250X

ENVIRONMENTAL PROTECTION AGENCY

PUBLIC HEARING

ON

NATIONAL EMISSIONS STANDARDS

FOR HAZARDOUS AIR POLLUTANTS

at

Room 1500

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P r e s i d i n g :

WILLIAM H. MEGONNELL
Director
Division of Stationary Source Enforcement
Environmental Protection Agency
5600 Fishers Lane
Rockville, Maryland 20852

Zimmer Reporting Service
150 Nassau Street
New York, N. Y. 10038
Barclay 7-2314

INDEX OF PARTICIPANTS

ENVIRONMENTAL PROTECTION AGENCY:

THOMAS B. YOST, ESQ.
Chief, Legal Procedures Branch
Division of Stationary Source Enforcement
Durham, North Caroline

MR. DON R. GOODWIN
Director
Division of Standards Development
Durham, North Caroline

MR. DALE M. SLAUGHTER
Chief
Hazardous Pollutants Branch
Durham, North Caroline

MR. JACK E. THOMPSON
Deputy Director
NERC--RTP
Durham, North Caroline

DR. LAWRENCE A. PLUMLEE
Medical Science Advisor
Office of Research
Washington, D.C.

PARTICIPANTS:

EDWARD F. WILSON (Submitted for the Record)
Assistant Health Commissioner
City of Philadelphia

LEONARD J. GOLDWATER, M.D.
(Submitted for the Record)

DR. KARL V. LINDELL
Chairman
Environmental and Occupational Health Committee
Quebec Asbestos Mining Association

PARTICIPANTS (Continued)

MR. R. C. SUTTER
Vice President
Diamond Shamrock Chemical Company

MR. W. A. OPPOLD
Vice President, Manufacturing
Chemicals Group
Olin Corporation
Stamford, Connecticut

MAC ROY GASQUE, M.D.
Corporate Medical Director
Olin Corporation
Stamford, Connecticut

MR. D. L. EMERY
Production Superintendent
Chlorine Plant
Aluminum Company of America
Point Comfort, Texas

MR. MORGAN NORTH
Morgan North Mine Management
1050 Parker Street
Berkeley, California

MR. ROBERT E. WIDING
Vice President of Manufacturing
Industrial Chemical Division
PPG Industries, Inc.

MR. EDGAR COMANT
Manager
Environmental Control
Stauffer Chemical Company

MR. EDMUND J. LAUBUSCH
Technical Manager
The Chlorine Institute, Inc.

PARTICIPANTS (Continued):

MR. DAVID S. CAHN
Chairman
Ad Hoc Committee for Machine
Applied Portland Cement Plaster

MR. BENTON B. BAILEY
Vice President and Manager of Operations
New Idria Mining and Chemical Company
San Jose, California

MR. MARTIN B. POWERS
Assistant to the President
Brush Wellman, Inc.
Cleveland, Ohio

MR. EDMUND M. VELTEN
Vice President
Kawecki Berylco Industries, Inc.
Reading, Pennsylvania

MR. WILLIAM C. ROSSACK
Coordinator
Safety and Industrial Hygiene
Lockheed Missiles & Space Company, Inc.
Sunnyvale, California

DR. DONALD J. SIBBETT
Vice President
Geomet, Incorporated
Pomona, California

DR. SELINA BENDIX
President, East Bay Chapter
Oceanic Society
Santa Monica, California

MR. FRANK H. ZIMMERMAN
Asbestos Information Association/North America
325 Delaware Avenue
Buffalo, New York

PARTICIPANTS (Continued):

DR. HANS WEILL
Professor of Medicine
Tulane University School of Medicine

DR. THOMAS J. SMITH, on behalf of
MR. K. W. NELSON
Director, Department of Environmental Sciences
American Smelting and Refining Company
Salt Lake City, Utah

MR. B. R. WILLIAMS
Vice President
Construction Products Division
W. R. Grace & Company

MR. ROBERT J. TUCKER
Sales Manager
Pacific Asbestos Corporation
Copperopolis, California

MR. JOHN F. HUNTER
Corporate Manager of Environmental Control
BASF Wyandotte Corporation
Wyandotte, Michigan

DR. STANLEY ROKAW
Tuberculosis and Respiratory Disease Association
of California
Los Angeles, California

DR. JOHN D. ALLEN
Air Quality Coalition
Puget Sound Air Quality Control Region
Seattle, Washington

MR. ROBERT G. LUNCHE
Chief Deputy Air Pollution Control Officer
Los Angeles County Air Pollution Control District

MR. WARREN DARRELL
Director of Manufacturing
Industrial Products Division
GAF Corporation

PARTICIPANTS (Continued):

MR. R. POWER FRASER
Vice President
GAF Corporation

MR. P. S. BETTOLI
Technical Director
Building, Industrial & Floor Products Division
GAF Corporation

MR. SILVAN B. LUTKEWITTE, JR.
Production Specialist
Monsanto Industrial Chemical Company

MRS. CECILE ROSENTHAL
Conservation Chairman
Angeles Chapter, Sierra Club

MR. LAWRENCE F. WILLIAMS
Executive Director
Oregon Environmental Council

MR. AL KLASCIUS
Southern California Section
American Industrial Hygiene Association

DR. HECTOR ELKJER
Head, Occupational Health
California Department of Public Health

MR. MEIER SCHNEIDER
Industrial Hygiene Engineer
California Department of Public Health

OSCAR J. BALCHUM, M.D.
Hastings Professor of Medicine
University of Southern California School of Medicine

MR. HARRY L. TATE
Arizonans in Defense of the Environment, Inc.

MR. ARTHUR L. HARVEY
Chairman, National Air Committee
The Izaak Walton League of America

MR. MEGONNELL: Mr. Warren Darrell and Mr. P. S. Bettoli of GAF Corporation.

STATEMENT BY

MR. WARREN DARRELL

DIRECTOR OF MANUFACTURING

INDUSTRIAL PRODUCTS DIVISION

GAF CORPORATION

MR. DARRELL: Mr. Megonnell, I would like, in the interest of saving time, to request that the written statement, of which you have a copy, by Mr. Fraser, Vice President of GAF, be entered into the record, and I would like to request that although I have a prepared statement, there will be some departures from the exact text.

MR. MEGONNELL: All right, fine. We will reproduce Mr. Fraser's comments.

MR. DARRELL: Thank you.

My name is Warren Darrell. I am Director of Manufacturing of the Industrial Products Division of GAF Corporation. I have responsibility for the manufacturing operations in fifteen of the GAF plants including five mineral product mining and milling facilities, a paper plant and several textile plants, and an asbestos mining and milling

facility in Hyde Park, Vermont.

Since 1946, I have held supervisory positions in asbestos using manufacturing plants and have also been associated with asbestos mining operations since 1961.

I am here to discuss the proposed emission control standards for asbestos, as well as the results of certain studies dealing with the effects of asbestos on the health of the general public.

As you know, the Federal Clean Air Act of 1970 and the Hazardous Substances Section of said Act authorizes the promulgation of these proposed standards. This Act was passed to protect the health of the general public from certain hazardous elements found in the ambient air. Asbestos, mercury and beryllium were described as hazardous substances during the congressional hearings on said Act.

I am going to skip a piece here.

For purposes of this discussion, it is assumed that there is a need to regulate asbestos dust based upon the medical findings. We request, however, that EPA standards regulating asbestos emissions be based upon all the facts that are presently available to protect the public from hazardous quantities of said material, but that such standards not be so drawn so as to protect against risks

that do not exist and not be so stringent that they cannot be complied with on a technological basis.

These proposed standards in question encompass the following:

The prohibition of emissions from stationary sources except from specified filter media; and the prohibition of visible emissions from dumps, storage areas, external conveyers and tailings dumps. I am prepared to discuss these areas in light of our experience with asbestos.

Emissions From Stationary Sources:

As Mr. Fraser stated, GAF operates an asbestos mine and mill in Vermont. This operation is a key GAF plant. It produces chrysotile fiber for our domestic and foreign customers and also supplies fiber for our own manufacturing of building products. This mine and mill is a typical chrysotile asbestos mine and is representative of some chrysotile asbestos mines in the United States and in Canada.

We have made a preliminary study of this mine and mill in regard to the proposals. As a result of the study, we have concluded that there is technical knowledge available to comply with the filter media requirements. As a matter of fact, GAF has, for the last several years, been

utilizing collectors on certain dryers with success in reducing fiber emission significantly. However, such compliance can be achieved only at great cost to the company. We estimate that it will cost GAF in excess of $800,000 to comply with the proposed standard at the Vermont facility, and this dollar figure applies only to those standards that we know we can comply with or could technologically comply with.

I would just like to digress, in that the dollar figure of itself is not of great importance, except that, as I will point out later, there are certain standards that we feel we cannot comply with, have no way of knowing how to comply with, and the expenditure of $800,000 will be wasted if certain of the standards as proposed go into effect.

Visible Emissions:

On the other hand, we have been unable to conceive of a method to cope with and measure visible emissions, as they are presently defined in the standards, especially from tailings piles. This is based upon a search throughout the industry and known technology, as well as certain governmental surveys which conclude that emissions from tailings piles cannot be reduced to zero with the present

state of technology.

We are, however, continuing to increase our knowledge of tailings and the emissions therefrom. As you know, tailings can be piled several hundred feet high and cover large areas. We are investigating the possible stabilization of tailings piles with vegetation, but these investigations are at a preliminary stage and they could continue for many years.

As an aside, these have also been tried by others with varying degrees of success and lack of success in covering asbestos tailings piles with vegetation. It does not seem possible that we can reduce visible emissions to the prescribed limit of "No visible emissions" within the two year waiver period provided in the regulations.

However, a threshold question as to the treatment of tailings dumps relates to whether in fact they constitute a health hazard. There are relatively insignificant amounts of asbestos in emissions from our tailings. I would say that this is an observation. We run into the same measurement problems you people run into. However, the free asbestos fiber in our tailings constitutes less than one-half of one percent of the material in a tailings dump. The remainder consists mostly of serpentine rock. This

minute percentage of free asbestos is the result of a GAF program in which new equipment was installed in Vermont permitting greater extraction of fiber from the host rock, which host rock eventually becomes the tailings material.

Gentlemen, that is the crux of our business, getting the fiber out of the rock in the first place. That is what we are trying to do.

MR. MEGONNELL: The more you get, the happier you are, I'm sure.

MR. DARRELL: Yes, or have been until some of the comments have been made (laughter).

Furthermore, the forces of nature further reduce emissions of asbestos fiber tailings. The consolidation of the tailings themselves, rain, or a significant snow cover during the long Vermont winters and the entrapment of fibers in the porous rock of the tailings serve to reduce the possibility of emissions.

Therefore, if one takes into consideration the minute percentage of fiber in our tailings, the reduction of emissions due to natural phenomena and the dilution of emissions, one could conclude that any emissions that do occur are not of such significance to constitute a health hazard to the general public.

We seriously question how the minimum amount of asbestos fiber released from our tailings piles could be hazardous to the health of the surrounding community adjacent to our mine.

Page 31 of the report published by the National Academy of Sciences, entitled, "Asbestos -- The Need For and Feasibility of Air Pollution Controls," concludes as follows:

"Industrial experience indicates that <u>there is no likelihood of significant asbestosis in non-occupational exposures.</u>"

And further states:

"At present, there is no evidence that the small numbers of fibers found in most members of the general population affect health or longevity."

In addition, the EPA has agreed to the above conclusions, as stated in the background information published by the EPA dealing with these standards. On Page 4 of said report, the following statement was made by the EPA:

"For populations exposed to asbestos only in ambient air, there are no data that define the excess risk, if any, of developing this disease." (Bronchogenic carcinoma.) And further, "It is presently thought that

exposure to asbestos concentrations much larger than those likely to be present in community air is required for the development of clinically significant asbestosis."

Dr. J. C. McDonald's recent testimony submitted to this agency at the New York hearing indicates that mesothelioma was not detected in persons living near the several asbestos mines in Quebec, Canada. The GAF mine is the only one in Vermont and is isolated in the mountains of Vermont far from any large populated areas, as opposed to some of the mines in Canada which are right in the towns surrounded by fairly dense populations. There have been no reports of medical problems made to us by the neighboring population due to the emissions from this mine.

Accordingly, we respectfully request that the visible emission standard be clarified as applicable to GAF in view of the minute percentage of asbestos materials in visible emissions emanating from our tailings, no known technology to alleviate said emissions, and I would like to say no known technology to eliminate completely said emissions, but known technology to reduce -- that is not in here, but I don't feel that statement was quite correct -- and the lack of any medical evidence that the general populations' health is endangered. As the standard now reads, visible

emissions of particulate matter are prohibited even though these emissions are not harmful, and contain little or no asbestos.

We propose that only visible emissions from tailings piles containing "Harmful amounts of asbestos" be prohibited.

It may be necessary for further medical studies to be conducted in regard to what constitutes harmful amounts. Some specific level could be established after sufficient studies are made and the standards could be amended at that time.

In light of the above, the following amendment to the standard is suggested:

Section 61.23(b)(1) should prohibit visible emissions of particulate matter from asbestos dumps, open storage areas for asbestos-containing materials, or asbestos-containing tailings dumps if said emissions contain amounts of asbestos that have been established as harmful to the general public.

In conclusion, GAF reiterates its recognition of the desirability and necessity for effective emission controls. With the exceptions we have discussed, we support the EPA's National Emission Standards for Asbestos.

There is some additional information which I have having to do with the prohibitions of the use of tailings on mine roads and so forth, but they all generally address themselves to the same general point, and I would prefer to turn them in in writing.

MR. MEGONNELL: Fine. They will be included in the record.

I think there is a thread of continuity running through these hearings. There is this common problem of tailings piles, and I think the EPA will have to reconsider that before final promulgation.

I don't quite understand why you say you have trouble measuring visible emissions. Anybody with eyesight can do that.

MR. DARRELL: You could see a visible emission, yes.

MR. MEGONNELL: You meant quantitatively measure.

MR. DARRELL: Yes. It is the same problem. The methods used in plant are not necessarily reliable outside of a plant.

MR. MEGONNELL: Yes. I think anything else I would say would be redundant.

Incidentally, on tailings piles, have you tried chemical sealing?

MR. DARRELL: We have not tried chemically sealing. We have read about it. We have two problems on tailings piles, Mr. Megonnell, and (1) all the areas are relatively consolidated and at the surface are pebble-sized rock, half inch rock, three-eighths inch rock. You can blow pretty hard and you don't see anything coming off these areas of the piles. We think it is going down into the loose gravelly nature of the pile itself, but when you are depositing the material on the pile, it is coming up a conveyer belt and there has to be some kind of a fall from the conveyer to the pile and then some mechanical spreading with a bulldozer or something to keep the pile going, and this is an area where the amount of free-fall can be reduced. In the summertime you might be able to wet it, in the wintertime certainly not, but all those things, and other things that we conceive of, lead us to believe that we could make significant reductions but not complete eliminations to zero, and that is the area we are more concerned with than the other.

I will agree that if a tornado came along, which we don't have, and tore a swath through the hill, then the older portions might be disturbed.

MR. MEGONNELL: I think we would like to, and perhaps be able to write legislation as you suggest here. We can't. It can't be written that way, but we are aware of these tailings problems, and I am sure it will get more consideration.

MR. SLAUGHTER: I want to amplify a little bit. Other than the dumping and the spreading of the tailings, do you have any visible emissions from the tailings dump? Would that part of the regulation be a problem other than the dumping and spreading of the tailings?

MR. DARRELL: Possibly in small areas, depending on freshness. We have had an opportunity to observe another tailings pile from another deposit that was mined prior to 1949 a little ways away, but it is there. This is all eyeball stuff, and we have asked all the older residents at the plant and other people, "Have you ever seen anything blowing off that pile," the unused pile, and the answer has been, "No, we have never seen it." So that does not mean that some day we might not see something and that we might have to do something further to these, what I call, stabilized or consolidated piles, but that does not seem to be a matter of concern to us now. It seems that we don't get any visible emissions at these points.

MR. SLAUGHTER: Thank you.

MR. MEGONNELL: Thank you.

(The following statement was submitted for inclusion in the record:)

STATEMENT BY

MR. R. POWER FRASER

VICE PRESIDENT

GAF CORPORATION

MR. FRASER: Gentlemen:

My name is R. Power Fraser, and I am Vice President of GAF Corporation. GAF's Industrial Products Division is a major producer of asbestos, although our output represents less than 2 1/2 percent of asbestos fiber consumed in the United States.

GAF appreciates the opportunity to participate in your public hearings on the proposed emission standards for asbestos, beryllium and mercury in industrial and mining operations. We want to cooperate in this important area and to assist in the writing of standards which are both practical and yet protective of the environment.

GAF concurs in general with the testimony given by Johns-Manville Corporation at the EPA hearing in

New York City on January 18th. Along with Johns-Manville, we support the proposed Environmental Protection Agency National Emission Standards on asbestos, with the exception of some modifications that Mr. Darrell and Mr. Bettoli will discuss later. We feel we can adapt the proposed EPA requirements to all our thirteen (13) consuming operations in the United States, with the exception of our Hyde Park, Vermont plant. Mr. Darrell will explain why shortly.

Before he speaks, I would like to give you a brief outline of GAF activities and policies.

GAF Corporation is a worldwide company which manufactures and distributes a wide range of products in five related consumer and industrial market areas. The areas are: chemicals, building materials, photographic film and equipment, office business systems, and industrial products. The common bond uniting the product groups is chemical research and technology, from which GAF's "congeneric" nature evolved. Headquartered in New York City, we employ approximately 20,000 persons.

At its more than 70 manufacturing and processing plants throughout the United States, GAF endeavors to be a responsible member of the business community. In fact, the company's Management Policy specifies that GAF

"will continue to do its utmost...to be a cooperative and useful citizen of the communities in which it operates and to contribute to the progress and welfare of these communities."

We have met pollution control requirements as we have understood them. However, much of what is called pollution is the result of the practices of man over hundreds of years, and solutions are being sought and even expected practically overnight. Sometimes, solutions to the problems must be delayed until the technology of how to solve the problem has been developed.

Overall, GAF spent about $5 million last year and will expend in the neighborhood of $6 million this year on environmental control equipment. I cite these figures only to illustrate that my company is totally committed in its role of a responsible and concerned citizen.

The ever-changing and sometimes conflicting regulations of the many agencies operating in the environmental control field necessitates our having a full staff of corporate environmental engineers to update and modernize our equipment and facilities to meet standards. This effort also includes basic research in those areas where there is presently no technology to combat certain problems.

GAF's industrial product division mines and

processes asbestos. The chrysotile asbestos fiber we mine and manufacture at our Hyde Park, Vermont plant goes into such products as asbestos felts, papers, cement, and wallboard. Contributing significantly to the safety and quality of life in America, asbestos is of vital importance to the textile, automotive, aircraft, plastic, paint, building, filtration, electrical, chemical, and many other industries. Our Vermont mine is one of two mines producing the basic line of chrysotile asbestos fibers in the United States.

The chrysotile variety of asbestos constitutes about 95 percent of world asbestos supply. The Republic of South Africa, Southern Rhodesia, Swaziland, Italy, and the United States, of course, are substantial producers. Small supplies also originate in many other countries. Total world production in 1968 was estimated at 3.5 million tons of all grades and varieties. Of this total, Canada produced about 46 percent and the USSR an estimated 25 percent.

GAF's Hyde Park asbestos plant -- located in northern Vermont about 40 miles west of Burlington -- employs 205 people with an annual payroll approaching $1 1/2 million. Counting their depends and families, some 800 people depend, in part, on that mill for their livelihood. GAF pays $97,000 in local and state taxes there and spends $625,000

yearly for the purchase of supplies and fuels.

Considering these facts, the Hyde Park operation has an enormous -- and favorable -- economic impact on the sparsely populated counties of Lamoille, Franklin and Orleans in the uppermost part of Vermont. Those are the counties that our Hyde Park employees come from. For example, we employ over 3% of the work force in Lamoille County. The economic contribution of Hyde Park to that three-county area of Vermont, while difficult to calculate exactly, would appear to run into millions of dollars.

It is a general consensus that asbestos plays an important part in our technology and economy. Therefore, GAF, as Johns-Manville has already done, would like to express again its continuing recognition of the need for the control of asbestos emissions into the air to the extent such are harmful, and to pledge our determination to do whatever is necessary within the limits of technical feasibility to achieve such controls.

Thank you.

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MR. MEGONNELL: Our next speaker is Mr. Darrell's colleague, Mr. P. S. Bettoli.

STATEMENT BY

MR. P. S. BETTOLI

TECHNICAL DIRECTOR

BUILDING, INDUSTRIAL AND FLOOR PRODUCTS DIVISIONS

GAF CORPORATION

MR. BETTOLI: My name is Philip Bettoli. I am Technical Director of the Building, Industrial and Floor Products Divisions of GAF Corporation. I have obtained a Bachelor of Science in Chemistry from the University of California and have been continually associated with development programs on a variety of asbestos products for 26 years.

I am here to discuss the proposed emission control standards for asbestos as they relate to the asbestos using manufacturing plants of GAF and some field applications.

GAF Corporation has made a preliminary study of our manufacturing plants in regard to the proposals. As a result of the study, it was concluded that we will be able to comply, except in the following respects.

There are visible emissions from certain operations producing asbestos-containing materials at our roofing and flooring plants which we are certain do not contain asbestos particles, since the asbestos is bound into the

products being manufactured at these stages of the operation. Examples of this are asbestos roofing felt saturation and coating and vinyl flooring plastisol fusion.

In these and many other laminating and coating processes, the asbestos fibers are bound together or totally encapsulated by agents that preclude any particle emission.

Strict interpretation of the current draft calls for unwarranted filtration of any associated fumes. We know of no acceptable test method to establish that asbestos fiber is not being introduced into a process gas stream or stack effluent emitted from these and other sources. It is, therefore, impossible to scientifically verify our conclusions. Until such a method can be established, we request that fumes being released from asbestos-containing material in which the asbestos is bound, should be excluded from the definition of particulate matter. We also pledge our full cooperation in helping the EPA establish an asbestos testing method.

In addition, the present definition of particulate matter makes no reference to asbestos material. Accordingly, we suggest that Section 61.21(h) should read as follows:

"Particulate matter means any asbestos-containing material which exists in final form as a liquid or solid, other than uncombined water or fumes being emitted from processing operations in which the asbestos content is bound."

Paragraph 61.23(d) of sub part B defines the woven cotton fabric filters to be utilized to remove particulate matter from certain sources. GAF manufactures filtration fabrics from synthetic fiber felts as opposed to cotton. Many felts are at least equal and in certain service, superior to woven cotton for "dry" filtration purposes. We believe that they reached efficiency equilibrium faster not only initially but after removal. They also will function with a higher permeability rating to give equal mass sufficiency. For certain applications and particularly where high temperature is involved, synthetic fiber felts are superior to cotton. We would be glad to provide comparative and performance data to the EPA.

Paragraph 61.22 - E 1 and 2 states that "The spraying of any product which contains asbestos on any portion of a building or structure, or any area directly open to the atmosphere is prohibited." This broad prohibition eliminates all types of spraying of asbestos-containing products,

including emulsions and cutback bituminous roof coatings, adhesives and other water-proofing compounds which contain minor amounts of asbestos fiber. These roofing and water-proofing components contain less than 10 percent of thoroughly wetted and dispersed asbestos in a liquid binder. They are applied by relatively crude spray nozzles which do not form a fine mist of droplets, but deliver a sheath or solid liquid fan which does not create any emissions of asbestos to the atmosphere. After application, the tailings dry and the asbestos is entrapped and is prevented from entering the atmosphere. Therefore, there is no justification for restricting the application of these sprayed-on roofing components.

We agree that there is a justification to limit the spraying of asbestos-containing compositions that have the potential to liberate harmful amounts of asbestos particles to the ambient air. Accordingly, we suggest an alternate wording of the above section as follows: "The spraying of asbestos-containing products, which emit harmful amounts of asbestos fiber to the atmosphere, on any portion of a building or structure, or any area directly open to the atmosphere, is prohibited."

I think I will eliminate that next paragraph.

I would further suggest that the word "source"

be dfined on a plant basis.

The above recommendations have been discussed with the technical experts from the EPA. We have met with them and will be glad to discuss any other problems with your office in the future.

I also sympathize with the very difficult task they have to do with this with the limited time and measurement technology available, and will assist them in any way possible.

MR. MEGONNELL: I accept your assistance.

MR. BETTOLI: I'm very serious. I really believe we are all trying to do the right thing and we are limited, and the men that I have met in the organization seem to be quite competent, and I've been in the business for 26 years, and I know there are some things that we cannot answer at the present time, nor do I feel that they would necessarily have been aware of certain uses where visible emissions would be, but not at all related to asbestos particles.

MR. MEGONNELL: I think your paper pointed it out. They informed me they are going to better define the parts of the process they are referring to. Perhaps the mixing operation would be covered, but certainly not the saturation part of the process.

I raised the same question you did, why cotton was specified, and I think it would be good to get the data they do have on other types of filter cloths.

As you know, the spraying of roofing and water-proofing components with lower amounts of asbestos is being reconsidered. I have to ask you also, sir, do you have any information on what happens to the roofing asbestos particles during demolition?

MR. BETTOLI: Well, a built up roof is made up of several layers of coating with saturated felt. They are bound together with the spray adhesive or laminating, and they can then pour on top of it additional asphalt or tile and gravel. Normally, those are what they call spaded or spudded up, many years later, maybe twenty years later. They are in the form of a solid mass.

In some cities, they require the wetting down of any demolition, which I think, if there were asbestos free to float around, it would preclude its floating around because of the wetness.

MR. MEGONNELL: It's not a very effective operation when a wrecking ball hits.

MR. BETTOLI: They don't hit the roofing with a wrecking ball. I mean it's not that kind of thing.

You have seen a bituminous membrane or a foundation that has been coated. The mass, the backing, what people generally call tar, the asphalt is still quite tenacious to the fiber, or the fiber is not even visible. It is part of this matrix. It isn't dusty.

MR. MEGONNELL: I can see where the emissions would probably be much less.

MR. BETTOLI: If you take the pipeline to the transcontinental lines which are protected by asbestos paper from corrosion, and these are buried underground, there are fumes emitted, though, because of the enamels that are used when they are wrapping them and bonding it to the pipe, but years later they could be picked out and they wouldn't have any dry nature to them. These are masses.

MR. MEGONNELL: Thank you, Mr. Bettoli.

Mr. Silvan Lutkewitte of Monsanto Industrial Chemicals Corporation.

Sir, I would like to ask you to consider this: I have reviewed this statement. I think it is very well done. I think it is repetitious of The Chlorine Institute's presentation yesterday. If you would like to summarize it, bearing in mind that the entire paper will be reproduced in the record, I would appreciate it, or, if you insist, we