

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

HARRY DOUGHERTY and
GRACE DOUGHERTY, his wife,
et al.,

Plaintiffs,

vs.

KEENE CORP., et al.,
Defendants.

Case No. 87-0093-JRR

DEFENDANT MANVILLE CORPORATION'S
ASBESTOS DISEASE COMPENSATION FUND'S
RESPONSE TO PLAINTIFFS' INTERROGATORIES

Defendant Manville Corporation Asbestos Disease Compensation Fund (hereafter "the Fund"), by and through its attorneys, PHILLIPS & SNYDER, P.A., hereby submits the following Responses to Plaintiffs' Interrogatories.

PRELIMINARY MATTERS

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

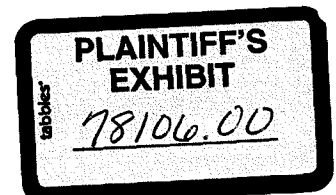
The Fund objects to these Interrogatories and Request for Production of Documents to the extent that they call for identification or production of documents entitled to protection as attorney client communication or attorney work product.

Defendant reserves the right to amend these answers to the extent that new or different information becomes available.

INTERROGATORY NO. 1:

Describe in detail, with specificity and particularity each product mined, produced, manufactured or sold by the answering defendant or its predecessors in title or subsidiaries which contained asbestos for each year from 1936 until 1980; and for each such product describe:

(a) Its chemical ingredients;



(b) State the manner in which it was intended to be used, i.e., in the construction and/or insulation of buildings and/or equipment, etc.;

(c) For each ingredient contained therein state:

(i) The name or chemical composition of each substance, what harmful effects, if any are known, that it produces in man or mammals and whether it produces its harmful effects through ingestion, inhalation, absorption or a combination of these;

(ii) When you determined and/or learned that the substance produced harmful effects and how such effects were produced;

(iii) Identify each individual who participated in such determination and/or obtained such knowledge;

(iv) Identify each document that refers, reflects or relates to any information pertaining to the properties of each of the ingredients and/or how the harmful effects are produced as well as your determination of those toxic effects and the manner by which they are produced;

(v) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied;

(vi) Which products or ingredients were mined which were manufactured and which were distributed by answering defendants.

RESPONSE:

For many decades, Manville Corporation or related entities engaged in the manufacture and sale of asbestos-containing products, as well as the mining, milling and sale of asbestos fiber. The H.W. Johns Company, a predecessor to Manville Corporation, first commenced business in 1858 and began manufacturing asbestos-containing products by at least 1900.

Johns-Manville Products Corporation was organized in 1927 and was responsible for the manufacture of asbestos-containing products. Johns-Manville Sales Corporation, organized in 1929, was responsible for the sale of asbestos-containing products. The asbestos used in Manville products was either chrysotile, amosite or crocidolite. The characteristics of each of these fiber types are as follows:

FIBER TYPE - CHARACTERISTICS

Chrysotile

Much of the chrysotile fiber sold or used by Manville Corporation or related entities were mined in Asbestos, Quebec by a Manville subsidiary, beginning in 1916. Chrysotile is a mineral in the serpentine group. Serpentine minerals are green, greenish-yellow or greenish-gray ferromagnesian hydrous silicate rock-forming minerals having greasy or silky luster and a slightly soapy feel.

Structural Occurrence: In veins associated with serpentine

Mineralogical Association: Principally in altered peridotite adjacent to serpentine; in limestone near contact with basic igneous rocks; sometimes contains small amounts of magnetite

Origin: Alteration and metamorphism of basic igneous rocks rich in magnesium silicates

Essential Chemical Composition: Hydrous silicate of magnesium

Theoretical Formula: $3\text{MgO}, 2\text{SiO}_2, 2\text{H}_2\text{O}$

Theoretical Chemical Composition: MgO: 43.6%, SiO_2 : 43.4%, H_2O : 13.0%

Usual Range of Actual Chemical Composition: MgO: 38.5 - 44.0%, SiO_2 : 38 - 43.5%, H_2O : 12 - 16%, FeO: 0.3 - 5.5%, Fe_2O_3 : 0 - 4.5%, Al_2O_3 : 0.2 - 2.5%

Crystal Structure: Fibrous and asbestiform (prismatic)

Crystal System: Monoclinic (pseudo-orthorhombic)

Color: White, gray, leek green, yellowish

Luster: Silky

Hardness: 2.5 - 4.0

Specific Gravity: About 2.5

Cleavage: 010 Perfect

Optical Properties: Biaxial, positive birefringence, small to moderate, parallel extinction

Mean Refractive Index: 1.50 - 1.55

Fusibility: Fusible in minute splinters at 6; loses H_2O at moderate temperatures

Length: Usual maximum 1 1/2 - 3 inches

Texture: Very fine and silky; finest of all varieties

Tensile Strength: High

Curliness: Most pronounced

Spinnability: Best spinning fiber

Hydration (combined H_2O): 10 - 16% H_2O ; most highly hydrated asbestos

Heat Resistance: Good, but becomes brittle and loses strength

Acid Resistance: Soluble in HCL with separation of gel

Petrographic: Parallel extinction; low refractive index; positive elongation.

Blowpipe: Fusibility - 6; decomposed by HCL (fibers of silica sometimes)

Features: Parallel extinction and H_2O content distinguished from tremolite; association with serpentine is characteristic

Principal Uses: Finest textile uses; spinning fiber; insulations; paper; asbestos-cement products; shorts and fines

Amosite

Amosite fibers were imported, primarily from South Africa. Amosite is a ferro-anthophyllite amphibole.

Structural Occurrence: Lamellar, coarsely to finely fibrous and asbestiform

Mineralogical Association: In crystalline schists

Origin: Metamorphic and non-ferro-magnesian minerals

Essential Chemical Composition: Silicate of iron and magnesium; higher iron content than anthophyllite; may also contain Al, Ca and Na, a little H_2O

Theoretical Formula: $(Fe, Mg)SiO_3$ 1 - 5% H_2O

Theoretical Chemical Composition: MgO: 5.0%, FeO: 47.7 - 54.5%, SiO₂: 47.3 - 45.5%

Usual Range of Chemical Composition: SiO₂: 49 - 53%, MgO: 1.0 - 7.0%, FeO: 34 - 44%, Al₂O₃: 2 - 9%, CaO and Na₂O: 0.5 - 2.5%, H₂O: 2.0 - 5.0%

Crystal Structure: Prismatic lamellar to fibrous

Crystal System: Orthorhombic

Color: Ash gray, greenish or brownish

Luster: Vitreous; somewhat pearly

Hardness: 5.5 - 6.0

Specific Gravity: 3.1 - 3.25

Cleavage: 110 perfect

Optical Properties: Biaxial, plus and minus extinction parallel

Mean Refractive Index: 1.64+/-

Fusibility: Fusible at 6; loses H₂O at moderate temperatures

Length: Usual maximum 7 inches; range of 2 - 11 inches; longest of all varieties

Texture: Rather coarse, but somewhat pliable

Tensile Strength: Good, but less than chrysotile

Curliness: Fair, but generally straight

Spinnability: Fair spinnability; inferior to chrysotile

Hydration (combined H₂O): 1.0 - 4.7%

Heat Resistance: Good, but becomes brittle and loses strength

Acid Resistance: Insoluble

Petrographic: Practically same as anthophyllite, except higher refractive index

Blowpipe: Difficulty -- fusible, but some water in closed tube

Features: Refractive index and specific gravity higher than anthophyllite; high iron content distinguishes from anthophyllite

Principal Uses: Some uses in textiles; insulations; building materials

Crocidolite

Crocidolite fibers were imported, primarily from South Africa. Crocidolite is a monoclinic amphibole.

Structural Occurrence: Usually fibrous, in iron-stone

Mineralogical Association: Iron-rich siliceous argillite in quartzose schists

Origin: Regional metamorphism

Essential Chemical Composition: Silicate of sodium and iron (some combined water)

Theoretical Formula: $\text{Na Fe (SiO}_3)_2 \cdot \text{FeSiO}_3$; usually with some H_2O

Theoretical Chemical Composition: Fe_2O_3 : 22%, FeO : 19.8%, SiO_2 : 49.6%, Na_2O : 8.6%

Usual Range of Actual Chemical Composition: SiO_2 : 49 - 53%, Fe_2O_3 : 17 - 20%, FeO : 13 - 20%, MgO : 0 - 3%, Na_2O : 4 - 8.5%, H_2O : 2.5 - 4.5%

Crystal Structure: Finely fibrous

Crystal System: Monoclinic

Color: Lavendar, blue, greenish

Luster: Silky to dull

Hardness: 4

Specific Gravity: 3.2 - 3.3

Cleavage: 110 perfect

Optical Properties: Biaxial, plus or minus extinction - inclined

Mean Refractive Index: About 1.7

Fusibility: Fuses with intumescence at 3; most readily fusible of all varieties

Length: Usual maximum 1 1/2 - 3 inches

Texture: Medium fine to coarse; tough

Tensile Strength: Highest of all varieties

Curliness: Fair, not equal to chrysotile

Spinnability: Fair spinnability; inferior to chrysotile

Hydration (combined H₂O): 2.55 - 4.15%

Heat Resistance: Poor; lowest of all varieties

Acid Resistance: Qualitatively insoluble; fairly resistant to chemicals

Petrographic: Strongly pleochroic (deep blue, blue, yellow green)

Blowpipe: Readily fusible at 3; gives strong sodium flame

Features: Blue color and low fusibility; distinguished from all other asbestos varieties; high refractive index and high pleochroism serve to identify

Principal Uses: To some extent in textiles; insulations; building materials

FIBER GRADING

After the natural chrysotile fiber is extracted from the mined ore, it is separated into fiber grade according to size. A former subsidiary of Manville, Johns-Manville Canada, Inc., tested and graded chrysotile asbestos by a method instituted by the Quebec Asbestos Mining Association, which gained worldwide acceptance as a standard for the classification and evaluation of chrysotile fiber.

The identification of fiber grades employed the use of a number followed by a letter; i.e.: 3T, 4T, 5R, 6D, or 7M, etc. The number classified the fibers into broad groups with "3" representing the longest fibers, progressing to "7" representing the shortest fibers. The letter was used to more precisely classify fiber length within each numbered group. The letter "A" represented the longest grade progressing to "Z" which represented the shortest grade within each numbered group.

The texture was further identified by adding a two digit numerical suffix to the standard grade length designation. The textural numbers started at "30" meaning very crudy, decreasing to "02" which means very well opened. For example, in the 6D grade length, Manville provided fibers having the following texture differences.

6D30	very crudy
6D24	crudy
6D20	semi-crudy
6D12	open
6D04	well open
6D02	very well open

In the case of group seven fiber grades, the textural numbers were used to express the bulk and absorption properties. The high numbers such as "19" and "15" indicated grades having low bulk and absorption, decreasing to "02" which represented grades having very high bulk and absorption.

Several other characteristics were identified which also affect the suitability of asbestos for any given application. The Quebec Asbestos Mining Association, in conjunction with other relevant organizations, adopted a series of test procedures designed to measure these properties. These tests were used regularly to monitor the quality of the grades being produced for specific applications.

PRODUCT DIRECTORIES

The Fund has in its possession Manville Corporation product directories from 1959 through 1986. These directories provide information relative to various product lines, construction of the product, popular uses, responsible sales division or department, various operating divisions, various plants with their respective products, products with a registered tradename, generic product names and competitive product names. Product names listed in all capital letters in these directories are tradenames. Such directories will be made available for inspection and copying at the records repository maintained by the Trust in Denver, Colorado, at a time convenient to the parties.

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

Exhibit A attached hereto is a list of asbestos-containing thermal insulation or shipyard products which were produced, manufactured or distributed by Manville Corporation or related entities. This listing includes the product name, product type, fiber type, percent fiber by weight, date manufactured, date labeled and date discontinued. Tradenames are listed in capital letters.

PRODUCTS DESCRIPTIONS AND USES

SHEETS AND BLOCKS

85% Magnesia - A high temperature insulation, composed of carbonate of magnesia and asbestos fiber, for service up to 600 degrees F.

ASBESTOCEL - An inexpensive insulation constructed of alternating layers of plain and corrugated asbestos paper for temperatures up to 300 degrees F.

Air-Cell - Very similar to ASBESTOCEL, constructed of alternating layers of plain and corrugated asbestos paper.

Asbestos "Navy Brand" FIRE FELT - A special grade of insulation, particularly adapted for marine work, or wherever a light weight insulation may be required.

Asbestos FIRE FELT - Insulating material made from felted and molded asbestos fiber for temperatures up to 1000 degrees F.

Asbestos Molded Blocks - Composed of a mass of felt-like asbestos fibers closely cemented together with a non-conducting compound.

Asbestos Sponge (Felted, Sectional, Molded) - An insulation made of layers of thin felt, composed of asbestos fiber and particles of finely ground spongy material forming and extremely cellular felt, built up like a book in laminated form, thereby confining a large volume of minute dead air cells in the felt and between the layers; for temperatures up to 700 degrees F.

EQUALITY - A material consisting of 50% carbonate of magnesia combined with asbestos and other fire-proof materials. It is especially manufactured to meet government specifications.

Flexible MIN-K - A fibrous insulating material designed principally for use on rockets, missiles, and jet aircraft; can withstand high heat and has an extremely low thermal conductivity.

High Temperature Insulation - Composed of a refractory material base of high insulating value combined with asbestos fiber and some carbonate of magnesia.

MAGNO - Consists of 35% carbonate of magnesia combined with asbestos fiber and other insulating materials. It is particularly adaptable for insulating heating systems and is specified by U.S. and state governments for this purpose.

MIN-K 1301 - A molded fibrous insulating material designed principally for use on rockets, missiles, and jet aircraft; can withstand high heat (1300 degrees F) and has an extremely low thermal conductivity.

MIN-K 2000 - See MIN-K 1301; can withstand heat to 2000 degrees F.

MIN-K 500 - See MIN-K 1301; can withstand heat to 500 degrees F.

SONITE - Made of MIN-K insulation and used by the U.S. Navy as an underwater sound insulation.

SUPEREX 1900 - A high temperature insulation for service up to 1900 degrees F made from asbestos fiber, diatomaceous silica, and other insulating materials.

SUPEREX 2000 - A high temperature insulation for service up to 2000 degrees F; replacement product for SUPEREX 1900, with asbestos removed by 1973.

SUPEREX-M - A high temperature insulation for service up to 1600 degrees F made from asbestos fiber, diatomaceous silica, and other insulating materials; replaced by asbestos free SUPEREX 1600 in 1973.

SUPEREX SG - A block of SUPEREX insulation bonded to a fiberglass blanket.

Silicated THERMOBESTOS - Dry granular sodium silicate added to THERMOBESTOS. See THERMOBESTOS.

Super FIRE FELT - A lighter weight variation of Asbestos FIRE FELT; temperature limit of 700 degrees or 1000 degrees F, depending on construction.

THERM-O-BESTOS - A waterproofed asbestos material of high insulating value used for billing underground conduit systems designed to house hot lines.

THERMOBESTOS - A high temperature insulation, made from lime, diatomaceous silica, and asbestos fiber, for service up to 1200 degrees F.

Thermo FIRE FELT - Similar to Asbestos FIRE FELT, except that it has a cellular asbestos structure completely enclosed in the center of the sheet, giving it increased efficiency and resiliency; for temperatures up to 1000 degrees F.

VITRIBESTOS - Made of asbestos felts which have been corrugated and built up to form a cellular sheet, then vitrified to make them more resistant to moisture and high temperature. The vitrified product has lower insulating value than untreated products. Used for lining smokestacks and flues, building theater curtains, and wherever a strong, stiff product is required that will resist temperatures up to 800 degrees F.

Vitro FIRE FELT - Similar to Thermo FIRE FELT except that the cellular asbestos structure is vitrified to increase rigidity.

SECTIONAL PIPE INSULATION

85% Magnesia - See 85% Magnesia under SHEETS AND BLOCKS.

ANTI-SWEAT - Made from water-proof insulating paper and wool felt, it prevents condensation from cold water pipes by insulating the pipe from warm air.

AQUA Covering - Solid laminations of wool felt one-half inch thick with one layer of asbestos paper. See Wool Felt Sectional Pipe Insulations.

ASBESTOCEL - See ASBESTOCEL under SHEETS AND BLOCKS; in this design, the air channels run around the pipe instead of lengthwise, which prevents the circulation of air.

Air-Cell - See Air-Cell under SHEETS AND BLOCKS; in this design, the air channels run lengthwise, parallel to the pipe.

Asbestos "Navy Brand" FIRE FELT Covering - See Asbestos "Navy Brand" FIRE FELT under SHEETS AND BLOCKS.

Asbestos Air-Chamber Covering - Formed by layers of fire-proof Asbestos Lining Felt, Hair Felt, Asbestos Sheating, and Canvas. An additional layer of Hair Felt and Asbestos Sheating form Double Air Chamber.

Asbestos Combination Spiral Pipe Insulation - Consists of a layer of CEILINITE (see under PAPER, FELTS, BLANKETS) over which is wrapped a layer of asbestos listing. Used on irregular runs of pipe, or where severe vibration is encountered, as an automobile exhaust pipes and on locomotives; temperature limit of 1000 degrees F.

Asbestos FIRE FELT Covering - See Asbestos FIRE FELT under SHEETS AND BLOCKS.

Asbestos Molded Sectional Covering - See Asbestos Molded Blocks under SHEETS AND BLOCKS.

Asbestos Sectional Covering - composed of a fire-proof non-conducting lining of asbestos, surrounded by alternate layers of asbestos and non-conducting felt.

Asbestos Sponge (Felted, Sectional, Molded) - See Asbestos Sponge under SHEETS AND BLOCKS.

Asbestos and Hair Felt Removeable Covering - A form of Air Chamber Covering composed of standard hair felt with an inner layer of asbestos fiber of equal thickness, the whole enclosed in a strong

wrapper or case of wool sheathing and a lining of asbestos sheathing.

Asbestos Hair Felt Covering - Consists of layers of Asbestos Hair Felt, composed of long fiber asbestos and cattle hair, built up on the pipe.

CHAMPION Sectional Covering - Solid laminations of wool felt three-quarters of an inch thick with one layer of asbestos paper. See Wool Felt Sectional Pipe Insulations.

EQUALITY - See EQUALITY under SHEETS AND BLOCKS.

EUREKA Covering - Made of one-quarter inch asbestos felt on the inside of the section, and the balance (three-quarters of an inch) of alternate layers of asbestos and wool felt.

EXPRESS Covering - Solid laminations of wool felt three-quarters of an inch thick with one layer of asbestos paper. See Wool Felt Sectional Pipe Insulations.

Fine Corrugated ASBESTOCEL - Similar to ASBESTOCEL, except the corrugations are smaller; however, there are 50% more laminations per inch of thickness and the additional small enclosed air cells provide greater efficiency.

High Temperature Insulation - See High Temperature Insulation under SHEETS AND BLOCKS.

INDENTED - Made up of several layers of pure indented Asbestos Felt, wire stitched together; the indentations cause air spaces to be formed between the layers, improving insulating efficiency.

MAGNO - See MAGNO under SHEETS AND BLOCKS.

METAL-ON - THERMOBESTOS pipe insulation with a factory applied jacket of aluminum; joints are sealed with special aluminum "snap-straps" and metal bands.

NATIONAL Sectional Covering - Composed of corrugated soft wool felt, lined on the inside and alternated for three layers with asbestos lining felt; an economical covering for use on low pressure steam lines.

PERFECTION Sectional Covering - Composed of one-half inch indented wool felt wrapped around one-half inch molded asbestos.

STANDARD Sectional Covering - Solid laminations of wool felt one inch thick with an interlining of two layers of asbestos paper. See Wool Felt Sectional Pipe Insulation.

SUPEREX 1900 - See SUPEREX 1900 under SHEETS AND BLOCKS.

SUPEREX-M - See SUPEREX-M under SHEETS AND BLOCKS.

Safety Blow-Off Covering - Protects boiler blow-off pipes against corrosion by hot gases and prevents explosions resulting from sudden changes of temperature when operating boilers.

Silicated THERMOBESTOS - See Silicated THERMOBESTOS under SHEETS AND BLOCKS.

THERM-O-BESTOS - See THERM-O-BESTOS under SHEETS AND BLOCKS.

THERMOBESTOS - See THERMOBESTOS under SHEETS AND BLOCKS.

VITRIBESTOS Covering - See VITRIBESTOS under SHEETS AND BLOCKS.

Wool Felt Sectional Pipe Insulations - An inexpensive insulation made of wool felt and asbestos paper. See STANDARD, EXPRESS, CHAMPION, and AQUA for more detail.

ASBESTOS MILLBOARD

ASBESTOS MILLBOARD (All Grades) - Made of asbestos fiber and suitable binders, this is recommended where relatively thin sheets or boards are required for protection against fire, heat, and acid fumes. Used as a fireproof lining for floors, partitions, ceilings, and elevator shafts. Also used in ranges, stoves, grates, etc. Made in various degrees of hardness and temperature resisting properties.

BOARD

ASBESTOS EBONY - A densely pressed hard sheet of asbestos fiber and binding cements, impregnated with an insulating compound and used for switchboards, controller plates, switch bases, etc. Has high dielectric strength, insulation resistance, strength, and durability.

DEKERAN - A mineral glaze surfacing with exceptional abrasion and stain resistance that is completely fireproof. Available on 3/16 Marine Veneer either plain or perforated.

Flat Transite - Incombustible asbestos-cement sheets, resistant to corrosion and weather.

MARIMET 45 - A calcium silicate structural - insulating board for feeding and conveying nonferrous metals up to 1800 degrees F.

MARINITE - A composition of asbestos fiber, diatomaceous silica and lime formed with calcium silicate sheets which have structural strength, fire resistance, and insulating value; used as fire-safe wall partitions in ship construction and as a fireproof base for wood veneers; also used to construct industrial ovens and other insulating enclosures, for handling molten metals, as drying trays

in dielectric core drying ovens, for back-up of electrottype printing mats, and for fireproof doors.

MARINITE 23 - The MARINITE panel with the best thermal insulating characteristics; recommended where strength and hardness are of secondary importance, in applications where the material is not subjected to direct abuse or where it serves as a core for veneering; the 23 indicates a density of 23 lbs. pcf.

MARINITE 30

MARINITE 36 - The MARINITE panel that provides the best combination of structural strength, surface hardness, and insulating value; recommended for most applications; the 36 indicates a density of 36 lbs. pcf.

MARINITE 65 - The MARINITE that is recommended where structural strength and surface hardness are of primary importance; the 65 indicates a density of 65 lbs. pcf.

MOLTEN METAL MARINITE - A board insulation made of amosite fiber, diatomaceous silica, and an inorganic binder; it is an ideal material for feeding and conveying molten metals up to 1350 degrees F. Also available as heat treated MOLTEN METAL MARINITE.

Marine Acoustical Unit - Square sections of perforated Marine Veneer with attached elements of sound-absorbing material; used for acoustical treatment in ship construction.

Marine Veneer - Strong, flexible, fire-resistant sheets made of asbestos and cement; used for low-maintenance ceilings and wall facings on ships.

Metal Veneered MARINITE

PALLITE - Sheet material formed from asbestos fiber and inorganic binder; used in drying operations in ceramic plants.

REEFERITE - An incombustible, corrosion-proof panel composed of a solid aluminum core faced on both sides with Marine Veneer.

Submarine Bulkhead - Corrugated asbestos cement sheets used as bulkhead piling to control erosion along lakeshores and inland waterways.

TRANSITE Acoustical Panel - A panel made of an asbestos-cement facing used in conjunction with a mineral fiber sound absorbing element.

TRANSITE Core Plate - Smoothly sanded, hydrothermally cured asbestos-cement board especially compounded to properly support cores during drying or baking; widely used in the manufacture of castings of brass, aluminum, gray, iron malleable iron, and steel.

Veneered MARINITE

FINISHES

AERTITE - An asphalt-asbestos coating for troweling over the outside of boiler walls.

INSULKOTE ET - A non water-vapor barrier, non-burning, weather proof coating for use over insulation where "breathing" is required.

INSULKOTE SG AND ST - Weatherproofing and vapor barrier coatings for insulations on refrigerated equipment. INSULKOTE SG is an excellent anti-corrosion coating.

PAPER, FELT, BLANKETS

#50 Asbestos Weatherproofing Felt - An asphalt-saturated asbestos felt used in waterproofing asphalt for work below grade.

#12 Asbestos Paper Tape - Paper tape made from 12 lb. asbestos paper, it is felted, composed of asbestos fiber and binder. It comes in 2 or 3 inch rolls, and is used to wrap duct joints and in many other applications.

15A Asbestos Jacket - A lightweight asphalt-saturated asbestos finishing felt.

45A Asbestos Jacket - An asphalt saturated asbestos felt with a sand finish; a heavy, long life weatherproofing jacket.

7700 Coated Asbestos Jacket - An asphalt-saturated and coated asbestos felt with a smooth outer surface, it is designed to be given a field coating of asphalt.

ARMATURO Asbestos Paper - An asbestos paper integrally reinforced with cotton-scrim cloth; used as an insulation in electrical equipment; temperature limit is 500 degrees F.

ARP-40 - Asbestos reinforced plastic used as the facing of MIN-KLAD INTERLOK and in other aircraft and missile applications; when furnished in tape form, called ARP Tacky Tape.

ASBESTOCEL Paper - A corrugated paper formed of successive corrugations of an asbestos felt, held together by an asbestos fireproof backing.

Asbestos Corded Sheathing - Consists of pure Asbestos Sheathing, to the surface of which are attached loosely twisted rolls of asbestos, forming a very strong fabric about one-quarter of an inch thick. It is particularly valuable as a fire-proof, non-conductive

covering for furnaces, furnace pipes, and other fire-heated surfaces, etc.

Asbestos FIRE FELT - See Asbestos FIRE FELT under SHEETS AND BLOCKS.

Asbestos FIRETARD - A fire-retardant weatherproof jacket consisting of a sheet of asphalt-saturated asbestos felt cemented to a sheet of unsaturated asbestos felt; used on outdoor pipe insulation and small diameter vessels wherever fire hazards are present.

Asbestos Felt - Composed entirely of pure asbestos, is fireproof, and possesses three times the strength of hair felt.

Asbestos Jelly Rolls - Made of Asbestos Roll FIRE FELT, these are used to pack boiler and still-setting expansion joints.

Asbestos Lining Felt - This material consists of pure Asbestos Sheathing, to one side of which is attached a layer of "flocked" or felted asbestos, forming a strictly fireproof, non-conducting lining for hair felt, protecting it from the injurious effects of heat when applied to steam pipes, boilers, etc.

Asbestos Lining and Deadening Felt - Same as Asbestos Lining Felt; also used for lining floors, walls, etc., to deaden sound.

Asbestos Locomotive Lagging - Composed of large strands or twisted rolls of pure asbestos, woven in a fine asbestos warp, and lined with a pure Asbestos Sheathing, forming a strong, matted, felt-like material of great non-conducting power.

Asbestos Pipe Blanket - Made of asbestos cloth, filled with asbestos fiber and quilted; for pipes, fittings and flanges where inspection is made frequently and necessitates removal of the insulation; the asbestos cloth used is special to suit each temperature and service condition up to 950 degrees F.

Asbestos Roll FIRE FELT - See Asbestos FIRE FELT under SHEETS AND BLOCKS.

Asbestos Sheathing

Asbestos Sponge Felt - A thin felt, composed of asbestos fiber and particles of finely ground spongy material forming an extremely cellular felt for temperatures up to 700 degrees F.

Asbestos Sponge Hair Felt - Composed of asbestos sponge and hair, it forms a good covering for steam pipes, boilers, mining purposes, etc.; it is very elastic, and owing to the large proportion of asbestos, is not liable to injury from steam heat.

Asbestos Turbine Blanket - Consists of high temperature felted mineral insulation fully enclosed in a wire inserted asbestos cloth for temperature exposure to 850 degrees F, or a stainless steel mesh for temperatures from 850 degrees F to 1100 degrees F.

Asbestos and Hair Woven Felt - Similar to Asbestos Locomotive Lagging, but contains 25% hair; it is very elastic and practically fire-proof.

CEILINITE - Made from Asbestos Roll FIRE FELT, reinforced on one side with asbestos cloth; used as an inter-lining, for fireproofing electrical apparatus such as switch boxes, and for similar purposes requiring a strong, flexible, fireproof felt; for temperatures up to 1000 degrees F.

Commercial Grade Asbestos Paper - A standard asbestos paper varying in weight from 6 to 32 lbs. per 100 sq. ft. and in thicknesses from .015 to .0625 inches. Asbestos paper is formed from asbestos fiber and a suitable binder and used where an insulating material of minimum thickness is required.

D.C. FLEXSTONE - A high quality asbestos felt, saturated and coated with asphalt on both sides; used to make weather-proof jackets for insulated pipe lines located outdoors.

DOUBLEX Asbestos Paper - A paper made from asbestos and a lime silicate binder used by neon sign manufacturers to make templates or patterns; also used for pouring gates in foundries.

Engineers Insulating Tape

FIBROID Asbestos Paper - Used as an electrical insulation; made from asbestos paper and a binder, it can withstand temperatures up to 500 degrees F.

High Temperature Flexible MIN-K Blankets - See Flexible MIN-K under SHEETS AND BLOCKS.

High Strength FIBROID Asbestos Paper - See FIBROID Asbestos Paper; can be used for service up to 600 degrees F.

Long Fiber Asbestos Paper - Made with high grade long asbestos fiber; for use as a thermal insulation, gasketing, or as a base sheet for saturating; minimum fiber content 88%.

MICROBESTOS - A high grade chrysotile asbestos paper which can be readily saturated with various resins to provide a very uniform prepreg reinforcing material; for use in the manufacture of reinforced plastic products and in the oblativ field.

MIN-KLAD - A molded combination of MIN-K and asbestos reinforced plastic faces.

NIAGRITE - A felted asbestos tape for wrapping around electrical cables as fireproofing; usually reinforced with burlap or asbestos cloth.

Non-Burn Asbestos Paper - A medium length fiber paper with high fiber content; suitable for continuous service at 400 degrees F.

Standard Flexible MIN-K Blankets - See Flexible MIN-K under SHEETS AND BLOCKS.

Super FIRE FELT - See Super FIRE FELT under SHEETS AND BLOCKS.

THERMO FELT - An asbestos hair felt composed of 50% cattle hair and 50% asbestos, with a burlap center; used in steel passenger cars and street cars.

THERMOMAT - A nonwoven long fiber asbestos felt saturated with phenolic resin; furnished as a molding compound in sheet or tape form; extremely resistant to high temperatures; used as a rocket motor liner and in other aviation and missile applications.

THERMOTAPE - A flexible pipe insulation in strip or roll form made of an asbestos pad in a neoprene coated asbestos cloth jacket; used on locomotives and cars where sectional insulation can't be applied effectively.

THERMOWRAP - A pipe insulation made up of a blanket of asbestos fibers held together by asbestos yarns and enclosed in a neoprenecoated asbestos jacket; primarily designed for steam lines on trains; High Temperature THERMOWRAP is designed for use on diesel exhaust lines and in similar high temperature situations.

Welding Paper

White Surface Asbestos Jacket - A pipe insulation jacket made from asbestos weatherproof felt.

SEALING COMPOUNDS

Sealing Compounds are plastic, putty-like materials for sealing out (or in) air, dust, moisture, etc. The products and their main sealing uses follow.

ALBASEAL - Air conditioners, refrigeration equipment.

AQUASEAL - Threaded or jacketed joints.

BRANCHITE - Sewer Pipe connections.

Body Sealer - Auto, truck, and trailer bodies.

DUXSEAL - Wires and cables at duct entrances; general purpose.

H-NAVASEAL - Electrical duct apertures aboard ship; a heat (H) resistant, practically incombustible sealer for Navy applications.

HF-NAVASEAL - Electrical duct apertures aboard ship; a heat and flame (HF) resistant, practically incombustible sealer for Navy applications.

Industrial Vent Caulking

NODRSEAL - Refrigeration equipment and general purpose.

Stove Putty - Ovens and hot-water heaters where it is not apt to be exposed to intense heat.

TRANOSEAL - Oil filled electrical transformers.

Type T NODRSEAL - Refrigeration equipment and general purpose.

UNISEAL - General purpose.

CEMENTS

0352 Cement - General utility short fiber cement, used by the plumbing and steamfitting trade for insulating heating boilers and pipe fittings; temperature limit 1000 degrees F.

300 Cement

301 Cement

302 Cement - An excellent finishing cement made from asbestos fibers and binding materials, it is light in weight and high in insulating value; temperature limit 1000 degrees F.

304 Cement - Insulating cement made from long fiber asbestos for covering surfaces liable to become red hot; temperature limit 1200 degrees F.

319 Semi-Refractory Cement - A combined insulating and semi-refractory cement used to protect block or brick insulation in flues, stacks, etc.; temperature limit 1600 degrees F.

329 Cement - A lagging cement for finishing over sheets and blocks, for insulating large heated surfaces and for irregular surfaces and fittings, where it is impossible to apply either sectional pipe covering or blocks. It is very light, full of confined air, elastic and spongy, and forms an excellent plastic non-conductor.

340 Cement - An insulating and finishing cement lower in covering capacity and price than the 302 Cement; temperature limit 1000 degrees F.

352 Cement - General utility short fiber cement, used in large quantities by the plumbing and steamfitting trades for insulating heating boilers and pipe fittings; used as a finish over block insulation and in general applications; temperature limit 1000 degrees F.

364 Cement - A medium grade insulating cement; temperature limit 1000 degrees F.

400 Cement - A combination of asbestos and other material of high insulating value, ideal for general use where efficiency, strength, and durability are desired; temperatures limit 700 degrees F.

450 Cement - A mineral wool base insulating cement with excellent adhesion which permits it to be readily applied to surfaces too irregular to insulate with sheets or blocks; adheres to hot or cold surfaces but is not a finishing cement; temperature limit 1200 degrees - 1500 degrees F.

500 Cement - A cement composed of asbestos fiber and expanded mica which combines high covering capacity and heat resistance with good working qualities. Can be used at temperatures up to 1800 degrees F if entire reclaimability is not essential. Completely reclaimable at temperatures up to 1500 degrees F. Useful for irregular surfaces where block insulation is not adaptable, but not ordinarily used for finishing.

678 Semi-Refractory Cement - An air-setting, hydraulic cement which is a combination finishing and semi-refractory cement for use as a protective coating over block insulation linings exposed to the action of moving gases in flues, breechings, and stacks. Where erosive action is severe such as in pulverized coal units and particularly in area where the gases change direction sharply, the cement should be protected with temperature resistant metal; temperature limit 1900 degrees F.

85% Magnesia Cement - Composed of the same material as 85% Magnesia sectional and block insulation, it is essentially an insulating and not a finishing cement; temperature limit 600 degrees F.

ASBESTILE Cement - A heavy bodied cement of asbestos fibers, asphalt, and other mineral ingredients; specifically designed for sealing flashings with a watertight bond.

ASBESTOMENT - A refractory powder which when mixed with water produces an outer coating on the fireproofing of electrical cables; usually used with NIAGRITE.

FIBROFIL - A mixture of diatomaceous silica and asbestos fibers; used as an insulating fill for irregular spaces.

FIREITE Furnace Cement - An asbestos compound for mounting, sealing, and repairing joints in stoves, boilers, furnaces, heaters, and ranges.

Fibrous Adhesive - A strong silicate soda and asbestos fiber cement used for temporary bonding of insulation to brick, concrete, metal, or other surfaces as well as for bonding prefab fittings; temperature limit 500 degrees F.

Fil Insul - A resilient fill composed of mineral fibers; used for insulating irregular surfaces.

Heat Treating Cement - A ready-mixed refractory cement for use in the heat treating of high carbon steel parts; for temperatures up to 2500 degrees F.

LAPTITE Cement - A heavy brushing fibrated cut-back asphaltic cement with a temperature limit of 140 degrees F. Used for sealing the laps of weatherproof insulating jackets.

MX-3808 Asbestos Filler

Navy 450 Cement - A specially formulated variation of 450 Cement to meet Navy specifications.

SUPEREX Cement - The same material as used in SUPEREX sectional and block insulation; used with SUPEREX or THERMO-12 pipe and block insulation for patching, pointing up joints, and covering irregular shapes.

SUPEREX Cement for Navy - A specially formulated variation of SUPEREX Cement to meet Navy specifications.

THERMOBESTOS Cement - The same material used in THERMOBESTOS sectional and block insulation.

THERMOMIX 700, 720, 770, 810 - Insulating cements designed for use in missile engines; these compounds contained a special heat resistant phenolic resin system of the dry type.

AWARENESS/KNOWLEDGE

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

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

Representatives of Manville Corporation or related entities first began to discuss a possible relationship between asbestos exposure and lung cancer in approximately 1943. However, for a number of years, there was no certain confirmation of a causal relationship. In 1955, Dr. Doll of Great Britain published an article on this topic, based on his epidemiological study of asbestos factory workers. Dr. Doll concluded that there was an increased incidence of lung cancer among those occupationally exposed to asbestos. Subsequent research has shown that lung cancer in those occupationally exposed to asbestos occurs primarily in persons who smoke cigarettes.

RECORDS REPOSITORY

All documents identified in response to this Interrogatory will be produced at the records repository maintained by the Trust in Denver, Colorado. In addition to the documents which will be specifically identified, there may be other responsive documents among the general collection of documents maintained by the Trust at the records repository in Denver, Colorado.

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

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

In order to comply with Judge Brown's order, Manville Corporation hired numerous paralegals and law clerks and undertook

a massive and comprehensive review of the corporate records of the company which existed at various Manville facilities world wide. Manville spent literally millions of dollars to gather and maintain this collection of documents.

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

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

Manville Trust Document Categories

The repository contains 19,317 boxes and 968 rolls of microfilm, housed in two separate warehouses. The larger of the two warehouses contains 15,293 boxes. The smaller warehouse contains 4,024 boxes and the microfilm collection. These documents are grouped in nine categories:

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

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

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

The World Headquarters (WHQ) collection (04) includes documents which were obtained from a number of locations, including: the Denison, TX plant; the Franklin, PA plant; the Green Cove Springs, FL plant; the Jeffrey Mine in Asbestos, Quebec,

Canada; the Long Beach, CA plant; the Lompoc, CA plant; the Marrero, LA plant; the Manville offices in Montreal, Quebec, Canada; the Pompano Beach, FL plant; the Pittsburg, CA plant; the Stockton, CA plant; and the Waukegan, IL plant.

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

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

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

The Local Counsel Boxes (07) collection includes documents from Heller, Ehrman, White & McAuliffe in California; Freeborn & Peters in Illinois; and Budd, Larner, Kent, Gross, Picillo & Rosenbaum in New Jersey.

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

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

Box Index

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

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

The index consists of 20 subject categories, 12 document types, and 12 time periods ranging from pre-1930 to post 1985, in 5-year increments. Each box and microfilm roll is indexed individually. A box may contain more than one type of document, subject area, or time period.

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

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

Review Procedures

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

In addition to the documents specifically identified, there may be other documents responsive to this interrogatory among the general collection of documents at the records repository. If any, this collection of documents will be made available to plaintiff for review.

INTERROGATORY NO. 2:

If any product identified in answer to Interrogatory No. 1 and was produced, manufactured and/or sold under a trade name, identify that trade name(s) and state the time period that each such product was sold under such trade name.

RESPONSE:

The Manville Corporation product directories identified in response to Interrogatory No. 1 indicate those products with a registered tradename. Such directories will be made available for inspection and copying at the records repository maintained by the Trust in Denver, Colorado at a time convenient to the parties.

Further, all United States file histories are available to the public at the United States Patent and Trademark Office in Arlington, Virginia.

INTERROGATORY NO. 3:

For each product identified in answer to Interrogatory No. 1, state:

(a) The address of each plant where it was manufactured, processed or packaged;

(b) Whether you were the sole producer, manufacturer and/or distributor of the product and, if not:

(i) The name and address of each other person, firm or other entity engaged in the production, manufacture and/or distribution of the product (including companies which rebranded for the answering defendant);

(ii) Whether any other manufacturer produced the product by virtue of a franchise or license from you;

(iii) The persons or firms who produced the product for distribution in the United States;

(iv) The person or firms who produced the product for distribution in the State of Delaware.

(c) All products the answering defendant manufactured, mined or sold which it would relabel for others and the name of any entity such relabeling occurred for, including when, where and with whom defendant dealt with.

(d) Any changes answering defendant made in the product or packaging for others of its products and any changes answering defendant requested be made in products or packaging of products others rebranded for the answering defendant;

RESPONSE:

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

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

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

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

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

Johns-Manville
Laurinburg, North Carolina
(1965 to 1985)

Johns-Manville
Lawrence, Massachusetts
(1964 to 1974)

Johns-Manville
2500 Miguelito Road
Lompoc, California
(1928 to 1985)

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

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

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

Johns-Manville
P. O. Box 128
Marrero, Louisiana
(1947 to 1985)

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

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

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

Johns-Manville
P. O. Box 591
Pittsburg, California 94565
(1926 to 1985)

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

Johns-Manville
Savannah, Georgia
(1956 to 1985)

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

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

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

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

To the best of Defendant's knowledge, the following products were among those manufactured at each facility listed. Most, but not necessarily all, of these products contained asbestos.

Billerica Plant products included:

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

Denison Plant products included:

Transite Pipe

Fort Worth Plant products included:

Roofing Products

Green Cove Springs Plant products included:

Transite Pipe

Laurinburg Plant products included:

Railroad Brake Shoes
Rubber Rings

Lompoc Plant products included:

Diaseal M

Fibra-Flo
Precoat Sorbo-Cel
Sil-O-Cel Hard Finish Cement
Sil-O-Cel Plastic Insulating Cement

Long Beach Plant products included:

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

Los Angeles Plant products included:

15A Asbestos Jacket
45A Asbestos Jacket
Insulkote ET

Manville Plant products included:

12 lb. Asbestos Tape
15A Asbestos Jacket
0352 Cement
301 Cement
302 Cement
304 Cement
319 Cement
340 Cement
364 Cement
45A Asbestos Jacket
450 Cement
#50 Weatherproofing Felt
500 Cement
678 Semi-Refractory Cement
7700 Coated Asbestos Jacket
85% Magnesia Block
85% Magnesia Cement
85% Magnesia Pipe Covering
Ace Panels
Aertite
Air-Cell
Albaseal
Anti-Sweat
Aqua Covering
Armature Asbestos Paper
Asbestile Cement
Asbestocel Paper
Asbestos Fire Felt
Asbestos Firetard
Asbestos Jelly Rolls
Asbestos Paper Tape #12

Asbestos Pipe Blanket
 Asbestos Roll Board
 Asbestos Roll Fire Felt
 Asbestos Sponge (felted, sectional, molded)
 Asbestos Turbine Blanket
 Asphalt Shingles
 Asbestos Welding Paper
 Body Sealer
 Brake Linings
 Branchtite
 Ceiling Tiles
 Ceilinite
 Champion Sectional Covering
 Clutch Facings
 Colorbestos Sheets
 Colorsil
 Commercial Grade Asbestos Paper
 Corrugated Transite
 Corspan
 D.C. Flexstone
 Doublex Asbestos Ppaper
 Duplex Asbestos Paper
 Duxseal
 Engineers Insulating Tape
 Expansion Strips
 Express Covering
 Facespan
 Fibrofil Cement
 Fibroid Asbestos Paper
 Fil Insul Cement
 Fine Corrugated Asbestocel
 Flat Transite
 Flexboard
 Flexible Min-K
 H-Navaseal
 HF Navaseal
 High Strength Fibroid Asbestos Paper
 High Temperature Flexible Min-K Blankets
 Industrial Tile
 Industrial Vent Caulking
 Insulkote ET
 Insulkote SG
 Insulkote ST
 Laptite Cement
 Long Fiber Asbestos Paper
 Metal On
 Microbestos Paper
 Millboard 101
 Millboard 102
 Millboard 103
 Millboard 104
 Millboard 105

Millboard 106
Millboard 219
Millboard C
Millboard XXX
Min-K 500
Min-K 1301
Min-K 2000
Min-Klad
Moulded Packings
MX-3803 Asbestos Filler
Navy 450 Cement
Niagrite
Nodrseal
Non-Burn Asbestos Paper
Plastiseal F
Pre-shrunk Wool Felt
Rolled Roofing
Roofing Paints and Putties
Silicated Thermobestos Block
Silicated Thermobestos Pipe Covering
Sonite
Standard Flexible Min-K Blankets
Standard Sectional Covering
Stove Putty
Superex M Block
Superex 1900 Block
Superex 2000 Block
Superex Cement
Superex Cement for Navy
Superex M Pipe Covering
Superex 1900 Pipe Covering
Superex 2000 Pipe Covering
Super Fire Felt
Thermobestos Block
Thermobestos Cement
Thermobestos Pipe Covering
Thermoflex
Thermomat
Thermotape
Thermowrap
Transite Pipe
Transoseal
Type T Nodrseal
Uniseal
Vitribestos
Welding Paper
White Surface Asbestos Jacket
Wool Felt Sectional Pipe Insulations

Marrero Plant products included:

15A Asbestos Jacket

Insulkote ST
7700 Coated Asbestos Jacket
Laptite Cement
Transite Pipe

Nashua Plant products included:

Aegan
Asbestos Ebony
Asbestocite
Chalkboard
Chemstone
Colorceran
Colorceran Edge Coating
Colored Marine Veneer
Colorlith
Colorlith Joint Cement
Colorthin
Dekeran
Duplex Asbestos Paper
Ebony
Electrobestos
Fireglaze Stonhenge
Flat Transite
Flexboard
Flexboard "B"
Imperial Walls & Beams
Marine Acoustical Unit
Marine Veneer
Marinite 36
Marinite 65
Molded Ebony
Molded Electrobestos
Molded Unit
Ohmstone
Pallets & Slip Jackets
Perforated Colored Marine Veneer
Perforated Fiberboard "S"
Perforated Flexboard
Perforated Marine Veneer
Quadro
Steam Cured Transite
Stonehenge
Submarine Bulkhead
Terraceran
Textured Transite
Transite Acoustical Panel
Transite Core Plates, Pallets and Slip Jackets
Transite Core Plate Sheets

North Brunswick Plant products included:

Spirotallic Gaskets

Patterson Plant products included:

**Die-Formed Rings
Gaskets**

Pittsburgh Plant products included:

**0352 Cement
#15 Finishing Felt
#15 Waterproofing Felt
15A Asbestos Jacket
301 Cement
302 Cement
319 Semi-Refractory Cement
400 Cement
45A Asbestos Jacket
450 Cement
50 Weatherproofing Felt
500 Cement
#55 Asbestos Base Felt
678 Semi-Refractory Cement
Aertite Coating
Asbestile
Asbestos Base Flashing
Asbestos Roofing Felt
Commercial Grade Asbestos Paper
D.C. Flexstone
Fibroid Asbestos Paper
Fibrous Adhesive
Flexboard
Flexstone
Insulkote ET
Insulkote SG
Insulkote ST
Laptite Cement
Transhield Asbestos Felt**

Redwood City Plant products included:

**85% Magnesia Block
85% Magnesia Pipe Covering
Magnesia Plastic
Superex Block
Superex Cement
Superex Pipe Covering
Superex Plastic**

Stockton Plant products included:

Transite Pipe

Tilton Plant products included:

Microbestos
Quinorgo
Quinterra
Quintex

Waukegan Plant products included:

0352 Cement
300 Cement
300 E Cement
301 Cement
302 Cement
304 Cement
319 Semi-Refractory Cement
352 Cement
364 Cement
400 Cement
450 Cement
500 Cement
678 Semi-Refractory Cement
85% Magnesia Block
85% Magnesia Cement
85% Magnesia Pipe Covering
Aertite
Anti-Sweat
Aqua Covering
Asbestile Cement
Asbestoboard
Asbestocel
Asbestoment
Asbestos Fire Felt
Asbestos Millboard
Asbestos Roll Board
Asbestos Sponge (felted, sectional and molded)
Asbestos Textile Adhesive
Asbestos Welding Paper
Champion Sectional Covering
Cooling Tower Fill
Commercial Grade Asbestos Paper
Coublex Asbestos Paper
Express Covering
Fibroid Asbestos Paper
Fibrofil Cement
Fibrous Adhesive
Fil Insul Cement
Fine Corrugated Asbestocel
Fireite Furnace Cement
Flexboard
Indented Sectional Covering

Insulkote ET
Insulkote SG
Insulkote ST
Laptite Cement
Marine Veneer
Millboard 101
Millboard 102
Millboard 103
Millboard 106
Millboard 106B
Millboard 106C
Millboard 106H
Millboard 219
Millboard 766
Millboard Type A
Millboard Type C
Millboard XXX
MX-3808 Asbestos Filler
Navy 450 Cement
Non-Burn Asbestos Paper
Pre-Shrunk Wool Felt
Sheet Packing
Silicated Thermobestos Block
Silicated Thermobestos Pipe Covering
Standard Sectional Covering
Super Fire Felt
Superex 1900 Block
Superex 2000 Block
Superex M Block
Superex SG Block
Superex Cement
Superex Cement for Navy
Superex 1900 Pipe Covering
Superex 2000 Pipe Covering
Superex M Pipe Covering
Superex SG Pipe Covering
Thermo Fire Felt
Thermobestos Block
Thermobestos Cement
Thermobestos Pipe Covering
Transhield Asbestos Felt
Transite Pipe
Vitro Fire Felt
Welding Paper
Wool Felt Sectional Pipe Insulations

Zelienople Plant products included:

Fireite Furnace Cement
Heat Treating Cement

REBRANDING

After reasonable inquiry and search, the Trust has determined that the following identifies by tradename asbestos products manufactured by other companies which were distributed by Manville Corporation or related entities.

Raybestos-Manhattan, Nippon Asbestos of Tokyo and Atlas Asbestos Company manufactured asbestos cloth and asbestos tape marketed under the Johns-Manville logo from approximately 1969 through 1974.

Additionally, in 1969, Manville or related entities entered into an agreement with Raybestos-Manhattan, Inc., whereby Manville agreed to market profile calendar brake linings manufactured by Raybestos-Manhattan, Inc. under the style designations HF, SF, and MF.

Manville or related entities also sold Corrugated Transite, a roofing/sheet product made by GAF, from 1972 through 1977.

The Fund has been unable to identify any other products which were sold by Manville Corporation or related entities but which were produced by other companies.

INTERROGATORY NO. 4:

For each product identified in answer to Interrogatory No. 1 state:

(a) How the product was sold and/or distributed for use in the United States and/or the State of Delaware;

(b) (i) Identify all persons, firms or other entities to whom these products were sold for distribution during the period 1936 to 1980;

(ii) Identify all entities to which a sale was made from 1936 to 1980 in Delaware, Pennsylvania, New Jersey and Maryland between 1936 and 1980.

(c) For each such person, firm or other entity identified in answer to subpart (b) above, state the following:

(1) the specific product sold and/or distributed;

(2) the quantity (i.e. boxes, linear feet) of the product sold and/or distributed;

(3) the dates which these products were sold, shipped and delivered to each entity;

(d) Identify each individual who has any knowledge of these sales and/or distribution and state with specificity and particularity the substance of each individual's knowledge;

(e) Identify and produce all documents which refer, reflect or relate to all sales and/or distribution of each such product to each such entity identified above.

RESPONSE:

The Trust is continuing to compile information responsive to this Interrogatory and will supplement as soon as possible.

INTERROGATORY NO. 5:

For each product identified in answer to Interrogatory No. 1 state whether you, your subsidiaries or predecessors in business engaged in any advertising program to promote the sale of that product and, if so state:

(a) The name or description of each advertising media that you have used to promote the product during the period 1936 to 1980;

(b) The name of each national magazine or periodical in which you have advertised the product during the period 1936 through 1980;

(c) The date of each issue of such magazine or periodical in which such advertisement appeared;

(d) The name and address of each newspaper in which it advertised the product during the period 1936 through 1980;

(e) The date of each publication of each newspaper in which the advertisement appeared;

(f) Identify and produce each document which refers, reflects or pertains to each such advertisement which was published in each such magazine, periodical and/or newspaper;

(g) State whether the advertising of the product was handled by an agency and, if so, state the name and address of each advertising agency that handled any portion of the advertising of the product during the period 1936 through 1980.

RESPONSE:

Manville's corporate advertising function was created and centralized at Manville headquarters in approximately 1970. Prior to that time, advertising was handled by individuals within each operating division. From approximately 1970 until Manville ceased

the manufacture of all asbestos-containing products in 1985, the following advertising personnel were concerned directly with industrial insulation advertising and promotion:

<u>NAME & POSITION</u>	<u>LAST KNOWN ADDRESS</u>
F. J. Solon, Jr., formerly Vice President, Advertising & Public Relations	8 Club Lane Littleton, CO 80123
James M. Sullivan, formerly Advertising Manager	1300 No. "L" Street, #195 Lompoc, CA 93436
Robert Feeney, formerly Advertising Manager	5812 South Laurel Place Littleton, CO 80120
Jeremiah J. Attridge, formerly Vice President, Corporate Marketing	23 West Ranch Trail Morrison, CO 80465
Larry Hall, formerly Senior Advertising Manager	4138 Blackhawk Lane Stratford, CT 06497
William P. Gibbons, formerly Director, Corporate Advertising	3479 East Easter Place Littleton, CO 80122
Robert F. Knapp, formerly Senior Vice President, Corporate Marketing & Growth Plan	5191 West Quarles Drive Littleton, CO 80123
Douglas O. Cooke, formerly Manager, Product Publicity	(Deceased)

In addition, for many years until the 1960s, Manville Corporation or related entities employed the advertising agency of J. Walter Thompson Agency, New York, NY. From the 1960s until 1970, the agency used was Cunningham & Walsh, Inc., 260 Madison Avenue, New York, NY. During 1970 and 1971, Manville employed the agency of Warner, Becking & Fenwick, 866 United Nations Plaza, New York, NY. During 1972 and 1973, all industrial advertising was handled by Broyles, Allebaugh & Davis, Inc., 31 Denver Technological Center, Englewood, Colorado.

Manville or related entities may have placed product advertisements in the following publications, periodicals and/or magazines:

Actual Specifying Engineer

Air Conditioning, Heating & Refrigeration News

Air Conditioning Refreigeration Business

American Ceramic Society Bulletin

American Society of Naval Engineers Membership Directory

Appliance Manufacturing

Architecture Record

ASHRAE Journal

ASNE Day Program

Brick & Clay Record

Chemical Engineering

Consulting Engineer

Contractor

Directory of Iron & Steel Engineers

Fish Boat

Heating/Combustion Equipment News

Heating/Piping/Air Conditioning

Hydraulics & Pneumatics

Hydrocarbon Processing

Indoor Comfort News

Industrial Convention

Industrial Heating

Industry Week

Insulation/Circuits

Insulation/Circuits Desk Manual

Insulation/Circuits Directory

Iron Age

Machine Design

Marine Catalog & Buyers Guide

1976 Marine Directory

Marine Engineering

Maritime Reporter

Materials Engineering

Metal Building Review

New Products News

The Wholesale NHAW Convention Daily

NICA Outlook

Nuclear News

Oil & Gas Journal

Plant Engineering

Plastics World

Power

Primary Metals Ed.

SMACNA Convention Daily

SMACNA of Pennsylvania 1976 Annual Convention & Buyers Guide

The Fund has eighty-three boxes from the Manville Corporate Information Center which has advertising literature for many asbestos products. These boxes will be made available to Plaintiff for inspection and copying at the records repository maintained by the Trust in Denver, Colorado. In addition to documents specifically identified, there may be additional documents responsive to this Interrogatory among the general collection of documents in the records repository. See Response to Interrogatory No. 1.

INTERROGATORY NO. 6:

With regard to each form of asbestos fibers identified in the answer to Interrogatory 1(a) and 1(c), state:

(a) Where it was purchased, if it was not purchased where it was obtained;

(b) From whom it was purchased;

(c) The manner in which it was received, stored and used in the production of the product.

RESPONSE:

FIBER SOURCE

Manville or related entities used asbestos fiber obtained from a number of sources. For products which contained chrysotile, much of the fiber used was obtained from the Jeffrey Mine in Asbestos, Quebec, which was owned and operated by a Canadian subsidiary. Other sources of chrysotile included: Advocate Mines, Ltd.; Bell Asbestos Mines, Ltd.; Calaveras Asbestos, Ltd.; Cassiar Asbestos Corporation, Ltd.; H.K. Porter Company; Marlme Chrysotile Asbestos Corporation, Ltd.; Metate Asbestos Corporation; and Pacific Asbestos Corporation.

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

FIBER PACKAGING

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

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

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

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

Manville Corporation or related entities first began to "pressure pack" fiber in the late 1940s. By 1954, all fiber was pressure packed. Jute bags were not used after that time unless they were specifically requested by the customer. The pressure pack method allowed the fiber to be automatically weighed out, dropped into a chamber, and compressed into a block. By 1976, this method was used exclusively.

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

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

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

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

Also in the 1970s, a special bag, the unsized kraft paper bag, was developed for use in wet papermaking processes. The bags were constructed with multiple plies of unsized natural kraft paper. When dry they were as sturdy as regular paper bags. However, when wet, the bag had poor strength and readily dispersed in a

hydropulper. This allowed the fiber to be introduced into a process without being removed from the bag.

INTERROGATORY NO. 7:

If you have ever manufactured or had a subsidiary or predecessor in the corporate chain manufacture any insulation products which are commonly used by insulators and which contain asbestos:

(a) Describe the process or method of how the products listed in 1 are cut, shaped, mixed and applied on the jobs giving particular reference as to whether or not the materials have to be sawed or cut on the job, blown into confined areas, or mixed with water into a cement or paste;

(b) State if there is any way known to the defendant that the products listed below can be used and applied without the worker inhaling any of the asbestos dust or fibers:

- (1) Asbestos cement; Asbestos Finishes;
- (2) Asbestos pipe covering;
- (3) Asbestos bricks or blocks;
- (4) Asbestos sheeting;
- (5) Asbestos insulation used to cover extremes of heat as well as cold;
- (6) Asbestos insulation in loose form which may be blown into homes or buildings;
- (7) Asbestos in spray form;
- (8) Asbestos mineral in fiber form or particulate form;
- (9) Asbestos Millboard, rope, gaskets, paper gloves or blanket.

RESPONSE:

Manville Corporation or related entities manufactured cements containing asbestos. They were loose materials which were mixed with water by hand or with a hoe or trowel. They were applied in plastic form with a trowel and allowed to dry.

Manville Corporation or related entities manufactured asbestos containing pipe coverings. It was sometimes necessary to form, shape or cut the pipe covering with a knife, hand saw or table saw. On the average job, less than ten percent (10%) of the total pipe insulation was cut. The pipe covering was then tied in place with wires or bonds.

Manville Corporation or related entities manufactured block insulation for flat, high temperature areas. The flat surface was first covered with cement. Wire or expandable metal lathes were

then placed on top of the cement to grip the block insulation, which was placed on top of the wire or lathes. The block insulation was, in some cases, cut by drill or saw to smoothly finish and fit the area.

Manville Corporation or related entities manufactured asbestos sheeting. These products were usually applied to framing with nails or screws. It was sometimes necessary to cut these board products with a hand or table saw.

Manville Corporation or related entities manufactured a wide variety of tapes containing asbestos, which were cut after applying the desired amount to the surface.

Manville Corporation or related entities manufactured asbestos containing cloth in a wide selection of textures, grades, weights and thicknesses. These materials were used for awnings, conveyor belts, curtains, dust collection bags and blankets. It was sometimes necessary to cut such cloth with a knife or scissors to fit the appropriate area.

Manville Corporation or related entities manufactured asbestos felt, which was used for a wide variety of applications. Generally, asbestos felt was shaped into sections where a unique fitting was required. Therefore, the felt usually had to be cut and molded to fit.

Manville Corporation or related entities manufactured asbestos paper which was generally used where insulation of minimum thickness was required for protection against fire, heat or corrosion. The paper was cut or torn to fit.

Gaskets or packings manufactured by Manville Corporation or related entities were used as a material placed between joints of mechanical equipment to prevent leakage. Thus, gaskets were furnished in a large number of styles and shapes. Gaskets were usually filled with asbestos paper, cloth or yarn. Alternatively, gaskets were cut from sheet packings and enclosed by a metal jacket. Most gaskets were pre-cut, but in some circumstances, it may have been necessary for an installer to fabricate or shape the gasket on the job site.

INHALATION

The extent of exposure to asbestos dust depends on the product involved, the general environment, work practices, installation safety procedures, and worker compliance.

INTERROGATORY NO. 8:

If any piece of equipment which was used at any time to install, cut, shape, etc. products identified in answer to

interrogatory no. 1 or 7(b) was invented, developed or first made by answering defendant or any person associated with you or any related company or association, state:

(a) When it was invented, developed or made (including changes or improvements to previously available equipment);

(b) The identity of each individual who participated therein and describe in detail the extent of his participation;

(c) The identity of each document which reflects, refers or relates to any information set forth in answer to this interrogatory;

(d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 1.

INTERROGATORY NO. 9:

For each process and/or method identified in answer to Interrogatory No. 7(a) developed or first made by you or any person associated with you or any related company or association, state:

(a) When and where it was developed;

(b) The identity of each individual who participated therein and describe in detail the extent of his participation;

(c) The identity of each document which reflects, refers or relates to any information set forth in answer to this Interrogatory;

(d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Not applicable.

INTERROGATORY NO. 10:

For each product identified in the answer to Interrogatory No. 1, describe what, if any, tests were made to determine the safety of said product and:

- (a) State when and where each such test was made;
- (b) Describe the results of each such test;
- (c) Identify each individual who participated therein and describe in detail the extent of his participation;
- (d) Identify each document which reflects, refers or relates to any information set forth in answer to this interrogatory;
- (e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Manville Corporation or related entities sponsored studies relating to asbestos exposure during mining, milling and manufacturing operations. One such study, which commenced in 1928, involved contributions by Manville for animal research on the effects of asbestos at the Saranac Laboratory of the Trudeau Foundation in upstate New York. The funds were contributed by Manville 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 Manville.

In early 1931, a report of this animal experiment was published by Dr. Leroy U. 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 Tuberculosis Infection."

In 1929, shortly after the launching of the Saranac studies, Manville 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 Manville's contributions in the form of increased premiums and assessments is not known to nor determinable by Manville. 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 A. J. Lanza, et al. The cost of publication was paid for by general tax funds.

As a result of the aforesaid Metropolitan Life study, additional health research on the effects of prolonged excessive inhalation of asbestos fiber on human being was undertaken at the Saranac Laboratory. The Quebec Asbestos Mining Association ("QAMA"), of which Manville was 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.

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.

In the early 1950s, 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.

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 with funding provided by Manville and other member companies. 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 Health, at Page 634 and was entitled "An Epidemiological Study of Lung Cancer in Asbestos Miners."

Inter-tracheal injection experiments on test animals were conducted by the Industrial Hygiene Foundation of America (and completed in July 1968) using asbestos fiber taken from a mine of Manville's subsidiary. Manville 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.

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

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

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

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

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

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

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

Manville Corporation or related entities funded a study in the amount of \$142,400 which was conducted by the Mt. Sinai School of Medicine, City University of New York, entitled "Biological Effects of Modified Inorganic Fibrous Microparticles." This study commenced November 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 funded by Manville Corporation or related entities to the extent of \$25,000 produced a report entitled "Asbestos Hemolysis" by R. J. Schnitzer and F. L. Pundsack (then an employee of Manville), which was reported in March 1969 and published in Environmental Research, January 1970.

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

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

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

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

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

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

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

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

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

QAMA sponsored 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 was \$200,000, and Manville furnished approximately \$142,000 of the sum through QAMA. In addition, Manville contributed the time of its personnel. This study began in 1969 and concentrated on the health status of present and past employees in the plants of Manville and National Gypsum Company in and around New Orleans. Reports of this study include the following:

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

"Radiographic and Physiologic Patterns Among Workers Engaged in Manufacture of Asbestos Cement Product, A Preliminary Report" by Hans Weill, et al., published in the Journal of Occupational Medicine, Vol. 15 (March 1973);

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There are no formal asbestos worker epidemiological studies underway by Manville. However, current workers and retirees who have previously worked with asbestos are a part of the overall surveillance program incorporated in MESHIMS (Manville's Environmental Safety and Health Information Management System).

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

Manville Corporation or related entities also sponsored research relating to insulators who installed asbestos containing thermal insulation products. In 1968, Manville Corporation or related entities joined in the establishment of the Insulation Industry Hygiene Research Program of Mt. Sinai Hospital. The purposes of this study were:

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

The Program Director was Irving J. Selikoff, M.D., Director of the Environmental Sciences Laboratory, Mt. Sinai School of Medicine, New York, New York. Reports were published from time to time and circulated. In 1969-1970 at Manville's Research and Engineering Center at Manville, New Jersey, tests were conducted for the Insulation Industry Hygiene Research Program by Thomas J. Weeks and Allen F. Burns. The report on such tests is entitled "Performance of Dust Respirators against a Fibrous Dust" by Messrs. Weeks and Burns, published in American Industrial Hygiene Association Journal, (May-June 1970).

Additionally, an epidemiological study of the biological effects of asbestos dust among the Port of Genoa and LaSpezia Arsenal insulation workers, among others, was 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. Manville Corporation or related entities contributed to the funding of the Quebec Asbestos Mining Association. This study was initiated early in 1968. Reports generated by this study include the following: "Research Project: Epidemiological Study on the Biological Effects of Asbestos Dust at the Balangero Mine and among the Port of Genoa and LaSpezia Arsenal Insulation Workers" by Enrico C. Vigliani (June 16, 1972), Report Clinica del Lavoro "Luigi Devoto."

Manville Corporation or related entities, 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, Berkeley. Reports generated by this study include the following:

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

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

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

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

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.

All responsive documents in the possession, custody and control of the Fund will be produced at the records repository in Denver, Colorado at a time agreed upon by the parties. In addition to the documents which will be specifically identified and produced at that time, there may be other responsive documents located within the general document collection at the repository. See answer to Interrogatory No. 1.

INTERROGATORY NO. 11:

For each label, brochure, or other written material describing or relating to the use of each product identified in answer to Interrogatory No. 1, produced by you or any person associated with you or any related company or association:

- (a) Describe its contents;
- (b) State when, where, how, and to whom it was distributed;
- (c) State the manner in which it was placed on or in the product container or whether it was separate from the product

container, or whether it was separate from the product or container;

(d) State whether any written, printed or graphic matter was present to warn of any harmful ingredient it might contain. If so, state:

(i) Whether a signal word, i.e. "danger", "warning" or "caution" was present;

(ii) Whether the signal word was printed in boldface, capital letters or different colored inks. Which?

(iii) The wording of the statements describing any hazard;

(iv) The wording of all directions and/or instructions pertaining to any method of use to avoid any danger resulting from the toxic ingredient;

(v) List the instructions provided for each product's use.

(e) Identify each individual who participated in the writing of the label, brochure or other written materials and describe in detail the extent of his participation;

(f) Identify each document which reflects, refers or relates to the information contained on the labels, brochures, or other written materials and/or the decision to include such information (if there are multiple documents, list any index of the documents and how and where stored);

(g) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Manville Corporation or related entities has, on a continuing basis, furnished customers information as to the proper use and application of its insulating products and has directly or indirectly advised industrial insulation contractors to utilize ventilation equipment, such as respirators, at the sites where finished insulation products were being worked with and applied. Those respirators which have been recommended are approved either by the Bureau of Mines or later by NIOSH for use as protection against pneumoconiosis-producing dusts.

Additionally, Thomas J. Weeks and Allan F. Burns conducted tests on respirators at Manville's Research & Development Center

at Manville, NJ. The report on such tests was entitled "Performance of Dust Respirators Against a Fibrous Dust." A study by McGill University entitled "Evaluation of Dust Respirators" was done for Manville in November 1971.

Manville Corporation or related entities also affixed caution instructions to products regarding the handling of these products.

In addition, Manville's product literature contained recommendations regarding respirator usage and utilization of adequate dust collection systems when fabricating, handling and applying certain asbestos containing materials.

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

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

Manville Corporation or related entities participated in, and contributed to, the Health and Safety Educational Program of the National Insulation Manufacturers Association (NIMA). This Program was designed to educate the insulation contractors' industry with respect to the health aspects of fibrous materials through regional meetings of insulation contractors' associations and to aid the contractors in minimizing or eliminating the inhalation of, among other things, asbestos fibers by those working with and/or installing and/or applying asbestos containing products.

In 1967, and again in 1968, programs were presented at the regional meetings of industrial insulation contractors. Approximately 400 industrial insulation contractors attended each year. These programs included a verbal review (of approximately three hours' duration) of the biological effects of fibrous materials, the threshold limit value of fibrous materials, methods for evaluating concentrations of dust, and engineering and method-change recommendations to assist the contractors in dust abatement and environmental control.

In addition to the verbal presentations, booklets were prepared by NIMA, largely through Manville's participation and efforts. The booklet entitled "Recommended Safe Practices for Handling and Applying Thermal Insulation Products Containing Asbestos," printed May 1, 1968, described above, was written by members of the NIMA Education and Information Committee. The Chairman of the Committee was Clifford L. Sheckler, who, at that time, was also Manager, Accident Prevention and Health Administration of Manville. Other members of the Committee included John Vyverberg, Owens-Corning Fiberglass Corporation; Harry Mesler, Ruberoid Company; Leon Horowitz, Certain-Teed

Corporation; and Jack Barnhart, Executive Secretary of NIMA. The aforesaid booklet was produced and circulated during the 1968 meetings. Also, subsequent to the meetings with the contractors, considerable work was done in conjunction with environmental control, especially in the area of fixed machinery and equipment.

In addition, over the past several years prior to Manville's discontinuing the manufacture of asbestos containing products, there were many oral presentations and meetings at the plant level concerning safety practices related to asbestos exposure.

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

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

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

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

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

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

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

Manville has distributed the following:

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

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

A pamphlet entitled "Recommended Safety Practices for Handling Asbestos Fiber" published Johns-Manville Corporation in November 1973. This booklet was distributed to all employees

at all locations using asbestos fiber or handling products containing asbestos fiber.

An employee notification form entitled "Dear Johns-Manville Employee" published by Johns-Manville Sales Corporation. This was inserted in paychecks of all employees at all Johns-Manville Sales Corporation contract units beginning in 1970.

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

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

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

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

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

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

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

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

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

In 1980, Manville published the 1980-81 edition of the Health, Safety & Environment Catalog which, in addition to the above, included:

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

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

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

"Does Asbestos-Cement Pipe Pose a Health Hazard?" This reprint of an article in California Building & Engineer on health questions regarding asbestos-cement pipe concluded that such pipe does not pose a health hazard.

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

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

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

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

PRODUCT LABELING

Manville placed warning labels on the packaging of its industrial thermal insulation products containing asbestos which might release dust upon installation. These labels and dates of use are as follows:

1964 to 1970

CAUTION

THIS PRODUCT CONTAINS ASBESTOS FIBER.

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

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

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

1970 to 1972

CAUTION

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

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

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

1972 to 1978

CAUTION

CONTAINS ASBESTOS FIBER

AVOID CREATING DUST

BREATHING ASBESTOS DUST MAY CAUSE
SERIOUS BODILY HARM

1978 to 1985

CAUTION

CONTAINS ASBESTOS FIBERS

AVOID BREATHING DUST

BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

SMOKING GREATLY INCREASES THE
RISK OF SERIOUS BODILY HARM

Manville began using such warning notices because in 1964 it
was reported by a member of the medical profession that there might
exist a risk to some persons who installed industrial insulation

products containing asbestos, in that inhalation of excessive quantities of asbestos fibers over prolonged periods of time under certain conditions might create a risk of contracting asbestosis to some persons. 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 Manville to include a no-smoking warning, implementation of which commenced in November 1978. In addition, product literature was available from sales personnel.

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

1969 to 1972

CAUTION

THIS BAG CONTAINS ASBESTOS FIBER.

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

1972 to 1978

CAUTION

CONTAINS ASBESTOS FIBER

AVOID CREATING DUST

BREATHING ASBESTOS DUST MAY CAUSE
SERIOUS BODILY HARM

1978 to 1983

CAUTION

CONTAINS ASBESTOS FIBER

AVOID CREATING DUST

BREATHING ASBESTOS MAY CAUSE
SERIOUS BODILY HARM

SMOKING GREATLY INCREASES THE
RISK OF SERIOUS BODILY HARM

Use of warning labels 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 Manville to include a no-smoking warning, implementation of which commenced in November 1978. Manville also placed this warning on all bags containing asbestos fiber in five additional languages; i.e.: French, Dutch, German, Spanish and Japanese. Additional language may have been used from time to time.

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

The selection of the wording of the text of the warning labels was made by a group of individuals representing the following departments at Manville: Environmental Control, Employee Relations, Executive, Legal and Product Marketing. The 1972 change in labeling was mandated by the federal government under the Occupational Safety and Health Act of 1970 and the standard promulgated thereunder for exposure to asbestos.

Beginning in the fall of 1974, all corporate labeling activities were within the jurisdiction of the Corporate Labeling Committee. Chairman of the Corporate Labeling Committee was Paul Kotin, M.D., Senior Vice President of Johns-Manville Corporation, Health, Safety and Environment Department, until his retirement in September, 1981.

On information and belief, the labeling of products at Manville is currently the responsibility of each Product Manager in conjunction with the Corporate Labeling Committee, which consists of representatives from the operating groups, Legal Department and Health Safety and Environment Department.

The following individuals have also been involved in the labeling of Manville Products:

Herbert M. Ball
(Deceased)

William P. S. Breese
255 Brookside Court
Knollwood, CO 80302

Edmund M. Fenner
(Deceased)

Hugh M. Jackson
5205 Sky Trail

Littleton, CO 80123

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

J. P. Leineweber
(Deceased)

Irving J. Pedley
10015 Royal Oak Road
Sun City, AZ 85351

William B. Reitze
10870 Park Ridge Road
Littleton, CO 80123

Clifford L. Sheckler
(Deceased)

Kenneth W. Smith, M.D.
(Deceased)

See Response to Interrogatory No. 1.

INTERROGATORY NO. 12:

For each product identified in answer to Interrogatory No. 1 state whether warnings of any harmful or potentially harmful effects of the product were printed on the cartons or packing cases in which individual containers were packed and, if so:

- (a) State the printed warning's contents;
- (b) State when the warning was used;
- (c) Describe the manner in which it was placed on or in the product container;
- (d) Identify each individual who participated in writing of the label or brochure and describe in detail the extent of his participation;
- (e) Identify each document which reflects, refers or relates to the information contained on the cartons or packing cases and the decision to include that information;
- (f) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

When applicable, Manville Corporation or related entities complied with the labeling regulations promulgated by the United States Department of Labor, Occupation Safety and Health Administration (OSHA). Labels on asbestos containing products manufactured by Manville Corporation or related entities were generally located on the packaging material. However, the location of label also depended on the specific type of product involved.

Asbestos containing pipe covering and block insulation, shipped in cardboard cartons, respectively contained a label on the side panel of each carton and on the top of each carton. Asbestos containing board products had labels stamped on every sheet or a label stamped on every five sheets, depending upon the product. Asbestos cements, shipped in multi-ply kraft paper bags and heavy duty polyethylene bags, contained a label on the back panel of each bag. Asbestos cloth, shipped in tubes, contained a label on the exterior of each tube. Asbestos containing millboard products, shipped in corrugated cardboard cartons, had a label located on the top side of the carton.

See also Response to Interrogatory No. 11.

INTERROGATORY NO. 13:

With regard to the production, distribution, and/or sale of each product identified in answer to Interrogatory No. 1 state whether you have ever been accused of violating any of the provisions of the Federal Labeling of Hazardous Substances Act, OSHA (P.L. 91-596, 29 U.S.C. Section 651 et seq and regulations promulgated thereunder or NIOSH and its regulations and, if so, state:

(a) The date of each indictment, complaint or information that accused you of such violation;

(b) The court in which the proceedings were instituted;

(c) The plea you entered;

(d) The verdict and/or judgment in each such case;

(e) The date set for trial of any pending case;

(f) Identify each document which reflects, refers or relates to information pertaining to such accusation;

(g) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

The Fund has never been accused of violating any of the provisions of the Federal Hazardous Substances Act with regard to labeling. The Fund does not have access to information which would allow it to determine whether Manville Corporation or related entities was in violation of this Act.

INTERROGATORY NO. 14:

For each product identified in answer to Interrogatory No. 1, state whether you contend it is a "hazardous substance" as defined in 15 United States Code, Section 1261(f) and, if so, state with specificity and particularity the facts which you rely on to support that contention.

RESPONSE:

Defendant objects to this Interrogatory on the ground that it calls for a legal conclusion. Without waiver of or prejudice to this objection, the Trust is continuing to compile information responsive to this request and will supplement as soon as possible.

INTERROGATORY NO. 15:

With regard to each product identified in answer to Interrogatory No. 1 state whether any quantity of that product has ever been seized by any agency of any government because of its containing a toxic ingredient and not having a proper label or required instructions for use; and if so:

- (a) State the date of each such occurrence;
- (b) State the name or description of the violations of which you were accused;
- (c) State the court in which the action was filed;
- (d) Describe the judgment that was rendered;
- (e) State the date that has been set for trial of any pending case;
- (f) Identify each document which reflects, refers or relates to information pertaining to such seizure;
- (g) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

To the best of the Fund's knowledge, no.

INTERROGATORY NO. 16:

State what action and when it was undertaken, if any, you have taken since 1935 to reduce or eliminate any risk of occupational disease or personal injury to those using your asbestos containing products which arises from the inhalation of dust and fibers.

RESPONSE:

See Response to Interrogatory Nos. 10 and 11.

INTERROGATORY NO. 17:

Describe in full and complete detail each of the activities which you have undertaken with the intention of warning the public of the effects of any product identified in answer to Interrogatory No. 1 as to the health of the user or general public and give the inclusive dates of each such activity, and:

(a) Identify each individual who participated therein and describe the nature of his participation;

(b) Identify each document which reflects, refers or relates to information pertaining to such warning;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory Nos. 10 and 11.

INTERROGATORY NO. 18:

Have you or any of your subsidiaries or corporate predecessors (defendant) conducted or contracted to have any entity conduct studies concerning the effects of inhalation of asbestos dust or fibers on a person using or being exposed to any of the asbestos materials manufactured by "defendant"? In answer to this question, please state:

(a) The date, nature and location of the studies;

(b) The name or names of the persons conducting the studies and their address and describe in detail the extent of their participation;

(c) The purpose of the studies;

(d) The identity of each document which refers or relates to any information set forth in answer to this interrogatory;

(e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 10.

INTERROGATORY NO. 19:

Has the answering defendant (see definition in No. 18) conducted any studies designated to minimize or eliminate the inhalation of asbestos dust and fibers by those exposed to the use of any of the products containing asbestos materials manufactured by it? If so:

(a) The date, nature and location of your studies;

(b) The name or names of the persons conducting such studies and their address and describe in detail the extent of this participation;

(c) State what action, if any, was taken based upon such studies in an effort to minimize or eliminate the effects of inhalation of asbestos dust or fibers upon those using or being exposed to the dust and fibers contained in such products as manufactured by your company;

(d) Identify each document which refers or relates to any information set forth in answer to this interrogatory.

(e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 10.

INTERROGATORY NO. 20:

What technique, if any did and/or do you use to make dust samplings in the manufacturing and packaging production environment or at job sites where your materials are used?

(a) Set forth in detail the technique used, when it was commenced and when, if ever, it was concluded;

(b) State the purpose for administering such samplings;

(c) State the results of such samplings;

(d) State what action, if any, has been taken in response to the findings as to the dust samples;

(e) Identify each document which refers or relates to such sampling;

(f) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied;

(g) Identify the living person who has the most knowledge of matters discussed herein.

RESPONSE:

For many years, Manville Corporation or related entities performed periodic industrial hygiene air sampling. Beginning in the mid-1930s, plant-wide dust counts were taken for Manville by Metropolitan Life Insurance Company. Manville's first in-house industrial hygienist was employed in 1934. Travelers Insurance Company began taking dust counts in Manville's plants in the mid-1940s and continued monitoring into the 1950s. Manville began using its own employees to conduct monitoring in the early 1950s, and by 1958, four regional laboratories had been established to keep pace with the company's expanding environmental control programs covering all locations and utilizing a number of permanently employed industrial hygienists.

The purpose of the evaluations was to determine existing asbestos dust levels, to analyze and evaluate the results, and to implement corrective action, when necessary, with respect to employees of Manville engaged in mining, milling and manufacturing operations and those employees involved in the application or installation operations.

The first generally accepted occupational exposure limit for asbestos fiber in the United States was recommended in 1938 by the

U.S. Public Health Service and was set at five million particles per cubic foot, eight-hour, time-weighted average. In 1946, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted this as their threshold limit value (TLV). In addition, for some period of time, Manville or related entities also measured airborne fiber concentrations and compared them to an experimental standard of one million fibers per cubic foot, based on the recommendation of researchers at the Saranac Laboratory.

In 1968, the ACGIH proposed a standard of two million particles per cubic foot or twelve fibers longer than five micrometers per cubic centimeter, as an eight-hour, time-weighted average. As its internal standard, Manville adopted a standard of six fibers longer than five micrometers per cubic centimeter, eight-hour, time-weighted average in 1968.

In 1971, OSHA promulgated an emergency standard of five fibers longer than 5 micrometers per cubic centimeter as an eight-hour, time-weighted average, and ten fibers longer than five micrometers per cubic centimeter maximum ceiling concentration, effective June 7, 1972. This standard was changed by OSHA effective July 1, 1976, 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.

On July 21, 1986, OSHA again revised the asbestos standard to the current permissible exposure limit of 0.2 fiber per cubic centimeter, determined as an eight-hour, time-weighted average airborne concentration. An action level of 0.1 f/cc as an eight-hour, time-weighted average was also established as the level above which certain compliance activities must be initiated.

The following individuals were involved in industrial hygiene and safety programs for Manville or related entities:

Name & Last Known Address

J. P. Woodard
(Deceased)

Date & Nature of Employment

Employed by Manville commencing in 1926; Assistant Industrial Relations Director, 1938-1945; Director of Industrial Relations, 1945-1952; retired in 1962.

O. L. Binder
(Deceased)

Employed by Manville commencing in 1934; Industrial Hygienist, Environment Control Department, 1934-1944; Industrial Relations Manager, 1944 until retirement in 1969.

John P. Syme
(Deceased)

Employed by Manville in the mid-1930s as Director of Industrial Relations; administered certain medical services to employees until 1947.

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

Employed by Manville commencing in 1936; Executive Vice President and Chief Operations Officer until retirement in 1973.

Clifford L. Sheckler
(Deceased)

Employed by Manville commencing in 1936; Supervisor, Safety and Industrial Hygiene; Corporate Manager, Hygiene; Corporate Manager, Industrial Health; Manager, Occupational and Environmental Control until retirement in 1977; administered Manville's health and safety program, 1960-1970; served as a consultant to Manville.

Charles W. Hite
(Deceased)

Employed by Manville commencing in 1937: Industrial Relations Manager, 1937-1945; Manager, Industrial Relations (Corporate), 1946-1956; Vice President Industrial Relations until retirement in 1968.

Hugh M. Jackson
5205 Sky Trail
Littleton, CO 80123

Employed by Manville commencing in 1937; Corporate Safety Director, 1947-1952; Director Corporate Training and Management Development until retirement in 1980.

Edmund M. Fenner
(Deceased)

Employed by Manville commencing in 1940; Environmental Control Department until retirement in 1981.

Kenneth W. Smith, M.D.
(Deceased)

Employed by Manville commencing in 1944; Medical Officer at Asbestos, P.Q., 1944-46; Medical Director at Asbestos, P.Q., 1946-51; Medical Director, Manville, approximately 1952 until 1966.

George L. Swallow
11705 Applewood Knolls Drive
Lakewood, CO 80215

Employed by Manville commencing in 1952; Project Engineer, General Plant Engineering Department, 1952-1957; Manager, Occupational Environmental Control, 1969 until retirement in 1982.

Dennis R. Christensen
Manville Corporation
P.O. Box 5108
Denver, CO 80217

Employed by Manville commencing in 1967; Industrial Hygienist, 1967-70; Industrial Hygiene Supervisor, 1970-1982; Manager, Occupational Environmental Control, 1982-Present.

William B. Reitze
10870 Park Ridge Road
Littleton, CO 80123

Previously employed by CIBA Corporation in the area of toxicology and pharmacology; inspector with U.S. Department of Health; employed by Manville commencing in 1969, Industrial Hygiene, Health and Safety; Director, Health, Safety and Environment; Chief Environmental Scientist until retirement in 1987.

Richard P. Carter
427 South Street
Randolph, MA 02368

Employed by Manville commencing in 1971; Director, Government Relations, 1973-1976; Manager, Government Affairs, 1976-1980.

Paul Kotin, M.D.
4505 S. Yosemite, Unit 339
Denver, CO 80217

Employed by Manville commencing in 1974; Senior Vice President, Health, Safety and Environment; administered Manville's health and medical program until retirement in 1981; currently a consultant to Manville.

In addition to these specific individuals, Manville employed various other personnel who participated in such activities as safety inspections, engineering studies, loss control evaluations or similar type operations at Manville's plant locations. These personnel included plant managers, industrial or employee relations managers, plant physicians and nurses, plant and corporate industrial hygiene technicians, plant dust control engineers and line foremen.

All responsive documents in the possession, custody or control of the Fund will be produced at the records repository maintained by the Trust in Denver, Colorado. In addition to the documents

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

INTERROGATORY NO. 21:

State what, if any safety measures were taken since 1935 by defendant with regard to its employees, during the processing, manufacturing and packaging of products containing asbestos which related to dust abatement or elimination of the discharge into the work environment of asbestos particles. If any such safety measures were taken, state:

(a) The reason for the use of such measures, equipment or clothing;

(b) The date of implementation of safety measures;

(c) Identify each document relating to safety procedures taken by employees or plant personnel in the manufacture, processing and packaging of such products;

(d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information.

RESPONSE:

Generally, the types of precautions taken at facilities owned and operated by Manville Corporation or related entities to prevent or reduce the exposure to asbestos included the following: 1) use of dust control devices; 2) pre-employment and periodic physical examinations; 3) training regarding safe work practices and other topics; 4) use of protective equipment such as respirators; 5) periodic air sampling; 6) engineering innovation; 7) education regarding the effects of exposure to asbestos; and 8) application of threshold limit values.

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

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

among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See Response to Interrogatory Nos. 1, 10, 20 and 22.

INTERROGATORY NO. 22:

State for the period of time the answering defendant manufactured or used at its own plants asbestos containing products the following:

(a) Knowledge as to any respirator or other breathing device which was on the market during the relevant period which would prevent the inhalation of asbestos dust and fibers;

(b) A detailed description of such respirator or other breathing device, together with all information as to how such device prevents the inhalation of asbestos dust and fibers;

(c) What tests, if any, were conducted, by whom and where, with regard to the effectiveness of any such device;

(d) Identify each document in any defendant's possession which refers or relates to the subject matter of this interrogatory;

(e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Since the early 1930s, respirators have been made available to employees at asbestos using facilities operated by Manville Corporation or related entities. Generally, the types of respirators used were those approved by the U.S. Bureau of Mines for pneumoconiosis producing dusts.

The U.S. Bureau of Mines was a widely used source of advice for Manville Corporation or related entities with regard to the selection of respirators. Factors used by the U.S. Bureau of Mines when determining the selection of respirator devices included:

- Nature of the hazard
- Severity of hazard
- Type of contaminant
- Period of exposure
- Distance of respirable air

- Activity of wearer

The approval requirements implemented by the U.S. Bureau of Mines represented the minimum protection that a respirator should give in order to protect the wearer adequately. Efficiency of the respirator determined by the U.S. Bureau of Mines was based on the percent of the dust in the air that is retained on the filter. Various respirators classified by the U.S. Bureau of Mines were Air Supplied respirators (which had a hose line through which air that is safe to breathe was conveyed to a face piece), Chemical Filter respirators (which removed gaseous contaminants from the air) and Mechanical Filter respirators (which removed, by mechanical filtration, harmful particles from the air).

Companies with grants from the U.S. Bureau of Mines for approval of manufacturing respiratory protective devices are listed below:

1941

Acme Protection Equipment Company, Pittsburgh, PA
American Optical Company, Southbridge, MA
American-LaFrance & Foamite Industries, Inc., Elmira, NY
B. F. McDonald Company, Los Angeles, CA
Chicago Eye Shield Company, Chicago, IL
Davis Emergency Equipment Company, New York, NY
DeVilbiss Company, Toledo, OH
Draegerwerk, Labeck, Germany
E. D. Ballard Company, San Francisco, CA
H. S. Cover, South Bend, IN
Hygeia Respirator Company, New York, NY
Mine Safety Appliances Company, Pittsburgh, PA
Pangborn Corporation, Hagerstown, MD
Pulmpsen Safety Equipment Corporation, Brooklyn, NY
Siebe, Gorman & Company, Limited, London, England
Standard Safety Equipment Company, Chicago, IL
W. W. Gly Manufacturing Company, Cleveland, OH
Willson Products, Inc., Reading, PA

1949

American Optical Company, Southbridge, MA
Binks Manufacturing Company, Chicago, IL
E. D. Bullard Company, San Francisco, CA
Metallizing Engineering Company, Inc., Long Island City, NY
Mine Safety Appliances Company, Pittsburgh, PA
Pulmosan Safety Equipment Corporation, Brooklyn, NY
Willson Products, Inc., Reading, PA

1950

Acme Protection Equipment Company, Chicago, IL
American Optical Company, Southbridge, MA
American-LaFrance & Foamite Industries, Inc., Elmira, NY
B. F. McDonald Company, Los Angeles, CA
Binks Manufacturing Company, Chicago, IL
Chicago Eye Shield Company, Chicago, IL
Davis Emergency Equipment Company, Inc., Newark, NJ
Davis Emergency Equipment Company, Inc., Newark, NJ
DeVilbiss Company, Toledo, OH
Draegerwerk, Lubeck, Germany
E. D. Bullard Company, San Francisco, CA
H. S. Cover, South Bend, IN
Hygeia Filtering Corporation (formerly Hygeia Respirator Company),
NY
Metallizing Engineering Company, Inc., Long Island City, NY
Mine Safety Appliances Company, Pittsburgh, PA
Pangborn Corporation, Hagerstown, MD
Pulmosan Safety Equipment Corporation, Brooklyn, NY
Scott Aviation Corporation, Lancaster, NY
Siebe, Gorman & Company, Limited, London, England
Standard Safety Equipment Company, Chicago, IL
W. W. Sly Manufacturing Company, Cleveland, OH
Willson Products, Inc., Reading, PA

1958

Acme Protection Equipment Company, South Huron, MI
American Optical Company, Southbridge, MA
American-LaFrance Corporation, Elmira, NY
B. F. McDonald Company, Los Angeles, CA
Binks Manufacturing Company, Chicago, IL
Chicago Eye Shield Company, Chicago, IL
Davis Emergency Equipment Company, Inc., Newark, NJ
Draegerwerk, Lubeck, Germany
E. D. Ballard Company, CA
H. S. Cover, South Bend, IN
Metallizing Engineering Company, Inc., Westbury, NY
Mine Safety Appliances Company, Pittsburgh, PA
Mine Safety Appliances Company, Limited, Glasgow, Scotland
Pangborn Corporation, Hagerstown, MD
Pulmosan Safety Equipment Corporation, Brooklyn, NY
Scott Aviation Corporation, Lancaster, NY
Siebe, Gorman & Company, Limited, London, England
Standard Safety Equipment Company, Chicago, IL
W. W. Sly Manufacturing Company, Cleveland, OH
Welsh Manufacturing Company, Providence, RI
Willson Products Division, Ray-O-Vac Company, Reading, PA

1965

Acme Protection Equipment Company, South Haven, MI
American Optical Company, Southbridge, MA
Binks Manufacturing Company, Chicago, IL
Cesco Safety Products, Inc., (formerly Chicago Eye Shield Company)
Chicago, IL
Davis Emergency Equipment Company, Inc., Newark, NJ
DeVilbiss Company, Toledo, OH
E. D. Bullard Company, Sausalito, CA
Firewel Company, Inc. (subsidiary of The Aro Corporation)
Buffalo, NY
Fry-Fyter Company, Dayton, OH
Glendale Optical Company, Woodbury, NY
Globe Safety Products, Inc., (formerly Globe Industries, Inc.)
Dayton, OH
H. S. Cover, South Bend, IN
Metallizing Engineering Company, Inc., Westbury, NY
Mine Safety Appliances Company, Glasgow, Scotland
Mine Safety Appliances Company, Pittsburgh, PA
Pangborn Corporation, Hagerstown, MD
Pulmosan Safety Equipment Corporation, Brooklyn, NY
Rite Hardware Manufacturing Corporation, Glendale, CA
Safeline Products, Putnam, CT
Scott Aviation Corporation, Lancaster, NY
Scott Air-Pak, Limited, Clarkson, Ontario, Canada
U. S. Divers Company, Santa Ana, CA
W. W. Sly Manufacturing Company, Cleveland, OH
Welsh Manufacturing Company, Providence, RI
Willson Products Division, The Electric Storage Battery Company
(formerly Willson Products Division, Ray-O-Vac Company and
Willson Products, Inc.), Reading, PA

Many of the approved respirators which were used at Manville facilities were manufactured by American Optical Company, Mine Safety Appliances Company, Minnesota Mining and Manufacturing, Scott Aviation, Welsh Manufacturing Company, and Willson Safety Products. The specific models which were approved for use varied over the years, as newer, more sophisticated models became available.

Prior to the approval of respirators by the U.S. Bureau of Mines, the Safety Engineering magazine in 1918, discussed the development of a protection device known as the "Dustite". Dustite was manufactured by Walter Soderling, Inc. and was approved in 1917 by the Underwriters Laboratory. This mask was made of rubber and polished aluminum with a dry filter of pure cotton. In 1932, the Safety Engineering magazine introduced two different respirators: the Willson Bag Respirator and the Willson Chemical Cartridge Respirator, in which a sanitary facelet covered the edge of the face piece, preventing inhalation of contaminants in the atmosphere.

Respirator usage was mandatory when the dust exposures at a particular work station were above the recommended threshold limit value for exposure to asbestos. After the advent of OSHA regulations for asbestos using operations, the specific requirements for respirator usage were established by law.

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

INTERROGATORY NO. 23:

Has the "defendant" or any entity (including associations to which the defendant is or has been a member) conducted or had conducted any investigation of the statistical and/or epidemiological relationship between the use of any product identified in answer to Interrogatory No. 1 and the contraction by humans or animals of cancer including but not limited to mesothelioma. If so:

(a) Identify each person participating in such investigation and describe in detail the extent of this participation;

(b) State when the investigation was conducted;

(c) Identify the person or persons who authorized the investigation;

(d) Identify each document which refers or relates to any information set forth in answer to this interrogatory;

(e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 10.

INTERROGATORY NO. 24:

Has the "defendant" or any entity (including associations to which the "defendant" is or has been a member) conducted or had

conducted any investigation of the statistical and/or epidemiological relationship between the use of any product identified in answer to Interrogatory No. 1 and the contraction by humans of pulmonary asbestosis. If so:

(a) Identify each person participating in such investigation and describe in detail the extent of his participation;

(b) State when the investigation was conducted;

(c) Identify the person or persons who authorized the investigation;

(d) Identify each document which refers or relates to any information set forth in answer to this interrogatory;

(e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 10.

INTERROGATORY NO. 25:

If the answering defendant did not respond affirmatively to Interrogatory No. 1 but undertook the types of inquiries indicated in Interrogatories 23 and 24--answer said interrogatories under this question including all subparts.

RESPONSE:

Not applicable.

INTERROGATORY NO. 26:

Describe in detail all written and oral reports including those reports originating from users of any of the products identified in answer to Interrogatory 1, including doctors, and employees and agents of the defendants concerning any relationship between the use of these products and the development of pulmonary asbestosis in humans or animals;

(a) Identify all persons making said reports and to whom said reports were made;

(b) State whether any report or series of reports initiated changes and/or reevaluation of the production, sale or use, or recommendations for use, of any of those products;

(c) Identify each document which refers or relates to any information set forth in answer to this interrogatory;

(d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 10.

INTERROGATORY NO. 27:

Describe in detail all written and oral reports including those reports originating from users of any of the products identified in answer to Interrogatory No. 1, including doctors, employees and agents of the defendants concerning any relationship between the use of any of those products and the development of cancer including but not limited to mesothelioma in humans or animals:

(a) Identify all persons making said reports and to whom said reports were made;

(b) State whether any report or series of reports initiated changes and/or reevaluation of the production, sale or use, or recommendations for use, of any of those products;

(c) Identify each document which refers or relates to any information set forth in answer to this interrogatory;

(d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 10.

INTERROGATORY NO. 28:

For each product identified in answer to Interrogatory No. 1 state whether the production and/or sale of the product has been discontinued, limited or curtailed, and, if so:

(a) State when it was discontinued;

(b) State with specificity and particularity all the reasons for the discontinuance;

(c) Identify each individual who participated in the decision to discontinue production and/or sale and describe in detail the extent of his participation;

(d) Identify all documents which reflect, refer or relate to each such discontinuance;

(e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory No. 1.

INTERROGATORY NO. 29:

Do you contend that each of the products identified in Interrogatory Nos. 1 or 70 do not or did not create any risk to one who applies or uses the product?

(a) If so, state the factual basis for each such contention;

(b) If not, state:

(i) The degree and kind of risk which is created by such use;

(ii) The conditions under which such risk is created, increased or decreased;

(iii) Identify each document which reflects, refers or relates to your answers to this interrogatory;

(iv) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory Nos. 1 and 10.

INTERROGATORY NO. 30:

Do you contend that it was not your responsibility to warn the ultimate user listed in Interrogatory Nos. 1 or 70 of any health risk related to products/asbestos?

- (a) State the factual basis for such response;
- (b) Identify each document which reflects, refers or relates to your answers to this interrogatory;
- (c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Defendant objects to this Interrogatory on the grounds that it calls for a legal conclusion on the ultimate issues presented in this case.

INTERROGATORY NO. 31:

Do you contend that it was only the responsibility of the employing company involved, or others, to so warn the workers of the risk of harm arising from the use of your product or of the danger of asbestos to their health?

- (a) State the basis for such contention;
- (b) Identify which others were so responsible;
- (c) Identify each document which reflects, refers or relates to your answer to this interrogatory;
- (d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Defendant objects to this Interrogatory on the grounds that it call for a legal conclusion on the ultimate issues presented in this case.

INTERROGATORY NO. 32:

Do you contend that the health danger to any plaintiff was not foreseeable by the answering defendant at the time the products alleged to have caused plaintiff's injuries were sold? If so, as to each plaintiff:

- (a) State the factual basis for such contention;
- (b) Identify each document relied upon in support of such contention;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Defendant objects to this Interrogatory on the grounds that it calls for a legal conclusion on the ultimate issues presented in this case.

INTERROGATORY NO. 33:

Do you contend that the health consequences to each plaintiff from the use by each plaintiffs of products containing asbestos was obvious? If so, as to each plaintiff:

(a) State the factual basis for such contention;

(b) Identify all documents relied upon in support of such contention;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Defendant objects to this Interrogatory on the grounds that it calls for a legal conclusion on the ultimate issues presented in this case.

INTERROGATORY NO. 34:

Do you contend that each plaintiff knew, understood and appreciated the danger to his/her health arising from his contact with asbestos products which the answering defendant mined, distributed, manufactured or allowed to be used within their production facilities? If so, as to each plaintiff:

(a) State the factual basis for such contention;

(b) Identify each document relied upon in support of such contention;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

After reasonable inquiry and search, the information known and available to the Trust is insufficient to respond at this time.

INTERROGATORY NO. 35:

Do you contend that plaintiff unreasonably exposed himself to the danger arising from his contact with asbestos products which the answering defendant mined, distributed, manufactured or allowed to be used within the confines of a facility of the answering defendant? If so, as to each plaintiff:

- (a) State the factual basis for such contention;
- (b) Identify each document relied upon in support of such contention;
- (c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

After reasonable inquiry and search, the information known and available to the Trust is insufficient to respond at this time.

INTERROGATORY NO. 36:

Do you contend that plaintiffs used any asbestos product in other than their usual, customary and expected manner? If so, as to each plaintiff:

- (a) State the name and chemical composition of the product claimed to have been used in other than its usual, customary and expected manner;
- (b) State in detail the manner in which plaintiffs used said product in other than its usual, customary and expected manner;
- (c) Identify each document relied upon in support of such contention;
- (d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

After reasonable inquiry and search, the information known and available to the Trust is insufficient to respond at this time.

INTERROGATORY NO. 37:

Has the answering defendant ever been named as a defendant in a proceeding including any other civil action, Workmen's Compensation Actions, filing of Workmen's Compensation consent agreements, or other proceedings, to recover damages for injuries resulting from any accident or alleged occupational disease (including asbestosis, cancer, etc.) as a result of exposure at the complainant in such proceedings to asbestos from 1925 to 1975:

- (a) State the name and address of each plaintiff;
- (b) State the name and address of each co-defendant;
- (c) State the date it was filed;
- (d) State the name of the court in which it was filed;
- (e) Describe the judgment rendered;
- (f) State the date that has been set for hearing or trial of any case still pending;
- (g) Describe the terms of any settlement reached before or during trial;
- (h) State whether any appeal is pending from any judgment that has been rendered;
- (i) State the exact nature of the condition alleged in such action to have resulted from the plaintiffs' use of or contact with said product and identify the product involved;
- (j) Identify each document which reflects, refers or relates to any information pertaining to that complaint;
- (k) State the first date any notice of the complainants problems came to the attention of the answering defendant;
- (l) State whether any appeal is pending from any judgment that has been rendered.

RESPONSE:

The Fund will produce non-privileged documents from Manville Corporation workers' compensation documents as well as a list of

all asbestos health claims pending against Manville Corporation or related entities at the time of Manville's Chapter 11 petition at the records repository maintained by the Trust in Denver, Colorado.

Additional information regarding the cases contained on the list is a matter of public record.

See Response to Interrogatory No. 1.

INTERROGATORY NO. 38:

With respect to the period from 1940 through 1980, state the names, addresses and company title or position of each person who at any time during that period was in charge of the following activities with regard to each of the products identified in answer to Interrogatory 1:

- (a) Production;
- (b) Marketing;
- (c) Labeling;
- (d) Advertising;
- (e) Product evaluation;
- (f) Research and development;
- (g) Distribution.

RESPONSE:

Listed below are the plant managers of Manville's major asbestos using facilities. This information was compiled to the best of Manville's current knowledge and existing records.

INDUSTRIAL PRODUCTS DIVISION
MAJOR MANUFACTURING FACILITIES

<u>Facility and Dates of Operation</u>		<u>Plant Managers & Last Known Address</u>
P.O. Box 9067 Long Beach, CA 90810 (1938 to 1982)	1938-54	J. A. Carey (Deceased)
	1955-56	T. H. Eaton Three Chimneys Royal Oak, MD 21662
	1956-57	P. V. Dybdal

	2618 Tim Ball Road Waterford, CA 96386
1957-59	A. R. Girardi (Deceased)
1960-64	S. J. Lane, Jr. Pleasant Point Plantation Star Route #5 Beaufort, SC 29902
1964-67	E. A. Paddock 415 Flossmoor Avenue Waukegan, IL 60085
1968-69	D. H. Gallagher 6666 S. Arapahoe Way Littleton, CO 80120
1969-75	R. J. Alleman 7393 S. Downing Circle East Littleton, CO 80122
1975-81	W. A. Ford 2900 Park Newport, #330 Newport Beach, CA 92660
High Street North Billerica, MA 01862 (1940 to 1985)	1943-54 R. M. Woodward 7 Crescent Street Nashua, NH 03060
	1954-59 V. B. Padham (Deceased)
	1960 N. J. Gray (Acting) 6755 W. Rowland Avenue Littleton, CO 80123
	1961-67 E. C. Truax (Deceased)
	1967-72 J. F. Mell 62 Thomas Drive Chelmsford, MA 01824
	1972-76 A. W. Swanson 78 N. Ridge Road P.O. Box 219 Castle Rock, CO 80104

1977-85

D. E. Guy
209 E. Loch Haven Drive
Fayetteville, NC 28304

INDUSTRIAL PRODUCTS DIVISION
INDUSTRIAL INSULATIONS DIVISION

Main Street
Manville, NJ 08835
(1913 to 85)

1938-43

J. E. Begert
(Address Unknown)

1944-49

Unknown

1950-54

H. J. O'Brien
(Address Unknown)

1955-60

J. B. McCarty
(Deceased)

1961-66

K. H. Slater
13722 Tartan Drive
Sun City West, AZ 85375

1967-82

A. W. Jung
275 S. Metape Circle
Bound Brook, NJ 08805

Main Street
Manville, NJ 08835

1983-84

H. S. Heydon, Jr.
17 Calvin Road
Kendall Park, NJ 08824

1983-84

D. B. Smith (Sealing
Components)
10 Arlyne Drive
Somerville, NJ 08876

1985

H. G. Kopp (Sealing
Components)
634 St. James Place
Nacogdoches, TX 75961

BUILDING PRODUCTS DIVISION
BUILDING MATERIALS MANUFACTURING DIVISION

Main Street
Manville, NJ 08835

1950-52

W. F. Fischer
(Address Unknown)

1958-66

1953-58

Unknown

1966-72

W. L. Ruff
(Deceased)

1976 J. A. Manara
123 Grove Street
Somerville, NJ 08876

1977-78 R. D. Phillips
56 Mine Mount Road
Bernardsville, NJ
07924

PACKINGS & FRICTION MATERIALS DIVISION

Main Street
Manville, NJ 08835

1958 U. D. Torrance
77 Highland Drive
San Luis Obispo, CA
93401

1959-60 P. D. Cannon
(Deceased)

1961-62 C. L. Stake
244 Shadow Ridge Court
Condo 58
Marco Island, FL 33937

1963-69 C. J. DeBiase
5030 Sanford Circle
Englewood, CO 80110

1970-71 J. A. Krochta
1141 B Spring Lane Run
Martinsville, NJ
08836

INDUSTRIAL SPECIALTIES DIVISION

Main Street
Manville, NJ 08835

1977-81 C. G. Guerin
1795 Bollmer Farm Road
Martinsville, NJ 08836

1982-85 F. J. Sydlowski, Jr.
673 John Christian Road
Bridgewater, NJ 08807

Tilton, NH 03275
(1948 to 1976)

1948-57 Gilman H. Lowery
(Last Known Address)
Sharon, MA

1957-69 Wesly Wilkinson
(Deceased)

1970-76 M. C. Hutchins
Route 7, Box 135C

Laconia, NH 03246

Single Plant Manager

P.O. Box 55
Waukegan, IL 60085
(1923 to 1985)

1922-24	H. A. Headson (Address Unknown)
1924-27	S. A. Williams (Address Unknown)
1927-37	J. P. Kottcamp (Address Unknown)
1937-44	K. W. Huffine (Address Unknown)
1944-49	C. R. Wikel, Sr. 980 Coventry Lane Lake Forest, IL 60045
1949-50	A. K. Higbee (Address Unknown)

INDUSTRIAL PRODUCTS DIVISION
INDUSTRIAL INSULATIONS DIVISION

P.O. Box 55
Waukegan, IL 60085

1950-56	T. R. Turnbull (Deceased)
1956-60	E. C. Truax (Deceased)
1961-64	N. J. Gray 6755 West Rowland Avenue Littleton, CO 80123
1964-69	S. J. Lane, Jr. Pleasant Point Plantation Star Route #5 Beaufort, SC 29902
1970-72	J. A. McCague (Address Unknown)
1972-74	J. W. Christopher P.O. Box 247 Franktown, CO 80116
1974-79	J. W. Reeder 410 Oxford Lane

Jamesburg, NJ 08831

1979-82 R. E. Gatti
142 Cottonwood Drive
Celena, OH 45822

1983-84 E. A. Paddock
415 Flossmoor Avenue
Waukegan, IL 60085

BUILDING PRODUCTS DIVISION
BUILDING MATERIALS MANUFACTURING DIVISION

P.O. Box 55
Waukegan, IL 60085

1950 A. K. Higbee
(Address Unknown)

1951-56 F. M. Armstrong
810 Capri Boulevard
Treasure Island, FL 33706

1956-61 A. B. Marchant
Route 1, P.O. Box 150C
Whitestone, VA 22578

1962-64 W. L. Miltimore
P.O. Box 536
Waukegan, IL 60085

1964-70 N. J. Gray
6755 West Rowland Avenue
Littleton, CO 80120

1970-77 C. R. Wikel, Jr.
980 Coventry Lane
Lake Forest, IL 60045

1978-82 J. H. Scott
P.O. Box 1487
Lyons, CO 80540

1976-82 E. A. Paddock
(Flexboard only)
415 Flossmoor Avenue
Waukegan, IL 60085

PACKING & FRICTION MATERIALS DIVISION

P.O. Box 55
Waukegan, IL 60085

1954-58 H. Nies
(Deceased)

1958-68 G. L. Simmons
3966 E. Evans

Denver, CO 80210

	1968-69	C. F. Luquer 5105 Mayan Ranch Road Apartment 105 Fort Worth, TX 76132
	1970	N. J. Gray 6755 West Rowland Avenue Littleton, CO 80120
	1971	J. W. Reeder 410 A. Oxford Lane Jamesburg, NJ 08831
P.O. Box 190 Zelienople, PA 16163 (1943 to 1973)	1943-46	S. K. Cooper (Address Unknown)
	1946-48	J. L. Miller 1470 Central Avenue Merritt Island, FL 32952
	1948-69	R. E. Robinson 310 South High Street Zelienople, PA 16063
	1970-73	R. G. Frederick 55 Rockrose Drive RD #1 Baden, PA 15005
P.O. Box 591 Pittsburg, CA 94565 (1926 to 1985)	1926-28	P. A. Andrews (Deceased)
	1928-37	C. L. Bates (Deceased)
	1937-63	W. B. Kelley 1407 Grove Way Concord, CA 94521
	1963-66	W. L. Ruff (Deceased)
	1966-68	J. C. Jones 9289 Skyway, Space 26 P.O. Box 40 Paradise, CA 95969

1968-69	T. F. Rooney (Deceased)
1970-73	A. C. Pennewell (Deceased)
1973-76	J. W. Cook 82 Fairway Lane Littleton, CO 80123
1976-85	A. W. Macrae 319 Barrow Street Walnut Creek, CA 94598

The following is a listing of district sales managers for northeast regional sales offices.

Insulation Systems

1958	Northeast	E.R. Wilkinson
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Industrial Building Products

1958	Northeast	R.D. Hayes
1959	New York	J.E. Kindregan
1959	Philadelphia	S.A. Peterson
1960	New York	J.E. Kindregan
1960	Philadelphila	S.A. Peterson

Industrial Insulation

1960	Boston	C.O. Garcelon
1960	New York	T.S. Nicely
1960	Philadelphia	E.J. Sullivan
1961	Boston	C.O. Garcelon
1961	New York	T.S. Nicely
1961	Philadelphia	E.J. Sullivan & T. P. Williams
1962	Northeast	T.S. Nicely
1962	Philadelphia	T.P. Williams
1963	Northeast	T.S. Nicely

1963	Philadelphia	T.P. Williams
1964	Northeast	T.S. Nicely
1964	Philadelphia	T.P. Williams
1965	Northeast	T.S. Nicely
1965	Philadelphia	T.P. Williams
1966	Northeast	T.S. Nicely
1966	Philadelphia	T.P. Williams
1967	Northeast	T.S. Nicely
1967	Philadelphia	T.P. Williams
1968	Northeast	T.S. Nicely
1968	Philadelphia	T.P. Williams
1969	Northeast	T.S. Nicely
1969	Philadelphia	T.P. Williams
1970	New York	T.S. Nocely
1970	Philadelphia	J.A. Campbell, Jr.
1970	Eastern Area	J. Huffine
1971	New York	T.S. Nicely
1971	Philadelphia	J.A. Campbell, Jr.
1971	Eastern Area	J. Huffine

Industrial Products Division

1972	North Atlantic	S.V. Lukas
1972	New York	T.S. Nicely
1972	Philadelphia	J.A. Campbell, Jr.
1972	Eastern Marine	P.F. Coggins
1973	North Atlantic	S.V. Lukas
1973	New York	T.S. Nicely

1973	Philadelphia	J.A. Campbell, Jr.
1973	Eastern Marine	P.F. Coggins
1974	Northeast (Constr.Prod.)	S.V. Lukas
1974	Northeast (Equip.Prod.)	J. Huffine
1974	Eastern Marine	P.F. Coggins
1974	East	R.T. Flanagan
1975	Northeast (Constr.Prod.)	T.M. Kirby
1975	Northeast (Equip.Prod.)	J. Huffine
1975	Northeast (Air Handling)	E.W. Korty
1975	Northeast (Sealing Comp.)	S.V. Lukas
1975	Eastern (Refract.Prod.)	P.F. Coggins
1975	East (Elec.Equip.)	R.T. Flanagan
1975	Northeast (Reinforcements)	R.D. Wisbon
1976	Northeast (Insul.Sys.)	T.J. Carley
1976	Eastern Marine (Refract.)	P.F. Coggins
1977	Northeast (Insul.Sys.)	T.J. Carley
1977	Northeast (Refract.)	C.L. Varney
1977	Northeast (Sealing Comp.)	S.V. Lukas
1977	Eastern	D.J. Stenison

1978	Northeast (Insul.Sys.)	W.C. Roth
1978	Northeast (Refract.)	C.L. Varney
1979	Northeast (Insul.Sys.)	W.C. Roth
1979	Northeast (Refract.)	C.L. Varney
1980	Northeast (Insul.Sys.)	W.C. Roth
1980	Northeast (Refract.)	C.L. Varney
1982	Northeast (Insul.Sys.)	W.C. Roth
1982	Eastern (Refract.)	C.L. Varney

The following is a listing of district managers regarding sales/marketing.

Northeast	T.J. Carley 19 Cedarcroft Rd., Gibbsboro, NJ 08026 (609)783-4009
Southeast	R.S. Parsley 275 Hollyberry Rd., Roswell, GA 30075 (404)993-1569
North Central	W.H. Samberg 10827 Lakeview Dr., Whitehouse, OH 43571 (419)877-0173
Midwest	E.W. Korty 542 N. Vine St., Hinsdale, IL 60521 (312)323-8464
Southwest	K.M. Thomson 11827 Meadowview, Cypress, TX 77429 (713)376-2137
Rocky Mountain	J.J. Whalen 6672 W. Portland Place, Littleton, CO 80123 (303)979-8500

West Coast

D.E. Kiepler
521 W. Coolidge Dr., San Gabriel, CA 91775
(213)284-1925

LABELING

See Response to Interrogatory No. 11.

ADVERTISING

See Response to Interrogatory No. 5.

RESEARCH & DEVELOPMENT

The individuals in charge of Research and Development since its inception are as follows:

<u>Dates</u>	<u>Name & Last Known Address</u>	<u>Title</u>
1929-1931	A. M. Hamblet (Address Unknown)	Manager of Research & Development
1932-1937	B. B. Townshend (Address Unknown)	Manager of Research & Development
1937-1938	None (E. R. Williams served as Assistant Manager)	
1939-1941	E. R. Williams (Address Unknown)	Director of Research & Development
1941-1964	C. F. Rassweiler (Address Unknown)	Vice President for Research & Development
1964-1969	A. C. Smith P. O. Box 1523 Drawer B Rancho Santa Fe, CA 92067	Vice President for Research & Development
1969-1976	F. L. Pundsack 8 Sedgwick Drive Englewood, CO 80110	Vice President for Research & Development
1975-10/77	H. W. Gilbert 7020 W. Stetson Place, #13 Littleton, CO 80123	General Manager, Research Division
1976-1977	C. J. DeBiase 5030 Sanford Circle	Senior Vice President for Production &

Englewood, CO 80110

Technology

1979-1982

C. J. Sulewski
19035 Greenbrier Lane
Monument, CA 80132

Senior Vice President
for Production &
Technology

INTERROGATORY NO. 39:

Identify the living parties or persons who are the most knowledgeable about asbestos mined and products containing asbestos sold and/or distributed by you from 1940 to present. Identify all documents which relate to such sales and/or distribution.

RESPONSE:

No single person or group can be considered "most knowledgeable" about more than sixty years of operations of Manville Corporation and its related entities. In an effort to be responsive, the Fund will produce corporate organization charts for inspection and copying at the records repository maintained by the Trust in Denver, Colorado at a time convenient to the parties. See Response to Interrogatory No. 1.

INTERROGATORY NO. 40:

Has the answering defendant or has anyone on its behalf attended and/or participated in any conference, seminar, lecture or symposium dealing with the health hazards of using any product identified in answer to Interrogatory Nos. 1 or 7 or of asbestos in general and, if so, state:

(a) The date and place of such conference, seminar, lecture or symposium;

(b) The person or persons conducting such conference, seminar, lecture or symposium;

(c) The person or persons who attended on your behalf;

(d) The subject matter of such conference, seminar, lecture or symposium;

(e) The speakers and/or moderators at such conference, seminar, lecture or symposium;

(f) Whether any reports or memoranda were made concerning the subject matter of such conference, seminar, lecture or symposium; identifying each such report or memorandum.

RESPONSE:

Representatives of Manville Corporation or related entities attended many meetings, seminars, conferences or conventions where the biological effects of asbestos exposure were discussed. It is impossible to determine all of the meetings, seminars, conferences or conventions attended by representatives of Manville Corporation or related entities. However, it is known that representatives of Manville attended or participated in such conferences sponsored by: 1) the Trudeau Institute at Saranac Lake in the 1930s, 1940s and 1950s; 2) the Mellon Institute in Pittsburgh, Pennsylvania in the 1930s; and 3) a U.S. government-sponsored conference on shipyard safety in 1942.

In more recent years, representatives of Manville or related entities attended the following additional conferences where asbestos health issues were discussed:

Montreal	1958 -	Symposium on Cardio-Respiratory Diseases in Industry - McGill and Montreal Universities
Oxford	1960 -	Inhaled Particles and Vapours - British Occupational Hygiene Society
Caen	1964 -	International Congress on Asbestosis - Chambre Syndicale de l'Amiante
New York	1964 -	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

Johannesburg	1969 -	International Conference on Pneumoconiosis - Department of Mines, Government of the Republic of South Africa
London (UK)	1969 -	The Control of Asbestos in Working Environment - British Occupational Hygiene Society
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 -	IV. International Pneumoconiosis Conference - International Labor Organization (ILO) Geneva
Helsinki	1971 -	International Symposium on Safety and Health in Shipbuilding and Ship Repairing - International Labor Organization (ILO) Geneva
Buenos Aires	1972 -	XVII. 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)
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 Becquerel", Rouen
Berlin	1975 -	Asbest and Asbestose - Colloquium - German Society for Traumatology
Lyon (France)	1976 -	Working Group on the Evaluation of Carcinogenic Risk of Chemical to Man: Asbestos - International Agency for Research on Cancer (IARC) Lyon
Paris	1977 -	Colloque - Amiante et Cancerogenese Humaine - (sponsor unknown)
Washington	1977 -	Workshop on Asbestos: Definition and Measurement Methods - (sponsor unknown)
Montreal	1977 -	International Conference on Cancer and Environment - Institute of Hematology and Oncology of Montreal
Washington	1977 -	Occupational Exposures 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 -	Fifth International Conference on Pneumoconiosis - 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

On information and belief, the proceedings of such conferences are matters of public record.

There may be documents responsive to this Interrogatory among the general collection of documents at the records repository maintained by the Trust in Denver, Colorado. Relevant documents will be produced to the plaintiff for review and copying, at the records repository, at a time convenient to the parties. See Response to Interrogatory No. 1.

INTERROGATORY NO. 41:

Is the answering defendant, any association it belonged to or any carrier that it had asbestos product liability with, submit to make a statement at the hearing concerning the dangers of asbestos conducted in March, 1967 before the House of Representatives of the United States Congress Sub-Committee on Labor? If so, identify those persons who are or were associated with you that participated, and identify any writing concerning said participation.

RESPONSE:

The Fund has not been able to find any information regarding hearings on asbestos held by the Select Sub-Committee on Labor in March, 1967. However, hearings on asbestos were held before the Select Sub-Committee on Labor of the Committee on Education and Labor, House of Representatives (H.R. 14816) in February and March of 1968. Responsive documents will be produced at the records repository maintained by the Trust in Denver, Colorado at a time agreed upon by the parties.

INTERROGATORY NO. 42:

State when, if at all, you received knowledge of the following publications or matters discussed therein, who received such knowledge and identify all documents relating to such knowledge:

(a) Fleischer, Viles, Gade and Drinker, "a Health Survey of Pipe-Covering Operations in Construction Naval Vessals," 28 J. Indus. Hyg. 9-16;

(b) Selikoff, et al., "Asbestosis and Neoplasia," 42 Am. J. Med. (1967);

(c) Selikoff, Churg and Hammon, "The Occurrence of Asbestosis Among Industrial Insulation Workers," 132 Ann. New York Acad. Sc. 139 (1965);

(d) "Documentation of the Threshold Limit Values for Substances in Workroom Air," A.C.G.I.H. (3rd 1971);

(e) "Threshold Limit Values for 1961," A.C.G.I.H. (1961);

(f) 1906 report by Dr. H. Montague Murray;

(g) 1934 study by Dr. Anthony J. Lanza, Assistant Medical Director of Metropolitan Life Insurance Company.

RESPONSE:

The Fund is continuing to compile information responsive to this Interrogatory and will supplement as soon as possible.

INTERROGATORY NO. 43:

Identify each publication contained in your research library, or otherwise in your custody, including but not by way of limitation, your Research and Development center, all medical journals, industrial medical journals, industrial hygiene journals, technical literature in the area of asbestos mining, manufacture, application and use, and Governmental publications, dealing with occupational diseases arising from the manufacture and use of asbestos-containing products. As to all such publications, state the volumes which are in your custody and control, when each such volume was received and the present location of such publications.

RESPONSE:

As of 1982, Manville Corporation or related entities subscribed to the following are journals or periodicals. The dates in parentheses represent the first year of subscription.

*(Periodic newsletter through membership)

Advanced Data (1976)

AIHA Journal (1960)

* AIHA Newsletter (Unknown)

American Journal of Epidemiology (1975)

American Journal of Industrial Medicine (1980)

American Journal of Law and Medicine (1977)

American Journal of Nursing (1976)

American Journal of Pathology (1974)

American Journal of Public Health (1975)
 American Review of Respiratory Disease (1975)
 American Scientist (1975)
 AWWA Journal (1974)
 Annals of Occupational Hygiene (1974)
 * AOMA Report (Unknown)
 Archives of Environmental Health (1973)
 Asbestos (1960)
 Asbestos Worker (1962)
 Audio Visual Communication (1976)
 A V Guide (1976)
 British Journal of Cancer (1975)
 British Journal of Industrial Medicine (1972)
 Business Week (1972)
 CA Cancer/Clinic (1969)
 CAL OSHA Labor (1977)
 CAL OSHA News (1979)
 CAL OSHA Reporter (1974)
 CAL OSHA, Title 8 (1976)
 Canadian Medical Association Journal (1980)
 Canadian Occupational Safety and Health Law (1980)
 Cancer (1974)
 Cancergram (1978)
 Cancer News (1975)
 Cancer Research (1974)
 Chemical & Engineering News (1970)
 Chemical Regulation Reporter (BNA) (1980)
 Chemical Week (1972)
 The Chemical Worker
 Chest (1970-71; 1974)
 Congressional Staff Directory (Unknown)
 CPSC Memo (1980)
 CPSC Publication Calendar (1980)
 Dangerous Prop. Industrial Materials Report (1980)
 Defend. Employment/OSHA, Contests (1979)
 Dun's Review (1974)
 Editor & Publisher (1978)
 Emergency Medicine (1977)
 Enterprise (1977)
 Environment (1978)
 Environment Reporter (BNA) (1977)
 Environment Health Letter (1972)
 Environmental Health Perspectives (1972)
 Environmental Pollution & Control (1972)
 Environmental Research (1974)
 Environmental Science & Technology (1977)
 Environmental Study Conference (1978)
 Experimental Lung Research (1979)
 FDA Drug Bulletin (1981)
 Federal Register (1972)
 Federal Yellow Book (1978)
 Federation Proceedings (1970)

Food Chemical News (1974)
 Harvard Business Review (1950)
 Harvard Environmental Law Review (1981)
 Harvard Medical School of Health Letter (1978)
 Hazardous Materials Management Journal (1979)
 Hazardous Substances Advisory (1980)
 Hazardous Waste News (1980)
 IARC Monogram (Carcinoma Risk/Chemical to Man) (1980)
 IARC Scientific Series (1980)
 Industrial Hygiene Digest (1964)
 Industrial Hygiene News (1976)
 Industrial Hygiene News Report (1974)
 Industrial Photography (1976)
 Industry Week (1974)
 Int'l Archives of Occupational & Environmental Health (1979)
 ILO Information (1975)
 Job Safety & Health Report (1974)
 Journal of Air Pollution Association (1973)
 Journal of American Medical Association (1956)
 Journal of Environmental Health (1974)
 Journal of Environmental Pathology/Toxicology (1977)
 Journal of Hazardous Materials (1975)
 Journal of the National Cancer Institute (1978)
 Journal of Occupational Medicine (1975)
 Journal of Society/Occupational Medicine (1975)
 Journal of Toxicology & Environmental Health (1977)
 Laboratory Management Alcohol Journal (1976)
 Laboratory/Occupational Health Program Monitor (1974)
 Lancet (1975)
 Mayo Clinic Proceedings (1976)
 Media & Methods (1976)
 Medical World News (1975)
 Medicolegal News (1975)
 Mine Injuries & Work Time Quarterly (1978)
 Mine Safety/Health Administration Mailings (1979)
 Mine Safety & Health Reporter (BNA) (1979)
 Monthly Labor Review (1976)
 Monthly Vital Statistics (1976)
 Morbidity & Mortality (1975)
 NAS News Report (1977)
 The Nation's Health (1978)
 NICA (National Insulation Contractors Association)
 Outlook (1974)
 National Library of Medical News (1975)
 National Safety Council Library Bulletin (1975)
 National Safety Council Data Sheets (1975)
 Nature (1980)
 New England Journal of Medicine (1974)
 New York Times (Newspaper) (1976)
 Noise Control Report (1974)
 Noise Regulation Reporter (1975)
 Nosology News (1981)

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

The Fund has 115 boxes from the Manville Corporate Information Center which may be responsive to this Interrogatory. These boxes and all specifically identified documents will be made available to plaintiff for review and copying at the records repository maintained by the Trust in Denver, Colorado at a time convenient to the parties. See Response to Interrogatory No. 1.

INTERROGATORY NO. 44:

As to any threshold limit values published by the American Conference of Governmental Industrial Hygienists, state whether you have brought such information to the attention of those using your products or asbestos products on your premises. (If yes, how?) If you have not done so, state the reasons why you have not done so.

RESPONSE:

See Response to Interrogatory No. 11.

INTERROGATORY NO. 45:

Has answering defendant or any of its employees been: (a) a member of or (b) affiliated in any manner with or (c) received reports or (d) subscribed for reports or publication to the Industrial Hygiene Foundation organized in Pittsburgh, Pennsylvania?

RESPONSE:

Johns-Manville was a member of the Industrial Hygiene Foundation of America, and received materials from the organization.

INTERROGATORY NO. 46:

With regard to Interrogatory No. 45, what years did answering defendant or its employee(s) participate under (a), (b), (c) or (d)?

RESPONSE:

Defendant objects to the word "participate" in that it is undefined, lacking in specificity and may have unintended legal ramifications. Without waiver of or prejudice to this objection, Defendant states that it was a member of the Industrial Hygiene Foundation of America, later the Industrial Health Foundation, from 1936 through the present.

INTERROGATORY NO. 47:

With regard to Interrogatory No. 45, do you have any documents obtained from the Industrial Hygiene Foundation? If so:

- (a) List all such documents;
- (b) Who currently has them in their possession?
- (c) When was each received?
- (d) State the name of the individuals who received such documents or information contained in such documents.

RESPONSE:

The Fund will produce responsive documents at the records repository maintained by the Trust in Denver, Colorado at a time convenient to the parties. See Response to Interrogatory No. 1.

INTERROGATORY NO. 48:

Have you received any reports or documents prepared by Metropolitan Life Insurance Company from 1929 to about 1960, concerning statistical and other studies of asbestos workers? If so, state:

- (a) The documents received;
- (b) Who received them and when;
- (c) The current location of the documents.

RESPONSE:

The Fund is continuing to compile information responsive to this Interrogatory and will supplement as soon as possible.

INTERROGATORY NO. 49:

State all chemical, industrial, medical or trade associations to which you have belonged since 1936.

RESPONSE:

Manville Corporation or related entities belonged to the following organizations which are involved directly or indirectly with the mining or milling of asbestos fiber, or the manufacturing or installation of asbestos containing products, current through 1985:

American Society of Testing Materials
1916 Race Street
Philadelphia, PA 19103
(approximately 1930s through 1985)

Asbestos Cement Pipe Producers Association
1600 Wilson Boulevard
Suite 1308
Arlington, VA 22209
(approximately 1972 to early 1980s)

Asbestos Cement Product Association (defunct)
New York, NY
(approximately 1955 to 1967)

Asbestos Information Association/North America
1745 Jefferson Davis Highway
Arlington, VA 22202
(approximately 1971 through early 1980s)

Asbestos Textile Institute
P.O. Box 471
Willow Grove, PA 19090
(11/16/44 to 1973)

Automotive Parts Rebuilders Association
6849 Old Dominion Drive
McLean, VA 22101
(approximately 1950 to 1972)

Brake Lining Materials Association (defunct)
370 Lexington Avenue
New York, NY 10017
(approximately 1926 to 1949)

Canadian Asbestos Information Centre
(formerly Institute of Occupational Environmental
Health)
1130 Sherbrooke Street West, Suite 410
Montreal, Quebec
H3A 2H8 CANADA
(1966 to 1983)

Friction Materials Standards Institute
E-210 State Highway, Number 4
Paramus, NJ 07652
(approximately 1949 to 1972)

Industrial Health Foundation
(formerly Industrial Hygiene Foundation)
34 Penn Circle West
Pittsburgh, PA 15206
(1936 through 1985)

Mid-West Insulation Contractor's Association
2202 Hanscom Boulevard
Omaha, NE 68105
(approximately 1962 through 1985)

National Building Material Distributors Association
1701 Lake Avenue
Glenview, IL 60025
(1966 through 1985)

National Insulation Contractors Association
address unknown
(1954 through 1980s)

National Insulation Manufacturers Association, Inc.
441 Lexington Avenue
New York, NY 10017
(approximately 1958 to 1968)

Quebec Asbestos Mining Association
Suite 412, 5 Place Ville Marie
Montreal, Quebec
H3B 2G2 Canada
(approximately 1930 to 1983)

Resilient Floor Covering Institute
966 Hungerford Drive, Suite 12-B
Rockville, MD 20850
(1978 through 1985)

Southwest Insulation Contractor's Association
1406 Third National Bank Building
Dayton, OH 45402
(sometime after 1958 through 1985)

Thermal Insulation Manufacturers Association, Inc.
441 Lexington Avenue
New York, NY 10017
(approximately 1969 through 1985)

Western Insulation Contractor's Association
83 Hazel Lane
Piedmont, CA 94611
(1955 through 1985)

INTERROGATORY NO. 50:

With regard to the associations enumerated in the answer to Interrogatory No. 49, state;

(a) The names of each individual associated with the answering defendant since that date who have had dealings with each said association;

(b) Describe the nature of their dealings with each such association;

(c) State their last known address;

(d) If still employed, their current job and title;

(e) List all documents related to said affiliation.

RESPONSE:

Defendant objects to this Interrogatory on the grounds that it is overly broad, unduly burdensome, lacking in specificity and impossible to answer in light of the length of time and number of organizations which the Manville Corporation or related entities has been a member. Without waiver of or prejudice to the foregoing objection, the Fund will produce responsive documents at the records repository maintained by the Trust in Denver, Colorado at a time convenient to the parties. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this Interrogatory among the general collection of documents in the repository. This collection of documents will be produced at a time agreed upon by the parties. See Response to Interrogatory No. 1.

INTERROGATORY NO. 51:

Name each corporate officer and/or member of corporate management who attended any meeting and/or conference concerning the health, safety or medical aspects of asbestos and/or the use of products containing asbestos, and for each person identified, state the nature of his participation in each such meeting or conference.

(a) If any papers were received or given by the individuals listed for answer to Interrogatory No. 51, list each such document and who has copies of them.

RESPONSE:

See Response to Interrogatory Nos. 40 and 50.

INTERROGATORY NO. 52:

State the sources of all asbestos and/or asbestos containing products which have been incorporated in any product manufactured or distributed by answering defendant in its own facility (including installing on its equipment or buildings) or utilized from 1936 to 1980.

(a) State the names of all individuals associated with the above stated sources who dealt with or handled your account:

(b) Identify any such document which refers, reflects or relates to any information provided in answer to this interrogatory;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such

information and state the full substance of the information supplied.

RESPONSE:

Manville or related entities used asbestos fiber obtained from a number of sources. For products which contained chrysotile, much of the fiber used was obtained from the Jeffrey Mine in Asbestos, Quebec, which was owned and operated by a Canadian subsidiary. Other sources of chrysotile included: Advocate Mines, Ltd.; Bell Asbestos Mines, Ltd.; Calaveras Asbestos, Ltd.; Cassiar Asbestos Corporation, Ltd.; H.K. Porter Company; Marlime Chrysotile Asbestos Corporation, Ltd.; Metate Asbestos Corporation; and Pacific Asbestos Corporation.

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

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

INTERROGATORY NO. 53:

State the names of all individuals associated with you who had any dealings with the requisition and/or procurement of asbestos or products containing asbestos as indicated in answer to Interrogatory No. 52 and for each such person:

(a) Identify the nature of his association(s), the locations and the dates of their occurrence;

(b) Identify each document which refers, reflects or relates to any information provided in answer to this interrogatory;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

See Response to Interrogatory Nos. 38 and 39.

Interrogatory No. 54:

State the names of all individuals who dealt with or handled the account with and/or made any sales to the employers of the Plaintiff of asbestos and/or products containing asbestos.

(a) Describe in detail the nature and dates of each such association with the said accounts;

(b) Identify each document which refers, reflects or relates to any information provided in answer to this interrogatory.

RESPONSE:

See Response to Interrogatory Nos. 38 and 39.

INTERROGATORY NO. 55:

Identify each individual whom you expect to call as an expert witness at the trial of this litigation, and for each person identified:

(a) The subject on which the expert is expected to testify and the substance of the facts and opinions to which he or she is expected to testify and a summary of the grounds for each opinion;

(b) Identify each document referring, relating or containing any such facts and/or opinions and identify each individual having custody of each document identified.

RESPONSE:

Defendant has not determined or identified expert witnesses at this time.

INTERROGATORY NO. 56:

Identify each individual who you have retained or employed or anticipate retaining or employing in any way in preparation of or

anticipation of trial in this litigation who is not expected to be called as a witness at trial, and for each such individual:

(a) State the substance of any facts or opinion which he or she has discussed with any agent, employee or representative of the answering defendant, together with a summary of the grounds for each opinion;

(b) Identify each document referring to or containing such facts and/or opinions, and identify each person having custody of each document identified.

RESPONSE:

Defendant objects to this Interrogatory on the ground that it seeks information which is beyond the scope of Civil Rule 26 and is privileged.

INTERROGATORY NO. 57:

State the names, last known addresses and telephone numbers of each and every person whom you intend to call as a witness at the trial of this litigation:

(a) State the substance of any facts or opinion which he or she has discussed with any agent, employee or representative of the answering defendant, together with a summary of the grounds for each opinion;

(b) Identify each document referring to or containing such facts and/or opinions, and identify each person having custody of each document identified;

(c) Specify witnesses you intend to use at the trial of this case with respect to the occurrences and/or cause of plaintiffs' illnesses or with respect to the claimed damages or with respect to your liability.

RESPONSE:

Defendant has not determined or identified witnesses at this time.

INTERROGATORY NO. 58:

State whether your corporation is and has been insured for:

(a) Product liability insurance, including "excess or umbrella" policies;

(b) Workmen's Compensation;

(c) For product liability coverage, state:

(i) If so, the limits of coverage;

(ii) The name of the insurance company;

(iii) Whether this claim has been accepted or whether a letter of intent to deny coverage has been received.

RESPONSE:

Manville Corporation or related entities had primary and excess liability insurance coverage for bodily injury claims. Insurance coverage was the subject of two declaratory judgment actions entitled: (1) Johns-Manville Corporation, et al v. The Home Insurance Company, et al., originally filed in San Francisco Superior Court, Docket No. 765226, and later a part of a coordinated action entitled "Judicial Council Coordination Proceeding No. 1072" in the State of California; and (2) Commercial Union Insurance Company v. Johns-Manville Corporation, et al, United States District Court, District of Massachusetts, Civil Action No. 80-306-N.

Manville has settled with most of the insurance companies which were involved in these suits, as well as other carriers which were not involved in any litigation. Total settlements exceed \$800 million. The following carriers were among those which entered into agreements with respect to their insurance obligations to Manville and related companies:

Aetna Casualty and Surety Company
AIU Insurance Company
Allstate Insurance Company
American Re-Insurance Company
Centaur Insurance Company
Columbia Casualty Company
Commercial Union Insurance Company
Continental Casualty Company
First State Insurance Company
Gibraltar Casualty Company
Granite State Insurance Company
Highlands Insurance Company
The Home Insurance Company
Insurance Company of North America
ISLIC (International Surplus Lines Insurance Company)
INSCO, Ltd.
Lexington Insurance Company
Lloyd's of London
Midland Insurance Company
National Union Fire Insurance Company of Pittsburgh, PA
Northbrook Excess & Surplus Insurance Company
Northeastern Fire Insurance Company of Pennsylvania

Peerless Casualty Company
Peerless Insurance Company
Prudential Reinsurance Company
Reliance Insurance Company
Rocky Mountain International Insurance, Ltd.
Sun Insurance Office, Ltd.
Travelers Indemnity Company

Manville Corporation is continuing to pursue litigation against Protective National Insurance Company of Omaha and Canadian Indemnity Company in San Francisco Superior Court in an effort to secure all funds to which it is entitled. Any funds which are obtained as a result of these ongoing efforts will be distributed pursuant to the terms of the Manville Corporation Second Amended and Restated Plan of Reorganization, November 28, 1988, ("Plan".)

Manville Corporation is also attempting to resolve a claim against South Hampton Insurance Company, Ltd. for recovery under coverage provided for bodily injuries. Manville Corporation is pursuing claims against numerous additional carriers which are in liquidation in order to protect its rights as to those carriers. Finally, Manville Corporation is continuing to investigate other carriers which may have provided coverage to Manville or related entities.

INTERROGATORY NO. 59:

In whose possession are you and your predecessors' annual reports from 1936 to the present?

RESPONSE:

Annual reports pertaining to Manville Corporation are in the possession of the Fund, and will be produced at the records repository maintained by the Trust in Denver, Colorado at a time agreed upon by the parties.

INTERROGATORY NO. 60:

Describe in detail your policy with respect to the destruction of records pertaining to each of the products identified in answer to Interrogatory No. 1.

(a) Identify all documents pertaining to your policy, if any, regarding the destruction of such records;

(b) Identify the person or persons having custody of such policy documents;

(c) Identify the person or persons in charge of destroying records pertaining to each such product;

(d) Identify each document which refers, reflects or relates to any information provided in answer to this interrogatory;

(e) Describe what steps, if any, you have taken since the institution of this action or other actions involving asbestos to prevent the destruction of any documents relating to asbestos.

RESPONSE:

The Fund is unaware of any documents destroyed during the course of the asbestos litigation. Additionally, Manville Corporation or related entities prohibited destruction of documents during the asbestos litigation. However, documentation has been discovered which indicates that some potentially relevant documents may have been destroyed in the early 1960s. In addition, prior to the advent of asbestos litigation, other documents may have been destroyed in the normal course of business.

Specific records known to the Fund to be responsive to this Interrogatory will be produced at the records repository maintained by the Fund in Denver, Colorado at a time agreed upon by the parties.

INTERROGATORY NO. 61:

State the names of all individuals who aided in the preparation of these answers, and for each such person, state:

(a) Which interrogatories they helped prepare or the particular subject area for which they supplied information;

(b) Their current position with the company;

(c) Their current or last known home and business address and phone numbers.

RESPONSE:

The Response to these Interrogatories were prepared by attorneys representing the Fund, using documents available to them.

INTERROGATORY NO. 62:

State all processes used by plaintiff's employer, known to any defendant where asbestos was an ingredient.

RESPONSE:

Unknown.

INTERROGATORY NO. 63:

State all use of asbestos insulation by plaintiff's employer, known to any defendant.

- (a) Types of asbestos insulation used;
- (b) Manufacturer and/or brand names;
- (c) Locations in said plants where said insulation was used;
- (d) The person most knowledgeable in said corporation about the purchasing of insulation by distributors that covered the states of New Jersey, Delaware, Pennsylvania and Maryland.

RESPONSE:

Unknown.

INTERROGATORY NO. 64:

State whether you have entered into any agreement, either oral or written, with any other defendant in this action regarding

- (1) Settlement or non-settlement and/or
- (2) Allocation of damages, should the plaintiffs prevail on liability.

If the answer is yes to either of the above, state the substance of each such agreement and such parties who have entered into this agreement:

(a) Identify those persons who participated in the preparation of each such agreement and describe in detail the nature and extent of his participation; and

(b) Identify each document which contains, refers or relates to each such agreement.

RESPONSE:

No.

INTERROGATORY NO. 65:

Do you or your attorneys know of any person or persons not listed in the preceding answers having knowledge of facts relevant to the allegations in this lawsuit including witnesses to the accident, injury, illnesses, etc. in question? If yes, please

state the names, addresses, home telephone numbers, places of employment, relationship to you, the present whereabouts of all such persons, and which of said persons you intend to produce as witnesses in the trial of this action.

RESPONSE:

No.

INTERROGATORY NO. 66:

Do you or your attorneys have any written statements from any persons having knowledge of facts relevant to the subject matter of this lawsuit, including witnesses to the accident, injury, illnesses, etc. in question? If yes, please state the names, addresses, home telephone numbers, places of employment, relationship to you and the present whereabouts of all such persons.

RESPONSE:

No.

INTERROGATORY NO. 67:

State whether you were a member of the Asbestos Information Association (A.I.A.) or in any manner received information or participated in any of the association's activities.

RESPONSE:

Yes.

INTERROGATORY NO. 68:

If your answer to any part of Interrogatory 82 is in the affirmative, please state:

(a) The date, time and places of any A.I.A. meetings attended;

(b) The date and time period during which you received any publication of the A.I.A.;

(c) The name, address and telephone number of each and every person who attended such meetings and to whom any such publications were sent;

(d) The nature of the information that was furnished at meetings or in such publications;

(e) Name, address and telephone number of the present or last known custodian of any copies of A.I.A. newsletters, correspondence or publications.

RESPONSE:

Manville Corporation or related entities were members of AIA/NA beginning in 1969. All non-privileged documents relating to Manville's participation in AIA/NA will be produced at the records repository maintained by the Trust in Denver, Colorado. In addition to documents specifically identified, there may be other documents responsive to this request among the general collection of documents in the records repository. See Response to Interrogatory No. 1.

INTERROGATORY NO. 69:

If answering defendant or any or its agents or employees received Asbestos Magazine, please state:

(a) The date and time periods during which you received such publication;

(b) The frequency of receipt, e.g., regularly, occasionally, rarely, etc.;

(c) The terms, circumstances or requirements of receipt of such publication, e.g. free, by subscription, distributed at meetings, etc.;

(d) Name, address and telephone number of the present or last known custodian of any copies of such magazine.

RESPONSE:

Manville Corporation or related entities subscribed to and received the "Asbestos Magazine" on a yearly basis. The Fund has copies of the issues or excerpts of issues listed below:

Issues

1959 December

1960 January

1967 April

1971 August, September, October, December

1972 January, February, March, April, May, June, October
December

1973 January, February, March, April, May, June, October, December

1974 January, February, March, April, May, June, October, December

1975 January, February, March, April, May, June, October, December

1976 January, February, March, April, May, June, October, December

1977 January, February, March, April, May, June, October, December

1978 January, February, March, April, May, June, October, December

1979 January, February, March, April, May, June, October, December

1980 January, February, March, April, May, June, October, December

1981 January, February, March, April, May, June, October December

1982 January, February, March, April, May, June, October, December

Excerpts

Raw Fiber/Product Statistics

1919 - 1930

1931 - 1939

1940 - 1942

1943 - 1946

1947 - 1950

1951 - 1957

1919 - 1939

1940 - 1952

1953 - 1960

1961 - 1981

INTERROGATORY NO. 70:

Does the answering defendant have in its possession any medical records, not previously produced in this case relating to any of the plaintiffs, including, but not limited to, charts, x-rays, physical examination reports, summaries, tape recordings of interviews and any and all other records pertaining to the medical

condition of the plaintiffs? If so, plaintiffs request that such records be produced in accordance with Rule 34.

RESPONSE:

No.

INTERROGATORY NO. 71:

With respect to each denial and affirmative defense contained in your response to the Complaint, state the following:

- (a) Identify which defense it relates to;
- (b) Each fact upon which your contention is based;
- (c) The names and present or last known addresses and present or last known employer of all persons having knowledge of any of the facts set out in answer to subparagraph (b) hereof;
- (d) The description or designation of each document which in any way reflects, relates or refers to any of the facts set out in answer to subparagraph (b) hereof.

RESPONSE:

Defendant will supplement its response to this Interrogatory as soon as possible.

**SECTION II
INTERROGATORIES AND REQUEST FOR PRODUCTION
DIRECTED TO DEFENDANTS ON WHOSE PREMISES PLAINTIFF
WAS EMPLOYED BY DEFENDANT OR OTHERS**

INTERROGATORY NO. 72:

Describe in detail, with specificity and particularity each product which was being installed, repaired, removed, or otherwise used on the answering defendant's premises at all relevant times which contained asbestos, and for each such product describe:

- (a) Its chemical ingredients;
- (b) For each ingredient contained therein state:
 - (i) The name or chemical composition of each substance, what harmful effect, if any are known, that it produces in man or mammals and whether it produces its harmful effects through ingestion, inhalation, absorption or a combination of these;

(ii) When you determined and/or learned that the substance produced harmful effects and how such effects were produced;

(iii) Identify each individual who participated in such determination and/or obtained such knowledge;

(iv) Identify each document that refers, reflects or relates to any information pertaining to the properties of each of the ingredients and/or how the harmful effects are produced as well as your determination of those toxic effects and the manner by which they are produced;

(v) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied;

(c) Whether any of these products were mined, manufactured or distributed by answering defendant;

(d) The location within defendants premises where said product was being installed, repaired, or removed.

RESPONSE:

Not applicable.

INTERROGATORY NO. 73:

Provide the information requested in Interrogatory No. 2 for products listed in No. 72.

RESPONSE:

Not applicable.

INTERROGATORY NO. 74:

For each product identified in answer to Interrogatory No. 72, identify:

(a) The general contractor on the project which was responsible for or participated in the installation, repair, or removal of said product;

(b) Any subcontractor or other contractor which was responsible for or participated in the installation, repair, or removal of said product, and state:

(i) The type of agreement under which each named contractor was responsible for or participated in such

installation, repair or removal (e.g. subcontractor, independent contractor);

(ii) The extent of each named contractor's expressed responsibility or participation under said agreement.

(c) Any other person, firm or entity who was responsible for or participated in the installation, repair or removal of said products;

(d) Each document which refers, reflects or pertains to any information provided in the answer to this interrogatory;

(e) As to any information received orally in answer to this interrogatory, identify each person who has supplied such information and state the full substance of the information supplied.

RESPONSE:

Not applicable.

INTERROGATORY NO. 75:

Identify any supervisory personnel of answering defendant or the entity performing the functions enumerated in Interrogatory No. 72 who were present during some or all of the installation, repair or removal of the products identified in answer to Interrogatory Number 72, and for each such person, state:

(a) The name of the person, firm or other entity who had the authority to hire him/her;

(b) The name of the person, firm or other entity who had the authority to fire him/her;

(c) The name of the person, firm or other entity who actually paid his/her wages;

(d) The name of the person, firm or other entity who had control over his/her day to day performance.

RESPONSE:

Not applicable.

INTERROGATORY NO. 76:

Identify each and every worker on answering defendant's job site who participated in the installation, repair or removal of the products identified in answer to Interrogatory No. 72 at all relevant times, and for each such person state:

(a) His job title at the job site;

- (b) His duties at the job site;
- (c) The local union to which he belonged at that time, if any;
- (d) The name of the person, firm or other entity who had the authority to:
 - (i) Hire him/her;
 - (ii) Fire him/her;
 - (iii) Pay his/her wages;
 - (iv) Control his/her day to day performance on the job.

RESPONSE:

Not applicable.

INTERROGATORY NO. 77:

For each product identified in answer to Interrogatory No. 72, state what person, firm or other entity was responsible or participated in providing said product to the workers on the job site?

- (a) How was the product purchased or otherwise acquired, before being distributed for use on the job site?

RESPONSE:

Not applicable.

INTERROGATORY NO. 78:

For each product identified in answer to Interrogatory No. 72 state:

- (a) What person, firm or other entity purchased and/or obtained said product;
- (b) Where it was purchased, and/or obtained;
- (c) From whom it was purchased;
- (d) The dates it was purchased;
- (e) The manner in which it was received, stored and distributed for use on the job site.

RESPONSE:

Not applicable.

INTERROGATORY NO. 79:

State whether asbestos products were being installed, repaired or removed on answering defendant's premises during the relevant time in areas where electrical construction workers were required to work. If so, describe:

(a) Whether and when answering defendant became aware of these circumstances;

(b) Any action which defendant took to insure the safety of such workers under these circumstances.

RESPONSE:

Not applicable.

INTERROGATORY NO. 80:

State what action, if any, you have taken since 1935 to reduce or eliminate any risk of occupational disease or personal injury to those using asbestos products or to those in close proximity to those using such products while on your premises, which arises from the inhalation of dust and fibers.

RESPONSE:

Not applicable.

INTERROGATORY NO. 81:

Describe in full and complete detail each of the activities which you have undertaken with the intention of warning workers on your premises of the effects of any product identified in answer to Interrogatory No. 1 as to the health of the user or those in close proximity to the user and give the inclusive dates of each such activity, and

(a) Identify each individual who participated therein and describe the nature of his participation;

(b) Identify each document which reflects, refers or relates to information pertaining to such warning;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Not applicable.

INTERROGATORY NO. 82:

State what if any safety measures were taken by you as to your employees, or other workers on your premises during the installment, repair or removal of products containing asbestos. If any such safety measures were taken, state:

(a) The reason for the use of such measures, equipment or clothing;

(b) Identify each document relating to safety procedures taken by such employee or workers;

(c) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information.

RESPONSE:

Not applicable.

INTERROGATORY NO. 83:

Describe in detail all written and oral reports including those reports originating from suppliers of any of the products identified in answer to Interrogatory No. 72, including doctors, and employees and agents of the suppliers concerning any relationship between the use of or proximity to the use of these products and the development of asbestos related illnesses in humans or animals:

(a) Identify all persons making said reports and to whom said reports were made;

(b) State whether any report or series of reports initiated changes and/or re-evaluation of the use, or recommendations for use, of any of those products;

(c) Identify each document which refers or relates to any information set forth in answer to this interrogatory;

(d) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Not applicable.

INTERROGATORY NO. 84:

For each product identified in answer to Interrogatory No. 72, state whether the product has been removed from any or all premises and equipment owned by answering defendant, and, if so:

- (a) State when it was removed;
- (b) State with specificity and particularity all the reasons for the removal;
- (c) Identify each individual who participated in the decision to remove said product and describe in detail the extent of his participation;
- (d) Identify all documents which reflect, refer or relate to each such discontinuance;
- (e) As to any information received orally in answer to this interrogatory, identify each person who supplied such information and state the full substance of the information supplied.

RESPONSE:

Not applicable.

INTERROGATORY NO. 85:

For each product identified in answer to Interrogatory No. 72, state whether the use of that product in any or all of your premises has been limited and/or curtailed, reduced or discontinued and, if so:

- (a) Describe how it was so limited or curtailed or reduced;
- (b) State when it was so limited, curtailed or reduced;
- (c) State with specificity and particularity all of the reasons for the limitation, curtailment, or reduction;
- (d) Identify each individual who participated and the extent of his participation in the decision to so limit, curtail or reduce production and/or sale;
- (e) Identify each document which reflects, refers or relates to the limitation, curtailment or reduction and/or the decision to implement the limitation, curtailment or reduction;
- (f) As to any information received orally in answer to this interrogatory, identify each person who supplied such

information and state the full substance of the information supplied.

RESPONSE:

Not applicable.

INTERROGATORY NO. 86:

Identify the living parties or persons who are the most knowledgeable about the installation, repair or removal of asbestos products on your premises during the relevant dates:

RESPONSE:

Not applicable.

INTERROGATORY NO. 87:

State what person, entity or firm was responsible for determining whether asbestos containing products would be installed, repaired or removed from your premises during the relevant dates.

RESPONSE:

Not applicable.

SECTION III
INTERROGATORIES DIRECTED TO ALL
RAILROAD DEFENDANTS

INTERROGATORY NO. 88:

(a) Identify the dates of all sales of asbestos-containing products by answering defendant (or its alleged corporate predecessors as set forth in plaintiffs' complaints) to the railroad defendants in these cases (Amtrack, Penn Central Transportation Company and the Pennsylvania Railroad).

(b) Identify all documents concerning such sales to these railroads.

RESPONSE:

Defendant objects to this Interrogatory on the grounds that it is overly broad, unduly burdensome and impossible to answer in light of the number of products sold and the length of time over which they were sold. Without waiver of or prejudice to this foregoing objection, the Fund will produce responsive documents at

the records repository maintained by the Trust in Denver, Colorado at a time convenient to the parties. In addition to the documents which will be specifically identified and produced at that time, there may be additional documents responsive to this Interrogatory among the general collection of documents in the repository. See Response to Interrogatory No. 1.

INTERROGATORY NO. 89:

Identify all documents concerning sale of asbestos-containing products by answering defendant to the railroad defendants and their predecessors to the railroad defendants:

- (a) Wilmington, Delaware railroad shops;
- (b) Philadelphia, Pennsylvania railroad shops;

RESPONSE:

See Response to Interrogatory No. 88.

INTERROGATORY NO. 90:

(a) Describe below in detail each and every asbestos-containing product sold or manufactured by answering defendant or its alleged corporate predecessors as set forth in plaintiffs' complaints.

(b) Describe all similar products that were non-asbestos-containing.

RESPONSE:

Asbestos containing products manufactured by Manville Corporation or related entities which may have been used in the railroad industry are listed below:

**MANVILLE CORPORATION OR RELATED ENTITIES
RAILROAD INDUSTRY
ASBESTOS-CONTAINING PRODUCTS**

Anti-Sweat Sectional Pipe Insulation

Asbesto-Metallic Friction Blocks

Asbesto-Sponge Felted Sectional Pipe Insulation

Asbesto-Sponge Felted Train Pipe Insulation

Asbesto-Sponge Felted Sheets and Blocks

Asbestocel
Asbestocel Fine Corrugated
Asbestocel Sectional Pipe Insulation
Asbestocel Sheets and Blocks
Asbestoment (Fireproof Cable Insulation)
Asbestoside (Exterior Wall Siding)
Asbestos Clothing
Asbestos Combination Spiral Pipe Insulation
Asbestos Cord
Asbestos Fibrous Enamel
Asbestos Fire-Felt Sectional Pipe Insulation
Asbestos Fire-Felt Sheets and Blocks
Asbestos Flexible Steam Pipe
Asbestos Paper and Roll Board
Asbestos Protected Metal Roofing and Siding
Asbestos Roll Fire-Felt
Asbestos Roof Putty
Asbestos Rope Packing (Twisted and Braided)
Asbestos Wick Packing
Barge Roofing
Brake Band Lining (Industrial)
Ceilinite (Steel Passenger Car Insulation)
Cement No. 302 (Fire Felt Insulating)
Cement No. 400
Cement - Fireite Asbestos Furnace Cement
Colorblende Asbestos Shingles

Ebony Asbestos Wood
85% Mag sectional Pipe Insulation
85% Mag Blocks
85% Mag Locomotive Boiler & Air Pump Lagging
Flexstone Asbestos Roofing
Jewett Ring Packings
Jomanco (Friction Tape)
Kearsarge (all products including gaskets)
Keystone Air Pump Packing
Keystone Hair Insulator
Lead Joint Runner
Locomotive CabCock Packing
Locomotive Cab Roofing
Millboard (Sheet)
Mobilene Sheet Packing (Style #101)
Mogul Coil Packing
Moulded Air Pump Packing
Niagrite (Fireproof Cable Insulation)
Nycinsul (Steel Passenger Car Insulation)
Phoenix Asbestos Stove Lining
Referite
Salamander (Steel Passenger Car Insulation)
Sea Rings
Service Sheet Packing (Style #60)
Sill Covering
Slater's Felt

Special Combination Air Pump Packing

Standard Asbestos Shingles

Thermo Fire-Felt Sheets & Blocks

Transite

Transite Asbestos Wood (Smoke Jacks/Stacks & Caps/Ventilators)

Universal Combination Steam Hammer Packings

Universal Piston Packings

Universal Rod & Plunger Packings

Vitro Fire-Felt Sheets & Blocks

Vitribestos Sheets & Blocks

Water Gauge Gaskets

Waterproofing Felt (#50)

Asbestos free products manufactured by Manville Corporation or related entities which may have been used in the railroad industry are listed below:

**MANVILLE CORPORATION OR RELATED ENTITIES
RAILROAD INDUSTRY
NON-ASBESTOS-CONTAINING PRODUCTS**

Asphalt Roofing Cement

Built-up Brine and Ammonia Insulation

Cold Water Paint

Duplex Rod & Plunger Packing

Hairinsul (Refrigerator Car Insulation)

Junior Trap

Liberty Red Rubber Sheet Packing (Styles #107, #108)

Orangeburg Fibre Conduit

Pilot Brand Roofing

Piston Packing (Power Reverse Gear)

Exhibit "A"

Manville Asbestos Containing Thermal
Insulation or Shipyard Products

Product Name: #12 Asbestos Paper Tape
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 95.0
Date Manufactured: 1936
Date Discontinued: 1980
Date Labeled: None

Product Name: 15A Asbestos Jacket
Product Type: Paper, Felt
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 57.0
Date Manufactured: 1931
Date Discontinued: 1980
Date Labeled: None

Product Name: 45A Asbestos Jacket
Product Type: Felt, Blankets
Fiber Type: Chrysotile
% Fiber by Weight: 50.0
Date Manufactured: 1931
Date Discontinued: 1980
Date Labeled: None

Product Name: #50 Asbestos Weatherproofing Felt
Product Type: Paper, Felt, Blankets
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 55.0
Date Manufactured: 1923
Date Discontinued: 1976
Date Labeled: 1970

Product Name: 55 Cable Fireproofing Tape
Product Type: Tape
Fiber Type: Chrysotile
% Fiber by Weight: 72.0
Date Manufactured: 1956
Date Discontinued: 1982
Date Labeled:

Product Name: 85% Magnesite
Product Type: Block, Pipe Insulation
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.3 - 15.0
Date Manufactured: 1902
Date Discontinued: 1970
Date Labeled: 1964

Product Name: 85% Magnesite Cement
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.3 - 15.0
Date Manufactured: 1902
Date Discontinued: 1970
Date Labeled: 1965

Product Name: 88 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 58.0
Date Manufactured: 1960
Date Discontinued: 1983
Date Labeled: None

Product Name: 89 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 58.0
Date Manufactured: 1955
Date Discontinued: 1983
Date Labeled: None

Product Name: 91 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 61.0
Date Manufactured: 1957
Date Discontinued: 1983
Date Labeled: None

Product Name: 95 (1/16) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 32.0
Date Manufactured: 1942
Date Discontinued: 1983
Date Labeled: None

Product Name: 95 (1/8) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 19.0
Date Manufactured: 1942
Date Discontinued: 1983
Date Labeled: None

Product Name: 96 (1/16) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 25.0
Date Manufactured: 1942
Date Discontinued: 1983
Date Labeled: None

Product Name: 96 (1/8) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 18.0
Date Manufactured: 1942
Date Discontinued: 1983
Date Labeled: None

Product Name: 101 (1/32, 3/32) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 45.0
Date Manufactured: 1903
Date Discontinued: 1983
Date Labeled: None

Product Name: 101 (1/16, 1/4) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 39.0
Date Manufactured: 1903
Date Discontinued: 1983
Date Labeled: None

Product Name: 101 Asbestos Millboard (Hard)
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 69.2 - 78.5
Date Manufactured: 1910

Date Discontinued: 1951
Date Labeled: None

Product Name: 102 Asbestos Millboard (Medium)
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 75.0 - 86.6
Date Manufactured: 1910
Date Discontinued: 1980
Date Labeled: 1970

Product Name: 103 Asbestos Millboard (Soft)
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 76.0 - 90.0
Date Manufactured: 1910
Date Discontinued: 1951
Date Labeled: None

Product Name: 104 Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 92.8
Date Manufactured: 1915
Date Discontinued: 1951
Date Labeled: None

Product Name: 105 Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 77.0 - 92.8
Date Manufactured: 1915
Date Discontinued: 1951
Date Labeled: None

Product Name: 106 Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 70.0 - 91.2
Date Manufactured: 1918
Date Discontinued: 1980
Date Labeled: 1970

Product Name: 106B Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile

% Fiber by Weight: 95.0
Date Manufactured: 1918
Date Discontinued: 1980
Date Labeled: 1970

Product Name: 106H Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 87.0 - 88.0
Date Manufactured: 1918
Date Discontinued: 1980
Date Labeled: 1970

Product Name: 135 Tadpole Gasketing Tape
Product Type: Tape
Fiber Type:
% Fiber by Weight: 36.0
Date Manufactured: 1948
Date Discontinued: 1982
Date Labeled: None

Product Name: 135-S Tadpole Gasketing Tape
Product Type: Tape
Fiber Type:
% Fiber by Weight: 36.0
Date Manufactured: 1948
Date Discontinued: 1982
Date Labeled: None

Product Name: 219 Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 84.0 - 86.8
Date Manufactured: 1918
Date Discontinued: 1980
Date Labeled: 1970

Product Name: 300 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 100.0
Date Manufactured: 1932
Date Discontinued: 1970
Date Labeled: None

Product Name: 301 Cement

Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 14.7 - 18.8
Date Manufactured: 1925
Date Discontinued: 1971
Date Labeled: 1965

Product Name: 302 Cement (Originally called Asbestos Cement
Felting; later known as Fire Felt Insulating Cement)
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 49.4 - 70.0
Date Manufactured: 1858
Date Discontinued: 1970
Date Labeled: 1965

Product Name: 304 Cement (Asbestos Hot Blast Cement)
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 53.4
Date Manufactured: 1884
Date Discontinued: 1969
Date Labeled: 1965

Product Name: 319 Semi-Refractory Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 20.0 - 21.0
Date Manufactured: 1925
Date Discontinued: 1969
Date Labeled: 1965

Product Name: 320 Cement
Product Type: Cement
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight:
Date Manufactured:
Date Discontinued:
Date Labeled: None

Product Name: 329 Cement
Product Type: Cement
Fiber Type:
% Fiber by Weight:
Date Manufactured: 1890
Date Discontinued: 1915 - 1920
Date Labeled: None

Product Name: 340 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 60.0
Date Manufactured: 1908
Date Discontinued: 1969
Date Labeled: None

Product Name: 0352 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 25.0 - 40.0
Date Manufactured: 1931
Date Discontinued: 1969
Date Labeled: 1965

Product Name: 352 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 100.0
Date Manufactured: 1923
Date Discontinued: 1973
Date Labeled: 1965

Product Name: 364 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 60.0
Date Manufactured: 1908
Date Discontinued: 1955
Date Labeled: None

Product Name: 400 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 21.6 - 23.0
Date Manufactured: 1915
Date Discontinued: 1969
Date Labeled: 1965

Product Name: 450 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 7.1 - 38.5
Date Manufactured: 1930

Date Discontinued: 1971
Date Labeled: 1965

Product Name: 500 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 16.7 - 20.0
Date Manufactured: 1933
Date Discontinued: 1971
Date Labeled: 1965

Product Name: 678 Semi-Refractory Cement
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 20.0 - 35.0
Date Manufactured: 1941
Date Discontinued: 1969
Date Labeled: 1965

Product Name: 7700 Coated Asbestos Jacket
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: 24.0 - 26.0
Date Manufactured: 1931
Date Discontinued: 1983
Date Labeled: None

Product Name: AAAA Grade
Product Type: Rope
Fiber Type: Chrysotile
% Fiber by Weight: 99.0 - 100.0
Date Manufactured: 1884
Date Discontinued: 1983
Date Labeled: 1972

Product Name: AAAA Grade Asbestos Cloth
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 99.0 - 100.0
Date Manufactured: 1884
Date Discontinued: 1970
Date Labeled: None

Product Name: AAAA Grade Asbestos Tape
Product Type: Tape
Fiber Type: Chrysotile

% Fiber by Weight: 99.0 - 100.0
Date Manufactured: 1884
Date Discontinued: 1983
Date Labeled: 1972

Product Name: AAA Grade (788, 857, 869, 873)
Product Type: Rope
Fiber Type: Chrysotile
% Fiber by Weight: 95.0 - 99.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: AAA Grade Asbestos Cloth
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 95.0 - 99.0
Date Manufactured: 1884
Date Discontinued: 1974
Date Labeled: 1972

Product Name: AAA Grade Asbestos Tape
Product Type: Tape
Fiber Type: Chrysotile
% Fiber by Weight: 95.0 - 99.0
Date Manufactured: 1884
Date Discontinued: 1983
Date Labeled: 1972

Product Name: AAA Grade Asbestos Tubing
Product Type: Tubing (Braided)
Fiber Type: Chrysotile
% Fiber by Weight: 95.0 - 99.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: AA Grade Asbestos Cloth
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 90.0 - 95.0
Date Manufactured: 1884
Date Discontinued: 1974
Date Labeled: 1972

Product Name: AA Grade Asbestos Tape

Product Type: Tape
Fiber Type: Chrysotile
% Fiber by Weight: 90.0 - 95.0
Date Manufactured: 1884
Date Discontinued: 1983
Date Labeled: 1972

Product Name: AA Grade Asbestos Tubing
Product Type: Tubing (Braided)
Fiber Type: Chrysotile
% Fiber by Weight: 90.0 - 95.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: A Grade Asbestos Cloth
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 85.0 - 90.0
Date Manufactured: 1884
Date Discontinued: 1974
Date Labeled: 1972

Product Name: A Grade Asbestos Tubing
Product Type: Tubing (Braided)
Fiber Type: Chrysotile
% Fiber by Weight: 85.0 - 90.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: AERTITE
Product Type: Finishes
Fiber Type: Chrysotile
% Fiber by Weight: 14.7 - 18.0
Date Manufactured: 1920
Date Discontinued: 1982
Date Labeled: None

Product Name: Air-Cell (Generic name for ASBESTOCEL)
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: 52.6 - 98.0
Date Manufactured: 1908
Date Discontinued: 1915 - 1920
Date Labeled: None

Product Name: ALBASEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 40.0
Date Manufactured: 1953
Date Discontinued: 1975
Date Labeled: None

Product Name: ANTI-SWEAT
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: up to 72.0
Date Manufactured: 1903
Date Discontinued: 1965
Date Labeled: None

Product Name: ARMATURO Asbestos Paper (Insulating Jacket)
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 84.0 - 97.0
Date Manufactured: 1920 - 1924
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: ARP-40 (Insulating Jacket)
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 60.0
Date Manufactured: 1963
Date Discontinued: 1971 - 1975
Date Labeled: Unknown

Product Name: Asbestica Tape
Product Type: Tape
Fiber Type: Chrysotile
% Fiber by Weight: 80.0 - 85.0
Date Manufactured: 1948
Date Discontinued: 1982
Date Labeled:

Product Name: ASBESTILE Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 8.2 - 21.8
Date Manufactured: 1930
Date Discontinued: 1982

Date Labeled: None

Product Name: ASBESTOCEL
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: 52.6 - 98.0
Date Manufactured: 1902
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: ASBESTOCEL Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 52.6 - 98.0
Date Manufactured: 1902
Date Discontinued: 1924 - 1931
Date Labeled: None

Product Name: ASBESTOCITE
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 33.0 - 45.0
Date Manufactured: 1927
Date Discontinued: 1975
Date Labeled: 1970

Product Name: ASBESTOMENT
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 6.0
Date Manufactured: 1923
Date Discontinued: 1970
Date Labeled: None

Product Name: Asbestos Air Chamber Covering
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not Available
Date Manufactured: 1880
Date Discontinued: 1893 - 1895
Date Labeled: None

Product Name: Asbestos and Hair Felt Removable Covering
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available

Date Manufactured: 1891
Date Discontinued: 1896 - 1900
Date Labeled: None

Product Name: Asbestos and Hair Woven Felt (Originally called
Asbestos and Hair Lagging)
Product Type: Paper, Felt, Blankets
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1884
Date Discontinued: 1890
Date Labeled: None

Product Name: Asbestos Combination Spiral Pipe Insulation
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1931
Date Discontinued: 1934 - 1936
Date Labeled: None

Product Name: Asbestos Corded Sheathing
Product Type: Paper, Felt, Blankets
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1887
Date Discontinued: 1896 - 1900
Date Labeled: None

Product Name: ASBESTOS EBONY
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 47.0 - 75.0
Date Manufactured: 1911
Date Discontinued: 1984 - 1985
Date Labeled:

Product Name: Asbestos Felt
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1890
Date Discontinued: 1890 - 1891
Date Labeled: None

Product Name: Asbestos FIRE FELT

Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: 61.0 - 98.0
Date Manufactured: 1891
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: Asbestos FIRE FELT
Product Type: Sheet/ Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1903
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: Asbestos Fire Felt Covering
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: 41.0 - 61.5
Date Manufactured: 1891
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: Asbestos Fire Felt Locomotive Lagging
Product Type: Sheet/ Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1900
Date Discontinued: 1903 - 1906
Date Labeled: None

Product Name: Asbestos FIRETARD
Product Type: Blankets
Fiber Type: Chrysotile
% Fiber by Weight: 88.9 - 92.0
Date Manufactured: 1931
Date Discontinued: 1980
Date Labeled: 1970

Product Name: Asbestos Hair Felt Covering
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1911 - 1915
Date Labeled: None

Product Name: Asbestos Jelly Rolls
Product Type: Blankets
Fiber Type: Chrysotile
% Fiber by Weight: 90.0
Date Manufactured: 1930
Date Discontinued: 1968
Date Labeled: None

Product Name: Asbestos Lining and Deadening Felt
Product Type: Paper, Felt, Blankets
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1900
Date Discontinued: 1903 - 1906
Date Labeled: None

Product Name: Asbestos Lining Felt
Product Type: Paper, Felt, Blankets
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1871 - 1877
Date Discontinued: 1900
Date Labeled: None

Product Name: Asbestos Locomotive Lagging (Originally called
Asbestos Lagging)
Product Type: Paper, Felt, Blankets
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1884
Date Discontinued: 1900
Date Labeled: None

Product Name: Asbestos Millboard (In Hard, Medium and Soft Grades)
Product Type: Sheet
Fiber Type:
% Fiber by Weight: Not available
Date Manufactured: 1896
Date Discontinued: 1910
Date Labeled: None

Product Name: Asbestos Millboard (Originally called Asbestos
Board)
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: Not available

Date Manufactured: 1871 - 1875
Date Discontinued: 1896
Date Labeled: None

Product Name: Asbestos Molded Blocks
Product Type: Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1900
Date Discontinued: 1915 - 1920
Date Labeled: None

Product Name: Asbestos Moulded Sectional Covering
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1891
Date Discontinued: 1915 - 1920
Date Labeled: None

Product Name: Asbestos "Navy Brand" FIRE FELT
Product Type: Sheet/Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1902
Date Discontinued: 1915 - 1925
Date Labeled: None

Product Name: Asbestos "Navy Brand" FIRE FELT Covering
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1902
Date Discontinued: 1915 - 1925
Date Labeled: None

Product Name: Asbestos Pipe Blanket
Product Type: Blankets
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 98.0 - 99.0
Date Manufactured: 1898
Date Discontinued: 1960
Date Labeled: None

Product Name: Asbestos Roll FIRE FELT
Product Type: Felt, Blankets

Fiber Type: Chrysotile
% Fiber by Weight: 91.0 - 99.0
Date Manufactured: 1891
Date Discontinued: 1980
Date Labeled: 1970

Product Name: Asbestos Sectional Covering
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1888
Date Discontinued: 1890
Date Labeled: None

Product Name: Asbestos Sheathing
Product Type: Sheet
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not Available
Date Manufactured: 1869
Date Discontinued:
Date Labeled:

Product Name: Asbestos Sponge Hair Felt
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1893
Date Discontinued: 1900 - 1903
Date Labeled: None

Product Name: Asbestos Sponge Felt
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: 68.0 - 96.2
Date Manufactured: 1890
Date Discontinued: 1961
Date Labeled: None

Product Name: Asbestos Sponge (Felted, Sectional, Molded)
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1890
Date Discontinued: 1953 - 1959
Date Labeled: None

Product Name: Asbestos Steam Packing
Product Type: Rope
Fiber Type:
% Fiber by Weight: Not available
Date Manufactured: 1871
Date Discontinued:
Date Labeled:

Product Name: Asbestos Turbine Blanket
Product Type: Paper, Felt, Blankets
Fiber Type: Amosite
% Fiber by Weight: 98.0 - 99.0
Date Manufactured: 1951
Date Discontinued: 1977
Date Labeled: 1971

Product Name: Besto-Tak
Product Type: Tape
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: 75.0 - 100.0
Date Manufactured: 1959 - 1963
Date Discontinued: 1975 - 1978
Date Labeled: 1972

Product Name: Body Sealer
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 37.0 - 41.0
Date Manufactured: 1954
Date Discontinued: 1975
Date Labeled: None

Product Name: BRANCHTITE
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 50.0
Date Manufactured: 1954
Date Discontinued: 1974
Date Labeled: None

Product Name: C Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 60.2 - 67.6
Date Manufactured: 1918
Date Discontinued: 1980
Date Labeled: 1970

Product Name: CEILINITE
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 98.0
Date Manufactured: 1910
Date Discontinued: 1973
Date Labeled: 1970

Product Name: CELLAMITE
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight:
Date Manufactured: 1939 - 1947
Date Discontinued: 1959 - 1963
Date Labeled: None

Product Name: CHAMPION Sectional Covering
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: up to 59.0
Date Manufactured:
Date Discontinued:
Date Labeled:

Product Name: Commercial Grade (566, 702, 733, 787)
Product Type: Rope
Fiber Type: Chrysotile
% Fiber by Weight: 75.0 - 80.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: Commercial Grade Asbestos Cloth
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 75.0 - 80.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: Commercial Grade Asbestos Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 95.0
Date Manufactured: 1929

Date Discontinued: 1980
Date Labeled: 1970

Product Name: Commercial Grade Asbestos Tape
Product Type: Tape
Fiber Type: Chrysotile
% Fiber by Weight: 75.0 - 80.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1970

Product Name: Commercial Grade Asbestos Tubing
Product Type: Tubing (Braided)
Fiber Type: Chrysotile
% Fiber by Weight: 75.0 - 80.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled: 1972

Product Name: D.C. FLEXSTONE
Product Type: Felt
Fiber Type: Chrysotile
% Fiber by Weight: 30.0 - 85.0
Date Manufactured: 1929
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: DEKERAN
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 29.6 - 34.6
Date Manufactured: 1963
Date Discontinued: 1975
Date Labeled: 1970

Product Name: DOUBLEX Asbestos Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 80.0
Date Manufactured: 1936
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: DUXSEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile

% Fiber by Weight: 52.5 - 69.0
Date Manufactured: 1934
Date Discontinued: 1982 - Asbestos Content
Date Labeled: None

Product Name: Engineers Insulating Tape
Product Type: Blankets
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1926
Date Discontinued: 1956
Date Labeled: None

Product Name: EQUALITY
Product Type: Sheet/Block
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1908 - 1911
Date Labeled: None

Product Name: EUREKA Covering
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1903
Date Discontinued: 1915 - 1920
Date Labeled: None

Product Name: EXPRESS Covering (See Wool Felt Sectional Pipe
Insulation)
Product Type: Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: up to 59.0
Date Manufactured:
Date Discontinued:
Date Labeled:

Product Name: FIBROFIL
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 30.0
Date Manufactured: 1940
Date Discontinued: 1969
Date Labeled: None

Product Name: FIBROID Asbestos Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 95.0
Date Manufactured: 1911
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: Fibrous Adhesive
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 14.0 - 20.0
Date Manufactured: 1887
Date Discontinued: 1981 - Asbestos Content
Date Labeled: None

Product Name: FIL-INSUL
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 70.0 - 80.0
Date Manufactured: 1930
Date Discontinued: 1969
Date Labeled: None

Product Name: Fine Corrugated ASBESTOCEL
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile
% Fiber by Weight: 52.6 - 98.0
Date Manufactured: 1923
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: FIREITE Furnace Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 1.8 - 3.7
Date Manufactured: 1924
Date Discontinued: 1973
Date Labeled: None

Product Name: Flat TRANSITE
Product Type: Board
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 22.0 - 69.2
Date Manufactured: 1907
Date Discontinued: 1985
Date Labeled: 1970

Product Name: FLEXBOARD
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 33.0 - 50.0
Date Manufactured: 1927
Date Discontinued: 1983
Date Labeled: 1970

Product Name: Flexible MIN-K
Product Type: Sheet
Fiber Type: Amosite
% Fiber by Weight: 20.0
Date Manufactured: 1963
Date Discontinued: 1975
Date Labeled: 1970

Product Name: Heat Treating Cement
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 1.0
Date Manufactured: 1954
Date Discontinued: 1973
Date Labeled: None

Product Name: High Strength FIBROID Asbestos Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 85.7 - 88.0
Date Manufactured: 1930
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: High Temperature Flexible MIN-K Blankets
Product Type: Blankets
Fiber Type: Amosite
% Fiber by Weight: 20.0
Date Manufactured: 1963
Date Discontinued: 1974
Date Labeled: 1970

Product Name: High Temperature Insulation
Product Type: Block, Pipe Covering
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1924

Date Discontinued: 1926
Date Labeled: None

Product Name: HF-NAVASEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 27.0
Date Manufactured: 1955
Date Discontinued: 1975
Date Labeled: None

Product Name: H-NAVASEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 48.0
Date Manufactured: 1951
Date Discontinued: 1975
Date Labeled: None

Product Name: INDENTED
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1924
Date Labeled: None

Product Name: Industrial Vent Caulking
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 53.0
Date Manufactured: 1957
Date Discontinued: 1974
Date Labeled: None

Product Name: INSULKOTE ET
Product Type: Finishes
Fiber Type: Chrysotile
% Fiber by Weight: 11.7 - 15.5
Date Manufactured: 1929
Date Discontinued: 1982
Date Labeled: None

Product Name: INSULKOTE SG
Product Type: Finishes
Fiber Type: Chrysotile

% Fiber by Weight: 14.7 - 16.7
Date Manufactured: 1929
Date Discontinued: 1982
Date Labeled: None

Product Name: INSULKOTE ST
Product Type: Finishes
Fiber Type: Chrysotile
% Fiber by Weight: 6.2 - 21.0
Date Manufactured: 1929
Date Discontinued: 1982
Date Labeled: None

Product Name: LAPTITE
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 10.0 - 16.9
Date Manufactured: 1938
Date Discontinued: 1954
Date Labeled: None

Product Name: Long Fiber Asbestos Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 88.0 - 98.5
Date Manufactured: 1930
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: MAGNO
Product Type: Sheet/Block
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1908 - 1911
Date Labeled: None

Product Name: MARIMET 45
Product Type: Board
Fiber Type: Amosite
% Fiber by Weight: 43.0 - 44.0
Date Manufactured: 1970
Date Discontinued: 1985
Date Labeled: 1970

Product Name: MARINITE

Product Type: Board
Fiber Type: Amosite and/or Chrysotile
% Fiber by Weight: 40.0 - 50.0
Date Manufactured: 1936
Date Discontinued: 1940 - Asbestos Content
Date Labeled: 1970

Product Name: MARINITE 23
Product Type: Board
Fiber Type: Amosite
% Fiber by Weight: 25.0 - 27.0
Date Manufactured: 1955
Date Discontinued: 1975 - Asbestos Content
Date Labeled: 1970

Product Name: MARINITE 30
Product Type: Board
Fiber Type: Amosite
% Fiber by Weight: 49.7 - 50.0
Date Manufactured: 1949
Date Discontinued: 1970
Date Labeled: None

Product Name: MARINITE 36
Product Type: Board
Fiber Type: Amosite and/or Chrysotile
% Fiber by Weight: 29.7 - 57.0
Date Manufactured: 1955
Date Discontinued: 1975 - Asbestos Content
Date Labeled: 1970

Product Name: MARINITE 65
Product Type: Board
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 55.5 - 70.0
Date Manufactured: 1955
Date Discontinued: 1975 - Asbestos Content
Date Labeled: 1970

Product Name: Marine Acoustical Unit
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 33.0
Date Manufactured: 1941
Date Discontinued: 1975-78
Date Labeled: 1970

Product Name: Marine Veneer
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 31.0 - 51.0
Date Manufactured: 1938
Date Discontinued: 1985 - Asbestos content
Date Labeled: 1970

Product Name: Metal Veneered MARINITE
Product Type: Board
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 15.0 - 40.0
Date Manufactured: 1951
Date Discontinued: 1973
Date Labeled: 1970

Product Name: METAL-ON
Product Type: Jackets
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.0 - 14.3
Date Manufactured: 1959
Date Discontinued: 1974
Date Labeled: 1966

Product Name: MICROBESTOS
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 40.0 - 97.0
Date Manufactured: 1959
Date Discontinued: Approximately 1980
Date Labeled: None

Product Name: MIN-K 500
Product Type: Sheet/Block
Fiber Type: Amosite
% Fiber by Weight: 5.0
Date Manufactured: 1958
Date Discontinued: 1977
Date Labeled: 1970

Product Name: MIN-K 1301
Product Type: Sheet/Block
Fiber Type: Amosite
% Fiber by Weight: 5.0 - 12.0
Date Manufactured: 1958
Date Discontinued: 1975

Date Labeled: 1970

Product Name: MIN-K 2000
Product Type: Sheet/Block
Fiber Type: Amosite
% Fiber by Weight: 5.0 - 12.0
Date Manufactured: 1959
Date Discontinued: 1975
Date Labeled: 1970

Product Name: MIN-KLAD
Product Type: Blankets
Fiber Type: Amosite
% Fiber by Weight: 5.0
Date Manufactured: 1958
Date Discontinued: 1972
Date Labeled: 1970

Product Name: MOLTEN METAL MARINITE
Product Type: Board
Fiber Type: Amosite
% Fiber by Weight: 38.0 - 40.0
Date Manufactured: 1962
Date Discontinued: 1980
Date Labeled: 1970

Product Name: MX-3808 Asbestos Filler
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 52.0 - 55.0
Date Manufactured: 1951
Date Discontinued: 1970
Date Labeled: 1965

Product Name: MX 4851 (Aluminized) Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 75.0
Date Manufactured:
Date Discontinued:
Date Labeled: None

Product Name: MX 5184 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 65.0

Date Manufactured: 1971
Date Discontinued:
Date Labeled: None

Product Name: MX 5215 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 69.0
Date Manufactured: 1971
Date Discontinued:
Date Labeled: None

Product Name: MX 5243 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 65.0
Date Manufactured:
Date Discontinued:
Date Labeled: None

Product Name: MX 5385 Cloth (Coated)
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 50.0
Date Manufactured:
Date Discontinued:
Date Labeled: None

Product Name: NATIONAL Sectional Covering
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1891
Date Discontinued: 1900 - 1903
Date Labeled: None

Product Name: Navy 450 Cement
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: 13.5 - 38.5
Date Manufactured: 1941
Date Discontinued: Not Active about 1972
Date Labeled: 1965

Product Name: NIAGRITE
Product Type: Felt, Blankets

Fiber Type: Chrysotile
% Fiber by Weight: 98.0
Date Manufactured: 1911
Date Discontinued: 1973
Date Labeled: 1970

Product Name: NODRSEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 59.4
Date Manufactured: 1947
Date Discontinued: 1975
Date Labeled: None

Product Name: Non-Burn Asbestos Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 95.0 - 97.0
Date Manufactured: 1900
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: PALLITE
Product Type: Board
Fiber Type: Amosite
% Fiber by Weight: 50.0
Date Manufactured: 1937
Date Discontinued: 1973
Date Labeled: 1970

Product Name: PERFECTION Pipe Covering
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1903
Date Discontinued: 1908 - 1911
Date Labeled: None

Product Name: REEFERITE
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 29.0 - 37.0
Date Manufactured: 1950
Date Discontinued: 1974
Date Labeled: 1970

Product Name: Safety Blow-Off Covering
Product Type: Pipe Insulation
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1903
Date Discontinued: 1915 - 1920
Date Labeled: None

Product Name: Silicated THERMOBESTOS
Product Type: Sheet/Block, Pipe Covering
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.0 - 14.3
Date Manufactured: 1966
Date Discontinued: 1974
Date Labeled: 1966

Product Name: SONITE
Product Type: Block
Fiber Type: Amosite
% Fiber by Weight: 5.0
Date Manufactured: 1969
Date Discontinued: 1975
Date Labeled: 1970

Product Name: Standard Flexible MIN-K Blankets
Product Type: Paper, Felt, Blankets
Fiber Type: Amosite
% Fiber by Weight: up to 20.0
Date Manufactured: 1963
Date Discontinued: 1974
Date Labeled: 1970

Product Name: STANDARD Sectional Covering (See Wool Felt Sectional
Pipe Insulation)
Product Type: Pipe Insulation
Fiber Type:
% Fiber by Weight: up to 59.0
Date Manufactured:
Date Discontinued:
Date Labeled:

Product Name: Stove Putty
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 15.0 - 25.0
Date Manufactured: 1934
Date Discontinued: 1971

Date Labeled: None

Product Name: Submarine Bulkhead
Product Type: Board
Fiber Type:
% Fiber by Weight: Not available
Date Manufactured: 1963
Date Discontinued: 1967
Date Labeled: None

Product Name: Super FIRE FELT
Product Type: Sheet/Block, Paper, Felt, Blanket
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 40.0 - 60.0
Date Manufactured: 1925
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: SUPEREX 1900
Product Type: Sheet/Block
Fiber Type: Chrysotile and/or Amosite
Fiber by Weight: 10.0 - 12.0
Date Manufactured: 1922
Date Discontinued: 1973
Date Labeled: 1965

Product Name: SUPEREX 2000
Product Type: Sheet/Block
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 9.0 - 12.0
Date Manufactured: 1971
Date Discontinued: 1972 - Asbestos content
Date Labeled: 1971

Product Name: SUPEREX Cement
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 8.4 - 15.0
Date Manufactured: 1922
Date Discontinued: 1973
Date Labeled: 1965

Product Name: Superex Cement for Navy
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.0 - 20.0

Date Manufactured: 1941
Date Discontinued: 1957
Date Labeled: 1965

Product Name: SUPEREX-M
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 8.4 - 15.0
Date Manufactured: 1930
Date Discontinued: 1971
Date Labeled: 1965

Product Name: SUPEREX-SG
Product Type: Sheet/Block
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 10.0
Date Manufactured: 1969
Date Discontinued: 1973
Date Labeled: 1966

Product Name: THERM-O-BESTOS
Product Type: Sheet/Block, Pipe Insulation
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: Not available
Date Manufactured: 1937
Date Discontinued: 1947
Date Labeled: None

Product Name: THERMOBESTOS
Product Type: Block, Pipe Covering
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.0 - 14.3
Date Manufactured: 1950
Date Discontinued: 1974
Date Labeled: 1964

Product Name: Thermobestos Cement
Product Type: Cement
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 7.0 - 14.3
Date Manufactured: 1959
Date Discontinued: 1969
Date Labeled: None

Product Name: THERMO FELT
Product Type: Felt

Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1931
Date Discontinued:
Date Labeled:

Product Name: Thermo FIRE FELT
Product Type: Sheet/Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1936
Date Labeled: None

Product Name: THERMOMAT
Product Type: Felt, Tape
Fiber Type: Amosite and/or Chrysotile
% Fiber by Weight: 49.6 - 96.0
Date Manufactured: 1931
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: Thermomix 700
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1966
Date Discontinued: 1970
Date Labeled: 1970

Product Name: Thermomix 720
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1966
Date Discontinued: 1970
Date Labeled: 1970

Product Name: Thermomix 770
Product Type: Cement
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1966
Date Discontinued: 1970
Date Labeled: 1970

Product Name: Thermomix 810
Product Type: Cement
Fiber Type: Crocidolite
% Fiber by Weight: Not available
Date Manufactured: 1966
Date Discontinued: 1970
Date Labeled: 1970

Product Name: Thermo-Pac 500 (Twisted Asbestos Rope Packing)
Product Type: Rope
Fiber Type: Chrysotile
% Fiber by Weight: 75.0 - 80.0
Date Manufactured: 1917
Date Discontinued: 1983
Date Labeled: 1972

Product Name: Thermo-Pac 750
Product Type: Rope
Fiber Type: Chrysotile
% Fiber by Weight: 95.0 - 98.0
Date Manufactured: 1969
Date Discontinued: 1982
Date Labeled: 1972

Product Name: Thermo-Pac 1000
Product Type: Rope
Fiber Type: Chrysotile
% Fiber by Weight: 98.0 - 100.0
Date Manufactured: 1917
Date Discontinued: 1983
Date Labeled: 1972

Product Name: Thermo-Pac Blue
Product Type: Rope
Fiber Type: Crocidolite
% Fiber by Weight: 100.0
Date Manufactured: 1917
Date Discontinued: 1973
Date Labeled: 1972

Product Name: THERMOTAPE
Product Type: Tape
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 75.0 - 80.0
Date Manufactured: 1951
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: Thermo-Wrap
Product Type: Sheet/Block, Blankets
Fiber Type: Unknown (Probably Chrysotile)
% Fiber by Weight: Not available
Date Manufactured: 1939-1950
Date Discontinued: 1971-1975
Date Labeled:

Product Name: THERMOWRAP
Product Type: Blankets
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 90.0
Date Manufactured: 1951
Date Discontinued: 1971 - 1975
Date Labeled:

Product Name: TRANOSEAL (TRANOLSEAL)
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 38.0 - 47.1
Date Manufactured: 1947
Date Discontinued: 1974
Date Labeled: None

Product Name: TRANSITE Acoustical Panel
Product Type: Board
Fiber Type: Chrysotile
% Fiber by Weight: 33.0
Date Manufactured: 1937
Date Discontinued: 1974
Date Labeled: 1970

Product Name: TRANSITE Core Plate
Product Type: Board
Fiber Type: Chrysotile and/or Amosite
% Fiber by Weight: 52.0 - 71.0
Date Manufactured: 1938
Date Discontinued: 1985
Date Labeled: 1970

Product Name: Type A Asbestos Millboard
Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 95.7 - 99.0
Date Manufactured: 1918

Date Discontinued: 1980
Date Labeled: 1970

Product Name: Type T NODRSEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 50.0 - 55.0
Date Manufactured: 1954
Date Discontinued: 1975
Date Labeled: None

Product Name: Underwriter's Grade Asbestos Cloth
Product Type: Cloth
Fiber Type: Chrysotile
% Fiber by Weight: 80.0 - 85.0
Date Manufactured: 1884
Date Discontinued: 1974
Date Labeled:

Product Name: Underwriter's Grade Asbestos Tape
Product Type: Tape
Fiber Type: Chrysotile
% Fiber by Weight: 80.0 - 85.0
Date Manufactured: 1884
Date Discontinued: 1983
Date Labeled:

Product Name: Underwriter's Grade Asbestos Tubing
Product Type: Tubing (Braided)
Fiber Type: Chrysotile
% Fiber by Weight: 80.0 - 85.0
Date Manufactured: 1884
Date Discontinued: 1982
Date Labeled:

Product Name: UNISEAL
Product Type: Sealing Compound
Fiber Type: Chrysotile
% Fiber by Weight: 53.0 - 59.0
Date Manufactured: 1947
Date Discontinued: 1975
Date Labeled: None

Product Name: Unspecified Grade, Originally Offered
Product Type: Cloth
Fiber Type: Chrysotile

% Fiber by Weight:
Date Manufactured: 1871 - 1875
Date Discontinued:
Date Labeled:

Product Name: Veneered MARINITE
Product Type: Board
Fiber Type: Amosite and/or Chrysotile
% Fiber by Weight: 16.0 - 41.0
Date Manufactured: 1955
Date Discontinued: 1975 - Asbestos Content
Date Labeled: 1970

Product Name: VITRIBESTOS
Product Type: Sheet/Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1959
Date Labeled: None

Product Name: Vitro FIRE FELT
Product Type: Sheet/Block
Fiber Type: Chrysotile
% Fiber by Weight: Not available
Date Manufactured: 1908
Date Discontinued: 1936
Date Labeled: None

Product Name: Welding Paper
Product Type: Paper
Fiber Type: Chrysotile
% Fiber by Weight: 99.0
Date Manufactured: 1930
Date Discontinued: Approximately 1980
Date Labeled: 1970

Product Name: White Surface Asbestos Jacket
Product Type: Jacket
Fiber Type: Chrysotile
% Fiber by Weight: 82.0
Date Manufactured: 1931
Date Discontinued: 1971
Date Labeled: None

Product Name: XXX Asbestos Millboard

Product Type: Sheet
Fiber Type: Chrysotile
% Fiber by Weight: 67.0 - 75.2
Date Manufactured: 1918
Date Discontinued: 1980
Date Labeled: 1970

Radiator Trap

Rag-Felt Roofings (Ready-to-Lay)

Regal Roof Coating

Slatekote Brand Roofing

Slip-Type Expander Ring (Air Brake)

Standard Hair Felt (Refrigerator Car Insulation)

Steam Trap

Union Washers

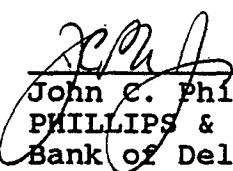
Volume Meter

Wool Felt Sectional Pipe Insulation

Zero Sectional Pipe Insulation

See also Response to Interrogatory Nos. 1 and 3.

Respectfully submitted,



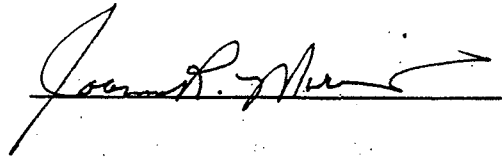
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AFFIDAVIT

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

Further affiant sayeth naught.



Subscribed and sworn to
before me this 21 day of
NOVEMBER, 1989.

Jerry Fenton
NOTARY PUBLIC

My Commission Expires May 14, 1994

AFFIDAVIT OF MAILING

GENERAL SERVICE LIST

The undersigned, an employee of Phillips & Snyder, P.A., 300 Bank of Delaware Center, P.O. Box 90, Wilmington, DE 19899, hereby swears that on November 27, 1989, she deposited in the U.S. Mail or hand-delivered the attached document(s) addressed to:

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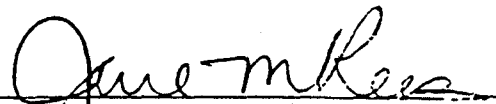
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