

**PLAINTIFF'S
EXHIBIT**

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OFFICIAL TRANSCRIPT OF PROCEEDINGS
before the
CONSUMER PRODUCT SAFETY COMMISSION

Docket No.

In the Matter of:

PUBLIC MEETING ON ASBESTOS

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1 UNITED STATES CONSUMER PRODUCT SAFETY COMMISSION

2
3 Public Meeting on Asbestos
4 - - -

5 Monday, August 15, 1977

6 Consumer Product Safety
7 Commission
8 1111 18th Street, N.W.
9 3rd Floor Hearing Room
Washington, D. C.

10 JOHN BYINGTON, Chairman
11 BARBARA H. FRANKLIN, Commissioner
12 R. DAVID PITTLE, Commissioner
13 THADDEUS GARRETT, Commissioner
14 LAWRENCE M. KUSHNER, Commissioner
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KMX 00808

ParticipantsPage

John S. Bush, U. S. Gypsum Corp.	7
Julius Wemeth, Bondex International	27
Harry Rhodes, Union Carbide Corp.	62
	181
Suedeen Gibbons, Natural Resources Defense Council	107
Barry Castleman, Environmental Consultant	154
Peter Simpson, Rustic Crafts Co.	123
Robert Rauch, Environmental Defense Fund	136

P R O C E E D I N G S

CHAIRMAN BYINGTON: We'll call this public meeting then, asbestos by the U. S. Consumer Product Safety Commission, to order. This meeting has been called to hear oral presentations of data, views or arguments on the Commission's proposal to ban two consumer products under the Consumer Product Safety Act.

I'm John Byington, Chairman of the Commission, and also participating are Commissioners Lawrence Kushner, Barbara Franklin, David Pittla, as well as members of our staff. Mr. Jules Bigio, the Office of Engineering and Science, Dr. Robert Melir, Office of Health Sciences, Charles Jacobson, Division of Enforcement, Dale Ray from the Division of Economic Studies, Francine Shecter, from the Office of Program Management, B. Pitkin, Office of General Counsel.

We are also pleased this morning to welcome participants from a couple of other agencies participating in this effort, as part of the new interagency cooperation and coordination, and we have Mr. William Warren of the Standards Division of OSHA, and Mr. Ron Levine of the Office of General Counsel of EPA.

KMX 00810

And also we have just been joined by Commissioner Thaddens Garrett. Now, on April 28th, 1977, the Commission announced its decision to propose banning consumer patching

1 and artificial emberizing materials containing respirable,
2 free form, asbestos.

3 The proposal to ban was published in the Federal
4 Register of July 29, 1977, and also since that time copies
5 of the proposal have been sent to 51 manufacturers of
6 patching compounds, as well as copies have been provided
7 to The Fireplace Institute for distribution to gas log
8 manufacturers and distributors.

9 Now, the scope of the proposed ban on patching
10 compounds would include all such compounds that are dis-
11 tributed to or used and enjoyed by consumers and consumer
12 environments such as homes and schools.

13 The proposed ban, which would be effective 30
14 days after publication of the final rule, would apply to
15 products in inventory as well as those manufactured on or
16 after the effective date of the rule.

17 Now, the scope of the proposed ban on artificial
18 emberizing materials would include all such materials in
19 inventory as well as those manufactured on or after the
20 effective date of the rule, and the proposed effective
21 date for this ban would be the date of publication of the
22 final ban, of the final rule, rather. KMX 00811

23 Now, in addition to soliciting written comments,
24 the proposal also advised that an opportunity would be
25 provided for oral presentation of data, views or arguments

1 on the proposed bans as required by section 2 of the Consumer
2 Product Safety Act.

3 And the Commission regulations that cover all
4 oral presentations such as these are in 16 CFR 1109. Oral
5 presentations provide interested persons with an opportunity
6 to participate in rulemaking activities and such participation
7 and discussion between the Commissioners and interested
8 persons during oral presentations might not otherwise be
9 available.

10 The proceedings of this meeting are non adver-
11 sary and informal, as legislative proceedings would be.
12 There are no formal pleadings or adverse parties as there
13 are in court proceedings.

14 A transcript of this meeting is being made and
15 should be available within 10 days. Interested persons,
16 including those speaking today, may submit written comments
17 and other related information to the Office of the Secretary
18 on both the proposed bans as well as issues discussed
19 today until August 29, 1977.

20 These comments, as well as the transcript of
21 this meeting, will be considered part of the public record,
22 on the proposed bans, and will be available for public
23 inspection.

KMX 00812

24 Now, the Commission has received seven requests
25 to make oral presentations. Questions will be asked of

1 these making oral presentations only by the presiding of-
2 ficer, commissioners, and commission and staff members.
3 Any participants or others in the audience who wish to ask
4 questions of the participants should write out their ques-
5 tions, give us their names and organizational affiliations
6 and pass them up to Miss Francine Schecter, sitting right
7 there.

8 Papers are available at the rear of the room.
9 Persons' questions will be asked subject to such limita-
10 tions as time, relevance and repetition allow.

11 Questions as well as presentations should be
12 confined to the scope of this meeting, and as presiding
13 officer we will attempt to allow as many views as possible
14 to be heard during this proceeding within that scope.

15 Now, at this point in time we have not received
16 any advance copies of any written statements or outlines,
17 so any of the parties who have prepared statements, I
18 would ask you to provide them to Mr. Shelton Butz here,
19 unless you already have copies to distribute.

20 If you do then we would like you to provide him
21 with sufficient copies for himself and for the Commissioners,
22 and as many other copies as you have for staff. If you
23 don't have sufficient copies with you, if you'll give him
24 one copy we will take care of the duplication and provide
25 them, the Commissioner and staff, with copies from our own

1 facilities.

2
3 So we would appreciate as soon as possible your
4 providing that to him. The following persons are scheduled
5 to make oral presentations. Michael Helton of U. S. Gypsum,
6 Julius Nemeth of Bondex, Harry Rhodes of Union Carbide
7 Corporation, Sweden Gibbons of the Natural Resources
8 Defense Council, Barry Castleman, the Environmental Consul-
9 tant, Peter Simpson of Rustic Crafts Company, and Robert
10 Rauch of the Environmental Defense Fund.

11 In addition, although he does not plan to make an
12 oral presentation, Mr. DeCarter of Jones Mansfield
13 Corporation is with us, and will be available to answer any
14 questions.

15 If that is agreeable in terms of providing the
16 material, other than any informal comments that you have,
17 we would begin and we'd call then Mr. Michael Helton of
18 the U. S. Gypsum Corporation, who has asked for approximate-
19 ly 20 minutes. Mr. Helton.

20 MR. BUSH: Mr. Chairman, Mr. Helton could not be
21 here, he's sorry this morning.

22 CHAIRMAN BYINGTON: It would be fine, if you'd
23 also give us your name and title, for the record.

24 MR. BUSH: Good morning, Mr. Chairman, members
25 of the Commission. My name is John S. Bush, B-u-s-h, I
am director of Governmental Affairs of United States Gypsum

1
2 Company.

3 I am appearing today on behalf of my company
4 and comment on the Consumer Product Safety Commission's
5 proposed rule concerning asbestos containing patching
6 compounds.

7 During the 50 years, past 50 years, patching
8 compounds have been manufactured in the United States as
9 a complement to the steadily increasing use of gypsum wall
10 board and as a repair material for existing plaster or gypsum
11 wall board, as dry wall walls and ceilings.

12 Patching compounds are known in the construction
13 trades as surface preparation products, a collective term
14 which includes three basic compositions. Joint treatment
15 compound, spackling material, and patching plaster.
16 In terms of volume, joint treatment compound is most
17 significant of these products, so I will concentrate on
18 this class of product.

19 Joint treatment compounds are cementous
20 materials, typically used to reinforce and conceal joinings
21 of gypsum wall board used on walls and ceilings. Joint
22 treatment compound is also used to patch, fill, and texture
23 surfaces such as spackling material is used.

24 It may be purchased in dry powder, or ready-mixed
25 form. Joint treatment compound products are chemically

KMX 00815

1 designed to satisfy at least 15 critical requirements,
2 working characteristics and performance properties. These
3 include shelf life, wet mix life, stability consistency,
4 slip, wet pack, feathering, coverage, low shrinkage, bond,
5 edge and check resistance.

6 These products must be designed to work under
7 widely varying weather and climatic conditions, applica-
8 tion methods and tools. Most powder and ready-mix
9 products are sold in three functional forms; taping,
10 topping and all purpose.

11 The taping form is designed with particular
12 emphasis on high bonding properties as a first coating over
13 wallboard joints. The topping form is designed to provide
14 easier finishing properties while all purpose is a conven-
15 ient compromise of the taping in, copying functions.

16 There are well over 1400 possible synthetic
17 and natural raw materials that may be considered in
18 preparation -- in preparing a new surface preparation
19 formula.

20 The use of each ingredient may produce a product
21 that differs from all other products in grade, color,
22 composition, purity and reaction. Changing any one in-
23 gredient, beneficially or adversely affects at least one
24 of the critical performance properties.

25 This delicate relationship makes joint compound

1 formulate into very precise, complex, and demanding process.
2 A single formula is seldom acceptable in multiple markets
3 and therefore a family of acceptably balanced formulas is
4 required.
5

6 Any change in working properties can quickly
7 affect user acceptance. Over the years joint treatment
8 compounds technically contain a very minor amount of as-
9 bestos, usually no more than a few percent.

10 For this reason we were not convinced that the
11 presence of this very small amount of asbestos posed a
12 threat to health. However, when the health issue was
13 raised in the early 1970's, the United States Gypsum Com-
14 pany funded a research project to develop non asbestos
15 formulas for all of these surface preparation materials.

16 This research project was a complex and expensive
17 effort, however we are pleased to note the project was
18 successful. As a result of this success, United States
19 Gypsum, during the last few years, has offered a complete
20 line of non asbestos, joint treatment products.

21 Today, United States Gypsum's entire line of
22 these products is nonasbestos and available nationwide.
23 We believe our nonasbestos formulas will perform their
24 function of providing a proper, monolithic surface, ready
25 for a final decoration in a manner equal to the old asbestos
formula.

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1 We also believe such characteristics as shelf
2 life and wet life, and other working properties, are such
3 that these products can be marketed and used on the job
4 in a fully satisfactory manner.

5 There is always a reluctance to accept any change
6 but these new United States gypsum products are gaining
7 widespread acceptance. Any reluctance to make the change,
8 we believe, is due more to the habit and the continued
9 availability of asbestos formulas than to any substantive
10 reason.

11 Today, non asbestos products are sold to and used
12 by the same people that previously expressed a preference
13 for the asbestos containing products. While the constituents
14 of the non asbestos formulas obviously differ from the
15 older asbestos containing formulas, the non asbestos
16 line of products is manufactured with the same production
17 equipment used to manufacture the older formulas.

18 United States Gypsum's non asbestos line is
19 available in a full range of sizes and packages from small
20 consumer size packages to larger, contractor size packages.
21 We believe the larger portion of joint compound is consumed
22 in new construction.

23 Its application is usually contracted to dry wall
24 or painting contractors. The products for the new construc-
25 tion market move predominantly through building material

1 specialty stores, lumber dealers, large paint stores, mass
2 merchandisers, and contractors. These products are
3 typically sold in 25 pound bags in the case of powder, and
4 62 pound, five gallon containers in the case of the ready
5 mixed products.

6 While the contractor is believed to represent
7 the larger share of the market, a certain percentage does
8 find its way into consumer channels. The joint treatment
9 industry is composed of some 100 manufacturers in approxi-
10 mately 26 states, which encompass over 130 plants in 238
11 warehouses. An estimated 55 percent of total volume was
12 manufactured by five or six national or near national
13 producers.

14 The balance comes from regional, sectional and
15 local producers. In summary, it is our company's position
16 that in the event the Consumer Product Safety Commission
17 implements the proposed limitation on asbestos containing
18 products, that action will not appreciably disrupt the
19 market.

20 Comparable non asbestos products are, and for
21 several years have been, available from United States Gypsum
22 as well as other manufacturers active in the industry.
23 Reformulation of the various asbestos containing products
24 would be required but we, at least, have not found it
25 necessary to make major new capital investment for new

1
2 or different production equipment.

3 Existing production equipment has been suitable
4 for non asbestos formulas. Generally speaking, the same
5 observations are true, are applied to spackling materials,
6 although the term also is generic and includes products
7 which never did contain asbestos.

8 Patching plaster, a gypsum product as we use the
9 term, has never contained asbestos. Thank you very much
10 for this opportunity to make these views known to the Consumer
11 Product Safety Commission.

12 CHAIRMAN BYINGTON: Okay, thank you very much.
13 Mr. Bush.

14 Can you identify for the Commission what types
15 of substitutes were used when asbestos was taken out?

16 MR. BUSH: I don't know the formula, these 1400
17 potential alternatives that's been used, Mr. Byington, but
18 I will attempt to get that information.

19 COMMISSIONER BYINGTON: I think it would be very
20 helpful to the Commission to have some understanding if
21 there is a particular binder that was found most useful
22 and maybe of the greatest use across the board, it would
23 be helpful to us.

24 One of the things that we're constantly faced
25 with is what are we looking at in terms of alternatives.
Commissioner Franklin.

1
2 COMMISSIONER FRANKLIN: Do I understand from
3 your statement on page three that you are at this point
4 selling both asbestos containing and non asbestos contain-
5 ing joint treatment compounds?

6 MR. BUSH: No, ma'am. We sell nothing but asbestos
7 free --

8 COMMISSIONER FRANKLIN: Okay.

9 MR. BUSH: Non asbestos products.

10 COMMISSIONER FRANKLIN: I wasn't clear from the
11 way your statement was --

12 MR. BUSH: Oh, I'm sorry, perhaps this wasn't --

13 COMMISSIONER FRANKLIN: All right, well we've got
14 it for the record. You're not selling anything --

15 MR. BUSH: No, ma'am.

16 COMMISSIONER FRANKLIN: -- with asbestos in it at
17 this point. Okay. The other question that relates to
18 what you have said here in the middle of your statement on
19 page 3 is the implication that the non asbestos formula is
20 perfectly acceptable to everyone who's using it and the
21 implication further to me is that your sales haven't gone
22 down as a result of your change in formula. Is that a
23 correct assumption?

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24 MR. BUSH: So far as the first question is con-
25 cerned, I think we're trying to say here that we -- that
there is some resistance to the non asbestos compounds, but

1 that we think this is just a normal resistance to change,
2 there are no substantive reasons for this, that many of
3 the people who were resistant to the asbestos -- non asbes-
4 tos products, are now using it and quite happily, and
5 we see no problem in it.

6 COMMISSIONER FRANKLIN: The reason I thought
7 that that was your conclusion was that sentence that reads,
8 today our non asbestos products are sold to and used by
9 the same people that may have previously expressed a
10 preference for the asbestos containing product.

11 MR. BUSH: Yes.

12 COMMISSIONER FRANKLIN: You're saying that's true
13 but with some qualifications.

14 MR. BUSH: I think that's what we mean, yes,
15 ma'am.

16 COMMISSIONER FRANKLIN: Do you have any indica-
17 tion as to what consumers think of the substitute?

18 MR. BUSH: I don't believe we --

19 COMMISSIONER FRANKLIN: Now my presumption is
20 you were not selling -- well, you've said that directly --
21 to consumers, selling to somebody else who sells to con-
22 sumers.

23 MR. BUSH: Yes.

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24 COMMISSIONER FRANKLIN: My question is, what do
25 consumers think?

1
2 MR. BUSH: We have no information on that. I
3 think the typical household consumer would be someone with
4 little experience with the product, and not know the dif-
5 ference, quite frankly. But rather the people who make
6 a profession of applying these things would be the ones
7 who might notice a change.

8 But we have no -- we have no extensive consumer
9 marketing apparatus but rather we're primarily involved
10 with major contractors. So I don't know the consumer re-
11 action.

12 COMMISSIONER FRANKLIN: I hear again in your
13 statement your conclusion that you feel that our regula-
14 tion is not going to, and I quote here, "appreciably dis-
15 rupt the market."

16 MR. BUSH: Our experience, and that of our per-
17 sonnel throughout the United States, has been that most
18 of the major producers now have non asbestos compounds,
19 and we see no impact or no slowing in construction or what
20 not, if you decide to go ahead with this.

21 COMMISSIONER FRANKLIN: My question then would
22 be whether you as a representative of one of the major
23 producers, could foresee any difficulties that might accrue
24 to small manufacturers.

25 MR. BUSH: I don't know, quite frankly. You know,

1 typically many businesses are teetering on the verge of
2 collapse in any change that can cause them difficulties.
3 We -- I have no information that would put anyone out of
4 business.

5 COMMISSIONER FRANKLIN: Okay. But there do appear
6 to be some small --

7 MR. BUSH: Well, we say, what, seven --

8 COMMISSIONER FRANKLIN: -- sort of small business

9 --

10 MR. BUSH: -- or five or six.

11 COMMISSIONER FRANKLIN: Yes.

12 MR. BUSH: Manufacturers, probably produce 55
13 percent of the total, and there are 95 or 94 other pro-
14 ducers, we say a total of about 100.

15 COMMISSIONER FRANKLIN: Yes, that's really my
16 question and my concern --

17 MR. BUSH: Yes, ma'am.

18 COMMISSIONER FRANKLIN: -- about the impact on
19 the small companies. Thank you.

20 COMMISSIONER PITTLE: Do you know if the substi-
21 tute that you're using is fibrous at all?

22 MR. BUSH: I don't know anything about the formu-
23 lation, I'm sorry, Commissioner Pittle, but I'll attempt,
24 as Chairman Byington asked, to get that information and
25 send it to you.

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1
2 COMMISSIONER PITTLE: The name of it is one thing,
3 but certainly if the name turns out to be something of a
4 trade secret I can understand your concern about it. But
5 I would like to find out if there is any fibrous content
6 to it.

7 Do you know if -- I guess when you're supplying
8 it -- I won't ask if you know, but when you supply the
9 other information, would you try to give an indication of
10 the kind of safety tests on the material that you performed
11 before you marked it.

12 MR. BUSH: Yes, sir.

13 COMMISSIONER PITTLE: On page 2 you made a com-
14 ment that the joint treatment compound is typically, in
15 the past, have only contained a small amount of asbestos,
16 usually no more than a few percent.

17 If there is a way you can tell us a little more
18 precisely whether it was five percent by weight or three
19 percent by weight --

20 MR. BUSH: Yes, sir.

21 COMMISSIONER PITTLE: -- that would be very help-
22 ful also.

23 And finally, on page 4 you mention that roughly
24 55 percent of the market is in the hands of five or six
25 large producers, roughly half of it is five producers and

1 the other half is with 95 producers. Do you know if the
2 four or five other large producers market a completely
3 asbestos free line at all?
4

5 MR. BUSH: From their containers I've seen around
6 town, construction jobs, and governmental affairs is my
7 area, you know, rather than the construction business.
8 Virtually all of them have asbestos free or non asbestos
9 on the containers. But I'll get the answer.

10 COMMISSIONER PITTLE: The other half then, the
11 95 smaller manufacturers -- if you have any knowledge
12 about that that would really be very helpful.

13 You made a statement somewhere on page 2, to
14 tie that off completely, that there were well over 1400
15 possible synthetic and natural raw materials that could be
16 considered.

17 Of those 1400 on a group of 1400 that could be
18 used as bonding agents, I mean, it's not like asbestos
19 would be competing with 1400 other ingredients.

20 MR. BUSH: Yes.

21 COMMISSIONER PITTLE: And use. Is that total
22 different kinds of ingredients that go into it?

23 MR. BUSH: I believe this is all the ingredients.

24 It was --

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25 COMMISSIONER PITTLE: So how many different kinds
of things are there that asbestos would be competing with,

1 are there only three or four logical substitutes, or 20 or
2 50? Because that would help us to know more what the
3 -- what we expect to see in the substitutes, except I guess
4 from what you're saying, the substitutes have already taken
5 place and the industry seems to have regulated itself.

6 MR. BUSH: We spent, I think, an awful lot of
7 money solving this, and you know, I would guess if we
8 gave you a list of 21, 20 of them probably aren't very
9 good, and we discovered which one was.

10 COMMISSIONER PITTLE: And you found it.

11 MR. BUSH: You don't spend a lot of money unless
12 you hope to come to, you know, the best answers.

13 COMMISSIONER PITTLE: Thank you.

14 MR. BUSH: Thank you, sir.

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15 COMMISSIONER FRANKLIN: Mr. Chairman.

16 CHAIRMAN BYINGTON: Okay, let me follow up on a
17 couple of those that were passed up because they relate
18 to where Commissioner Pittle left off. If you could also
19 -- we can also give you for the record if you would like a
20 list of a couple of these questions.

21 And that was, when you decided -- when you give
22 us the information on the substitute, one of the questions
23 is that if the formulation patented that you have, and
24 if so is it available for license, for some of the smaller
25 manufacturers, which also may get back to what Commissioner

1 Franklin was talking about where they may be able to work
2 out a licensing arrangement, if that's agreeable.

3 And one of the other questions that's been asked
4 that we would appreciate your checking on when you give
5 us the information on the substitute is that have there
6 been any toxicological testing on the substitute, have
7 you done any testing on the substitute that you're using,
8 and how are you monitoring your asbestos and your finished
9 non asbestos compounds?

10 In other words when you say some of these are
11 asbestos free or non asbestos compounds, how are you
12 checking on that, and do you really mean that they're
13 totally asbestos free?

14 MR. BUSH: Yes.

KMX 00828

15 CHAIRMAN BYINGTON: Or do you mean that you're
16 not using asbestos as part of your formulation and there
17 may still be some contamination.

18 MR. BUSH: You mean from another ingredient or
19 something. Well, I can check that.

20 CHAIRMAN BYINGTON: Okay, because that's what
21 we're -- in other words when we said they're asbestos free,
22 that may mean that you are not overtly using asbestos as
23 one of the ingredients in the formula. On the other hand,
24 we're looking at whether or not the overall product is
25 being checked and is it being monitored, and if so are we

1 getting some asbestos through contamination, and what kind
2 of levels, that this might result in.

3 MR. BUSH: Yes.

4 CHAIRMAN BYINGTON: Commissioner Franklin.

5 COMMISSIONER FRANKLIN: I wanted to follow up
6 one more time on the concern about what consumers may think
7 of the substitute product in terms of how it works, and so
8 on.

9 MR. BUSH: You're talking about the household con-
10 sumer.

11 COMMISSIONER FRANKLIN: I'm talking about the
12 household consumer because that really is where our concern
13 is.

14 MR. BUSH: I'll see if we have the information
15 on that.

16 COMMISSIONER FRANKLIN: We are talking about con-
17 sumer products. Yes, I would simply ask that you would
18 provide whatever you could for the record. I would further
19 follow up this question about toxicological testing, and
20 indicate that if you have done such testing in substitutes,
21 that we should have, for the record, what tests and what the
22 results were.

23 MR. BUSH: Yes, ma'am, okay.

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24 CHAIRMAN BYINGTON: Commissioner Kushner.

25 COMMISSIONER KUSHNER: On page 4 I'd just like to

1
2 clarify something, although your statement appears to be
3 quite explicit. You say there are some --

4 MR. BUSH: My problem is this is Mr. Helton's
5 statement, and I got it at 10:30 last night by aircraft,
6 commercial I might say.

7 COMMISSIONER KUSHNER: You mentioned that the
8 joint treatment industry is composed of some 100 manu-
9 facturers, you literally mean manufacturers, formulators
10 of joint compounds.

11 MR. BUSH: I think we mean anybody who mixes it
12 up and offers it for sale, and that could be somebody in
13 a bath tub someplace, probably, that we may not know about
14 it, you know.

15 COMMISSIONER KUSHNER: Is there very much private
16 labelling?

17 MR. BUSH: I don't know. I can find out what we
18 do in that.

19 COMMISSIONER KUSHNER: I think that would be
20 useful information.

21 MR. BUSH: Private consumer labeling you mean.

22 COMMISSIONER KUSHNER: Yes. That was the only
23 question.

24 CHAIRMAN BYINGTON: Okay, Commissioner Pittle, you
25 had one more question.

KMX 00830

COMMISSIONER PITTMAN: Yes, I understand this is

1
2 unfair to you because you're just going to be a writer of
3 questions, but --

4 MR. BUSH: No, I've got to be good for something.

5 COMMISSIONER PITTLE: Back when you did use as-
6 bestos in your compounds, do you know, are there just a
7 limited number of suppliers of asbestos fiber used, or
8 did you use a variety of people?

9 The reason I ask that is because I'm trying to
10 get a handle on the various kinds of fibers that we might
11 expect to find in a spackling or a treatment compound like
12 this. It seems to me I've got--

13 MR. BUSH: You mean a variety of types of as-
14 bestos --

15 COMMISSIONER PITTLE: Yes.

16 MR. BUSH: -- or a variety of suppliers of the
17 same type?

18 COMMISSIONER PITTLE: Suppliers who may have a
19 different -- who may say it's the same type, it might be
20 either slightly different in size or due to the processing
21 by the asbestos manufacturer or supplier, might wind up
22 seeing a different fiber in a line of products like this.

23 MR. BUSH: Yes.

24 COMMISSIONER PITTLE: For example, do you use
25 only -- well, I won't even pick one, I'll just -- use only
brand X fiber in your products, and if we ever tested your

1 asbestos product we would expect it to be all alike and
2 we would be able to trace it. Whereas if you'd used a
3 variety of several different suppliers and it sort of all
4 got mixed in together, the fiber might have slightly dif-
5 ferent characteristics and it may show up with different
6 measurements when these things are tested.

7 And without a complete history of how you've ever
8 used this, just whether or not you have --

9 MR. BUSH: Yes, sir.

10 COMMISSIONER PITTLE: -- and if you feel comfortable
11 in telling us who, then that would be good also.

12 MR. BUSH: Yes, sir.

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13 COMMISSIONER PITTLE: Thank you.

14 CHAIRMAN BYINGTON: And lastly, two other short
15 questions that were submitted. One is, was there any in-
16 crease in the cost due to this change in formulation in
17 terms of the product, at the sale, the retail level, or is
18 it left to you any way, and if so could you give us some
19 idea what percentage increase is due to the new formulation.

20 MR. BUSH: Yes, sir.

21 CHAIRMAN BYINGTON: And secondly, in utilizing this
22 newly formulized product, is it more time consuming, is it
23 more difficult, is it at all more difficult either to use
24 or to apply or longer drying period, in other words is
25 there any additional labor factors that would go into this

1 because of the absence of asbestos.

2 MR. BUSH: Yes, sir, I understand that it is
3 slightly, but we don't believe it's substantive.

4 CHAIRMAN BYINGTON: Okay, that's the kind of --

5 MR. BUSH: Which is a kind of judgmental thing.

6 CHAIRMAN BYINGTON: Okay. And you indicate that
7 in your statement of approximately 100, if it's possible
8 we would also appreciate your submitting to these questions
9 the list of those that you know of, in other words you
10 came up with 100. We won't hold you to exactly 100, but
11 we'd like the list of those that you knew of that you used
12 to compile that approximation.

13 MR. BUSH: Yes, sir.

14 CHAIRMAN BYINGTON: Okay, there being no other
15 questions we want to thank you, Mr. Bush.

16 MR. BUSH: Thank you, Mr. Chairman.

17 CHAIRMAN BYINGTON: We appreciate your coming.

18 The next witness is Mr. Julius Nemeth of Bondex
19 International. And I'd like to ask at this time that
20 anyone who does not have at least 15 copies of their
21 statement, if they would at this time give them to Mr.
22 Shelton Butz so that we could make copies now, rather than
23 in the future.

24 Okay.

KMX 00833

25 MR. NEMETH: Mr. Chairman, in that regard I have

1 just some prepared notes, should I --

2 CHAIRMAN BYINGTON: That's fine.

3 MR. NEMETH: Should I back off --

4 CHAIRMAN BYINGTON: No.

5 MR. NEMETH: -- one person and let him make
6 copies in the meantime. Would you prepare that?

7 CHAIRMAN BYINGTON: What do you just have some
8 notes you're going to be reading?

9 MR. NEMETH: Yes, I have just some -- it's a semi-
10 prepared statement with hand scribbled notes on it, so if
11 you want --

12 CHAIRMAN BYINGTON: Why don't you go ahead and
13 give yours, then after we're done we'll Xerox them. That's
14 all.

15 MR. NEMETH: Fine, thank you.

16 CHAIRMAN BYINGTON: But if everyone else who has
17 any kind of a prepared statement and doesn't have 15 copies,
18 would you please let Mr. Sheldon Butz know now so we can
19 make copies during this period. Okay.

KMX 00834

20 MR. NEMETH: Fine, thank you.

21 My name is Julius Nemeth, president of Bondex
22 International, and I want to thank the chairman and members
23 of the Commission for this opportunity to appear and comment
24 on the proposed ban for consumer patching compounds.

25 Having read the proposed rulemaking as published

1 in the Federal Register, it's clear that the Commission has
2 reviewed all aspects that have been presented to date,
3 nonetheless since this hearing is scheduled to produce
4 further comment from the original petitioners, I felt it
5 advisable to comment on one or two points and to more
6 clearly state our position as a small manufacturer.

7
8 Now in our 95th year, Bondex International has
9 acted in good faith in starting a voluntary reformulation
10 program in early 1976, having more or less seen the hand-
11 writing on the wall.

12 With the goal of converting our entire line to
13 an asbestos free basis, as the Commission has pointed out,
14 many factors enter into such a reformulation program, in-
15 cluding from a competitive marketing standpoint the im-
16 portance of providing the consumer with equal or similar
17 quality and no major price penalty, while at the same time
18 competing in the marketplace with a more favorably formu-
19 lated, asbestos product still available.

20 Our first conversion to non asbestos formula was
21 in August of 1976, the second in December of '76, and as
22 of April '77 all production of asbestos containing
23 paint sundry products was discontinued. We feel perhaps
24 a trifle prematurely, but nonetheless mandated by the
25 attention getting, though some erroneous media reports,
which alleged an immediate ban and needless to say created

1 considerable turmoil in the marketplace among some of our
2 distributors and dealers in trying or attempting to estab-
3 lish a course of action.

4 Since it appears that most of the Commission's
5 data is based on occupational statistics, it probably
6 would be difficult to document the statement, and I quote,
7 "for many people, the major exposure to inhalable asbestos
8 is in the home."

9 Particularly in view of the acknowledged, many
10 sources of exposure to asbestos, which exist in the environ-
11 ment today. Since we're told that the minimum threshold
12 level of exposure is unknown, we fully expect and can ac-
13 cept the ban from the use of asbestos in wall patching
14 materials, although again as a small manufacturer certainly
15 more time for product testing would be desirable.

16 We are concerned, however, that the ban, if it
17 must be, should be exactly as proposed under CPSA instead
18 of under the Federal Hazardous Substances Act. Having
19 acted voluntarily on the reformulation aspect, we're
20 frankly looking at the economic impact and suggest it as
21 a product in use for centuries.

22 Asbestos is not an imminent hazard, and I be-
23 lieve a repurchase program would place an unfair burden
24 on today's manufacturers, who as a matter of practicality
25 would end up with the total purchase expense.

1 In any case, such a recall program does not
2 produce the complete desired end result because of the
3 other asbestos exposure factors remaining in the market-
4 place.

5 We believe that any repurchase program would have
6 a drastic financial impact on the small manufacturers,
7 ourselves included, with no real equity to the consumer
8 in comparing a recent unused purchase, and therefore re-
9 turnable, versus earlier purchases already applied or
10 consumed.

11 Our products and those of some other manufacturers
12 have in fact been properly labelled to inform of asbestos
13 content, thereby providing the consumer with a product
14 choice.

15 In view of the media coverage on a national
16 basis, it's inconceivable that any consumer of patching
17 materials would not in the last several years been apprised
18 of the controversy.

19 Although it was published that 100 and 360 days
20 were considered too lengthy a time period on effective
21 date after the final ruling, the Commission staff researchers
22 nevertheless indicated that asbestos free products can
23 probably be in distribution in about six months.

24 Under those circumstances, we respectfully
25 suggest reconsideration of a 180 day effective date,

1 possibly staggered from manufacturing to distributor, to
2 final resale, to better facilitate clearing of all distri-
3 bution channels of offending materials, and to further
4 minimize confusion over existing stocks when that date
5 arrives.

6 From a practical standpoint, even without a
7 repurchase program, many manufacturers will, in all likeli-
8 hood, have to relieve their distributors of any remaining
9 stocks of asbestos containing products.

10 One final point that I would like to make con-
11 cerns the matter of the acceptability of continued contrac-
12 tor use of asbestos containing products, and the need for
13 a clearer definition of suitable selling and buying pro-
14 cedures which do not place unreasonable burden on existing
15 lines of distribution as far as determining the final user.

16 The fact of the matter is, many contractors
17 still do use, and many still prefer, asbestos containing
18 joint cement. If asbestos containing, wall patching
19 materials for contractor use are not to be banned, we
20 suggest that labelling of this nature for contractor use,
21 for industrial use only, should then, in fact, be suf-
22 ficient to place the consumer on notice and absolve any
23 manufacturer, wholesaler or retailer of liability as to
24 ultimate uses.

KMX 00838

25 One further means of limitation might well be in

1 package size since the case of powder joint cements, in
2 the case of powder joint cements, that 25 pound bag, and
3 in the case of premix, the five gallon package, are more
4 commonly though not exclusively contractor oriented.
5

6 Thank you, again, for this opportunity and con-
7 sideration.

8 CHAIRMAN BYINGTON: Could you be a little more
9 explicit in terms of your request that we reconsider the
10 180 day time frame? The way it's presently phrased it
11 would be 30 days after the day of the publishing of the
12 final notice, and it would relate to the manufacturer.

13 MR. NEMETH: Sale and distribution, as I under-
14 stand it.

15 CHAIRMAN BYINGTON: So what you're talking about
16 what be your problem that you're raising is not necessarily
17 the 30 days for the manufacturer, it's the 180 days down
18 to the time.

19 MR. NEMETH: Yes. What I'm saying is that your
20 staff researchers indicated that it would be six months
21 before you can have all non asbestos materials in distri-
22 bution, so that if six months for that is a reasonable
23 figure, then I'm suggesting that perhaps the 30 day figure
24 should perhaps apply for a manufacturing deadline, but to
25 allow additional time for the materials that are out there
to clear channels. Particularly under this CPSA proposal,

1 which would not call for a ban.

2 In other words I'm thinking of the enforcement
3 end of this, in terms of clearing the channels out, that
4 perhaps 90 days for a distributor, or 180 days for a
5 distributor and a retailer might be a more realistic ap-
6 proach to have everything out.

7 CHAIRMAN BYINGTON: Okay, well I understand now,
8 but I guess my confusion was that I'm listening to what
9 you had to say without, unfortunately, being able to see
10 it.

11 You seem to be discussing that at about the same
12 time I think you said something along about need possibly
13 more time, reformulation time.

14 MR. NEMETH: I'm saying we can accept it. We
15 would, from an internal standpoint, we would prefer more
16 time for product testing, but we understand the situation
17 and we have been testing and have been working, and we
18 can accept the ban.

KMX 00840

19 CHAIRMAN BYINGTON: Okay.

20 MR. NEMETH: I'm just concerned about the proce-
21 dures.

22 CHAIRMAN BYINGTON: The severe economic impact
23 that you're referring to is really related to recall, and
24 reformulation time, you believed, you can meet the 30 day
25 and the --

1 MR. NEMETH: We are out of asbestos --

2 CHAIRMAN BYINGTON: Now.

3 MR. NEMETH: -- now, yes. As of April we complete-
4 ly discontinued all asbestos patching type materials.

5 We have reformulated -- let me say that again --
6 we have reformulated to a non asbestos basis. We have
7 not discontinued selling. But anything produced since
8 April, the end of April, has been on a non asbestos basis.

9 CHAIRMAN BYINGTON: All right, if that's the
10 case, that was one of the reasons why I felt the time
11 frame should be shortened. I'm one of those who made the
12 motion supported by my fellow commissioners, but I mean,
13 one of my concerns and why I particularly raise it, and
14 maybe they would have raised it as well for the same reason,
15 was because of that.

16 In other words, if you take April, let's say the
17 end of April, and you start with May, by October you'll
18 be at the 180 day period. And my concern has been that
19 we have taken inordinately long --

20 MR. NEMETH: I understand.

21 CHAIRMAN BYINGTON: -- in getting from there to
22 here.

23 MR. NEMETH: Yes.

KMX 00841

24 CHAIRMAN BYINGTON: And as I indicated, one of
25 the problems was that the deeper the staff and the Commission

1 get into it, the larger some of the problems became, and
2 we needed to clarify some of those in terms of the work
3 that we are required to do prior to publishing a proposal.
4 It took us a couple of months or so longer than we had
5 originally anticipated that it would.

6 And therefore since there was great, as you
7 indicated, publicity, some of it unfortunately not correct,
8 back in April when we originally made the original decision,
9 and then the end of July when we published, I felt that
10 we had already used maybe another 60 days, 90 days, which
11 if you add the 120 comes not too far from the 180.

12 And so even in your own particular situation, if
13 you assume, as you said, you haven't been doing it since
14 April, let's assume since the 1st of May everything that's
15 left to your place has been non asbestos?

16 MR. NEMETH: No, because we discontinued production
17 at that point and went into the production --

18 CHAIRMAN BYINGTON: Okay, so --

19 MR. NEMETH: But we shifted from inventory, so it
20 --

21 CHAIRMAN BYINGTON: What sort of an inventory do
22 you maintain?

23 MR. NEMETH: Well, there would be in some instances,
24 there would be a 30 to 60 or 90 -- some items 90 days in-
25 ventory.

1 CHAIRMAN BYINGTON: On hand at the time.

2 So production stopped as of --

3 MR. NEMETH: May 1st, for all practical purposes.

4 CHAIRMAN BYINGTON: Okay.

5 MR. NEMETH: Yes.

6 CHAIRMAN BYINGTON: As of the first of May nothing
7 more was being produced.

8 MR. NEMETH: That's correct.

9 CHAIRMAN BYINGTON: But effectively you would
10 have through on the 90 day thing, you might have through
11 July --

12 MR. NEMETH: We might be coming to the end of it
13 now, yes.

14 CHAIRMAN BYINGTON: All right.

15 MR. NEMETH: Which means there is still some out
16 in the distribution channels.

17 CHAIRMAN BYINGTON: So your point is, again if
18 I understand it, no problem with the 30 days as long as
19 it's left at the manufacturer level, but if it's not and
20 it's at the retail level as well, there is going to be a
21 significant economic burden potentially facing the smaller
22 manufacturer because of what's going to be left in the
23 chain?

24 MR. NEMETH: Yes, and from a practical standpoint
25 we will probably be asked to take back from our distributors

1
2 plus we have the other factor of while we try to tell our
3 retailers to turn their stock, we really don't know how
4 much of it is still out there from six months ago that
5 may never come to the front of the shelf to be purchased.
6 And I'm thinking from an enforcement standpoint, two
7 months down the road it's still there.

8 If we then effectively have everyone go back and
9 pick it up, they will then begin to look at their stock to
10 see what is to be returned.

11 CHAIRMAN BYINGTON: Commissioner Franklin, did
12 you want --

13 COMMISSIONER FRANKLIN: I wanted to follow up on
14 this timing question. Let's say we were to publish a
15 final ban in September. Now 180 days, it would be six
16 months into the future, if I'm hearing you right --

17 MR. NEMETH: Yes.

18 COMMISSIONER FRANKLIN: The chain would be cleared
19 by then, whether we're talking about --

20 MR. NEMETH: Six months.

21 COMMISSIONER FRANKLIN: Well, we're talking about
22 next March, I'm counting. Is there any -- do you think
23 that some reasonable time like December or like October?
24 What I'm getting at is, do you think the chain would be
25 clear of asbestos containing material in 60 days from the

1
2 day we proposed the ban? Do you really think it's going
3 to take the full 180?

4 MR. NEMETH: Well --

5 COMMISSIONER FRANKLIN: Because I too was one
6 who wanted it cut back --

7 MR. NEMETH: Yes, and I understand the reasons
8 why, of course. Certainly from our standpoint, when a
9 final determination is made, we will make every effort to
10 notify our distributors and in turn all of their retailers
11 to be certain that the merchandise gets moved out; with
12 the publicity there has been they may or may not.

13 I don't know this for a fact, although frankly,
14 we have not had anyone come back to us at this point and
15 say, I've got asbestos in stock in view of everything
16 that's going on, take it back.

17 So the consumers are still buying the merchandise
18 because it's out there on the shelf, frankly. So we
19 would make certainly every effort, whatever the final
20 determination is, to get the distributors and the retailers
21 to get that merchandise out front on the shelves, to be
22 certain it is moved out.

23 COMMISSIONER FRANKLIN: What is the size of your
24 company in terms of sales volume?

25 MR. NEMETH: Well, about five million.

COMMISSIONER FRANKLIN: Okay. Is this your only

1 business, the making of these kinds of --

2 MR. NEMETH: Well, powder paint sundries predomi-
3 nately, powder and paste paint sundries, all types of
4 patching and resurfacing type materials.

5 COMMISSIONER FRANKLIN: Let me ask it another
6 way. Is the kind of products that we're talking about here,
7 we've identified patching compounds, is that the major part
8 of your business?

9 MR. NEMETH: No, the ones that you're identifying
10 here now would be about 25 percent.

11 COMMISSIONER FRANKLIN: Okay. Are you a public
12 company?

13 MR. NEMETH: Yes.

14 COMMISSIONER FRANKLIN: I have no further ques-
15 tions, thank you.

16 CHAIRMAN BYINGTON: Commissioner Pittle.

17 COMMISSIONER PITTLE: Yes. When you said that
18 asbestos containing products were still on the market,
19 do you have any feel for what percentage of the market
20 today on the retail shelves contains asbestos containing
21 products?

22 MR. NEMETH: I'm --

KMX 00846

23 COMMISSIONER PITTLE: Could you pull one out of
24 the air?

25 MR. NEMETH: That would be difficult to say.

1 When I made the comment even earlier about the time element,
2 I was making a general statement because I don't know how
3 many other manufacturers are out there who have, in fact,
4 converted or not converted to non asbestos.

5 COMMISSIONER PITTLE: Are you one of the five or
6 one of the 95?

7 MR. NEMETH: Oh, I'm sure we're one of the 95.

8 COMMISSIONER PITTLE: Okay, I just --

9 MR. NEMETH: I'm certain we are, in view of my
10 predecessor.

11 COMMISSIONER PITTLE: Do you mind -- can you tell
12 us what you used as a substitute?

13 MR. NEMETH: Well, calcium carbonates would be
14 one, types of clay would be another.

15 COMMISSIONER PITTLE: They're not fibers then, in
16 that sense.

17 MR. NEMETH: I certainly hope not.

18 COMMISSIONER PITTLE: Okay, have you --

19 MR. NEMETH: I --

20 COMMISSIONER PITTLE: -- tested?

KMX 00847

21 MR. NEMETH: No, we're in the process of going
22 into further detail on this, but again it's a time consuming
23 thing, and to the best of our knowledge at this point they
24 are not.

25 COMMISSIONER PITTLE: Do you plan to do any kind

1 of testing such as either an optical scan or --

2 MR. NEMETH: Yes.

3 COMMISSIONER PITTLE: Back in the days when you
4 did use asbestos, what percentage, by weight, roughly,
5 was the asbestos in the final product?
6

7 MR. NEMETH: Well, in the joint cements, probably
8 a little less than five percent.

9 COMMISSIONER PITTLE: Between four and five?

10 MR. NEMETH: Yes, between four and five percent.
11 Now, that's an off the top of my head judgment, somewhere
12 in that range. Spackling compounds as such would never have
13 had asbestos as an obvious part of the formulation, however,
14 that's a little side element there that we have never put
15 asbestos as such into spackling compounds. But --

16 COMMISSIONER PITTLE: That must have been a
17 generic term that's --

18 MR. NEMETH: Well, no, this is part of that talc
19 --

20 COMMISSIONER PITTLE: Oh.

KMX 00848

21 MR. NEMETH: -- process.

22 COMMISSIONER PITTLE: Oh, did you use talc?

23 MR. NEMETH: Oh, yes. Not in the joint cement but
24 in spackling compounds.

25 COMMISSIONER PITTLE: Do you still use talc or is
that --

1 MR. NEMETH: Yes.

2 COMMISSIONER PITTLE: The termalitic (ph) count?

3 MR. NEMETH: No longer, no.

4 COMMISSIONER PITTLE: Oh, but you did?

5 MR. NEMETH: Yes, earlier, yes. All that went
6 out the window as of April.

7 COMMISSIONER PITTLE: Oh, I see, in April --

8 MR. NEMETH: When the television stations and
9 everybody, and our distributors, and everybody, began
10 calling, and that was the first we'd heard of it.

11 COMMISSIONER PITTLE: I completely agree with
12 you, the regulation through the press is probably not
13 fair when there's not a chance to evaluate all of the
14 evidence.

KMX 00849

15 MR. NEMETH: Yes.

16 COMMISSIONER PITTLE: It's just something --

17 MR. NEMETH: Nevertheless, at that point --

18 COMMISSIONER PITTLE: It works both ways.

19 MR. NEMETH: Of course it does, and at that point
20 we dropped everything, which when I say that, when you do
21 -- when you think you're on schedule, and then all of
22 a sudden from that point on everything becomes a crash
23 program, why some of these things we're still catching
24 up on.

25 COMMISSIONER PITTLE: We're aware of that, it's

1 something I think we all suffer with. Going back to the
2 testing, whether you use the optical or the electron micro-
3 scope, you don't have that equipment in your own --

4 MR. NEMETH: No. We've been sending the material
5 out. We've had some materials out to independent testing
6 laboratories to give us reports on, and we will be doing
7 more of this.

8 COMMISSIONER PITTLE: Is that very expensive, that
9 type of-- do you feel was that a \$5,000 test, was that a
10 --

11 MR. NEMETH: Oh, no, no.

12 COMMISSIONER PITTLE: -- a \$50,000.00 test.

13 MR. NEMETH: No, it wouldn't be that expensive.
14 I don't have an exact dollar figure, but it wouldn't be
15 in that range where we would be --

16 COMMISSIONER PITTLE: Less than a thousand.

17 MR. NEMETH: Less inclined to do it, yes. I
18 would say it would be less than \$1,000.00.

19 COMMISSIONER PITTLE: Less than a thousand.
20 That's to determine any fiber content of --

21 MR. NEMETH: Yes, there may be some people in
22 the room that could answer that better than I can. I
23 don't know.

24 COMMISSIONER PITTLE: Does the -- your testing
25 will just be to determine whether there's any fiber as

1 opposed to what the toxicological effects of any lingering
2 dust would be on --

3 MR. NEMETH: Yes, at this point it would be
4 basically on the fiber because as a small manufacturer,
5 we really rely rather heavily on our raw material suppliers,
6 in terms of testing data.

7 COMMISSIONER PITTLE: And when you depend on them
8 do you ask them for tests and say what have you done to
9 assure me that I won't get taught for something that --

10 MR. NEMETH: Well, you don't always get too straight
11 an answer on that type of thing, it's difficult even to get
12 material safety data sheets from some of the raw material
13 suppliers. But we're accumulating a file over the time
14 period and when you ask enough you do get it.

15 COMMISSIONER PITTLE: If you were to receive
16 back a large amount of asbestos containing products like
17 you manufacture, like a year ago, two years ago, would
18 there be any way to recycle that or reuse it, or would
19 that be a total waste?

20 MR. NEMETH: It would be probably an additional
21 expense because we'd have to go through special precautionary
22 procedures, I assume, in dumping it, in large volume to
23 one location, if it came in.

24 Ip resume that scattered out the way it is
25

1 around the country, ours and everyone else's, the dumping
2 process would be minute in terms of the other asbestos
3 already in the environment.
4

5 But of course it all comes into one location,
6 and it all goes to one dumping location, then I suppose
7 some type of special precautionary measures would have to
8 be taken.

9 COMMISSIONER PITTLE: So at this time your
10 company doesn't have any plans, any specific plans, to
11 dispose of whatever might be returned from let's say a
12 distributor who says, no, I don't want it?

13 MR. NEMETH: No, we do not. We will -- we hope
14 that doesn't happen, but we have no specific plans because
15 we don't know the amount involved at this point.

16 COMMISSION PITTLE : Okay.

17 MR. NEMETH: And I suspect if it came to that, and
18 we had a warehouse full, we probably have to contact some
19 agency to determine exactly what procedures we should take.

20 COMMISSIONER PITTLE: Thank you, very much.

21 CHAIRMAN BYINGTON: Commissioner Kushner.

22 COMMISSIONER KUSHNER: I'd just like to follow
23 up a bit on the testing that you say is being done. This
24 testing is simply to satisfy yourself that there isn't any
25 asbestos in the new formulations?

KMX 00852

1 MR. NEMETH: Exactly.

2 COMMISSIONER KUSHNER: And what you look for
3 are what, fibrous materials, is that the --

4 MR. NEMETH: Yes.

5 COMMISSIONER KUSHNER: I guess it would be
6 interesting to me to know what somebody -- what kind of a
7 definition the laboratory has of a fibrous material, what
8 constitutes a fibrous material. I wonder if you could get
9 that information for us from your testing laboratory.

10 MR. NEMETH: Certainly.

11 COMMISSIONER KUSHNER: Once you had decided
12 on an alternative formulation, to your product, did you
13 encounter any difficulty in getting the materials?

14 MR. NEMETH: No, we --

15 COMMISSIONER KUSHNER: In what quantities you
16 needed.

17 MR. NEMETH: No, we have not had any difficulty
18 in getting the raw materials. The hard part, we're
19 trying to get all the characteristics to perform as the
20 gentleman before me indicated, the testing procedure to
21 get all the same or similar characteristics of the finished
22 product.

23 We went through a number of them, of course,
24 but on those we were working with now, we have no diffi-
25 culty in getting the raw materials.

KMX 00853

1 COMMISSIONER KUSHNER: It was my understanding
2 it was a fibrous nature of asbestos that imparted the
3 desirable property, and yet now you are apparently being
4 able to formulate alternatives that don't have fibrous
5 materials, and I'm --

6 MR. NEMETH: Well --

7 COMMISSIONER KUSHNER: That allegedly don't have
8 fibrous materials, and I'm interested in knowing what
9 the --

10 MR. NEMETH: Yes, I've made a note of that and
11 we'll certainly --

12 COMMISSIONER KUSHNER: -- just what you really
13 mean by non fibrous.

14 MR. NEMETH: Well, what we mean by non fibrous.
15 This is a big debate --

16 COMMISSIONER KUSHNER: Well your testing company.

17 MR. NEMETH: Yes.

KMX 00854

18 COMMISSIONER KUSHNER: Yes.

19 CHAIRMAN BYINGTON: Would you also address your-
20 self to a couple of similar questions we asked Mr. Bush
21 from U. S. Gypsum, in addition to those Commissioner Pittle
22 has already raised, and that would be has there been an
23 effect on the cost in terms of this reformulation, and
24 if it leaves you -- now, if you know what that's translated
25 to in terms of retail, we'd appreciate knowing that.

1 But we would like to know what kind of impact,
2 if any, there has been, in terms of cost, and secondly, in
3 terms of labor in the application of the compound. In
4 other words, is the compound more difficult to use or
5 more time consuming to use, et cetera, and therefore
6 maybe a more labor intensive product than the prior
7 product was.

8 MR. NEMETH: Well, from our standpoint, because
9 the bulk of our merchandise is in small packages, and
10 goes to the consumer -- in other words, the bulk of our
11 merchandise is sold through retail outlets, if the average
12 do-it-yourselfer is the type of do-it-yourselfer that I
13 am, he would not probably notice the difference because
14 he is not using it frequently enough.

KMX 00855

15 CHAIRMAN BYINGTON: Correct.

16 MR. NEMETH: To really notice the difference and
17 when he's doing it himself five minutes or 10 minutes
18 more or less wouldn't make that much difference. So
19 we don't have that type of contractor experience.

20 CHAIRMAN BYINGTON: I think that that's true,
21 and I think that's what Mr. Bush pointed out, that the
22 one or two times in my life that I might ever try it, I
23 wouldn't have anything to compare it to, so I --

24 MR. NEMETH: Yes.

25 CHAIRMAN BYINGTON: -- wouldn't know if it took

1 longer or shorter, but if I was doing it every day, then I
2 might.

3 But you indicated a possible separation point
4 between consumer and industrial, but you don't sell at
5 the industrial level --

6 MR. NEMETH: No --

7 CHAIRMAN BYINGTON: -- over 25 pound bag, and
8 you --

9 MR. NEMETH: Well, we have it available, and of
10 course through our distribution channels, some of the 25
11 pound size and some of the five gallon size and pre-mix
12 might very well end up with a contractor, not on a direct
13 sale basis, but through our distributors, so that's cer-
14 tainly possible.

15 CHAIRMAN BYINGTON: But isn't it true that
16 through that same distributor, any consumer could go in
17 and buy that 25 pound bag, or five pound container?

18 MR. NEMETH: Yes, he certainly could, he certainly
19 could.

20 CHAIRMAN BYINGTON: Five gallon container.

21 MR. NEMETH: Yes, I only brought the matter up
22 because of the comment in the Federal Register --

23 CHAIRMAN BYINGTON: Correct.

KMX 00856

24 MR. NEMETH: -- to the effect that just labelling
25 along should not be sufficient, and yet in fact the

1 contractor is going to be allowed to continue to buy asbes-
2 tes containing products, then it seems to me unfair to
3 put a burden on that retailer to put him in the category of
4 a druggist and have to get signatures on where this material
5 is going to be used.

6 And even then you can't be sure because the
7 contractor using it in new construction may have a bag left
8 over that he gives to a workman, and the minute the workman
9 takes it home he's a consumer.

10 So we're right back to where do we draw the line,
11 and if the consumers know that this is for industrial or
12 commercial use only, and it's marked that it's an asbestos
13 product, then that should become his problem, I think, or
14 it should be a total ban.

15 I certainly don't throw that out as my recom-
16 mendation --

17 CHAIRMAN BYINGTON: Which is where we are right
18 now --

19 MR. NEMETH: Yes.

20 CHAIRMAN BYINGTON: -- which is what the total ban
21 is.

KMX 00857

22 MR. NEMETH: Yes.

23 CHAIRMAN BYINGTON: Do you have any idea of what
24 percent of your sales are at the 25 pound bag, at the five
25 gallon level?

1
2 MR. NEMETH: I couldn't give you an exact per-
3 centage figure, but they're small. They're small.
4 The bulk of our business is in the small package, the
5 gallon sizes, the five pound sizes.

6 CHAIRMAN BYINGTON: Do you label your product now
7 as being asbestos free, or non asbestos, in other words do
8 you say so on the package?

9 MR. NEMETH: We have on one or two products, we
10 are more than anything just dropping the asbestos warnings
11 that we previously had on the packaging.

12 COMMISSIONER FRANKLIN: And having nothing, in
13 other words, no warning at all.

14 MR. NEMETH: Yes. Some of them say non asbestos
15 because we began to promote those while we still had --
16 we're still making both, and so we were offering a dif-
17 ferentiation.

18 But as we go away from it we probably will just
19 drop the asbestos warning, and on the assumption that the
20 ban will, of course, take effect. It really won't make any
21 difference as long as -- because they all will.

22 COMMISSIONER BYINGTON: Would you be a little
23 more specific for our staff who have asked that in terms
24 of cleaning out the marketplace, at whatever time the ban
25 takes effect, and we'll leave that -- you've asked us to
reconsider and we did point out that we would take a look

1 at that.

2 But let's assume that the day arrives the ban
3 takes effect, and even if we assume for the moment it was
4 a staggered basis, and it took 30 days from manufacture,
5 and X number of days, 90, 120, whatever, 180 as you sug-
6 gested, at the retail level, at that point in time, whatever
7 it is, what would then really happen to that which is
8 really out there?

9 Would you have it recalled, or would you reimburse
10 and have them dispose of it locally, how would you pro-
11 ceed?

12 MR. NEMETH: How would I like to proceed? Or --

13 CHAIRMAN BYINGTON: How -- what would you like to
14 see happen?

15 MR. NEMETH: I would just like to suggest that
16 everybody throw away what they have left in stock.

17 CHAIRMAN BYINGTON: Take care of disposal at the
18 local level --

19 MR. NEMETH: Exactly.

KMX 00859

20 CHAIRMAN BYINGTON: -- in smaller amounts.

21 MR. NEMETH: Exactly, because --

22 CHAIRMAN BYINGTON: Then would you reimburse,
23 or would you have to reimburse, or would you be --

24 MR. NEMETH: That would be a very ticklish prob-
25 lem. I don't suppose that the manufacturer is any more at

1
2 fault than the retailer or the distributor. It's a diffi-
3 cult question to answer. I know what I would like to see
4 happen, again, but I suppose market situations would dictate.

5 CHAIRMAN BYINGTON: Also what your competitors
6 do?

7 MR. NEMETH: Probably.

8 CHAIRMAN FRANKLIN: But under CPSA there is
9 not the same kind --

KMX 00860

10 CHAIRMAN BYINGTON: No.

11 CHAIRMAN FRANKLIN: -- of repurchase obligation
12 and --

13 MR. NEMETH: Yes, I understand that, as a matter
14 of fact that was the point I was trying to make, and I
15 hoped that the ban would go forward on that basis, because
16 then at least it becomes a negotiable situation between
17 the distributor or retailer and the manufacturer.

18 CHAIRMAN FRANKLIN: I've got two more.

19 CHAIRMAN BYINGTON: Go ahead, Commissioner Franklin.

20 COMMISSIONER FRANKLIN: Just to reiterate some-
21 thing that I really am very interested in, and it was
22 mentioned by the chairman briefly here, and that is if
23 you do have any information, that would be helpful to us
24 with respect to how a consumer used your reformulation,
25 whether he likes it or doesn't like it, it works better,
works worse or whatever, I think that's very important

1 information for us.

2 Along those lines I'd like to ask you --

3 CHAIRMAN BYINGTON: Excuse me, could I say some-
4 thing? I think what we both are looking for is that you
5 do, which unlike gypsum, probably have a closer retail
6 relationship or a consumer relationship because of the
7 nature of your product, and therefore possibly some of your
8 distributors may have received complaints --

9 COMMISSIONER FRANKLIN: Or may have some idea --

10 CHAIRMAN BYINGTON: -- or written you.

11 COMMISSIONER FRANKLIN: -- about the efficacy, if
12 you will --

13 CHAIRMAN BYINGTON: Right.

14 COMMISSIONER FRANKLIN: -- of the new products.

15 MR. NEMETH: The problem is since we just -- well,
16 I can -- we discontinued everything as of May 1st, so
17 some of the things still going out since May 1st --

18 COMMISSIONER FRANKLIN: Yes.

19 MR. NEMETH: -- were still of the old type. On
20 two of the products, one in the powder joint cement, that
21 was discontinued and switched to non asbestos last August,
22 the gallon size of pre-mix joint cement has been on the
23 market since December.

24 And we have had no adverse comments on either of
25 those two products.

1 CHAIRMAN BYINGTON: Okay.

2 COMMISSIONER FRANKLIN: I have a further question
3 here, and I'd like your reaction to the statement that's
4 in our proposed ban. I state now, "for purposes of this
5 assessment, the Commission considered the use of patching
6 compounds by a consumer, for six hours a day, four times a
7 year, to be high yet reasonably foreseeable yearly exposure."

8 Do you think we're in the right ballpark with
9 that?

10 MR. NEMETH: I think that it's high.

11 COMMISSIONER FRANKLIN: You think it's high.

12 MR. NEMETH: Yes, but --

13 COMMISSIONER FRANKLIN: What do you think it
14 should be?

15 MR. NEMETH: I'm probably in the same position
16 that you're in in trying to make that evaluation. It's
17 high but it's -- I don't want to say it's unreasonable
18 because I think it is high, but to try to put a lower
19 figure on it, again I would just be guessing, really.

20 CHAIRMAN BYINGTON: Your lower figure wouldn't be
21 any more defensible than that position, is that what you're
22 saying?

KMX 00862

23 MR. NEMETH: That's about right.

24 COMMISSIONER FRANKLIN: Do you think that your
25 point of view in what you have done with respect to your

1 voluntary reformulation of this product is similar to what
2 other businesses, of comparable size that make this product,
3 have done?

4 MR. NEMETH: Difficult to answer. I -- we don't
5 really fraternize with our competition too much, and --

6 COMMISSIONER FRANKLIN: Well, I understand.

7 MR. NEMETH: Yes.

8 COMMISSIONER FRANKLIN: Why you are not.

9 MR. NEMETH: So it's difficult for me to say
10 that, other than what I might observe in the marketplace,
11 and there are other small manufacturers around. And when
12 I was making some of these comments I was talking about all
13 of us really as a whole, not necessarily what our specific
14 position might be in terms of the turnover and what have
15 you.

KMX 00863

16 More difficult for the small ones to reformulate
17 and to switch over. I think in talking to one or two
18 people just casually, they thought this whole thing would
19 blow over and go away, so there may be a few who have not
20 reformulated, and that's just a guess on my part. I
21 really wouldn't know that for a fact.

22 But I know that the thought was, oh, well, you
23 know, it's never really going to happen.

24 COMMISSIONER FRANKLIN: But in other words, in
25 your comments, particularly as they relate to the effective

1 date of this regulation, you feel that you were speaking,
2 at least more or less, for other small manufacturers.

3 MR. NEMETH: Yes.

4 COMMISSIONER FRANKLIN: Okay.

5 CHAIRMAN BYINGTON: Commissioner Pittle, you have
6 one more?

7 COMMISSIONER PITTLE: I was curious by the fact
8 that you have, and I'd just like to know what your thinking
9 is, why you dropped the asbestos warning. I understand
10 why you dropped if it doesn't contain it, why you didn't
11 take the next step and say, this doesn't contain asbestos.
12 And that way it would be, you know, would grab the consumer's
13 attention --

14 KMX 00864

15 MR. NEMETH: Well --

16 COMMISSIONER PITTLE: -- to compete against all
17 the other products in the market containing asbestos.

18 MR. NEMETH: We have put that on a few products,
19 but in view of the fact that we -- the remaining products
20 that we got out of on asbestos were as recently as April,
21 we anticipate that we're very, very close at this point to
22 a complete, non asbestos situation, so that everybody is
23 going to be in the same ballpark.

24 COMMISSIONER PITTLE: All right, in other words
25 do you believe that it's going to be that soon before you
couldn't buy asbestos containing products in the market,

1 I mean, do you predict that's going to be, I mean, just
2 naturally in six months or a year?

3 MR. NEMETH: I'm sorry, I don't understand.

4 COMMISSIONER PITTLE: The way I'm understanding
5 it, it's going to take quite a while for the -- some number
6 of months, in the two figures that --

7 MR. NEMETH: Yes.

8 COMMISSIONER PITTLE: Two figures for the month
9 to somehow make sure there are no longer any -- if the
10 regulation wasn't in existence but just naturally were to
11 take place --

12 MR. NEMETH: Yes.

13 COMMISSIONER PITTLE: -- it would take 24 months.
14 And it would seem to me if you had a product that didn't
15 have this undesirable characteristic that you'd want to
16 advertise that and push it, to reach out and grab the
17 consumer's attention and try to steer them toward your
18 product.

19 MR. NEMETH: Yes, we have done that on some spe-
20 cific products, and especially one or two brand new
21 products that we formulated from the start as being non
22 asbestos. On those we did play up the non asbestos
23 feature quite heavily.

KMX 00865

24 But only on those, and I guess, again, from a
25 practical, economic standpoint, our type of packaging is

1 on automated equipment with overwrap type packaging, which
2 is the easiest way, I guess, to describe it would be the
3 type of packaging that goes on a cracker box. Every box
4 is individually wrapped, and it gets very costly to be
5 changing labels, directions, which we've had to go through
6 quite a bit of this in recent months, recent years, as
7 various regulations have come out.

8 It gets very costly to completely scrap labels,
9 we buy them in enormous quantity, and to throw them out
10 and redo the place and reprint when we see this non asbestos
11 thing taking shape the way it is any way, probably an
12 economic consideration as much as anything else.

13 We've evaluated that, and on those where we felt
14 it would be advantageous to say non asbestos, we did it.
15 On others where it didn't make any difference because the
16 whole thing was going that way shortly any way, and it was
17 a standard in the line, we just didn't do it because in
18 six months it would be redundant to say non asbestos, we
19 assume, or 90 days, or whenever, it will be redundant to say
20 non asbestos.

21 COMMISSIONER PITTLE: I see. It seemed to me if
22 you were going to have space, that you had asbestos warning,
23 and when you redid your labels, to take that out, but
24 that's a decision I wasn't part of--

25 MR. NEMETH: Yes.

KMX 00866

1 COMMISSIONER PITTLE: -- and I don't know all the
2 parameters. But you could have just stuck in there no as-
3bestos.

4 And I'm just wondering, there is not possibly
5 products that you'd be competing with yourself in terms of
6 one product you had out, would have asbestos in it and
7 another one that wouldn't.

8 MR. NEMETH: Well, only in an overlap situation
9 where --

10 COMMISSIONER PITTLE: Overlap.

11 MR. NEMETH: Yes, only where we had discontinued
12 and still had some of the old in stock.

13 COMMISSIONER PITTLE: I see. Okay.

14 CHAIRMAN BYINGTON: Thank you very much, sir, we
15 really appreciate your coming down. And if you could, the
16 bits of information that we were asking, if you'd get us,
17 and supply that.

18 MR. NEMETH: I will certainly try to.

19 CHAIRMAN BYINGTON: Thank you, very much.

20 COMMISSIONER FRANKLIN: May I make a remark?

21 CHAIRMAN BYINGTON: Yes.

22 COMMISSIONER FRANKLIN: I just wanted to add my
23 thanks to your coming. I think there are a couple of
24 points of view we don't typicall get enough of in the regula-
25 tory decision making process, and one of them is small

1 business.

2 And I appreciate your coming and taking the time
3 and making your views known. The other is consumers.

4 MR. NEHETB: Small consumers don't come either.

5 COMMISSIONER FRANKLIN: Yes, small consumers
6 don't come either, I quite agree.

7 CHAIRMAN BYINGTON: The next presentation will
8 be made by Mr. Rhodes of the Union Carbide Corporation,
9 and it's my understanding that Mr. Rhodes has asked that
10 of his 30 minutes he would like to make part of his presen-
11 tation now and part of your presentation later?

12 MR. RHODES: That's correct.

13 CHAIRMAN BYINGTON: Okay, go ahead and proceed.

14 MR. RHODES: I have 15 copies, but I would like
15 to request that they be given to the Commissioners and
16 staff only until I've completed my presentation. Is that
17 okay?

18 CHAIRMAN BYINGTON: Fine.

KMX 00868

19 You're concerned -- you're saying that the
20 distribution of this thing relates to, the press can't have
21 copies while you're going through it?

22 MR. RHODES: I would prefer that I be allowed
23 to complete my presentation before it be made generally
24 available.

25 CHAIRMAN BYINGTON: Well, I think --

1 MR. RHODES: It splits into two parts. I'd like
2 to present it before it's released to the press. Is that a
3 problem with you?

4 CHAIRMAN BYINGTON: Well, I think they ought to
5 have the opportunity to go through it the same time that
6 we're going through it. I mean, this is a public meeting
7 and you're going to make a public statement, and you know,
8 I think it would be appropriate if they were given at least
9 a copy of it to follow along as you're going through it,
10 yes.

11 MR. RHODES: Yes.

12 COMMISSIONER PITTLE: There may be people who
13 want to write questions up at the end of the presentation,
14 and it's kind of hard to follow, a thick document like this,
15 orderly.

16 CHAIRMAN BYINGTON: Why don't you make some more
17 for later.

18 MR. RHODES: I didn't mean it to be all that
19 complicated.

20 Okay, let me begin by introducing myself.
21 My name is Harrison B. Rhodes, and I'm speaking on behalf
22 of Union Carbide Corporation where I hold the position of
23 technology manager in the "Calidria" Asbestos Department.

24 My education is in the field of chemical engineer-
25 ing where I hold a degree of Doctor of Science from

1 Columbia University. The past four years my assignment
2 has been in the area of asbestos health and regulatory
3 matters, and has also included research on monitoring tech-
4 niques.

5 I am also currently serving the Asbestos In-
6 formation Association, North America, as chairman of the
7 standards and technical committee. Union Carbide Corpora-
8 tion has been actively engaged since 1963 in the mining
9 and milling of asbestos for facilities in Central Califor-
10 nia.

11 The asbestos fiber produced is marked throughout
12 the United States and in many foreign countries. One of
13 the principal applications for asbestos in this country
14 has been in tape-joint compounds.

15 We do not ourselves manufacture such compounds,
16 however, nor do we manufacture any other asbestos contain-
17 ing finished products. As a commissioners are well aware,
18 there has been a tremendous flood of paper generated in
19 relation to the asbestos regulatory matters under con-
20 sideration here.

KMX 00870

21 We believe that several crucial issues have
22 been lost in the flood, and would like to take the oppor-
23 tunity today to address these issues as follows.

24 First, a look at all of the commercial and
25 consumer exposure data available today, including some

KMX 00870

1 recent consumer tests, and also some OSHA compliance in-
2 spection results. An examination of the risk estimation
3 model proposed by Dr. Bayard of the CPSC staff in
4 terms of actual consumer exposure.

5 Third, a discussion of the elimination for reduc-
6 tion of unreasonable risk of injury as required by the
7 statute in the absolute zero risk regulatory approach that
8 is advocated by the petitioners.

9 Fourth, the direction of your attention to the
10 fact that asbestos, of one type or another, is present
11 throughout the air, water, and earth of this planet, and
12 the overwhelming consequences of a ban of ubiquitous
13 material such as this without a precise definition of what
14 is banned, a well specified, analytical procedure, at
15 some allowable levels other than zero.

16 Fifth, a presentation of a suggested alternative
17 approach to protect the consumer from unreasonable risk of
18 injuries, which is more realistic, more workable, and more
19 enforceable in the proposed total ban.

20 And this talk splits very nicely into the techni-
21 cal areas and a discussion of the regulatory problems.
22 I will address for the first portion the technical matters
23 and present the information. **KMX 00871**

24 Should be emphasized that this discussion will
25 deal directly with and presented in terms of tape-joint

1 compounds. Spackling compounds are similar in composition
2 and use, but are applied in so much smaller amounts that
3 the potential for significant exposure is virtually non
4 existent.

5
6 Emberizing Kits are outside the field of our
7 expertise, and will not be considered. Gypsum wall board
8 was developed about 1880, 1900. It did not come into wide
9 usage until World War II when the need for houses and other
10 buildings made this quicker, less complex construction
11 method very popular.

12 Usage has grown substantially since that time
13 and dry wall construction is now used in the majority of
14 residential and a wide variety of commercial and public
15 buildings.

16 Initially, ordinary plaster was used to embed
17 and cover the tape to make the joint between the boards,
18 but in the mid-forties specially formulated dry mixtures,
19 with caseine as the binder introduced.

20 These mixtures typically contained 10 to 15
21 percent asbestos. We have been told that the plaster at
22 that time also contained asbestos. And let me digress for
23 just a moment at this point. There seems to be a mis-
24 understanding that the asbestos is used as a binder in
25 tape joints.

KMX 00872

The binder is a casing, a glue, a vinyl acetate,

PMA 003/0

1 something of that nature, which makes itself hard. The
2 asbestos does not function as a binder.

3
4 To continue, ready mix, that is wet compounds or
5 mud, were introduced in the mid-fifties, were in broad,
6 general use by 1960. The asbestos content of muds in
7 general was high until about 1970, dropped during the seven-
8 ties to approximately the range of two to seven percent.

9 Tape joint compounds containing asbestos are
10 thus not new but have been in widespread use for 30 to 35
11 years, and I certainly wouldn't quarrel with the previous
12 speaker, who said 50 years.

13 Over the first 15 years of this period, the main
14 material used was provided dry and contained relatively
15 high levels of asbestos, that is 10 to 15 percent. The
16 Commission's consultants, A. T. Carney, Incorporated,
17 estimates that today's annual value of shipments of
18 patching compounds is \$80 million.

19 In an average price of 4.50 per can, this is
20 equivalent to about 18 million cans. The formulations we
21 have seen cost about 20 to 30 cents more per can for raw
22 materials to replace asbestos, so that the added burden
23 just to cover raw materials cost is about four and a half
24 million dollars annually.

KMX 00873

25 This cost, plus any percentage mark ups used,
would be added to the cost of the structure and would

1 carry the normal finance charges over the life of the
2 indebtedness.

3 It should also be noted that about 10,000 tons per
4 year of asbestos, with a product value of about one million
5 dollars, were used in this application prior to the decline
6 that has resulted from actions by a variety of governmental
7 agencies.

8 We believe that the total five and a half million
9 dollars annually represents a reasonably reliable, minimum
10 estimate of the direct, economic effects of the replacement
11 of asbestos and tape joint compounds.

12 The added effects of the poor performance of many
13 of the asbestos free muds has not been considered here.
14 In the assessment of the risk that needs to be related to
15 this cost burden, it is important to have a reliable esti-
16 mate of the level of consumer exposure.

17 All of the available information on exposure has
18 been assembled and is documented in -- and discussed in
19 detail in an appendix to this presentation, which will be
20 submitted prior to the August 29th, 1977 deadline for
21 written comments.

22 Only the key results will be summarized here.
23 The data presented are contained in five reports. First,
24 the tests conducted by Roll et al at one location in
25 New York City. This is the data cited by the petitioners.

1
2 Second, a survey of a variety of sanding condi-
3 tions made by Rhodes and Ingalls and cited extensively
4 by the Asbestos Information Association, North America,
5 in their response to the petition.

6 Third, data from state and federal OSHA compliance
7 inspections compiled by Equitable Environmental Health,
8 Incorporated, as part of a study of asbestos exposure in
9 the construction industry.

10 Fourth, a report submitted to the Consumer Product
11 Safety Commission by Union Carbide Corporation on July 14th,
12 1977, covering consumer exposure during a typical spackling
13 and a moderate sized, dry wall installation operation.
14 And fifth, a study by Union Carbide Corporation, which has
15 just been finished, on another consumer installation of dry
16 wall in a large room, including the ceiling.

17 The results of this survey are summarized in
18 two figures you are now receiving. Now, those are at-
19 tached to the back of the report. I have these. Would
20 you like some additional ones or do you want to switch
21 to the back?

KMX 00875

22 CHAIRMAN BYINGTON: That's okay.

23 MR. RHODES: Figure 1 shows along the vertical
24 axis the airborne asbestos concentration. The fibers per
25 cubic centimeter longer than five micrometers that occurred
in the breathing zone of the operator, during the sanding

1 operation.

2 Usually a number of samples were collected at
3 each location in a dark bar showing the range of concentra-
4 tions found, with the arithmetic average of all samples
5 indicated by the arrows.

6 The data on the left are those of Rohl, that were
7 cited in support of the petition. They were obtained in
8 one test in New York City. Note that an exposure of 20
9 fibers per CC for four days was used by Dr. Bayard in his
10 projection to risk, to be discussed later, and the scale
11 on that chart runs from zero to 20, so the top line on
12 there is 20 fibers per cc.

13 The next group of results were obtained by Union
14 Carbide Corporation in a survey of commercial
15 operations in eight different cities. Results range from
16 .2 to three fibers per cc.

17 These fiber counts have been spot checked blind
18 by two other laboratories. The EEH and OSHA compliance
19 data are shown next, and they fall in just about the
20 same range as the results of Union Carbide.

21 Now, I might interject, over towards the left
22 of that graft, Minneapolis, Minnesota was an asbestos
23 free mud and we're indicating several tenths of a fiber
24 per cc, which may or may not be asbestos. But it does
25 show up in the phase contrast monitoring procedure.

1
2 And there's another one about in the middle of
3 Denver, Colorado asbestos free. It's the same sort of
4 problem. We're not saying that those contain asbestos,
5 but we're saying if you run it by the OSHA inspection
6 procedure, there are fibers in there which must be counted
7 as asbestos.

8 The consumer use data is shown over on the far
9 right. The first case is for extensive spackling and the
10 installation of three panels of dry wall. The second is
11 for three walls and a ceiling in a large basement recrea-
12 tion room.

13 The latter mud contained two -- 2.6 percent
14 asbestos by weight on the dry bases. Exposures in these
15 tests were only 2/10ths to one fiber per cc longer than
16 five microns, which correspond roughly to the lower end
17 of the range found for commut-- commercial use.

18 COMMISSIONER PITTLE: Excuse me. The three panels
19 of dry wall you just referred to, is that --

20 MR. RHODES: That's the one--

KMX 00877

21 COMMISSIONER PITTLE: -- the study in the July 14th.

22 MR. RHODES: That's in the July 14th, and the
23 picture there installing it myself. There are two other
24 operations in tape joint installation that present the
25 possibility of exposure to free form asbestos fiber.

The addition of dry powder product water, and

1 the clean up after sanding. Data for these operations are
2 shown in figure 2. Here, in order to get the raw data on
3 the graph, it was necessary to run the scale from zero to
4 60 instead of zero to 20 as in the previous figure.

5 Otherwise the graph follows the same format and
6 shows a very similar pattern. The raw data are far higher
7 than the USHA results, and the consumer values are below
8 or in the lower end of the range for commercial use.

9 It is very important to understand that all of
10 the concentrations shown occurred during the active pur-
11 suit of the particular operation, sanding, wet out, or clean
12 up.

13 These operations generally take place for a
14 moderate portion of the day, with concentrations at much
15 lower values for the rest of the eight hour period. Eight
16 hour time waited, average exposures were calculated for
17 the two consumer installations, and the highest exposure
18 found was 2/10ths of a fiber per cc greater than five
19 microns for two days, while asbestos containing dust was
20 being generated.

21 One of your staff members, Dr. Stephen Bayard,
22 has developed a model to estimate the risk of respiratory
23 cancer from low level exposure to asbestos from taping
24 compounds. This modern model is patterned on that pre-
25 scribed in the paper by Rhodes and Henderson, except that

1
2 Dr. Bayard has made an assumption that the effective dose
3 is cumulative.

4 This shows a geometric increase in risk into the
5 model. We question whether there is any basis for this
6 assumption, we do not feel this is an appropriate place
7 to debate the issue.

8 It is of more interest to use the model, which is
9 heavily biased towards predicting a high risk, with the
10 exposures just noted for consumer use. That is 2/10ths of
11 a fiber per cc TWA for two days of operation.

12 Following Dr. Bayard's directions on page 3, part
13 C of the reference which we cite, for the highest time
14 waited average, of 2/10ths fiber per cc for two days
15 found for consumer applications, we obtain an annual
16 exposure of .004 fibers per cc per day for one year.
17 A mean latent period to tumor of 621 years, and zero
18 deaths of asbestos induced cancer in the 40 year period
19 considered.

20 If the period examined is extended to 100 years,
21 the number of deaths predicted would be .000003, which is
22 still far less than a single death. These risk estimates
23 are probably on the high side due to the assumptions used
24 in the model. KMX 00879

25 Since an exposure of .004 fibers per cc per
day is indistinguishable from background, the values are

1 not unreasonable.

2 It is also instructed to point out that if we
3 assume an exposure of five fibers per cc for two full
4 eight hour days, which is well above the level found in
5 commercial use, the yearly rate becomes .1 fiber per cc.
6 This yields a median time to tumor of 212 1/2 years, and
7 an asbestos induced cancer rate of .02 deaths.
8

9 We question whether these are the unreasonable
10 risks referred to in the statute. Now, at this point I
11 will skip to page 12, I believe it is, and cover the rest
12 of the technical matters.

13 I would like to start by pointing out certain
14 practical aspects of enforcement of the ban as proposed
15 in the Federal Register, and I'm getting the impression
16 from what's gone before the Commissioners may already be
17 well aware of this problem.

18 These particular questions were discussed at
19 great length, and unfortunately generally were not solved.
20 The recent meeting in Gathersburg, Maryland conducted by
21 the National Bureau of Standards, and since several of your
22 staff members were there I will only touch upon them
23 briefly.

24 Since the promulgation of the OSHA asbestos
25 regulations in 1972 there has been a continued debate on

1 what is asbestos, what is an asbestos fiber. Asbestos,
2 when narrowly defined in a way that will satisfy the most
3 precise mineralogist, is ubiquitous in the atmosphere,
4 although generally it occurs at a very low, but not zero
5 concentrations.

6 When the definition is broadened to include all
7 amphibole chips, which are longer than five microns, and
8 have a length to diameter ratio greater than three, you
9 will approach a condition aptly described by Dr. Malcolm
10 Ross of the U. S. Geological Survey at the NBS meeting of
11 shutting down the face of the earth.

12 Particles of this type are everywhere, and would
13 contaminate any product containing a mineral. The EPA
14 faced this problem in 1973 and in writing emission
15 standards for the spraying of asbestos containing products.
16 And decided to treat it by setting a one percent by weight
17 maximum limit.

18 Their reasoning was as follows. The intent of
19 the one percent limit is to ban the use of materials
20 which contain significant quantities of asbestos but
21 allow the use of materials which would one, contain trace
22 amounts of asbestos which occur in numerous natural sub-
23 stances; and two, include very small quantities of asbestos,
24 less than one percent added to enhance the material's
25 effectiveness.

1 In order for any action by the Commission to be
2 workable and enforceable, we believe it is absolutely es-
3 sential that you provide a definition of asbestos which
4 states exactly what mineral species and what form of these
5 species are included, and specify what particle dimensions
6 constitute an asbestos fiber.

7 The present definition of the proposal could be
8 applied to rock that covers most of the surface of the
9 earth. In addition, an analytical procedure of the levels
10 of impurities that are acceptable, as measured by this
11 procedure, must be specified.

12 Without these practical definitions, the ban is
13 virtually universal and completely unworkable, and I will
14 conclude this portion of my remarks there and I'll be
15 happy to try to answer any questions in this area that
16 you may have.

17 CHAIRMAN BYINGTON: Are there any questions at
18 this time or do you want to reserve questions. He's going
19 to come back.

20 MR. RHODES: I'll be here.

21 CHAIRMAN BYINGTON: He'll stay the whole thing
22 but he wants to reserve the second part of his time for the
23 end.

24 COMMISSIONER PETERSON: I'd like to ask him one
25 question.

1 Just to pick up on the top of page 6 of your
2 statement, and I'd just like to check into the reasoning
3 of how you calculated that, on page 9 and 10 of your July
4 14th submission when you went into more detail about how
5 you arrived at that, you have an equation for time wait
6 averaging which essentially multiplies the amount of time
7 you spent in one procedure, and then the measurement.

8 MR. RHODES: Yes.

9 COMMISSIONER PITTLE: You added to that the
10 amount of time spent during another procedure, cleaning up,
11 and so on, and then you divided by 480, which is the equiva-
12 lent.
13 KMX 00883

14 MR. RHODES: Yes.

15 COMMISSIONER PITTLE: And you come out with a
16 number of .02 fibers per cubic centimeter, which you felt
17 was greater than five microns. And I don't understand why
18 you used the number zero for the greatest portion of time,
19 namely something on the order of 387 minutes.

20 MR. PITTLE: Well, on that particular one the
21 man who was doing the sanding left the area and went into
22 work, and he has no exposure other than background.

23 COMMISSIONER PITTLE: I understand that, but I mean, I
24 got that from the text of it, and the only thing is, if
25 someone were living in that house or were spending some
time beyond that, the implication of this is that if

1 somebody were to work in the room much longer, then you
2 would have like a double or triple the exposure.

3 MR. RHODES: There are data there, presented
4 there, which indicate what the exposures were after the
5 working period, in those rooms. They are area data, there
6 is a complete survey of data throughout the entire day in
7 three rooms in the house.

8 COMMISSIONER PITTLE: I note that.

9 MR. RHODES: It really would not make any
10 measureable difference if you used 005 or 006 for that
11 remainder either.

12 COMMISSIONER PITTLE: Well, I don't know what you
13 mean. Is that what the measurements took place, if those
14 are the measurements --

15 MR. RHODES: Measurements were taken.

16 COMMISSIONER PITTLE: And they were 005. I got
17 the impression --

18 MR. RHODES: Wait, I'm talking about after opera-
19 tions --

20 COMMISSIONER PITTLE: Yes.

KMX 00884

21 MR. RHODES: -- where dust is being generated.
22 There is a complete series of measurements for the entire
23 -- there were personal samples taken during the operation.

24 COMMISSIONER PITTLE: Right.

25 MR. RHODES: There were area samples in the rooms

1 of the house, three rooms of the house, for the full day.
2 Now if you wish to recalculate it, and using the area, why
3 it's not hard to do --
4

5 COMMISSIONER PITTLE: No, I --

6 MR. RHODES: -- and it will make very little dif-
7 ference.

8 COMMISSIONER PITTLE: But that leads to a sort of
9 a statement in your today's statement, saying that eight
10 hour time waited average exposures were calculated in two
11 consumer installations, and saying that the highest exposure
12 was .25 cubic centimeters.

13 MR. RHODES: For two days.

14 COMMISSIONER PITTLE: For two days.

15 MR. RHODES: Yes.

16 COMMISSIONER PITTLE: That is predicated on the
17 fact that you're assuming, I mean, I don't know that the
18 number might turn out to be just double.

19 MR. RHODES: No, the --

20 COMMISSIONER PITTLE: Do you think that's in-
21 significant?

22 MR. RHODES: It's not a matter of thinking, you
23 can calculate it right from the numbers --

24 COMMISSIONER PITTLE: Well, I --

25 MR. RHODES: -- and see what the differences

are.

1 COMMISSIONER PITTLE: All right--

2 MR. RHODES: Now, let me -- the 2/10ths of a
3 fiber for two days occurred at the large, full room instal-
4 lation.

5 COMMISSIONER PITTLE: Yes.

6 MR. RHODES: And those are calculated completely
7 for the --

8 COMMISSIONER PITTLE: Oh, for the entire -- oh.

9 MR. RHODES: -- entire day, with some of the back-
10 ground. Now, we had a point three in the small operation
11 which actually occurred when there really wasn't any asbestos
12 being used per se, wasn't carrying out the old dry wall and
13 preping the old plaster, to install the spackle.

14 I assure you I'm not playing any games--

15 COMMISSIONER PITTLE: No, no, I'm trying to under-
16 stand.

17 MR. RHODES: We are --

KMX 00886

18 COMMISSIONER PITTLE: I'm looking at the -- I'll
19 have to read today's submission over much more carefully.
20 I'm responding to the sentence that you're talking about,
21 eight hour time waited averages being .2, and I've looked
22 at July 14th and it has eight hour sessions in which you
23 come down to 102. Maybe there's a slip of a typo there,
24 or that's a different figure --

25 MR. RHODES: I don't guarantee that there isn't.

1 but I sure hope there wasn't.

2
3 COMMISSIONER PITTLE: And in the calculation of
4 the .02, in your July -- you are saying, by golly, the
5 person wasn't there and therefore he wasn't exposed
6 and the substitution in for a zero in for the exposure to
7 the consumer or the person strikes me as very heavily
8 dependent on what he happens to be doing when he finishes
9 cleaning up.

10 If he leaves the room, then the exposure goes
11 down, which is natural to that person. But we were more
12 interested in assessing, I would want to read that as as-
13 sessment of what the possibility of exposure is if the
14 person stayed in the room longer.

15 MR. RHODES: The information is there.

16 COMMISSIONER PITTLE: Well, I -- KMx 00887

17 MR. RHODES: We'll look at that if we want to
18 look -- see, you're talking -- you have a problem, and
19 if you're applying an OSHA formula, you're calculating eight
20 hour TWA's of workers, because you want to relate that
21 to the OSHA compliance data.

22 And you know, we're -- where do you make your
23 adjustment? What I did was report everything, and the
24 information is there, and I think I am correct in saying
25 that those numbers, after the operations are so small that
when you would put them in there, even though you multiply

1 that by a lot of hours, a lot of minutes, they are very
2 low numbers.

3 JUDGE FITZGER: May I will pursue this with you
4 after.

5 MR. RHODES: Good, I'd be glad to.

6 CHAIRMAN BYINGTON: Yes, Commissioner Franklin.

7 COMMISSIONER FRANKLIN: I hear you questioning
8 our risk assessment, and it's not clear to me from your
9 statement exactly the magnitude of that. What I'd like
10 to do is ask you the same question and ask the gentleman
11 from Bondex, and get your reaction to it.

12 To this statement in our Federal Register notice
13 says, for purposes of this assessment the Commission
14 considered the use of patching compounds by a consumer
15 for six hours a day, four times a year, to be high, yet
16 reasonably foreseeable yearly exposure.

17 Now, what do you think of that statement?

18 MR. RHODES: Well, the main point of the data
19 that I presented is that that's highly unlikely.

20 COMMISSIONER FRANKLIN: Too high, yes.

21 MR. RHODES: The numbers that occur during the
22 actual operation were somewhere in the tenths to, I think
23 we had a one or -- one and a quarter or one and a half,
24 during the clean up operation, in the large operation.

25 And the total for the man and his wife to do all

1 of the sanding on a rather large recreation room, includ-
2 ing the ceiling, took something less than two hours.

3 And the exposure for the remaining six hours
4 was -- I can't quote it off the top of my head, but it
5 was quite low. So that the numbers that were used in
6 that risk assessment, I think, are grossly high.

7 COMMISSIONER FRANKLIN: All right, now --

8 MR. RHODES: Based on our consumer information
9 and commercial information.

10 COMMISSIONER FRANKLIN: I understand what you're
11 saying about the six hour time period when there was some
12 exposure, but what do you think about the assumption of
13 the four times a year type use?

14 MR. RHODES: In the installation of dry wall, you
15 start off by burying the tape-- now, if you're going to
16 use dry mix, you have to mix up the dry mix. I don't think
17 very many consumers use the dry mix for big jobs, they'll
18 use the pails.

19 You bury the tape, and then come back over it
20 with a single coat, and while it's still wet, and you
21 let that dry, and all of these muds shrink, so they --
22 I don't know whether you're aware of it or not, but the
23 boards are grooved where you buck the boards together,
24 so there's a groove in there, a channel, that you're
25 filling with the tape and with the mud.

1 So that the first step is to bury the tape and
2 cover it, and then you come back through and a day later
3 when it's dry or has shrunk some, and put another coat on,
4 when that dries you come in and sand, and follow it with
5 a third coat, and then you touch up the third coat with a
6 little sanding where you may have not cleared the edges
7 properly.

8 So that in a installation of dry wall, according
9 to the directions on the box, and according to the way the
10 commercial operators run, you really have two days, in
11 which you're actually doing sanding and raising the dust
12 and cleaning up.

13 So if you -- I think I would agree with Chairman
14 Byington that if you do that once or twice, during a life
15 time, that's -- it's a reasonable estimate of how often
16 you're going to be involved with the thing.

17 How often do you finish a room?

18 COMMISSIONER FRANKLIN: So what you're saying is
19 that our assumption here of four times a year that one
20 would be --

21 MR. RHODES: I think it's --

22 COMMISSIONER FRANKLIN: -- would be going through
23 some kind of --

24 MR. RHODES: I think it's high.

25 COMMISSIONER FRANKLIN: -- patching, would be too

1 MR. RHODES: Yes.

2 You're talking primarily where you're installing
3 a few panels of dry wall too. I don't think even your
4 staff believes that running a two foot crack with spackling
5 compound is going to generate any significant amount of
6 asbestos.

7 COMMISSIONER FRANKLIN: Yes.

8 MR. RHODES: I think they made a statement to that
9 effect, either in one of their briefing packages or in
10 the Federal Register notice.

11 COMMISSIONER FRANKLIN: I have a couple more
12 questions but on another subject, if you want to follow
13 this up.

14 COMMISSIONER KUSHNER: I would like to follow
15 this up.

16 Do you have any explanation for the discrepancy
17 between the Rohl data on exposure and your own?

18 MR. RHODES: I suspect possibly that they were
19 -- it was taken in '74 thereabouts, that they were using
20 one of the high asbestos content muds. Beyond that I --
21 there's not enough information given in their discussion
22 of it to make any kind of --

23 COMMISSIONER KUSHNER: What would have been the
24 level of asbestos contained in the materials that you
25 used or that are cited by and large in the other --

1 MR. RHODES: They're probably --

2 COMMISSIONER KUSHNER: -- instances here.

3 MR. RHODES: The one material that we know what
4 was in, we had the formulation for, the manufacturer
5 supplied that.

6 COMMISSIONER KUSHNER: Yes.

7 MR. RHODES: That was 2.6 percent, on a dry basis.

8 COMMISSIONER KUSHNER: Yes.

9 MR. RHODES: The first material, if you'll pardon
10 the expression, was the U. S. Gypsum that I bought off
11 the shelf with an asbestos label on it. When we were
12 suppliers to them I believe they went around four or five
13 percent, but I really don't know, and it's a dickens to
14 try and analyze for asbestos in mud at that level. It's
15 just a major analytical job, at least we're finding it that
16 way.

17 So I can only guess that it was four or five
18 percent in the first test.

19 COMMISSIONER KUSHNER: What--

20 MR. RHODES: One thing I would like to point out
21 is that the OSHA compliance people had pretty much the
22 same numbers, the same range of numbers that we're getting.

23 COMMISSIONER KUSHNER: Yes, that's evident from
24 the data shown here. But the difference then between the
25 asbestos content of the materials that you used, or were

1 used later, and the earlier materials that Rohl might
2 have used, would have been of the order of four or five.
3 Though probably not as high as five because they didn't
4 go above 20 percent, asbestos, even years ago, did they?

5 MR. RHODES: Well, the information I quoted was
6 given to me by one of the large manufacturers, and a man
7 who'd been in it for many years. It was 10 to 15 percent,
8 in the earlier.

9 COMMISSIONER KUSHNER: Okay.

10 MR. RHODES: Actually, it didn't drop too much
11 until the seventies.

12 COMMISSIONER KUSHNER: Yes, I guess I have diffi-
13 culty ascribing the difference between Rohl's results and
14 yours, or these others which are differences of the order
15 of perhaps 10 --

16 MR. RHODES: Well --

17 COMMISSIONER KUSHNER: -- to a difference in as-
18 bestos concentration --

19 MR. RHODES: Well, I don't want --

20 COMMISSIONER KUSHNER: -- of two, or possibly
21 three.

22 MR. RHODES: I didn't want to get too much into
23 -- I don't mean to critique Rohl's results, I present them
24 as they are. But I would point out that they took a lot of
25

1 one and one and a half minute samples, and those are
2 notoriously variable.

3 COMMISSIONER EYEWALL: Yes.

4 MR. RHODES: And if you look at the meaning values,
5 you find that the mean value for pole sanding, which is
6 the standard commercial sanding procedure, is 10 fibers per
7 cc.
8

9 The mean value for the hand sanding, which is
10 the way the consumers sand, is five fibers per cc. So
11 they're not viewed in that manner, they're not that different
12 than the biggest numbers that we got around three, and
13 OSHA, three and a half, and OSHA around three and a half.

14 And that was run, I understand, as a test. Our
15 data were all obtained where we went into a commercial
16 location at the -- this was all done in cooperation with
17 dry wall contractors where we went in and attached a
18 sample to the fella's back. He didn't really know what
19 we were doing.

20 We were measuring the dust that he was breathing,
21 and then faded into the background so that he would --
22 told him to do just what he normally did. We emphasized
23 trying to get it, get results in the manner that the
24 men were actually working.

25 The contractor just wanted to find out what kind
of dust levels they were exposing people to.

1 COMMISSIONER KUSHNER: Thank you.

2 MR. RHODES: It was not set up as a test.

3 CHAIRMAN BYINGTON: Any more?

4 COMMISSIONER FRANKLIN: Yes, on page 3 two ques-
5 tions. You make the statement that we believe the total
6 of \$5.5 million annual presents a reasonably reliable
7 minimum estimate of direct economic effects of the replace-
8 ment of asbestos in the tape joint compounds.

9 Annually for how long? What kind of a calculation
10 is this?

11 MR. RHODES: That's a very good question. You've
12 really got the 10,000 tons per year of asbestos is no
13 -- is much higher than it's now being used. The panic
14 button was pushed here, in the last several months, so that
15 I doubt if really there's anybody in the country -- I
16 wouldn't say that. Any of the bigger --

17 I know none of the bigger manufacturers are using
18 asbestos. That was the amount that was being used before
19 the serious inroads began with the concerns for OSHA, and
20 the various -- the regulatory efforts that have gone in.

21 I would not mean to imply that the Consumer
22 Product Commission's action was going to result in an
23 effect of 10,000 tons a year of asbestos.

24 However, the information on the cost per can
25

1 was given to me, and I think was given to your consultants,
2 as representative of the kind of additional cost that
3 it was going to be to use adapeleite, which is one of
4 the principal placements that we are aware of.

5 COMMISSIONER FRANKLIN: Where did the 5.5 million
6 dollars annually come from?

7 MR. RHODES: That's \$1 million for the asbestos,
8 and the 25 cents a can for 18 million cans.

9 COMMISSIONER FRANKLIN: Oh, I see.

10 MR. RHODES: Has my arithmetic gone bad on me?

11 COMMISSIONER FRANKLIN: Well, I -- I still
12 don't understand. Are you just projecting this forever?

13 MR. RHODES: No, right now --

14 COMMISSIONER FRANKLIN: What --

15 MR. RHODES: Right now it's costing, to the
16 best of our information, about a quarter of a can to
17 leave the asbestos out and use a substitute.

18 COMMISSIONER FRANKLIN: Okay, I see that.

19 MR. RHODES: And that's a direct effect across
20 the marketplace, of the substitution for the asbestos
21 development for the Rohi material costs for the asbestos
22 reformulations.

23 COMMISSIONER FRANKLIN: Well, now, is that al-
24 ways going to be the case or is -- should you not be
25 assuming something else is here, either some kind of

1 economy scale or some other factor that over a period of
2 time you know you're going to --

3 MR. RHODES: Actually, again, from what we've
4 been able to learn, the supply of some of these materials
5 is fairly limited. The atapolgite has only, I believe,
6 three producers.

7 And a massive switch to that material is something
8 you should explore, I believe, as to what --

9 COMMISSIONER FRANKLIN: You mean it could drive
10 the price of that material up?

11 MR. RHODES: The price of atapolgite, quite
12 easily could go up, when it becomes a very popular asbestos
13 substitute.

14 COMMISSIONER FRANKLIN: Okay.

15 MR. RHODES: Again I'm speculating, this is
16 secondhand, what I pick up around the industry.

17 COMMISSIONER FRANKLIN: The other question I
18 have relates to the next sentence where you make a comment
19 about the poor performance of many of the asbestos free
20 muds. What do you mean by that?

21 MR. RHODES: That subject has been touched on a
22 number of times this morning. We are told by people in
23 the industry that the asbestos free muds vary very
24 considerably in their comparative performance with the
25 asbestos containing muds.

1 There's a -- first of all there's a tendency
2 for them to be harder to draw in the sense that, you know,
3 you're putting them on with a wide knife and you slap it
4 on, and bring it down. And if you want to go back, if it
5 isn't exact --

6 First of all it's heavy to use, it feels heavy
7 to the worker, and if you want to go back and remake a
8 pass over it and touch it, it tends to be difficult to re-
9 work.

10 The other areas, and I think your first speaker
11 indicated that the formulation of a mud of this nature, we
12 call it a mud, is a fairly exacting balance of a lot of
13 ingredients, and it has to be climate adjusted, it has
14 to be in some areas adjusted to the way they're -- whether
15 they're using primarily hand tools or aims tools.

16 And it isn't all that easy to take a product
17 that's evolved over 30 or 40 years and come up with a
18 material that performs in the same fashion.

19 Have I answered your question or am I --

20 COMMISSIONER FRANKLIN: Are you saying there
21 really is consumer concern about --

22 MR. RHODES: Well, I would agree with the gentle-
23 man -- speaking as a consumer now, the fella that does
24 it once or twice in his life time is not going to notice.
25 It's the commercial people that can tell the difference.

1 Our reaction, the reaction of the couple that
2 did the full room was that a man will only do it once in
3 his life time, the next time he'll use paneling, some-
4 thing of that nature.

5 COMMISSIONER FRANKLIN: He'll let his wife do it
6 or something.

7 MR. RHODES: Now it --

8 CHAIRMAN BYINGTON: First and last time.

9 MR. RHODES: It is for a reasonably skilled con-
10 sumer, it's much easier to put in paneling. At least
11 that's my own personal consumer opinion, and they're going
12 to dry wall, those four by eight things on a ceiling are
13 a real dog to handle.

14 CHAIRMAN BYINGTON: For the record, you've ad-
15 dressed the one area on poor performance that you mentioned,
16 but you also made a statement that you were concerned
17 about the utilisation of the term binding with asbestos,
18 and that that is improper.

19 Would you elaborate in terms of what would
20 be properly be addressed as, for the record.

21 MR. RHODES: Well, the binder, in normal termi-
22 nology, the binder is the glue, the plastic, I could use
23 that term loosely, that glues the whole thing together.
24 The asbestos is in there for a number of things, to make it
25 easy to trowel, the description that I've given, the asbestos

1 muds are slipperier and they move more easily under the
2 trowel. They also tend to feather better, and the asbestos
3 also reduces shrinkage, so that you don't get cracking.

4 Now, I don't mean to imply that all the non as-
5 bestos muds have not solved these problems, but they're
6 varying degrees, and it's quite a research program to come
7 up with a good asbestos-free mud.

8 So I was really merely making you aware of some
9 misuse of terminology in some of your reports.

10 CHAIRMAN BYINGTON: I appreciate that, and that's
11 why I say for the record.

12 MR. RHODES: Does that answer your question?

13 CHAIRMAN BYINGTON: That's fine. Commissioner, do
14 you --

15 MR. RHODES: The asbestos also serves in the
16 northern part of the country, the muds tend to freeze
17 out on the jobs, and warehouses and that sort of thing.
18 And one of the big problems they had to overcome on these
19 non asbestos muds is the one freeze ruins it, whereas
20 the asbestos muds, you can stir them back together after a
21 freeze or two.

22 CHAIRMAN BYINGTON: Commissioner Kushner.

23 COMMISSIONER KUSHNER: Yes. Can you identify
24 the specific chemical or physical characteristics of
25 asbestos that would underlie its use in these compounds?

1 MR. RHODES: Yee, I think I did that in the AIA
2 presentation, but I'll be glad to hit it here, hit the
3 high spots. Asbestos is made up of very, very tiny, hair-
4 like fibers, and when you mix them in the mud they form a
5 loosely flocculated network that gives it body.

6 And when you trowel it or work it, the fibers
7 come apart, they're so loosely attached, and the material
8 becomes thin, which allows you to move it with a trowel,
9 rework it, and feather it, and that sort of thing.

10 On the other hand, as soon as you take the
11 energy off you stop pushing it with a trowel, but the
12 fibers reflocculate again, and it stays in place, and it's
13 this property that people are trying to get without ata-
14 polgite, lastinite, and a number of these other fibrous
15 mineral species.

16 COMMISSIONER KUSHNER: You would look for sub-
17 stitutes in other fibers --

18 MR. RHODES: As far as I --

KMX 00901

19 COMMISSIONER KUSHNER: -- material.

20 MR. RHODES: -- am aware, the main candidates
21 for replacement are other fibrous minerals. Atapolgite
22 is, I think, one of the leading candidates. It's -- they
23 have fairly long needle-like crystals, look a little like a
24 pencil, pen, that general shape.

25 I thought of bringing along some photomicrographs,

1 but I did not. I didn't really want to get into the substi-
2 tutes area, that was not my principal point.

3 COMMISSIONER KUSHNER: Do they tend to have the
4 same kind of properties as asbestos in terms of the fiber
5 bundles appearing to almost continuously be able to sub-
6 divide it into finer and finer --

7 MR. RHODES: The atapulgite --

8 COMMISSIONER KUSHNER: -- fibers.

9 MR. RHODES: -- tends to be single crystals.
10 They normally do not -- they're in the form in which they
11 were grown in nature, there's no real tendency for them
12 to split into finer and finer fibers.

13 COMMISSIONER FRANKLIN: Is there performance, of
14 the performance of the compound, is it similar to that
15 which contains asbestos?

16 MR. RHODES: I can only tell you what I hear in
17 the field.

18 COMMISSIONER FRANKLIN: What do you hear?

19 MR. RHODES: It's not quite as -- it varies with
20 who manufactures it, but in general it does have some de-
21 ficiencies. And I think the USG gentleman indicated that
22 it has not been totally accepted as equivalent.

23 COMMISSIONER FRANKLIN: So that your comments
24 about poor performance of non asbestos muds would apply.

25 MR. RHODES: To the commercial, commercial users.

1 COMMISSIONER FRANKLIN: To what we've just been
2 talking about, atapolgite.

3 MR. RHODES: As far as I know --

4 COMMISSIONER FRANKLIN: Containing --

5 MR. RHODES: -- this is -- we have looked at some
6 of these. The answer is yes, the atapolgite, although
7 there -- I will say that I think there is one that comes
8 pretty close. They've used some other things --

9 COMMISSIONER FRANKLIN: To be equivalent in per-
10 formance.

11 MR. RHODES: To be equivalent, yes.

12 COMMISSIONER FRANKLIN: The rest isn't.

13 MR. RHODES: It varies quite a bit. Again, as
14 the USC speaker indicated, developing a new compound with
15 -- that has to meet these 14, 15 criteria, is a major re-
16 search project.

17 The companies which manufacture these compounds
18 have no incentive to use asbestos, other than performance
19 in the marketplace. Most of them would rather not have to
20 have all the control equipment in their plants, they'd
21 rather get rid of the problem if they could find an easy
22 way to do it.

23 And they've been working on it since-- some of
24 them since 1970, or thereabouts, and they're just beginning
25 to see the results now.

1 COMMISSIONER FRANKLIN: This is curious. Maybe
2 you and I are hearing the discussion differently, but I
3 thought the man from US Gypsum was coming down and saying
4 he thinks that the substitutes are going to be okay, there
5 is a little resistance, but he thinks the marketplace is
6 accepting them.

7 And I hear you saying something different, I
8 think --

9 MR. RHODES: Well, the marketplace may have no
10 choice, the way things are going.

11 COMMISSIONER FRANKLIN: Okay.

12 MR. RHODES: But I was talking to a competitive
13 manufacturer on Friday, and he indicated that, yes, we can
14 go with one, we've got one that we think is better than
15 some that have been discussed here.. But we're not happy
16 with it as an equivalent replacement.

17 COMMISSIONER FRANKLIN: Thank you.

18 CHAIRMAN BYINGTON: Commissioner Pittle.

19 COMMISSIONER PITTLE: Yes. Just so that I make
20 sure that I'll be reading the right things over lunch,
21 the July 14th submission by you has dealt with some experi-
22 ments run on June 21, 22. That is the experiment that you
23 are reporting on the top of page 6, the eight hour time
24 waited average during exposure?
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MR. RHODES: The top of page 6.

COMMISSIONER PITTLE: Six of your statement.

MR. RHODES: No.

COMMISSIONER PITTLE: That's not the July 14th --

MR. RHODES: We have since installed a full room and that report is being frantically written right now to submit before the August 29th deadline.

COMMISSIONER PITTLE: You're just giving me time to enjoy my lunch.

MR. RHODES: But these two -- as you might expect, we did a whole room. We got some higher TWA's.

COMMISSIONER PITTLE: Yes.

MR. RHODES: And those are the --

COMMISSIONER PITTLE: Then when we come back I will be sure that I'll still have the same questions about this report as to why there are zeros, but let's move on to the one on the thing about some of the testing procedures. This might be the right time to answer the questions.

The people who were involved in this experiment, were they your employees, or were they a testing group?

MR. RHODES: One of them was myself. I ran it in my own basement. The other is a man and his wife who are employed as guests.

COMMISSIONER PITTLE: Did they have any -- did you

1 or they have any sort of special, or unusual ventilation
2 equipment in their house, an attic fan or --

3 MR. RHODES: I did not have any, nor did they.

4 COMMISSIONER KUSHNER: Is that the recommended
5 way to use that, I mean, are there any special precautions
6 to take when you --

7 MR. RHODES: Well, I'm sorry I didn't bring a
8 bunch of pictures, it's dustier than the dickens. The
9 operation is -- the main ingredient in the mud is limestone,
10 and it's heavy.

11 COMMISSIONER KUSHNER: I've used it more than
12 once in my life --

13 MR. RHODES: You know, you sand it and it's
14 dustier than daylights.

15 COMMISSIONER KUSHNER: Yes.

16 MR. RHODES: But they did not have any, and I
17 did not have any in the way of special ventilation.

18 COMMISSIONER KUSHNER: When you made some of your
19 measurements, you, at least on the July 14th report, you
20 apparently measured them by using two different techniques.

21 MR. RHODES: We measured them primarily by the
22 prescribed NIOSH-OSHA --

23 COMMISSIONER KUSHNER: OSHA.

24 MR. RHODES: -- standard.

25 COMMISSIONER KUSHNER: That's the optical

1 scanning.

2 MR. RHODES: Optical material. We also examined
3 them with a technique we're working on under the scanning
4 electron microscope.

5 COMMISSIONER KUSHNER: I see.

6 MR. RHODES: That was primarily to satisfy our-
7 selves that there weren't a lot of little fibers that we
8 were missing under the optical because I was afraid some-
9 body would ask that question.

10 COMMISSIONER KUSHNER: Well, let me try to ask it
11 if I've got this thing lined up right. Your microscope
12 had a magnification of, it could have gone all the way up
13 to 25,000.

14 MR. RHODES: Yes, well, the scanning scope could
15 have gone up to about 20,000, without losing resolution -

16 COMMISSIONER KUSHNER: I see.

17 MR. RHODES: -- on this particular samples.
18 Working off those filters in a scanning scope is a technique
19 in itself.

20 COMMISSIONER KUSHNER: Is it more difficult to do
21 it, let's say, with that piece of equipment with 20,000ths
22 opposed to 10,000ths?

23 MR. RHODES: You lose field area. See, the higher
24 your magnification, the smaller area you're looking at.

25 COMMISSIONER KUSHNER: Right.

1 MR. RHODES: And the longer you have to scan to --

2 COMMISSIONER PITTLE: To get the same area.

3 MR. RHODES: -- to satisfy yourself that you've
4 covered enough area so you've got some sort of a repre-
5 sentative sample.

6 COMMISSIONER PITTLE: Well, the reason I'm asking,
7 of course, is that I was struck by the fact that you, in
8 comparing some of the samples, you tried to add some infor-
9 mation about this controversy about what's the best way to
10 measure this.

11 MR. RHODES: Yes.

12 COMMISSIONER PITTLE: Material, that you made most
13 of those down at the lower resolution areas, and I wondered
14 why you didn't try it from maximum resolution. You're
15 telling me now it's a matter of time to get the feel.

16 MR. RHODES: Well, you've got to look at enough
17 fields so you feel you've got a representative area.
18 The bigger you go the more fields you've got to look at.

19 COMMISSIONER PITTLE: Yes.

20 MR. RHODES: And this whole question of scanning
21 in transmission scopes got beaten around for about three
22 days, last month.

23 COMMISSIONER PITTLE: Well --

24 MR. RHODES: And it's far from being a routine
25 procedure.

1 COMMISSIONER PITTLE: Well, that may be one of
2 the reasons why there is this vast difference, possible
3 difference, in the data between Rohl and yourself and
4 OSHA.

5 MR. RHODES: Rohl was using -- the data, the Rohl
6 data that I have presented by the same OSHA technique.

7 COMMISSIONER PITTLE: The same OSHA technique,
8 they did not use any sort of scanning --

9 MR. RHODES: No. Let me make it clear, all of
10 the fiber count data that we have reported has been by the
11 prescribed OSHA --

12 COMMISSIONER PITTLE: Oh.

13 MR. RHODES: -- NIOSH techniques, and Rohl's data
14 are by the same technique.

15 COMMISSIONER PITTLE: All right.

16 MR. RHODES: The looking, and I will comment that
17 there's a lot of problems with the OSHA-NIOSH optical
18 fiber counting technique. There's a -- the Asbestos
19 Information Association has got a big, round robin that
20 they're trying to get off the ground, and it's a major
21 problem with enforcement, not so much in the crysatile
22 asbestos industry, but when you get over into talc and
23 impurities.

24 It isn't all that hard to get a pretty good
25 recognition of crysatile, optically, a reasonable percentage

1 of the time. But when you start throwing the amphibol
2 chips in there it becomes a very difficult problem to
3 decide is it an amphibol or isn't it.

4 There's really no good way until you get into
5 some fairly involved petrographic, microscope techniques.

6 COMMISSIONER PITTLE: Well, I can't put my finger
7 on the exact location, but apparently Dr. Selikoff has
8 written somewhere in an article or a report that he feels
9 that you need to multiply 100 to 200 as a nullifying factor
10 to sort of take the optical scanning data and make it match
11 with the microscopic data.

12 And you address that in your report by saying
13 that you didn't think it was that great of a multiplicity.
14 Do you have any --

15 MR. RHODES: Well, in --

16 COMMISSIONER PITTLE: -- feel for the number?

17 MR. RHODES: Well, the thing you want to recog-
18 nize is that I think I've seen that reference. You're
19 talking about in one case using raw asbestos fiber, 100
20 percent asbestos fiber, shaking it up, and you can get a
21 whole wide range of fiber sizes.

22 In these sanding samples, the only thing you're
23 seeing is what you break loose out of the binder. And the
24 littlier ones, I suspect, are very small fibrils, are much
25 harder to break out than the longer fibers.

1 Now, we went around with Slikoff on this, on
2 spraying work, and I did the same sort of thing, and could
3 not find, at least in our techniques, any great multiplicity
4 of very fine fibers.

5 Now, I don't say they don't exist in the raw
6 asbestos, than these materials where you've --

7 COMMISSIONER PITTLE: Oh.

8 MR. RHODES: -- mixed them with a binder and re-
9 leased them by sanding. It's a -- as far as we can --

10 COMMISSIONER PITTLE: The measurement technique
11 is highly sensitive to the material that you're measuring
12 in terms of --

13 MR. RHODES: No, I think what's there is highly
14 sensitive to the history of the material you're looking at.
15 It's a little bit different point of view.

16 COMMISSIONER PITTLE: Well, I think his numbers
17 were something like a multiplicity anywhere from 200 to
18 1000, and you said you didn't think it was quite that high.

19 MR. RHODES: Well, if you'll look at the NIOSH
20 criteria document, the recent one on the appropriate levels,
21 they review some conversion factors from nanograms to
22 fibers longer than five microns, and the number -- their
23 conclusion is that there is no consistent conversion fac-
24 tor.

25 COMMISSIONER PITTLE: Okay. Did -- I think I want

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to save this until after I read the report --

MR. RHODES: Okay.

COMMISSIONER PITTLE: -- because there are still some things that are on the surface out here, like, for example, the substitute material. Is that as likely to be airborne or free form as the present asbestos?

In other words, it may match up with all the other 14 qualities and I don't want it to match up with 15 quality, namely causing some sort of a respiral disease.

MR. RHODES: I don't really have enough background in that area. Some of these materials tend to be quite dusty.

MR. PITTLE: Are there any toxic -- long term, chronic studies going on on the -- at least the one that you've mentioned, atapolgite.

MR. RHODES: I believe NIOSH has got some things going. You have to understand basically we're in the asbestos business.

COMMISSIONER PITTLE: I understand.

MR. RHODES: And some of these areas of toxicology for substitutes we run into talking to people, but we --

COMMISSIONER PITTLE: Are you aware, has anybody mentioned that they're doing any --

MR. RHODES: I know that NIOSH has a couple of

1 studies going on atapulgite. What they found, I couldn't
2 tell you.

3 John Dement probably is a good contact there,
4 in Cincinnati. I have enough trouble following the ones
5 that are directly involved.

6 COMMISSIONER PITTLE: Very helpful.

7 CHAIRMAN BYINGTON: Okay, well the staff and
8 some of the other commissioners also may have some
9 additional questions, as you complete your second portion.
10 We'll save for that.

11 There was one question that was submitted, that I
12 bring up now, and that is, has Carbide done any morbidity
13 or morbidity studies on the dry wall workers exposed
14 in the first 30 years or so?

15 MR. RHODES: No, we have not.

16 CHAIRMAN BYINGTON: Okay.

17 MR. RHODES: We've only been involved for 10 or
18 12 years here, really, on any kind of a scale.

19 CHAIRMAN BYINGTON: Would you be willing to
20 provide to our staff a list of those people who make tape
21 joint compounds that you sell asbestos to?

22 MR. RHODES: Our policy in the past has been
23 that we did not give that kind of information, but I think
24 at this point in time the answer, I can give you right off
25 the top of my head, there aren't any.

1 CHAIRMAN BYINGTON: Okay.

2 MR. RHODES: That's off the top of my head. I'll
3 check that but I think --

4 CHAIRMAN BYINGTON: Because you don't think you're
5 selling to anybody.

6 MR. RHODES: Within the last week or so, the last
7 of the Mohigans, decided he wouldn't dare take a chance on
8 it any more, so --

9 CHAIRMAN BYINGTON: Okay. Thank you, we'll call
10 you back here shortly.

11 MR. RHODES: Okay, thank you.

12 CHAIRMAN BYINGTON: The next person is Svedeen
13 Gibbons of the Natural Resources Defense Council.

14 Yes, Miss Gibbons, do you have a copy of your
15 statement?

16 MS. GIBBONS: I'm sorry, it's not prepared in
17 final form, yet, and I can submit one later this afternoon.

18 CHAIRMAN BYINGTON: Okay.

19 MS. GIBBONS: My name is Svedeen Gibbons, I am
20 an attorney with the Natural Resources Defense Council, and
21 I thank you for the opportunity to speak today on the
22 recently published proposed rules to ban consumer patching
23 compounds containing respirable free form asbestos.

24 On July 15th, 1976, NRDC filed a petition with
25 CPSC requesting it to issue an order declaring consumer

1 patching compounds containing asbestos to be banned hazar-
2 dous substances under the Federal Hazardous Substances Act.

3 The Commission granted this petition on April
4 28th, 1977, but has proposed to ban these products under
5 Section 3 of the Consumer Product Safety Act. I would
6 like to speak today on four issues concerning proposed rule-
7 making, namely the evidence regarding the unreasonableness
8 of injury to consumers, prevented by asbestos-containing
9 patching compounds, the environmental hazards associated
10 with asbestos substitutes, the effective date of the pro-
11 posed regulations, and the wording of the proposed ban.

12 NRDC believes that the Commission has correctly
13 determined that asbestos containing patching compounds
14 present an unreasonable risk of injury to consumers.
15 This finding was based on a review of experimental data
16 and human experience information on exposure to asbestos.

17 The Commission has calculated an assessment
18 on the risk of consumer exposure on the basis of data by
19 Dr. Rohl and his colleagues at the Mount Sinai School of
20 Medicine.

21 Dr. Rohl's work on exposure to asbestos in the
22 use of consumer spackling, patching, and taping compounds
23 was cited by NRDC in our petition to this Commission.
24 This testimony was drafted before the representative
25 from Union Carbide spoke.

1 The results of the five day study of consumer
2 exposure to asbestos in the spackling and dry wall renova-
3 tion operation. This, I understand, is different from the
4 information which they summarize in their statement today.

5 But in this earlier experiment, they found that
6 exposure level to the consumer of asbestos fibers longer
7 than five microns did not exceed at any time 0.5 fibers
8 per cubic centimeter.

9 This study contrasts with results obtained by
10 Dr. Rohl who found that amounts of asbestos longer than
11 five microns in the air during and after dry wall construc-
12 tion operations, with asbestos containing patching com-
13 pounds, ranged from 2.5 to 19.8 fibers per millimeter,
14 which is the same measurement as cubic centimeter, and
15 that fiber counts during mixing of the patching compounds
16 ranged from 35.4 to 59.0 fibers per milliliter.

17 Obviously the results from these two studies are
18 widely disparate, and we believe that they are so because
19 of at least two differences in technique used by Union
20 Carbide.

21 The following information, which I'm going to
22 summarize, is obtained through a telephone conversation
23 with one of Dr. Rohl's colleagues at Mount Sinai School of
24 Medicine, and I don't profess to be an expert in chemical
25 engineering, in chemistry.

1 First, the Union Carbide study does not reveal
2 that the patching compound was analyzed to determine that it
3 did in fact contain asbestos, or how much asbestos it did
4 contain.

5 This must be done by X-ray defraction, evidently
6 it's a very complex, analytical technique, and the peaks
7 that you see for asbestos are very similar to peaks that
8 you see for chloride. And chloride is found in asbestos
9 containing compounds.

10 Second, and most importantly, it appears that
11 Union Carbide did not use the NIOSH counting technique.
12 The NIOSH technique dictates that any fiber longer than
13 five microns, and is a three to one length to diameter
14 ratio, is counted.

15 Union Carbide only counted crystile fibers.
16 It is evidently extremely difficult to identify which
17 fibers are crysatile and which are not, even with a
18 polarizing microscope, which is presumably the type of
19 instrument that would be used if you wanted to attempt
20 the experiment.

21 This is precisely why the NIOSH counting tech-
22 nique is widely used. Union Carbide did not use a
23 polarizing microscope in attempting to determine which
24 fibers were asbestos.

25 Dr. Rohl's workers would like to know how they

1 did determine it. Union Carbide also did not state how
2 many fibers were collected and determined to not be crys-
3 tale. This might be very interesting information.

4 Finally, as Commissioner Pittle brought out, the
5 time waited average of .2 fibers per milliliter was based
6 on an occupational standard type technique formula, and
7 it's not relevant to consumer situations.

8 Union Carbide measured the average eight hour
9 exposure to the person who did the job and by figuring
10 in the fact that he was out of the house for over six
11 hours.

12 Even if we assume that Union Carbide sampling
13 levels are correct, which we don't believe is true, the
14 fibers present an unreasonable risk to health. If we
15 calculate the time waited average, assuming a consumer
16 remains in the home, for the total eight hours, we arrive
17 at .03 to .1 fibers per milliliter.

18 If the consumer is reasonably active during this
19 eight hour period, he will breathe in a total of four
20 cubic meters of air, or 120,000 to 400,000 asbestos fibers
21 longer than five microns.

22 In addition, for each five micron asbestos
23 fiber, there are conservatively speaking 50 to 100 times
24 as many smaller fibers.

25 This means that the consumer would breathe in

1 an additional 12 million to 40 million smaller asbestos
2 fibers.

3 We believe that if the Commission determines not
4 to proceed with the rulemaking on the basis of Dr. Rohl's
5 study because of the Union Carbide study that they wait
6 to make that decision until Union Carbide's study is pub-
7 lished, and there's sufficient time for critical scientific
8 review of it.

9 I'm not advocating that you delay in promulgating
10 the ban. Industry affected by the proposed regulation has
11 expressed concern that other fibrous minerals substitutes
12 for asbestos, such as, well, lastinite, atapoltite clay,
13 and fibrous talc, may present adverse environmental health
14 effects.

15 Although this issue is significant in itself,
16 it is not particularly relevant to this rulemaking.
17 No evidence has been presented which shows that such a
18 fibrous mineral must be substituted for asbestos in patching
19 compounds.

20 On the contrary, it is clear that effective
21 patching compounds need not contain fibrous minerals.
22 Industry has enumerated the properties of asbestos which
23 it considers to be the most valuable in the preparation of
24 patching compounds.

25 These include good absorption qualities, high

1 resistance to electricity, fire and alkaline substances,
2 low magnetic permeability, roughness of fiber, low density,
3 and non relative impermeability, and relative impermeability
4 to fungus, mildew and vapor.
5

6 However, the only relevance of these characteris-
7 tics of asbestos to this rulemaking proceeding is that
8 they contribute to an overall effect of final patching
9 compounds. That is a product which is easily applied,
10 workable and durable.

11 What must be stressed is that neither asbestos
12 nor other fibrous minerals are necessary to achieve an
13 effective patching compound. Patching compounds already
14 exist which do not contain these minerals and which are
15 as effective as asbestos containing products.

16 Of the 15 patching compounds sold in retail out-
17 lets, sampled by Dr. Rohl and his colleagues, five were
18 found to contain asbestos, five were found to contain a
19 plating mineral such as mica, kalinite, and pyrofillite,
20 which perform the same functions as asbestos.

21 And five were found to contain neither fibers
22 nor plating minerals, most probably they contained calcium
23 carbonate. At least one of the latter products was
24 used by one of the investigators and found to be totally
25 effective.

1 Thus, while the Commission should study the
2 possible adverse environmental health effects posed by
3 other fibrous minerals to consumer, it should not refrain
4 from promulgating the proposed regulations in final form
5 as soon as possible.

6 It is, of course, hoped, that industry will act
7 responsibly and not substitute suspect fibrous minerals
8 for asbestos in their reformulation of asbestos containing
9 patching compounds.

10 The Commission has the authority to set the
11 effective date of the proposed regulation, the proposed
12 ban on patching compounds containing asbestos, as the
13 date of promulgation of the final regulation rather than
14 30 days later as now proposed, if the Commission determines
15 immediate effectiveness is within the public interest.

16 And I do see, believe, that such a finding is
17 supported by the evidence already before the Commission.
18 No evidence has been presented which shows that the
19 risk to an individual -- sorry, in fact, the Commission
20 has already determined to promulgate a ban effective on
21 final publication on fireplace logs and ash containing
22 asbestos.

23 An immediate ban on patching compounds is no
24 less in the public interest. No evidence has been present-
25 ed which shows that the risk to an individual household

1 from use of an asbestos containing patching compound in
2 the normal repair operation is any less than that from
3 exposure to fireplace logs and ash.

4 In fact, more households use, most likely,
5 patching compounds, than fireplace logs and ash. Every
6 day's delay of the ban exposes more consumers to an un-
7 reasonable risk of injury.

8 The Commission itself has estimated that the
9 increased risk of death from respiratory cancer induced
10 yearly is between 10 and 2,000 per million. In addition,
11 these substances present other risk of injury to health.

12 Consumers will not suffer in any way from an
13 immediate ban because alternative products performing the
14 same function are presently on the market at a price
15 comparable to asbestos containing patching compounds.
16 The impact on the asbestos industry from the ban 30 days
17 earlier than proposed will be relatively insignificant.

18 The industry has stated that the amount of
19 asbestos sold for patching compounds is 10,000 tons,
20 and that this is a high figure at this point, and this
21 amount is only one percent of total asbestos sale.

22 Assuming equal amounts are sold each month,
23 only one-twelfth of a percent, of the total asbestos
24 market will be affected by a ban 30 days earlier than
25 proposed.

1 As we heard today, some patching manufacturers
2 have switched to non asbestos formulations, thus in the
3 period during which the Commission has worked on this ban,
4 manufacturers have eliminated much of their potential
5 adverse economic impact.

6 The point of this rulemaking is to protect the
7 health of consumers, not to protect manufacturers from
8 any adverse, economic impact. There are always costs and
9 benefits to regulation. This is a relatively small cost
10 associated with the ban effective upon final promulgation.

11 However, in the alternative, should the Com-
12 mission not make the final ban immediately effective, it
13 should prohibit manufacturers of asbestos containing
14 patching compounds from stockpiling these products.

15 The Commission has authorized to issue such a
16 ruling under Section 9D2 of the Consumer Product Safety
17 Act. Such a rule would prohibit the manufacturer or
18 importation of these products between the date of promul-
19 gation of the ban and its effective date, at a rate which
20 is significantly greater than the rate at which the
21 product was produced or imported during a base period
22 prior to promulgation of the ban.

23 Such a rule is in the public interest and
24 will not adversely affect manufacturers who are, of
25 course, expected not to increase manufacture of these

1 products during the period before the effective date of the
2 ban.

3 Finally, I would like to request several changes
4 to the wording of the proposed regulation to better reflect
5 the intent of the ban. In the proposed paragraph 1304.1A,
6 which describes the scope and application of the ban, in
7 the fifth line of the paragraph the words and designed for
8 use are presently there.

9 We request that these words be deleted. With
10 this deletion the paragraph will read, Consumer Product
11 Safety Commission declares that consumer patching compounds
12 containing respirable, free form asbestos in such a manner
13 that asbestos fibers can become air borne under reasonably
14 foreseeable conditions of use, are banned hazardous products.

15 The words "and designed for use" are unnecessary
16 and cause some confusion in the paragraph as it presently
17 reads. In addition, the definition of free form asbestos
18 in proposed paragraph, section 1304.3 presently reads --
19 shall I read it for the record or are you following it on
20 your paper?

21 COMMISSIONER FRANKLIN: Repeat where you are,
22 again.

23 MS. GIBBONS: Okay, proposed paragraph 1304.3C,
24 free form asbestos.
25

1 CHAIRMAN BYINGTON: All right, why don't you
2 indicate, like you did the last time, what change you'd
3 like and then read it as it was changed.

4 MS. GIBBONS: Okay. NRDC would like to see
5 the words in the fourth line, those from which fibers
6 deleted, and that the words of the product inserted at
7 the end, of the definition.

8 The definition would then read, free form asbes-
9 tos is that which is not bound, woven, or otherwise locked
10 in to a product by resins or other bonding agents, or
11 which can readily become airborne with any reasonably
12 foreseeable use of the product.

13 Finally, in paragraph 1304.4, NRDC believes that
14 hazardous which arise from asbestos fibers are not limited
15 to lung cancer and mesathelioma, and therefore would
16 propose that the paragraph be rephrased to read, on the
17 basis that air borne asbestos fibers present hazardous,
18 including lung cancer and mesathelioma to the public,
19 consumer patching compounds containing respirable free
20 form asbestos are banned hazardous products.

21 I've appreciated this opportunity to present
22 NRDC's views on the proposed ban, and I thank you.

23 CHAIRMAN BYINGTON: All right, first of all,
24 though, by the end of the day you will have a full copy
25 of what was on.

1 MS. GIBBONS: Right.

2 CHAIRMAN BYINGTON: We also have a copy of the
3 transcript and will make sure that the staff then has a
4 copy of your proposed changes as well.

5 Also I have attempted to make a couple of notes
6 since we don't have a copy of some of the concerns you
7 had on the Union Carbide tests. But I would prefer that
8 rather -- instead of using my notes, if it's possible for
9 you to outline specifically what your concerns were, that
10 they had not tested for asbestos in the compound and
11 not use a NIOSH testing technique, they did not use a
12 polarized microscope.

13 MS. GIBBONS: Right.

14 CHAIRMAN BYINGTON: And I think there were maybe
15 even one or two other ones that I might have missed.

16 MS. GIBBONS: True.

17 CHAIRMAN BYINGTON: If we could have those, since
18 the Union Carbide representative will be back with us,
19 we might try and deal with it directly and let them comment
20 if they would on any of those things that you've raised.

21 So --

22 MS. GIBBONS: Sure. Did you want that in writing
23 or would you --

24 CHAIRMAN BYINGTON: If you'd just give me a
25 written --

1 MS. GIBBONS: -- like me to state it now?

2 CHAIRMAN BYINGTON: No, if you'd just give me your
3 written note with the four or five questions, or whatever
4 the number of them are, then we would proceed from there.
5 And one of them, I think -- one or two of them he may have
6 commented on, let's -- you know, let's comment on it, and
7 again, if he feels it's necessary that the record --

8 MS. GIBBONS: Fine.

9 CHAIRMAN BYINGTON: Commissioner Pittle.

10 COMMISSIONER PITTLE: It might be helpful if you
11 had an estimate of how you think the results would have
12 been changed. It would be only a guess any way because
13 you don't have the quantitative data that --

14 MS. GIBBONS: Right.

15 COMMISSIONER PITTLE: My question is --

16 MS. GIBBONS: I don't think that -- Dr. Nicholson,
17 who gave me this data, and he didn't have enough informa-
18 tion to know how much the results would have been changed.

19 CHAIRMAN BYINGTON: Okay.

20 COMMISSIONER FRANKLIN: I have a -- do you have
21 any other information about consumer acceptability of sub-
22 stitute compounds containing no free form asbestos?

23 MS. GIBBONS: I have my own experience, and --

24 COMMISSIONER FRANKLIN: Well, are other people
25 relating their own experiences, but go ahead.

1 MS. GIBBONS: I used a patching compound before
2 that I didn't know that it contained asbestos, or didn't
3 contain asbestos, and found out later that it did not
4 contain asbestos. It was fine, it did the job. A
5 terrible job.

6 COMMISSIONER FRANKLIN: But you're not attribut-
7 ing that to the product, is that what you're saying?

8 It worked, in other words, it worked well enough for you.

9 MS. GIBBONS: The crack is no longer in the wall.
10 Dr. Nicholson uses one product, which does not contain
11 either asbestos or plating mineral, and uses it frequently,
12 and finds it to be totally effective, as their samples.

13 I would imagine that consumers don't know the
14 difference.

15 COMMISSIONER FRANKLIN: That seems to be what
16 some other people have said this morning too.

17 The words that you wanted to have dropped out
18 of 1304.1A --

19 MS. GIBBONS: Yes.

20 COMMISSIONER FRANKLIN: -- and designed for use.

21 MS. GIBBONS: Yes.

22 COMMISSIONER FRANKLIN: Could you expand on your
23 reasoning there a little bit more.

24 MS. GIBBONS: As it reads now we're talking about
25 -- the Commission talks about patching compounds, which

1 contain asbestos, and which are designed for use in a
2 manner such that asbestos fibers can become airborne under
3 reasonably foreseeable conditions of use.
4

5 It is perhaps an -- arguably, a contradiction
6 between designed for use being one standard and reasonably
7 foreseeable conditions of use being a standard by which
8 to judge whether this is a banned hazardous product.

9 COMMISSIONER FRANKLIN: I see.

10 MS. GIBBONS: We think that the intent of the
11 rulemaking is that products containing asbestos from which
12 asbestos fibers are released during reasonably foreseeable
13 conditions, under reasonably foreseeable conditions of
14 use, and that whether it's designed for use in that way
15 is irrelevant.

16 COMMISSIONER FRANKLIN: Okay, thank you.

17 CHAIRMAN BYINGTON: I thank you very much.

18 Was there a question?

19 It happens at the moment to be about 20 minutes
20 to 1:00. It's my understanding that Peter Simpson and Robert
21 Rauch really want to only address the emberizing material,
22 is that correct, Mr. Rauch I see nodding. Mr. Simpson
23 here.

24 If the Commission has no objection, and since we
25 are going to have to come back, can we take those two
people out of order right now so they could be done,

1 and then the rest of the people who will want to -- then
2 Mr. Castleman. And then we have Mr. Rhodes to come back
3 again.

4 So what we could do is to take Mr. Simpson and
5 Mr. Rauch now, and possibly do that in the next 20 minutes
6 or so, take a break for approximately one hour, and we'll
7 resume at 2:00 o'clock, and Mr. Castleman could give his
8 comments, and Mr. Rhodes could wrap up and we could attempt
9 to be done within an hour or so.

10 Is that agreeable? Okay. First of all, Mr.
11 Simpson.

12 MR. SIMPSON: I'm Peter Simpson and I'm with
13 Rustic Crafts Company, and we're manufacturers of electric
14 artificial fireplaces and electric logs. And we're respond-
15 ing to the news release and the accompanying consumer
16 alert of July the 21st, and the proposed rulemaking concern-
17 ing respirable, free form asbestos.

18 We are most distressed at the wording used in
19 all three cases as the wording implies that all artificial
20 fireplaces and all artificial logs are harmful. And the
21 effect of this wording is not only understandable to
22 the consumer concern, but an actual stopping of consumer
23 buying.

24 The repeated references to artificial logs and
25 artificial fireplaces without specific exclusion of

1 electric fireplaces and electric logs has alarmed the
2 consumer who already owns our products, and is causing the
3 prospective buyer to decide against buying.

4 We've manufactured electric, artificial fire-
5 places and logs for over 35 years, and feel that we have
6 a safe, sensible, energy saving alternative to gas logs
7 and inefficient fireplaces.

8 The electrically operated, fire simulator in our
9 log creates a very realistic burning effect. A portion of
10 our electric logs and a portion of our fireplaces are
11 decorated with an artificial ash bed made of vermiculite,
12 a product which we are told is totally inert, inorganic
13 and non flammable and which your office has indicated is
14 completely safe and acceptable.

15 Nevertheless, since a news release of July the
16 21st, we have received numerous calls from the media, from
17 our individual retailers, and from consumers expressing
18 concern over our products.

19 We feel that we did have an opportunity to
20 convince these callers of the truth of the situation,
21 and we spent additional money to notify our major customers
22 and our sales reps as to the truth.

23 But we're most strongly concerned about those
24 consumers who decide simply not to buy it because they've
25 been afraid, because they've been made afraid by the

1 press release.

2 We have a very highly seasonal business. We
3 are most successful during the six months in the winter
4 when people start thinking about fireplaces, and our
5 selling season is only about two weeks away.

6 And we request that the -- that our products be
7 specifically excluded from this proposed ban. And it be
8 written into the rules of the Register.

9 We also would like the exclusion to be included
10 in a press release so that our consumers know that they
11 have a safe and economical substitute. We, or at least I
12 read through the news release, when it first came to us,
13 I wrote here and asked for it, and in reading through it
14 I tried to think of it in terms of a reporter, and also
15 as an editor, as to what actually might happen to the news
16 release when it was printed in the newspaper.

17 And by clipping out certain words, I came up
18 with the, the news release could have read, artificial
19 fireplace emberizing materials, ash and embers, are used
20 in artificial fireplace systems for decorative purposes.
21 Asbestos fibers are released into the air when household
22 air currents disturb the ash.

23 About three or four days later I was reading
24 through our local paper, the Bergen Record, which is no
25 reflection on that particular newspaper, and this is how it

1 came out.

2 They had interviewed the state commission of
3 consumer affairs, the director of that department, and
4 it states, the director of the state division of consumer
5 affairs is urging New Jersey consumers to join a nationwide
6 campaign to discontinue use of and safely dispose of
7 spackling compounds and artificial ash and embers, products
8 containing inhalable asbestos, and suspected of causing
9 cancer. And that was the first paragraph.

10 The Federal Consumer Product Safety Commission
11 is planning a ban on the products, however state D. C. A.
12 director Adam K. Levin notes that the ban will not become
13 effective until some time this fall.

14 He's quoted as saying, these products are ex-
15 tremely dangerous in that they have the possibility of
16 causing cancer when inhaled, and inhalation occurs rather
17 easily.

18 And a little further on in the article, the
19 statement was made, the artificial ash and embers are
20 used in gas burning and decorative fireplaces. At high
21 temperatures the asbestos in these products produces a
22 glow similar to that of real embers and ash.

23 And the next paragraph, dangerous inhalation
24 of these products can occur, says Levin, when they are
25 sprinkled on the fireplace floor, when glue is used to

1 attach the product to an artificial fireplace, and then
2 household air disturbs the ash.

3 The whole middle section of the consumer alert
4 and news releases missed out, and ended up with just that
5 statement.

6 The quote from the proposed rules from the
7 Federal Register, the product is also glued to artificial
8 logs, either at a factory or by the consumer using an
9 emberizing kit. Asbestos fibers are released when the
10 emberized material containing asbestos is sprinkled on the
11 fireplace floor and when ordinary household air currents
12 and downdrafts cause the asbestos in the simulated ambers
13 and ash to become airborne.

14 This product is used on artificial logs and on
15 fireplace floors beneath them to simulate light embers and
16 ash. There are three kinds of artificial fireplace logs
17 available on the market presently; the electric flame
18 simulating artificial logs, of which we manufacture one
19 kind made out of oak wood, and there are the compressed,
20 synthetic logs generally made from saw dust, and I think
21 it's a wax sludge, and gas burning, artificial logs.

22 Now, the proposed ban concerns the third type,
23 the gas burning, artificial logs. Type one, our logs,
24 and type two, has been specifically excluded in the
25 wording of the Federal Register.

1
2 Now, these saw dust and wax sludge logs are
3 actually burned in the fireplace, but they -- in the actual
4 wording they have been specifically excluded, although they
5 do not contain asbestos, and I don't think they ever have
6 contained asbestos.

7 And we are asking that the -- as the commission
8 specifically described and excluded those compressed logs
9 to prevent unfair and unwarranted negative consumer reac-
10 tion to that product, we request the same exclusion for the
11 very same reasons.

12 We are only a small business, and we look to the
13 agency of the federal government for support, and we
14 feel that this will have a negative effect on our busi-
15 ness.

16 CHAIRMAN BYINGTON: Are there other manufacturers
17 of electric logs as well, besides yourself?

18 MR. SIMPSON: Yes, there's another manufacturer
19 of wood logs, and there's a manufacturer of fiberglass or
20 I think it's structural foam cast facing to the log.

21 CHAIRMAN BYINGTON: Well, is it your position
22 then that none of the people who are making the electric
23 type are using asbestos, and that is exclusively the
24 gas?

25 MR. SIMPSON: That is what I understand. We
have never used asbestos, and we keep a pretty fair eye

1 on what our competitors are doing, and they use the same
2 materials and it's virtually the same techniques.

3 So that what you're really after is an addition
4 to the exemption, in other words to have it where we have
5 already exempted compressed logs that are burned, we would
6 like added in there electric.

7 MR. SIMPSON: That's correct.

8 See, the implication, we call them artificial
9 fireplaces and artificial logs. The major merchandisers
10 who merchandise our products through their catalogues and
11 the retail outlets, have referred to them as artificial
12 fireplaces, artificial logs, or decorative fireplaces.

13 Wording that's used in the same way referring
14 to the gas logs that you were specifically interested in.

15 CHAIRMAN BYINGTON: Commissioner Kushner.

16 COMMISSIONER KUSHNER: Perhaps I misunderstand
17 you but I don't interpret our rules applying, that is the
18 proposed ban, as applying only to artificial logs intended
19 for use in gas burning systems.

20 As I read it, the ban would be applicable to logs
21 containing or bearing respirable, free form asbestos,
22 regardless of the kind of system that they were in.

23 It includes decorative fireplace logs, and I
24 think cites gas fired, decorative systems simply as an
25 example. But I don't read it as being limited to that.

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24 think cites gas fired, decorative systems simply as an
25 example. But I don't read it as being limited to that.

1 Now, what is the -- what kind of assurance is
2 there that manufacturers of electric systems would not
3 be finding it attractive under certain circumstances to
4 decorate the logs with asbestos bearing materials?

5 There is nothing inherent about the electric ones
6 as opposed to gas one, to make the use of asbestos bearing
7 emberising materials more or less likely.

8 MR. SIMPSON: Except that first of all the --
9 when you talk about decorative fireplace systems or arti-
10 ficial fireplace systems there are only two ways -- three
11 ways of doing it.

12 There are gas logs.

13 COMMISSIONER KUSHNER: Yes.

14 MR. SIMPSON: There are artificial electric logs,
15 and there is something that is totally consumed.

16 COMMISSIONER KUSHNER: Yes.

17 MR. SIMPSON: That would be wood, of the compres-
18 sed logs that have already been mentioned in the Register.
19 And there is no -- we use vermicular, we've been using
20 it all along. It serves the purpose well. We have no --
21 there's no advantage for us to use asbestos because we're
22 not -- there is no heat generated.

23 The flame effect is created with a 40 watt
24 lamp and the clock motor, and it revolves to simulate a
25 burning effect, but the material you use on the outside

1 has to be clear, or at least somewhat clear so that you
2 can see this light.

3 And asbestos -- I couldn't see any advantage.
4 We wouldn't consider it, we would never have considered
5 it because it would serve no extra purpose.

6 CHAIRMAN BYINGTON: Commissioner Pittle.

7 COMMISSIONER PITTLE: I must say I misunderstood
8 you when you were talking about as efficient a system. I
9 thought you were talking about a system of providing heat
10 to the room.

11 MR. SIMPSON: Well, they are used in conjunction
12 with electric heater, or they can be used.

13 COMMISSIONER PITTLE: No, I --

14 MR. SIMPSON: But I understand, yes.

15 COMMISSIONER PITTLE: Because I was under the
16 impression you had an electrical heater as opposed to a
17 -- the only thing electric is the rotation of the foil
18 or whatever the device is that the light would shine on
19 to reflect, to give the appearance of --

20 MR. SIMPSON: That's correct.

21 COMMISSIONER PITTLE: Okay. So there's no
22 reason -- I can understand why you would have no -- you
23 don't get enough heat to cause anything to glow.

24 MR. SIMPSON: There is none. The glow is
25 created by the color of the lamp or the bulb that's in

1 log.

2
3 COMMISSIONER PITTLE: So your concern is just
4 to make a distinction, so that the word artificial fire-
5 place, where in one case it's artificial in terms of
6 it's even artificial in terms of giving off heat --

7 MR. SIMPSON: Yes.

8 COMMISSIONER PITTLE: As opposed to another one
9 that gives off heat but it's artificial, because there is
10 no chimney that takes -- yes, there is a chimney too.

11 MR. SIMPSON: Doesn't have to be. We--

12 COMMISSIONER PITTLE: It isn't a gas fireplace,
13 doesn't it have --

14 MR. SIMPSON: A gas --most all of them have to
15 be vented --

16 MR. PITTLE: That's right.

17 MR. SIMPSON: There are one or two that are not,
18 and have not been vented. But --

19 COMMISSIONER FRANKLIN: But the concern is in
20 the consumer's mind, he or she doesn't make a differentia-
21 tion between what kind of artificial you're talking about
22 here.

23 Your product, which we have not -- if what you
24 say is true, we should be concerned with under this notice
25 as being maybe pulled in here in terms of its image as
far as the consumer is concerned.

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MR. SIMPSON: I have --

CHAIRMAN BYINGTON: Fine, you'll show them?

MR. SIMPSON: These are just a picture of the catalogue, the product that we're talking about. It is free standing, it is not vented, it can be used in conjunction with electric heat, forced air heater that fits inside the fireplace.

That log on the lefthand side, that one standing up, is the artificial log. It's a decorative fireplace system.

But I spoke of the media, I got a call from Oregon from a manufacturer out there who uses my products in conjunction with his, and he had been called by the local news station asking why he was selling these products when he knew that they were dangerous.

And he immediately got onto me to find out if we were, and that's when I really got to hear how we got sideswipped by this proposed ban.

CHAIRMAN BYINGTON: Well, I would suggest that before you leave today the Commission would certainly like to consider your request. But I think that one of the things that's going to be necessary is some consultation with the staff to determine how the appropriate wording can be set up --

MR. SIMPSON: Yes.

1 CHAIRMAN BYINGTON: -- for the Commission to
2 consider, so it would take care of your problem but would
3 not develop a very large loophole --

4 MR. SIMPSON: Ec.

5 CHAIRMAN BYINGTON: -- as Commissioner Kushner
6 indicated might be developed if it weren't properly ad-
7 dressed.

8 MR. SIMPSON: Yes.

9 CHAIRMAN BYINGTON: So I think the Commission
10 might, you know, in considering this, would like to make
11 sure that the wording that we come up with is not only
12 agreeable to our staff but does solve your problem without
13 causing a major problem elsewhere before we could go any
14 further.

15 MR. SIMPSON: Yes.

16 COMMISSIONER PITTLE: Is the vermiculate coated
17 onto the outside of this log in the center?

18 MR. SIMPSON: Yes, it is.

19 CHAIRMAN BYINGTON: And also --

20 COMMISSIONER PITTLE: How is it attached, with
21 a glue or --

22 MR. SIMPSON: With a glue, with a particular --
23 it's a wood glue that we've used in our -- in the making
24 of the fireplace. We also use it to bond to the log it-
25 self.

1 I brought one with me if at any time someone
2 wants to take a look at it. It's also, if you look at
3 the front of that picture, underneath that log there is
4 a little dark area. That's vermiculite that's being glued
5 to the floor of the fireplace and then sprayed with a
6 black enamel paint, to also act as a reflector and simulate
7 embers.

8 CHAIRMAN BYINGTON: Okay, thank you very much,
9 Mr. Simpson.

10 MR. SIMPSON: Yes.

11 CHAIRMAN BYINGTON: Okay, can you come back at
12 2:00.

13 Okay, we'll adjourn until 2:00 o'clock, and then
14 we'll take you and Mr. Castleman and those two others.

15 (Whereupon, at 1:00 the hearing was adjourned
16 for lunch.)
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AFTERNOON SESSION

CHAIRMAN BYINGTON: U. S. Consumer Product Safety Commission, public meeting on asbestos, and for the information, the public commission is scheduling for itself in closed session a meeting late this afternoon to discuss with its lawyers legal situation relevant to the recent appellate court decision on the Tris case.

And therefore we will attempt -- we've been achieving to wrap this up by 3:00, but we would be as -- attempt to be as close to 3:00, 3:30 as possible, so we can resume our meeting shortly thereafter.

So we will now proceed, and Mr. Robert Rauch of the Environmental Defense Fund, is next, and you want to talk about emberizing material.

MR. RAUCH: Mr. Chairman, Commission. With me is Mr. Barry Castleman, whom you will be hearing from independently a little bit later, who is acting and in his present capacity as a consultant.

I want to be fairly brief this afternoon because a number of these issues I have covered with you in previous statements, but I must say in reviewing the news release which was sent out on the 21st of July, and also in viewing subsequent publicity, there have been a number of concerns which have been raised in my mind, which I hope don't entirely, at least, come under the

1 category of water under the dam.

2
3 There are some concerns which frankly I wish I
4 had noticed earlier, and I guess -- I hope you do when you
5 hear them. I've reviewed the various letters which you
6 solicited, to get advice, before the press release was
7 issued, and a number of them -- first of all suggested
8 that the press release, or information going to consumers
9 contained some means for identifying whether in fact the
10 consumer has asbestos in the fireplace.

11 Now, you just heard from the industry which
12 manufactures electric fireplaces, which apparently utilize
13 vermiculite, and frankly I don't think if you gave me a
14 fireplace I could tell you whether it contained asbestos.

15 And I have seen the mineral on a number of
16 occasions. I'm just wondering how many people at this
17 stage, given what the Commission has released, can actually
18 determine whether they have asbestos in their fireplace.

19 And furthermore, if they're in doubt where do
20 they go to get the information. Now, that concern was
21 raised by a number of different writers, and probably the
22 most prominent of which is Mr. Wilkinson, who was the
23 supervisory industrial hygienist from the Department of
24 H.E.W.

25 The second concern also raised by Mr. Wilkinson,
or Dr. Wilkinson, was that this operation should only be

1 attempted by responsible, non smoking adults. Now,
2 Mr. Castleman perhaps can add something to this, but my
3 understanding at least the reason for this is that
4 studies have shown that there is a very high incidence
5 of cancer and other forms of asbestos related disease in
6 those who smoke in addition to being exposed to asbestos.

7 I think Dr. Wilkinson has raised a very real
8 question here as to whether smokers should attempt the
9 removal of these ashes. Again, something which from what
10 I've seen was not reflected in the Commission's press
11 releases.

12 Now, the reason this is a particular concern
13 is contained in again Dr. Wilkinson's letter, this is page
14 one, the sixth paragraph, and I'll just read it verbatim.
15 My own opinion is that responsible, non smoking adults
16 following specific instructions, can remove the asbestos
17 with a very minimum risk.

18 But then he goes on to cite what he believes
19 are the estimates of exposure. My estimate is that a
20 complete clean up can be done in less than 15 minutes
21 with a potential exposure to an air concentration that
22 could vary from one tenth million, that is four fibers
23 per cubic centimeter, to 10 million, that is 354 fibers
24 per cubic centimeter, per cubic foot.

25 Then he points out in 1976 OSHA limit, this is

1 the present one, for asbestos, is two fibers per cubic
2 centimeter with a ceiling exposure of 10 fibers per cubic
3 centimeters.

4 Now, Barry has informed me that OSHA has the
5 proposal out right now to reduce these so that the ceiling
6 concentration would be five fibers per cubic centimeter,
7 not to be exceeded in a 15 minute period.

8 Now, what Dr. Wilkinson is saying here is that
9 during the 15 minutes it's required to remove the ashes,
10 in his judgment a maximum of 354 fibers per cubic centimeter
11 could be released. Almost 70 times the OSHA proposal.

12 Now, it was because of this information, this
13 estimate, that Dr. Wilkinson concluded that, "Before this,
14 or any other type of solution recommended publically, I
15 believe it is imperative that it be tried out in some loca-
16 tion in which the potential exposures can be documented
17 under different circumstances and unforeseen problems
18 worked out.

19 Now, to my knowledge, and I would like to be
20 corrected, no such tests were conducted prior to the
21 test release was issued. Now, believe me, I really regret
22 bringing these points up at this point, they certainly
23 should have been made much earlier, and to the extent that
24 I personally didn't make them earlier I'm sorry because I
25 certainly would have.

1
2 But I think what may have happened here is that
3 in getting all of those letters, most of which did conclude
4 that consumers could do it, we didn't take a close enough
5 look at some of the detailed observations, and if Dr.
6 Wilkinson is right about this exposure, and of course we
7 have no way of knowing, I assume it's just an estimate
8 on his part, we are talking about a single exposure, po-
9 tentially 70 times the OSHA ceiling.

10 Now, the last point as far as the instructions
11 go I wanted to make was made by Dr. O'Neal Banks, who
12 is the chief of the Maryland Health and Safety Industrial
13 Hygiene Department.

14 He pointed out a problem which the gentleman who
15 just preceded me didn't specifically address but would
16 come up with his products, and that is that if you have
17 an electrical fireplace which has the vermiculite in it,
18 and do this by mistake, not knowing that it contains
19 vermiculite and asbestos, the application of water to these
20 electrodes or wiring or whatever is used, could pose a
21 problem.

22 And again I think the Commission's press release
23 did not point this out. Now, I don't know how serious
24 the problem would be, but apparently Dr. Banks did feel that
25 it was potentially a problem. Exactly how serious, I
frankly don't know.

1 But these are four specific concerns which we do
2 have, and which did, of course, lead EDF up initially,
3 you know, to request that some type of specialized team
4 be assigned to do this.

5 Now, I understand the reasons why the Commission
6 did not adopt that suggestion. Admittedly, all the advice
7 she received suggested that homeowners could do it them-
8 selves, and the teams would have been expensive.

9 However, we do feel, based on the information
10 I just presented, that a number of steps should be taken
11 at this point. Number one, we would recommend that a test
12 be run as suggested by three of the people who corresponded
13 with you, and I can go over them. Dr. Clark Cooper
14 made this recommendation, Mr. Harrison Rhodes, from whom
15 you heard earlier this morning, and of course Dr. Wilkin-
16 son.

17 All of them indicated that a test was necessary
18 before this was recommended, and I think given Dr.
19 Wilkinson's estimates, particularly, there is a need
20 to try it and to try it both with someone who would do
21 it carefully and someone who would do it carelessly,
22 as Dr. Cooper has suggested.

23 To get an idea of just what are we talking
24 about. In other words, you know, one of the points that
25 I made earlier was that, for example, just a failure to

1 soak the ashes through sufficiently first, this is not
2 an area where we can try trial and error. As soon as
3 someone pokes that plastic shovel in or whatever, and
4 lifts up the ashes, if it isn't soaked all the way through
5 you could have a problem.

6 I think it's this type of sort of carelessness
7 that we can expect of. At least we ought to know the
8 parameters of what we're talking about in terms of expo-
9 sure.

10 All right, the second suggestion, and this
11 really goes to the problem of how many people actually
12 know, despite the press release -- let me add, I haven't
13 reviewed all of the papers in the country, but the one
14 that I did see was the New York Times, and some of you
15 may have seen it.

16 It gave the story, barely two column inches,
17 buried on a back page with the heading, who burns fires in
18 July, or something to that effect. It was really rather
19 comical in the heading.

20 And to my knowledge, at least, the stories that
21 I have seen, none of them have actually printed the in-
22 structions. Now, perhaps you all have seen stories to
23 that effect. We generally review this through national
24 newspapers, but it concerns me that even if it was
25 covered, how are people supposed to get these instructions.

1 So the second step that we are going to suggest
2 is that at least for those manufacturers and distributors
3 that do have records -- now, admittedly it's probably
4 not a large number, but you ask them to notify purchasers
5 of whom they have records. It won't be everyone, but
6 you'll get at least some of them.

7 I suspect, although I have no way of proving,
8 that a lot of people still don't know about this, and it's
9 very wasy for us in dealing with this constantly because
10 we've been exposed to it over and over, to think that
11 somehow everyone else is learning about it too.

12 But as we all know, that is not necessarily the
13 case.

14 Third, and this is undoubtedly the most contro-
15 versial, we still would like to see at least for people
16 who smoke and for the elderly, the option of calling a
17 central number and getting someone else to do the removal.
18 Now that someone else doesn't necessarily have to be a
19 separate, specially formed team.

20 It occurred to me this morning that perhaps a
21 local fire department who's used to handling dangerous
22 materials might be able to do it. There are a number of
23 people who could do it, presumably who would take the care,
24 they could understand the instructions, where a person
25 either because they smoke, because they're elderly, may not

1 be able to do so.

2 Fourth, we would hope that you would make, once
2 the tests are completed, and assuming that they are
4 completed satisfactorily, another effort to republicize
5 this problem, and the steps that are needed to correct it.

6 One thing which I think would be very dramatic,
7 and I don't know whether any of you have considered it,
8 but I think it would be very effective, if one of the
9 commissioners themselves was filmed removing these
10 ashes, from a fireplace.

11 Now, I say that really not in jest because a
12 lot of people may take the attitude, well, it's fine for
13 you people in Washington, without gas fireplaces, to tell
14 us how to do it. But have any of you ever done it your-
15 selves?

16 Frankly, I would pause myself before I tried it.
17 I would be very, very careful. And I daresay that many,
18 many people who are going to try it don't have as much
19 information as I do.

20 I think also, and I understand that your office
21 of media relations has taken a number of steps to publicize
22 it, that perhaps distribution of a film, whether you're a
23 Commissioner or someone else, and you're doing it, radio
24 spots could be utilized.

25 My point, very simply is this. I don't think

1 the issue of a press release alone is enough to do it.
2 We're talking about 300 to 500,000 homes, presumably, that
3 have these in them.

4 I would be very, very surprised if more than
5 five to 10,000 of them were removed as of this point.
6 It's just a wild guess but I would be very surprised.
7 An effort of this magnitude requires a continuing effort
8 and one I think in this case probably needs some modifica-
9 tion.

10 And let me just say in closing that despite these
11 concerns, EDF is very pleased by the Section 8 ban which
12 is being proposed by the Commission. We're pleased that
13 the effective date is, when the final regs do come out,
14 and we think that you have taken a number of very important
15 steps.

16 And I don't mean by this criticism to suggest
17 that you haven't done anything, or at least we're not
18 moving in the right direction. At this time I'd be
19 happy to answer any questions, and refer the scientific ones
20 to Barry.

21 CHAIRMAN BYINGTON: First of all, Robert, are
22 you aware that the press release is not the only part of
23 the program?

24 MR. RAUCH: Yes, I am, right.

25 CHAIRMAN BYINGTON: Because your statement

1 indicates that you felt a press release by itself was not
2 sufficient.

3 MR. RAUCH: Right, I do understand that other
4 steps have been taken. I don't know exactly how it
5 stands --

6 CHAIRMAN BYINGTON: The Commission agrees with
7 you that a press release was not sufficient, and the office
8 of communications have taken a broad approach to dealing
9 with this program through a large number of media with
10 a whole series of programs, short of a film.

11 MR. RAUCH: Yes.

12 COMMISSIONER KUSHNER: Just wanted to ask for a
13 clarification of the -- your suggestion number two, which
14 followed from your observation that the newspapers hadn't
15 given the Commission's press release very much play, and
16 I guess what you are suggesting got by me by way of the
17 Commission's getting in touch with manufacturers --

18 MR. RAUCH: Right.

19 COMMISSIONER KUSHNER: -- of distributors.

20 MR. RAUCH: Yes.

21 COMMISSIONER KUSHNER: And I didn't know what you
22 wanted us to do --

23 MR. RAUCH: I think --

24 COMMISSIONER KUSHNER: And what we're suggesting
25 in that connection.

1
2 MR. RAUCH: Right. I think the first step would
3 be to get in touch with both manufacturers and distributors.
4 As I understand it from the Fireplace Institute's letter
5 to you, there are some vendors that send out warranty cards,
6 some of which presumably have been returned, and which
7 could be used at least as a start to begin reaching some
8 people.

9 I think at the same time, of course, these
10 manufacturers, and particularly distributors, could be
11 urged to send out the instructions with notification, as
12 well as perhaps post signs in their outlets. I don't know
13 how often people would return to them, but in other words
14 have some way at the local level to reach these people
15 who have the fireplaces.

16 I just -- I could be completely wrong, but I
17 don't think at least the national media coverage I've
18 seen, has been very effective. And there may have been a
19 lot more that I haven't seen, but I haven't been -- when I
20 saw this little story in the Times, as I said, I was rather
21 disturbed.

22 COMMISSIONER PITTLE: I've had a concern about
23 not seeing very many stories myself, and I asked the
24 director of our media relations, Herb Coster, to keep a
25 separate file on all the clippings that came in on this
story.

1 As it turns out he was already doing that, he
2 didn't need me to suggest it, but I think there's a strong
3 feeling on the part of the Commission to really make sure
4 that -- at least in my mind, any way, it's an open question.
5 If it doesn't succeed then we can get very many people,
6 to be aware of it, through the print media and possibly
7 something through the electronic media, we're going to have
8 to try something else.

9 MR. RAUCH: Yes.

10 COMMISSIONER PITTLE: I completely agree with you
11 that with 300,000 homes, or whatever the exact number is,
12 that a two inch story -- but it turns out there are some --
13 you just weren't reading some of the other, bigger news-
14 papers.

15 Because there have been some fairly good sized
16 articles, at least according to his file, that's growing
17 by the day.

18 MR. RAUCH: Yes. Have they included the instruc-
19 tions, Commissioner Pittle?

20 COMMISSIONER PITTLE: That depends on who's got
21 the space at the time they print the article, and that's
22 something we have no control over.

23 MR. RAUCH: Yes, I understand, I was just cur-
24 ious.

25 COMMISSIONER PITTLE: But the reason why they

1 aren't there is of no value to us if -- in being satisfied
2 that that's all we do --

3 MR. RAUCH: Yes.

4 COMMISSIONER PITTLE: Because there may be some
5 way to get those things published at a cost. But they
6 will have to be done now.

7 MR. RAUCH: Yes, I was just concerned that some-
8 how we don't let this matter rest with the initial effort
9 that was made, particularly if we find that not as much
10 is happening as we had hoped.

11 I think that this is -- it is a serious problem.
12 When I first came to you we thought this might be, you
13 know, 20 or 30,000 fireplaces. But the Fireplace Institute
14 was saying 300 to 500,000. You talk about an average
15 household of three people you're talking about potentially
16 1,500,000 people that are exposed.

17 COMMISSIONER PITTLE: That's with the fireplace,
18 but not necessarily with asbestos emberizing materials
19 laying underneath, is that -- or do you believe--

20 MR. RAUCH: I thought the estimate was--

21 COMMISSIONER PITTLE: -- that a there's a one to
22 one relationship?

23 MR. RAUCH: Well, I thought the estimate covered
24 asbestos containing kits. It's right in here.

25 It says here, in the past four or five years,

1 an estimated 300 to 500,000 fireplace log/ash kits have
2 been sold. There were 31 manufacturers of gas logs in
3 '72, in 1977 there are nine known manufacturers.
4

5 COMMISSIONER PITTLE: So --

6 MR. RAUCH: So it's unclear, but I think it's
7 clear that the tenor of the letter is about asbestos ashes.
8 I think we could check with the Fireplace Institute easily
9 enough and find out for sure.

10 CHAIRMAN BYINGTON: I don't mean to be defensive
11 about our communications program, but I think for the
12 record we ought to indicate that now all the Commission
13 feel as you do in terms of getting the word out. But there
14 has been a lot of other things.

15 One, there has been a whole series of picture
16 grams that are going out to weeklies that can run this
17 type of thing.

18 MR. RAUCH: Yes.

19 CHAIRMAN BYINGTON: That you won't see in the
20 normal dailies, but will cover a great percentage of the
21 households in America through weeklies.

22 MR. RAUCH: Yes.

23 CHAIRMAN BYINGTON: There has also been a major
24 effort to get radio copy to radio stations and to try and
25 get -- you can't get the instructions and it was generally
agreed by most lawyers that you can't use the broadcast

1 media very well to tell people or show people how to do it
2 because they need something in their hands. So the effort
3 here again was to get people to call us or write us and
4 get the instructions from us.

5 MR. RAUCH: Yes.

6 CHAIRMAN BYINGTON: So I think a fair analysis
7 ought to be, which is what I hope we're trying to do, it's
8 a little difficult in the way it operates, but it keeps
9 some track on how many calls we're getting and numbers
10 we're sending out in terms of our hotline and other areas
11 as well.

12 MR. RAUCH: Yes.

13 CHAIRMAN BYINGTON: Plus we've used consumer
14 organisations and consumer affairs officers and the
15 state and local level across the country to try and dis-
16 tribute that.

17 And we've got no way of knowing how successful
18 some of those might be, or are.

19 MR. RAUCH: Mr. Chairman, I didn't really mean
20 to suggest by that that your media office had not been
21 doing anything, and I was made aware this morning of some
22 of the things you were doing.

23 I think my only concern is that some effort be
24 made on a continuing basis to find out just how effective
25 this is, if at all possible, such as the file and monitoring

1 and so forth, and then if it appears that further efforts
2 are necessary to keep an open mind on them.

3 CHAIRMAN BYINGTON: I agree, I don't think we can
4 rely on the Times to get the ash out.

5 MR. RAUCH: I would -- as I said, the first point
6 I made about actually testing this, I think frankly would
7 be a good idea, given the fact that three of your commen-
8 tators did strongly suggest, including the term imperative
9 at one point, before we got too much further with this
10 program.

11 The test would be simple enough.

12 CHAIRMAN BYINGTON: Well, that's not what we're
13 told --

14 MR. RAUCH: Really?

15 CHAIRMAN BYINGTON: We're told it will take
16 a minimum of three months by the time you conduct it, run
17 it, and come back with any kind of analyzed results worth
18 looking at.

19 And one of the reasons why I certainly voted not
20 to do the testing was because I wasn't interested in
21 waiting three months, and if I'm told three months I'll
22 guarantee it will probably run four or five.

23 But I'm just not interested in running -- in
24 waiting for anywhere from two to six months, whatever the
25 figure happens to be, two months, three months, five months,

1 to wait and see whether or not or what the concentration is
2 when the basic thing was to get it out.

3 And --

4 MR. RAUCH: Well, I'm certainly not one to suggest
5 the Commission should delay, as you certainly know, but I
6 would hate to think that the cure in this case was worse
7 than the problem.

8 And you had had three fairly respected people
9 when you solicited their views, tell you you needed to do
10 that. And as I said --

11 CHAIRMAN BYINGTON: We also had 15 others that
12 didn't think so. I mean, you know, we got 20 some responses,
13 I guess, is the problem.

14 MR. RAUCH: Yes, I've looked at them, and I think
15 that, you know, some people obviously didn't even think of
16 it. I guess it's not a question of them saying you shouldn't
17 do it, it just didn't occur to them.

18 You know, I don't know if -- I can't imagine it
19 taking three months to run a test. Tests were run on the
20 Rockville asbestos problem with the roads in a much
21 shorter time than that, I mean, it's not that difficult.
22 And these would be under much more controlled conditions.

23 Again, it's some advice that at some point I
24 hope we don't find out that this is a serious problem.

25 CHAIRMAN BYINGTON: Okay, thank you very much, Mr.

1 Rauch.

2 MR. RAUCH: Thank you.

3 CHAIRMAN BYINGTON: Mr. Castleman.

4 MR. CASTLEMAN: The statements I have to make
5 at this point are my own, they do not represent anybody
6 else. I have worked on product liability suits against the
7 asbestos industry and I think it's important for the Com-
8 mission to understand the larger context of its ban in
9 terms of protecting people from asbestos hazards.

10 And how we got into this fix we're in in the
11 first place, and why a product liability law is proving
12 totally inadequate to protect consumers, and why bans of
13 this sort are really needed.

14 Up until this time, the only recourse a consumer
15 had under the law was the right to sue manufacturers after
16 he was injured, and this just hasn't been very protective.
17 The latency of a disease usually on the order of 30 years
18 or more from the time of the person's being injured, and
19 from the time that whoever sold him the product made a
20 buck for selling it to him.

21 And there are now hundreds of thousands of people
22 who are expected to develop cancer, and are developing
23 cancer, as a result of exposure to asbestos products.
24 Most of these people were not warned that the products that
25 they handled were any hazard to them.

1 The first time that I know of any asbestos
2 product bearing a hazard warning was 1964, and that was
3 insulation material, and the warnings were put on only
4 after Selikoff's landmark paper was published showing that
5 something like 40 percent of the work force was getting
6 wiped out by occupational cancer and asbestosis.

7 There were many case reports earlier going back
8 to 1933, the first case reports of asbestosis, among insula-
9 tion workers. And it was well known at that time that
10 asbestosis was a fatal disease.

11 A lack of hazard labeling on asbestos insulation
12 is analagous to the lack of labeling on asbestos containing
13 dry wall patching compounds. Dry wall patching compounds,
14 to the best of my knowledge, bore no hazard labeling
15 until 1975.

16 And the manufacturers made no effort to determine
17 the extent of the asbestos hazard that the product's use
18 entailed, leaving this, instead, to be done by unions and
19 medical researchers, and the products endangered the
20 general public as well, not just the work force that applied
21 them.

22 And, finally, substitutes were always available.
23 The asbestos industry's failure to clean up its manufactur-
24 ing plants and to warn its customers about product hazards,
25 the industry's unwillingness to conduct proper studies of

1 hazardous of asbestos, and I'm talking about in the 1930s
2 and 1940s when they started to find out about this from
3 other sources, and they probably knew about it long before
4 that, has led to the proliferation of asbestos hazards
5 that will be with us for the next 100 years.

6 And I am enclosing a statement for the record
7 which I originally wrote in response to a proposed bill
8 on national product liability, and it goes through some of
9 the history in the asbestos industry, and I won't read the
10 whole thing, I'll just sort of skip through it and pull
11 some parts out of it as I go.

12 Asbestosis was recognized by Pliny the Younger,
13 a Roman historian of the first century A.D.. The Romans
14 noticed -- this was slaves weaving asbestos, and they
15 noticed that they were using up these slaves awfully fast,
16 and no matter how much they whipped them they couldn't
17 get them to work. And they figured out it must be asbestos
18 they were breathing that was killing them.

19 And they even provided respirators for these
20 slaves. Now, in 1918 the U. S. Department of Labor Statis-
21 tics monograph mentions that the insurance industry had
22 already picked up on the fact that asbestos workers were
23 at risk of fatal disease to the extent that it wasn't a
24 good idea to bet money on them living, that they were
25 declined for life insurance by the insurance companies

1 based on the little data that was available to them.

2 That was six years before the first case of as-
3 bestosis was published in the medical literature. And as
4 I mentioned, the first case of asbestosis among a product
5 user, that is a man who worked with insulation materials,
6 I suppose someone who worked in a manufacturing plant, was
7 published in 1933, and that was in the American literature.

8 There was also two cases published in the British
9 literature in 1934. In 1942 a couple of cases were published
10 in New York, insulation workers who had both lung cancer
11 and asbestosis. One of these men was employed with a major
12 asbestosis company, according to the medical article, up
13 until a few months before he died, and his asbestosis killed
14 him in a very short time.

15 If he hadn't developed lung cancer, according to
16 the article, according to the last few years of life, he
17 was almost completely exhausted after climbing one flight of
18 stairs, and he had frequent bouts of coughing day and
19 night.

20 And it's pretty amazing that the asbestos industry
21 never did any studies on the product, on the users of its
22 products, such as these insulation workers, before 1964.

23 The industry did publish a few things in the
24 literature, but they weren't very well designed studies,
25 and they were generally defensive in nature. When I was

1 writing my master's thesis on medical literature of asbes-
2 tos in 1971, I knew nothing about the politics of scientific
3 articles and how they get published and who wants to publish
4 what to protect himself.

5 But I was struck by the fact that there were two
6 camps; there seemed to be one group of people that were
7 always getting positive results and another group of people
8 that were always getting negative results, and asking new
9 questions that seemed to try and get everybody off the
10 track, of the fact that the stuff was out there killing
11 people.

12 Now, the marketing of some of these products that
13 have caused academics of asbestos, probably would never
14 have occurred had the industry done the kinds of studies
15 that it should have done in the 1930s, and this is the
16 reason I'm saying all of this.

17 A lot of these problems never would have arisen.
18 A good example is the use of sprayed fireproofing insula-
19 tion, which was introduced in the 1950s, and they had snow-
20 falls in the streets of New York from all the sprayed fire-
21 proofing material being blown onto the girders of buildings
22 being constructed every three blocks, another 60 story
23 building with the stuff being sprayed all over the place.

24 There was no way they could enclose it, and the
25 stuff was eventually banned in 1973 by the Environmental

1 Protection Agency. But there were millions of people who
2 worked in those buildings, trades workers, there were
3 other people walking by who were exposed to this asbestos.
4 This is a product that never should have been sold in the
5 first place, and now that people are starting to get asbes-
6 tosis from having worked with it, it's a problem to even
7 find out what's become of the companies that manufactured
8 it.

9 And of course there's the residual problem of
10 the asbestos material that is sprayed on the insides of
11 buildings and in duct work, and now as with the ULCA dormi-
12 tories and the school house in Lander, Wyoming, and this
13 is an article about the Yale architecture building had
14 to be completely renovated. This is in the medical litera-
15 ture of how that was done.

16 I'm sure your staff has a copy of this. This
17 is quite a mess, we're stuck with all these buildings
18 having this material and it's not just a hazard, it's to
19 the people who built these buildings.

20 Now, I've gone through 30 years of back issues
21 of asbestos magazines, and used other sources, to try and
22 run down some of the products that have been sold, and
23 I think we'll eventually find large populations at risk
24 from such things as dry wall compounds, certainly,
25 textured paints, flooring, backings.

1 Armstrong makes a flooring backing that contains
2 asbestos, so if you have to rip the flooring off, vinyl
3 flooring off of a floor, then you've got to find some way
4 of scraping or sanding that backing, and the backing
5 needn't contain asbestos, I would think.

6 Asbestos has also been used in tobacco and
7 cigarette filters. There's even an article in the medical
8 literature on people who developed asbestosis from making
9 cigarette filters. It was used for filtering intravenous
10 drugs until about a year and a half ago when the Food
11 and Drug Administration took the suggestion of the
12 Environmental Defense Fund to deal with that problem.

13 And children's modeling compound is the only
14 product I know of that the asbestos industry has said,
15 does not contain asbestos. And it was in 1971, the
16 Asbestos Information Association put out a press release
17 and told a whole lot of people who run bureaus of education,
18 things like that, that they should get rid of any of these
19 materials and not use asbestos to make paper mache and
20 this stuff.

21 And that came out of 22 East 40th Street, which
22 is the same address as the Johns-Manville corporate head-
23 quarters. And in 1976 I heard of a woman who was making
24 clay modeling compounds using Johns-Manville asbestos,
25 so it seems as if the companies haven't been effective in

1 controlling these hazards on their own.

2
3 Okay, so I'll just mention that product liability
4 first of all in the case of consumers is very often un-
5 recognised. In the case of people who worked with these
6 products often, it is recognized and it's become a rather
7 substantial threat to some members of the asbestos indus-
8 try.

9 This is a 10K form from the Johns-Manville Corpora-
10 tion. They mention that as of March of this year they
11 were the defendant or co-defendant in 271 suits alleging
12 damage to the health of persons exposed to asbestos.
13 Most of these are product liability suits from asbestos
14 for insulation workers, who were never warned that the
15 stuff could kill them, and who are now dying.

16 This -- the threat of all these lawsuits has
17 apparently been taken quite seriously by industry. This is
18 a bill, H.R. 8689, was proposed by Congresswoman Millicent
19 Fenwick on August the 2nd, 1977, a week or so ago, two
20 weeks ago.

21 And this bill is called the Asbestos Health
22 Hazard Compensation Act, and this is going to be a compen-
23 sation act just to pay off people who get asbestos disease.
24 And the part that strikes me is section 205, which reads
25 in part, no person or persons entitled to file a claim
for benefits pursuant to a provision to this act, shall

1 be allowed to recover against the manufacturer, distributor,
2 seller, contractor, or applicator of asbestos materials.

3 So that might be the end of product liabilities,
4 if that thing gets passed. I haven't had a chance to
5 read that bill over thoroughly, I just received it, but
6 part of it does strike me.

7 CHAIRMAN BYINGTON: In the interests of time
8 could you summarize, deal with the areas that directly
9 relate these two bans with this meeting, and then any
10 other products. We will continue to appreciate any more
11 information that you have.

12 MR. CASTLEMAN: Okay. Now, the absence of any
13 members of the asbestos industry to testify today, except
14 for Union Carbide, suggests to me that the industry is
15 really decided that this product, this dry wall patching
16 compound, should not be made with asbestos.

17 And I have some remarks about the carbide data
18 that you received on July the 14th, dated July the 14th.
19 I first note that this is data from an interested party,
20 as was the earlier data sent in by the Asbestos Information
21 Association.

22 I did not know until today that the person who
23 did the job was the -- was a chairman of an asbestos
24 information association standards committee, and the person
25 chiefly responsible for selling asbestos to you. And to

1 consumers of dry wall patching compounds.

2 There is no attempt that I could see to square
3 this with the values reported by Rohl in the Rohl paper.
4 I point out this paper had to undergo peer review prior to
5 being published, and certainly does not contain some of
6 the very questionable aspects I will allude to in the
7 Union Carbide submission.

8 They used optical microscopy, out of doors and
9 in the home, for determining background asbestos levels.
10 This is totally inappropriate a way of discovering back-
11 ground levels. This is a very coarse method, only measure
12 one fiber in 100 or one in 1000, from what's there.

13 And yet even with this coarse method, if you
14 take a look at the data you'll see higher values for
15 the asbestos levels inside the house than outside the
16 house, and there was nothing natural about the asbestos
17 levels inside the house, and the use of this term in the
18 cover letter, and a description of the house as a typical
19 residence is misleading.

20 The house had had a dry wall job in 1968, and
21 a bathroom renovation in 1975, with extensive use of
22 asbestos containing patching compounds, in both cases,
23 and sawing and drilling of asbestos cement sheathing
24 in the latter job to fashion bathtub enclosures.

25 Then they had a gas log installed in '68 with

1 asbestos on it. Operator and area samples were taken
2 during the mixing of the powder with the water, mixing of
3 the spackling compound with water. But the operator's
4 exposure during this 17 minute step mentioned on page 3
5 was not reported.
6

7 It appears to have been included in one of the
8 eight hour time waited averages. The peak value that
9 this person had during the 17 minute step is not reported
10 itself.

11 I'd like to know what that exposure was. The
12 time waited average is for sanding, were both computed on
13 the basis of consumer spending something like six or so
14 of the eight hours outside of the house, as you pointed
15 out that's probably not the sort of indicator that you
16 would want to use in deciding whether there's an acceptable
17 risk.

18 You'd want to look at the more -- if that's a
19 very foreseeable, that the consumer stays in his house.
20 And you would get values then of several times as high
21 as the ones reported in the cover letter.

22 And this is the sort of thing that would never
23 get published in a scientific journal. Carbides claim
24 that there was not a multiplicity of shorter, narrow
25 fibers that were missed by optical methods is not supported
by data.

1 I haven't seen, haven't had a chance to look
2 through what they've brought in today very carefully, but I
3 don't believe they brought in any data about electron
4 microscopy by way of saying, for example, how many fibers
5 you see by electron microscopy for every one you would
6 count by optical microscopy.

7 And this was reported by Selikoff as being 200
8 to nearly 1000 -- not Selikoff, Rohl, by being in the
9 range of 200 to 1000. So that's for every one you see
10 by optical microscopy, you'd find that many more if you
11 looked at it under an electron microscope.

12 And Slikoff's people used a 25,000 power magni-
13 fication transmission electron microscope. They are
14 also the world's leading authorities on analytical methods
15 for asbestos, and so I would, having no other data, have
16 to assume that the 200 to 1000 multiplier applies in this
17 case as well as in the case of the paper that they pub-
18 lish.

19 Scanning electron microscopy can be used to
20 magnification of 15,000 power, Carhide pointed out, in their
21 oral statement today, they said 20,000. They only described
22 one sample that they looked at at all, in the 15,000
23 power, and the sample was described as number M30.

24 And I'd like to know what kind of sample that was
25 and I'd like to know more about what they saw under that

1 microscope. Their method for SEM analysis appears to be
2 limited to the 1500 to 2000 power range. This is a new
3 method they're talking about developing, and this is only
4 several times more powerful than an optical microscope,
5 which runs at about 400 power.

6 Why don't they use 15,000 power and count more
7 fields? That way they'll really see what's there, or
8 at least they'll see a lot more what's there. The scanning
9 electron microscope technique used makes a millipore
10 filter into a thin film before scanning, for fibers.

11 Well, fibers that were trapped in the middle of
12 that filter, when a filter gets collapsed, are going to
13 wind up in the middle of that film. And they might be
14 hidden from view from a scanning electron microscope
15 if the -- the scanning electron microscope sees about the
16 top micron of surface, according to people I consulted,
17 and if the fiber is a small fiber, especially, but at
18 any rate if it's under the top micron, surface, the scanning
19 electron microscope is not going to see it.

20 And so this method will undercount fibers,
21 and it will especially undercount real small fibers.

22 I'd like to know how thick the film was, that
23 they looked at, under the scanning electron microscope,
24 after it was collapsed prior to being put under the
25 microscope.

1 I've also been told that millipore filter material
2 is easily damaged by electron beams, and swelling of the
3 film would impede analysis. In contrast, nuclepore
4 filters are not so affected. The samples could have been
5 transferred to nuclepore filters with deposition of the
6 asbestos fibers entirely on the filter surface.

7 Was swelling a problem, was transfer considered.
8 Low temperature ashing would have removed the millipore
9 filter remains, making it easier to view the fibers.
10 Yet no mention of the use of ashing appeared in the re-
11 port.

12 Now, if we used the figures of Roh et al of
13 200 to 1000 small fibers for every one you'd count with
14 the optical microscope, and the number -- the peak number
15 reported by Carbide, the number of fibers you come up
16 with.

17 Carbide reported 300,000 large fibers, physical
18 and optical microscope, on a time waited average basis.
19 That was the maximum they reported.

20 And so from the Mount Sinai paper, that means
21 there were six million to 30 million asbestos fibers
22 per cubic meter of air, total fibers. The average
23 persons breaths about one cubic meter, a little less than
24 that, per hour.

25 And these amounts of asbestos are certainly

1 not normal background levels for the home as Carbide has
2 maintained.

3 When Carbide or its commercial customers for
4 asbestos fiber make a product that does not expose con-
5 sumers to asbestos levels above normal background, I would
6 agree that's no basis for banning the product as a con-
7 sumer hazard. But this is not such a product.

8 It's not mentioned whether the product used for US
9 Gypsum is made from asbestos from Union Carbide's mines.
10 I understand the carbides, asbestos is fiber of an unusual-
11 ly small dimension, and this is the fiber in the product
12 it would be especially difficult to get meaningful measures
13 of exposure with optical microscopy.

14 The product was made in 1974 and took three years
15 to reach the consumer, I know. Was U.S. Gypsum a customer
16 for carbide asbestos in 1973, '74?

17 The dry wall job was reportedly done by a
18 typical consumer. Was the consumer wearing a respirator.
19 I'm thinking now about the -- not the job that was done
20 by Mr. Rhodes, but the job that was done by the other
21 carbide employee.

22 And I'm thinking, if I were an employee of
23 Union Carbide and I were doing a job on my house, what
24 would go through my head while I was doing the job, and
25 might the nature of the job I do be affected by the fact

1 that there's all this monitoring equipment around.

2 And the fact that I worked for a company that
3 is obviously looking for a certain result from the testing.
4 The highest exposure reported was that of a person who
5 watched the work close. This shows one way that the risk
6 is transmitted to other members of the household.
7

8 Use of fiber shaped substitutes for asbestos
9 is not necessary, as some products on the market for years
10 have not had fibrous ingredients. Non fibrogenic, non
11 carcinogenic formulations already exist.

12 The concern over fibrous clays is primarily a
13 result of their impending substitution for asbestos, not
14 a result of documented health effects that are caused
15 by these substances. It is unlikely that any substitute
16 for asbestos now being considered will rival it as a health
17 hazard to man.

18 Carbide has asked the Commission for a one percent
19 limit on asbestos and dry wall patching compounds, however
20 no data was supplied to the extent of asbestos, that
21 these compounds would entail.

22 Moreover, no reason is offered for why the
23 Commission should deem compounds of more than one percent
24 asbestos as unacceptable, yet allow one percent asbestos
25 in these compounds.

I would personally think that the risk to

1 consumers is the same order of magnitude, whether you
2 have one percent asbestos in the product or three or four
3 percent. And it's not going to -- you're not going to
4 reduce the risk by one hundredfold by going down a few
5 percent in the asbestos.

6 Carbide's other request to the Commission was
7 to require warning labels on all such compounds, whether
8 packaged for commercial or consumer use. I believe they
9 would put warning labels on these products voluntarily
10 any way, if only to protect themselves from product liability
11 suits.

12 But since they like to calculate time waited
13 averages on the basis of the consumer being out of the
14 house, perhaps they'd be willing to put a warning label
15 that tells the consumer to get out of the house when he
16 gets through spackling his house.

17 A one percent limit would enable manufacturers
18 to work off existing stocks, with higher asbestos contents,
19 by dilution. Unlike a ban on asbestos, this would mean
20 there is really no economic impact on the industry. Of
21 course the public health risk would be extended indefinitely
22 with a one percent level of asbestos allowed.

23 Now, I've even tried to calculate what it's
24 worth to the industry to be able to go on selling asbestos
25 for use in these compounds, how much money they would make

1 from it, and how many people would probably die as a re-
2 sult.

3 And I've tried to use industry figures. With
4 the Asbestos Information Association comments that about
5 10,000 tons of asbestos were used in tape joints and
6 similar compounds in 1975, and following publicity after
7 the Mount Sinai's medical group paper in August '75, use
8 of asbestos in such products has declined.

9 And Johns-Manville, the largest asbestos company
10 in the western hemisphere, stopped selling asbestos for
11 use in tape and patching compounds in 1976. Johns-Manville
12 attorneys were no doubt mindful of their company's poten-
13 tial liability in the event of a bad recall order on
14 dry wall patching compounds containing Johns-Manville
15 asbestos.

16 Such ban had been requested by the Natural
17 Resources Defense Council in its petition, and the Com-
18 mission voted three to two to instead pursue a ban on
19 the Consumer Product Safety Act.

20 Since 1976 that has become a part of Johns-Manville
21 policy not to sell asbestos fiber for what they called
22 inappropriate uses, and therefore the sale of fiber for
23 spackling compounds, joint compounds, has been discontinued.
24 The only firm pushing for continued permission to use
25 asbestos and dry wall patching compounds is Union Carbide.

1 whose California asbestos mines constitute a minor source
2 of income for the nation's second largest chemical companies.
3 It's not even mentioned in their annual report, the word
4 asbestos.

5 Unlike Johns-Manville, Carbide does not have
6 an enormous caseload of product liability, worker's compen-
7 sation, and other asbestos disease litigation at this
8 time.

9 Let us assume that everybody but Union Carbide
10 stopped selling asbestos for use in dry wall patching
11 compound, and make an estimate of what this business would
12 be worth to Union Carbide.

13 As noted, the industry estimates for the market
14 are 10,000 tons per year, before the hazards were reported
15 in the scientific literature, and before pressure was
16 brought on public agencies to --on this agency to ban this
17 product.

18 The Asbestos Information Association estimated
19 an average asbestos content for dry wall patching compounds
20 is three percent, and Carbide wants the Commission to
21 approve of compounds of one percent asbestos for continued
22 sale.

23 So an outside estimate of the remaining market
24 for asbestos in these products at the one percent level
25 might be 3000 tons per year. Union Carbide's asbestos is

1 short, thin fiber with an approximate sale value of \$50.00
2 a ton. And at this price, assuming that Carbide has the
3 entire market, that is that nobody else would sell asbestos
4 for these purposes, the annual asbestos sales for patching
5 compounds would be \$150,000.00.

6 Carbide's 1976 rate of return was seven percent
7 net income on sales, so we're talking about a net income
8 of \$10,500.00. They have over 150,000 stockholders, so
9 the return of the sale of the 3000 tons of asbestos per
10 year amounts to seven cents per stockholder, per year.

11 Dr. Selikoff suggested that if the products
12 are not banned, the government might consider just giving
13 the \$10,000.00 to the stockholders of Union Carbide and
14 let them keep the asbestos.

15 On the other side, the Commission has estimated
16 that the lung cancer risk is between 10 and 2000 per
17 million. In other words, with each exposure, consumer
18 incurs a life time lung cancer risk of between one in
19 100,000 and one in 500.

20 The Commission's risk estimate does not take
21 account of risks of other forms of cancer, such as
22 mesothelioma, however I do not believe that there is yet
23 sufficient data to calculate the risk with much assurance
24 as a guess, an expert guess, if you will, I would use a
25 figure of one in 10,000 as a total cancer risk for a job

1
2 of 24 hours as described in the risk estimate.

3 With the caveat that it's probably within the
4 range of 10 times as much to 10 times as little that figure.
5 A way of confirming something that gives me some assurance
6 that I'm in the right ballpark is to assume that the risk
7 is linear with dose, that is, if you take this chance five
8 times you have five times as risk as you do if you're doing
9 it once.

10 And this is 24 hours of exposure, so let's assume
11 that somebody works with the stuff 24 hours a week, does
12 it 50 weeks a year, so he takes the risk 50 times per year,
13 that's a one in 10,000 risk times 50, and let's say he
14 does it for 20 years, that's 1000 times he takes a one in
15 10,000 risk.

16 So as a very rough figure it's one in 10, his
17 risk would be after doing this for 20 years. And that
18 seems, roughly speaking, reasonable to me.

19 Now, for every one million such exposures from
20 consumer and commercial application, dry wall patching
21 compounds, the expected number of eventual cancer cases
22 would be 100, one in 10,000 risk, a million people, 100
23 times 10,000.

24 The industry estimated a 350,000 tons of patching
25 compound with three percent asbestos was produced in 1975.
Assuming that Carbide's one percent limit is accepted by

1 the Commission, it is likely that millions of dry wall
2 renovations per year would continue to be done with as-
3bestos containing material.

4
5 CHAIRMAN BYINGTON: Mr. Castleman, could you sum-
6marise. You asked for 15 minutes and you're about 40 al-
7ready.

8 MR. CASTLEMAN: I'm sorry. This is about all I
9have to say.

10 CHAIRMAN BYINGTON: Okay, will you supply copies
11of this to the Office of the Secretary, so the Commission
12will have copies?

13 MR. CASTLEMAN: It's a bit of a mess, but I've
14already supplied it. I don't type very well.

15 CHAIRMAN BYINGTON: Okay. I looked through the
16package that we received, and I didn't see the material that
17you were using as you go through here, but --

18 MR. CASTLEMAN: Well, it's here out of order.

19 CHAIRMAN BYINGTON: Okay.

20 MR. CASTLEMAN: There's also a brochure from a
21company that has asbestos mines that's out selling asbes-
22tos, just like it was the best thing in the world.
23That's Grant Wilson.

24 COMMISSIONER FRANKLIN: Excuse me, for a moment.
25Is this -- what I've gotten, is what what you're using?

MR. CASTLEMAN: Yes, I'm working from that.

1
2 COMMISSIONER FRANKLIN: Okay, okay. You've got
3 it all in here, but out of order.

4 MR. CASTLEMAN: Yes.

5 In order -- the Commission has proposed a total
6 ban on asbestos in these materials, not being able to find
7 any routes of sales to these materials that aren't accessible
8 to consumers.

9 In order for Union Carbide to continue to sell
10 asbestos for patching compounds, in the event that the
11 Commission follows through with its proposal to ban
12 asbestos containing compounds, patching compounds, Union
13 Carbide would have to make special arrangements for its
14 commercial customers to create new channels of distribution
15 that will be on the Commission's authority.

16 I take this occasion to urge Union Carbide not
17 to press its case before the Commission, or try in other
18 ways to foist these dangerous products on the American
19 people.

20 I urge Carbide to cease maintaining, even
21 after the rest of the asbestos industry has gone silent,
22 that asbestos is safe and essential for use in patching
23 compounds.

24 And I urge Union Carbide to consider that some
25 of its stockholders will most likely be endangered by
these very products, and they would rather not risk getting

1 cancer themselves, or having anyone else get cancer, for a
2 profit of seven cents per year.

3 And I urge the Consumer Product Safety Commission
4 to do all in its power to promulgate a total ban on as-
5bestos containing patching compounds as soon as possible.

6 The last thing is a very specific request. I
7 would request that the ban take effect immediately, not
8 in 30 days after it's published. But if a 30 day stay of
9 effective date is retained, I request that the Commission
10 require during this period all asbestos containing dry
11 wall patching compounds be required to bear a label,
12 warning, that they are about to be banned because they
13 pose an unacceptable risk of cancer to consumers.

14 CHAIRMAN BYINGTON: Okay. Any questions?

15 COMMISSIONER PITTLE: A very quick one. I was
16 reading on one of your pages, you indicated you were
17 an expert witness on product liability cases. Would you
18 state for the record what your qualifications are that
19 make you an expert.

20 MR. CASTLEMAN: When I was at Johns Hopkins in
21 1970-'71, I obtained a master's thesis -- a master's degree
22 in environmental engineering, and my thesis was on the
23 medical literature on asbestos. It was Asbestos Effects on
24 Health.

25 And for the last six years I've worked on problems

1 having to do with asbestos and health. I've dealt with
2 over a dozen federal regulatory agencies -- not all regula-
3 tory agencies, including outfits like the United States
4 Navy that have asbestos problems.

5 And I'd like to see some of these problems
6 solved.

7 CHAIRMAN BYINGTON: Commissioner Kushner.

8 COMMISSIONER KUSHNER: In this connection, Barry,
9 are you aware of any emerging data that deals with the
10 incidence of lung cancer, mesothelioma, in dry wall
11 workers?

12 MR. CASTLEMAN: Yes, I mentioned one paper the
13 last time I was here.

14 COMMISSIONER KUSHNER: Yes.

15 MR. CASTLEMAN: It's by Nanc and Henderson in
16 the December '76 issue of the Journal of Occupational
17 Medicine, and they found that it was excess rates of
18 lung cancer among a number of work forces in Los Angeles,
19 including dry wall workers, including electricians, plumbers,
20 and clothing ironers.

21 And the authors believed that these people's
22 exposure to asbestos played a role with excess risk of
23 lung cancer.

24 There is also one case reported of lung cancer
25 of a dry wall worker, I have a copy of it. It's an abstract,

1 but it's just one case to really tell you much.

2 CHAIRMAN BYINGTON: Okay, we thank you very much,
3 Mr. Castleman.

4 We also have been provided -- we'll hear again
5 from Mr. Rhodes of Union Carbide, who wanted to save half
6 of his time.

7 The prior witnesses, Suedeen Gibbons of the
8 Natural Resources Defense Council, has agreed and we
9 appreciate her providing the list of questions that she
10 raised relevant to studies, there were six of them.

11 MS. GIBBONS: Okay.

12 CHAIRMAN BYINGTON: And I would suggest, I think,
13 that -- do you have additional copies of those?

14 MS. GIBBONS: Yes.

15 CHAIRMAN BYINGTON: Yes, I'd like one. Also,
16 to the staff and Mr. Rhodes.

17 What I would suggest, unless there are some
18 of those that you would like to address at this point in
19 time, address as many of those as you think that you want
20 to.

21 The rest, though, we would ask that you submit
22 an answer for the record, if you would agree to that.

23 COMMISSIONER FRANKLIN: Mr. Chairman, and Mr.
24 Rhodes too, I've got to go, but there's a question I
25 would like to have asked and perhaps the Chairman could

1 see that it gets answered.

2 CHAIRMAN BYINGTON: Okay.

3 COMMISSIONER FRANKLIN: In my absence. And there
4 is a member of my staff in the room who will listen
5 very carefully, and will listen to everything else that
6 goes on besides.

7 But Mr. Rauch mentioned earlier, I thought, that
8 you agreed with him that we needed some kind of test to
9 see whether consumers can actually get fireplace logs and
10 ash out of their homes safely, and that was my question.

11 I wanted to ask you whether the two of you do
12 indeed agree and what your thought on this was.

13 MR. RHODES: Well, the staff contacted me to
14 ask for opinions on a suggestion for a procedure, which
15 we were happy to send in. I gather it looked very much
16 like a number of procedures that was sent in.

17 And one of the suggestions, if I recall correctly,
18 I don't have it here in front of me, was that we did
19 suggest that we should -- a gentleman has just put it
20 here over my signature.

21 I said in conclusion, due to the complete lack
22 of any data for the specific operation, he strongly
23 recommended that any removal procedure that is developed
24 be checked to measure actual exposure levels before wide-
25 spread use.

1
2 And I would stand on that, that seems to me that
3 it's worth trying to find out what level of exposure you
4 are causing. Now, as far as the three to six months, I
5 haven't seen that protocol and I would think it would be
6 done as long as you're not looking for total statistical
7 evaluation of 20 or 30 locations.

8 But you could go into three or four places and
9 remove the material and measure the asbestos level you're
10 getting much more quickly than three to six months. Now,
11 in that connection, there has been a lot of talk about the
12 use of scanning electron microscopy and transmission elec-
13 tron microscopy.

14 The thing that you have to be aware of is that
15 all of the medical data -- say all, all that I'm aware of --
16 has been correlated in terms of the fibers per cc, longer
17 than five microns, primarily as measured by optical measure,
18 optical procedures.

19 This question of whether there are a lot of
20 very fine fibers or very short fibers, whether these have
21 any hazardous nature, is very much a controversial issue
22 at this point.

23 CHAIRMAN BYINGTON: Okay. I think part of the
24 problem in terms of the three months or more is the fact
25 that if you've ever been involved at this end in terms of
government contracting, we're looking at probably anywhere

1 from 30 to 45 days just in order to draft it up, publish
2 it, get the bids, do the thing, or even go out and find it
3 and get it ordered, and find the people.

4 So that we're worried at this end of the 30
5 to 45 day lag before we're ever into testing, and then
6 it's the testing and then the results and that's how
7 somebody gets to about 90 days.

8 MR. RHODES: Well, if you're going to get into
9 transmission electron microscopy, I can see how it would
10 take that long because sample, prep, and counting are very
11 slow and tedious, and I don't know quite how you want
12 to handle some of these questions that Mr. Castleman
13 raised.

14 I don't think we really want to get into a de-
15 tailed, technical discussion of monitoring procedures.
16 Again, transmission, I'd be glad to.

17 CHAIRMAN BYINGTON: What --

18 MR. RHODES: I am not really an expert in that
19 area. The man we rely on is chairman of the ASTM committee,
20 subcommittee, which is studying that subject.

21 CHAIRMAN BYINGTON: What we attempted to do is
22 to provide you right now with a copy of ERDC's points, and
23 as many of those points that she raised or that Mr.
24 Castleman raised that you would like to address, you're
25 free to do so.

1 The balance we would ask that you could comment
2 on for the record we would appreciate that.

3 MR. RHODES: All right, let me start with the
4 questions here. I've got too much data floating around.
5 Question number -- do you want me to read it or do you
6 want me to go ahead and answer it.

7 CHAIRMAN BYINGTON: Go ahead and answer it.

8 MR. RHODES: Relating to x-ray diffraction, in
9 the determination of how much asbestos products contain,
10 we have done some x-ray diffraction work, and it's very
11 undefinitive.

12 We are now talking with the people who presented
13 the people, NBS, on the talc side of things. You just
14 plain cannot take a mud or a dry product and run it
15 through an x-ray diffractometer, and expect to get lines
16 out that will tell you how much asbestos.

17 As they appropriately say, chloride will inter-
18 fere, and mica will interfere, and there's a whole series
19 of things that will interfere. You get involved in special
20 preparations.

21 Now what we did do on the material which was
22 labelled as containing asbestos, on the first test, is
23 mix it up, dilute it, and look at it under the optical
24 microscope.

25 And we were able to see fibers that to an

1
2 experienced counter all the characteristics of classical
3 crysatile.

4 So this tells us they were there. It doesn't
5 tell us the weight percent in the mud. On the second mud
6 we it was supplied to us by a manufacturer who told us
7 what the formulation was, met all his product specifica-
8 tions, the asbestos had been left out. It just wouldn't
9 have looked the same.

10 We can't guarantee that it's 2.6 percent asbestos,
11 but we know how many bags were supposed to have put in,
12 put in in the formulation and I think that's probably a
13 more reliable measure of what's in there than trying to
14 run it through a long, complex analytical technique.

15 I come back to the point that the analysis for
16 asbestos, crystaile, any way, in these compounds, is a
17 real difficult analytical problem.

18 Second question, how did you insure you counted
19 all the asbestos particles. Union Carbide did not use a
20 NIOSH counting technique, and so on. As a matter of fact,
21 Union Carbide did use the NIOSH counting technique, if I
22 can find the quotation.

23 I duplicated a page from P and CAM 239, the
24 latest edition, which says, part 3, interferences. An
25 atmosphere known to contain asbestos, all particulates
with a length of diameter ratio of three to one or greater,

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20 NIOSH counting technique, and so on. As a matter of fact,
21 Union Carbide did use the NIOSH counting technique, if I
22 can find the quotation.

23 I duplicated a page from P and CAM 239, the
24 latest edition, which says, part 3, interferences. An
25 atmosphere known to contain asbestos, all particulates
with a length of diameter ratio of three to one or greater,

1 any length greater than five micrometers should, in the
2 absence of other information, be considered to be asbestos
3 fibers and counted as such.

4 And I don't know of any laboratory, and I know a
5 lot of people in the laboratories, who do a blind count
6 of everything with a L over D greater than three, a length
7 greater than five.

8 OSHA does not do it at Salt Lake City, and a
9 certain amount of -- I don't want to get too long into a
10 discussion on it, but if you count -- I don't count, I
11 look a lot in the microscope. Counting is an eyeballing
12 technique which you have to develop.

13 If you've done it a while you can spot what's
14 asbestos, what meets the criteria. You get a trained eye-
15 ball, and it's an acquired skill.

16 Now, as far as did we leave a lot of fibers out,
17 we try to count, first of all, everything could be crysatile,
18 and I won't get into details, it could be crysatile, even
19 though we may not think it is, it's counted as crysatile.
20 Anything which could be an amphibole is counted as an
21 amphibole.

22 The only things that are not counted are these
23 wavy platelets and things which meet the criteria, but
24 do not look either like crysatile or any of the amphiboles.

25 We are not, and again I would comment, this

1 concept that someone who's involved in trying to do a
2 reasonable, scientific job is suspect as having an interest
3 in their data, or no use. I have been trying to avoid
4 getting into a hassle with Mount Sinai on why the Rohl
5 data looks so high. I declined to speculate on it, and
6 I will only stand on the data that we've presented today,
7 other investigators, including OSHA, which indicates that
8 our numbers are pretty much in the same range as theirs
9 are.

10 And we have counted a number of times with
11 California OSHA, and a number of other laboratories, side
12 by side, and we get essentially the same numbers.
13 This question of significant amounts of smaller than five
14 micron fibers, the point that I made earlier, that all of
15 the hazard data, the risk data, is in terms of fibers
16 per cc longer than five microns, and this whole area of
17 the shorter than five microns has not been well defined,
18 and we did not intend to present this as an electron micro-
19 scope study of small fibers.

20 This time waited average thing that we allowed,
21 we calculated them as required by the OSHA formulation.
22 I think it's been blown out of all proportion. The
23 numbers are there for the household exposure, in the off
24 periods when the workers are not there.

25 Some of the subsequent ones have been calculated

1 for the entire day in the house. One of the operators,
2 the wife, stayed there the whole day. And the critical
3 point is whether you've got a tenth or two-tenths, four-
4 tenths, it really doesn't -- when you start feeding it into
5 the risk estimation, you can get up as high as four or
6 five fibers for a whole day before it begins to make
7 any significant result, effect.

8 Now, when you average out -- when you take it
9 and average it over a year, and grind it into Dr. Bayard's
10 formulation, why you have to get up around four or five
11 fibers per cc before you begin to see any significant ef-
12 fects.

13 When you get up into 20 and 30, it gets to be
14 significant rather rapidly. And I would comment that I
15 was not criticizing basically Dr. Bayard's approach. We
16 are dubious about some of his assumptions, but I was
17 using it to, as he put it together, and I hope my arithme-
18 tic is correct, to calculate the numbers for some other
19 levels which he didn't touch.

20 Is there anything else in that area that you
21 had.

22 CHAIRMAN BYINGTON: Why don't you go ahead and
23 proceed.

24 MR. RHODES: You'd like to ask about --

25 CHAIRMAN BYINGTON: Then feel free at the same

1 time to the other parties, as I indicated at the very be-
2 ginning, that any of the parties who are participating to-
3 day are most free to submit additional comments between
4 now and the end of the close of comment time, which is
5 the 2 -- what, 29th, isn't it? Yes, August 29th.

6 MR. RHODES: The 29th?

7 CHAIRMAN BYINGTON: On any of the subjects that
8 you had previously planned to comment on, or any of the
9 other subjects that were raised today. And they would all
10 be part of the record and taken into consideration by the
11 Commission when it makes its decision.

12 MR. RHODES: Well, we do plan to present a report
13 on this second test.

14 CHAIRMAN BYINGTON: All right.

15 MR. RHODES: Some of the file numbers are just
16 being counted today.

17 CHAIRMAN BYINGTON: You had a small portion, I
18 understand, of the rest of your statement here --

19 MR. RHODES: Right, I will go right to that.

20 CHAIRMAN BYINGTON: -- and also staff had a
21 couple questions, and we can see if we can attempt to
22 complete this.

23 MR. RHODES: Do you want to go to the staff ques-
24 tions or --

25 CHAIRMAN BYINGTON: No, go to your --

1 MR. RHODES: What I wanted to do now is pick up
2 at the point where we had estimated using the Bayard
3 model, the levels of risk calculated for the levels of ex-
4 posure that we had found. This starts at the beginning of
5 page seven, and at the risk of being redundant and telling
6 you something you already know, I wanted to quote a couple
7 of items from section seven from the Consumer Product Safety
8 Act, which relate to the conditions for a ban.

9 First, the consumer product is being or will be
10 distributed in commerce and such consumer product presents
11 an unreasonable risk of injury. No feasible consumer
12 product safety standard under this act would adequately
13 protect the public from the unreasonable risk from injury
14 associated with such products.

15 And skip down, the Commission shall not promulgate
16 a consumer product safety rule unless it finds and includes
17 such finding in the ruling that the rule, including its
18 effective date, is reasonably necessary to eliminate or
19 reduce an unreasonable risk of injury associated with such
20 products.

21 Promulgation of the rule is in the public interest,
22 in the case of a rule declaring a product a banned hazardous
23 substance, that no feasible consumer product safety standard
24 under this act would adequately protect the public from
25 an unreasonable risk of injury associated with such product.

1 Note particularly the repeated use of the words
2 unreasonable risk and the requirement to eliminate or reduce
3 unreasonable risk, not to make this risk zero. The act
4 makes it quite clear that the intent is not the total elimi-
5 nation of all risk, but of unreasonable risk, and it dele-
6 gates the Commission the complex and soul searching problem
7 of deciding what is reasonable.

8 Comments of your own staff on the strength of
9 the evidence used to support the ban is well summarized
10 in three short quotations from the record. First, from
11 the Federal Register and the description of the ban.

12 The petitioners believe that high quantities of
13 asbestos fibers remain in the air after these products are
14 sanded, and the fibers substantially increase the risk of
15 mesothelioma and lung cancer. And from a letter July 11th,
16 '76, from Charles M. Jacobson, to Francine Shacter, the
17 petitioners have addressed problems which arise from being
18 exposed to asbestos fibers occupationally and environ-
19 mentally.

20 However, they have not cited any concrete evidence
21 of a hazard, which is tied directly to the products for
22 which they seek a ban. Merely cited the fact that these
23 products do contain asbestos fibers and they cited the
24 fact that asbestos fibers in such situations have been
25 linked to lung disease.

1 To quote your own staff, we questioned whether
2 the evidence presented in the petition is sufficient to
3 show that these substances may cause substantial personal
4 injury and substantial illness during or as an approximate
5 result of any customary or reasonably foreseeable handling or
6 use.

7 To wrap that up, the instances of single or short
8 term exposure, and this is from another briefing package,
9 to asbestos, cited in the petition, can be taken as
10 evidence as a possible but not necessarily probable cause-
11 effect relation.

12 However, by themselves they would not stand up
13 to statistical scrutiny in predicting a correlation be-
14 tween brief exposure to asbestos and a latter development
15 of cancer caused by such exposure.

16 Substantial evidence has been presented here
17 that the commercial use data on which the petitioners base
18 their allegations is substantially higher than that of all
19 other investigators, including OSHA compliance inspections.

20 It has also been shown that consumer exposure to
21 low, and short duration, and when averaged over a year
22 or more, are not distinguishable from ambient background.

23 We know of no evidence that such casual, low
24 exposure represents any hazards, so that the question that
25 remains becomes one of a banning action based on the

1
2 existence of a possible but not proven risk, which if
3 they exist at all, differs only slightly from zero.

4 You are probably aware that this question of
5 the regulation of carcinogens is a major issue today before
6 virtually all of the government regulatory agencies. The
7 FDA saccharin ban has received wide publicity. OSHA is
8 deeply involved in a proposal for generic regulation
9 approach to carcinogens. Hearing on benzene are now in
10 progress.

11 All of this activity does not help to find
12 answers to our immediate problems, but at least we're in good
13 company. The problem we face originates in a so called
14 one hit theory of carcinogenesis. The simplest outline,
15 this theory holds that a single molecule of carcinogen
16 is capable of causing cancer, particularly to susceptible
17 persons.

18 If enough people are exposed, susceptible persons
19 or small number of persons will contract cancer; if
20 follows, therefore, that there is no absolutely safe or
21 zero risk level for a carcinogen. And such a material
22 should, depending on the statutory authority of the
23 agency involved, be banned, severely restrict, replaced,
24 controlled to the limits of detection, and so forth.

25 It is useful to examine this theory in the light
of where there is general agreement and where responsible

1 opinions diverge. We believe that virtually all medical
2 authorities would agree, first, the wide range of dosages
3 for a carcinogen where a dose response relationship exists;
4 the larger the dose the greater percentage of those exposed
5 will contract cancer, and vice versa.

6 Second, in exposed populations, even substantial
7 exposure levels, large proportions of those exposed, do
8 not contract cancer. As the dosage goes down, the average
9 time to the appearance of the tumor increases. This
10 principle was illustrated by the extrapolation formula
11 I've underlined in the Bayard specifications discussed
12 previously.

13 Medical disagreement occurs over what happens
14 when the dosage is decreased to very low levels. There
15 is one school of thought, and this was embraced by most of
16 the regulatory agencies, there is no completely safe level
17 that exists.

18 There are other responsible authorities who con-
19 tend a dosage level is reached when the body's defense
20 mechanisms can effectively combat the altered cell, and
21 cancerous growth does not occur.

22 Supporters of this position cite the low level
23 presence of certain metals and hormones that are essential
24 to the human body in trace amounts, that at higher levels
25 are carcinogens.

1 Unfortunately, there is no way to demonstrate
2 the correctness of either view. There is a background
3 level of cancer in both man and experimental animals.
4 As the dosage in the corresponding number of cancers
5 decrease.

6 One point of view is that the occasional cancer
7 from the specific agent still occurs, and cannot be
8 distinguished from background; while the other is that
9 the added cases do not occur.

10 The existence of the background makes it impos-
11 sible to determine which view is correct. These views
12 can be partially resolved with a model of -- discussed
13 previously. A low exposure may cause cancer, but if
14 the time to tumor is 150 years, for example, then expected
15 life span of 70 years is for all practical purposes a
16 safe threshold exposure, at least until life expectancy
17 approaches 150 years.

18 However, since there is no provable scientific
19 answer to this risk question, we are really left with a
20 socio-political, rather than a wholly -- than a scientific
21 decision to consider. The fundamental question, then,
22 is whether a total absence of risk approach to regulation
23 is appropriate, or more particularly will be acceptable
24 to society.

25 In our lives we undergo a succession of risks,

1 some knowingly and some unknowingly. The American people
2 have always indicated a willingness to take risks as
3 evidenced by such things as widespread use of the auto-
4 mobile, smoking, alcohol, and proper diet, even the home
5 as it is today.

6 We believe that the zero risk concept begins
7 to impact on jobs as a way of life of a substantial number
8 of people will not be acceptable and will have to be
9 modified to balance risks against benefits in a realistic
10 fashion.

11 This sort of balance, rather than regulation
12 by cliché, is a carcinogen, so ban it, should be applied
13 here. The benefits from the continued use in asbestos
14 and tape joint compounds is substantial, and the risk is
15 either zero or so small it cannot be distinguished from
16 zero.

17 And I will summarize, skipping the next couple of
18 pages that I gave earlier, I would like to summarize the
19 Union Carbide Corporation's position and expand on the
20 approach presented in my letter of July 14th, 1977, which
21 we believe is a reasonable alternative to the ban proposed
22 by the Commission.

23 First, products under consideration have been
24 in widespread use for about 35 years, and we know of no
25 evidence that any consumer has ever been harmed by that.

1 No unreasonable risk to the consumer has been demonstrated
2 by the petitioners or by the staff. Consumer exposure --
3 second, consumer exposure data have been presented and
4 show that the exposures are both low and brief, and when
5 averaged over a year are not distinguishable from the
6 general background.

7 The risk from such exposure, if indeed any risk
8 does exist, is extremely small and based on the extrapolation
9 of an unproven and unprovable theory.

10 Third, we question whether it is appropriate, and
11 whether the act gives the Commission the authority to
12 ban a product on the basis of a hypothetical or theoretical
13 risk, or on the basis of an absolute zero risk requirement.

14 Fourth, we do not agree that a reasonable product
15 safety standard cannot be promulgated to protect the
16 public adequately from any unreasonable risk and recommend
17 the following approach.

18 (A) limit the amount of asbestos that can be
19 used in spackling and taping compounds to two percent by
20 weight of the dry formulation. This is sufficient to gain
21 the benefits of the use of asbestos and serves to limit
22 the potential for exposure.

23 It differs from the one percent of total
24 formulation, including water suggested previously, in that
25 more closely defines the content of the final product in

1 the form that is sanded.

2
3 It is also a level where analysis is more
4 reasonable.

5 (B) require a warning label, including proper
6 work procedures, on all compounds under the jurisdiction
7 of the Commission whether packaged for direct consumer or
8 commercial use in consumer contact. This turns to good
9 advantage and widespread public awareness of a possible
10 potential hazards of asbestos to encourage that the product
11 be treated according to directions and not abused.

12 It also gives the user a choice.

13 Thank you very much for the opportunity to speak
14 to the Commission, we will be happy to try and answer all
15 the questions that we haven't answered so far.

16 CHAIRMAN BYINGTON: Commissioner Kushner.

17 COMMISSIONER KUSHNER: Just one comment. With-
18 out commenting on the reasonableness of the entire set
19 of suggestions that you make, I just would comment on one
20 thing on the last page, page 14.

21 You say that it is also a level that is two
22 percent, where analysis is more reasonable. I guess it's
23 a little bit more reasonable in the sense that you'll
24 see more asbestos, but the issue of determining whether
25 you have 1.9 percent or 2.1 percent is no easier --

MR. RHODES: Well --

1 COMMISSIONER KUSHNER: -- than the decision that
2 would need to be made in the event of a ban. But I
3 really don't think that that helps the situation. That's
4 just a comment.

5 MR. RHODES: Okay, if you're going to be looking
6 at zero, or very close to zero, with all these amphibole
7 chips in it, you're probably going to have to go to
8 transmission electron microscopy.

9 If you're talking two percent or one percent or
10 something, you can back off from that and I don't think
11 you're going to have problems with trying to find zero.

12 COMMISSIONER KUSHNER: I agree, it's very diffi-
13 cult to find zero, but I suspect that one is simply trading
14 problems, if one were to take your suggestion, just from
15 the standpoint of the analytical problems.

16 MR. RHODES: Well, an analysis at a two percent
17 level, in general, is easier to do than an analysis at
18 two-tenths of a percent, 200ths, 2000ths.

19 COMMISSIONER KUSHNER: Yes, but once again the
20 precision of any of these techniques is not going to be
21 good enough for you to be able to distinguish with the kind
22 of certainty that you'd like the difference between 1.9 and
23 2.1. That's the only point I'm trying to make.

24 MR. RHODES: Well, I wouldn't disagree with that,
25 really.

1
2 COMMISSIONER KUSHNER: Of course, the importance
3 of knowing the difference between 1.9 and 2.1 is --

4 MR. RHODES: Well, it's the difference between
5 being in and out of compliance --

6 COMMISSIONER KUSHNER: Well, I suspect --

7 MR. RHODES: -- with some proposed standard.

8 COMMISSIONER KUSHNER: I suspect you'd have to
9 do some of the things that OSHA is working on now where
10 you have a co-efficient of variation, and you run the
11 analysis and it has a set precision and you decide whether
12 you're in and out of compliance, depending on the certain
13 of application --

14 MR. RHODES: But aren't those principles equally
15 valid to the zero or near zero -- well, as you go down
16 towards zero, there's a tendency to the outer limits to
17 become much larger.

18 Certainly a much larger percentage than the
19 number you're trying to get a reading on.

20 COMMISSIONER KUSHNER: Well, I don't think we need
21 to --

22 MR. RHODES: No.

23 COMMISSIONER KUSHNER: -- pursue this much further.

24 CHAIRMAN BYINGTON: Is one of your concerns
25 contamination, just generally?

MR. RHODES: As an asbestos supplier, we're not

1 really that concerned, but we felt that --

2 CHAIRMAN BYINGTON: That would be your last --
3 following up with Commissioner Kushner in terms of per-
4 centage, I mean, am I reading something into the --

5 MR. RHODES: Our feeling --

6 CHAIRMAN BYINGTON: -- between the lines when you
7 start talking about background asbestos, when you start
8 talking about all this type of thing, are you saying
9 indirectly or hinting at the possibility that there really
10 isn't such a thing as an asbestos free compound of the
11 figure?

12 MR. RHODES: I'm not hinting, I'm coming right
13 out and saying it. I think, you can take any compound on
14 the market and feed it into Mount Sinai, and they don't
15 find some asbestos in it. And I think they'll be right,
16 it'll be there.

17 Now, you have to look long enough and hard
18 enough, it's everywhere, and the broader you make your
19 definition of asbestos, the easier it is to find it.
20 I think your staff probably has got some thoughts on that,
21 having listened to the problem at the NBS.

22 There is a raging controversy on what is asbestos
23 and what's a mineral fiber. It's been going on for
24 years. Crysatile is not that hard to pin down.
25

1
2 CHAIRMAN BYINGTON: Well, then you've also got
3 a raging controversy in the medical profession as to
4 whether that really makes any difference and whether one's
5 not just as bad as the other..

6 MR. RHODES: Yes, you have, that's quite right.
7 And what dimensions are appropriate.

8 CHAIRMAN BYINGTON: Okay.

9 COMMISSIONER PITTLE: Just a couple of questions.
10 When you were explaining the desirable feature and property
11 of asbestos in causing this -- I forgot the words you used,
12 but this kind of sheathing that allowed it to be spread
13 on easily and then sort of come back together.

14 MR. RHODES: Yes.

15 COMMISSIONER PITTLE: Do you attribute that to
16 the physical, geometric properties or the chemical
17 properties of that particular find?

18 MR. RHODES: Basically it's the physical proper-
19 ties of the fiber combined with the tendency to flocculate,
20 which is --

21 COMMISSIONER PITTLE: Is that particular to that
22 particular fiber or is that all fibers are that?

23 MR. RHODES: Generally common to fibrous materials.

24 COMMISSIONER PITTLE: So you expect to get that
25 in the substitutes, that same kind of a property, and
it would still be roughly the same --

1
2 MR. RHODES: It would be the same sort of phe-
3 nomenon, yes. It would vary in degree with a number of
4 particles and the size and dimensions and the surface
5 charge.

6 COMMISSIONER PITTLE: So you don't think -- you
7 think then it's peculiar. It's not peculiar to the surface
8 chemistry of the fiber as to why that particular fiber is
9 better than other materials to get that flocculation,
10 whatever you used.

11 MR. RHODES: What -- my judgement is --

12 COMMISSIONER PITTLE: Would you spell that word
13 for the record. I want to look it up later.

14 MR. RHODES: Flocculation?

15 COMMISSIONER PITTLE: Yes.

16 MR. RHODES: I don't know whether I can spell it
17 or not.

18 COMMISSIONER PITTLE: Okay, I just want to make
19 sure --

20 MR. RHODES: My secretary does most of my spelling
21 for me.

22 COMMISSIONER PITTLE: All right.

23 MR. RHODES: I believe it's f-l-o-c-c-u-l-a-t-
24 i-o-n.

25 COMMISSIONER PITTLE: I wanted to make sure
that's the right word you'd use in mixed company.

1
2 MR. RHODES: You have to watch your pronuncia-
3 tion.

4 COMMISSIONER PITTLE: I just want to get from
5 you whether or not you consider that desirable fiber
6 because of its surface chemistry or because of --

7 MR. RHODES: Primarily because of geometry.

8 COMMISSIONER PITTLE: It's geometry.

9 MR. RHODES: Yes.

10 COMMISSIONER PITTLE: When one of your competitors
11 was in not so long ago, in an open meeting here, I had
12 asked on the question of whether they had a company
13 policy as to how they educated their own customers about
14 the hazards of whatever, the potential hazards there are,
15 or the hazards of using asbestos in consumer products,
16 and they sent us back some answers as to how they deal
17 with their customers, the rather aggressive positions
18 they say they take if people didn't violate that.

19 Do you -- does your company have such a policy?

20 MR. RHODES: We have -- we started with labels
21 on our bags in 1968. We're late in the game.

22 We provide information, we provide --

23 COMMISSIONER PITTLE: My question --

24 MR. RHODES: No, we-- well, upon request is
25 academic these days, and has been for the last four or
five years. You don't talk to anyone, who is a user or

1 potential user of asbestos these days without some
2 discussion of the regulations, the health hazards, that
3 sort of thing.
4

5 COMMISSIONER PITTLE: Has your policy ever
6 evolved into a document?

7 MR. RHODES: We do not have a document in the
8 formality that Johns-Manville does, but we have a whole
9 series of things that we send the customers. We also do
10 a lot of dust counting to help them see that their-- in
11 answer to your question, we have a very active policy to
12 educate and to warn.

13 COMMISSIONER PITTLE: Would it be possible to
14 get a copy of those materials? I mean, if I were a
15 potential customer you could tell me what I should watch
16 out for when I make products to sell.

17 MR. RHODES: I presume it would, yes.

18 COMMISSIONER PITTLE: I mean, if it's available
19 it would be very helpful.

20 MR. RHODES: Yes, we can get something.

21 COMMISSIONER PITTLE: One thing I've learned is
22 that the experts, many of the experts in the field, are
23 the people who manufacture it. And whatever advice you
24 give is going to be very helpful to us.

25 That's all.

CHAIRMAN BYINGTON: Yes. The staff has a few

1
2 questions, I understand, at the moment.

3 MR. HAVEEN: I am Ron Haveen of the Office of
4 General Counsel of the Environmental Protection Agency.
5 I refer to page 9 in Mr. Rhodes' statement where he says
6 that we know of no evidence that such casual, low ex-
7 posure represents any hazards, that the question becomes
8 one of the banning actions based on the existence of a
9 possible but not proven risk, which if it exists at all
10 differs only slightly from zero.

11 From EPA's perspective, I would just like to
12 introduce into the record the comments on our asbestos
13 regulations concerning the demolition of buildings.
14 Since 1973 the agency has provided that before such build-
15 ings are demolished, asbestos insulation on pipes and
16 elsewhere in the building has to be wetted and removed
17 from the demolition takes place.

18 When these amendments, when these regulations
19 are -- were amended in '74 and '75, the demolition industry
20 raised a concern that they had had all along, that short
21 term exposure to asbestos were not risky.

22 EPA disagreed with that and has all along,
23 specifically 40 Federal Register 48295 on October 14th,
24 1975, when it promulgated these amendments to the demolition
25 standard it noted some new studies which indicated that
single short term exposure to asbestos are significant.

1 These involved one day inhalation studies of rats which EPA
2 has used all along as evidence supporting its standard.

3 The only point I'd wish to make is our agency
4 has been concerned all along with short term exposure,
5 and although our statutory authority, I think, does differ
6 from yours, we have not hesitated to take action to ban
7 asbestos, so to speak, in this context.

8 I just want to make sure that the record reflects
9 that.

10 CHAIRMAN BYINGTON: I appreciate it.

11 MR. RHODES: I think I indicated that that was
12 the position that a number of the regulatory agencies have
13 taken.

14 MR. HAVERN: Yes, and again I recognize that
15 our statutory authority lets us go after substances such
16 as asbestos, if they may cause or contribute to the health
17 hazards, and it differs maybe a little bit.

18 But there are studies --

19 CHAIRMAN BYINGTON: We do appreciate that and
20 the submission of that for the record too. Okay. Another
21 -- go ahead.

22 MR. RHODES: I would also suggest if you calculate
23 out on the rat's life span, what proportion of -- how
24 that compares to the proportion of the human life, as
25 far as -- what I'm saying is that one day exposure to

1 the rat, calculates out to considerably more than that in
2 a human life span. I don't want to get into the medical
3 hassle on this thing, I don't have a medical background,
4 but I do present that as the way things get passed around.

5 One day becomes hazardous because it was
6 hazardous to the rat.

7 CHAIRMAN BYINGTON: Okay, there was another
8 question over here. Mr. Bigio.

9 MR. BIGIO: Yes, I had a couple questions that
10 arose primarily during the course of your talk this
11 morning. There has been a lot of mention on your part, and
12 others, of the background, the natural background of
13 asbestos.

14 Now, I'm sure you've looked into this for some
15 time, and would you say that in part this background is
16 not natural in the classic sense as we would use it, but
17 has been -- is manmade or created by industrial, commercial
18 users of asbestos?

19 MR. RHODES: I will make a couple comments on
20 that. First of all I think there's a paper by Sid Speel
21 and another author from Johns-Manville who have looked
22 into that quite extensively.

23 And there's no question that some of it has
24 been around for thousands of years. I believe they found
25 it in the glaciers.

1 As far as how fast it's expanding, how much it's
2 growing --

3 MR. BIGIO: No, I'm really talking about the levels,
4 I mean, what you would call the background levels today
5 as opposed to what it might have been say before the
6 industrial age.

7 MR. RHODES: I can't answer that question.

8 MR. BIGIO: I'm sure you can't answer that, but
9 I was wondering if you had some feeling about what contri-
10 bution or widespread use of asbestos has made to the so
11 called background level.

12 And of course, the immediate corollary to that
13 question is one way of getting the background down to
14 start to eliminate certain unessential or unnecessary uses.
15 Do you --

16 MR. RHODES: Well, I would have to make my
17 original comment, I don't know what the growing background,
18 whether it's growing, how much is being lost back into
19 the soil. You know, I don't know the overall --

20 But I would comment, I would agree with one of
21 the comments that several people have made. The NIOSH
22 optical procedure is a poor way to measure background.

23 On the other hand, if you're trying to get a
24 comparison with what's going on in the immediate vicinity,
25 it really is the only way we have to do it without

1 going into a long, involved transmission electron micros-
2 copy approach.

3 So the reliability of the background numbers,
4 I got it somewhere. I looked up the NIOSH conclusion and
5 here's what -- their conclusion after looking at all the
6 data they had a year or so ago, was something less than
7 .01 fibers, and they really didn't know specifically what
8 it was or how to convert that to anagrams per cubic meter.
9 I can give you the reference on that, it's a NIOSH criteria
10 document of '76 or so on the 1/10th fiber for asbestos.

11 MR. BIGIO: The second question I had, most
12 of the discussion today has been about the instantaneous
13 short term exposure, as for instance during the few hours
14 or the day, that a particular job might be going on.

15 Do you have any data, or have you looked into
16 at all the question of the recycling contamination, in
17 other words you've put this asbestos fiber into the
18 house, dwelling, school, whatever it may be. Presumably
19 it's going to be there a long time and can be stirred up
20 repeatedly.

21 Do you have any data on that, as to what the
22 secondary exposures might be?

23 MR. RHODES: Well, on the first test that we
24 ran, we ran a day in the house before, and we ran a day
afterward, and we couldn't find -- within the precision

of the optical method, you couldn't find any difference.

MR. BIGIO: Did you make any attempt to stir up the dust or --

MR. RHODES: Well, we vacuumed before, we vacuum cleaned after.

MR. BIGIO: Before and after --

MR. RHODES: Well, we started --

MR. BIGIO: And you took measures during the vacuuming.

MR. RHODES: Measured it right after the vacuuming, right.

MR. BIGIO: And you found essentially --

MR. RHODES: 005, 003, 006, something of that nature.

I only recorded one number because we just can't get a better number on the method, whether it's 005, plus or minus, 05. We did the best we could with that.

MR. BIGIO: Okay, thank you, those were my two questions.

CHAIRMAN BYINGTON: Okay. Shacter.

MS. SHACTER: Do you manufacture any compounds, patching compound that contains asbestos?

MR. RHODES: No.

MS. SHACTER: Thank you, very much.

1
2 CHAIRMAN BYINGTON: Right there.

3 MR. BAYARD: My name is Steven Bayard, from
4 the Consumer Product Safety Commission. Barry, I just
5 wanted to point one thing out to you, maybe a couple of
6 things.

7 But on page 6 you spent a lot of time discussing
8 the risk based on the model which we used, and the one
9 phrase that I want to deal with is on page six, in the
10 middle, you said that you're going to use this model,
11 which is heavily biased towards predicting a high risk.

12 Well, in fact the model is heavily biased at
13 consumer levels to predicting a very, very low risk, and
14 I want you to keep this in mind. When I made a presenta-
15 tion to the commissioners at one point, I compared the
16 models that we used, that we used eventually, finally, with
17 another model which was a single hit model that you've
18 also discussed.

19 And we showed that the single hit model would
20 predict a risk which was 250 times higher than that model,
21 that we did use.

22 The Commission believes, at least I believe,
23 that this model that we used is more correct, in fact,
24 as you point out later on there is a time to dose, and
25 time to tumor, based on dose.

MR. RHODES: Yes.

1 MR. BAYARD: That the lower dose will indicate
2 a higher time until tumor. But, still, at the low consumer
3 levels, and you've had some of your analysts look at this,
4 you'll find out that this model falls off very, very
5 rapidly in terms of the type of dose and the type of
6 response.

7 So that --

8 MR. RHODES: Falls right off the table at the
9 lowest --

10 MR. BAYARD: Very, very rapidly, and --

11 MR. RHODES: I ran out of table.

12 MR. BAYARD: Yes. What I'm saying is it's a
13 very, very conservative type model in predicting risk
14 because it's very, very low risk, at low consumer levels.

15 I can't imagine a model that would predict a
16 lower risk. So that when we came up with a figure of 10
17 deaths per million excess, we said even at this minimum
18 figure that's still pretty high. We just didn't like it.
19 That's all I'm pointing out to you.

20 MR. RHODES: Well, all I'm doing is using the
21 model with numbers which we believe are more representative
22 of the consumer exposure, and illustrating what it
23 says.

24 Now if you wish --

25 CHAIRMAN BYINGTON: Okay.

1 MR. RHODES: I don't want to argue the model,
2 I'm not a statistician, I'm really not competent to.

3 CHAIRMAN BYINGTON: All right, well we want to
4 thank you very much.

5 MR. RHODES: Okay.

6 CHAIRMAN BYINGTON: For coming down.

7 We want to thank all of the other people who
8 have participated.

9 Again, I remind everyone that interested
10 persons, including those speaking today, may submit written
11 comments and other related information to the Office of
12 the Secretary, on both the proposed bans as well as
13 the issues discussed, until August the 29th, 1977.

14 MR. RHODES: Can I ask a final question? Do I
15 owe you anything now, or have I answered the questions
16 or --

17 COMMISSIONER PITTLE: There are some materials
18 you said you would provide.

19 MR. RHODES: Okay, thank you.

20 CHAIRMAN BYINGTON: We can check our notes to
21 see if there's anything.

22 Thank you very much, we stand adjourned.

23 (Whereupon, at 4:00 p.m. the meeting was ad-
24 journed.)

STATE OF CALIFORNIA

TITLE 8 **DIVISION OF INDUSTRIAL SAFETY**
GENERAL INDUSTRY SAFETY ORDERS
(Register 78, No. 27—7-3-76)

5208. Asbestos. (a) The 8-hour time-weighted average concentration of airborne asbestos fibers to which any employee may be exposed shall not exceed 2 fibers, longer than 5 micrometers, per cubic centimeter of air as determined by the membrane filter method using phase contrast illumination and 400 to 450X magnification. The ceiling or short time concentration to which employees are exposed shall not exceed 10 fibers, longer than 5 micrometers, per cubic centimeter of air.

(b) **Engineering Controls.** Controls such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection shall be used to meet the exposure limits in Section 5208 (a). All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of such limit shall be provided with local exhaust ventilation systems. The American National Standards Institute Z9.2-1971 Standard Governing the Design and Operation of Local Exhaust Systems shall be used as a guide to design, construct, install, and maintain exhaust ventilation and dust collection systems.

(c) **Work Practices.** Asbestos shall be mixed, handled, applied, removed, cut, or otherwise worked wet insofar as practicable. Asbestos spills shall be cleaned up promptly. Asbestos-containing cement, mortar, coating, grout, plaster, or similar material shall not be removed from bags, cartons, or other containers without being wetted, unless it is enclosed and/or ventilated to effectively control airborne fibers as specified in Section 5208 (a). Asbestos waste, scrap, debris and asbestos contaminated materials consigned for disposal shall be collected and disposed in sealed impermeable bags or containers.

(d) **Respiratory Protective Equipment.** When engineering controls and wet handling methods are not feasible or are incapable of controlling the concentration or in an emergency, respiratory protection shall be provided and worn in accordance with provisions of Section 5144 and the following requirements:

(1) Reusable or single-use air filtering respirators shall be used when the concentration exceeds the levels specified in Section 5208 (a), but may not be used when the concentration may reasonably be expected to exceed 10 times the limit.

(2) Powered air filtering respirators may be worn for lower concentrations, but shall be worn when the asbestos fiber concentration is reasonably expected to exceed 10 times, but not 100 times the limit in Section 5208 (a).

(3) Continuous flow or pressure demand air-line respirators or self-contained breathing apparatus may be worn for lower concentrations, but shall be worn when the asbestos fiber concentration is reasonably expected to exceed 100 times the limit in Section 5208 (a).

(4) No employee shall be assigned to tasks requiring the use of respirators if based on his most recent examination an examining physician determines that the employee will be unable to function normally wearing a respirator or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to an equivalent job whose duties he is able to perform, if such a position is available.

(e) Change Rooms and Special Clothing.

(1) The employer shall provide and require the use of special clothing such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in Section 5208 (a).

(2) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in Section 5208 (a), the employer shall provide change rooms for employees working regularly at the place, and shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employees' street clothes from his work clothes.

(f) Laundering.

(1) Laundering of asbestos-contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in Section 5208 (a).

(2) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in Section 5208 (f)(1) to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in Section 5208 (a).

(3) Contaminated clothing shall be transported in sealed impermeable bags or other closed, impermeable containers, and labeled in accordance with Section 5208 (i).

(g) Monitoring and Record Keeping.

(1) Monitoring. (Revision adopted 11/1/76)

(A) The employer shall sample the air and determine the concentration of asbestos fibers within the breathing zone of employees whose exposure to airborne asbestos may exceed an 8-hour time-weighted average concentration of 1 fiber, longer than 5 micrometers, per cubic centimeter or a ceiling concentration of 10 fibers, longer than 5 micrometers, per cubic centimeter due to work assignment(s) at or near operations with asbestos or asbestos-containing products which result in the release of asbestos fibers.

(B) Following any change in control, process, or production method which may alter the airborne concentration of asbestos, the employer shall monitor the level of any employee's exposure which may have been affected by such change.

(C) Monitoring shall be repeated at least once every 6 months where exposure to airborne asbestos may exceed an 8-hour time-weighted average concentration of 1 fiber, longer than 5 micrometers, per cubic centimeter or a ceiling concentration of 10 fibers, longer than 5 micrometers, per cubic centimeter.

(D) The sampling of airborne asbestos required by this paragraph shall be performed in a manner which will assure a reasonably accurate determination and shall be made without regard to employee use of respiratory protective equipment.

(E) All determinations of airborne concentrations of asbestos fibers performed under requirements of this section shall use the membrane filter method with phase contrast illumination, 400 to 450X magnification, and 4 millimeter objective.

(2) **Record Keeping.** Every employer shall maintain records of any personal or environmental monitoring required by this subsection. Records shall be maintained for a period of at least 20 years and shall be made available upon request to the Chief of the Division of Industrial Safety, the Director of the State Department of Health, and to authorized representatives of either. Upon written request of an employee, a former employee, or an employee representative of either, the employer shall furnish the monitoring record of that employee or former employee. In the event the employer ceases to do business and there is no successor to receive and retain his records for the prescribed period, these records shall be transmitted by registered mail to the Director, National Institute for Occupational Safety and Health, U.S. Department of Health, Education and Welfare, and each employee shall be notified in writing of this transfer.

(h) Caution Signs.

(1) **Posting.** Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in Section 5208 (a). Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(2) **Sign Specifications.** The warning signs required by subparagraph (h)(1) shall conform to the requirements of format signs specified in Section 6003 (d)(4) of the General Industry Safety Orders and to this subparagraph. The signs shall display the following legend in the lower panel, with the letter sizes and styles of a visibility at least equal to that specified in this subparagraph.

Legend	Notation
Asbestos.....	1" Sans Serif, Gothic or Block
Dust Hazard.....	1/2" Sans Serif, Gothic or Block
Avoid Breathing Dust	1/2" Gothic
Wear Assigned Protective Equipment.....	1/2" Gothic
Do Not Remain In Area Unless Your Work Requires It.....	1/2" Gothic
Breathing Asbestos Dust May Be Hazardous To Your Health.....	14 Point Gothic

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(i) Caution Labels.

(1) **Labeling.** Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in Section 5208 (a) will be released. For large outdoor storage such as mine ore tailings piles, labeling shall not be required if properly posted.

(2) Label Specifications. Caution labels required by this subsection shall be conspicuous and legible and shall contain the following or equivalent warning:

CAUTION

**Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause
Serious Bodily Harm**

(j) Medical Examinations. (Revision adopted 11/1/76)

(1) The employer shall provide or make available at no cost to the employee a comprehensive preplacement medical examination by a licensed physician for each employee engaged in an occupation where exposure to airborne asbestos, without regard to the use of respiratory protective equipment, has been determined to exceed, or may be reasonably expected to exceed, an 8-hour time-weighted average concentration of 1 fiber, longer than 5 micrometers, per cubic centimeter or a ceiling concentration of 10 fibers, longer than 5 micrometers, per cubic centimeter.

The examination shall be provided or made available within 30 calendar days of an employee's initial assignment to such occupation and shall include as a minimum a 14-inch by 17-inch chest X-ray (posterior-anterior), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at one second (FEV_{1.0}).

(2) At least annually every employer shall provide or make available at no cost to the employee a medical examination to employees as specified in paragraph (j)(1). The employer shall provide or make available, within 30 days of termination of employment of any employee exposed to airborne asbestos, a medical examination as specified in paragraph (j)(1), if such examination has not been taken within the previous year of termination.

NOTE: Pursuant to authority granted by Labor Code Section 6305(b), the Division, upon the advice of the Department of Health, may require an employer to make additional diagnostic test(s) available during medical examinations performed under the provisions of this paragraph when a preponderance of evidence indicates the advisability of such supplemental testing.

(3) Records shall be kept of medical examinations required by this subsection for each employee; such records shall be maintained by the employer for at least 30 years. Access to records of medical examinations required by this subsection shall be made available for inspection and copying to the Division of Industrial Safety, the Department of Health, and to authorized physicians or medical consultants of either of them. Upon written request of an employee or former employee, the employer shall provide a copy of the medical examination record to the employee's or former employee's physician. Any physician who conducts a medical examination required by this subsection shall furnish the employer of the examined employee or former employee all the information required by this subsection and any other medical information related to occupational exposure to asbestos.

(k) Employee Notification. (New section adopted 11/1/76)

Any employee found to have been exposed to asbestos fibers in excess of either of the permissible limits prescribed by subsection (a) shall be notified in writing of the exposure within 5 days of the finding. The individuals so exposed shall also be notified of the corrective action, in compliance with subsections (b), (c), (d), (e) and (f) being taken by the employer.

Senate Bill No. 2419

CHAPTER 1432

An act to add Chapter 10.3 (commencing with Section 25910) to Division 20 of the Health and Safety Code, relating to spraying of asbestos.

[Approved by Governor September 26, 1974. Filed with Secretary of State September 26, 1974.]

LEGISLATIVE COUNSEL'S DIGEST

SB 2419, Marks. Spraying of asbestos.

Prohibits any person, on or after July 1, 1975, from causing or permitting the spraying of any substance containing more than $\frac{1}{2}$ of 1% asbestos in or upon a building or other structure during its construction, alteration, or repair; and, on or after July 1, 1976, similarly prohibits the spraying of any substance containing any amount of asbestos.

Exempts cold process cutback asphalt roof coatings from such prohibitions.

Provides that notwithstanding Sec. 2231, Revenue and Taxation Code, there shall be no reimbursement pursuant to that section nor any appropriation made by this act for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. Chapter 10.3 (commencing with Section 25910) is added to Division 20 of the Health and Safety Code, to read:

CHAPTER 10.3. SPRAYING OF ASBESTOS

25910. No person, on or after July 1, 1975, shall cause or permit the spraying of any substance containing more than one-half of 1 percent asbestos in or upon a building or other structure during its construction, alteration, or repair. No person, on or after July 1, 1976, shall cause or permit the spraying of any substance containing any amount of asbestos in or upon a building or other structure during its construction, alteration, or repair.

Cold process cutback asphalt roof coatings shall be exempted from the provisions of this chapter.

25911. Any violation of this chapter shall be a misdemeanor.

SEC. 2. Notwithstanding Section 2231 of the Revenue and Taxation Code, there shall be no reimbursement pursuant to that section nor shall there be any appropriation made by this act because the Legislature recognizes that during any legislative session a variety of changes to laws relating to crimes and infractions may cause both increased and decreased costs to local government

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