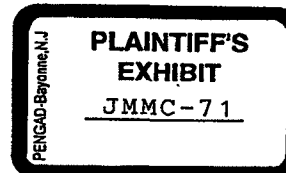


IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION



MARIAN DOWNS, Individually)
and as Executrix of the Estate)
of Charlie E. Downs, Deceased)

VS.)

No. 73-145-CA

JOHNS-MANVILLE CORPORATION, et al)

DOROTHY GAGE, Individually and)
as Administratrix of the Estate)
of Glen Wayne Gage, Deceased,)
et al)

VS.)

No. S-78-155-CA

JOHNS-MANVILLE CORPORATION, et al)

ANSWER OF DEFENDANTS JOHNS-MANVILLE CORPORATION,
JOHNS-MANVILLE SALES CORPORATION, SUCCESSOR BY MERGER
WITH JOHNS-MANVILLE PRODUCTS CORPORATION,
JOHNS-MANVILLE INTERNATIONAL, AND CANADIAN JOHNS-MANVILLE
ASBESTOS LTD TO PLAINTIFFS' SECOND SET OF INTERROGATORIES
AND REQUEST FOR PRODUCTION OF DOCUMENTS

TO ALL ATTORNEYS OF RECORD:

In accordance with Rules 33 and 34 of the Federal Rules of Civil Procedure, Johns-Manville Corporation, Johns-Manville Sales Corporation, successor by merger with Johns-Manville Products Corporation, Johns-Manville International, Canadian Johns-Manville Ltd. hereby answer Plaintiff's Second Set of Interrogatories and Request for Production served on Defendants' counsel.

Defendants reserve the right to amend or supplement their answers if they find that inadvertent omissions or errors have been made or if additional or more accurate information becomes available that is required to be provided by Federal Rules of Civil Procedure.

1. Identify (a) the person or persons who prepared the answers to these interrogatories; and (b) all persons who assisted in their preparation.

ANSWER: This document is signed by R. B. Von Wald, Corporate Counsel of Johns-Manville Corporation and Vice President and Corporate Counsel of Johns-Manville Sales Corporation, Ken-Caryl Ranch, Denver, Colorado, (303) 979-1000, solely to satisfy the rules of procedure, as no single officer or agent of one or more of Defendants has the exclusive knowledge or information required to supply the necessary answers. Answers were prepared from a number of sources; i.e., files and records of Defendant's various divisions and departments and interviews with various employees. The above signing officer has been informed that those files, documents and interviews support the responses herein based upon a diligent search of available information conducted as of the date of signature.

2. State when, if ever, you first became involved in the business of:

- (a) Mining raw asbestos fiber;
- (b) Manufacturing asbestos-containing products;
- (c) List all plants or facilities where asbestos containing products similar to those manufactured at Denison are manufactured.

ANSWER: (a) 1915.

(b) 1927.

(c) Defendant objects to this subpart on the grounds that the same is overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence. However, in an effort to be responsive, Defendant Johns-Manville Sales Corporation, successor by merger with Johns-Manville Products Corporation, states that the major manufacturing locations for asbestos-containing products are: Waukegan, Illinois; Long Beach, California and Manville, New Jersey. Johns-Manville Corporation and Johns-Manville International Corporation do not manufacture asbestos-containing products.

3. (a) State your total annual sales, if any, in dollars and in tons for each year since the dates identified in response to Question 2 of:

- (i) Raw asbestos fiber;
- (ii) Asbestos-containing products.

(b) State your total annual purchases, if any, in tons and in dollars for each year since the dates identified in response to Question 2 of:

- (i) Raw asbestos fiber;
- (ii) Asbestos-containing products.

ANSWER: Defendants do not maintain such records.

4. (i) State how many, if any, you operate of the following:

- (a) Asbestos mines;
- (b) Asbestos mills;
- (c) Plants that produce asbestos-containing products

(ii) State the date of initial operation of all facilities listed in response to 4(i) a-c.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is irrelevant, immaterial and not reasonably calculated to lead to the discovery of admissible evidence in the case at bar, which involves the Denison plant.

5. State when you first operated the Denison plant.

ANSWER: 1957.

6. Produce all your organizational charts pertaining to your overall corporate structure or to your organizational structure at the plant and all your annual reports since the plant was first operated. (Counsel agreed to produce organization chart in Denver during deposition of Henry Belchar.)

ANSWER: Defendant Johns-Manville Corporation attaches as Exhibit A its current organizational chart. Defendants object to the remainder of the Interrogatory (unduly burdensome, not reasonably calculated to lead to admissible evidence.

7. State what products have been made at the plant since it was first operated and as to each product:

- (a) Give the dates during which you made each product;
- (b) State each substance used in the manufacture of each product;

(c) State in what part of the plant each product was made;

(d) State in what parts of the plant asbestos was stored, handled, or used in the manufacturing process;

(e) Produce all maps, charts, or other writings showing or describing the floor plan of the plant since it was first operated; showing or describing the flow of asbestos through the plant from first receipt to final shipment of the product; or otherwise showing or describing the manufacturing process in the plant.

ANSWER: Defendant objects in part to this Interrogatory on the grounds that the same calls for information on products other than asbestos-containing ones, which are not relevant in the case at bar. Notwithstanding said objection, Defendant states the Denison plant has manufactured transite pipe, couplings and related accessory items.

(b) Such products contain asbestos fiber, portland cement, silica and water--formed from slurry.

(c) Area numbers indicated below refer to Plant Layout No. 7-30-7 attached hereto as Exhibit B.

<u>Product</u>	<u>Area</u>
Asbestos Cement Pipe	3, 4, 5, 6
Epoxy Lined Asbestos-Cement Pipe & couplings	8
Foam Insulated Pipe	9
Polyester-Fiberglass Pipe	10
Polyvinyl Chloride Pipe	10, 13
Epoxy-Fiberglass Fittings	11
Polyvinyl Chloride Injection Molded Fittings	11
Epoxy-Fiberglass Reinforced Polyvinyl Chloride Pipe	12

(d)

Area

- 1
- 2
- 3
- 4 (pipe)
- 5 (pipe)
- 6 (pipe and fiber)
- 7 (pipe)
- 8 (pipe)
- 9 (pipe)
- 10 (pipe)

(e) Defendant objects to this subpart as being overly broad and unduly burdensome. However, in an effort to be responsive, Defendant answers as follows:

Asbestos fiber is received by railcar or truck and stored in Area 1 or 2. The asbestos fiber is moved to Area 3 by forktruck. The asbestos is transferred from individual bag containers to a conveyor. The asbestos is combined with water, silica, and cement at two pipe forming machines (Area 3). The slurry is picked up on a continuous felt and transferred to a steel mandrel. The pipe is allowed to cure on a mandrel. The mandrel is mechanically extracted. The pipe is transferred to Area 4 for further curing. The pipe is transferred to Area 5 for final cure in autoclaves. The cured pipe is moved to Area 6 for finishing by machining. The finished pipe is inspected and moved to Area 7 for storage or Areas 8 and 9. In Area 8, the pipe inside diameter is coated with a non-asbestos-containing substance. In Area 9, the pipe is insulated with a non-asbestos-containing substance. In Area 10, the pipe inside diameter is coated with a second non-asbestos-containing substance.

8. Identify the following person:

(a) All managers of the plant since it was first operated;

(b) All persons functioning as industrial hygienists at the plant since it was first operated;

(c) All persons having any responsibility for the maintenance of health and safety at the plant since it was first operated;

(d) All physicians, nurses, and nurses' aids, whether they were your employees or independent contractors, who provided pre-employment physical examinations, periodic physical examinations, or treatment to employees at the plant since it was first operated;

(e) All persons having any responsibility for air quality samplings at the plant since it was first operated;

(f) All persons having any responsibility for the investigation or settlement of workmen's compensation claims at the plant since it was first operated.

ANSWER:

(a) J. E. Masse	1957-1964
G. C. Eggleston	1964-1972
D. W. French	1972-1975
L. I. Richards	1975-1980
J. A. Lawrence	1980

(b) An industrial hygienist was not maintained at the Denison plant on a full time basis. Industrial hygiene was carried out through the Johns-Manville headquarters.

(c) See Answer to No. 8(a) above. In addition, the following individuals had such responsibility:

J. C. Bradley	1. H. Hankinson
M. S. Burton	J. T. Armstrong
C. R. Smith	M. R. Arant
J. V. Anderson	R. F. Page
J. E. Kelly	J. T. Largent
D. C. Buckner	

(d) Physicians

W. H. Brown	M. H. Frietsch
J. C. Saunders	J. L. Brown
W. J. Elkins	R. L. Rivera
J. P. Tyson	P. T. Swamy

Nurses

F. E. Gott	1. B. Forbis
H. J. Lovett	3. A. Williams
S. P. Cantrell	3. J. Fitzpatrick
C. J. Holloway	L. T. Krasz
C. K. McBride	1. F. Seltz
D. A. Witt	3. Y. Woodson
(e) J. C. Brailley	M. H. Hankinson
M. S. Burton	C. G. Stelchek
A. V. Chambers	A. M. Curry
L. Y. Ellison	J. V. Anderson
L. F. Massey	

(f) See answers to subparts (a) and (b) above.

9. Have you or any of your officers or employees made any statements at any time since the plant was first operated concerning your knowledge or experience in the field of asbestos-related disease?

(a) Identify, as to each such statement:

- (i) The date and place the statement was made;
- (ii) The substance of the statement;
- (iii) The person or persons who made the statement;

(b) Produce all writings containing or pertaining to each such statement.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence. However, in an effort to be responsive, Defendant states that employees have testified in conjunction with civil litigation and have presented statements of position both in writing and orally at various government hearings. All documents and statements relating to such proceedings are a matter of public record and are readily available to Plaintiff.

10. Have you known at any time since the plant was first operated of any alleged or asserted relationship between exposure to asbestos fibers and the contraction of asbestosis? If so,

(a) State:

(i) What you understand the alleged or asserted relationship to be;

(ii) When you first learned of this alleged or asserted relationship;

(iii) The manner in which you learned of this alleged or asserted relationship;

(iv) Whether you have concluded such a relationship exists and, if so, when you concluded the relationship exists;

(b) identify all persons in your employ who have any knowledge concerning such a relationship or the manner in which you learned of it;

(c) Produce all writings concerning such a relationship or the manner in which you learned of it.

ANSWER: The Corporation became aware of the relationship between asbestos and the disease known as asbestosis among workers involved in mining, milling and manufacturing operations and exposed to high levels of virtually 100% raw asbestos fibers over long periods of time by the early 1930's. The Corporation has followed and become aware of the general state of the medical art relative to asbestos and its relationship to disease processes, if any.

11. Have you known at any time since the plant was first operated of any alleged or asserted relationship between exposure to asbestos fibers and the contraction of lung cancer? If so,

(a) State:

(i) What you understand the alleged or asserted relationship to be;

(ii) When you first learned of this alleged or asserted relationship;

(iii) The manner in which you learned of this alleged or asserted relationship;

(iv) Whether you have concluded such a relationship exists and, if so, when you concluded the relationship exists;

(b) Identify all persons in your employ who have any knowledge concerning such a relationship or the manner in which you learned of it;

(c) Produce all writings concerning such a relationship or the manner in which you learned of it.

ANSWER: As to bronchogenic cancer, the first large-scale study indicating an increased incidence of bronchogenic cancer among individuals occupationally exposed to asbestos was Sir Richard Doll's study of asbestos textile workers in the United Kingdom. Subsequent to the Doll study in 1955, Defendant and other asbestos producers undertook to finance and support a large-scale epidemiological study in North America as to the association, if any, between bronchogenic cancer and occupational exposure to asbestos. Such study by Braun and Truan is identified in Defendant's Answer to Interrogatory No. 37. Such study did not indicate the hazard described by Doll. Subsequent and continuing research did, by the mid-1960's indicate an increased incidence of bronchogenic cancer among individuals exposed to asbestos occurred virtually exclusively among individuals who also smoked cigarettes.

12. Have you known at any time since the plant was first operated of any alleged or asserted relationship between exposure to asbestos fibers and the contraction of mesothelioma? If so,

(a) State:

(i) What you understand the alleged or asserted relationship to be;

(ii) When you first learned of this alleged or asserted relationship;

(iii) The manner in which you learned of this alleged or asserted relationship;

(iv) Whether you have concluded such a relationship exists and, if so, when you concluded the relationship exists;

(b) Identify all persons in your employ who have any knowledge concerning such a relationship or the manner in which you learned of it;

(c) Produce all writings concerning such a relationship or the manner in which you learned of it.

ANSWER: The first study indicating an increased incidence of mesothelioma in relationship to asbestos exposure was that of Wagner in South Africa in 1960. Mesothelioma was a virtually unknown tumor until approximately 1960 and the Wagner paper referred to above. While many causal relationship questions still exist, Defendant has accepted and acted upon the increased incidence of association referred to above since the same became confirmed by the medical/scientific community in the mid-1960's.

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

13. Has any federal, state, or local government agency ever set any standard for allowable asbestos dust concentrations in the air at the plant? If so,

(a) State as to each such standard:

(i) The date the standard was adopted;

(ii) The name of the agency that adopted the standard;

(iii) The dust concentrations the standard permitted;

(iv) The steps you took to comply with the standard and the procedures by which they were implemented;

(v) Whether the dust concentrations in the plant, after the standard was adopted, were lesser than, equal to, or greater than those the standard permitted;

(b) Identify all persons involved in adopting steps and procedures to comply with the standard;

(c) Produce all writings concerning the adoption of each such standard and the plant's compliance or non-compliance with the standard.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible

evidence. However, in an effort to be responsive, Defendant states that the first threshold limit value (TLV) for asbestos fiber in the United States was established in 1938 by the American Conference of Governmental Industrial Hygienists and was set at 5 million particles per cubic foot, 3-hour time-weighted average. In 1963, ACGIH proposed a standard of two million particles per cubic foot or twelve fibers longer than five micrometers per cubic centimeter, eight-hour time-weighted average. Defendant then unilaterally adopted a standard of six fibers longer than five micrometers per cubic centimeter, eight-hour time-weighted average. In 1971, an emergency standard of 5 fibers longer than 5 micrometers per cubic centimeter as an 8-hour time-weighted average and 10 fibers longer than 5 micrometers per cubic centimeter maximum ceiling concentration was promulgated by OSHA and became their permanent standard effective June 7, 1972. This standard was changed July 1, 1976 by OSHA to two fibers longer than five micrometers per cubic centimeter as an eight-hour time-weighted average and ten fibers longer than five micrometers per cubic centimeter maximum ceiling concentration.

14. Have you ever adopted by your voluntary action any other standard or guideline for allowable asbestos dust concentrations in the air at the plant. If so,

(a) State as to each such standard or guideline:

(i) The date the standard or guideline was adopted;

(ii) The dust concentrations the standard or guideline permitted;

(iii) The steps you took to comply with the standard or guideline and the procedures by which they were implemented;

(iv) Whether dust concentrations in the plant, after the standard or guidelines was adopted, were lesser than, equal to, or greater than those the standard or guideline permitted;

(b) Identify all persons involved in adopting the standard or guideline or in adopting steps and procedures to comply with it;

(c) Produce all writings concerning the adoption of each standard or guideline and the plant's compliance or non-compliance with the standard or guideline.

ANSWER: See Answer to Interrogatory No. 13. To the best of Defendant's present knowledge, no other standards have been adopted at Defendant's Denison plant.

15. Have you, at any time since the plant was first operated, known of any other standard or guideline for allowable asbestos dust concentrations in asbestos plants developed by the American Conference of Governmental and Industrial Hygienists, the American Industrial Hygiene Association, the Industrial Hygiene Foundation, or any other body? If so,

(a) State, as to each such standard or guideline:

(i) The name and address of the body that developed the standard or guideline.

(ii) The dust concentrations the standard or guideline permitted;

(iii) The date when you became aware of this standard or guideline.

(b) Identify all persons at any time in your employ having knowledge of this standard or guideline.

(c) Produce all writings concerning this standard or guideline.

ANSWER: See Answer to Interrogatory No. 13.

16. Have any representatives of any federal, state, or local government agency ever visited the plant to inspect health conditions or to measure asbestos dust concentrations in it. If so,

(a) Identify as to each such visit:

(i) The person who visited the plant;

(ii) The date of the visit;

(iii) What inspections or measurements were performed during the visit;

(iv) The conclusions, recommendations, or comments expressed to you by the person making the visit;

(b) Produce all writings dealing with each such visit, including the results of any testing or air sampling performed.

ANSWER: This Interrogatory is objected to (overly broad, not likely to lead to discovery of admissible evidence). However, in an effort to be responsive, periodic visits by governmental agencies have been made at the plant, without discovery of, or citation for, any condition associated with the inhalation of asbestos dust in excess of the maximum allowable concentration set forth in the answer to Interrogatory No. 13. above.

17. Have any of your employees, any of your insurers' employees, or any other person ever measured asbestos dust conditions in the plant? If so,

(a) Identify:

- (i) The date when the measurement began;
- (ii) The frequency of the measurement;
- (iii) The method of measurement used;
- (iv) The results of each measurement;
- (v) The persons responsible for the measurement;

(b) Produce all writings concerning the measurement and the results of the measurement.

ANSWER: Dust concentrations have been monitored periodically since the plant commenced operation. The identity of all persons taking dust samples is not presently known; however, it is known that some samples were taken by Michael Burton in approximately 1960, and that sampling during the 1970's has been accomplished generally under the supervision of William Reitze. Defendants are currently searching for surviving mathematical indicators of asbestos exposure at the plant during the exposure periods alleged by the Plaintiffs. Such will be provided in the event that the information can be located.

18. Have any employees at the plant ever been represented by any union? If so,

(a) State as to each such union:

- (i) The name of the union;

(ii) The specific class of employees that it represented;

(iii) The dates during which it represented these employees;

(iv) Whether each of the plaintiffs in this action was represented by the union;

(b) Identify all officials of the union during its representation;

(c) Identify all union personnel having any responsibility for representing employees on matters concerning health and safety conditions in the plant during the union's representation.

ANSWER:

(a)

(i) International Association of Machinists

(ii) Hourly production and maintenance employees

(iii) First contract was effective

October 21, 1958; new contracts have been negotiated upon expiration. The present agreement expires October 23, 1981.

(iv) Unknown if plaintiffs were members of the union, but they were represented by the Union.

(b) Unknown.

(c) Unknown at this time.

19. Has any contract with any union referred to in Question 17 contained any provision relating to safety and health at the plant. If so,

(a) State as to each such contract:

(i) The date the contract was signed;

(ii) The terms of the provision;

(iii) Identify the union and management personnel responsible for negotiating the provision;

(b) Produce a copy of the contract and all writings concerning the negotiation and adoption of each such provision.

ANSWER:

(a)

(i) See Answer to Interrogatory No. 18(a) (iii).

(ii) See Article I, General Purposes, Paragraph I, of Labor Agreements, copies of which are attached hereto as Exhibit C.

(iii) All names of the Union and Management Negotiating Committees are listed in the Labor Agreements attached hereto as Exhibit C.

(b) Copies of Labor Agreements are attached hereto as Exhibit C. Copies of writings concerning the negotiation are not available.

20. Have you had any conversations or correspondence with representatives of any union referred to in Question 17 concerning alleged asbestos health hazards or the avoidance of them at the plant? If so,

(a) Identify, as to each such conversation or item of correspondence:

(i) Its date;

(ii) The persons involved in the conversation or correspondence;

(iii) The substance of the conversation or correspondence;

(b) Produce the correspondence and all writings concerning it and all writings concerning any such conversation.

ANSWER: Any such discussions would have been general discussions only, with no existing documentation.

21. Have you received any complaints from any representative or committee of any union referred to in Question 17 or from individual workers about dust levels or health conditions at the plant? If so,

(a) Identify as to each such complaint:

(i) Its date;

(ii) The person or persons who made the complaint;

(iii) The person or persons to whom the complaint was made;

(iv) The nature of the complaint;

(v) What action, if any, you took in response to the complaint;

(b) Produce all writings concerning each such complaint.

ANSWER: Any such discussions, if in fact the same took place, would have been general discussions only, with no existing documentation.

22. Has any epidemiological study or survey of employees at the plant ever been conducted? If so,

(a) Identify as to each such study or survey:

- (i) The date when it was conducted;
- (ii) Its conclusions or recommendations;
- (iii) The persons who conducted it;
- (iv) The persons to whom the study or survey was communicated and when it was communicated;

(b) Produce all writings containing or pertaining to each study or survey.

ANSWER: As Defendants understand the term "epidemiological study", such a survey has not been undertaken by Defendant at the Denison plant. Defendant assumes that this Interrogatory addresses the area of occupational disease.

23. Have you ever employed, or hired as an independent contractor, someone functioning as an industrial hygienist at the plant, whatever his title? If so,

(a) As to each such industrial hygienist:

- (i) Identify him and state the dates during which he was employed or hired;
- (ii) State his duties;
- (iii) State all recommendations or comments that he made concerning the operation of the plant or maintenance of healthful working conditions in the plant;
- (iv) State what action you took in response to each recommendation or comment;

(b) Produce all writings concerning the decision to employ or hire an industrial hygienist; concerning any recommendations or comments any industrial hygienist made regarding the operation of the plant and maintenance of healthful working conditions in the plant; and concerning your response to the recommendations or comments.

ANSWER: See Answer to Interrogatory No. 8(b).

24. Have you ever employed, or hired as an independent contractor, someone functioning as an industrial hygienist, whatever his title not located at the plant who reviewed health and safety conditions at the plant? If so,

(a) As to each such industrial hygienist:

(i) Identify him and state the dates during which he was employed or hired;

(ii) State his duties;

(iii) State when, if ever, he visited the plant;

(iv) State all recommendations or comments that he made concerning the operation of the plant or maintenance of healthful working conditions in the plant;

(v) State what action you took in response to each recommendation or comment;

(b) Produce all writings concerning the decision to employ or hire an industrial hygienists; concerning any recommendations or comments any industrial hygienist made regarding the operation of the plant and maintenance of healthful working conditions in the plant; and concerning your response to the recommendations or comments.

ANSWER: The following individuals have been involved in the field of industrial hygiene as the same relates to the use of asbestos and exposure to asbestos fibers:

Hugh M. Jackson

Director, Corporate Training and Management Development
P. O. Box 5723
Denver, Colorado 80217

Employed by Johns-Manville since 1937; cost
accountant; Industrial Relations Department;
Corporate Safety Engineer.

Edmund M. Fenner
Director, Environmental Services
P. O. Box 5723
Denver, Colorado 80217

Employed by Johns-Manville since 1940; Research
Engineer, Engineering Project Manager; Founding
Director, Environmental Control Department.

J. B. Jobe
2800 South University #64
Denver, Colorado 80120

Employed by Johns-Manville since 1935; sales clerk; staff manager; special representative to the aviation industry nationally; Regional Manager for Southern California and operated insulation contract unit; Merchandise Manager of Industrial Insulation Division; Sales Manager, IID: Senior officer in charge of five divisions including industrial insulation, packaging and frictions, Dutch Brand, Canada, and the Fibre Division and later International; Executive Vice President and Chief Operations Officer until retirement in 1973.

K. W. Smith, M.D.
Deceased

Previously employed by Canadian Johns-Manville from 1944-46 as Medical Officer at Asbestos, P.Q.; Medical Director 1946-51. Medical Director, Johns-Manville Corporation, New York, New York, approximately 1952 until 1966.

F. J. Solon
Vice President - Presidential Assistant
Vice President - Economic Affairs
P. O. Box 5723
Denver, Colorado 80217

Employed by Johns-Manville since 1951; Assistant Director, Director and Vice President, Advertising and Public Relations; Vice President Corporate Relations; Vice President Environmental Affairs; Vice President Environmental Relations.

William B. Reitze
Director, Health, Safety and Environment
P. O. Box 5723
Denver, Colorado 80217

Previously employed by CIBA Corporation in the area of toxicology, pharmacology; inspector with U. S. Department of Health; Industrial hygiene health and safety, Johns-Manville since 1969.

Clifford Sheckler
838 S. Drive
Metedeconk, New Jersey
Consultant

Previously employed by Johns-Manville as Construction Engineer, Supervisor of Construction, Safety Engineer, Supervisor of Safety and Industrial Hygiene, Corporate Manager of Industrial Health, Manager of Occupational and Environmental Control.

Paul Kotin, M.D.
Senior Vice President, Health, Safety and Environment
P. O. Box 5723
Denver, Colorado
Employed by Johns-Manville since June, 1974.

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

25. Have you ever employed, or hired as an independent contractor, any person, other than an industrial hygienist, who reviewed health and safety conditions at the plant? If so,

(a) As to each such person:

(i) Identify him and state the dates during which he was employed or hired;

(ii) State his duties;

(iii) State all recommendations or comments that he made concerning the operation of the plant or maintenance of healthful working conditions in the plant;

(iv) State what action you took in response to each recommendation or comment;

(b) Produce all writings concerning the decision to employ or hire each such person; concerning any recommendations or comments he made regarding the operation of the plant or maintenance of healthful working conditions at the plant; and concerning your response to such recommendations or comments.

ANSWER: See Answer to Interrogatory No. 24.

In addition, Defendant has had a medical function beginning in the middle 1930's.

Since the middle 1930's, this function was administered by John P. Syme, Director of Industrial Relations. Mr. Syme is deceased.

In 1947, a formal health and medical program was initiated for the benefit of employees of Defendant, under the administration of H. M. Jackson, Safety Director, Johns-Manville Corporation, Ken-Caryl Ranch, Littleton, Colorado.

Beginning in 1952, the health and medical program was administered by H. M. Jackson, Manager, Industrial Health and K. W. Smith, M.D., Medical Director. Dr. Smith is deceased.

Beginning in 1960, the health and medical program was administered by C. L. Shackler, Manager, Accident Prevention and Industrial Health and K. W. Smith, M.D., Medical Director. Mr. Shackler's address is 938 South Drive, Metateconk, New Jersey.

Beginning in 1966, the health and medical program was administered by C. L. Sheckler, Manager, Accident Prevention and Health Administration.

Beginning in 1970 until 1972, the health and medical program was administered by C. L. Sheckler, Manager, Accident Prevention and Health Administration, and T. J. Davison, M.D., Corporation Medical Director. Dr. Davison's address is 2069 Deerfield Road, Deerfield, Illinois.

Beginning in November, 1972, to November 30, 1973, the health and medical program was administered by F. E. Marriner, M.D., Medical Director. Dr. Marriner's address is Mallard Crossing, Rt. 11, P. O. Box 290, Gainesville, Georgia 30501.

Beginning in 1972 until June 1, 1974, the corporate medical and health program was administered by W. R. Reitze, Manager, Accident Prevention and Health Administration.

Beginning June, 1974 to date, the corporate medical and health program has been administered by Paul Kotin, M.D., Senior Vice President, Health, Safety and Environment.

Beginning on July 1, 1977, William Paul, M.D. became Corporate Medical Director of Johns-Manville Corporation under Dr. Paul Kotin, with Dr. Kotin retaining all responsibilities as Senior Vice President of Health, Safety and Environment.

26. Have you ever employed, or hired as an independent contractor, any person having any responsibility for recommending, adopting, or developing health and safety policies at the plant or elsewhere? If so,

(a) As to each such person:

(i) Identify him and state the dates during which he was employed or hired;

(ii) State his duties;

(iii) State all policies that he recommended, adopted or developed regarding health and safety, and state the date of each such recommendation or policy;

(b) Produce all writings concerning the decision to employ or hire such a person; containing or concerning health and

safety policies; concerning the decision to adopt or develop each such policy; and concerning your implementation of each such policy.

ANSWER: See Answers to Interrogatories Nos. 24 and 25.

27. Have you ever maintained at the plant a library or collection of books, articles, or other writings dealing with the health consequences of asbestos exposure? If so,

(a) State:

(i) The date you began maintaining the library or collection;

(ii) The titles of all books, articles, or other writings in the library or collection;

(iii) The date each book, article or other writing was acquired;

(b) Identify all persons who had access to the library or collection;

(c) Produce all writings dealing with the decision to maintain such a library or collection.

ANSWER: Such materials may have been maintained by various employees on an individual basis, but no formal library exists at the Danison plant. Company-wide policies relative to asbestos and health would have been established by corporate personnel at Defendants' Headquarters, where such a library is maintained.

23. Have you ever maintained at a location other than the plant a library or collection of books, articles, or other writings dealing with the health consequences of asbestos exposure? If so,

(a) State:

(i) The date you began maintaining the library or collection;

(ii) The titles of all books, articles, or other writings in the library or collection;

(iii) The date each book, article or other writing was acquired;

(iv) Whether personnel at the plant have or may obtain access to the library or collection;

(b) Identify all persons who had access to the library or collection;

(c) Produce all writings dealing with the decision to maintain such a library or collection.

ANSWER: Yes. (i) Formally established with a full-time librarian in 1974, at Defendant's headquarters in Denver, Colorado.

(ii) A 700-page bibliography of the materials contained in this library is available for inspection and/or copying at the offices of Defendant's counsel.

(iii) It would be impossible, as well as extremely burdensome, to state a specific date when Defendant acquired each document in said library. Generally speaking, Defendant has become familiar with the major publications on the subject of asbestos and health contemporaneously with their publication.

(iv) Yes.

(b) All employees of Defendant.

(c) Defendant objects to this subpart as being irrelevant and immaterial in the case at bar.

29. Have any of your personnel at the plant ever subscribed to or otherwise received any periodicals or other writings pertaining to asbestos or to occupational health or safety? If so,

(a) State as to each such periodical or other writing:

(i) The name of the periodical or other writing;

(ii) The dates during which it was received;

(iii) Identify the person or persons who received it;

(b) Produce all copies of the periodicals or other writings that were received.

ANSWER: Subscriptions may have been maintained on an individual basis by various employees, however, no specific records of same exist over such a long period of time, with the exception of the following:

C. R. Smith began receiving "Asbestos Facts" beginning in June, 1980; F. E. Gott began receiving "Occupational Health and Safety" in 1978. Defendant objects to furnishing copies of same

on the grounds that they are a matter of public record and readily available to Plaintiff.

30. Have any of your personnel who are located elsewhere than at the plant subscribed to or otherwise received at any time since the plant was first operated any periodicals or other writings pertaining to asbestos or to occupational health or safety? If so,

(a) Identify as to each such periodical or other writing:

- (i) The name of the periodical or other writing;
- (ii) The dates during which it was received;
- (iii) Identify the person or persons who received it;

(b) Produce all copies of the periodicals or other writings that were received.

ANSWER: Yes. It would be impossible for Defendant to state with certainty each publication received over such a long period of time by such a large number of employees. However, in an effort to be responsive, Defendant attaches hereto as Exhibit D list of subscriptions maintained by Defendant's Department of Health, Safety and Environment library. Defendant objects to Plaintiff's request to produce copies of all periodicals on the grounds that the same is overly burdensome, and on the further grounds that such publications are a matter of public record and are equally available to Plaintiff.

31. Have any of your personnel at the plant ever been members of, or attended any meetings of, any trade association or other organization concerned with asbestos, asbestos-containing products, or occupational health and safety? If so,

(a) As to each such person:

- (i) Identify the person;
- (ii) State the name and address of each organization to which he belonged or whose meetings he attended;
- (iii) State the dates during which he belonged to each organization;

(iv) State the dates of any meetings of each organization that he attended;

(v) State whether he belonged to any committees of each organization and, if so, state the name of each committee and the dates during which he belonged to it:

(vi) State the name of any periodicals that he received from each organization;

(b) Produce copies of all writings received from each organization.

ANSWER: Generally, such memberships were maintained at the corporate level, as set forth in Answer to Interrogatory No. 32. In addition, Cecil Smith of the Delison plant has been a member of the Texas Safety Association, Inc., 5014 Bull Creek Road, Austin, Texas, since 1977. He attended meetings from June, 1977 to the present. As to subparts (v) and (vi), no.

32. Have any of your personnel located elsewhere than at the plant, at any time since the plant was first operated, been members of, or attended any meetings of any trade association or other organization concerned with asbestos, asbestos-containing products, or occupational health and safety? If so,

(a) As to each such person:

(i) Identify the person;

(ii) State the name and address of each organization to which he belonged or whose meetings he attended;

(iii) State the dates during which he belonged to each organization;

(iv) State the dates of any meetings of each organization that he attended;

(v) State whether he belonged to any committees of each organization and, if so, state the name of each committee and the dates during which he belonged to it:

(vi) State the name of any periodicals that he received from each organization;

(b) Produce copies of all writings received from each organization.

ANSWER: Johns-Manville belongs or has belonged to the following organizations:

Thermal Insulation Manufacturers Association, Inc.
441 Lexington Avenue
New York, NY 10017
(approximately 1969 to present)

National Insulation Contractors Assn.
8630 Fenton Street
Silver Spring, MD 20910
(10/66 - present)

National Insulation Manufacturers Association, Inc.
441 Lexington Avenue
New York, NY 10017
(approximately 1958 - 1958)

Asbestos Information Association/North America
Suite 402
1835 K Street, N.W.
Washington, D. C. 20006
(approximately 1971 to present)

Asbestos Textile Institute
P. O. Box 471
Willow Grove, PA 19090
(11/15/44 - 1973)

Quebec Asbestos Mining Association
Suite 412, 5 Place Ville Marie
Montreal, Canada H3B 2G2
(approximately 1930 to present)

Asbestos Cement Pipe Producers Association
Suite 1308
1600 Wilson Blvd.
Arlington, VA 22209
(approximately 1972 to present)

Asbestos Cement Product Assn. (defunct)
New York, NY
(approximately 1955 - 1957)

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

33. Have you, as distinguished from any of your personnel, ever been a member of any trade association or other organization concerned with asbestos, asbestos-containing products, or occupational health and safety? If so,

(a) As to each such organization, state:

(i) Its name and address;

(ii) The dates during which you belonged to it;

(iii) The dates of any of its meetings that any of your personnel attended;

(iv) Whether you or any of your personnel belonged to any of its committees and, if so, state the name of each such committee, and the dates during which you or any of your personnel belonged to the committee;

(v) All persons currently employed in the division, office, branch, or department;

(b) Produce all writings concerning the decision to maintain such a division, office, branch, or department; all annual or other reports made by such division, office, branch, or department; and all writings produced by it concerning the maintenance of healthful working conditions at any of your plants.

ANSWER: See Answer to Interrogatory No. 32. Defendant does not understand Plaintiff's meaning in subparts (a) (v) and (b) of this Interrogatory and therefore objects to those subparts on the grounds that they are incomprehensible.

35. Have any of your officers or employees ever contributed to any trade, professional, or other periodical or association any article, paper, speech, or other writing concerning the properties of asbestos or the health consequences of asbestos exposure? if so,

(a) Identify as to each such article, paper, speech, or other writing:

(i) The author and title;

(ii) The periodical or other form in which it appeared or was delivered;

(iii) The date when it appeared or was delivered;

(b) Produce a copy of each such article, paper, speech, or other writing and all documents pertaining to its preparation, composition, or delivery.

ANSWER: Defendants object to this Interrogatory on the

(a) State or identify, as to each such research project:

- (i) The person who conducted the research;
- (ii) The dates when the research was conducted;
- (iii) The nature of the research;
- (iv) The conclusions or recommendations, if any, reached as a result of the research;
- (v) The amount of money spent on the research;
- (vi) The full citations of any articles, papers, books, or other writings published or prepared as a result of the research;

(b) Produce all writings containing the results of this research or pertaining to it.

ANSWER: See Answer to Interrogatory No. 37.

37. Have you ever sponsored, contributed to, or cooperated in any research conducted by persons not employed by you into the health consequences of asbestos exposure or into methods of controlling asbestos dust? If so,

(a) State or identify, as to each such research project:

- (i) The person who conducted the research;
- (ii) The dates when the research was conducted;
- (iii) The nature of the research;
- (iv) The conclusions or recommendations, if any, reached as a result of the research;
- (v) The manner in which you sponsored, contributed to, or cooperated in the research;
- (vi) The amount of money spent on the research; and the portion that you contributed;
- (vii) The full citations of any articles, papers, books, or other writings published or prepared as a result of the research;

Johns-Manville Corporation contributed funds to sponsor animal research on the effects of asbestosis at the Saranac Laboratory of the Trudeau Foundation in up-state New York commencing in 1928. The funds were contributed by Defendant and/or Johns-Manville Corporation in the form of premium payments and assessments to the Metropolitan Life Insurance Company, which was the immediate sponsor. The amount of such contributions is not known to, nor determinable by Defendant.

In early 1931, a report of this animal experiment was published by Dr. Leroy V. Gardner (the original director of this project) in Vol. 13 No. 3 (March 31, issue) of the Journal of Industrial Hygiene. This report is entitled "Studies on Experimental Pneumonokoniosis. VI. Inhalation of Asbestos Dust: Its Effect Upon Primary Tuberculous Infection". A copy of such report is available for inspection and copying in the office of Defendant's counsel.

In 1929, shortly after the launching of the Saranac studies, Defendant and/or Johns-Manville Corporation and other companies in the asbestos industry asked the Metropolitan Life Insurance Company to determine whether asbestos dust was an occupational hazard and, if so, the nature of the hazard and what could be done to control it. The amounts of Defendant's and/or Johns-Manville Corporation's contributions in the form of increased premiums and assessments is not known to, nor determinable by Defendant. 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 in an article entitled "Effects of the Inhalation of Asbestos Dust on the Lungs of Asbestos Workers" by

undertaken at the Saranac Laboratory. The Quebec Asbestos Mining Association ("QAMA"), of which Johns-Manville Corporation was and is a principal member, contributed to this new research. A report on this research was delivered at the Seventh Saranac Lakes 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. A copy of such report is available for inspection and copying in the office of Defendant's counsel.

Another report arising out of the industry-sponsored studies at Saranac Laboratory was entitled "Experimental Studies of Asbestosis". It was written by Arthur J. Vorwald, Thomas M. Durkin and Philip C. Pratt, and appeared in the A.M.A. Archives of Industrial Hygiene and Occupational Medicine in January, 1951, at Vol. 3, Page 1. A copy of this paper is available for inspection and copying in the office of Defendant's counsel.

In the early 1950's, an animal research project to investigate the reported association between asbestos exposure and lung cancer was begun at Saranac Lake and funded by QAMA. A report entitled "Asbestosis and Pulmonary Cancer" by Arthur J. Vorwald was released in 1952. A copy thereof is available for inspection and copying at the office of Defendant's counsel.

Another project was an epidemiological study of lung cancer among asbestos miners in the Province of Quebec in Canada. This study was also sponsored by QAMA, and, again Johns-Manville Corporation furnished a significant portion of the funding. The study was conducted by Daniel C. Braun and T. David Truan for the Industrial Hygiene Foundation of America, Pittsburgh, Pennsylvania. The study was completed in 1957 and published in the June 1958, Vol. 17 issue of the A.M.A. Archives of Industrial

Inter-tracheal injection experiments on test animals were conducted by the Industrial Hygiene Foundation of America (and completed in July, 1958) using asbestos fiber taken from a mine of Johns-Manville Corporation. Johns-Manville Corporation contributed \$1,250 to this study. This study is entitled "The Pulmonary Response to Coalinga Asbestos Dust: A Preliminary Investigation", by Paul Gross, et al. A copy of this study is available for inspection and copying at the office of Defendant's counsel.

Defendants have contributed the time of personnel and data to a seven to ten year environmental clinical and epidemiological study of workers exposed to asbestos which is now being conducted by the Division of Occupational Health of the United States Public Health Service and is entitled "Asbestos Industry Study: U. S. Public Health Service". The following reports relate to and/or are based on such study:

"Measurement of Asbestos Exposure" by Jeremiah R. Lynch and Howard E. Ayer published in the Journal of Occupational Medicine (January, 1958), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Research on Health Effects of Asbestos" by Lewis J. Cralley, et al., and published in the Journal of Occupational Medicine (January, 1968), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"The Role of Trace Metals in Chemical Carcinogenesis-Asbestos Cancers" by J. R. Dixon, et al., unpublished, but presented at the International Congress of Occupational Health, Tokyo, Japan, (September, 1969), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Identification and Control of Asbestos Exposures" by Lewis J. Cralley, unpublished but presented at the International Congress on Occupational Health, Tokyo, Japan (September, 1969), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Fibrous and Mineral Content of Cosmetic Talcum Products" by

Modified Inorganic Fibrous Microparticles" which was commenced November 1, 1969 and was completed October 31, 1970. The purpose of the study was to explore the development of new biological test systems for fibrous materials and to determine the effect on biological activity of asbestos fiber which has been coated with a variety of physical and/or chemical substances.

A related study which was funded by Johns-Manville Corporation to the extent of \$25,000 produced a report entitled "Asbestos Hemolysis" by R. J. Schnitzer and F. L. Pundsack (an employee of Defendant), which was reported in March, 1969 and published in Environmental Research, January, 1970). A copy thereof is available for inspection and copying in the office of Defendant's counsel.

Johns-Manville Corporation has contributed \$70,000 to the Industrial Hygiene Foundation of America's "Fibrous Dust Study". The purpose of this program is to investigate factors involved in the pathogenicity of major varieties of asbestos fiber to determine the true nature of ferruginous bodies. Reports related to and/or based on this study include the following:

"Proceedings Fibrous Dust Seminar" of the Industrial Hygiene Foundation of America, published in its Medical Series Bulletin No. 16-70 (November 22, 1968), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"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, (Sept. 1967), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

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

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Ferruginous Bodies in Human Lungs", by Michael D. Utidjian, et al., published in the Archives of Environmental Health, Vol. 17 (September, 1968), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Asbestos Bioeffects Research for Industry", by the Industrial Hygiene Foundation of America, Inc., published in its Medical Series, Bulletin No. 11 (1966), a copy of which is available for inspection and copying in the office of Defendant's counsel.

QAMA is sponsoring a study of the health effects of asbestos, if any, on workers in the asbestos cement manufacturing industry in the New Orleans area. The total funding of this study is \$200,000 and Defendant and/or Johns-Manville Corporation is furnishing approximately \$142,000 of the sum through QAMA. In addition, Johns-Manville Corporation is contributing time of its personnel. This study began in 1969 and is concentrating on the health status of present and past employees in the plants of Defendant and National Gypsum Company in and around New Orleans and has generated the following:

"Asbestosis in Asbestos Cement Workers" by Philip E. Enterline, and Hans Weill, presented at LYON Conference, (Oct. 1972), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Radiographic and Physiologic Patterns Among Workers Engaged in Manufacture of Asbestos Cement Products, a Preliminary Report", by Hans Weill, et al., published in the Journal of Occupational Medicine, Vol. 15 (Mar. 1973) a copy of which is available for inspection and copying in the office of Defendant's counsel.

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

The Institute of Occupational and Environmental Health of QAMA is conducting a study to relate the health status of the

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Epidemiology of Primary Malignant Mesothelial Tumors in Canada" by A. D. McDonald, et al., published in CANCER Vol. 25, No. 4 (October, 1970), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Recent Developments in Asbestosis", by Dr. Premysl V. Pelnar, published in Studia Laboris et Salutis (1970) a copy of which is available for inspection and copying in the office of Defendant's counsel.

Johns-Manville Corporation also paid for certain studies by Dr. Kenneth W. Smith who was then a full-time employee of said corporation. Reports of Dr. Smith's studies are as follows:

"Asbestosis" printed in The Pneumoconioses by Kenneth W. Smith (approximately 1963), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Pulmonary Disability in Asbestos Workers" by Kenneth W. Smith printed in the A.M.A. Archives of Industrial Health, Vol. 12 (August, 1955), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Trends in the Health of the Asbestos Worker" by Kenneth W. Smith published in the Annals of the New York Academy of Sciences, Vol. 132, Article 1 (Dec. 1965), a copy of which is available for inspection and copying in the office of Defendant's counsel.

In January, 1977, Johns-Manville Corporation contributed \$250,000 to the Mt. Sinai School of Medicine to fund a mesothelioma treatment study and program. This was a cooperative effort by the Corporation and the Heat, Frost & Insulators Union with the Union contributing a like amount toward the funding of this Program. The director of the Program is Dr. Irving J. Selikoff.

- (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 is Irving J. Selikoff, M.D., Director of the Environmental Sciences Laboratory, Mt. Sinai School of Medicine, New York, New York. These studies have not been concluded. Reports have been published from time to time and circulated to the trade through the union and are presumably available to Plaintiff's attorney through the Director of the Program, Dr. Irving J. Selikoff. In 1969-1970 at Defendant's Research and Engineering Center at Manville, New Jersey, tests were conducted for the Insulation Industry Hygiene Research Program by Thomas J. Weeks and Allan F. Burns. A copy of the report on such tests entitled "Performance of Dust Respirators against a Fibrous Dust" by Messrs. Weeks and Burns, published in American Industrial Hygiene Association Journal (May-June, 1970), is available for copying at the office of Defendant's counsel.

Additionally, an epidemiological study of the biological effects of asbestos dust among the Port of Genoa and LaSpezia Arsenal insulation workers, among others, is being conducted by the Clinica del Lavoro, Milano, Italy, under the sponsorship of the Institute of Occupational and Environmental Health, which Institute in turn is funded by the Quebec Asbestos Mining Association. Defendant is the principal contributor to the funding of the Quebec Asbestos Mining Association. This study was

Defendant, through its membership in the National Insulation Manufacturers Association, has funded, in part, the studies conducted by Dr. Clark Cooper, et al, at the University of California at Berkeley. The following have been generated by this study:

"Industrial Hygiene for Insulation Workers", by J. Leroy Balzer, published in the Journal of Occupational Medicine (January, 1968), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Environmental Exposures in the Insulation Trade" by J. Leroy Balzer, published in NICA Outlook (April, 1970), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"Evaluation and Control of Asbestos Exposures in the Insulating Trade", by Clark W. Cooper and J. Leroy Balzer, 2nd International Conference Biological Effects of Asbestos, Dresden, (1968), a copy of which is available for inspection and copying in the office of Defendant's counsel.

"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), a copy of which is available for inspection and copying in the office of Defendant's counsel.

The first of the studies under the direction of Dr. Cooper, mentioned above, was published in the Journal of Occupational Medicine (January, 1968) and reported to numerous persons and entities including the Eleventh Annual Western Industrial Health Conference. The second study directed by Dr. Cooper, referred to above, was published in the National Insulation Contractors Association's magazine Outlook during or about 1970.

38. Have you ever maintained any research laboratory or division at the plant? If so,

(a) State or identify:

(i) The date when this research laboratory or division was established;

(ii) The nature of the research performed there, including specifically whether any research was conducted into the

(iv) All persons who have headed it since the plant was first operated;

(b) Produce all writings dealing with the decision to maintain the research laboratory or division.

ANSWER: Not to the best of Defendant's present knowledge.

39. Have any of your personnel located at the plant ever attended any conference, symposium, or other meeting concerned with the health consequences of asbestos exposure, the proper methods of working with asbestos or methods of controlling asbestos dust? If so, as to each such conference, symposium, or meeting:

(a) State or identify:

(i) The person or organization that sponsored it;

(ii) The date and place it was held;

(iii) Your personnel who attended it;

(iv) All information provided there concerning the health consequences of asbestos exposure, the proper methods of working with asbestos, or methods of controlling asbestos dust;

(b) Produce all writings distributed at or concerning the conference, symposium, or meeting.

ANSWER: Defendant is unable to respond to this Interrogatory, as no documentation is available, with the exception of a meeting held in 1980, which is irrelevant in the case at bar.

40. Have any of your personnel located elsewhere than at the plant ever attended any conference, symposium, or other meeting concerned with the health consequences of asbestos exposure, the proper methods of working with asbestos or methods of controlling asbestos dust? If so, as to each such conference, symposium, or other meeting:

(iv) All information provided there concerning the health consequences of asbestos exposure, the proper methods of working with asbestos, or methods of controlling asbestos dust;

(b) Produce all writings distributed at or concerning the conference, symposium, or meeting.

ANSWER: Defendant has attended many meetings and, to its knowledge, every significant seminar, conference or convention anywhere in the world where the biological effects of asbestos were discussed by the world's foremost authorities on the subject.

The following are the major conferences where the subject of occupational health and exposure to asbestos was discussed; sponsoring organizations are indicated where known.

Oxford	1950 -	Inhaled Particles and Vapours - British Occupational Hygiene Society
Caen	1954 -	International Congress on Asbestosis - Chambre Syndicale de l'Amiante
New York	1954 -	Biological Effects of Asbestos - New York Academy of Sciences
Cambridge	1965 -	Inhaled Particles and Vapours II - British Occupational Hygiene Society
Vienna	1966 -	XV. International Congress on Occupational Health - Permanent Commission and International Association on Occupational Health
Cincinnati	1967 -	X-Ray - Meeting of Experts on Radiology of Asbestosis - International Union Against Cancer (UICC)
Dresden	1968 -	Biologische Wirkungen des Asbestos - East Germany Society of Occupational Medicine
Tokyo	1969 -	XVI. International Congress on Occupational Health - Permanent Commission and International Association on Occupational Health

London (UK)	1970 -	Inhaled Particles and Vapours III - British Occupational Hygiene Society
Sardinia	1970 -	Meeting of the Sub-Committee and International Colloquium on Asbestosis - Permanent Commission and International Association on Occupational Health, Subcommittee on Asbestosis
Cardiff	1970 -	Symposium on the Tissue Response to Asbestos - University of South Wales
Bucharest	1971 -	IVth International Pneumoconiosis Conference - International Labor Organization (ILO) Geneva
Helsinki	1971 -	International Symposium on Safety and Health in Ship- building and Ship Repairing - International Labor Organization (ILO) Geneva
Buenos Aires	1972 -	IVth. International Congress on Occupational Health - Permanent Commission and International Association on Occupational Health
Lyon	1972 -	Biological Effects of Asbestos - International Agency for Research on Cancer (IARC) Lyon
Montreal	1973 -	Institute of Occupational and Environmental Health - Fibres for Biological Experiments - Institute of Occupational and Environmental Health (IOEH), Montreal, Canada
Geneva	1973 -	ILO (experts) - Asbestos: Health Risks and their Prevention - International Labor Organization (ILO) Geneva
Brighton	1975 -	XVIII. International Congress on Occupational Health - Permanent Commission and International Association on Occupational Health
Edinburgh	1975 -	Inhaled Particles IV - British Occupational Hygiene Society
Rouen	1975 -	Symposium Pathologie de l'Amiante - "Centre Henri

Paris	1977 -	Colloque - Amiante et Cancerogenese Humaine - ??
Washington	1977 -	Workshop on Asbestos: Definition and Measurement methods - ??
Montreal	1977 -	International Conference on Cancer and Environment - Institute of Hematology and Oncology of Montreal
Washington	1977 -	Occupational Exposure to Fibrous and particulate dust and their extension into the environment - Society for Occupational and Environmental Health
Johannesburg	1977 -	Asbestos Symposium - Department of Mines, Government of the Republic of South Africa
New York	1978 -	Health Hazards of Asbestos Exposures - New York Academy of Sciences
Dubrovnik (Yugoslavia)	1978 -	XIX International Congress on Occupational Health - Permanent Commission and International Association on Occupational Health
Caracas (Venezuela)	1978 -	5th International Conference on Pneumonconiosis - International Labor Organization (ILO), Geneva
San Francisco	1979 -	International Conference on Occupational Lung Diseases - American College of Chest Physicians
Lyon (France)	1979 -	Biological Effects of Mineral Fibres - International Agency for Research on Cancer (IARC), Lyon
Cardiff (UK)	1979 -	Cardiff Workshop on In Vitro Testing - Medical Research Council ??
Mt. Ste-Marie (Quebec)	1979 -	Workshop on Occupational Health Standards - Society for Occupational and Environmental Health
Los Angeles	1980 -	Medical and Legal Aspects of Asbestos Related Disease - University of Southern California

The proceedings of such conferences are matters of public

(b) Provision of medical examinations for workers;

(c) Improvement of health conditions.

ANSWER: Defendant's answer to (a) is split into two parts:

(1) A/C (asbestos-cement) dust,

(2) Other dust and fumes.

Defendant's answer to (c) includes safety features as well as improved working conditions.

<u>Year</u>	<u>A/C Dust</u>	<u>Other Dust & Fume</u>	<u>Medical Exams</u>	<u>Improved Health</u>
1959	\$213,199	-	\$ 19,410	\$ 1,621
1960	-	-	Not Avail.	350
1961	-	-	6,575	1,250
1962	16,186	-	6,349	2,282
1963	-	\$ 6,600	7,083	11,127
1964	1,544	-	7,211	5,780
1965	2,481	15,587	3,866	1,441
1966	-	-	Not Avail.	2,036
1967	-	885	4,561	7,897
1968	11,650	1,639	7,910	7,411
1969	3,394	2,563	8,756	11,400
1970	3,935	4,515	9,054	13,185
1971	4,917	9,469	9,071	21,005
1972	16,028	3,222	11,106	10,378
1973	57,397	29,664	14,404	2,491
1974	176,521	-	14,779	1,500
1975	-	23,909	15,500	-
1976	136,634	-	15,428	7,447
1977	31,130	8,071	30,351	-
1978	43,749	88,799	74,377	-
1979	<u>-</u>	<u>38,046</u>	<u>69,941</u>	<u>6,862</u>
	\$718,765	\$232,969	\$335,732	\$115,333

The amounts shown above do not include any of the expenditures made for the regular routine maintenance of equipment because accounting records do not show that type of detail.

"Improved Health" includes safety features as well as improved working conditions.

42. State the total amount, if any, in dollars that you spent for the following purposes at all your plants during each year since the plant was first operated:

(a) Dust control at your plants;

unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence.

43. Have you ever installed any hoods, fans, sprays, bag houses, or other dust control equipment in the plant? If so,

(a) State when the dust control equipment was first installed in the plant, the nature of the dust control equipment that was then installed, and the nature of any modifications made in the dust control equipment since then;

(b) State, as to each piece of dust control equipment that is currently installed in the plant:

- (i) The specific type of equipment;
- (ii) The manufacturer of the equipment;
- (iii) The specific location where it is installed;
- (iv) The date when it was installed;
- (v) Its cost;

(c) Identify all persons who have had any responsibility for the purpose, design, installation, or maintenance of dust control equipment at the plant since the plant was first operated;

(d) Produce all writings dealing with the purchase, installation, operation, and maintenance of dust control equipment at the plant.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence.

However, in an effort to be responsive, Defendant answers in the affirmative and states the following:

(a) The Denison Pipe plant was designed in 1956/57 and constructed over 1957/58. Included in the original design was a complete dust collection system for the Forming Dept. and a

1. AR-1 (Mod)-7/10/59 Constructed dust enclosures over Monolithic Lathe, Mono Saw, Fitting Lathe and Boring Mill.
2. IR-136 (9/22/64) Added dust collector to tool room.
3. IR-169 (3/4/65) Enclosed Finishing End Dust Collector.
4. IR-329 (7/22/68) Dust Collector installation on M.O.A. lathe.
5. IR-330 (7/22/68) Three additional dust and scrap hoppers added.
6. IR-331 (7/22/68) Provide four dust blow-off booths.
7. IR-334 (9/24/68) Provide shed to wash off fiber pallets.
8. IR-349 (11/27/68) Add vacuum cleaner for willow area (cancels IR-335).
9. IR-368 (7/15/69) Dust collector for shipping saw (wood/sawdust only).
10. IR-386 (3/25/69) Dust system booster (for added Finishing end dust/chip collection).
11. IR-404 (10/21/69) Addition of dust hoods to UPL #2.
12. IR-432 (1/30/70) Three additional dust and scrap hoppers added.
13. IR-448 (4/28/70) Construct fiber pallet washing station.
14. EC-483 (2/2/71) Add Dust Collector for Lining Sanding Probe.
15. EC-512 (8/12/71) Dust Hood for 10' P/Y Willow Dump Station.
16. EC-548 (10/10/73) Unloading equipment for truck unloading of fiber.
17. EC-577 (7/31/72) Purchase 3 vacuum cleaners for asbestos dust and chips

20. EC-632 (12/19/72) Finishing Dust System revision and collector for Wheelabrator.
21. EC-633A (11/1/73) Finishing "Booster Fan" Vacuum Cleaning System.
22. EC-645 (12/18/73) Supplied Air Respirator System - Dust Houses.
23. EC-669 (4/26/73) Central Vacuum System - Forming Dept.
24. R-721 (5/30/74) Replacement of lines in Negative Fiber Handling System.
25. R-817 & 817 S-1 (6/3/76) Modify Pipe Machine Willow Feeds.
26. EC-844 (8/30/76) A/C Dust Wetting Modifications.
27. EC-845 (9/14/76) A/C Scrap Carts.
28. EC-769 Pneumatic Conveying System for finishing Dust.
29. EC-741 & 741 S-1 (4/24/74) Enlarge Finishing End Dust Collector.
30. EC-782 (5/2/75) Enclosed Gate for Upper P/E Mixers.
31. EC-913 (7/25/77) Dust Collector for Lining Sanding Probe.
32. EC-947 (12/16/77) Locker Room for Willow Operator.
33. CR-926 (9/15/77) PVC Mixer Dust Collector.
34. IR-1043 (5/30/79) Enclose Willow Station.

Technical or Engineering Projects were as follows:

(Attachment 43C)

1. EP-119 (4/9/58) Evaluated Tornado Vacuum Cleaner.
2. EP-169 (10/28/71) Evaluate Dust Collection System at Lining Sanding Probe.
3. EP-170 (Sup-1, 12/13/71) Evaluate #1 UPL Flextester Blowing Station.

7. EP-859 (10/23/70) Evaluate Hood Respirator for Fiber Handling.

It should be noted that routine repair, maintenance, and updating of dust controlling systems occurred continuously and no specific substantiating documents are available.

(b) The dust control equipment currently installed in the plant is summarized on Data Collection Information Sheets (Attachment 43D).

(c) The following list of persons have had some responsibility for the purchase, design, installation or maintenance at the plant:

- H.F. Lloyd - Purchasing
- M. Wineinger - Purchasing
- W.W. Baywell - Plant Engineer
- H.T. Brode - Plant Engineer
- R.L. Batts - Plant Engineer
- J. Young - Purchasing
- B. Riddle - Maintenance
- A. Templeton - Purchasing
- R. Burden - Purchasing
- B. Hullett - Purchasing
- B. Adams - Purchasing
- G. Perry - Design
- E. Clark - Design
- D. Faber - Design
- W. Harris - Purchasing
- T. Baker - Purchasing
- B. Moon - Maintenance
- C.C. Pascale - General Engineering Dept.
- G. Seat - Maintenance

(a) State:

- (i) The type of respirator used;
- (ii) The manufacturer of the respirators;
- (iii) The date when respirators were first made available;
- (iv) Whether use of respirators is mandatory, and if so, the date use became mandatory and the sanctions for failure to use a respirator;
- (v) Whether each of the plaintiffs in this action ever wore a respirator;
- (vi) The terms of any advice or instructions given to employees at the plant regarding the respirators;
- (vii) The manner by which any advice or instructions regarding the use of the respirators was given to employees at the plant;
- (viii) Whether any of the plaintiffs in this action were ever reprimanded or otherwise disciplined for failure to wear a respirator and, if so, by whom and on what date;

(b) Identify all persons with any responsibility for the respirator program since respirators were first made available at the plant;

(c) Produce all writings dealing with the decision to commence or maintain a respirator program, the purchase of the respirators, their provision to employees at the plant, the advice or instructions given to employees at the plant regarding the respirators, and any disciplinary actions taken against any plaintiff in this action for failure to wear a respirator.

ANSWER: Yes. All available documentation as to the use of respirators at Denison is attached hereto as Exhibit E. The use of respiration devices is dependent upon the dose exposure.

(v) Unknown.

(vi) The term of any advice given was to be in effect until improvements were made in the design of the respirator of work conditions.

(vii) The use of respirators was explained to individuals by their first line supervisor. New procedures were covered in Safety and Work Smarter meetings and instructions for proper usages were printed on the respirator containers.

(b) Jack Hessa - Plant Manager

Gil Eggleston - Plant Manager

Dave French - Plant Manager

Lou Richards - Plant Manager

John Lawrence - Plant Manager

(c) See Exhibit E.

45. Have you ever made any changes in the manufacturing or other processes in the plant, or in other asbestos-related plants that you have operated, in order to reduce the amount of asbestos dust associated with these processes? If so,

(a) State or identify as to each such change:

(i) The nature of the change;

(ii) The date of the change and the plant in which it was made;

(iii) All facts that led you to make the change;

(iv) The reduction in dust levels resulting from it;

(v) The persons responsible for deciding upon and adopting the change;

(b) Produce all writings concerning each such change.

ANSWER: Defendants have been pioneers in the development of dust control processes, which processes were incorporated into its

(i) The type of fiber you previously used and the suppliers of that fiber;

(ii) The type of fiber you used instead and the suppliers of that fiber;

(iii) The date of the change and the plant in which it was made;

(iv) All facts that led you to change the type of fiber;

(v) The reduction in dust levels resulting from it;

(vi) The persons responsible for deciding upon and adopting the change;

(b) Produce all writings concerning each such change.

ANSWER: To the best of Defendants' knowledge, the dust levels obtained under a given set of conditions are not dependent upon the type of asbestos fiber used.

47. Have you ever provided showers or change-of-clothing facilities for employees at the plant? If so,

(a) State or identify:

(i) The nature of the facilities provided;

(ii) When they were first provided;

(iii) Whether employees' use of them is mandatory and, if so, when such use became mandatory and the sanctions for failure to use the facility;

(iv) The content of any instructions or advice given to employees to use them;

(v) The persons responsible for deciding to provide them;

(b) Produce all writings concerning the decision to provide such facilities.

(ii) Showers -- 1958 for any employee to use in Hourly Locker Rooms. 1973 for Willow Operators only in Special Locker Room.

(iii) Use of Protective clothing and respirators is mandatory in areas as described in the attached P.D.O.M.

6.3.9.6-1; the use of showers is not mandatory but recommended to Willow Operators. Sanctions for failure to use are noted in P.D.O.M. 6.1.4.2 "Uniform Application of Discipline". Page 3, Para. 8.0 "Failure to Wear Personal Protective Equipment" P.D.O.M. 6.2.4.1, attached.

(iv) All operators are instructed (verbally) by their immediate Shift Supervisor to wear and use protective clothing and equipment provided by the Company. They are encouraged to use showers available to them in their Special Locker Room. They are further advised that violations of the P.D.O.M. 6.3.9.6-1 will result in disciplinary action.

(v) This information is not presently known.

(b) Any such writings could not be located.

48. Have you ever provided medical examinations for workers at the plant? If so,

(a) State or identify:

(i) The date when such medical examinations were first given;

(ii) The reasons why such medical examinations were given;

(iii) The frequency with which each employee was examined;

(iv) Whether such examinations included x-rays and pulmonary function tests;

(v) Whether employees' participation in such

(b) Produce all writings concerning the decision to give such medical examinations.

ANSWER: Yes.

(i) Since the Denison plant began operations.

(ii) Company policy.

(iii) Pre-employment examinations are conducted prior to hiring an individual. Regular exams were then offered ever two years until the OSHA regulation was adopted requiring yearly examinations for those working with asbestos.

(iv) X-rays, and also pulmonary function tests as per OSHA mandate.

(v) See Answer to subpart (iii) above, except in instances where employees refused to cooperate.

(vi) Company physicians as set forth in Answer to Interrogatory No. 8. Defendant objects to the balance of this Interrogatory on the grounds that the same is overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence.

(b) No such records are still in existence, to our present knowledge.

49. Have you ever maintained a training or orientation program for employees at the plant or at other asbestos plants you have operated? If so,

(a) State or identify as to each such program:

(i) The date when the program began;

(ii) Whether each of the plaintiffs in this action participated in the program;

(iii) The terms of any information concerning health, safety, and the proper methods of working with asbestos given to persons participating in the program;

ANSWER:

(a) Yes.

(i) "Work Smarter" and Safety Meetings were held beginning with the operation of the Denison plant in 1957.

(ii) Yes.

(iii) Defendant does not understand this subpart and therefore objects to same.

(iv) The plant managers held each department head responsible for required meetings. For the most part, front line supervisors conducted the actual meetings.

(b) Defendant has made a diligent search and has not located any such documents.

In addition, New Employee Indoctrination programs originated in 1977; these meetings were organized by R. Arant, Employee Relations Supervisor; N. Largent, Plant Trainer; C. Smith, Safety and Environmental.

50. Have you ever placed any posters, placards, or other writings in the plant to inform employees about the health consequences of asbestos exposure or the proper methods of working with asbestos or controlling asbestos dust? If so,

(a) State or identify as to each such poster, placard, or other writing:

(i) The date it was placed in the plant;

(ii) The location in the plant where it was placed;

(iii) All information provided in it;

(iv) The persons responsible for placing it in the plant;

(b) Produce all the posters, placards, or other writings, and all writings concerning the decision to place them

51. Have you ever distributed any writings to employees that deal with the health consequences of asbestos exposure or the proper methods of working with asbestos or controlling asbestos dust? If so,

(a) State of identify as to each such writing:

- (i) The date it was distributed;
- (ii) All information provided in it;
- (iii) Whether each of the plaintiffs in this action received copies of it;
- (iv) The persons responsible for distributing it;

(b) Produce all the writings and all writings concerning the decision to distribute them.

ANSWER: Defendant has distributed the following:

A booklet entitled, "What You Should Know About Asbestos and Health", published by Johns-Manville Corporation in January of 1975, a copy of which is available for inspection and/or copying at the office of Defendants' attorneys. This booklet was distributed to all employees at all locations using asbestos fiber or handling products containing asbestos fiber.

A booklet entitled, "What Every Employee Should Know About Asbestos", published by Johns-Manville Corporation in 1973, a copy of which is available for inspection and/or copying at the office of Defendants' attorneys. 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, a copy of which is available for inspection and/or copying at the office of Defendants' attorneys. This booklet was distributed to all employees at all locations using asbestos fiber or handling products containing asbestos fiber.

Since 1976, Defendant has made available a Catalog of Occupational/Environmental Health and Safety Programs as listed below. All the publications, audio-visual programs and other

A pamphlet entitled, "Occupational Health Guide - Asbestos", published by Johns-Manville in 1976, a copy of which is available for inspection and/or copying at the office of Defendants' attorneys. This guide is designed as a reference for supervisory personnel.

A 25-minute slide/tape presentation on industrial hygiene programs at Johns-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 in 1976, a copy of which is available for inspection and/or copying at the office of Defendants' attorneys.

In addition, over the several years last past, there have been many oral presentations and meetings at the plant level concerning safety practices related to asbestos exposure.

Also, Defendant has 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".

Such booklets may be obtained from the AIA, 1500 L Street, N.W. Washington, D.C. 20036.

Additionally, Defendants 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". Such booklet is available from NICA, 3630 Fenton Street, Silver Spring, Maryland 20910, at a cost

(a) State or identify:

(i) The name of each publication;

(ii) The frequency of its publication;

(iii) The contents of all articles in it dealing with the health consequences of asbestos exposure or the proper methods of dealing with asbestos or controlling asbestos dust;

(iv) Whether each of the plaintiffs in this action received copies of the publication;

(v) The persons responsible for distributing each such publication;

(b) Produce copies of all issues of each such publication distributed.

ANSWER: The Denison Plant publishes a newsletter publication entitled "Pipeline - Intercom"; dates of publication vary.

53. Have you ever conducted any meetings, grievance sessions, or film shows at the plant dealing in whole or in part with the health consequences of asbestos exposure or the proper methods of working with asbestos or controlling asbestos dust? If so,

(a) State or identify as to each such meeting, grievance session, or film show:

(i) The date it was held;

(ii) All information provided there concerning the health consequences of asbestos exposure or the proper methods of dealing with asbestos or controlling asbestos dust;

(iii) Whether each of the plaintiffs in this action attended it;

(iv) The persons responsible for holding it;

(b) Produce all writings distributed at the meetings, grievance sessions, or film shows, all writings dealing with the decision to hold them and a copy of any film that was shown.

(a) State or identify:

(i) The manner in which the employees were so informed;

(ii) The date when they were so informed;

(iii) All information provided to the employees;

(iv) Whether each of the plaintiffs in this action was so informed;

(v) The persons responsible for so informing the employees;

(b) Produce all writings containing such information or dealing with the decision to provide it.

ANSWER: (a) Correspondence, booklets, notices, etc.

(i) Bulletins, Work Smarter Meetings, Safety Meetings and Labor/Management Meetings.

(ii) Unknown.

(iii) Defendants can in no way remember or recount all such information over a 23 year period. Much of such information would necessarily have been verbal. Please refer to information on this subject produced in response to the Plaintiffs' Request to Produce.

(iv) Glenn Gage had been informed, to the best of our information.

(v) Employee Relations Manager, Department Head, General Foreman and First Line Supervisor.

(b) See attached Monthly safety Meetings for years 1977-1979, identified as Exhibit G.

55. Have any of your foremen, supervisors, or management personnel at the plant ever received any formal or informal training regarding the health consequences of asbestos exposure or the proper methods of working with asbestos or controlling

(ii) All information provided there concerning the proper methods of working with asbestos dust or the health consequences of asbestos exposure;

(c) Produce all documents regarding the training.

ANSWER: See Answer to Interrogatory No. 49. Defendants have not yet located any surviving documents pertaining to information sought by this Interrogatory. Some personnel have received training through headquarters; Defendant, however, is unable to identify such persons at this time and over the time period in question.

56. State, as to each of your present or former employees who is a plaintiff in this action:

(a) The date he first worked in the plant;

(b) All positions and locations in which he has worked in the plant and the dates he worked in each position and location;

(c) The specific tasks he performed in each position;

(d) The name and current address of his immediate supervisor in each position;

(e) When you first became aware that he claimed to be suffering from an asbestos-related disease;

(f) The manner in which you became aware that he claimed to be suffering from an asbestos-related disease;

(g) Whether he has filed a claim for workmen's compensation due to an asbestos-related disease and, if so, when the claim was filed, the docket number of the claim, and the amount of the award, if any, that he received as a result of the claim.

ANSWER: Attached as Exhibit H is a copy of the employment record for Messrs. Downs and Gage. The interrogatory is otherwise objected to on the grounds that it seeks information already known

in this action, concerning each such person's medical history, and concerning any workmen's compensation claim filed by each such person; copies of all x-rays taken of each plaintiff; and all medical reports made to you or to each plaintiff concerning his medical condition.

ANSWER: See Answer to Interrogatory No. 56.

58. Do you have any policy regarding the retention or destruction of corporate records or other writings? If so,

(a) State:

(i) When the policy was adopted;

(ii) What the policy is;

(b) Identify all persons supervising the retention or destruction of corporate records since the plant was first operated;

(c) Produce all writings describing the policy and its adoption.

ANSWER: Yes. Documents are routinely kept for a period of five (5) years, although exceptions exist in respect to certain corporate medical documents due to applicable statutes and regulations. It is not known when such a policy was first implemented by Defendant; however upon information and belief, Defendant states that such a policy has existed at least since the 1940's. Defendant objects to the balance of this Interrogatory as being overly broad, unduly burdensome, not relevant to or tending to lead to the discovery of information relevant to this litigation, and pertaining to documents sensitive to business operations of the defendant while pertaining in no way to any issue in these lawsuits.

59. List all suppliers to the Danison, Texas facility of:

(a) Raw asbestos fiber;

ANSWER: A diligent search to date has resulted in identification of the following suppliers:

Cape Asbestos

Turner-Newall, Ltd.

Lake Asbestos

United States Government, General Services Administration

General Mining and Finance Corp. Ltd.

Cassiar Asbestos Corp. Ltd.

Central Asbestos Company. Ltd.

Eternit

Johns-Manville

Defendants cannot state with specificity whether additional suppliers exist, by reason of direct supply of fiber to the Denison plant or through indirect supply through another Johns-Manville plant.

50. State the use of each such product or fiber supplied to Denison facility for each year 1953 to 1979.

ANSWER: Such fiber was used in the construction of transite materials.

51. State whether purchases of raw asbestos fiber and/or asbestos containing products were made by a purchasing agent at Denison or by a central purchasing agent.

ANSWER: Generally by a central purchasing agent located at Johns-Manville World Headquarters.

52. List all purchasing agents or departments for the Denison, Texas plant and state their duty status:

(a) At the time of purchase;

(b) Currently.

ANSWER: H.F. Lloyd has been the Purchasing Agent for the Denison plant since it began operations.

ANSWER: No.

54. For every year of operation list all products manufactured at the Denison, Texas facility.

ANSWER: See Answer to Interrogatory No. 60.

55. Produce all purchase invoices, sales records, shipment vouchers, computer printouts, or other documents or indicia of purchase of asbestos fiber or asbestos containing products at the Denison facility for the years 1953 through 1979.

ANSWER: To the best of our present knowledge, no such invoices or records exist pertinent to the period subject to these lawsuits. This Interrogatory is objected to insofar as it seeks such documents prepared subsequent to the last date of claimed exposure to asbestos or asbestos-containing products by these Plaintiffs on the ground that such documents are not relevant to these lawsuits.

56. With respect to raw asbestos fiber purchased or supplied by any subsidiary or affiliated company of Johns-Manville, state when:

(a) A warning label was first attached to bags or containers of fiber;

(b) A letter to workers was issued advising specifically of the risk of containing:

- (i) Asbestosis;
- (ii) Lung cancer;
- (iii) Mesothelioma.

ANSWER: Defendant placed warning notices on the packaging of its asbestos fiber. The warning labels and the dates of use are as follows:

CAUTION

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

(1972-1978)

CAUTION

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

(1978-PRESENT)

Use of warning labels was commenced during 1969. 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, such regulation being promulgated by OSHA in 1972. This label was revised by Defendant to include a no-smoking warning, implementation of which commenced in November, 1978. Defendant also places this warning on all bags containing asbestos fiber in five additional languages; i.e., French, Dutch, German, Spanish and Japanese.

57. State whether any company defendant in this litigation was a member of any trade association or association or organization of asbestos producer which this defendant was a member of and, if so,

(a) List each such company defendant and organization.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is overly broad and unduly burdensome. In addition, Defendant states that the proper source for such

(a) Whether said entity is still in existence;
(b) Whether and how said entity has been purchased, merged, combined or absorbed or taken over by another Johns-Manville entity.

ANSWER: Jonns-Manville Products Corporation owned and operated the Denison facility from September 21, 1956 until December 31, 1975, at which time Johns-Manville Products Corporation was merged into Johns-Manville Sales Corporation.

69. List all asbestos fiber types and grades and sizes employed in the manufacture of asbestos cement pipe at the Denison facility for each year of operation.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same constitutes trade secrets. Defendant objects further on the grounds that the same is irrelevant and immaterial in the case at bar. In an effort to be responsive, see Answer to Interrogatory No. 46.

70. State whether bids or specifications are entertained or extended or accepted for asbestos fibers obtained from suppliers and, if so, where records of same can be obtained.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is irrelevant, immaterial and not reasonably calculated to lead to the discovery of admissible evidence.

71. With respect to raw asbestos fiber, state whether bids, sales or purchase or shipment or other records indicating receipt or purchase of asbestos fiber are maintained:

(a) Separately for the Denison facility;
(b) Separately for the Asbestos Cement Pipe Division for each year 1958-1980.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is irrelevant, immaterial and not reasonably

purchase, receipt or other indicia of the obtaining of asbestos fiber for use at Denison.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is irrelevant, immaterial and not reasonably calculated to lead to the discovery of admissible evidence.

73. For each year of operation at Denison, state with specificity the manner or method of:

- (a) Ordering raw asbestos fiber for Denison;
- (b) Ordering raw asbestos fiber for the Asbestos Cement Pipe Division;
- (c) Receipt of bids or purchase orders, shipment records or other indicia of purchase from suppliers of asbestos fiber to Denison;
- (d) Receipt of asbestos fiber to the Asbestos Cement Pipe Division.

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is irrelevant, immaterial and not reasonably calculated to lead to the discovery of admissible evidence.

74. State whether or not OSHA has ever reprimanded, cited, fined or sanctioned the Denison plant for violations of the Occupational Safety and Health Act, and if it has specify:

- (a) The date of the inspection which lead to any such action;
- (b) The date of the notice to the Denison plant of any such action;
- (c) The exact nature of such action;
- (d) The amount of any fine assessed against Defendant;
- (e) The exact reason or reasons for any such reprimand, citation, fine or sanction;
- (f) Produce any all all notices of violations,

ANSWER: Defendant objects to this Interrogatory on the grounds that the same is overly broad, unduly burdensome and not reasonably calculated to lead to the discovery of admissible evidence. This Interrogatory seeks information far beyond the issues reasonably related to these lawsuits.

Dated this 9 day of ~~January~~ ^{February}, 1981.

THOMPSON, ~~KNIGHT~~, ~~SIMMONS AND~~
~~BULLIEN~~

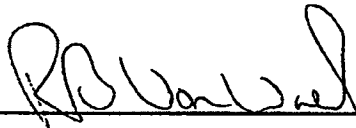
By: _____

Stephen H. Marshall
Attorney for Defendants
Johns-Manville Corporation,
Johns-Manville Sales
Corporation, successor by merger
with Johns-Manville Products
Corporation, Johns-Manville
International, and Canadian
Johns-Manville Asbestos Ltd.
2300 Republic National Bank Bldg.
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AFFIDAVIT

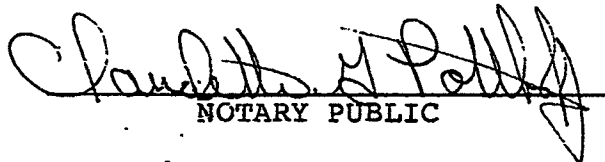
STATE OF COLORADO)
) ss:.
COUNTY OF JEFFERSON)

R. B. VON WALD being duly sworn according to law deposes and says he is Corporate Counsel of JOHNS-MANVILLE CORPORATION, a defendant in this action, that he is authorized to make this Affidavit on its behalf and that the facts set forth in the foregoing pleading have been supplied to him by others upon whom he relies and are true and correct to the best of his knowledge, information and belief.



R. B. VON WALD

Sworn and subscribed to
before me this 28 day
of January, 1981.


NOTARY PUBLIC

My Commission expires Nov. 12, 1984