

VIRGINIA: IN THE CIRCUIT COURT FOR THE CITY OF NEWPORT NEWS

D. GARLAND MOORE,	:	AT LAW NOS. 13603-S,
	:	14062-S & 14577-S
	:	
WILLIAM L. KELLEY,	:	AT LAW NO. 13945-S
	:	
Plaintiffs,	:	
	:	
v.	:	
	:	
H.K. PORTER COMPANY, INC.,	:	
et al.	:	
	:	
Defendants.	:	

**RESPONSES OF DEFENDANT MANVILLE
CORPORATION ASBESTOS DISEASE
COMPENSATION FUND TO
PLAINTIFFS' INTERROGATORIES**

Defendant Manville Corporation Asbestos Disease Compensation Fund (hereafter "the Fund"), by and through its attorneys, KNIGHT, DUDLEY, DEZERN & CLARKE, hereby submits the following Responses to Plaintiffs' Interrogatories.

PRELIMINARY MATTERS

The Fund objects to these discovery requests to the extent that they ask for information relating to the Fund's involvement in the asbestos industry. The Fund has never been involved in the manufacture, sale or distribution of asbestos or asbestos containing products. Nevertheless, the Fund interprets these questions to relate to Manville Corporation, its predecessors or subsidiaries (hereafter "related entities").

The Fund objects to these discovery requests to the extent that they call for production of documents entitled to protection as privileged attorney client communications or attorney work product.

To the extent that the information contained herein differs in any respect from any prior response to discovery, these answers shall be deemed to update and supersede such prior answers in any and all cases. The Fund reserves the right to supplement these responses to the extent that new or additional information becomes available.

RESPONSES

Interrogatory No. 1:

Describe in detail Manville's complete corporate history, including, but not limited to, date and place of incorporation, corporate purpose, principal place of business, and location of sales offices, and including any mergers, consolidations, asset purchases, acquisitions or spinoffs which concern or affect manufacture, sale, or distribution of asbestos-containing products. In addition:

- (a) State the name of any subsidiary or predecessor corporation, its date of incorporation, and its corporate purposes;
- (b) If Manville has bought or sold any asbestos product line or stock in a company dealing in asbestos-containing products, state the date of the sale and identify the seller or purchaser;
- (c) Identify each document related to the history or transaction(s) set forth above.
- (d) State whether Manville agreed to be, or has been held by any Court to be, legally responsible for the past liabilities of any nature of any other such corporation or entity. For each Court which has so held, identify the case, the jurisdiction of the Court, and the date of the Order.

RESPONSE:

For many decades, Manville Corporation or related entities engaged in the manufacture and sale of asbestos containing products, as well as the mining, milling and sale of asbestos fiber. The H. W. Johns Company, a predecessor to Manville Corporation, first commenced business in 1858. Manville Corporation or related entities first became involved in the mining and milling of asbestos in 1916 when it purchased the Jeffrey Mine in Asbestos, Quebec.

Johns-Manville Corporation was incorporated in New York in 1927. Johns-Manville Products Corporation, incorporated in 1927 in Delaware, was responsible for the manufacture of asbestos containing products. Johns-Manville Sales Corporation, incorporated in 1929 in Delaware, was responsible for the sale of asbestos containing products. In 1975, Johns-Manville Products Corporation merged into Johns-Manville Sales Corporation. A corporate reorganization in 1982 created a new parent corporation known as Manville Corporation, and in 1985 Johns-Manville Sales Corporation became Manville Sales Corporation.

Manville Corporation or related entities' principal place of business is Denver, Colorado.

Upon information available to the Fund the following subsidiaries of Manville Corporation or related entities at one time were related to the asbestos industry.

CURRENT MANVILLE SUBSIDIARIES

Cobra Canada, Inc. (50% owned by American Standard)
Incorporated in Canada
Name changed from Cobra Friction Products, Limited - 1981

Johns-Manville Corporation
Incorporated in New York - 1926
Authorized to do business in Colorado, Georgia, New Hampshire,
New Jersey, and New York

Johns-Manville East Africa, Limited
Incorporated in Delaware - 1968
Authorized to do business in Delaware

Johns-Manville India, Limited
Incorporated in Delaware - 1965
Authorized to do business in Delaware

Manville (Great Britain) Limited
Incorporated in the United Kingdom of Great Britain and
North Ireland
Name changed from Johns-Manville (Great Britain) Limited
- 1982

Manville De France S.A.
Incorporated in France
Name changed from Johns-Manville De France S.A. - 1982

Manville Do Brazil Ltda.
Incorporated in Brazil
Name changed from Johns-Manville Do Brazil - 1982

Manville Italian S.p.A.
Incorporated in Italy
Name changed from Johns-Manville Italiana S.P.A - 1982

Manville Japan, Limited
Incorporated in Japan
Name changed from Johns-Manville Japan, Limited - 1981

Manville Mexicana S.A. de C.V.
Incorporated in Mexico
Name changed from Johns-Manville Mexicana, S.A. de C.V. - 1982

Manville Sales Corporation
Incorporated in Delaware
Authorized to business in all fifty sates and the District of
Columbia
Name changed from Johns-Manville Sales Corporation - 1985

Manville Sudamericana Ltda
Incorporated in Delaware
Authorized to do business in Delaware
Name changed from Johns-Manville Sudamericana, Limited - 1982

New Materials, Inc.
Incorporated in New York - 1958
Authorized to do business in New York

Railroad Friction Products (50% owned by American Standard)
Incorporated in Delaware - 1954
Authorized to do business in Arizona, Arkansas, California,
Delaware, Georgia, Idaho, Illinois, Indiana, Kansas,
Maryland, Minnesota, Missouri, New York, North Carolina,
North Dakota, Oregon and Pennsylvania

Termoacusticos, S.A. de C.V.
Incorporated in Mexico - 1973

PREVIOUS MANVILLE SUBSIDIARIES

Acoustical Construction Corporation
Incorporated in New York - 1930
Dissolved - 1946

American Mineral Company
Name changed from Seehaver Clay & Mineral Company - 1947
Incorporated in California
Merged into Desert Minerals, Inc. - 1975

Asbestos Construction Company, Inc.
Incorporated in New York - 1922
Name changed to Johns-Manville Insulation Contracting & Supply
Company - 1960

Asbestos and Danville Railway Company
Incorporated in Quebec, Canada - 1897
Authorized to do business in Quebec
Divested - 1982

Banner Rock Corporation
Incorporated - 1929
Dissolved - 1938

Beton et Mollith S.A.
 Incorporated in Belgium - 1923
 Name changed to Johns-Manville S.A

Canadian Johns-Manville Asbestos, Limited
 Incorporated in Canada - 1954
 Name changed to Johns-Manville Amiante Canada, Inc. - 1980

Canadian Johns-Manville Ontario, Limited
 Incorporated in Ontario, Canada - 1950
 Dissolved - 1968

Celite Corporation
 Name changed from Fibre Corporation - 1928
 Dissolved - 1939

Chem Blend System Corporation
 Incorporated in New Jersey - 1965
 1970 - Acquisition
 Dissolved - 1972

Coalinga Asbestos Company, Inc.
 Incorporated in Delaware - 1960
 Authorized to do business in California and Delaware
 Merged into Johns-Manville Sales Corporation - 1975

Cobra Friction Products, Limited (50% Held by J-M - 1981)
 Incorporated in the Dominion of Canada - 1960
 Authorized to do business in the Dominion of Canada
 Name changed to Cobra Canada, Inc.

Crown Tuft Carpet, Inc.
 Incorporated in Georgia - 1963
 Merged into Johns-Manville Products Corporation - 1972
 Divested to Celotex Corporation - 1972

Delaware Johns-Manville Corporation
 Incorporated - 1927
 Name changed to Johns-Manville Corporation of Delaware - 1927

Desert Minerals, Inc.
 Incorporated in California - 1956
 Merged into L. Grantham Corporation - 1975

Fibre Corporation
 Incorporated - 1914
 Name changed to Celite Corporation - 1928

Grantham Mines Corporation
 Incorporated in California - 1969
 Name changed to L. Grantham Corporation - 1969

Holophane Company, Limited (The)
 Incorporated - 1911
 Amalgamated with Canadian Johns-Manville Company, Limited
 - 1978

Holophane S.A. de C.V.
 Incorporated in the Dominion of Canada - 1962
 Authorized to do business in California, New York, Ohio, New
 Jersey and the Dominion of Canada
 Divested - 1988

Interstate Flooring and Construction Company, Inc.
 Incorporated - 1930
 Dissolved - unknown

Jayem Exploration Company, Limited
 Incorporated in Quebec, Canada - 1961
 Dissolved - 1980

John Brand Corporation
 Incorporated in Delaware
 Name changed from Johns-Manville Dutch Brand Products - 1970
 Dissolved - 1972

Johns-Manville (Great Britain), Limited
 Incorporated in the United Kingdom of Great Britain and
 North Ireland
 Name changed from Johns-Manville Company, Limited - 1966
 Name changed to Manville (Great Britain) (Limited) - 1982

Johns-Manville (United Kingdom), Limited
 Incorporated - 1959
 Merged into Johns-Manville Company, Limited - 1965

H. W. Johns Manufacturing Company
 Incorporated - 1858
 Reorganized as H. W. Johns Manufacturing Company - 1874
 Merged with Manville Covering Company to become H.W.
 Johns-Manville Company - 1901

H. W. Johns-Manville Company
 Organized through merger between Manville Covering Company and
 H. W. Johns Manufacturing Company - 1901
 Name changed to Johns-Manville, Inc. - 1920

Johns-Manville Amiante Canada, Inc.
 Incorporated in Canada
 Authorized to do business in Quebec, Canada
 Name changed from Canadian Johns-Manville Asbestos, Limited
 - 1980
 Sold - 1983

Johns-Manville Belgium, S.A.
 Incorporated in Belgium - 1961
 Divested - 1983

Johns-Manville Boley, Limited
 Incorporated in Delaware - 1931
 Name changed to Johns-Manville Sudamericana, Limited - 1955

Johns-Manville Canada, Inc.
 Incorporated in the Dominion of Canada - 1978
 Authorized to do business in Alberta, British Columbia,
 Manitoba,
 New Brunswick, Nova Scotia, Ontario, Prince Edward
 Island, Quebec, Saskatchewan and Yukon Territory
 Sold - 1983

Johns-Manville Ceiling Corporation
 Incorporated - 1973
 Name changed to Southern Johns-Manville Products Corporation
 (Delaware) - 1973

Johns-Manville Company, Limited (United Kingdom)
 Incorporated in the United Kingdom - 1939
 Name changed to Johns-Manville (Great Britain), Limited - 1966

Johns-Manville Construction
 Incorporated - 1956
 Name changed to Johns-Manville Service Corporation - 1960

Johns-Manville Corporation of Delaware
 Name changed from Delaware Johns-Manville Corporation - 1927
 Name changed to Johns-Manville Products Corporation - 1932

Johns-Manville De France S.A.
 Incorporated in France
 Name changed from Societe Anciens Etablissements Hordot and
 Chataignon, Flechet et Cie., Succs. - 1961
 Name changed to Manville de France S.A. - 1982

Johns-Manville De Ventas S.A. de C.V.
 Incorporated in Mexico - 1962
 Name changed to Johns-Manville Mexicana, S.A. de C.V. - 1962

Johns-Manville Development Corporation
 Incorporated in Delaware
 Authorized to do business in California, Colorado, Illinois,
 New Jersey and Ohio
 Name changed to Johns-Manville Service Corporation - 1973
 Merged into Johns-Manville Sales Corporation - 1975

Johns-Manville Do Brazil Isolantes Termicos, Limited
 Incorporated in Brazil
 Name changed from Johns-Manville do Brazil S/A Isolantes Termicos - 1977
 Name changed to Manville Do Brazil, Limited - 1982

Johns-Manville Do Brazil S/A - Isolantes Termicos
 Incorporated in Brazil
 Name changed from Magnebras, S.A. - 1976
 Name changed to Johns-Manville Do Brazil Isolantes Termicos Ltda - 1977

Johns-Manville Dutch Brand Products Corporation
 Incorporated in Delaware
 Name changed from Van Cleef Brothers, Inc. - 1955
 Name changed to John Brand Corporation - 1970

Johns-Manville Equipment Corporation
 Incorporated in Delaware - 1961
 Merged with Johns-Manville Sales Corporation - 1973

Johns-Manville, Inc.
 Name changed from H. W. Johns-Manville Company - 1920
 Dissolved - 1927

Johns-Manville Insulation Contracting & Supply Company, Inc.
 Incorporated in New York
 Name changed from Asbestos Construction Company, Inc. - 1960
 Merged into Johns-Manville Sales Corporation - 1962

Johns-Manville International Corporation
 Incorporated in Delaware - 1929
 Authorized to do business in California, Colorado, Delaware, Florida, New York and Texas
 Merged into Manville Sales Corporation - 1986

Johns-Manville Italiana S.p.A.
 Incorporated in Italy
 Name changed from Silex S.p.A. - unknown
 Name changed to Manville Italiana S.p.A. - 1982

Johns-Manville Japan, Limited
 Incorporated in Japan
 Name changed from New Materials Kabushiki Kaisha - 1978
 Name changed to Manville Japan, Limited - 1981

Johns-Manville Mexicana S.A. de C.V.
 Incorporated in Mexico
 Name changed from Johns-Manville de Ventas S.A. de C.V. - 1962
 Name changed to Manville Mexicana S.A. de C.V. - 1982

Johns-Manville Mining and Trading
 Incorporated in Delaware - 1966
 Merged into Johns-Manville Corporation - 1973

Johns-Manville (Overseas), Limited
 Incorporated in the Province of Ontario - 1958
 Authorized to do business in Ontario
 Dissolved - 1981

Johns-Manville Products Corporation of California
 Incorporated in Delaware - 1956
 Authorized to do business in California
 Merged into Johns-Manville Products Corporation - 1972

Johns-Manville Products Corporation
 Incorporated in Delaware
 Authorized to do business in AZ, CA, CO, DE, FL, IL, IN, IA,
 KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ,
 NY, NC, OH, OR, PA, TN, TX, UT, VA, WA
 Name changed from Johns-Manville Corporation of Delaware
 - 1932
 Merged with Johns-Manville Sales Corporation - 1975

Johns-Manville Products Corporation of Georgia
 Incorporated in Delaware - 1955
 Merged into Johns-Manville Corporation - 1970

Johns-Manville Products Corporation of Massachusetts
 Incorporated in Delaware - 1939
 Merged into Johns-Manville Products Corporation - 1972

Johns-Manville Products Corporation of Mississippi
 Incorporated in Delaware - 1958
 Dissolved - 1966

Johns-Manville Products Corporation of Ohio
 Incorporated in Delaware - 1959
 Dissolved - 1972

Johns-Manville Products Corporation of Oregon
 Incorporated - 1956
 Merged into Johns-Manville Corporation - 1962

Johns-Manville Products Corporation of Pennsylvania
 Incorporated in Pennsylvania - 1940
 Merged into Johns-Manville Sales Corporation - 1975

Johns-Manville S.A.
 Incorporated in Belgium
 Name changed from Beton et Mollith
 Divested - 1983

Johns-Manville Sales Corporation
 Incorporated in Delaware - 1929
 Name changed to Manville Sales Corporation - 1985

Johns-Manville Service Corporation
 Incorporated in Delaware
 Name changed from Johns-Manville Construction Corporation
 - 1960
 Name changed to Johns-Manville Development Corporation - 1973

Johns-Manville Sudamericana, Limitada
 Incorporated in Delaware
 Name changed from Johns-Manville Boley, Limited - 1955
 Name changed to Manville Sudamericana, Limitada - 1982

Kingsey Falls Paper, Inc. (50% owned by Johns-Manville)
 Incorporated in Quebec - 1972
 Authorized to do business in Quebec
 Sold - 1984

L. Grantham Corporation
 Incorporated in California
 Authorized to do business in California
 Name changed from Grantham Mines Corporation - 1969
 Acquired in 1972
 Merged into Johns-Manville Sales Corporation - 1978

Magnebras, S.A.
 Incorporated in Brazil - 1957
 1973 - Acquisition
 Name changed to Johns-Manville Do Brazil, S.A. - Isolantes
 Termicos - 1976

Manvilglass, Limited
 Incorporated in Delaware - 1970
 Authorized to do business in Delaware and Argentina
 Name changed to Thermocoustic Insulations, Limited - 1976

Manville Covering Company
 Incorporated - 1886
 Merged into H. W. Johns Manufacturing Company - 1901

New Materials Kabushiki Kaisha
 Incorporated in Japan - 1959
 Name changed to Johns-Manville Japan, Limited - 1972

Nicely Corporation (The)
 Incorporated - 1933
 Dissolved - 1946

Revere Mills, Inc.
 Incorporated - 1964
 Name changed to Revere, Inc. - 1965

Revere, Inc.
 Name changed from Revere Mills, Inc. - 1965
 Merged into Crown Tuft Carpet, Inc. - 1972

Seehaver Clay and Mineral Company
 Incorporated in California - 1946
 Name changed to American Mineral Company - 1947

Silex S.p.A.
 Incorporated in Italy
 Name changed to Societa Anonima Immobiliare esari - 1940
 Name changed to Johns-Manville Italiana S.p.A. - 1962

Societa Accomandita Semplice Silex
 Incorporated - 1940
 Merged into Societa Anonima Immobiliare Cesari - 1940

Societa Anonima Immobiliare Cesari
 Incorporated in Italy - 1939
 Name changed to Silex S.p.A. - 1940

Societe Anciens Etablissements Hordot and Chataignon, Flechet et Cie., Succs.
 Incorporated - 1961
 Name changed to Johns-Manville De France S.A. - 1961

Southern Johns-Manville Products Corporation
 Incorporated in Delaware
 Name changed from Johns-Manville Ceiling Corporation - 1973
 Merged into Johns-Manville Sales Corporation - 1979

Table Mountain Asbestos Company, Inc.
 Incorporated - 1962
 Dissolved - 1967

Thermocoustic Insulations, Limited
 Incorporated in Delaware
 Name changed from Manvilglass, Limited - 1976
 Merged into Johns-Manville Sudamericana Limitada - 1976

Van Cleef Brothers, Inc.
 Name changed from Vee Cee Brothers, Inc. - 1947
 Name changed to Johns-Manville Dutch Brand Products Corporation - 1955

Vee Cee Brothers, Inc.
 Incorporated - 1947
 Name changed to Van Cleef Brothers, Inc. - 1947

Additionally, the names of any consolidation, merger or purchase of assets of any company by Manville Corporation or related entities can be obtained by a review of the Annual Reports of Manville Corporation and related entities, and the location of sales offices can be obtained from a review of corporate organizational charts. Copies of such reports and organizational charts are located at the records repository maintained by the Fund in Denver, Colorado, and will be made available for inspection and copying at a time agreed upon by the parties.

RECORDS REPOSITORY

All of the non-privileged documents in the possession, custody and control of the Fund which were obtained from Manville Corporation and which relate to asbestos litigation are located in a records repository in Denver, Colorado. The Fund assumed the management and operation of this repository on November 28, 1988, the date on which the Manville Corporation bankruptcy plan was consummated.

The repository was originally set up and managed by Manville Corporation to house the documents which Manville retrieved and produced in previous litigation. In 1983, pursuant to an order entered by Judge Ira Brown of the Superior Court in the City and County of San Francisco, Manville Corporation was required to produce all non-privileged documents relevant to the coverage litigation which Manville Corporation had commenced against its insurance carriers. That litigation was brought to establish Manville Corporation's right to defense and indemnification for costs incurred in connection with the asbestos litigation. The insurance litigation was ultimately settled for sums in excess of \$800 million.

In order to comply with Judge Brown's order, Manville Corporation hired numerous paralegals and law clerks and undertook a massive and comprehensive review of the corporate records of the company which existed at various Manville facilities world wide. Manville spent literally millions of dollars to gather and maintain this collection of documents.

Similarly, beginning in 1985, Manville Corporation was required to produce the vast majority of these same documents to representatives of the United States Department of Justice, in connection with Manville's actions against the United States. In those cases, Manville Corporation was claiming a right to indemnification or contribution for expenses incurred in the defense of asbestos health cases brought by workers employed in government owned or controlled shipyards.

These documents are currently kept at the document repository referred to above. The repository is now maintained and operated by the Fund.

Manville Fund Document Categories

The repository contains 19,317 boxes and 968 rolls of microfilm. These documents are grouped in nine categories:

- 01: Manville plant collection - 10,383 boxes
- 02: Waukegan plant collection - 4,908 boxes
- 03: Lompoc plant collection - 149 boxes
- 04: World Headquarters (WHQ) collection - 3,417 boxes
- 05: Microfilm from Manville WHQ - 492 rolls
- 06: Microfilm from Manville WHQ - 361 rolls
- 07: Documents sent by Local Counsel - 385 boxes
- 08: Microfilm with Redacted Documents - 115 rolls
- 09: Documents produced in January, 1989 - 73 boxes

The Manville Plant collection (01) includes documents from the Manville, NJ plant; the Nashua, NH plant; the Billerica, MA plant; the Savannah, GA plant; the Laurinburg, NC plant; and the Fort Worth, TX plant. It also includes documents sent to the plant for storage from Manville General Headquarters prior to the early 1970s, when the Headquarters offices were located in New York. In addition, this collection includes documents from plants in the eastern United States which were closed prior to the 1980s.

The Waukegan Plant collection (02) includes documents from the Waukegan, IL plant and the Oak Brook, IL office.

The Lompoc Plant collection (03) includes documents from the Lompoc, CA plant.

The World Headquarters (WHQ) collection (04) includes documents which were obtained from a number of locations, including: the Denison, TX plant; the Franklin, PA plant; the Green Cove Springs, FL plant; the Jeffrey Mine in Asbestos, Quebec, Canada; the Long Beach, CA plant; the Lompoc, CA plant; the Marrero, LA plant; the Manville offices in Montreal, Quebec, Canada; the Pompano Beach, FL plant; the Pittsburg, CA plant; the Stockton, CA plant; and the Waukegan, IL plant.

The WHQ collection also includes documents obtained from the files maintained at the World Headquarters, including: the Asbestos Fiber Division; the Audio-Visual Department; Manville Contract Units; the Corporate Information Center; the Corporate Relations Department; the Engineering Department; the Executive offices; the Fiberglass Division; the Filtration and Minerals Division; the Finance Department; the Health, Safety, and Environment offices; the Holophane Division; the Industrial Products Division; the Labor Relations offices; the Legal Department; the Patent and Licensing offices; the Research and Development offices; Sales Offices; and Workers' Compensation records.

Finally, the WHQ collection also includes: asbestos health claims filed against Manville; bankruptcy related materials; documents from the historical records kept at Manville headquarters ("B-Level"); insurance loss runs and policies; local counsel files; legal department files; and miscellaneous asbestos-related documents.

The Microfilm collections (05), (06) also contain documents which were located at World Headquarters. Generally, the same types of documents from the same departments and offices are included. However, at the time of the production in the insurance litigation, these documents were produced on film, usually because the documents were in active files which needed to be maintained for normal operations of the company. Records from the following collections were included in these microfilm collections: patents and licensing department; the Research and Development offices; the Lompoc plant; the Health, Safety, and Environment offices; and the records from the Englewood Cliffs, NJ sales offices; insurance department files; insurance policies; industrial hygiene surveys; administrative bulletins; asbestos medical articles; asbestos health depositions; asbestos health files; Manville Corporation general ledgers from 1919 to 1952; and growth plans from 1971 to 1980. In addition, some document collections produced to insurance companies are also located on film in these collections.

The Local Counsel Boxes (07) collection includes documents from Manville's counsel in California, Illinois and New Jersey.

The Microfilm collection with the redacted documents (08) contains documents from many locations previously mentioned. However, privileged portions of the documents have been redacted, and the redacted copy was filmed, so that the documents could be produced.

The Boxes produced in January, 1989 (09) are documents which had originally been classified as privileged. All privileged documents were reviewed again in 1988 and 1989, and the documents in the 09 collection were determined at that time to be producible.

Box Index

A Box Index for the repository is provided to reviewers. It took six paralegals three months to index the boxes. The microfilm took an additional three months to index. The finished indices were then spot-checked for accuracy by a supervising paralegal with five years experience in the asbestos litigation.

The form used to prepare the index was reviewed in advance by Selected Counsel for the Beneficiaries, a group of three plaintiff's attorneys appointed by the Trust's Board of Trustees to represent the Asbestos Litigation Group. Any changes suggested by these attorneys were incorporated into the form.

The index consists of twenty subject categories, twelve document types, and twelve time periods ranging from pre-1930 to post 1985, in five year increments. Each box and microfilm roll is indexed individually. A box may contain more than one type of document, subject area, or time period.

The Box Index allows reviewers to: 1) establish priorities for their searches; and 2) eliminate large numbers of boxes with irrelevant documents. For example, many boxes contain nothing but sales invoices or payroll records. A reviewer interested in documents relating to knowledge of asbestos health hazards would be able to eliminate those boxes from his or her search on the basis of the Box Index alone.

Reviewers may order a copy of the index so that they can identify the boxes which they wish to review prior to their arrival at the repository. Alternatively, the Fund will provide reviewers with a printout of all the information contained in the index. Finally, the Fund will conduct computer searches of the data base for reviewers who identify the categories in which they are interested.

Review Procedures

The repository is open to all parties to the asbestos litigation. An informational packet on the repository is provided to all parties who express an interest in the collection. It contains information regarding the hours of operation, rules regarding reviews, and procedures for scheduling visits to the repository. Generally speaking, the Fund has been able to accommodate the schedules of persons wishing to conduct a review, and access is often provided with less than one week's notice.

Interrogatory No. 2:

If Manville has, at any time, been engaged in the mining, manufacturing, producing, processing, compounding, converting, selling, merchandising, supplying, distributing, and/or otherwise placing in the stream of commerce asbestos, asbestos products and/or material containing asbestos, be specific in your answer and state:

- (a) The trade name(s) of the product(s);
- (b) The date you first mined, manufactured, produced, processed, compounded, converted, sold, merchandised, supplied, distributed and/or otherwise placed in the stream of commerce your asbestos, asbestos products and/or products containing asbestos;
- (c) The date your asbestos, asbestos products and/or materials containing asbestos were first placed upon the market;

- (d) The inclusive dates of mining, manufacturing, producing, processing, compounding, converting, selling, merchandising, supplying, distributing and/or otherwise placing in the stream of commerce;
- (e) A complete description of the product or products including the components of the product in percentage terms including specifically the percentage of each type of asbestos fiber (i.e., amosite, chrysotile and/or crocidolite) incorporated into the product;
- (f) A description of the physical appearance of such product;
- (g) A description of the intended uses of each such product;
- (h) The specific nature and date of each alteration or change in the composition of the product since the initial date of mining, manufacturing, supplying, distributing, and/or otherwise placing in the stream of commerce.

RESPONSE:

See Exhibit A attached hereto for a list of asbestos containing insulation or shipyard products manufactured by Manville Corporation or related entities. This list includes the product name, product type, fiber type, percent of fiber by weight, years of production and the date labeled.

Additionally, the Fund has in its possession product directories prepared by the Advertising and Public Relations Department from 1959 through 1986. These directories provide information regarding product lines, construction of the product, popular uses, responsible sales division or department, various operating divisions, the plants at which certain products were manufactured, products with a registered trademark, generic product names and competitive product names.

The Fund also has in its possession eighty-three boxes of product literature and brochures. Much of this material came from the Manville Corporate Information Center which contained the corporate library materials for Manville Corporation or related entities. These documents will be produced at the records repository maintained by the Fund in Denver, Colorado at a time agreed upon by the parties.

In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this Interrogatory among the general collection of documents in the repository. This collection of documents will be made available to counsel for review.

See Exhibit B attached hereto for descriptions and intended uses of the products listed in Exhibit A.

The specific composition of asbestos containing products manufactured by Manville Corporation or related entities was changed frequently over the years in order to meet the needs and demands of customers. In general, these changes would have been made on the recommendation of personnel in the Research & Development Department. In addition, minor changes in product formulations were often accomplished at the plant level, depending on the availability and characteristics of certain raw materials. Many of these changes are reflected by manufacturing documents and product specifications which are located in the records repository maintained by the Fund in Denver, Colorado.

Manville also developed asbestos free replacement products for many of the asbestos containing products which were manufactured previously. For the most part, these replacement products differed substantially from the products which they replaced, and were not simply products from which asbestos was removed. No asbestos containing products have been manufactured by Manville since 1985. With respect to asbestos fiber, Manville Corporation or related entities divested their interest in asbestos mining and milling operations in 1983.

Substitutes for thermal insulation asbestos containing products manufactured by Manville Corporation or related entities and the dates of substitution are as follows:

<u>Asbestos containing products</u>	<u>Non-asbestos Products</u>	<u>Date Replaced</u>
SUPEREX-M	SUPEREX-1600	1971/73
SUPEREX-1900	SUPEREX-2000	1971/73
301 Cement	375 Cement	1971
450 Cement	460 Cement	1972/77
500 Cement	505 Cement	1972
THERMOBESTOS	THERMO-12	1972/74
MARINITE 23, 36, & 65	MARINITE XL	1976
METAL-ON (THERMOBESTOS)	METAL-ON (THERMO-12)	1972/74
SUPEREX-2000 (AF later dropped, making replacement product name SUPEREX-2000)	SUPEREX-2000AF	1972
Molded MIN-K (500, 1301, 2000)	Molded MIN-K (500, 1301, 2000)	1973/77
Flexible MIN-K	Flexible MIN-K	1973/77

(High Temperature Std.) (High Temperature Std.)

SONITE

SONITE

1973/74

See also response to Interrogatory No. 1.

Interrogatory No. 3:

Please identify by location and product produced each plant in which products listed in your answer to Interrogatory No. 2 have been manufactured and/or assembled and the dates said plants have been in operation.

RESPONSE:

Manville Corporation or related entities manufactured asbestos containing products at the following locations:

Johns-Manville
High Street
Billerica, Massachusetts 01862
(1940 to 1985)

Johns-Manville
Highway 75
Denison, Texas
(1957 to 1982)

Johns-Manville
2222 W. 5th Street
Fort Worth, Texas
(1952 to 1985)

Johns-Manville
P. O. Box 185
Green Cove Springs, Florida
(1965 to 1982)

Johns-Manville
Laurinburg, North Carolina
(1965 to 1980s)

Johns-Manville
Lawrence, Massachusetts
(1964 to 1974)

Johns-Manville
2500 Miguelito Road
Lompoc, California
(1928 to 1980s)

Johns-Manville
2420 East 223 Street
Long Beach, California 90810
(1938 to 1982)

Johns-Manville
(Watson)
Los Angeles, California
(1929 to 1981)

Johns-Manville
Main Street
Manville, New Jersey 08835
(1913 to 1985)

Johns-Manville
P. O. Box 128
Marrero, Louisiana
(1947 to 1980s)

Johns-Manville
P.O. Box 428
Marshville, North Carolina
(1963 to 1969)

Johns-Manville
Nashua, New Hampshire
(1907 to 1985)

Johns-Manville
P. O. Box 66
North Brunswick, New Jersey
(1947 to 1975)

Johns-Manville
McLean Boulevard at 9th Avenue
Patterson, New Jersey
(1970 to 1975)

Johns-Manville
P. O. Box 591
Pittsburg, California 94565
(1926 to 1980s)

Johns-Manville
Middlefield Road
Redwood City, California
(1932 to 1955)

Johns-Manville
Savannah, Georgia
(1956 to 1985)

Johns-Manville
Sperry Road & Airport Way
Stockton, California
(1957 to 1982)

Johns-Manville
Tilton, New Hampshire 03275
(1948 to 1976)

Johns-Manville
P. O. Box 55
Waukegan, Illinois 60085
(1922 to 1985)

Johns-Manville
P. O. Box 190
Zelienople, Pennsylvania 16163
(1943 to 1973)

To the best of the Fund's knowledge, the following asbestos containing products were among those manufactured at each facility listed below.

BillERICA Plant products included:

Asbestocite
Heat Treated Molten Metal Marinite
Heat Treated Thermostone
Imperial Marinite
Marimet 45
Marinite
Marinite 23
Marinite 30
Marinite 36
Marinite 65
Metal Veneered Marinite
Molten Metal Marinite
Pallite
Permatone Corrugated Transite
Reeferite
Terraceran
Thermostone
Veneered Marinite

Denison Plant products included:

Transite Pipe

Fort Worth Plant products included:

Asbestos Roofing Felts

Green Cove Springs Plant products included:

Transite Pipe

Laurinburg Plant products included:

Railroad Brake Shoes
Rubber Rings

Lompoc Plant products included:

Diaseal M
Fibra-Flo
Precoat Celite 564
Precoat Sorbo-Cel
Sil-O-Cel Hard Finish Cement
Sil-O-Cel Plastic Insulating Cement

Long Beach Plant products included:

Metal On
Thermobestos Block
Thermobestos Insulating Cement
Thermobestos Pipe Covering
Transite Pipe

Los Angeles Plant products included:

15A Asbestos Jacket
45A Asbestos Jacket
Insulkote ET

Manville Plant products included:

0352 Cement
12 lb. Asbestos Tape
15A Asbestos Jacket
45A Asbestos Jacket
#50 Weatherproofing Felt
301 Cement
302 Cement
340 Cement
364 Cement
7700 Coated Asbestos Jacket
85% Magnesia Block
85% Magnesia Pipe Covering
Aertite
Albaseal
Anti-Sweat
Armature Asbestos Paper
Asbestobord

Asbestocel
Asbestos Cloth
Asbestos Fire Felt
Asbestos Firetard
Asbestos Jelly Rolls
Asbestos Paper and Rollboard
Asbestos Pipe Blanket
Asbesto-Sponge (felted, sectional, molded)
Asbestos Roll Fire Felt
Asbestos Rope
Asbestos Sheet
Asbestos Tape
Asbestos Textiles
Asbestos Tubing
Asbestos Turbine Blanket
Asbestos Welding Paper
Automotive Friction Materials
Body Sealer
Branchtite
Ceilinite
Colorsil
Commercial Grade Asbestos Paper
Corrugated Transite
Corspan
D.C. Flexstone
Doublex Asbestos Paper
Duplex Asbestos Paper
Duxseal
Engineers Insulating Tape
Facespan
Fibrofil Cement
Fibroid Asbestos Paper
Fil Insul Cement
Fine Corrugated Asbestocel
Flexboard
Flexible Min-K
H-Navaseal
HF Navaseal
High Strength Fibroid Asbestos Paper
High Temperature Flexible Min-K Blankets
Industrial Vent Caulking
Insulkote ET
Insulkote SG
Insulkote ST
Laptite Cement
Long Fiber Asbestos Paper
Metal On
Microbestos Paper
Millboard 101
Millboard 102
Millboard 103
Millboard 104

Millboard 105
Millboard 106
Millboard 219
Millboard C
Millboard XXX
Min-K 500
Min-K 1301
Min-K 2000
Min-Klad
Molded Packings
MX-3803 Asbestos Filler
Navy 450 Cement
Niagrite
Nodrseal
Non-Burn Asbestos Paper
Pan-O-Cel
Plastiseal F
Silicated Thermobestos Block
Silicated Thermobestos Pipe Covering
Sonite
Standard Flexible Min-K Blankets
Stove Putty
Superex M Block
Superex 1900 Block
Superex Cement
Superex Cement for Navy
Superex M Pipe Covering
Super Fire Felt
Thermobestos Block
Thermobestos Pipe Covering
ThermoFire Felt
Thermomat
Thermotape
Thermowrap
Transhield Asbestos Felt
Transite Pipe
Transite Ridge Roll and Battens
Transoseal
Type T Nodrseal
Uniseal
Vitribestos
Vitro Fire Felt
Wet Strength Fibroid Asbestos Paper
White Surface Asbestos Jacket
Woven Asbestos Sheet Packing

Marrero Plant products included:

15A Asbestos Jacket
7700 Coated Asbestos Jacket
Insulkote ET
Insulkote ST

Laptite Cement
Transite Pipe

Marshville Plant products included:

Asbestos Textiles

Nashua Plant products included:

Aegean
Armor-On
Asbestocite
Chemstone
Colorceran
Colorceran Edge Coating
Colorchip
Colored Marine Veneer
Colorlith
Colorlith Chalkboard
Colorthin
Dekeran
Duplex Asbestos Paper
Ebony
Electrobestos
Fireglaze Stonehenge
Flat Transite
Flexboard
Flexboard "B"
Imperial Walls & Beams
Marine Acoustical Unit
Marine Veneer
Marinite 36
Marinite 65
Molded Ebony
Molded Electrobestos
Molded Unit
Ohmstone
Perforated Colored Marine Veneer
Perforated Fiberboard "S"
Perforated Flexboard
Perforated Marine Veneer
Quadro
Santone
Splitwood II
Steam Cured Transite
Stonehenge
Submarine Bulkhead
Textured Transite
Transite Acoustical Panel
Transite Core Plates, Pallets and Slip Jackets
Transite Core Plate Sheets
Venetia

North Brunswick Plant products included:

Spirotallic Gaskets

Patterson Plant products included:

Die-Formed Rings
Gaskets

Pittsburgh Plant products included:

0352 Cement
6# Asbestos Felt Saturated for Pipe Covering
9# Asbestos Felt for Pipe Line
15A Asbestos Jacket
15# Pipeline Felt
23-1/2# Pipe Line Felt
301 Cement
302 Cement
319 Semi-Refractory Cement
400 Cement
45A Asbestos Jacket
450 Cement
50 Weatherproofing Felt
500 Cement
#55 Asbestos Base Felt
678 Semi-Refractory Cement
Aertite Coating
Anti-Sweat
Asbestile
Asbestocel
Asbestoment Type "S"
Asbesto-Sponge
Commercial Grade Asbestos Paper
Corrugated Transite
D.C. Flexstone
Fibroid Asbestos Paper
Fibrous Adhesive
Flexboard
Glasal Asbestos Cement Sheet
Insulkote ET
Insulkote SG
Insulkote ST
Kearsarge
Laptite Cement
Millboard
Saturated Asbestos Felts for Ply and Pipe Covering
Service Sheet No. 60
Transhiel Asbestos Felt

Redwood City Plant products included:

- 85% Magnesia Block
- 85% Magnesia Cement
- 85% Magnesia Pipe Covering
- 85% Magnesia Pipe Covering for Copper Tubing
- Combination Pipe Covering (85% Magnesia and Superex)
- D.C. Flexstone
- End Lap Strips for Weatherproof Jackets
- Flat, Curved and Lagging Blocks (85% Magnesia and Superex)
- Magnesia Plastic
- Rough 85% Magnesia Sectional Pipe Covering, Segments and Block
- Rough Superex Sectional Pipe Covering, Pipe Blocks and Blocks
- Superex Block
- Superex Cement
- Superex Pipe Covering
- Superex Plastic

Savannah Plant products include:

- Asbestos Roofing Felts

Stockton Plant products included:

- Transite Pipe

Tilton Plant products included:

- Fuel Cell Millboard
- Fuel Cell Paper
- Microbestos
- Millboard, Type 106
- Quinorgo
- Quinorgobord
- Quinterra
- Quinterrabord
- Quintex
- Telgard
- Toasterbord
- TV Bord

Waukegan Plant products included:

- 0352 Cement
- 12# Asbestos Tape
- 15A Asbestos Jacket
- 45A Asbestos Jacket
- #50 Weatherproofing Felt
- 300 Cement
- 300 E Cement
- 301 Cement

302 Cement
304 Cement
319 Semi-Refractory Cement
340 Cement
364 Cement
400 Cement
450 Cement
500 Cement
678 Semi-Refractory Cement
7700 Coated Asbestos Jacket
85% Magnesia Block
85% Magnesia Cement
85% Magnesia Pipe Covering
Aertite
Anti-Sweat
Aqua Covering
Architectural Panels
Asbestile Cement
Asbestoboard
Asbestocel
Asbestoment
Asbestos Fire Felt
Asbestos Firetard
Asbestos Sponge (felted, sectional and molded)
Asbestos Textile Adhesive
Asbestos Welding Paper
Automotive Friction Materials
Commercial Grade Asbestos Paper and Rollboard
Corrugated Transite
D.C. Flexstone
Ebony
Fibroid Asbestos Paper
Fibrofil
Fibrous Adhesive
Fil Insul Cement
Fine Corrugated Asbestocel
Fireite Furnace Cement
Flat Transite
Flexboard
Insulkote ET
Insulkote SG
Insulkote ST
Klefstone
Laptite Cement
Marine Veneer
Millboard 101
Millboard 102
Millboard 103
Millboard 106
Millboard 106B
Millboard 106C
Millboard 106H

Millboard 202
Millboard 219
Millboard 766
Millboard Type A
Millboard Type C
Millboard XXX
MX-3808 Asbestos Filler
Navy 450 Cement
Non-Burn Asbestos Paper
Permatone S
Rentone
Ridge Roll
Santone
Sheet Packing
Splitwood
Super Fire Felt
Superex 1600 Block
Superex 1900 Block
Superex 2000 Block
Superex M Block
Superex SG Block
Superex Cement
Superex Cement for Navy
Superex M Pipe Covering
Superex SG Pipe Covering
Thermo Fire Felt
Thermobestos Block
Thermobestos Cement
Thermobestos Pipe Covering
Thermocore
Transshield Asbestos Felt
Transifoam
Transite Pipe
Transite Ridge Roll and Battens
Transitop
Vitro Fire Felt

Zelienople Plant products included:

Fireite Furnace Cement
Heat Treating Cement

Interrogatory No. 4:

Please list the name and address of each business entity from whom you have received raw asbestos and the dates and amounts received.

RESPONSE:

Manville Corporation or related entities used asbestos fiber obtained from a number of sources. For products which contained chrysotile, much of the fiber used was obtained from the Jeffrey Mine in Asbestos, Quebec, which was owned and operated by a Canadian subsidiary. In addition, Manville Corporation or related entities used fiber from their Coalinga Mine in California, Munro Mine in Ontario, Reeves Mine in Ontario and from their Rhodesian mines in southern Rhodesia. Manville also purchased asbestos from the Advocate Mine in Newfoundland, of which it was part owner. Other sources of chrysotile included: Advocate Mines, Ltd.; Bell Asbestos Mines, Ltd.; Calaveras Asbestos, Ltd.; Cassiar Asbestos Corporation, Ltd.; H.K. Porter Company; Marlime Chrysotile Asbestos Corporation, Ltd.; Metate Asbestos Corporation; Pacific Asbestos Corporation; and Rhodesian Asbestos, Ltd.

Crocidolite and amosite fibers were imported into this country, primarily from South Africa. The suppliers included: Antony Gibbs & Company, Ltd.; Asbestos Investment (Pty), Ltd.; John Beith (S.A.) Pty.; Ltd.; British Metal Corporation; Cape Blue Mines (Pty), Ltd.; Central Asbestos Company, Ltd.; C. J. Petro & Company; Colonial Sugar Refining Company, Ltd.; Egnep (Pty), Ltd.; Flintkote Building Products Group; General Mining & Finance Corporation, Ltd.; General Services Administration; Hooker Chemical Company; John Holt & Company; Norca Corporation; North American Asbestos Corporation; Raw Asbestos Distributors; S.A. Asbestos Trading (Pty), Ltd.; V/O Soyuspromexport; Special Asbestos Company, Inc.; Turner & Newell, Ltd.; Turners Asbestos Fibres, Ltd.; and Watson, Geach & Company, Inc.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 5:

Does Manville have custody, possession or control of any samples of asbestos-containing products? If so:

- (a) Identify each such sample;
- (b) Identify the custodian of each such sample;
- (c) Identify the date on which each such sample was sold and/or distributed by Manville;
- (d) State whether or not each such sample was retrieved from the stream of commerce or was retrieved from warehouses or storage facilities of Manville;

- (e) If it was retrieved from the stream of commerce, identify the person or company from whom it was retrieved;
- (f) If it was retrieved from in-house sources, i.e., warehouses, storage facilities, or sales representative of Manville, identify where and from whom it was received.

RESPONSE:

To the extent any such samples exist, they will be produced at the records repository maintained by the Fund in Denver, Colorado.

Interrogatory No. 6:

Does Manville have custody, possession, or control of any packages that presently or formerly packaged asbestos-containing products. If so:

- (a) Identify each such package;
- (b) Identify the custodian of each such package;
- (c) Identify the date on which each such package was sold and/or distributed by Manville;
- (d) State whether or not each such package was retrieved from the stream of commerce or was retrieved from warehouses or storage facilities of Manville;
- (e) If it was retrieved from the stream of commerce, identify the person or company from whom it was retrieved;
- (f) If it was retrieved from in-house sources, i.e., warehouses, storage facilities, or sales representatives of Manville, identify where and from whom it was received.

RESPONSE:

Samples of any such packages used by Manville Corporation or related entities and all responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 7:

Describe in detail the type of packages in which Manville sold, distributed or delivered asbestos, material containing asbestos, asbestos products and compounds in the Commonwealth of Virginia, listing:

- (a) The date each type of package was used;
- (b) A physical description thereof, including the size of the package, color, and size of any lettering on the package, including warnings of any kind; and
- (c) A description of any printed material or trademarks that appeared on or in said package, including a verbatim statement of any warnings or cautions; and
- (d) The name(s) of the most knowledgeable person(s) concerning the packaging of the asbestos and asbestos products.

RESPONSE:

PRODUCT PACKAGING

Asbestos containing pipe covering and block were placed in Kraft cardboard boxes. Asbestos cements were sold in multi-ply Kraft paper bags or heavy duty, polyethylene bags. Asbestos cloth was rolled, wrapped in laminated kraft paper, tied with tape or twine, and placed in burlap tubing. In later years, reinforced paper was used in place of burlap tubing.

Asbestos yarns were wound on paper tubes and shipped in fiberboard cartons or wooden boxes. Depending on the specified size, asbestos tubing was either wound on spools or cut to specified lengths, and placed in fiberboard cartons. Asbestos tape was rolled, bound with twine, and placed in fiberboard cartons.

Asbestos sheeting was rolled on tubes then wrapped in laminated kraft paper, tied with tape then placed in fiberboard cartons with paper lining between each roll. Larger sheets, which were individually wrapped in kraft paper, were placed in corrugated fiberboard cartons or placed in wooden crates.

Printing on the cartons or bags usually included the J-M logo, the name "Johns-Manville", the product name, the size and the weight. Additional language may have been used from time to time. Some photographs and product literature are located at the document repository maintained by the Fund in Denver, Colorado, and will be produced at a time agreed upon by the parties.

In addition, warning labels were placed on packaging of asbestos containing products beginning in 1964 as set forth below.

Also, the Fund has in its possession finished product specifications and purchase specifications for various asbestos containing products which describe the packaging of each product in detail, any alterations thereto, and the physical description thereof, including placement of warning labels. These specifications will be produced at the records repository maintained by the Fund in Denver, Colorado, at a time agreed upon by the parties.

FIBER PACKAGING

Manville Corporation or related entities first began to sell asbestos fiber in 1916. From that time through the early 1920s, fiber was packed by hand in jute bags. From the 1920s to the 1950s, the fiber was fed into spouts which poured fiber into jute bags. Dimensions of some of the jute bags used were as follows:

20" x 36"
23" x 40"
30" x 40"
32" x 40"
25 1/2" x 42"

In addition to jute bags, the use of open mouthed, two or three ply kraft paper bags began in 1940. The standard dimensions of the open mouthed bags were 16 1/4" x 7 1/2".

Beginning in the late 1940s, Manville Corporation or related entities began to use valve paper bags in addition to the open mouthed bags. This multi-walled bag was constructed of a specified number of plies, then completely sealed except for a sleeved opening on one corner, through which the fiber was injected. Dimensions of the valve bags ranged from 15" x 6 3/4" to 25" x 7 1/4".

Manville Corporation or related entities first began to "pressure pack" fiber in the late 1940s. The pressure pack method allowed the fiber to be automatically weighed out, dropped into a chamber, and compressed into a block. By 1954, all fiber was pressure packed. Jute bags were no longer used after this date unless specifically requested by the customer.

Two standard bags were used in conjunction with the pressure pack method: 1) the open mouthed multi-walled kraft paper bag, described above; and 2) the woven polyethylene bag. Pressure packed woven polyethylene bags were constructed of woven polyethylene filaments, which gave the bag strength and durability. The bags were coated on the outside with a polyethylene film to make it impervious to dust and moisture. The bag was then passed through a bag sealer, which automatically applied glue to the flaps and creased the bag together. These woven polyethylene bags may have been "palletized" for shipment by stacking and gluing several bags together to form a stable load for mechanical handling.

The size of the mold and resulting package dimensions were related to the density of the fiber grade involved. Varied sizes of pressure packers were developed to accommodate ranges of fiber grades and included the following:

11" x 16" x 24"
10" x 16" x 24"
8" x 16" x 24"
7" x 16" x 30"

In the 1970s, additional equipment was developed which was capable of producing high-density blocks of fiber measuring 9" x 12" x 16." These blocks had a density of 100 pounds per cubic foot, approximately twice the density of a standard pressure packed bag. Additionally, in 1972, Manville Corporation or related entities completed modifications of all pressure packaging equipment to allow production of a standard sized package with dimensions of 9" x 15" x 22 1/2." This new package accommodated fifty kilograms of fiber.

Also in the 1970s, Manville Corporation or related entities began to use a newly developed multi-ply unsized kraft paper bag to package fiber which was used in wet papermaking processes. The entire bag could be thrown into the mix, without removing the fiber from the bag.

Manville Corporation or related entities developed packing and shipping procedures designed to avoid damage to the bags during shipment. For example, when palletizing bags of fiber, various stacking arrangements were used to create a stable load. Some of the stacking practices implemented by Manville Corporation or related entities included the five bag pattern, three bag pattern, pinwheel pattern, two bag cross pattern and two bag pattern.

Additionally, it was necessary to pack the fiber in a fashion which would accommodate the customer's unloading practices. Single decking was used when the customer was capable of handling the full height and weight of units. In this case, a pallet was placed under the bottom layer of the bags so that the mechanical equipment could pick up the entire load.

Double decking was used when the customer was incapable of handling a full height and weight unit. In that case, the units which were prepared were approximately one half of the normal height and weight. The types of pallets used included cardboard deck sheets, cardboard deck sheets with stringer, single faced wood, double faced wood and polypropylene sheets.

In order to prevent deterioration of the pallet load during transit and subsequent handling by the customer, Manville Corporation or related entities used adhesive to bond the bags together on the pallet. The adhesive was applied to the face of the bag. If the bags were palletized automatically, as were pressure packed bags, the adhesive was automatically applied by a spray gun. If the bags were palletized manually, the adhesive was applied by brush.

In an additional effort to provide stable pallets for shipping, Manville Corporation or related entities utilized an automatic wrapping machine which wrapped a single or double layer of stretch film around the pallet load.

PRODUCT WARNING LABELS

Manville Corporation or related entities placed warning labels on the packaging of its asbestos containing thermal insulation products from which dust might have been released during installation. These labels and dates of their use are as follows:

1964 to 1970

CAUTION

THIS PRODUCT CONTAINS ASBESTOS FIBER.

INHALATION OF ASBESTOS IN EXCESSIVE
QUANTITIES OVER LONG PERIODS OF TIME
MAY BE HARMFUL.

IF DUST IS CREATED WHEN THIS PRODUCT
IS HANDLED, AVOID BREATHING THE DUST.

IF ADEQUATE VENTILATION CONTROL IS NOT
POSSIBLE, WEAR RESPIRATORS APPROVED BY
THE U.S. BUREAU OF MINES FOR PNEUMOCONIOSIS-
PRODUCING DUSTS.

1970 to 1972

CAUTION

THIS PRODUCT CONTAINS ASBESTOS FIBER.
AVOID BREATHING THE DUST. INHALATION
OF ASBESTOS IN EXCESSIVE QUANTITIES
OVER LONG PERIODS OF TIME MAY BE HARMFUL.

IF DUST IS CREATED WHEN THIS PRODUCT
IS HANDLED, USE PROPER PROTECTION.

IF PROPER DUST CONTROL CANNOT BE PROVIDED,
RESPIRATORS APPROVED BY THE U.S. BUREAU OF
MINES FOR PROTECTION AGAINST THE PNEUMOCONIOSIS-
PRODUCING DUSTS SHOULD BE WORN.

1972 to 1978

CAUTION
CONTAINS ASBESTOS FIBER
AVOID CREATING DUST
BREATHING ASBESTOS DUST MAY CAUSE
SERIOUS BODILY HARM

1978 to 1985

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID BREATHING DUST
BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM
SMOKING GREATLY INCREASES THE
RISK OF SERIOUS BODILY HARM

Manville Corporation or related entities began using these warning labels in 1964, after learning of reports from Dr. Irving J. Selikoff that there was a health risk associated with the installation of some asbestos containing thermal insulation products.

The label in use from 1972 to 1978 was prescribed by the United States Department of Labor, Occupational Safety and Health Administration (OSHA) pursuant to 29 C.F.R. Sec. 1910.1001. In November 1978, this label was revised by Manville Corporation or related entities to include a no-smoking warning.

In addition, product literature and brochures which were distributed to customers also addressed potential health risks associated with the installation of asbestos containing thermal insulation products.

Warning or caution labels which were used for asbestos containing products manufactured by Manville Corporation or related entities were generally located on the packaging material, such as the bag or box. In addition, the caution information was often also stenciled on the top of the shipping unit. However, the exact location of the warning label depended on the type of product

involved. After 1972, labeling practices were dictated in part by United States Department of Labor, Occupational Safety and Health Administration (OSHA).

Asbestos containing pipe covering and block insulation were shipped in cardboard cartons, and a label was printed on a side panels of each carton. For asbestos containing board products, labels were stamped on every sheet or every fifth sheet, depending upon the specific product. Asbestos cements were shipped in multiply kraft paper bags or heavy duty polyethylene bags, and the warning label appeared on the back panel of each bag. Asbestos cloth, shipped in tubes, contained a label on the exterior of each tube. Asbestos containing millboard products, shipped in corrugated cardboard cartons, had a label located on the top side of the carton.

FIBER WARNING LABELS

Manville Corporation or related entities placed warning notices on the packaging of its asbestos fiber. The warning labels and the dates of use are as follows:

1969 to 1972

CAUTION

THIS BAG CONTAINS ASBESTOS FIBER.

PERSONS EXPOSED TO THIS MATERIAL SHOULD
USE ADEQUATE PROTECTIVE DEVICES AS
INHALATION OF THIS MATERIAL OVER LONG
PERIODS MAY BE HARMFUL.

1972 to 1978

CAUTION

CONTAINS ASBESTOS FIBER

AVOID CREATING DUST

BREATHING ASBESTOS DUST MAY CAUSE
SERIOUS BODILY HARM

1978 to 1983

CAUTION

CONTAINS ASBESTOS FIBER

AVOID CREATING DUST

BREATHING ASBESTOS MAY CAUSE
SERIOUS BODILY HARM

SMOKING GREATLY INCREASES THE
RISK OF SERIOUS BODILY HARM

The label in use from 1972 to 1978 was prescribed by the United States Department of Labor, Occupational Safety and Health Administration (OSHA) pursuant to 29 C.F.R., Sec. 1910.1001. In November, 1978, Manville Corporation or related entities revised this label to include a no-smoking warning.

Manville Corporation also placed warnings on all bags containing asbestos fiber in five additional languages; i.e.: French, Dutch, German, Spanish and Japanese. Additional language may have been used from time to time.

In addition, product literature and brochures which were distributed to customers also addressed potential health risks associated with the use of asbestos.

No single person can be considered "most knowledgeable" about more than sixty years of operations of Manville Corporation and related entities. In an effort to be responsive, the Fund will produce corporate organization charts at the records repository maintained by the Fund in Denver, Colorado at a time convenient to the parties.

Interrogatory No. 8:

Identify which products manufactured, distributed or otherwise placed into the stream of commerce by Manville which qualified under any military specifications. For each asbestos-containing product manufactured, distributed, or otherwise placed into the stream of commerce by Manville that qualified under one or more of the military specifications:

- (a) State which military specifications it satisfied; and
- (b) State the inclusive dates that the product was listed on the military qualified products list for that particular military specification.

RESPONSE:

During World War II and all times subsequent, asbestos products were considered strategic and critical materials under national legislation. Manville Corporation or related entities sold various asbestos products which met various specifications written by the United States Navy, the Maritime Commission and other entities, including the American Society for Testing and

Materials (ASTM) Specifications, the Coast Guard Specifications, the Maritime Administration Specifications and various government specifications such as Guide Specifications and Project Specifications. In order to meet many of the standards, new insulation products were developed, resulting in products which were lighter in weight and less flammable. These products also met industry standards.

The Fund has in its possession various specification directories which were designed serve as sales aids in identifying products of Manville Corporation or related entities which were involved with U.S. government specifications. These directories include the specification number, the title of the product and the comparable product material of Manville Corporation or related entities which may or may not comply with the specification. The directories will be made available for inspection and copying at the records repository maintained by the Fund in Denver, Colorado at a time agreed upon by the parties.

In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this Interrogatory among the general collection of documents in the repository. This collection of documents will be made available to plaintiffs for review. See response to Interrogatory No. 1.

Interrogatory No. 9:

Was the composition of any of the asbestos-containing thermal insulation products manufactured and/or distributed by Manville, specifically including asbestos content, intentionally different with regard to sales by Manville of said products to the United States Government or any of its agencies as compared to asbestos-containing thermal insulation products sold and/or distributed by Manville for sale to non-governmental private industrial consumers? If so, state the following:

- (a) The type of asbestos-containing thermal insulation product in which the composition of the product was intentionally different with regard to sales by Manville to the United States Government or any of its agencies as compared to sales to non-governmental private industrial consumers;
- (b) The trade name of any such product;
- (c) The time period during which such intentional variation in the composition of said product(s) occurred;
- (d) Describe each such intentional variation;
- (e) Explain why each such intentional variation occurred; and
- (f) Identify the person or persons who are most knowledgeable concerning these intentional variations.

RESPONSE:

See response to Interrogatory No. 8.

Interrogatory No. 10:

Was there any difference in the packaging of any asbestos-containing thermal insulation product manufactured and/or distributed by Manville and sold to the United States Government or any of its agencies and sold by Manville to non-governmental private industrial consumers? If so, state the following:

- (a) Identify the type of asbestos-containing thermal insulation product which was sold and/or distributed by Manville to the United States Government or any of its agencies in packages that were substantially different from said products sold and/or distributed by Manville to non-governmental private industrial consumers;
- (b) The trade name of any such product;
- (c) The time period during which such differences in packaging occurred;
- (d) If there was a reason for each such difference in packaging, state what each such reason was for each packaging variation; and
- (e) Identify and describe all variations in the packaging of asbestos-containing thermal insulation product(s) identified above that was sold to the United States Government which distinguished such packaging from the asbestos-containing thermal insulation product that was sold to non-governmental private industrial consumers.

RESPONSE:

Manville Corporation or related entities sold their products to the U.S. Government in packaging designed to strictly comply with existing federal and military standards for packaging promulgated by the particular purchasing activity. For example, Military Standard 129 (MIL-STD-129), first promulgated in August 1951, was a compilation of various previous standards of the Army, Navy and other defense related institutions. The purpose of MIL-STD-129 was to provide uniform marking of shipments. Deviations were only permitted upon the approval of the procuring activity. Unauthorized markings were prohibited unless permitted by the procuring activity or by statute or regulation.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time,

there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 11:

Identify by name, address and telephone number, the name of all salesmen (including inside salesmen (in-house) as well as outside salesmen (in the field)) for Manville whose duties included matters pertaining to the sale or distribution of asbestos-containing insulation products in the Commonwealth of Virginia during all years from 1928 through 1972. For each such salesman:

- (a) State the years during which such salesman worked for Manville;
- (b) The territory to which he was assigned; and
- (c) The names and addresses of the customers within that territory to whom sales of asbestos products were made by that salesman.

RESPONSE:

Salesmen of Manville Corporation or related entities responsible for sales of asbestos containing thermal insulation products within the Commonwealth of Virginia during the relevant period of time included the following individuals:

Joseph A. Campbell, Jr.
4821 Eastwick
Toledo, OH 43614

John B. Dorsey
3800 East Mansfield Avenue
Englewood, CO 80110

Arthur E. Flack
6824 Barnett Road
Balt, MD 21239

Patricia Keegan
606 Pickwood Drive
Glenshaw, PA 15116

M.B. O'Malley
113 Sharon Drive
Pittsburgh, PA 15221

W.H. Parker
755 Shady Lane
Mt. Lebanon, PA 15228

R.S. Parsley
5784 Shasta Circle
Littleton, CO 80123

T.P. Williams
226 S. Interlocken Drive
Evergreen, CO 80439

In addition, the following is a list of distributors of asbestos containing products manufactured by Manville Corporation or related entities for the state of Virginia compiled to the best of the Fund's current knowledge and available records:

Virginia

A. Lynn Thomas Company River Avenue, Roanake	12/31/69-1985
Automatic Equipment Sales 300 Swann Avenue, Alexandria 22301 3501 Progress Street, Norfolk 23502 3600 Saunders Avenue, Richmond 23227 3517 Aerial Way Drive, Roanoke 24015	12/31/69-1985 1977-78 1977-78 1977-78
B & B Contracting, Inc. 2729 Dorr Avenue, Merrifield 22116	1977-78
C. E. Thurston 850 Tideware Drive, Norfolk 23501 P.O. Box 968, Richmond 23207 357 Salem Avenue, Roanoke 24007	1978 1978 1978
Caudle-Hyatt, Inc. P.O. Box 65, Fishersville 22939 P.O. Box 127, Hopewell 23869 P.O. Box 4541, Roanoke 24015	1977-78 1977-78 1977-78
Dunham Bush 101 Burgess Road, Harrisonburgh 22801	1977-78
East Coast Metal Distributors, Inc. 1320 School Street, Richmond 23220	1978
Gordon Metal Company 211 South 14th Street, Richmond 23219	9/15/59-1980
Hajoca Corporation P.O. Box 2428, Staunton 24401	1977
Metal Distributing 435 Calvert Avenue, Alexandria 22301	1977-78

N.B. Handy P.O. Box 737, Lynchburg 24505	1977
Noland Company 12515 Jefferson Avenue, Newport News 2324 Church Street, Norfolk 23501	1977-78 1977-78
Norport Supply Company, Inc. 3441 Mangrove Avenue, Norfolk 23502	1977-78
Porter Hayden Company P.O. Box 2116, Ashland 23005 P.O. Box 2321, Norfolk 23513 4109 West Clay Street, Richmond 23230	1977-78 1977-78 1977
Raub Supply 1840 S. Loudoun Street, Winchester 22601	1977
Stevens Supply Company 1716 West First Street, Radford 24141	1977
Waldron, Inc. 885G South Pickett Street, Alexandria 22304	1980
Whitten Electric Piedmont & Edmond, Bristol 24201	8/1/77-1985
Z & M Sheet Metal, Inc. 8425 Hilltop Road, Fairfax 22031	1981

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 12:

When, if at all, did Manville first realize that unprotected exposure to airborne (or inhalation of) asbestos dust and fibers could foreseeably cause illness or disease of any kind?

- (a) What illnesses and/or diseases did Manville discover could foreseeably be caused, precipitated, or aggravated by such exposure;
- (b) The specific date Manville acquired awareness of each disease entity and its foreseeable relationship to asbestos exposure;

- (c) Explain fully how Manville obtained this information, including the source of any such information (i.e., medical articles, papers, journals, or warnings).

RESPONSE:

Representatives of Manville Corporation or related entities became aware of the confirmation of a relationship between asbestos exposure and the disease known as asbestosis in workers involved in mining, milling and manufacturing operations in the early 1930s. This knowledge was acquired: 1) from published medical literature which discussed the relationship between occupational exposure to asbestos and asbestosis among workers involved in asbestos mining and milling and certain asbestos manufacturing operations; and 2) as a result of claims filed by Manville's employees in 1929 and the early 1930s alleging injury due to occupational exposure to excessive quantities of asbestos.

Representatives of Manville Corporation or related entities first learned of a possible relationship between mesothelioma and occupational exposure to asbestos in approximately 1960, when Dr. Wagner of South Africa published an article on this topic. Manville or related entities received a workers' compensation claim which alleged mesothelioma in 1962.

Representatives of Manville or related entities first began to discuss a possible relationship between asbestos exposure and lung cancer in approximately 1943. However, for a number of years, there was no certain confirmation of a causal relationship. In 1955, Dr. Doll of Great Britain published an article on this topic, based on his epidemiological study of asbestos factory workers. Dr. Doll concluded that there was an increased incidence of lung cancer among those occupationally exposed to asbestos. Subsequent research has shown that lung cancer in those occupationally exposed to asbestos occurs primarily, if not exclusively, in persons who also use tobacco products.

Interrogatory No. 13:

When, if at all, did Manville first learn that the United States Government knew that the use or handling of asbestos-containing products without respiratory protection could foreseeably cause lung diseases such as asbestosis, lung cancer, or mesothelioma?

- (a) How did Manville first learn that information;
- (b) Identify the person or persons at Manville who first learned this information;
- (c) Identify any documents which support Manville's answer to this interrogatory;
- (d) Identify all persons who have knowledge concerning this interrogatory.

RESPONSE:

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 14:

Did Manville know that one of the customary work methods for the use of asbestos-containing products involved the use of hand saws, knives and scissors to cut or shape asbestos-containing products to fit around pipes? If so,

- (a) When did Manville first learn this information;
- (b) After learning this information, did Manville ever conduct any test to determine the amount of airborne asbestos fibers created from the cutting and/or shaping of its asbestos-containing products;
- (c) If so, state when and where each such test was conducted;
- (d) If such tests were conducted, identify all such test results, including any correspondence, memorandum, report or document which may reference or contain information about such test results.

RESPONSE:

Yes. The Fund is unable to state with specificity the exact date such knowledge was acquired by Manville Corporation or related entities but most likely was contemporaneous with the production and sale of such products. See response to Interrogatory No. 2.

Beginning in 1968, Manville Corporation or related entities provided the services of an industrial hygienist to Dr. Selikoff and the Mt. Sinai Hospital in New York for the purpose of making environmental evaluations, including dust counts, at construction sites where thermal insulation products were being installed.

This service was provided in conjunction with the joint scientific research program being conducted by the Mt. Sinai Environmental Sciences Laboratory, Johns-Manville Corporation and the International Association of Heat & Frost Insulators and Asbestos Workers Union. Reports of this program were published from time to time and are contained in the Insulation Hygiene Progress Reports from the Insulation Industry Hygiene Research Program, Environmental Sciences Laboratory, Mt. Sinai School of Medicine, New York, NY. These reports, referred to as "green

sheets" and published in The Asbestos Worker magazine, were sent to each insulator who belonged to the union, and described possible health hazards and safe handling procedures.

From 1970 to 1973, surveys were performed at approximately one hundred of the company's fabrication shops and construction sites by Manville's Environmental Control Department. These tests were conducted under the direction of Edmund M. Fenner, now deceased.

In addition, beginning in January 1973, a Manville staff engineer visited company job sites in order to perform dust counts to evaluate the dust levels at various locations. Thereafter, hundreds of tests were taken for airborne concentrations of asbestos.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 15:

With respect to any plants where Manville employees produce or produced asbestos-containing thermal insulation products, identify each employee who has filed a claim under any occupational disease or workers' compensation statute for any asbestos-related disease, including, but not limited to, mesothelioma, asbestosis, and lung cancer for each year from 1930 to 1972. For each individual identified:

- (a) State the date the claim was filed;
- (b) State the date notice of the claim was received by Manville;
- (c) Identify the governmental agency and location where the claim was filed;
- (d) Identify where the records of the claim may be located, examined and copied;
- (e) Identify the docket number of the claim;
- (f) Identify the employee's occupation;
- (g) Identify the disease alleged by the claimant;
- (h) State whether the claim for occupational injury was allowed, disallowed or settled; and
- (i) State whether claim was for living disability benefits or death benefits or both.

RESPONSE:

The workers' compensation records of Manville Corporation or related entities for asbestos-related disease claims are located at the records repository maintained by the Fund in Denver, Colorado. Copies of non-privileged documents in these records will be produced at the repository at a time agreed upon by the parties.

In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 16:

With respect to Manville contract insulation installation units, identify any employees who have filed claims under any occupational or workers' compensation statute for any asbestos-related disease, including, but not limited to, asbestosis, mesothelioma, and/or lung cancer for each year from 1930 to 1972. For each individual identified:

- (a) State the date the claim was filed;
- (b) State the date notice of the claim was received by Manville;
- (c) Identify the governmental agency and location where the claim was filed;
- (d) Identify where the records of the claim may be located, examined and copied;
- (e) Identify the docket number of the claim;
- (f) Identify the employee's occupation;
- (g) Identify the disease alleged by the claimant;
- (h) State whether the claim for occupational injury was allowed, disallowed or settled; and
- (i) State whether claim was for living disability benefits or death benefits or both.

RESPONSE:

On information and belief, the following list contains names of installers of asbestos containing products who filed workers' compensation claims or lawsuits against Manville Corporation or related entities prior to 1970.

Gustave J. Carlson (1935) (MA) asbestosis

Lewis M. Munger (5-18-54) asbestosis
Workmen's Compensation Award B-7297849 (MI)
(Hearing Held, 1959 - 1st reference to Manville)
Settled

Edward L. Campbell (1955) asbestosis
Workmen's Compensation N-24318 (CT)
Settled

Ervey McCarrell (11-30-56) asbestosis
Workmen's Compensation 56-LA-176684 (CA)
(Order Joined Manville 1959)
Settled

John E. Swartout (12-28-55) asbestosis
Workmen's Compensation 55-SF-169171 (CA)
(Manville noticed 1956)
Settled

James W. Riley (7-15-57) pneumoconiosis
Workmen's Compensation 57-LA-182835 (CA)
Settled

Harry Haake (1957) asbestosis
Workmen's Compensation N-34614 (CT)
Settled
Manville not a party to the settlement

Frederick LeGrande (7-17-57) asbestosis
U.S. District Court 741-57, District of New Jersey
Settled

John Yavonditte (1958) asbestosis
Workmen's Compensation 55-80-02394 (NY)

James Cavanaugh, Sr. (1959) asbestosis

Dean Templeton (7-8-60) asbestosis
Workmen's Compensation (MI)
Dismissed for Lack of Prosecution

Clifford Harding (1960) asbestosis

Harvey Curtis (11-21-60) pneumoconiosis
Workmen's Compensation B-9384208 (MI)
Settlement Award Against Owens-Corning Only

Harvey Curtis (9-18-67) asbestosis
Workmen's Compensation (MI)

Ernest F. Gately (1960) asbestosis
Workmen's Compensation

Raymond J. Collins (1961) bronchitis
Workmen's Compensation (NY)

Gladys Faciane (Clarence) (3-20-61) lung disease
Case #77,004, Division "C", 19th Judicial District Court
Parish of East Baton Rouge, Louisiana

Claude J. Tomplait (12-11-61)
Workmen's Compensation #W67299 (TX)
Settled

Claude J. Tomplait (12-23-66)
Civil #5402 U.S. District Court,
Eastern District of Texas, Beaumont Division
Settled

Anthony J. Onofrio (1962)
Workmen's Compensation (CA)

James Vogt (1962) occupational disease
Workmen's Compensation

David Mulligan (1962) asbestosis
Workmen's Compensation
Denied, not total disability

Fred C. Wenham (2-23-61) lung disease
Case #125-61, 3rd Party, U.S. District Court,
New Jersey
Dismissed

William S. McKinney (1962) asbestosis
Workmen's Compensation (OH)
Exposure not established, Disallowed

Faida LaBonte (7-22-63) asbestosis
Workmen's Compensation WCB-563-07823 (NY)

Robert O. Goans (5-16-63) asbestosis
Workmen's Compensation 63-OAK-11052 (CA)
Settled

Willard R. Crader (12-17-64) asbestosis
Workmen's Compensation 64-POM-1939 (CA)
Settled

Paul J. Greischar (4-24-62) asbestosis
(Order joining Manville 4-17-64)
Workmen's Compensation (CA)
Settled

Harry A. Burris (1964) asbestosis
Workmen's Compensation (MA)

Ollie Rogers (6-23-64) asbestosis
Workmen's Compensation (CA)
Settled

Thomas W. Gregory (5-26-64) asbestosis
Workmen's Compensation (TX)

Bernard Wines (3-15-65)
Workmen's Compensation (MI)

Melvin Hunt (2-11-65) pneumoconiosis
Workmen's Compensation 65-LB-29228 (CA)
Settled

Carl Bailey (11-15-65) asbestosis/lung cancer
Workmen's Compensation 65-LA-288822 (CA)
Settled

Henry Peutz (7-22-66) asbestosis
Workmen's Compensation 66-OAK-20668 (CA)
Settled

Kenneth M. Frederick (9-13-66) asbestosis/lung cancer
Workmen's Compensation 66-F-16482 (CA)
Settled

Dean Clark (2-15-66) lung cancer
Workmen's Compensation 66-LA-292043 (CA)
Settled

Lawrence J. Taylor (7-18-66) asbestosis
Workmen's Compensation (MI)

Vernon Lumbattis (2-11-66) asbestosis
Workmen's Compensation 66-LA-291957 (CA)
Settled

Donald F. Bradshaw (1-3-67) asbestosis
Civil #29433, U.S. District Court
Eastern District, Michigan Southern Division
Dismissed

Oscar L. Gilbert (4-19-67) lung injury
Workmen's Compensation 67-ANA-19219 (CA)
Settled

Robert Horsman (10-23-67) asbestosis
Workmen's Compensation 67-LA-316509 (CA)
Settled

William McCormick (11-17-67) pneumoconiosis
Workmen's Compensation 67-LA-317548 (CA)
Settled

Joseph Noto, Jr. (1967) asbestosis

John Tyler (1967) asbestosis

Lawrence F. Brimmer (1968) dust disease

Clyde Nicholson (6-19-68) lung fibrosis
Workmen's Compensation 68-ANA-23276 (CA)
Settled

Frances Rogers (1968) pneumoconiosis

John G. Rauscher (1969) asbestosis

Delmer Lee Austin (1969) asbestosis

Clarence Borel (10-20-69) asbestosis
Claim #6449, U.S. District Court for
Eastern District of Texas, Beaumont Division
Jury Award

J. J. Crawford (12-4-69) asbestosis
Claim #6492, U.S. District Court,
Eastern District of Texas, Beaumont Division

S. R. Potter (1969) asbestosis
Claim #6329, U.S. District Court,
Eastern District of Texas, Beaumont Division
Settled

Also see response to Interrogatory No. 15.

Interrogatory No. 17:

With respect to any plants where Manville produced asbestos-containing thermal insulation products, describe in detail any changes Manville made in work practices and/or equipment used and/or policies developed during the period of its production of such asbestos insulation products, concerning the safety of its plant employees with respect to their exposure to airborne asbestos dust fibers (which would relate to safety procedures, ventilation systems, cleaning procedures, safety equipment, etc.). For any such changes, practices, or policies:

- (a) State the nature of each such change, practice, or policy;
- (b) State the approximate date of such change, practice, or policy;

- (c) State the reason the changes were made; and
- (d) Identify any documents in your possession which reflect such change, practice, or policy.

RESPONSE:

Manville Corporation or related entities responded in a number of ways to various developments with respect to increasing knowledge of health hazards associated with asbestos exposure. These responses included, but were not limited to: 1) the funding of additional research; 2) changes in operating systems within facilities or contract units controlled by Manville Corporation or related entities; 3) the reduction and eventual elimination of asbestos in products manufactured by Manville Corporation or related entities; 4) the promulgation or revision of booklets containing information regarding asbestos health issues; 5) the adoption and modification of warning labels; 6) revision of employee training and education programs; 7) modifications of medical programs offered for employees; 8) modifications of industrial hygiene programs; 9) changes in dust control equipment; 10) changes in job methods or practices; 11) implementation of safer work practices and use of personal protective equipment such as respirators; and 12) modification of product literature.

Many or all of these practices have been in effect in Manville plants which manufacture asbestos containing products since the early 1930s. The practices, procedures and technology have changed substantially with the passage of time, in accordance with developing knowledge in the fields of industrial hygiene and occupational medicine.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 18:

Has Manville ever given medical examinations to its employees who were exposed to airborne asbestos dust and fibers? If so, state:

- (a) When said examinations were given;
- (b) Whether chest x-rays were included in the examinations;
- (c) The names and current addresses of the persons who conducted these examinations;
- (d) Whether any employees who were found to have any asbestos-induced abnormality were so advised.

RESPONSE:

Manville Corporation or related entities provided employees with physical examinations beginning in the 1930s. The frequency and nature of the examination varied considerably over time and from location to location. Generally, chest x-rays were a part of these examinations from the earliest years. Pulmonary function tests were incorporated much later, as that technique gained recognition as a viable tool for the physician. In recent years, the physical examination program for asbestos exposed individuals has been regulated by OSHA.

The following list includes the names of many of the physicians who were employed, either directly or on a contract basis, by Manville Corporation or related entities at asbestos using manufacturing facilities:

Billerica, MA Plant

Edward Parsons Billerica, MA	5/76 to 1985
Orland S. Marshall, M.D. Billerica, MA	1939
Solomon G. Hajjar, M.D. North Billerica, MA	1941 to 1966
Edward Tober, M.D. 170 Merrimack Street Lowell, MA 08153	4/5/67 to 2/1/71
David D. B. Woo, M.D. 5 Andover Road Billerica, MA 08121	2/2/71 to 7/9/71
Ray T. Huffman, M.D. (Address unknown)	7/21/71 to 1/1/74
Dr. Edward Gaensler Boston University School of Medicine 80 East Concord Street Boston, MA 02118	1971 to 1985
Peter M. Glassman, M.D. 190 Littleton Road Westford, MA 01886	3/6/74 to 1985

Denison, TX Plant

Dr. W. H. Brown 1958 to 1974
(Deceased)

Dr. Bedingfield 1956 to
3025 Bull Street at least 1975
Savannah, Georgia 31405

Fort Worth, TX Plant

Mr. Bryan Charles, FACCM 1952 to 1985
Administrator
Dr. Tonymon
Medical and Surgical Clinic
1651 W. Rosedale
Fort Worth, TX 76104

Green Cove Springs, FL Plant

John M. Malone, M.D. 7/65 to 1982
Doctors Building
Green Cove Springs, FL

Laurinburg, NC Plant

Frank J. Ball, Jr., M.D. at least 1988
601 Lauchwood Drive
Laurinburg, NC 28352

Dr. G. E. Forbes 4/65 to 1979
Dr. Donald Woolfolk 1979 to 1985
Medical Arts Building
Laurinburg, NC 28352

Dr. Mark H. Huckeriede 2/28/73 to 5/19/75
Atkinson Street
Laurinburg, NC 28352

Dr. George O. Creed 2/28/78 to 1985
Biggs Street
Laurinburg, NC 28352

Dr. Hugh M. McArn 5/15/75
422 King Street
Laurinburg, NC 28352

Lawrence, MA Plant

(unknown)

Lompoc, CA Plant

P. G. Lineweaver, M.D. Santa Barbara Clinic P.O. Box 1200 Santa Barbara, CA 93102	11/76 to 1985
Gilbert Anderson, M.D. 515 E. Ocean Avenue Lompoc, CA 93436	1/88 to 1985
J. P. Troux, M.D. (Address unknown)	1930 to 1942
Walter B. Anderson, M.D. (Deceased)	1943 to 1954
Milton V. Duncan, M.D. 214 South "H" Street Lompoc, CA 93436	2/54 to 1/31/72
Valley Medical Group James D. Warrick, M.D. Eldon Elam, M.D. Edward R. Wallace, M.D. William H. Gauseman, M.D. 136 North Third Street Lompoc, CA 93436	2/1/72 to 1985

Long Beach, CA Plant

R. W. Stellar, M.D. 1019 Avalon Boulevard Wilmington, CA 90744	1938 to 1946 (Partial)
Carl G. Johnson, M.D. 114 East Seventh Street Long Beach, CA 90813	1946 to 1961 (Partial) 1961 to 1970
C. Brian Tang 757 Pacific Avenue Long Beach, CA 90813	9/81 to 1985
Seaview Medical Group 1127 Avalon Boulevard Wilmington, CA 90744	9/8/70 to 12/31/73
Jared L. Piety, M.D. Mighell Medical and Surgical Group 6510 East Spring Street Long Beach, CA 90815	1/1/74 to 1985

Los Angeles Plant

Southeast Medical Center
2675 East Slauson Avenue
Huntington Park, CA 90255

1955 to ?

Dr. Michael Wald
Southeast Medical Center
2675 East Slauson Avenue
Huntington Park, CA 90255

1970 to ?

Manville, NJ Plant

D. T. DuBow, M.D.
222 Stelle Avenue
Plainfield, NJ 07060

11/29/51 to 12/1/65

E. D. Merrill, M.D.
R.D. 1
Princeton, NJ 08540

6/1/53 to 11/14/69

S. S. Klein, M.D.
242 Union Avenue
Somerville, NJ 08876

11/22/65 to 3/29/68
(Part Time)

B. B. Taylor, M.D.
102 Berkshire Drive
Berkeley Heights, NJ

1/17/66 to 1/31/66

H. W. Locke, M.D.
600 Camden Avenue
Moorestown, NJ 08057

8/1/67 to 8/31/67

S. Z. Neiman, M.D.
Box 381, Route 3
Somerset, NJ 08873

11/2/67 to 10/31/69
(Part Time)

Edward Hurtado, M.D.
155 E. Chestnut Avenue
Metuchen, NJ 08840

12/18/67 to 1/19/73
(Part Time)

R. M. Liss, M.D.
6 Debby Lane
Warren, NJ 07060

1968 to 1985

M. Goldstein, M.D.
130 Easton Avenue
New Brunswick, NJ 08901

7/22/68 to 8/26/68
(Part Time)

A. W. Edlin, M.D.
3524 Route 22
Somerville, NJ 08876

11/3/69 to 5/31/73
(Part Time)
06/01/73 to 1985

Henry Dantzig, M.D.
12 South Franklin Street
Lambertville, NJ 08530

3/9/70 to 5/31/73
6/1/73 to at least
1976

Marrero, LA Plant

Dr. Charles Gelbke
(Deceased)

Prior to 1948

Logan & Nelson
Surgical Clinic
Dr. Logan
Dr. Nelson
(Previously the Westbank Surgical
Clinic. Dr. Francis Gidman)
4475 Westbank Expressway
Marrero, LA 70072

1948 to 1985

Marshville, NC Plant

(unknown)

Nashua, NH Plant

Richard A. Williams, M.D.
30 Dearborn Street
Nashua, NH 03060

11/77 to 1985

Dr. John Fontana
Daniel J. Sullivan, M.D.
23 Scott Avenue
Nashua, NH 03060

1976 to 1977
1945 to 1974

New England Health Services, Inc.
(Previously Known as
Medi-Phase Corporation)
155 Main Dunstable Road
Nashua, NH 03060

7/24/74 to 1985

New Brunswick, NJ Plant

J. Dragon, Jr., M.D.
255 Livingston Avenue
New Brunswick, NJ 08901

1/1/64 to 11/1/68

Middlesex County T. B.
Mobile Unit
New Brunswick, NJ 08903

1/1/64 to 1/1/69
(Periodic x-rays)

W. G. Kuhn, Jr. M.D.
251 Powers Street
New Brunswick, NJ 08901

1/1/64 to 1975
(Orthopedics)

R. G. Matflerd, M.D., P.A. 7 Wirt Street New Brunswick, NJ 08901	1/1/64 to 1975 (Surgery)
S. Goldman, M.D. 161 Livingston Avenue New Brunswick, NJ 08901	1/1/64 to 1/1/75 (Dermatology)
A. E. Greenwald, M.D. 303 George Street New Brunswick, NJ 08901	1/1/65 to 1975 (Surgery)
J. H. Kler, M.D. 151 Livingston Avenue New Brunswick, NJ 08901	1/1/65 to 1975 (Ophthalmology)
W. Rubin, M.D. 184 Livingston Avenue New Brunswick, NJ 08901	1/1/65 to 1975 (Ophthalmology)
Michael Brody, M.D. 228 Livingston Avenue New Brunswick, NJ 08901	1/1/65 to 1975 (Ophthalmology)
J. P. Zawadsky, M.D., P.A. 205 Easton Avenue New Brunswick, NJ 08901	4/1/65 to 1975 (Orthopedics)
A. Whalen, M.D. 330 Livingston Avenue New Brunswick, NJ 08901	5/1/65 (Orthopedics)
X-Ray Group 151 Livingston Avenue New Brunswick, NJ 08901	9/1/65 to 1975 (Pre-employment x-rays)
R. W. Powers, M.D. 7 Wirt Street New Brunswick, NJ 08901	1/1/66 to 1975 (Surgery)
G. Jacoby, M.D. 88 Huntington Street New Brunswick, NJ 08901	1/1/67 to 1975 (Surgery)
H. Bloom, M.D. 211 Livingston Avenue New Brunswick, NJ 08901	9/1/67 to 1975 (Orthopedics)
C. J. Brandwein, M.D., P.A. 223 State Highway #18 East Brunswick, NJ 08816	11/1/68 to 7/1/71

O. J. Sokoloff, M.D., P.A.
69 Paterson Street
New Brunswick, NJ 08901

2/1/70 to 1975
(Dermatology)

A. J. Passanante, M.D.
7 Wirt Street
New Brunswick, NJ 08901

7/1/71 to 7/1/72

N. Kothari, M.D., P.A.
61 Livingston Avenue
New Brunswick, NJ 08901

7/1/72 to 1975

Middlesex County
Rehabilitation Hospital
Drexel Hill, PA

1/1/74 to 1975
(Hearing Exams -
Periodic)

Professional Health Service
Drexel Hill, PA

1/1/74 to 1975
(Periodic x-rays and
Hearing Exams)

E. Stahl, M.D.
130 Easton Avenue
New Brunswick, NJ 08901

1/1/75 to 1975
(Dermatology)

Pittsburg, CA Plant

D. C. Wise, M.D.
Marsh Creek Road
Clayton, CA 94517

1926 to 1964

Edith Wise, M.D.
Marsh Creek Road
Clayton, CA 94517

1926 to 1964

Dr. Kelso
(Deceased)

1962 to 1967

Kent D. Wise, M.D.
2495 Salvio Street
Concord, CA 94520

1963 to 1974

C. L. Kerns, M.D.
242 East 10th Street
Pittsburg, CA 94565

2/68 to 1974

H. C. Hinshaw, M.D.
450 Sutter Street, Suite 1023
San Francisco, CA 94108

1976

D. W. Smith, M.D. 1973 to 1985
398 Greenoaks Drive
Atherton, CA 94025

Savannah, GA Plant

Lawrence J. Lynch, Jr., M.D. 3/78 to 1985
West County Medical & Surgical Clinic
35 Brampton Road
Garden City, GA 31408

Drs. Brown & Bidingfield 1956 to 1985
3025 Bull Street
Savannah, GA 31405

Stockton, CA Plant

Dr. Robert Salter 8/5/57 to 9/1/67
327 East Alpine Avenue
Stockton, CA

Dr. Joseph Wilson 9/2/67 to 3/31/71
2420 North California
Stockton, CA

Dr. Oliver Vannucci 1967 to 1982
Dr. William Arthur
1717 North California Street
Stockton, CA

Tilton, NH Plant

Dr. A. Grevior ? to 1948
Main Street
Tilton, NH

Dr. F. J. Kropp 1948 to
429 Central Street at least 1975
Franklin, NH

Secondary physician:
Dr. F. J. Robinson
308 Main Street
Tilton, NH

Waukegan, IL Plant

Dr. S. L. Keller 1929 to 1953
111 North Sheridan Road
Waukegan, IL 60085

Dr. W. Ewald 1401 Golf Road Waukegan, IL 60085	1937 (Part Time)
Dr. M. Cahan 701 14th Street North Chicago, IL 60064	1942 (Part Time)
Dr. S. L. Larson (Address unknown)	1947 (Part Time)
Dr. Floyd Castator (Address unknown)	1948 to 1952/1961 (Part Time)
Dr. H. Parker (Address unknown)	1952 (Part Time)
Dr. Charles U. Culmer P.O. Box 548 Libertyville, IL 60048	1953 to 1962
Dr. J. A. McHale 1008 Illinois Avenue Racine, WI 53400	1954 to 1955 (Part Time)
Dr. Frederick Wood 6530 Sheridan Road Kenosha, WI 53140	1956 to 1962 (Part Time)
Dr. Thomas H. Davison 2069 Deerfield Road Deerfield, IL 60015	1962 to 1970
Dr. Mark Field 247 West Harrison Street Libertyville, IL 60048	1968 to 1969 (Part Time)
Dr. Daniel D. Brass 1947-A Lexington Avenue Great Lakes, IL 60088	1970 (Part Time)
Dr. W. R. Sloan 1510 E. McElderry Street Baltimore, MD 21205	1970 (Part Time)
Dr. Gerald A. Frank 4006 Yaeger Drive Great Lakes, IL 60088	1970 (Part Time)
Steven Holtzman, M.D. 1020 Glen Flora Avenue Waukegan, IL 60085	1981 to 1985

Dr. Vincent Sarley
682 Pine Street
Deerfield, IL 60015

12/70 to 7/72

Zelienople, PA Plant

T. Warren Wilson, M.D.
100 South Division Street
Zelienople, PA 16063

1940 to 4/75

Ellwood City Hospital

1942 to 1946
(Chest x-rays)

Clark L. Markel, M.D.
South Main Street
Zelienople, PA 16063

1942 to 1967

William Rice, M.D.
252 Connecticut Avenue
Rochester, PA 15074

2/56 to 1985
(Chest x-rays)

Henry C. Thel, M.D.
200 Third Street
Beaver, PA

1965 to 1967

Arthur C. Hoenstine, M.D.
134 Fourth Street
Ellwood City, PA 16117

1967 to 1985

George Janicke, M.D.
South Main Street
Zelienople, PA 16063

5/70 to 3/73

Ricardo Raymundo, M.D.
Northgate Plaza
Zelienople, PA 16063

5/70 to 1985

Louise Etter, M.D.
The Warrendale Clinic
Warrendale, PA 15086

9/72 to 6/74

George J. Jacobs, M.D.
Route 19, Cranberry Park Road
Evans City, PA 16033

8/73 to 1985

Ronald Gilcher, M.D.
Northgate Medical Center
Box 456 - Northgate Drive
Warrendale, PA 15086

1/75 to 1985

Interrogatory No. 19:

During the time that Manville manufactured, sold, or distributed asbestos-containing products, did Manville ever consult with, or receive from, any entity or medical expert(s) in order to determine the existence of any potential hazard of exposure to airborne asbestos dust and fibers. If so, state:

- (a) The date(s) of the consultation(s);
- (b) The names and current addresses of said entities or medical experts;
- (c) What was learned from said consultation;
- (d) What was done as a result of said consultation;
- (e) The name and current address of the custodian of the information received; and
- (f) Identify all documents received or generated which concerns such consultation or information.

RESPONSE:

The physicians employed who have performed consulting services for Manville Corporation or related entities include the following:

SPECIALTY: CARDIOLOGY, CHEST DISEASES

Albert B. Tucker, M.D.
22 North Maple Avenue
Irvington, NJ 07111

SPECIALTY: GI DISEASES

Charles Lightdale, M.D.
Memorial Sloan-Kettering Cancer Center
New York, NY 10021

Dr. Sidney
Memorial Sloan-Kettering Cancer Center
New York, NY 10021

Dr. Winawer
Memorial Sloan-Kettering Cancer Center
New York, NY 10021

SPECIALTY: HEMATOLOGY, ONCOLOGY

Thomas Clynn, M.D.
Chicago, IL

Lyle Munn, M.D.
Chicago, IL

SPECIALTY: HEMATOLOGY, INTERNAL MEDICINE, ONCOLOGY

James Manhart, M.D.
Libertyville, IL 60048

SPECIALTY: INTERNAL MEDICINE

Mahesh Agarwal, M.D.
135 North Greenleaf
Gurnee, IL 60031

D. W. Cugell, M.D.
200 East Superior
Chicago, IL 60611

B. Frazin, M.D.
1616 Grand Avenue
Waukegan, IL 60085

J. P. Freeland, M.D.
1616 Grand Avenue
Waukegan, IL 60085

Kang-Yann Lin, M.D.
1616 Grand Avenue
Waukegan, IL 60031

M. Siddique, M.D.
4343 Grand Avenue
Gurnee, IL 60031

J. Zannini, M.D.
1400 North Western Avenue
Lake Forest, IL 60045

SPECIALTY: OCCUPATIONAL DISEASES

A. J. Lanza, M.D.
(Deceased)

Hallet A. Lewis, M.D.
P.O. Box 7604 - Rincon Annex
San Francisco, CA 94120

SPECIALTY: ONCOLOGY

Frederick B. Cohen, M.D.
292 Beech Road
South Orange, NJ 07079

SPECIALTY: ORTHOPEDICS

H. W. Apfelbach, M.D.
700 Westmoreland
Lake Forest, IL 60045

J. M. Baehr, M.D.
135 North Greenleaf
Gurnee, IL 60031

C. H. Fossier, M.D.
700 Westmoreland
Lake Forest, IL 60045

G. M. Goshgarian, M.D.
2634 Grand Avenue
Waukegan, IL 60085

E. L. Mauer, M.D.
135 North Greenleaf
Gurnee, IL 60031

G. M. Moga, M.D.
135 North Greenleaf
Gurnee, IL 60031

T. W. Penn, M.D.
135 North Greenleaf
Gurnee, IL 60031

James B. Frost, M.D.
800 O'Connor Road
Irving, TX 75061

Carl L. Highgenboten, M.D.
7777 Forest Lane, #23
Dallas, TX 75230

T. C. Lewis, M.D.
403 North Highland
Sherman, TX 75680

Donald M. Mauldin, M.D.
7850 Brookhollow Road
Dallas, TX 75235

Vert Mooney, M.D.
5323 Harry Hines Boulevard
Dallas, TX 75235

Philip E. Rosen, M.D.
12140 Webb Chapel Road
Dallas, TX 75234

David K. Selby, M.D.
6161 Harry Hines Boulevard, #107
Dallas, TX 75235

Earl C. Smith, M.D.
7850 Brookhollow Road
Dallas, TX 75235

SPECIALTY: PATHOLOGY

Paul Kotin, M.D.
4505 South Yosemite, Unit 339
Denver, CO 80237

Marvin Kuschner, M.D., Retired
Dean, School of Medicine
State University of New York
Stoneybrook, NY 11790

SPECIALTY: PULMONARY DISEASES

Allen Armstrong, M.D.
3000 Medical Park Drive
Tampa, FL 33712

Richard M. Burlee, M.D.
2012 North Indiana
Oklahoma City, OK 73106

Benjamin Burrows, M.D.
Director, Division of Respiratory Sciences
University of Arizona Health Sciences Center
Tucson, AZ 85724

John S. Chapman, M.D.
UT Southwestern Medical School
5323 Harry Hines Boulevard
Dallas, TX 75235

John Joseph Connolly, M.D.
Omaha, NE

Patrick James Connors, M.D.
Omaha, NE

J. Lawrence De Polo, M.D.
1638 California Street
Stockton, CA 95204

Joel Duberstein, M.D.
Millburn, NJ 07041

Lawrence Eason, M.D.
5439 Glen Lakes
Dallas, TX 75231

Edward A. Gaensler, M.D.
80 East Concord Street
Boston, MA 02118

Dr. Gherhart
Millburn, NJ 07041

Allen Goldman, M.D.
VA Hospital
13000 North Thirtieth Street
Tampa, FL 33612

Robert Jones, M.D.
New Orleans, LA

Ross C. Kory, M.D.
Chairman of Pulmonary Medicine
Tampa General Hospital
108 Martinique Avenue
Tampa, FL 33606

Robert Kozam, M.D.
Englewood, NJ

David Levin, M.D.
Oklahoma City, OK 73106

Dr. Malovany
Englewood, NJ
Harold G. Muehmore, M.D.
P.O. Box 26901
Oklahoma City, OK 73106

Randall L. Rosenblatt, M.D.
5959 Harry Hines Boulevard
Dallas, TX 75235

Nathan Seriff, M.D.
New York, NY

Stuart Silberstein, M.D.
Englewood, NJ

Clifford Simon, M.D.
Englewood, NJ

Richard Spann, M.D.
Wichita, KS

Hans Weill, M.D.
Tulane Medical Center
1700 Perdido Street
New Orleans, LA 70012

Richard Wilnberg
Millburn, NJ

George Wright, M.D.
3795 South Hibiscus Way
Denver, CO 80237

SPECIALTY: RADIOLOGY

Paul L. Bell, M.D.
3939 Monroe Street
Toledo, OH 43606

Leonard Bristol, M.D.
Trudeau Institute
Saranac Lake, NY 12983

Neal Goodman, M.D.
St. Anthony's Hospital
4231 West Sixteenth Avenue
Denver, CO 80204

Ray Haddad, M.D.
Chief of Pulmonary Medicine
Bridgeport Hospital
Grant Street
Bridgeport, CT 06610

Steven A. Sahn, M.D.
University of Colorado
Health Sciences Center
4200 East Ninth Avenue
Denver, CO 80220

E. Nicholas Sargent, M.D.
1200 North State Street
Los Angeles, CA 90093

Jerome J. Wiot, M.D.
Cincinnati General Hospital
Department of Radiology
Cincinnati, OH 45267

SPECIALTY: UNKNOWN

George Jacobson, M.D.
(Deceased)

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 20:

State whether or not any research or tests were ever conducted by Manville, or at Manville's request, to determine the health hazards associated with the unprotected exposure of human beings to the inhalation of airborne asbestos dust and fibers. If so, state:

- (a) The date(s) of the research;
- (b) The name and current address of anyone connected with conducting said research;
- (c) The results of said research; and
- (d) Identify all documents concerning the above-mentioned research or test(s).

RESPONSE:

Beginning in 1928, Manville Corporation or related entities participated in animal research on the effects of asbestos at the Saranac Laboratory of the Trudeau Foundation in upstate New York. This research was indirectly funded by Manville Corporation or related entities in the form of premium payments and assessments to the Metropolitan Life Insurance Company, which was the immediate sponsor of the study. The amount of these contributions are unknown.

In early 1931, a report of this animal experiment was published by Dr. Leroy U. Gardner, the director of the project, in Vol. 13, No. 3 of the Journal of Industrial Hygiene. This report was entitled "Studies on Experimental Pneumonokoniosis. VI. Inhalation of Asbestos Dust: Its Effect Upon Primary Tuberculosis Infection."

In 1929, shortly after the Saranac animal research began, Manville Corporation or related entities, along with other companies, asked the Metropolitan Life Insurance Company to determine whether asbestos dust was an occupational hazard and, if

so, the nature of the hazard and methods of control. Manville's contributions again were indirect and took the form of increased premiums and assessments of unknown amounts.

The Industrial Hygiene Division of the Department of Public Health of the McGill University Medical School in Montreal assisted Metropolitan Life in this research. The results were published in 1935 in the Public Health Reports, Vol. 50, No. 1, issued by the U.S. Public Health Service. The title of the article was "Effects of the Inhalation of Asbestos Dust on the Lungs of Asbestos Workers" by A. J. Lanza, et al.

As a result of some of this early research, the Saranac Laboratory undertook additional research on the health effects of prolonged excessive inhalation of asbestos fiber. The Quebec Asbestos Mining Association ("QAMA"), of which Manville Corporation was a member, contributed to this new research. A report on this research was delivered at the Seventh Saranac Symposium in 1952 and was entitled "Pulmonary Function Studies in Men Exposed for Ten or More Years to Inhalation of Asbestos Fibers" by Fernand Gregoire and George W. Wright.

As a result of industry sponsored research, the Saranac Laboratory also published an article entitled "Experimental Studies of Asbestosis," by Arthur J. Vorwald, Thomas M. Durkin and Philip C. Pratt, Archives of Industrial Hygiene and Occupational Medicine, January 1951, Vol. 3, Page 1.

In the early 1950s, the Saranac Laboratory obtained funding from the QAMA for an animal research project to investigate the reported association between asbestos exposure and lung cancer. A report entitled "Asbestosis and Pulmonary Cancer" by Arthur J. Vorwald was released in 1952.

The QAMA also sponsored an epidemiological study of lung cancer among asbestos miners in the province of Quebec, Canada. The study was conducted by Daniel C. Braun and T. David Truan for the Industrial Hygiene Foundation of America, Pittsburgh, Pennsylvania. The study was entitled "An Epidemiological Study of Lung Cancer in Asbestos Miners," and appeared in the June 1958, Vol. 17 issue of the Archives of Industrial Health at Page 634.

The Industrial Hygiene Foundation of America conducted inter-tracheal injection experiments on test animals using asbestos fiber taken from an asbestos mine owned by Manville Corporation or related entities. Manville contributed \$1,250 to this study, which was completed in 1968. This study is entitled "The Pulmonary Response to Coalinga Asbestos Dust: A Preliminary Investigation" by Paul Gross, et al.

Manville Corporation or related entities contributed personnel and data to a seven to ten year environmental, clinical and epidemiological study of workers exposed to asbestos which was conducted by the Division of Occupational Health of the United States Public Health Service. Reports relating to or based on such study include the following:

"Measurement of Asbestos Exposure" by Jeremiah R. Lynch and Howard E. Ayer, published in the Journal of Occupational Medicine, (January 1968);

"Research on Health Effects of Asbestos" by Lewis J. Cralley, et al., published in the Journal of Occupational Medicine, (January 1968);

"The Role of Trace Metals on Chemical Carcinogenesis-Asbestos Cancers" by J. R. Dixon, et al., unpublished, but presented at the International Congress of Occupational Health, Tokyo, Japan, (September 1969);

"Identification and Control of Asbestos Exposures" by Lewis J. Cralley, unpublished, but presented at the International Congress on Occupational Health, Tokyo, Japan (September 1969);

"Techniques for the Detection, Identification and Analysis of Fibers" by Robert C. Keenan and Jeremiah R. Lynch, published in the American Industrial Hygiene Association Journal, (September-October 1970).

"Fibrous and Mineral Content of Cosmetic Talcum Products" by Lewis J. Cralley, et al., published in the American Industrial Hygiene Association Journal, (July-August 1968).

Manville Corporation or related entities contributed \$142,400 to a study conducted by the Mt. Sinai School of Medicine, City University of New York, entitled "Biological Effects of Modified Inorganic Fibrous Microparticles." This study commenced November, 1969 and was completed in October, 1970. The purpose of the study was to: 1) explore the development of new biological test systems for fibrous materials; and 2) determine the effect on biological activity of asbestos fiber which had been coated with various physical or chemical substances.

Manville Corporation or related entities contributed \$25,000 on related research, which resulted in the publication of a report entitled "Asbestos Hemolysis" by R. J. Schnitzer and F. L. Pundsack, Environmental Research, January 1970.

Manville Corporation or related entities contributed \$70,000 to the Industrial Hygiene Foundation of America's "Fibrous Dust Study." The purpose of this program was to investigate factors

involved in the pathogenicity of major varieties of asbestos fiber to determine the nature of ferruginous bodies. Reports related to or based on this study include the following:

"Proceedings of the Fibrous Dust Seminar" of the Industrial Hygiene Foundation of America, published in its Medical Series Bulletin No. 16-70, (November 22, 1968);

"Experimental Asbestosis: The Development of Lung Cancer in Rats with Pulmonary Deposits of Chrysotile Asbestos Dust" by Dr. Paul Gross, et al., published in the Archives of Environmental Health, Vol. 16 (September 1967);

"The Pulmonary Response to Fibrous Dusts of Diverse Compositions" by Dr. Paul Gross, et al., published in the American Industrial Hygiene Association Journal, Vol. 31 (March-April 1970);

"'Ferruginous Bodies' in Guinea Pigs" by John M. G. Davis, et al., published in the Archives of Pathology, Vol. 89 (April 1970);

"Pulmonary Ferruginous Bodies" by Dr. Paul Gross, et al., published in the Archives of Pathology, Vol. 85 (May 1968);

"Pulmonary Ferruginous Bodies in City Dwellers, A Study of Their Central Fiber" by Dr. Paul Gross, et al., published in the Archives of Environmental Health, Vol. 19 (August 1969);

"Ferruginous Bodies in Human Lungs" by Michael D. Utidjian, et al., published in the Archives of Environmental Health, Vol. 17 (September 1968);

"Asbestos Bioeffects Research for Industry" by the Industrial Hygiene Foundation of America, Inc., published in its Medical Series, Bulletin No. 11, (1966).

QAMA contributed \$200,000 for a study of the health effects of asbestos exposure on workers in the asbestos cement manufacturing industry in the New Orleans area. Manville Corporation or related entities furnished approximately \$142,000 of the \$200,000. In addition, Manville contributed the time of its personnel. This study began in 1969 and concentrated on the health status of present and former employees in Manville and National Gypsum Company plants in and around New Orleans. Reports of this study include the following:

"Asbestosis in Asbestos Cement Workers" by Philip E. Enterline and Hans Weill, presented at LYON Conference, (October 1972);

"Radiographic and Physiologic Patterns Among Workers Engaged in Manufacture of Asbestos Cement Product, A Preliminary

Report" by Hans Weill, et al., published in the Journal of Occupational Medicine, Vol. 15 (March 1973);

"Lung Function Consequences of Dust Exposure in Asbestos Cement Manufacturing Plants" by Hans Weill, et al., published in Archives of Environmental Health, Vol. 30 (February 1975);

"Influence of Dose and Fiber Type on Respiratory Malignancy Risk in Asbestos Cement Manufacturing" by Hans Weill, et al., published in American Review of Respiratory Disease, Vol. 120 (1979);

"Lung Cancer Risk Associated with Manufacture of Asbestos-Cement Products" by J. Hughes and H. Weill, published in Biological Effects of Mineral Fibers, Vol. 2, International Agency for Research on Cancer Scientific Publications No. 30, Lyon (1980);

"Immunologic Aberrations in Asbestos Cement Workers: Dissociation from Asbestosis" by R. D. deShazo, et al., published in the Journal of Allergy and Clinical Immunology, Vol. 72, (November 1983);

"Mortality of Workers Employed in Two Asbestos Cement Manufacturing Plants" by Janet M. Hughes, et al., published in the British Journal of Industrial Medicine, Vol. 44 (1987).

The Institute of Occupational and Environmental Health of QAMA conducted a study to compare the health status of an asbestos-exposed population to a non-exposed population in Canada. This study was conducted under the direction of Dr. J. C. McDonald, McGill University, Montreal, Canada. Reports generated by this study include the following:

"Qualitative Aspects of Dust Exposure in the Quebec Asbestos Mining and Milling Industry" by G. W. Gibbs, presented at the Third International Symposium on Inhaled Particles, British Occupational Hygiene Society, London (September 1970);

"Epidemiology of Primary Malignant Mesothelial tumors in Canada" by A. D. McDonald, et al., published in CANCER, Vol. 26, No. 4 (October 1970);

"Recent Developments in Asbestosis," by Dr. Premysl V. Pelnar, published in Studia Laboris et Salutis, (1970);

"Mortality from Lung Cancer and Other Causes in the Chrysotile Asbestos Mines and Mills of Quebec" by Dr. J. Corbett McDonald, et al., published in the Archives of Environmental Health, Vol. 22 (June 1971);

"Respiratory Symptoms in Chrysotile Asbestos Mine and Mill Workers of Quebec" by Dr. J. Corbett McDonald, et al., published in the Archives of Environmental Health, Vol. 24 (May 1972);

"Lung Function in Chrysotile Asbestos Mine and Mill Workers of Quebec" by Dr. Margaret R. Becklake, et al., published in the Archives of Environmental Health, Vol. 24 (June 1972);

"The Health of Chrysotile Asbestos Mine and Mill Workers of Quebec" by Dr. J. Corbett McDonald, et al., published in the Archives of Environmental Health, Vol. 28 (February 1974);

"Radiological Changes Over Twenty Years in Relation to Chrysotile Exposure in Quebec" by Douglas Liddell et al., and published in Inhaled Particles and Vapours: IV, (1977);

"Radiological Findings as Predictors of Mortality in Quebec Asbestos Workers" by F. D. K. Liddell and J. C. McDonald published in the British Journal of Industrial Medicine, Vol. 37 (1980);

"Follow-Up Respiratory Measurements in Quebec Chrysotile Asbestos Miners and Millers" by Dr. Margaret R. Becklake, et al., published in the Scandinavian Journal of Work, Environment and Health 8, Supplement 1 (1982);

"Fibre Exposure and Mortality from Pneumoconiosis, Respiratory and Abdominal Malignancies in Chrysotile Production in Quebec, 1926-75" by F. D. K. Liddell, et al., published in the Annals of the Academy of Medicine of Singapore, Vol. 13, 2nd Supplement (1984).

Manville Corporation or related entities also sponsored certain studies by Dr. Kenneth W. Smith, a full-time Manville employee. Reports of Dr. Smith's studies are as follows:

"Asbestosis" printed in The Pneumoconioses, by Kenneth W. Smith (approximately 1963);

"Pulmonary Disability in Asbestos Workers" by Kenneth W. Smith printed in the A.M.A. Archives of Industrial Health, Vol. 12 (August 1955);

"Trends in the Health of the Asbestos Worker" by Kenneth W. Smith, published in the Annals of New York Academy of Sciences, Vol. 132, Article 1 (December 1965).

In January, 1977, Manville Corporation or related entities contributed \$250,000 to the Mount Sinai School of Medicine to fund a mesothelioma treatment study and program. This was a cooperative effort by Manville and the International Association of Heat &

Frost Insulators and Asbestos Workers Union, which also contributed \$250,000. The director of the Program was Irving J. Selikoff, M.D.

Manville Corporation or related entities released a report on August 2, 1982, which set forth the findings of a study performed for Manville by Epidemiology Resources, Inc. This report, entitled "Projections of Asbestos-Related Disease 1980-2009" attempted to project the incidence of asbestos-related disease over the next three decades.

On information and belief, the Fund states that Manville Corporation or related entities continue to monitor current workers and retirees who have previously worked with asbestos, as a part of the overall surveillance program incorporated in MESHIMS (Manville's Environmental Safety and Health Information Management System).

Beginning in 1968, Manville Corporation or related entities also sponsored studies relating to possible risks associated with the installation or removal of asbestos containing thermal insulation products. In that year, Manville joined in the establishment of the Insulation Industry Hygiene Research Program, Mount Sinai School of Medicine. The purposes of this study were as follows:

- (1) to develop improved methods for minimizing inhalation by insulation workers of dust and fumes encountered in their work;
- (2) to disseminate knowledge of those improved methods of dust and fume control wherever they may be applied advantageously; and
- (3) to offer cooperation, advice and assistance toward universal adoption of these methods.

The Program Director was Irving J. Selikoff, M.D.

In 1969-1970, Thomas J. Weeks and Allen F. Burns conducted tests for the Insulation Industry Hygiene Research Program at Manville's Research and Engineering Center at Manville, New Jersey. The report on these tests was entitled "Performance of Dust Respirators against a Fibrous Dust," and was published in American Industrial Hygiene Association Journal, (May-June 1970).

In addition, in 1968, the Clinica del Lavoro, Milano, Italy, initiated an epidemiological study of the biological effects of asbestos dust among the Port of Genoa and LaSpezia Arsenal insulation workers. This study was sponsored by the Institute of Occupational and Environmental Health, which was, in turn, funded by QAMA. Manville Corporation or related entities contributed to the funding of the Quebec Asbestos Mining Association. The report

generated by this study was entitled "Research Project: Epidemiological Study on the Biological Effects of Asbestos Dust at the Balangero Mine and among the Port of Genoa and LaSpezia Arsenal Insulation Workers" by Enrico C. Vigliani (June 16, 1972), Report Clinica del Lavoro "Luigi Devoto."

Manville Corporation or related entities contributed to studies conducted by Dr. Clark Cooper and others at the University of California, Berkeley, through membership in the National Insulation Manufacturers Association. Reports generated by this research include the following:

"Industrial Hygiene for Insulation Workers" by J. Leroy Balzer, published in the Journal of Occupational Medicine, (January 1968);

"Environmental Exposures in the Insulation Trade" by J. Leroy Balzer, published in NICA Outlook, (April 1970);

"Evaluation and Control of Asbestos Exposures in the Insulating Trade" by Clark W. Cooper and J. Leroy Balzer, Second International Conference Biological Effects of Asbestos, Dresden (1968);

"Asbestos in Relation to the type of Fibre and Dose in the Insulation Industry" by W. Clark Cooper and J. Miedema, LYON Conference, (October 1972).

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 21:

During the time that Manville manufactured, sold, or distributed asbestos-containing products, list all published literature or medical articles of which Manville was aware which dealt with asbestosis, lung cancer, or mesothelioma, due to unprotected exposure to, or inhalation of, airborne asbestos dust and fibers. Specify the date, month and year of each such article and how long after publication Manville became aware of the existence of the article.

RESPONSE:

Documents known and available to the Fund state that as of 1982, Manville Corporation or related entities subscribed to the

following journals or periodicals. The dates in parentheses represent the first year of subscription.

Advanced Data (1976)
AIHA Journal (1960)
AIHA Newsletter - Periodic newsletter through membership (Unknown)
American Journal of Epidemiology (1975)
American Journal of Industrial Medicine (1980)
American Journal of Law and Medicine (1977)
American Journal of Nursing (1976)
American Journal of Pathology (1974)
American Journal of Public Health (1975)
American Review of Respiratory Disease (1975)
American Scientist (1975)
AWWA Journal (1974)
Annals of Occupational Hygiene (1974)
AOMA Report - Periodic newsletter through membership (Unknown)
Archives of Environmental Health (1973)
Asbestos (1960)
Asbestos Worker (1962)
Audio Visual Communication (1976)
A V Guide (1976)
British Journal of Cancer (1975)
British Journal of Industrial Medicine (1972)
Business Week (1972)
CA Cancer/Clinic (1969)
CAL OSHA Labor (1977)
CAL OSHA News (1979)
CAL OSHA Reporter (1974)
CAL OSHA, Title 8 (1976)
Canadian Medical Association Journal (1980)
Canadian Occupational Safety and Health Law (1980)
Cancer (1974)
Cancergram (1978)
Cancer News (1975)
Cancer Research (1974)
Chemical & Engineering News (1970)
Chemical Regulation Reporter (BNA) (1980)
Chemical Week (1972)
The Chemical Worker
Chest (1970-71; 1974)
Congressional Staff Directory (Unknown)
CPSC Memo (1980)
CPSC Publication Calendar (1980)
Dangerous Property Industrial Materials Report (1980)
Defendant Employment/OSHA, Contests (1979)
Dun's Review (1974)
Editor & Publisher (1978)
Emergency Medicine (1977)
Enterprise (1977)
Environment (1978)
Environment Reporter (BNA) (1977)

Environment Health Letter (1972)
 Environmental Health Perspectives (1972)
 Environmental Pollution & Control (1972)
 Environmental Research (1974)
 Environmental Science & Technology (1977)
 Environmental Study Conference (1978)
 Experimental Lung Research (1979)
 FDA Drug Bulletin (1981)
 Federal Register (1972)
 Federal Yellow Book (1978)
 Federation Proceedings (1970)
 Food Chemical News (1974)
 Harvard Business Review (1950)
 Harvard Environmental Law Review (1981)
 Harvard Medical School of Health Letter (1978)
 Hazardous Materials Management Journal (1979)
 Hazardous Substances Advisory (1980)
 Hazardous Waste News (1980)
 IARC Monogram (Carcinoma Risk/Chemical to Man) (1980)
 IARC Scientific Series (1980)
 Industrial Hygiene Digest (1964)
 Industrial Hygiene News (1976)
 Industrial Hygiene News Report (1974)
 Industrial Photography (1976)
 Industry Week (1974)
 International Archives of Occupational & Environmental Health
 (1979)
 ILO Information (1975)
 Job Safety & Health Report (1974)
 Journal of Air Pollution Association (1973)
 Journal of American Medical Association (1956)
 Journal of Environmental Health (1974)
 Journal of Environmental Pathology/Toxicology (1977)
 Journal of Hazardous Materials (1975)
 Journal of the National Cancer Institute (1978)
 Journal of Occupational Medicine (1975)
 Journal of Society/Occupational Medicine (1975)
 Journal of Toxicology & Environmental Health (1977)
 Laboratory Management Alcohol Journal (1976)
 Laboratory/Occupational Health Program Monitor (1974)
 Lancet (1975)
 Mayo Clinic Proceedings (1976)
 Media & Methods (1976)
 Medical World News (1975)
 Medicolegal News (1975)
 Mine Injuries & Work Time Quarterly (1978)
 Mine Safety/Health Administration Mailings (1979)
 Mine Safety & Health Reporter (BNA) (1979)
 Monthly Labor Review (1976)
 Monthly Vital Statistics (1976)
 Morbidity & Mortality (1975)
 NAS News Report (1977)

The Nation's Health (1978)
 NICA (National Insulation Contractors Association)
 Outlook (1974)
 National Library of Medical News (1975)
 National Safety Council Library Bulletin (1975)
 National Safety Council Data Sheets (1975)
 Nature (1980)
 New England Journal of Medicine (1974)
 New York Times (Newspaper) (1976)
 Noise Control Report (1974)
 Noise Regulation Reporter (1975)
 Nosology News (1981)
 NTIS Newsline (1980)
 NTP Technical Bulletin (1980)
 OAG Airline Guide (1976)
 OAG Travel Planner (1977)
 Occupational Hazards (1971)
 Occupational Health (St. Joseph's Hospital-Denver) (1977)
 Occupational Health Nursing (1969)
 Occupational Health & Safety (1976)
 Occupational Health & Safety Letter (1972)
 Occupational Safety & Health Reporter (BNA) (1973)
 Oncology Times (1980)
 OSHA Report (MAN Manager) (1973)
 OSHA Regulations Update Services (1979)
 Pathologist (1974)
 Preventive Medicine (1980)
 Product Safety & Liability Reporter (1977)
 Scandinavian Journal of Work/Environment & Health (1975)
 Science (1974)
 Science News (1975)
 The Sciences (1974)
 Scientific Medicine (1980)
 Scientific American Medicine (Update) (1980)
 Sound & Vibration (1980)
 Source Data (1980)
 State Regulation Report of Toxic Substances & Hazardous Waste
 (1974)
 The Tobacco Observer (1979)
 Today's Secretary (1976)
 Tox Tips (1978)
 Toxic Materials News (1974)
 Toxic Materials Reference Service (1977)
 Toxic Substance Journal (1979)
 Toxicology & Applied Pharmacology (1975)
 Wall Street Journal (1976)
 Washington Post (1976)

The Fund has 115 boxes in its possession, custody or control which were obtained from the Manville Corporate Information Center and which may contain documents responsive to this Interrogatory. These boxes and all specifically identified documents in the

possession, custody and control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 22:

During the time that Manville manufactured, sold, or distributed asbestos-containing products, did any employee of Manville, or group of employees, agents, or consultants, ever discuss or consider (a) the possible impact that warning users of its asbestos products about asbestos hazards would or could have on sales of its asbestos-containing product as well as (b) what impact greater public knowledge of potential asbestos hazards would or could have on sales of its asbestos-containing products.

If so, please identify all person involved in such discussions and identify and produce all documents pertaining to each such discussion or consideration.

RESPONSE:

Yes. All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 23:

If Manville has ever given any information to Manville's employees concerning any potential hazards of exposure to asbestos, state:

- (a) The specific information given;
- (b) The date(s) on which said information was given;
- (c) The manner in which said information was given;
- (d) By whom was said information given (give names and current addresses);
- (e) To whom was said information given (give names and current addresses);
- (f) The name and current address of the custodian of any records concerning the information given.

RESPONSE:

Manville Corporation or related entities distributed the following materials to employees who were exposed to asbestos or asbestos containing products in the course of their employment:

An employee notification form entitled "Dear Johns-Manville Employee" reminded employees of the risks associated with asbestos exposure. This was inserted in paychecks of all employees at all Johns-Manville Sales Corporation contract units beginning in 1970.

A pamphlet entitled "Safe Work Manual" published by Johns-Manville Corporation in 1971.

A booklet entitled "What Every Employee Should Know About Asbestos" published by Johns-Manville Corporation in 1973. This booklet was distributed to all employees at all locations using asbestos fiber or handling products containing asbestos fiber.

A pamphlet entitled "Recommended Safety Practices for Handling Asbestos Fiber" published by Johns-Manville Corporation in November 1973. This booklet was distributed to all employees at all locations using asbestos fiber or handling products containing asbestos fiber.

A booklet entitled "What You Should Know Asbestos and Health" published by Johns-Manville Corporation in January 1975. This booklet was distributed to all employees at all locations using asbestos fiber or handling products containing asbestos fiber.

A booklet entitled "Before You Begin" published by Johns-Manville Corporation in 1976 and designed to be given to prospective employees before beginning work in an asbestos-using operation.

A booklet entitled "Questions and Answers Concerning Asbestos" published by Johns-Manville Corporation in 1982.

In 1976, Manville Corporation or related entities began to publish a Catalog of Occupational Environmental Health and Safety Programs as listed below. All of the publications, audio-visual programs and other material listed in this catalog were made available to Manville customers and public interest groups as well as to all Manville personnel.

A pamphlet entitled "Occupational Health Guide - Asbestos" published by Johns-Manville Corporation in 1976. This guide is designed as a reference for supervisory personnel.

A 25-minute slide/tape presentation on industrial hygiene programs at Manville.

A 20-minute slide/tape program on health aspects of working with asbestos.

A 25-minute motion picture on occupational health risks associated with asbestos fiber.

A newspaper entitled "The Asbestos Report" published by Johns-Manville Corporation in 1976.

In 1980, Manville Corporation or related entities published the 1980-1981 edition of the Health, Safety and Environment Catalog which, in addition to the above, included:

"A Study of the Problem of Asbestos in Water," which was a reprint of a report by the American Water Works Association Research Foundation. This report was the result of intensive study and literature search and covered all aspects of the use and safety of asbestos-cement pipe materials.

"Asbestos Facts," published by Johns-Manville Corporation, was a series of one-page fact sheets covering various aspects of the asbestos and health issue.

"Asbestos Minerals in Modern Technology," published by Johns-Manville Corporation, was a comprehensive review of mineralogy.

"Does Asbestos-Cement Pipe Pose a Health Hazard?" This reprint of an article in California Builder & Engineer discussed the health questions regarding the use of asbestos-cement pipe.

"Dust Control Techniques in the Asbestos Industry," published by Johns-Manville Corporation, summarized engineering efforts at Manville to control the emission of asbestos in mining, milling and manufacturing operations.

"The Asbestos Issue: A Matter of Principle," published by Johns-Manville Corporation in 1979, reported on issues related to asbestos health concerns and covered research efforts, Manville health programs and actions.

"Today: Special Asbestos Update," published by Johns-Manville Corporation, covered asbestos policy, benefits and applications, types of diseases and groups affected.

Manville Corporation or related entities cooperated with the Asbestos Information Association in the production of the following booklets:

"Recommended Work Practices - Molding and Fabrication of Asbestos-Containing Plastic Products."

"Recommended Work Practices - Fabrication and Use of Asbestos Friction Materials."

"Recommended Work Practices - Fabrication and Use of Asbestos Paper Products."

"Recommended Work Practices - Shop and Field Fabrication of Asbestos Sheet Products."

"Recommended Work Practices - Use and Handling of Asbestos Textile Products."

Additionally, Manville Corporation or related entities participated in 1971 through the Occupational Health and Safety Committee of the National Insulation Contractors Association in the preparation of a booklet entitled "Safety Reminders."

Over the years, Manville Corporation or related entities also produced, published or distributed for use by employees a number of booklets which addressed a number of different safety and health issues in Manville operations. Many of these booklets addressed safe work practices to minimize exposure to dust.

In addition, until Manville Corporation or related entities ceased manufacturing asbestos containing materials, there were many oral presentations and meetings at the plant level concerning safety practices related to asbestos exposure.

Manville Corporation or related entities directly or indirectly advised its contract unit personnel to utilize ventilation equipment, good housekeeping procedures and personal protective equipment, such as respirators, at the sites where finished insulation products were being worked with and applied.

Beginning in 1968, Manville Corporation or related entities provided the services of an industrial hygienist to Dr. Selikoff and the Mt. Sinai Hospital in New York for the purpose of making environmental evaluations, including dust counts, at construction sites where thermal insulation products were being installed. Some Manville contract units were included in this program.

This service was provided in conjunction with the joint scientific research program being conducted by the Mt. Sinai Environmental Sciences Laboratory, Johns-Manville Corporation and the International Association of Heat & Frost Insulators and Asbestos Workers Union. Reports of this program were published from time to time and are contained in the Insulation Hygiene Progress Reports from the Insulation Industry Hygiene Research Program, Environmental Sciences Laboratory, Mt. Sinai School of Medicine, New York, NY. These reports, referred to as "green

sheets" and published in The Asbestos Worker magazine, were sent to each insulator who belonged to the union, and described possible health hazards and safe handling procedures.

Manville Corporation or related entities also made efforts to educate contract unit employees regarding the risks associated with asbestos exposure. Manville participated in and contributed to the informational and educational program of the National Insulation Manufacturers Association (NIMA). This program was designed to educate the insulation contractors' industry with respect to the health aspects of exposure to asbestos.

To this end, NIMA sponsored a number of regional meetings to aid contractors in minimizing or eliminating the inhalation of asbestos fibers by those who worked with, installed or applied asbestos containing thermal insulation products. In 1967 and 1968, approximately eight hundred insulation contractors attended these regional meetings.

Approximately three hours in length, these programs included a review of: 1) the biological effects of exposure to asbestos; 2) the threshold limit value for asbestos; 3) methods for evaluating concentrations of dust; and 4) engineering and method recommendations designed to assist the contractors in dust abatement and environmental control.

The highlights of these presentations were published in several booklets prepared by NIMA. One such booklet, entitled "Recommended Safe Practices for Handling and Applying Thermal Insulation Products Containing Asbestos" printed May 1, 1968, was written by members of the NIMA Education and Information Committee. This booklet was distributed during the 1968 meetings. In addition, the booklet was distributed to customers, employees and other interested parties.

The chairman of the NIMA Education and Information Committee was Clifford L. Sheckler, who, at that time, was Manager, Accident Prevention and Health Administration at Manville Corporation. Other members of the committee included John Vyverberg, Owens-Corning Fiberglass Corporation; Harry Mesler, Ruberoid Company; Leon Horowitz, Certain-Teed Corporation; and Jack Barnhart, Executive Secretary of NIMA.

Manville's communications to applicators were primarily oral and in the form of implementing work practices. At regular meetings, Manville Corporation or related entities communicated with its district managers in charge of contract units as to the possible hazard. In turn, district managers and other supervisory personnel working under their direction discussed possible hazards with insulation applicators.

Moreover, insulation applicators who were employed by Manville Corporation or related entities were members of the Heat and Frost Insulators and Asbestos Workers Union, which was actively involved in educational efforts regarding possible health hazards associated with asbestos exposure. The union members who were employed by Manville were, in turn, addressing questions relating to health issues to supervisory personnel at the contract units. Thus, there was an ongoing dialogue with employees regarding these topics.

Manville Corporation or related entities also issued various memoranda or directives relating to the safe handling of asbestos containing thermal insulation materials. Many of these memoranda were later incorporated in Manville's "Fab Shop Guide," first published in 1971. This guide addressed all aspects of the use and installation of asbestos containing thermal insulation materials, and was provided to Manville management and employees at locations where warehouse or field insulation fabrication shops were installed. The guide recommended equipment, layout and procedures designed to comply with OSHA and corporate safety, health and environmental control standards.

In addition, Manville Corporation and related entities prepared and distributed to its applicators a manual entitled "Contract Unit Procedures," first issued in 1964. In July 1981, Manville's Industrial Products Division Contract Department prepared and distributed the "Asbestos Control Guide," to serve as a guide in the removal of asbestos containing insulation materials.

See also responses to Interrogatories Nos. 7 and 17.

Interrogatory No. 24:

As to each product containing asbestos distributed by Manville, state whether any of said products were distributed by Manville with any safety instructions, cautionary language, or warnings inside the packages of asbestos-containing products sold, supplied, or distributed by it.

If so,

- (a) State the content of each such safety instruction, cautionary language, and warning;
- (b) State the times during which such safety instructions, cautionary language, or warning was included; and
- (c) Identify the person or persons at Manville who are most knowledgeable concerning any safety instructions, cautionary language, or warnings inside the packages of asbestos-containing products sold, supplied, or distributed by it.

RESPONSE:

See response to Interrogatory No. 7.

Interrogatory No. 25:

As to each product containing asbestos distributed by Manville, state whether any of said products were distributed by Manville with any safety instructions, cautionary language, or warnings on the asbestos-containing products themselves, or physically attached to the asbestos-containing products sold, supplied, or distributed by it.

If so,

- (a) State the content of each such safety instruction, cautionary language, and warning;
- (b) Describe the size and location of the language on the product;
- (c) State the times during which such safety instructions, cautionary language, or warning was included; and
- (d) Identify the person or persons at Manville who are most knowledgeable concerning any safety instructions, cautionary language, or warnings on the asbestos-containing products sold, supplied, or distributed by it.

RESPONSE:

See response to Interrogatory No. 7.

Interrogatory No. 26:

If any cautionary language ever appeared on the package of any product containing asbestos distributed by Manville at the time the package of said product was received by Manville, state:

- (a) the specific dates during which said cautionary language appeared;
- (b) the specific language that was used;
- (c) the size and location of that cautionary language on the package; and
- (d) which products' package or container was so marked.

RESPONSE:

See response to Interrogatory No. 7.

Interrogatory No. 27:

With regard to any product containing asbestos distributed by Manville without cautionary language on the package or on the product itself, has Manville ever recalled the product for the purpose of affixing cautionary language describing the health hazards of exposure of human beings to airborne asbestos dust and fibers and/or how the product could be safely used.

If so, state:

- (a) What product or products were recalled;
- (b) The date or dates the product or products were recalled;
and
- (c) The name or names of persons who have knowledge of the recall of asbestos-containing products by Manville.

RESPONSE:

Not to the best of the Fund's knowledge. To the extent any documents responsive to the above Interrogatory exist, they would be contained among the documents stored at the records repository maintained by the Fund in Denver, Colorado. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 28:

Has Manville ever sent any advisory letter or memorandum to any of its customers (specifically including without limitation, any of the plaintiff's employers) which attempts to advise them of any health hazard that may be associated with the use of asbestos-containing products.

If so,

- (a) Identify the author of each such advisory letter or memorandum;
- (b) State the content of each such advisory letter or memorandum;
- (c) Identify the person(s) to whom each such letter or memorandum was sent;
- (d) State the date on which each such letter was sent; and
- (e) Identify the custodian of all such advisory letters or memoranda.

RESPONSE:

On a continuing basis, Manville Corporation or related entities furnished customers information as to the proper use and application of its insulating products, and directly or indirectly advised industrial insulation contractors to utilize ventilation equipment, such as respirators, at the sites where finished insulation products were being worked with and applied. Those respirators which have been recommended were approved by the federal government for use as protection against asbestos.

Manville Corporation or related entities also affixed caution instructions to products regarding the handling of these products. See response to Interrogatory No. 7. In addition, Manville's product literature contained recommendations regarding respirator usage and utilization of adequate dust collection systems when fabricating, handling and applying certain asbestos containing materials.

Manville Corporation or related entities participated in and contributed to the informational and educational program of the National Insulation Manufacturers Association (NIMA). This program was designed to educate the insulation contractors' industry with respect to the health aspects of exposure to asbestos.

To this end, NIMA sponsored a number of regional meetings to aid contractors in minimizing or eliminating the inhalation of asbestos fibers by those who worked with, installed or applied asbestos containing thermal insulation products. In 1967 and 1968, approximately eight hundred insulation contractors attended these regional meetings.

Approximately three hours in length, these programs included a review of: 1) the biological effects of exposure to asbestos; 2) the threshold limit value for asbestos; 3) methods for evaluating concentrations of dust; and 4) engineering and method recommendations designed to assist the contractors in dust abatement and environmental control.

The highlights of these presentations were published in several booklets prepared by NIMA. One such booklet, entitled "Recommended Safe Practices for Handling and Applying Thermal Insulation Products Containing Asbestos," printed May 1, 1968, was written by members of the NIMA Education and Information Committee. This booklet was distributed during the 1968 meetings. In addition, the booklet was distributed to customers, employees and other interested parties.

The chairman of the NIMA Education and Information Committee was Clifford L. Sheckler, who, at that time, was Manager, Accident Prevention and Health Administration at Manville. Other members of the committee included John Vyverberg, Owens-Corning Fiberglass Corporation; Harry Mesler, Ruberoid Company; Leon Horowitz, Certain-Teed Corporation; and Jack Barnhart, Executive Secretary of NIMA.

Manville Corporation or related also received various customer inquiries regarding concerns about health hazards associated with the use of asbestos containing products. Manville Corporation or related entities advised customers to: 1) minimize hazards by implementing proper handling methods; 2) develop good housekeeping practices through ventilation control systems and vacuum systems; 3) maintain exhaust ventilation at dust sources; and 4) provide personal protective devices such as approved respirators when engineering control of the dust was not possible.

Customers were encouraged to use industrial hygiene sampling to determine compliance with the threshold limit values for

exposure to asbestos. Additionally, Manville Corporation or related entities developed a customer compliance survey in order to identify customers needing assistance on industrial hygiene matters.

Manville Corporation or related entities also distributed to customers copies of the following booklet providing instructions designed to reduce health and safety risks in the fabrication, handling and application of asbestos products:

"Recommended Health Safety Practices for Handling and Applying Thermal Insulation Products Containing Asbestos" (1968)

In addition, sales and service personnel may have, in the ordinary course of business, communicated information to those using or installing products manufactured by Manville Corporation or related entities as to current threshold limit values.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

See also response to Interrogatory No. 23.

Interrogatory No. 29:

Did Manville ever send any advisory letter or memorandum to any of its customers (specifically including, without limitation, any of the plaintiff's employers) which attempted to advise them of any safety precautions or procedures which should have been followed when handling or using asbestos-containing thermal insulation products. If so, identify each such employer, and for each such employer:

- (a) Identify the author of each such advisory letter or memorandum;
- (b) State the content of each such advisory letter or memorandum;
- (c) Identify the person(s) to whom each such letter or memorandum was sent;
- (d) State the date on which each such letter or memorandum was sent; and
- (e) Identify the custodian of the advisory letter or memorandum.

RESPONSE:

Yes. See response to Interrogatory No. 28.

Interrogatory No. 30:

Does Manville contend that its representative, i.e., salesman or other agents or employees verbally communicated any information to any of its customers and/or plaintiff's employers which attempted to advise them of any health hazard that may be associated with the use of asbestos-containing products or which attempted to advise them of any safety precautions or procedures which should be followed when handling or using asbestos-containing products manufactured, sold, supplied, or distributed by Manville? If so, identify each such customer or employer and for each such customer or employer:

- (a) Identify the Manville representative who made each such verbal communication;
- (b) State the content of each such verbal communication;
- (c) Identify the person or persons to whom such verbal communication was made;
- (d) State the date on which each such verbal communication was made; and
- (e) Identify the custodian of any document(s) which concerns, confirms, or related to any such verbal communication.

RESPONSE:

Yes. See response to Interrogatory No. 28.

Interrogatory No. 31:

Did Manville ever advise, prior to July 1, 1972, any user or purchaser of asbestos-containing products to wear a respirator when using, handling, or cutting asbestos-containing products? If so,

- (a) Identify to whom this information was given;
- (b) Identify the method by which this information was communicated;
- (c) State the exact contents of the advice;
- (d) State the specific date such information was communicated to each such person;
- (e) Identify any and all documents which contain this information.

RESPONSE:

Yes. See response to Interrogatory No. 28.

Interrogatory No. 32:

Did Manville ever advise, prior to July 1, 1972, any user or purchaser of asbestos-containing products to control and/or avoid breathing dust created from the use, handling, or cutting of asbestos-containing products? If so,

- (a) Identify to whom this information was given;
- (b) Identify the method by which this information was communicated;
- (c) State the exact contents of such information;
- (d) State specific date such information was communicated to each such person;
- (e) Identify any and all documents which contain this information.

RESPONSE:

Yes. See response to Interrogatory No. 28.

Interrogatory No. 33:

Did Manville ever advise any purchaser or user of asbestos-containing products that there was any threshold limit value which applied to the dust created from the use of asbestos-containing products and/or that the dust associated with the use of asbestos-containing products should be kept below the threshold limit value of five million particles per cubic foot? If so,

- (a) Identify to whom this information was given;
- (b) Identify the method by which this information was communicated;
- (c) State the exact contents of such information;
- (d) State the specific date such information was communicated to each such person;
- (e) Identify any and all documents which contain this information.

RESPONSE:

Yes. See response to Interrogatory No. 28.

Interrogatory No. 34:

At any time during which Manville sold or distributed asbestos-containing products, were you ever advised by any of the persons to whom you sold asbestos-containing products that such person knew that the use of asbestos-containing products could cause or contribute to cause illness or disease of any kind? If so:

- (a) Identify each such purchaser of asbestos-containing products that advised you of this information;
- (b) Specifically identify the disease entity of which you were advised;
- (c) State the information concerning the potential hazards of the use of asbestos-containing products that was communicated to you by that purchaser;
- (d) Identify the custodian of the documents which contain, refer, or relate to each such communication; and
- (e) Identify the names of the person(s) who received this information at Manville.

RESPONSE:

The Fund possesses no information or knowledge regarding any customer or purchaser of Manville Corporation or related entities' asbestos containing products having advised Manville of such knowledge. To the extent any documents addressing this Interrogatory exist, they would be contained among the documents stored at the records repository maintained by the Fund in Denver, Colorado. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 35:

If any employee or agent of Manville has ever testified before any governmental agency or body regarding the health hazards associated with the exposure of human beings to asbestos, state:

- (a) The name(s) and current address(es) of the person(s) giving such testimony;
- (b) The governmental agency or body before whom such testimony was given and the date(s) of such testimony;
- (c) Whether the person(s) testifying prepared a written statement of Manville's position;
- (d) The present location of such prepared statement, including the name and current address of the custodian of such statement;
- (e) Whether a transcript was made of the testimony given;
- (f) If a transcript of such testimony was made, attach copies of all such transcripts.

RESPONSE:

Consultants and current or former employees testifying on behalf of Manville Corporation or related entities before governmental committees or administrative agencies include the following:

Edmund M. Fenner
(Deceased)

Before the United States Department of Labor,
Occupational Safety and Health Administration Hearing on
Proposed Occupational Asbestos Standard, March 14, 1972.

J. B. Jobe
2800 South University, #64
Denver, CO 80210

Before the United States Department of Labor,
Occupational Safety and Health Administration Hearing on
Proposed Occupational Asbestos Standard, March 14, 1972.

Paul Kotin, M.D.
5404 South Yosemite, Unit 339
Denver, CO 80237

Before the U.S. House of Representatives Education and
Labor Subcommittee on Labor Standards, May 8, 1979.

Before the U.S. House of Representatives Education and
Labor Subcommittee on Compensation, Health and Safety
Hearings on Asbestos, October 23, 1978.

James P. Leineweber
(Deceased)

Before the House of Representatives Committee on
Education and Labor Subcommittee on Elementary, Secondary
and Vocational Education, January 8, 1979.

Francis H. May, Jr.
13 Lynn Road
Englewood, CO 80110

Before the House of Representatives Committee on
Education and Labor Subcommittee on Compensation, Health
and Safety, November 14, 1978.

John A. McKinney
3131 E. Alameda #906
Denver, CO 80209

Before the Senate Committee on Human Resources, September
19, 1978.

Before the Committee on Education and Labor Subcommittee
on Compensation, Health and Safety, October 23, 1978.

Before the House Education and Labor Subcommittee on
Labor Standards, May 8, 1979.

Before the United States Senate Committee on Labor and Human Resources, August 27, 1980.

Before the Senate Committee on Human Resources, September 9, 1985.

Henry B. Moreno
5055 E. Princeton Avenue
Englewood, CO 80110

Before the United States Department of Labor, Occupational Safety and Health Administration Hearing on Proposed Occupational Asbestos Standard, March 16, 1972.

G. Earl Parker
460 S. Madison Parkway, Apartment 1501C
Denver, CO 80209

Before the House of Representatives Committee on Education and Labor Subcommittee on Elementary, Secondary and Vocational Education, November 14, 1978.

Before the Subcommittee on Labor and Human Resources, United States Senate, May 21, 1984.

Before the Subcommittee on Labor Standards of the House Education and Labor Committee on September 26, 1985.

Before the Subcommittee on Labor Standards of the House Education and Labor Committee on June 25, 1985.

Frederick L. Pundsack
8 Sedgwick Drive
Englewood, CO 80110

Before the United States Department of Labor, Occupational Safety and Health Administration Hearing on Proposed Occupational Asbestos Standard, March 16, 1972.

Matthew M. Swetonic
(Address Unknown)

Before the United States Department of Labor, Occupational Safety and Health Administration Hearing on Proposed Occupational Asbestos Standard, March 14, 1972.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This

collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 36:

State in detail the following concerning the first occurrence wherein Manville was named as a defendant in an action to recover for disease or death as a result of exposure to asbestos.

- (a) The date you were notified of the claim;
- (b) The name and current address of the claimant;
- (c) The name and location of the court in which the action was filed and the number of the action;
- (d) The specific disease or illness complained of;
- (e) The name and address of the attorney for the claimant;
- (f) The disposition of such action, whether settled, verdict or appeal; if funds paid, the total amount thereof and the amount contributed by each co-defendant;
- (g) The name and current address of the custodian of the files involving the above actions.

RESPONSE:

Upon information and belief, the Fund states that the earliest claim against Manville Corporation or related entities alleging injury due to occupational exposure to asbestos was filed May 8, 1929 by Anna Pirsowski, a former Manville Plant employee.

All responsive, non-privileged documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 37:

Identify with particularity each lawsuit (including actions in which appeals are concluded, and actions which were subsequently settled) wherein the finder of fact, either judge or jury, has found Manville liable for punitive damages due to an asbestos-induced injury (including death) or disease that was alleged to have been caused, in whole or in part, by asbestos-containing products that were alleged to have been manufactured, sold, or distributed by Manville, and state the amount of the award.

If such punitive damage has been awarded, state the amount of punitive damages Manville actually paid.

RESPONSE:

The Fund objects to this Interrogatory on the grounds that it is overly broad, unduly burdensome, and not reasonably calculated to lead to discovery of admissible evidence.

Interrogatory No. 38:

Has Manville sold and/or supplied any asbestos-containing products to the Newport News Shipbuilding & Dry Dock Company, Newport News, Virginia, between 1928 and 1980? If your answer to this interrogatory is affirmative, state:

- (a) The name of the business entity to which products containing asbestos were distributed;
- (b) Whether said products were manufactured and/or distributed by Manville directly or through an intermediary, agent, subsidiary, or other company;
- (c) The dates that said products were manufactured and/or distributed;
- (d) The trade name of said product(s) manufactured and/or distributed;
- (e) The quantity of said product(s) distributed; and
- (f) The names and current addresses of any individuals employed by you or formerly employed by you who have knowledge of the sale.

RESPONSE:

A search has been conducted of computerized sales records for the Manville Corporation Industrial Products Division, which cover the period from 1972 through 1985. Documents reflecting sales of asbestos containing products to Newport News Shipbuilding and Dry Dock Company, Newport News, Virginia, for the years 1972 through 1974 have been identified.

To the extent additional sales records exist, they would be contained among the records stored at the records repository maintained by the Fund in Denver, Colorado. For the most part, these invoices cover sales of Manville products since the late 1960s. However, the sales records even for this time period are not complete. Other sales records may have been destroyed pursuant to the ordinary record retention policies of Manville.

Based on a search performed on the Box Index data base described in response to Interrogatory No. 1, there are a total of 5,648 boxes which contain only sales invoices or other records relating to sales of Manville products. The documents in these boxes are not organized, and in order to identify sales of particular products or sales to particular customers, it would be necessary to review each sales document.

Moreover, there are approximately 2,325 additional boxes which contain sales records as well as other documents potentially relevant to the asbestos litigation. However, not every document in these boxes would need to be reviewed if the reviewer were interested only in sales records.

The burden of searching these records is no greater for another party to the litigation than it would be for the Fund, and consequently, pursuant to Rule 4:8(f) of the Virginia Rules of Civil Procedure, the Fund elects to produce business records in lieu of response to a written interrogatory. In the event that the counsel elects to search these boxes, a printout of the relevant box numbers can be provided.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 39:

Has Manville provided asbestos installation services, work crews, contract units, equipment and/or manufactured, produced, sold and/or supplied any asbestos-containing products to C.E. Thurston & Sons, Inc., E. I. DuPont de Nemours & Company, ITT Grinnell Company, Allied Chemical & Dye Company; Armstrong Cork Company; Virginia Insulation Company; Reid-Hayden Company; or the Manville Company for the construction and/or renovation and repair of a power plant in Albany, Georgia between 1947-1948; a power plant in Lumberton, North Carolina between 1949-1950; a power plant in Goldsboro, North Carolina in 1951; the E.I. DuPont de Nemours & Company Spruance Plant in Richmond, Virginia between 1953-1955 or 1961-1969; the Allied Chemical & Dye Company, Plants A and B, Hopewell, Virginia between 1956-1960; the Firestone Tire & Rubber Company in Hopewell, Virginia in 1972; or the Philip Morris plant in Richmond, Virginia in 1971. If your answer to this Interrogatory is affirmative, state:

- (a) The name of the business entity to which products containing asbestos were distributed;
- (b) Whether said products were manufactured and/or distributed by Manville directly or through an intermediary, agent, subsidiary, or other company;
- (c) The dates that said products were manufactured and/or distributed;
- (d) The trade name of said product(s) manufactured and/or distributed;
- (e) The quantity of said product(s) distributed; and

proper use and application of its insulating products that it provided to all such customers, as described in response to Interrogatory No. 28.

In addition, many of the above entities were also members of the National Insulation Manufacturers Association and would have participated in the informational and educational program designed to educate the insulation contractors' industry with respect to the health aspects of exposure to asbestos exposure. This program is more fully described in response to Interrogatory No. 28.

Interrogatory No. 41:

- (a) What information, if any, was ever given by Southern Asbestos Company, H. K. Porter Company, Inc., Southern Textile Company, Owens-Corning Fiberglas Corp., Owens-Illinois, Inc., Pittsburgh Corning Corporation, Porter-Hayden Company, The Celotex Corporation, Garlock, Inc., Precision Seal Division, Philip Carey Company, Keene Corporation, C. E. Thurston & Sons, Inc., Waco, Inc., Newport News Shipbuilding and Dry Dock Company, GAF Corporation, Allied Chemical & Dye Corporation, Grinnell Corporation, DuPont Company, or Piping & Equipment Company, or the employees of the above companies, to Manville regarding the potential health hazards of exposure to asbestos and/or how to safely use products distributed by Manville containing asbestos?
- (b) If the answer to (a) above is affirmative, summarize the advice given and state the name(s) and address(es) of all persons employed or formerly employed by Manville who have knowledge of said advice; the name(s) and address(es) of all persons employed or formerly employed by the above companies, businesses or entities who have knowledge of said advice; and the date(s) said advice was first given.

RESPONSE:

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Fund in Denver, Colorado. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this request among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See response to Interrogatory No. 1.

Interrogatory No. 42:

For each affirmative defense set forth in Manville's Answer to the Plaintiff's Motion for Judgment, state the following:

- (a) The specific facts upon which Manville relies to support that defense;
- (b) Identify each factual witness that Manville may call to support that defense;
- (c) Summarize the facts that each such factual witness is expected to testify about in support of that defense;
- (d) Identify each expert witness that Manville may call to support that defense;
- (e) State the substance of the facts and opinions that each such expert witness is expected to testify to;
- (f) Identify each expert witness with whom Manville has consulted concerning this defense, but whom Manville does not expect to testify in this action;
- (g) Identify every document that Manville contends supports that defense.
- (h) Identify every witness that Manville may call to testify concerning each document that Manville contends supports that defense.

RESPONSE:

Unknown at the present time. Investigation is continuing, and the Fund will supplement this response when and if the information requested becomes available.

Interrogatory No. 43:

Does Manville contend that Plaintiff or any employer of the Plaintiff improperly used products containing asbestos distributed by Manville?

If so, please set out in detail in which respect each said product containing asbestos was improperly used.

RESPONSE:

See response to Interrogatory No. 42.

Interrogatory No. 44:

Identify by name, address and telephone number, every expert witness that Manville may call to testify in the trial of this case. For each such expert witness, state:

- (a) The subject matter on which the expert is expected to testify;

- (b) The substance of the facts and opinions to which the expert is expected to testify; and
- (c) A summary of the grounds for each opinion.

RESPONSE:

Expert witnesses have not been selected, and the Fund will supplement this response when the requested information becomes available.

Interrogatory No. 45:

Identify by name, address, and telephone number, every factual witness that Manville may call to testify in the trial of this case.

RESPONSE:

The Fund has no information regarding factual witnesses at this time. The Fund will supplement this response when the information requested becomes available.

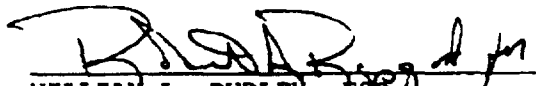
Interrogatory No. 46:

Identify every document that Manville may offer into evidence in the trial of this case.

RESPONSE:

See response to Interrogatory No. 45.

Respectfully Submitted,


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Attorneys for Manville Corporation
Asbestos Disease Compensation Fund

AFFIDAVIT

I, JOHN K. TAYLOR, being of full age and first duly sworn, depose and state that: I am assistant general counsel of the Manville Corporation Asbestos Disease Compensation Fund, a party to this action; I am authorized to make this affidavit on its behalf; the matters stated in the foregoing document are not within my personal knowledge; I am informed that no single official, employee, or former employee of either the Fund or of Manville Corporation has personal knowledge of all such matters; information contained herein has been compiled at my direction by counsel for the Fund, and the responses are in accordance with the information available to them; the answers are true and correct, insofar as it is possible to verify them.

Further affiant sayeth naught.

John K. Taylor

Subscribed and sworn to
before me this 15th day of
February, 1990.

Teray Fenton

NOTARY PUBLIC

My Commission Expires May 14, 1994