion opened by:
T. F. Mancuso, M.D., University of Pittsburgh School of Public Health, Muriel L. Newhouse, M.D., London School of Hygiene and Tropical Medicine, London, England and

B. Holmberg, Ph.D., National Board of Occupational Safety and Health, Stockholm, Sweden.

13. PATHOLOGY OF ANGIOSARCOMA OF THE LIVER AMONG VINYL CHLORIDE - POLYVINYL CHLORIDE WORKERS

L. B. Thomas, M.D. and H. Popper, M.D., National Institutes of Health, Bethesda, Md.

Discussion opened by:
H. L. Stewart, M.D., National Cancer Institute, Bethesda, Md. and O. Auerbach, M.D., Veterans Administration Hospital, East Orange, N.J

EXPERIMENTAL OBSERVATIONS

CHAIRMAN
U. Saffiotti, M.D.
National Cancer Institute
Bethesda, Md.

14. HEMATOGENOUS DISSEMINATION OF INGESTED PVC MICROPARTICLES

G. Volkheimer, M.D., Berlin, Germany

15. CARCINOGENICITY BIO-ASSAYS OF VINYL CHLORIDE: CURRENT RESULTS

C. Maltoni, M.D. and G. Lefemine, M.D., Institute of Oncology and Tumor Center, Bologna, Italy

16. EXPERIMENTAL STUDIES WITH VINYL CHLORIDE

M.L. Keplinger, Ph.D., J.W. Goode, Ph.D., D.E. Gordon, D.V.M., Ph D., and J.C. Calandra, M.D., Ph.D., Industrial Bio-test Laboratories, Inc., Northbrook, Ill

Discussion opened by:
Eula Bingham, Ph.D.
University of Cincinnati,
Cincinnati, Ohio
and B.L. Van Duuren, Ph.D.
New York University
New York City, N.Y.

7:30 P.M. SUBSCRIPTION DINNER
DELMONICO HOTEL

9:00 A.M. MORNING SESSION

SESSION CHAIRMAN
E. Dixon, M.D.
Celanese Corp.
New York City, N.Y.

C NTR L F EXP SURE

CHAIRMAN
C. Levinson
International Federation of Chemical and General Workers' Unions
Geneva, Switzerland

17. EXPERIENCE IN INDUSTRIAL EXPOSURE CONTROL

V. K. Rowe, Ph.D., Dow Chemical Company, Midland, Michigan

18. THE ENVIRONMENTAL THREAT FROM VINYL CHLORIDE BEYOND THE WORK PLACE

G. Schweitzer, Ph.D., Environmental Protection Agency, Washington, D.C.

Discussion opened by:
M. Corn, Ph D., University of Pittsburgh School of Public Health, Pittsburgh, Pa. and V. A. Newill, M.D., Environmental Protection Agency, Washington, D.C.

PROBLEMS AND PERSPECTIVES

CHAIRMAN
N. J. Roberts, M.D.
Exxon Corporation
New York City, N.Y.

19. CLINICAL MANAGEMENT OF WORKERS EXPOSED TO VINYL CHLORIDE AND POLYVINYL CHLORIDE

C. A. Johnson, M.D., Goodyear Tire and Rubber Company, Akron, Ohio

20. SURVEILLANCE OF WORKERS WITH HISTORY OF EXPOSURE TO VINYL CHLORIDE

L. Beliczky, A. Mazzocchi and G. Perkel, Vinyl Chloride Health Committee, Industrial Union Department, AFL-CIO, Washington, D.C

21. EPIDEMIOLOGICAL APPROACHES TO THE EVALUATION OF EXTENT OF NEO PLASTIC RISK OF VINYL CHLORIDE —POLYVINYL CHLORIDE

E. C. Hammond, Sc.D., American Cancer Society, New York City, N.Y.

22. MOUSE TO MAN — EXTRAPOLATION OF LABORATORY RESULTS TO HUMAN DISEASE

M. A. Schneiderman, Ph.D., National Cancer Institute, Bethesda, Md.

Discussion opened by:
R. Doll, M.D., Oxford University, Oxford, England

Sylve Sinanian, M.A.
Conference Director

Anderson, Dr. H.A.
Auerbach, Dr. O.
Bechner, Dr. U.
Beliczky, Mr. L.
Berk, Dr. P.
Bingham, Dr. E.
Corn, Dr. M.
Creech, Dr. J.L.
Daum, Dr. S.
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Fairchild, Dr. E.J.
Falk, Dr. H.
Fischbein, Dr. A.S.
Gaffey, Dr. W.
Gedyk, Dr. P.
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Hammond, Dr. E.C.
Heath, Dr. C.W.
Jaeger, Dr. R.J.
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Jolie, Dr. S.
Key, Dr. M.M.
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Lefemine, Dr. G.
Leibach, Dr. W.K.
Levinson, Mr. C.
Lilis, Dr. R.
Lloyd, Dr. J.W.
Maidl, Dr.L.
Mallov, Dr. J
Maltoni, Dr. C.
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Van Duuren, Dr. B.L.
Veltman, Dr. G.
Volkheimer, Dr. G.
Wagoner, Dr. J.K.

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