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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 Newslines (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., salesmen 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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1350 Sovran Center
One Commercial Place
Post Office Box 3188
Norfolk, Virginia 23514-3188

Attorneys for Manville Corporation
Asbestos Disease Compensation Fund

AFFIDAVIT

I, JANE 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.

Jane K. Taylor

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

Thomas Fenton
NOTARY PUBLIC

My Commission Expires May 14, 1994