



Air Products and Chemicals, Inc.

Box 538, Allentown, PA 18105
(215) 398-4911

File
Vinyl
Chloride

7 March 1979

Dr. Richard Burack
Allied Chemical Corporation
Box 1054R
Morristown, New Jersey 07960

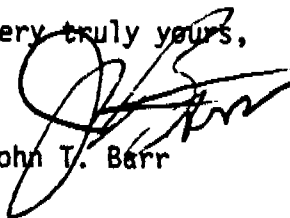
Dear Dick:

Enclosed is a copy of the ordering information for the vinyl chloride literature review which I gave your secretary today. We have also ordered this document, but have not received it yet, so I cannot speak to its value.

Also enclosed is a short chronology for vinyl chloride, up to mid 1977, which may be useful. The events since that time are pretty well known.

If I can be of any further help, let me know. I expect that if the end desire is to clear the use of a polymer for bottle manufacture, then the history of vinyl chloride before the FDA will be of interest. The SPI counsel here has been Jerome Heckman of Keller and Heckman, Washington.

Very truly yours,


John T. Barr

JTB/sjw
Att.

ASI 000011542

nded 2/84
ORNL/TIRC-78/3

Contract No. W-7405-eng-26

VINYL CHLORIDE

**A Review
1835 - 1975**

**An Annotated Literature Collection
1835 - 1975**

**A Literature Compilation
1976 - 1977**

J. S. Warren, J. E. Huff,* and H. B. Gerstner

**Toxicology Information Response Center
Information Center Complex
Information Division**

***Unit of Chemical Carcinogenesis
International Agency for Research on Cancer
Lyon, France**

**Toxicology Information Program, National Library of Medicine,
Bethesda, Department of Health, Education, and Welfare under
Contract No. 40-274-71.**

November 1978

**ORNL NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
Operated by
CARBIDE CORPORATION
for the
DEPARTMENT OF ENERGY**

States
ty of its
press or
accuracy,
process
rights.

ASI 000011543

RECENT TIRC PUBLICATIONS*

ORNL/TIRC-76/1

Toxicology Information Response Center Literature Search Index. I. 101 to 2100. Toxicology Information Response Center Staff. 205 pages, 2,000 references, \$7.50.

ORNL/TIRC-76/2

Trichloroethylene: I. An Impact Overview. E. M. Waters, H. B. Gerstner, and J. E. Huff. II. An Abstracted Literature Collection, 1907-1976. E. M. Waters and S. A. Black. 265 pages, 1,673 references, \$20.00.

ORNL/TIRC-76/3

Kepone. I. A Literature Summary. J. E. Huff and H. B. Gerstner. II. An Abstracted Literature Collection, 1952-1977. S. A. Black. 82 pages, 175 references, \$15.00.

ORNL/TIRC-76/4

Mirex. I. An Overview. E. M. Waters. II. An Abstracted Literature Collection, 1947-1976. E. M. Waters. 98 pages, 325 references, \$10.00.

ORNL/TIRC-76/5

Toxicology Information Response Center Literature Search Index. II. 2101-2600. Toxicology Information Response Center Staff. 99 pages, 500 references, \$7.50.

ORNL/TIRC-76/6

Lead Analysis: Literature Collection, 1966-1976. S. A. Black and K. C. Miller. 214 pages, 1,552 references, \$18.00.

ORNL/TIRC-77/1

Selected Case Histories and Epidemiological Examples of Human Mercury Poisoning. I. State-of-the-Art Review. Herbert B. Gerstner and J. E. Huff. II. An Abstracted Literature Collection, 1947-1976. S. A. Black. 101 pages, 866 references, \$20.00.

ORNL/TIRC-77/2

Methoxyflurane. I. An Overview. E. M. Waters and B. E. Ricci. II. An Abstracted Literature Collection, 1947-1976. B. E. Ricci and E. M. Waters. 120 pages, 1,071 references, \$22.50.

ORNL/TIRC-77/3

Vinylidene Chloride. I. An Overview. II. A Literature Collection, 1947 to 1977. H. S. Warren and B. E. Ricci. 52 pages, 117 references, \$15.00.

ORNL/TIRC-77/4

Health Aspects of Chloroform—A Review. S. G. Winslow and H. B. Gerstner. An Abstracted Literature Collection, 1907 to 1977. S. G. Winslow. 252 pages, 1,357 references, \$28.00.

ORNL/TIRC-77/5

Asbestos: A Perspective. I. An Overview. J. E. Huff. II. An Annotated Literature Collection, 1960-1974. J. E. Huff, A. S. Hammons, C. Y. Dinger, B. W. Kline, and B. L. Whitfield. III. An Abstracted Literature Compilation, 1974-1977. S. A. Black. 214 pages, 867 references, \$25.00.

ORNL/TIRC-77/6

Toxicology Information Response Center Literature Search Index. III. 2601-3100. Toxicology Information Response Center Staff. 77 pages, 500 references, \$7.50.

ORNL/TIRC-78/1

Toxicology Information Response Center Literature Search Index. IV. 3101-3600. Toxicology Information Response Center Staff. 69 pages, 500 references, \$9.00.

ORNL/TIRC-78/2

Polychlorinated Biphenyls, Polybrominated Biphenyls, and Their Contaminants: Literature Compilation, 1965-1977. S. G. Winslow and H. B. Gerstner. 374 pages, 2,065 references, \$25.00.

ORNL/TIRC-78/3

Vinyl Chloride. A Review, 1835-1975. An Annotated Literature Collection, 1835-1975. A Literature Compilation, 1976-1977. H. S. Warren, J. E. Huff, and H. B. Gerstner. 213 pages, 1,153 references, \$28.00.

ORNL/TIRC-78/5

Health and Environmental Effects of Toxaphene — A Literature Compilation, 1962-1978. S. A. Mashburn. 114 pages, 853 references, \$17.50.

PUBLICATIONS IN PREPARATION

ORNL/TIRC-79/4

Leptophos. E. M. Waters.

Acrylonitrile. N. P. Drago.

*Available from the National Technical Information Service, Springfield, Virginia 22161.

CHRONOLOGICAL LIST OF MAJOR VINYL CHLORIDE DEVELOPMENTS

- 1962 American Conference of Governmental Industrial Hygienists adopted 500 ppm as an appropriate standard.
- 1970 Dr. Viola reported inducing cancer in rats at 10,000 to 30,000 ppm.
- 1971 European PVC manufacturers engaged Dr. Maltoni to follow up on Dr. Viola's results.
- OSHA adopted 500 ppm as standard for occupational exposure.
- 1972 U.S. industry agreed to sponsor animal studies and epidemiological surveys through the MCA.
- 1973 Industry reported to NIOSH that Dr. Maltoni found tumors at lower exposures in rats.
- FDA barred use of PVC bottles for liquor.
- 1974 January: B.F. Goodrich reported link between heavy vinyl chloride exposure and liver cancer.
- February: OSHA held a hearing on vinyl chloride. EPA formed a task force to investigate vinyl chloride emissions, met with industry.
- April: OSHA set temporary 50 ppm limit. MCA reported their animal studies showed cancer at 50 ppm.
- May: EPA sent Section 114 questionnaires to industry requesting data.
- June: OSHA started a hearing on its permanent standard for occupational exposure. EPA reported no "imminent hazard" as the result of ambient monitoring, but that it planned reductions in emissions up to 90%.
- October: OSHA announced a permanent standard of 1 ppm for occupational exposure.
- November-December: EPA consulted other governmental agencies and advisory committees.
- 1975 February: SPI Group met with EPA's Standards Group at Durham--first of several meetings.
- March: Industry/EPA meeting with National Air Pollution Control Techniques Advisory Committee, first of two meetings.

Chronological List of Major Vinyl Chloride Developments
Page Two

- 1975 May: SPI met with EPA and discussed the Agency's draft for a proposed vinyl chloride standard; additional meeting held in September.
- July: Health Research Group petitioned FDA to ban all PVC use in food packaging.
- December: EPA published a proposed emission standard for vinyl chloride; public comments were invited.
- 1976 February: EPA held a public hearing on the proposed vinyl chloride standard.
- * October 21: EPA promulgated a final Vinyl Chloride Standard.
- November 19: EDF filed a petition in the Court of Appeals for judicial review of the Standard.
- December 9: SPI moved to intervene in the court case.
- 1977 January 18: SPI's motion to intervene was granted.
- January 19: Statutory date for compliance or EPA-approved waiver schedule.
- January-March: EPA-EDF negotiations to settle court case. SPI was excluded from the negotiations.
- March 24: EDF-EPA agreement reached; EPA to propose certain amendments to the Standard, court case to be dismissed.
- June 2: EPA published proposed amendments to the existing Standard.
- June 22: SPI met with EPA's technical staff.
- June 27: The court case was dismissed.
- July 19: EPA held an "open meeting" on the proposed amendments.

*/ From this date, industry has exactly two years to meet the new standard. Changes in plant and equipment are needed to do this at every plant in the Nation handling vinyl chloride, and this work is underway. Some of it may need to be changed or redone if the proposed amendments are adopted.