FILE NAME: PPG (PPG)

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ERRATA SHEET

to the Deposition of MORTON CORN.

The deponent having a right to make any changes deemed necessary hereby makes the following changes into the deposition and states the reasons for each change accordingly.

PAGE NO.	LINE NO.	CHANGE (State Reason for Change after each)
6	7	Department of Chemical Engineering.
12	10	Change "facies" to "label".
32	14	Omit 3rd word "with".
49	22-23	"environmental techniques to measure and control asbestos dust;"
52	3	Question referred to asbestos not asbestosis.
57	15	"showed that they... (not there)
62	17	Should read "I state in the final paragraph of the report Conclusions and Recommendations section that..."
62	18	Should read "I did not find what you state in your question. ....
63	15-17	See deposition.
70	11	.... of asbestos dust.
73	18	Change "witness" to "question".
112	5	Transfer for transportation.
124	Last line.	What is the question?
128	11	See deposition.
133	16	1956 through August of 1958

E R R A T A S H E E T (CONTINUED)

PAGE NO.	LINE NO.	CHANGE (State Reason for Change after each)
134	12	Involved to involvement.
134	22	Lynch for Lane.
135	2nd & 3rd lines from bottom.	Delete as shown.
137	7	Area not are.
142	8	Of should be or.
143	Next to Last line.	Dr. Cralley.
142	Ditto for corrections of name.	
144	11	1969 not 1959.
148	7	Add expert, as shown.
156	4	"Asbestosis aspects".
158	17	"Asbestosis" should be "asbestos".
159	Next to Last line.	Proliferation.
164	11	"limit" for "import".
164	17	"giving" for "given".
178	6	"substance" to "subject".
190	Last 3 lines.	See deposition.
193	18	Ira for Ayer.

October 20, 1976
DATE

Morton Corn
MORTON CORN

Notary Public
My Commission Expires November 30, 1980

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF TEXAS

TYLER DIVISION

HERMAN YANDLE, ET AL.,	:	
v.	:	Civil Action TY-74-3-CA
PPG INDUSTRIES, INC., ET AL.	:	

Washington, D. C.
Tuesday, September 21, 1976.

Deposition of MORTON CORN, taken on behalf of the plaintiffs in the above-entitled action, at the offices of the Department of Labor, 200 Constitution Avenue, N. W., Washington, D. C., pursuant to notice, beginning at approximately 10:20 o'clock a.m., before SARAH POOLE, A Notary Public in and for the District of Columbia.

For the Plaintiffs:

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JOHN O'CONNOR, ESQ.

For Pittsburgh Corning Corporation:

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For Corning Glass Works:

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For North American Asbestos Corporation:

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Touchstone, Bernays & Johnston
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For the United States:

JAMES P. KLAPPS, ESQ.
Assistant Chief, Torts Section
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BILL TRAIL, ESQ.
U.S. Department of Justice
Washington, D. C. 20530

Also present:

CORNELIUS DONOGHUE, ESQ.
GILBERT T. REMAUT, ESQ.
Department of Labor
Washington, D. C. 20530

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C O N T E N T S

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P R O C E E D I N G S

Whereupon,

MORTON CORN

was called as a witness on behalf of the plaintiffs in the above-entitled action and, having been first duly sworn by the Notary Public, was examined and testified as follows:

EXAMINATION BY COUNSEL FOR THE PLAINTIFFS

BY MR. BALDWIN:

Q Would you give us your name, please?

A My name is Morton Corn.

Q When and where were you born, Dr. Corn?

A I was born in New York City, October 18, 1933.

Q Would you give us your -- are you married?

A Yes, I am married.

Q Would you give us your home address?

A My home address is 310 Bower Hill Road, Pittsburgh, Pennsylvania 15228.

Q What is your business or profession?

A My profession is educator. My business or current employment is Assistant Secretary of Labor for Occupational Safety and Health.

Q For the United States government?

A That's correct.

Q And how long have you held that position?

A I was confirmed by the United States Senate on

November 3, 1975 -- pardon me, November 11, '75, sworn into office December 3, 1975.

Q That's with the Labor Department?

A Yes, it is.

Q And what did you do before that?

A Prior to that I was professor in the Graduate School of Public Health at the University of Pittsburgh, an adjunct professor at the Department of Engineering of the University of Pittsburgh.

Q And when did you leave that employment?

A I have not left that employment, I am on leave of absence from the University of Pittsburgh.

Q When did you go with the University of Pittsburgh?

A I took up an appointment there in September of 1962, I have been employed there on a continuous basis since, with various occasions for leave of absence from the campus.

Q And where is that located?

A That is located in Oakland, in Pittsburgh.

Q How do you say Oakland, in Pittsburgh?

A Oakland is a community of the City of Pittsburgh.

Q And what did you do before 1962?

A During the years 1961 and '62, from August of 1961 until taking up the appointment at the University of Pittsburgh, I was a National Science Foundation post-doctoral fellow in London, England, and a senior lecturer at the

London School of Hygiene, University of London.

From 1958 through 1961, I was a graduate student and a research associate in the Department of Industrial Hygiene and Applied Physiology of the Harvard School of Public Health, at Harvard University, in Boston.

From 1956 through 1958, I was a research engineer for the United States Public Health Service, at the Robert A. Taft Sanitary Engineering Center, in Cincinnati, Ohio.

From 1955 through 1956, I was a graduate student at the Harvard School of Public Health, in Boston.

And from 1951 through 1955, I was an engineering student at the Cooper Union School of Engineering in New York.

That is a summary, very briefly, of my professional involvement.

I should mention that during the period 1962 through 1975, in addition to my university employment, I spent approximately one day a week as an independent consultant to industry, labor, government, in the field of industrial hygiene and environmental pollution.

Q Would you give us the degrees that you have received, the dates that you received them, and the institutions from which you received them?

A I received a Bachelor of Chemical Engineering from the Cooper Union in 1955; a Master of Science Degree in Industrial Hygiene from the Harvard University Graduate School

of Arts and Sciences in 1956; and a Ph.D., Doctor of Philosophy Degree in Industrial Hygiene and Sanitary Engineering from the Division of Applied Physics and Engineering of Harvard University, in 1961.

Q Name some of the companies that you did consulting work for during the 1962-75 period that you have mentioned.

A I have consulted for Bird Industries, Newton, Massachusetts; Boston Radio Corporation, Boston, Massachusetts; Union Industrial Equipment Company, Fall River, Massachusetts; Crucible Steel Corporation, Pittsburgh, Pennsylvania; Brooks Instrument Company, Hatboro, Pennsylvania; Harbison-Walker Refractories Corporation, Pittsburgh, Pennsylvania; Syntex Research Corporation, Palo Alto, California; Becton-Dickinson Corporation, East Rutherford, New Jersey; Ferro Corporation, Pittsburgh, Pennsylvania; U.S. Steel Company, Pittsburgh, Pennsylvania; Ohio River Barge Company, Pittsburgh, Pennsylvania; Consolidated Coal Company, Pittsburgh, Pennsylvania; DuPont Company, Wilmington; Monterey Coal Company, Carlinville, Illinois; PPG, Pittsburgh; Pittsburgh Corning, Pittsburgh; Hanes Corporation, Winston-Salem, North Carolina; Resources Research, Reston, Virginia; Baltimore Biological Lab, Cockeysville, Maryland; International Nickel Company, Huntington Alloy Products Division; Pittsburgh Metals Purifying Company, Saxonburg, Pennsylvania -- do you want me to continue?

Q Well, I presume you are reading from a list.

A That is correct.

Q And you own that list as a United States government--

A That would be listed under various government agencies I worked for. These were private firms.

Q Have you consulted to the United States Department of Labor?

A No.

Q What government agencies have you consulted with?

A Well --

Q Let me ask you this, maybe we can save some time: Are you reading from a resume?

A This is my resume, professional qualifications.

Q All right. Does that include, then, a pretty comprehensive list of the people and government agencies you have consulted with?

A Not the people but the government agencies and the firms.

Q All right.

A Yes, it does.

Q Does it include any writings?

A I have a supplement to this of all publications that I have that is not here, but which can be made available.

Q Maybe it would save some time if you would let us mark that as an exhibit and let me look at it.

A Certainly.

MR. BALDWIN: We will ask that it be marked as Exhibit 1 to the deposition of Dr. Corn.

[The document referred to was marked Exhibit 1 for identification.]

BY MR. BALDWIN:

Q Doctor, would it be proper for me to call you Doctor?

A Certainly, whatever you would like to call me is all right.

Q I am going to ask the reporter to leave a place for Exhibit 1-A and let that be the supplement that you have told us about, which includes an up-to-date bibliography of your writings and books; would you do that?

A Yes.

[The document referred to is to be marked Exhibit 1-A for identification.]

BY MR. BALDWIN:

Q You said you had done consulting work for Pittsburgh-Corning. Would you outline that? If you need your resume, let me know.

A I recall the manner in which the consulting for Pittsburgh Corning first came about. During the period 1964

through 1968, I was handling all of the engineering requests to the Industrial Hygiene Foundation. Their full-time engineer had left and I agreed to try, within the framework of the time available with my university responsibilities, to handle requests to them.

One of those requests from Pittsburgh-Corning to the Industrial Health Foundation or Industrial Hygiene Foundation brought me in contact with Pittsburgh-Corning. I believe that was 1964.

Q And what specific project did that relate to?

A It related to the Port Allegheny facilities.

Q All right. Did that relate to the asbestos problem?

A It was a survey, a very brief look through the entire facility, one portion of which was a Unibestos operation.

Q From the standpoint of industrial hygiene?

A Yes.

Q Did you make recommendations?

A I wrote a report, yes.

Q And did that relate to asbestos dust in any way?

A It had certainly sections that related to the Unibestos operation, yes.

Q Did you find that they needed improvement or did you make recommendations for improvements?

A I would have to review those specific sections of that report to answer that question.

Q Did that report in any way relate to the Tyler plant?

A No.

Q Now, did you make known to any agency of the United States government or consult with any agency of the United States government relating to that investigation and report that you have just described?

A No, I did not. The client in this case was Pittsburgh-Corning. My report was submitted to Pittsburgh-Corning over the facies or within the facies of the Industrial Hygiene Foundation.

As contrasted to later consulting involvement of mine, this was not a report from me to the client, it was a report from the Industrial Hygiene Foundation to the client, performed by me as a part-time employee, if you will, of the Industrial Hygiene Foundation.

Q Tell us what the Industrial Hygiene Foundation is.

A The Industrial Hygiene Foundation, I believe it is now called the Industrial Health Foundation, is a nonprofit organization of approximately at the time I did work for it 400 private firm members providing a variety of services to members from holding meetings on topics relevant to industrial health to providing engineering services and medical services to clients as they request them.

Q Where is its home office?

A The Industrial Health Foundation is located in Pittsburgh, Pennsylvania.

Q And how long has it been there?

A It was formed in 1937. I believe it has been located on a continuous basis in Pittsburgh.

Q Now, I presume both Pittsburgh-Corning and Pittsburgh Glass, I will call them, participate in that foundation?

MR. ARMSTRONG: Objection, leading.

BY MR. BALDWIN:

Q Go ahead.

MR. BRIN: There wasn't any question, there was just a statement.

BY MR. BALDWIN:

Q I presume both of those companies participated in that foundation; am I not correct?

MR. ARMSTRONG: Objection, leading.

THE WITNESS: I don't know.

BY MR. BALDWIN:

Q Are you saying you don't know?

A I can answer questions related to my involvement with the foundation. I do not know their membership rolls. If you choose to rephrase that in a way I could answer, I would be happy to.

Q Do you know whether PPG has ever participated in the

Industrial Hygiene Foundation in any way?

A I think they have, and I would have to check my records to be sure. The only way I would know if they have is if I performed for them while I was with them.

You have my resume which lists the jobs I performed for IHF. If they are on that list, then they were a member. You can determine that quite quickly.

If they are not on that list, I do not know if they were or were not.

Q It shows that Pittsburgh Plate Glass is on that list.

A Then they were a member and I did perform a service for them.

Q And it shows Pittsburgh-Corning.

MR. TRAIL: Scott, I would ask that you identify what portion of the resume you are reading from.

MR. BALDWIN: The one he just described.

MR. TRAIL: Right, but what page and what heading is it listed under?

MR. BALDWIN: It is on page 7, it is under the heading "Private Non-Profit Organizations."

MR. ARMSTRONG: I suggest the list be handed to the witness and let the witness interpret the list and not counsel.

BY MR. BALDWIN:

Q Let me say this, Mr. Witness: I would represent to you that this is what it says, and I think it will save a lot of time without me coming over to hand this to you every time I want to ask a question.

A I like Mr. Armstrong's suggestion, I am the best one prepared to read that.

Q It is written in English, isn't it?

MR. TRAIL: But not East Texas.

THE WITNESS: Yes, I performed a service for Pittsburgh Plate Glass Company through Industrial Hygiene Foundation in 1965, so they must have been a member in 1965.

BY MR. BALDWIN:

Q According to the list you prepared there?

A That's right.

Q The same would be true of Pittsburgh-Corning?

A 1966 -- in 1966 I performed a service for Pittsburgh-Corning through the Industrial Health Foundation.

Q All right. Now, let's go on. You said that you did private consulting work for Pittsburgh Glass. What was the nature of that work? Was that the one you just described, or is that in another capacity?

A I will have to refer to the list again to see if I performed a service for Pittsburgh Plate Glass independent of IHF.

Q Didn't you just tell us that?

A Yes, in 1969 I performed a service for the Coating and Coating Division of Pittsburgh Plate Glass, and in 1969 for the Plate Glass Division of Pittsburgh Plate Glass.

Q Did either of those relate to the Tyler plant?

A No.

Q Now, you did conduct a survey of what is commonly referred to around here as the Tyler plant of Pittsburgh-Corning?

A Yes.

Q And when was that?

A That was in 1969.

Q And at whose request?

A At the request of the Pittsburgh-Corning Corporation.

Q Was that a written request?

A I believe it was a verbal request followed up by a letter from me confirming that request.

Q And what hat did you wear when you performed that survey?

A In 1968, my affiliation with the Industrial Hygiene Foundation ended, the workload had become too heavy. I indicated to them that they should hire a full-time engineer, I could no longer assist them, and all consulting work subsequent to 1968 had no affiliation with IHF.

During the period 1964 to '68, some consulting work had affiliation with IHF, some did not. That clarifies your --

When Corn Studied of Tyler for PC was he working for Itt T

answer my question?

tand it, if you did. I wanted to

nting when you made the survey of the

ant to the PIttsburgh-Corning Corporation.

Q In your individual capacity?

A That is correct.

Q And not in any capacity with the Industrial Hygiene Foundation?

A I indicated in 1968 that capacity ended. This survey was performed in 1969.

Q So you were hired to do a job, in effect, and paid for it?

A That is correct.

Q And you confirmed this by letter, you told us?

A That is right.

Q And could we have a copy of your letter?

A The copy of the letter was a letter to a Mr. Blair of the Department of Labor, which confirmed that and which can be made available.

Q We will ask that the letter be marked P-2. Where is that letter?

A I have a copy of that letter in my files.

Q Well, where are your files?

A Here in Washington.

Q Well, may I see it?

A I would have to go down to my office to get it.

MR. BALDWIN: Well, we are going to call for these things and we may just as well -- we can do it either way, we can wait until we get a list accumulated or we could send him to get them now, but we want the letter and there are going to be other documents we want out of his files.

MR. KLAPPS: Mr. Baldwin, I do not understand why you didn't request documents before this deposition. Why can't the witness simply attach a copy?

MR. BALDWIN: I didn't know of the existance of this letter, for example. That's one good reason. So, you know, we can do this either way, how do you all want to do it? I would like to do it at your request so we can get out of here as early as possible.

MR. KLAPPS: Why don't we accumulate a list, I thnk that would be less disruptive.

MR. BALDWIN: Okay. We will to a point, and we are going to get down here to where we are going to need some things before we can go any further.

BY MR. BALDWIN:

Q Okay. P-2 will be the letter that you wrote to Mr. Blair of who?

A Department of Labor.

Q Why did you write Mr. Blair of the Department of the Department of Labor about a job you were doing for Pittsburgh-Corning?

A Pittsburgh-Corning had been -- I was made aware at the time of the verbal request for my services that they were under citation.

Q And what was the purpose of your employment, to help get them out from under citation?

A I do not accept charges phrased in that manner. The purpose was that I do an independent survey of these facilities and inform them as to the condition of the facilities from the point of view of the hygienic exposure of employees and the adequacy of procedures to protect employees.

Q All right. Now --

A That was the purpose.

Q Excuse me, had you finished?

A That was the purpose.

Q Now, when you did this work in the Port Allegheny plant, was there any discussion of the Tyler plant?

A No.

Q Prior to the time that you were contacted about this survey that you have just described at the Tyler plant, had there ever been any discussion with you by anyone of the Tyler plant of Pittsburgh-Corning?

A No.

Q And will you understand me in the rest of my questions today when I refer to the Tyler plant, that I can save words by just saying the Tyler plant, but I mean the Pittsburgh-Corning plant at Tyler, Texas; will you understand that?

A Fine. Yes.

Q All right. So then, if I understand it, you have got this request to do the survey, you wrote a Mr. Blair in the Department of Labor a letter which you are going to obtain. And you have a file in connection with this particular consulting job, is that right?

A Yes.

Q And it is available here in Washington?

A Yes.

Q Now, you did then make a visit to the Tyler plant in May of 1967?

A '69, I believe.

Q Excuse me, '69.

A '69.

Q And you wrote a report?

A That is correct.

Q Now, would you mind obtaining for us a copy of that report?

MR. TRAIL: Scott, at this point I want to point out

one thing, a number of things that you are asking for were produced at the deposition of Miguel Padilla.

MR. BALDWIN: I know. And I would like at this time to request that he obtain a copy of that report or that somebody furnish me with a complete copy of that report.

MR. KLAPPS: Don't you have a copy?

MR. BALDWIN: No, my copy stops at page 19.

Mr. Corn, unless one of your lawyers has a copy that he is willing to give me, I would ask that you recess the deposition until you go get a copy of the report. I want the report now.

MR. KELLEY: Why don't we save time and let him go get his files, maybe it will take ten or fifteen minutes at most, and he is asking questions in the dark here.

MR. BALDWIN: Why don't you go get your file and bring it up here.

MR. KLAPPS: All right, we will recess for fifteen minutes then.

[Recess]

[Documents were marked as Exhibits P-2, P-3, and P-4 for identification.]

MR. KLAPPS: Scott, before you begin, I would like to make a statement on the record so we proceed in an orderly manner.

I would like the record to reflect that Exhibit P-2 to this deposition was previously marked and identified as Exhibit 1, page 22, of the exhibit to the deposition of Miguel Padilla, taken on April 6, 1976, and that is the letter from Dr. Morton Corn to Mr. Blair; and Exhibit P-4, the report by Dr. Corn, was likewise marked as Exhibit 1 to Mr. Padilla's deposition and it comprehended pages 23 through 67 of Exhibit 1 to Mr. Padilla's deposition; I believe that Exhibit P-3 to this deposition, a letter dated April 11, 1969, was likewise an exhibit to Mr. Padilla's deposition on pages 49 and 50 of the exhibits.

Proceed.

BY MR. BALDWIN:

Q Doctor, right now for identification I will hand you what has been marked P-2 with this date and ask you if you will look at it and identify it.

A Yes, that is my -- that is the letter I referred to indicating the written expression of the intent to perform the survey at the Tyler facility.

Q And P-3 is what?

A This was a letter that I received and which prompted my writing the May 1 letter to Mr. Blair. This is a letter to Mr. Blair from Mr. Stout of the Pittsburgh-Corning Corporation.

Q P-4 is what?

A P-4 is the report that I submitted following my

survey of the Tyler, Texas plant. It was submitted to the Pittsburgh-Corning Corporation.

Q All right. Now, my copy of that report only has 19 pages, so I will ask you if you would be good enough to examine that and tell me if that represents a complete report, complete copy of your report.

A Yes, this represents the 21 pages of the report and the appendices, yes.

Q Now, before you made this visit to the Tyler plant in 1969, had you ever made any visit to that plant prior to that time in any capacity?

A None whatsoever.

Q Had you ever discussed that plant with any person, firm or entity prior to that time?

A No.

Q Had you ever read any reports or memoranda or letters, writings or of any character relating to that report prior to your letter of May 1, 1969?

A No.

Q Now, in April of 1969, had you discussed the survey with Pittsburgh-Corning?

A In April, I don't believe so.

Q When is the first time that you recall -- will you excuse me for standing here right in your face, because I am going to have to refer to these exhibits.

A Certainly, no.

Q When was the first time that you discussed this Tyler plant with any official for Pittsburgh-Corning or Pittsburgh Glass?

A To the best of my memory, it was shortly before the visit. I cannot place the day. Shortly before May and shortly before I wrote to Mr. Blair, I don't recall the exact dating.

Q Shortly before your letter of May 1?

A That is right. I knew a Tyler plant existed and I knew it was similar to the Port Allegheny, but that was my total knowledge of Tyler.

I believe I state something like that in the letter, do I not, do I not say that? Yes.

Q Who is the first person that you talked with at the Pittsburgh-Corning about the Tyler plant?

A I believe it was discussed with several individuals at a meeting called to address the citation.

Q And when and where was that meeting?

A This is where it gets difficult. Again, it was very shortly before I wrote that letter and I believe the meeting was at the Presque Isle Research Center of the Pittsburgh-Corning Corporation.

Q And who was present at the meeting?

A I think Mr. Hyde, who accompanied me to Tyler.

Q Who is Mr. Hyde?

A He was a project engineer. I expressed an acknowledgement to him for his assistance in the report.

Q Project engineer for who?

A For Pittsburgh-Corning.

Q All right. Go ahead.

A Mr. John H. Hyde, in the page 21 acknowledgement. He was present. Mr. Byrl Stout, vice president, I believe, for manufacturing of the company, the writer of the letter to Mr. Blair. Mr. Holman, Sandy Holman, who was the, I believe, vice president -- well, I am not sure of the exact title, I believe he was a vice president of the corporation at that time.

And I am just -- I am not prepared to state definitively that Dr. Grant was present, but usually whenever I was involved with the Pittsburgh-Corning Company, there was close liaison with Dr. Grant. He may have been present, but I am not sure.

Q How long have you known Dr. Grant?

A Since 1964.

Q Where did you first meet him?

A I first met Dr. Grant in my involvement, I think, with the very first involvement with the Industrial Hygiene Foundation.

Q What was his capacity at that time?

A His capacity, he had recently come to Pittsburgh as medical director of PPG and he was also associated with the Industrial Hygiene Foundation, representing either PPG or Pittsburgh-Corning or both.

Q You have known him then from '64 on down through to now?

A Yes.

Q And you know that he -- he is a medical director for PPG, is that correct?

A That's correct.

Q He is on their payroll?

A Yes, as far as I know.

Q And has been from that period of time down to now, is that right?

A That's right.

Q Now, you state in your letter of May 1 that the first time you saw the letter to Mr. Blair was April 24 -- April 28, excuse me.

A Yes.

Q Could that have been at this meeting?

A That could have been at the meeting.

Q Would that, in your opinion, date the meeting that

you have just described?

A It could. It simply is not -- I am not trying to be evasive, I simply do not remember if that was the date of the meeting, but it could well be. The meeting was in close proximity to this correspondence.

Q All right. Then, prior to April 28, 1969, you had never seen the letter to Mr. Blair, which is P-3?

A That is right.

Q You have never heard or ever discussed of the Tyler plant?

A That is right. Well, I had heard of the Tyler plant, I knew the corporation had a Tyler facility.

Q Well, you had never heard or discussed any problem with the Tyler plant?

A No.

Q And you wrote the letter of May 1 to try to clarify this letter of April 11, didn't you?

A Yes.

Q And what you wanted to clarify was the implication that you had been to the Tyler plant or had done some work in connection with it before May 1, isn't that true?

MR. McGOUGH: Object to the form of the question, the document speaks for itself.

BY MR. BALDWIN:

Q Go ahead and answer the question. Isn't that true?

A Yes, I wrote to clarify that letter.

Q In the respect that I have described?

A I felt it could be inferred from reading that letter that I had had involvement in the Tyler facility.

Q Prior to May 1?

A That is correct.

Q And you wanted to erase any notion of that sort, didn't you?

MR. TRAIL: I am going to object to the question as leading. Well --

BY MR. BALDWIN:

Q Go ahead and answer.

A I am really -- my answer is I wished to clarify the letter, particularly in reference to the role I served and I felt it could be read that I had had involvement with the Tyler facility. I had not. I stated in my letter that this is the first I heard of it and I think that speaks for itself.

Q Now, do you have a copy of that report in front of you there?

A Yes, I do.

Q Okay. Would you refer to it?

MR. BALDWIN: We will offer P-1 through P-4 at this point.

BY MR. BALDWIN:

Q P-4 is a report that you wrote summarizing your visit to the Tyler plant and findings, is this correct?

A Yes.

Q And who was this report written to?

A Submitted to the Pittsburgh-Corning Corporation with a copy to Dr. Grant.

Q Why did you send Dr. Grant a copy?

A I always sent a copy to Dr. Grant of any work I did for Pittsburgh-Corning.

Q And where did you get that instruction?

A We had agreed together that the proper role of the medical professionals was to communicate with each other and he should be aware of all my involvement with the company.

Q And was -- this then was a business practice between you and Dr. Grant?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BALDWIN:

Q Go ahead.

A It was a professional procedure that I adhered to after discussion with my counterpart professional colleague in

the company. He was at this time, as related to me, a consultant to the Pittsburgh-Corning Corporation.

Q Did you also send him copies of any reports or work that you did for PPG?

A Yes.

Q Under the same arrangement?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BALDWIN:

Q Is that correct?

A In general, he received copies of my work.

Q Of any of your work on Pittsburgh-Corning or Pittsburgh Glass?

A Yes.

Q You didn't send him copies of your work on U.S. Steel?

A No.

Q What you are telling me is if you did any work -- the understanding between you and he was that if you did any work for any of the Pittsburgh companies, either Pittsburgh-Corning or Pittsburgh Glass, he got copies?

A Of the reports. I did not keep him apprised of all correspondence. Relevant correspondence and reports, but there is a great deal of correspondence that is not transmitted

on the basis of this understanding.

Q Okay. Now, did you then keep him abreast at all times of your findings in Tyler?

A Yes.

Q And would it be fair to say that he was informed forthwith of your findings without any substantial elapse in time?

A He received the reports. I don't recall if I verbally -- I prefer to submit a report and decline in general to make statements about the results of my work before the report because many of the results of my work are dependent on laboratory results that are delayed in coming. I would say I probably did not verbally transmit findings.

Q Well, the point I am making is you kept him apprised of what your findings were and what you were doing at Tyler?

A Yes.

Q At all times, is this correct?

A Yes.

Q Now, who went to Tyler with you and when did you go?

A Mr. John Hyde, Pittsburgh-Corning engineer working out of the research center at Presque Isle, accompanied me, and we left, I assume, the day before and we were at the plant on May 7, 1969. We spent a day at the plant.

Q Before we get further into that, you said you sent copies of this report to Dr. Grant. Who else did you send copies to?

A I believe I transmitted it to Mr. Hyde, who was appointed the liaison for me with the corporation on this project.

Q What about any government agency?

A No.

Q Was your copy of your report ever transmitted to any government agency?

A No.

Q Did you ever discuss your findings with any member of the United States government or any of its agencies?

A I discussed with my presence, in addition to the letter to Mr. Blair, after the survey. I confirmed via phone with Mr. Padilla that I had been in the facility.

Q He is with the United States government?

A That is correct.

Q And you told him that you had conducted a survey?

A That's correct.

Q Did you tell him what you found?

A As I recall the conversation, he was quite concerned as to whether my findings were consistent with his. I think

at this point he wondered at the validity of his citation. Again, I don't recall the exact wording, but I remember the distinct impression of his concern whether what I found was consistent with what he found. I very broadly stated, yes, my findings in general sustain your technical findings.

Q His technical findings of what?

A His technical findings are very much related in the citation, I think we could examine the citation. He speaks about face velocities at hoods; the local exhaust is below required capacity. My report confirms those statements in the citation.

I indicated to him in a sentence or two in reply to his question, yes, my survey generally supports his assessments.

Q Contentions?

A His assessments.

Q All right. Tell us generally what his assessment was that your findings supported.

A That the ventilation system in this facility was inadequate, and I think that is the thrust of the citation that is appended to my report.

Q So you told him this?

A Yes, in answer to his question, I indicated that.

Q And when did you tell him this?

A I have not a date or a record of this phone conversation.

Q Well, give us your best estimate as to how soon after your visit of May 7 it would have been.

A I wrote a letter on June 6 to Mr. Blair indicating I performed a survey and telling that the report was submitted to the corporation. The phone call to Mr. Padilla would have been somewhere between confirming that I had been in the plant -- between May 7 and June 6.

Q It will save us a lot of time, Dr. Corn, if you will make available to us your correspondence as it related to this Tyler plant. Would you do that? And we will look at it, not right now, but at a recess.

MR. TRAIL: We can make the arrangement at the recess, Scott.

BY MR. BALDWIN:

Q Well, all right. Now, for the record, would you tell us his job title, not Mr. Blair, but I can't say it, Mr. Padilla.

A Padilla is an industrial hygienist with, at that time, with the Bureau of Labor Standards, U.S. Department of Labor, assigned to the Tyler area.

Q Okay. So then at that time, sometime between May 7

and June 7, let's say, you made an oral report to him, is this correct?

A That I had been there.

Q And substantially what you had just told us?

A In response to his question, yes.

Q And that is that you found that the ventilation system at the Tyler plant was inadequate?

A I indicated that I confirmed his findings with respect to the ventilation system. I think that wording is particularly critical.

His question was, "Did you find what I found" as I -- it was phrased that way, he was very insecure as to a consultant coming in and differing with his citation, and I recall I replied to the effect, "Yes, I confirmed your findings." I don't think I went any further.

Q And I believe you are the man that said earlier, "I confirmed his finding that the ventilation was inadequate."

A That is what he states in the citation, yes.

Q All right.

A That was quite specifically addressed in the report. You don't -- there are very -- the details associated with that statement are delineated in the report. Some of those details Mr. Padilla pointed to, others I pointed to.

Q When you speak of the report in your last answer, you mean Plaintiff's Exhibit 4 that was --

MR. ARMSTRONG: Your report.

THE WITNESS: My report.

BY MR. BALDWIN:

Q But now I am interested in what you told Mr. Padilla when you talked to him on the telephone.

A I essentially assured him that his citation was valid.

Q All right.

A That is the essence of what I told him.

Q And at that time did you realize then that there was a hazard at the Tyler plant, a health hazard?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BALDWIN:

Q Go ahead.

A I think my report states --

Q I am not asking you about your report, Doctor, I am asking you what you realized.

MR. ARMSTRONG: Just a moment. I am going to object to Mr. Baldwin's interrupting the witness' answer. He presented --

MR. BALDWIN: I --

MR. ARMSTRONG: Just a moment. Just a moment, please, don't interrupt me.

He interrupted him in mid-word and I think that the witness is entitled to complete his answers and then Mr. Baldwin, if he objects to him, can so state for the record.

THE WITNESS: My professional opinion at that time is incorporated in this report and for your questioning relevant to what I thought at that time I will refer you to that report.

BY MR. BALDWIN:

Q Well, I will refer you to the report, look at the report and tell me.

A Fine. If you would refer to a specific area of the report, I would be very happy to.

Q My question is, did you not realize that there was a health hazard at the Tyler plant at that time, it is that simple.

MR. ARMSTRONG: Mr. Baldwin, I will object because, once again, you are interrupting the witness.

BY MR. BALDWIN:

Q Say what you want to say.

A I will read from my report.

Q Read.

A "Summary and recommendations" -- which I think is what you are interested in.

Q No, would you let me ask a question and then you answer it, please? And if you want to read your report in answering it, all right, but all I want is an answer.

A I heard your question. I am choosing to read my report.

Q All right, now go ahead, and my question, in order that we understand each other, is simply this --

A We understand each other very clearly.

Q Let me ask my question, Doctor. My question is simply this, did you or not at the time after you made that visit at the Tyler plant in May of 1969 recognize that there was a health hazard? It is that simple.

MR. ARMSTRONG: Object to the form of the question.

THE WITNESS: May I continue to read from my report?

BY MR. BALDWIN:

Q I just want my question answered. If you want to answer it by reading your report, go ahead.

A That is what I wish to do.

Q Go ahead.

A Is that clear, for the record?

MR. ARMSTRONG: What page?

THE WITNESS: Page 3, summary and recommendations.

"An industrial hygiene and ventilation survey of this plant performed on May 7, 1969 suggests that asbestos fiber concentrations are nigh in worker breathing zones (Builder and Feeder Operators) and at breathing level in certain other plant locations. There are no hygienic guidelines for concentration of Amosite fibers in air and the judgment of excessive dustiness in this plant is referred to guidelines for Chrysotile dust. Utilization of hygienic guidelines for Chrysotile asbestos concentration in air for Amosite asbestos fibers in air is an accepted procedure in the U.S. at this time. The finding of excessive dustiness at 'spot' sampling locations in the plant is consistent with survey measurements which revealed inadequate quantities of air at local exhaust hoods. Insufficient air at local sites of dust emission was reflected in low air velocities at hood faces and low air conveying velocities in branch lines and ducts. The ventilation system was estimated for Builder and Feeder areas to move approximately one sixth of the air required to ventilate these

processes.

"In addition to the inadequacies of the ventilation system and the resultant excessive dustiness, it was found that general housekeeping is poor in the plant. Also, during the entire day of the survey not one employee in the production area was observed to wear a respirator.

"In the opinion of the author, this short survey strongly suggests that employees at this plant are being exposed, on a daily basis, to excessive concentrations of Amosite asbestos dust. It is recommended that efforts be immediately focused on design of a complete ventilation and dust collection system at this plant. The system is rudimentary in concept and is underdesigned. Efforts to 'doctor up' this system would probably lead to a less than satisfactory system and would involve expenditures in time and equipment equivalent to those associated with design of a new system."

That is what I thought at the time I completed the survey about conditions in the plant.

BY MR. BALDWIN:

Q Now, will you answer my question?

A I answered your question.

Q Well, I don't think you did, and I am going to ask it again.

A You are using terms that health professionals do not use.

Q Do you understand the word hazard?

A Yes, I do.

Q All right. What is your definition of hazard, health hazard?

A A hazard is a condition that implies a threat to health.

Q All right. Now, that's a good enough definition for me. Using that definition, tell us just whether or not in your opinion the conditions in that plant presented a health hazard to the workers.

MR. ARMSTRONG: Objection.

MR. TRAIL: Objection, because the question has already been asked and answered about a half dozen times.

BY MR. BALDWIN:

Q It has not and go ahead and answer it.

A I have answered that in the phrasing of my summary and conclusions in words that I am comfortable with. You are

drawing a broad stroke and I have worded them very carefully. On the basis of this short survey, certain things are suggested. Great care is taken to phrase my conclusions of this professional effort in the proper framework. You are asking me to make a short answer to a broad question that I am not prepared to make on the basis of this survey.

Q Okay. You can't make -- you can't answer my question as to whether a health hazard existed at this plant?

A I answered it in the best way I knew how to in this report.

Q Can you just tell me, "Yes, a health hazard existed," or "No, one didn't exist," that is all I want you to do.

MR. KNAPPS: Objection, the question has been asked and answered repeatedly.

BY MR. BALDWIN:

Q Go ahead, sir.

A On the basis of that one day, I could not answer the question the way you want me to answer.

Q I don't want you to answer it any way.

A I think you do.

Q All I want is the truth and not a bunch of mumbo jumbo.

A I have given you this in my report.

Q I have got your report. I am asking you questions now, sir. If you want your report -- I don't need to ask you about it, I have it.

I am asking you as a professional man whether or not in your opinion there was a health hazard there.

A I have answered your question.

Q No, I submit you have not.

A Then if that is your perception of this situation, then I have not answered your question.

Q All right, would you mind trying to answer it?

A I have done my best.

Q Would you tell me you can't answer?

A In all good faith I believe I have answered it.

Q Are you telling me then in language me and a jury can understand that, yes, a hazard exists?

MR. ARMSTRONG: Object to the form of the question.

MR. KLAPPS: Mr. Baldwin, the question has been asked; perhaps your question is vague and ambiguous; rephrase it.

MR. BALDWIN: I don't think there is anything vague and ambiguous.

BY MR. BALDWIN:

Q I want you to answer my question, are you telling me

that a hazard existed?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BALDWIN:

Q Sir?

A I am telling you that in the opinion of the author this short survey strongly suggests that employees at this plant are being exposed on a daily basis to excessive concentrations of Amosite asbestos. That is all I can say as an environmental professional.

Q Is that a health hazard?

A I do not make that judgment. They are excessive concentrations beyond a standard that I measure conformance with. You are asking me to make a professional jump to reach a medical conclusion that I am not prepared to make and it is worded as I as an engineer am prepared to state it, and I think must read that in the sense of an engineering record.

Q Than you can't tell us whether a hazard exists?

MR. ARMSTRONG: Object to the form of the question.

THE WITNESS: At that time, I certainly could not.

BY MR. BALDWIN:

Q Now, you said "in the words of the author," who is the author?

A That is myself.

Q Oh, I see. Now, who was with you down there on this visit?

A Mr. John Hyde.

Q Was there anybody else?

A I don't believe there was.

Q How long did you stay?

A One day.

Q Have you been back?

A I was back again, yes.

Q When?

A In 1972.

Q At whose request was that?

A At the request of Mr. G. S. Gregory of the Pittsburgh-Corning Corporation.

Q You didn't get my pencil a minute ago, did you?

A No, I didn't.

MR. McGOUGH: I'm sorry, I didn't hear that question. May I have that question read back, please.

MR. BALDWIN: I will withdraw the question, Mr. Baron had my pencil.

MR. BARON: No, it was under his notebook, he lost it.

MR. BALDWIN: Okay.

BY MR. BALDWIN:

Q Did you write this report?

A Which report.

Q Exhibit 4 here.

A The report of the Tyler survey?

Q Yes.

A Absolutely. Who do you think wrote it?

Q Well, it referred to Dr. Corn in the third person, is that the same Dr. Corn as you? It says "Dr. Corn was accompanied and assisted by John L. Eyde."

A Yes.

Q You are referring to you there?

A Yes.

Q In the third person?

A That is a common form of expression in this type of report.

Q And what did you mean when you say "The survey was concentrated exclusively on assessment of hygienic risk"?

A Where may I refer to the sentence you are referring to?

Q The introduction.

MR. ARMSTRONG: The bottom of the first paragraph.

THE WITNESS: I mean that the role of the environmenta

specialist is to evaluate the conditions in the facilities and compare them to certain guidelines or standards which are recommended practice. That is my function. I go in, I make measurements, laboratory analysis, I reach a conclusion if the environmental conditions adhere to recommended practice or legal standards for the agent that is under question. That is what that phrase means, an assessment of hygienic risk, was the standard at that time in force the agent asbestos being met or wasn't it. On the basis of that judgment, I make recommendations, and that brings us back to your previous question, I don't phrase a question or answer a question as you have phrased it, I compare conditions to recommended practice.

BY MR. BALDWIN:

Q And you found that it did not meet the recommended standards?

A As specified in the summary and conclusions, there were certain areas that did not and there were others, as I recall, that were kind of on the borderline, yes.

Q And you were referring to Amosite asbestos dust?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BALDWIN:

Q Go ahead.

MR. ARMSTRONG: It doesn't even indicate what he was referring to.

THE WITNESS: The dust in this plant was Amosite asbestos dust. There were no standards for Amosite asbestos dust, that was the reason for me to flag this in the summary and conclusions that I was using as a professional a commonly accepted jump, I was going to invoke the standards for Chrysotile for Amosite which the scientific community had accepted at that point in time until there was further evidence that would differentiate any biological effects of Amosite from those of Chrysotile, and I have clearly indicated that my conclusion comparing this dust with the standards for Chrysotile was predicated on that assumption.

BY MR. BALDWIN:

Q Which was an accepted standard in the industry at the time?

A Yes.

Q Of applying Chrysotile standards to Amosite dust?

A In general at that time about 97 percent of asbestos dust in use in the United States was Chrysotile. We were talking about a small percentage of total utilization of asbestos and the professional community treated the 100 percent as if it was the 97 percent.

Q Well, even if it is just 3 percent, it wouldn't be good practice, would it, to apply the Chrysotile standards to Amosite dust if, in fact, you had different results from Amosite than you had from Chrysotile?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BALDWIN:

Q Would that be good practice?

A In general, it would not be good practice to apply any standard to different substance.

Q All right.

A We did not have information at that time that would give any basis for differentiating Amosite from Chrysotile and in the interim this practice was used.

Q You did, as an industrial hygienist, keep up with the literature in the field?

A I made every effort to, yes.

Q Did you feel at that time that you were reasonably abreast of the literature in the field?

A May I ask the literature with respect to what?

Q To asbestos.

A I was familiar to a very high degree with the assessment of asbestos and the environment techniques to measure it with control; I was familiar to a lesser extent with those aspects that are really not in my professional

perview, namely the biological affects, the epidemiology.

I must be candid and say I still do not completely understand all of the methodologies of those fields, but I am familiar with those that relate to my function to evaluate, assess and engineer.

Q And that includes applying these standards?

A Yes.

Q And you certainly wouldn't apply a standard to Amosite if you felt like that Amosite had different biological properties than Chrysotile, would you?

MR. ARMSTRONG: Object to the form of the question.

MR. KLAPPS: Join in that objection.

THE WITNESS: It is not a good question.

BY MR. BALDWIN:

Q It may not be, but answer it.

A It isn't really a good question. I would not apply any standard to any other situation unless I professionally felt it had relevance.

Q And you have told us earlier, I believe, that according to your knowledge and understanding of the literature in the field, there was no basis to make a distinction between Amosite and Chrysotile?

MR. ARMSTRONG: I object to that. That is not what

he said. I object to the form of that question as misstating his testimony.

BY MR. BALDWIN:

Q All right, what did you say?

A I stated that the professional industrial hygiene community were working with a Chrysotile standard, that is the only standard on the books. When dealing with 3 percent of the asbestos in the work place, we had no standard. The professional biologists, toxicologists, physicians, biochemists who put together the information leading to a standard left us without a standard for Amosite. It was a commonly accepted procedure of the industrial hygiene community to use the Chrysotile standard for situations involving other forms of asbestos.

That is as clear as I can state it.

Q Did you have any knowledge that there was any difference in the biological effect of Amosite and Chrysotile?

MR. TRAIL: Objection, he has already stated that that is outside his field of competency.

BY MR. BALDWIN:

Q Well, it may or may not be. Answer the question.

A I think it is outside. I had awareness of discussions, I really had no knowledge.

Q Did you have any knowledge that there was any difference in the biological properties of these two types of asbestosis?

A No, no, I would have to say I had no firm body of evidence in my possession, no.

Q All right. You considered your measurement, then, representative of the conditions in the plant during the summer months, didn't you?

A Yes, I did. Yes, I did. I might say normally I would take additional samples, but I thought from -- these were representative, yes.

Q And you felt like they would only get worse as the winter months came?

A On the basis of all my work with industrial facilities in winter, windows are closed, ventilation is poorer, and I think the body of data that I have in my possession suggests winter concentrations indoors are higher than summer concentrations; I so stated that in the report.

Q Now, you found excessive dustiness at spot sampling locations which revealed inadequate quantities of air at local exhaust hoods, didn't you?

MR. TRAIL: I am going to object to the question, Mr. Baldwin is reading from the document. I would like to

have the portion of the document that is being read from identified so that the witness could relate to it.

THE WITNESS: Mr. Baldwin, that would be very helpful to me.

BY MR. BALDWIN:

Q I was paraphrasing from a statement you made in the document on page three, if you would care to follow it.

A Yes, if I could follow it. The wording of the document is quite carefully arrived at, and if we could read the statement together I could elaborate on what the intent was.

Would you repeat, please?

Q I said you found excessive dustiness at spot sampling locations which revealed inadequate quantities of air at local exhaust hoods.

A That is not what I said.

Q Well, that is my question.

A No.

Q Would you permit me to ask a question, is that all right with you if I ask a question in my own language?

A But that language was an incorrect statement of this sentance.

Q I didn't purport to make any statement of a sentance, I am asking you what you found.

A Go right ahead, sir. Go right ahead.

Q I am asking you if it isn't true that you found excessive dustiness at spot sampling locations which revealed inadequate quantities of air at local exhaust hoods?

A And my answer is no.

Q All right, what did you find?

A I found excessive dustiness at spot sampling locations which was consistent with survey measurements which revealed inadequate quantities of air at local exhaust hoods; that's not the same thing, Mr. Baldwin.

Q It is different, I see. It may be different in your language, it is the same in mine. Did you or not find inadequate quantities of air at local exhaust hoods?

A Yes, I did.

Q What do you mean when you said "inadequate quantities of air at local exhaust hoods," not enough ventilation, is that what is meant?

MR. TRAIL: Object to the question as being compound.

THE WITNESS: There are guidelines for the movement of air at hoods used to ventilate dusty operations in industries. I measured air at the hoods of this facility and found the amount of air was below those guidelines. That is

what I mean by inadequate ventilation.

BY MR. BALDWIN:

Q In just plain old language of a layman, there wasn't enough ventilation?

A I think I answered the question.

Q Well, will you answer that one I just asked?

MR. KLAPPS: It has now been asked and answered.

BY MR. BALDWIN:

Q Was there enough ventilation?

A I have answered the question.

Q Was there?

A I have answered the question, sir.

Q Well, did you tell me -- I can't understand your answer.

A I think we are really going to have to get on the same language levels here or this is going to go on all day. I am quite precise in my language and you are not.

Q That I can't help. I am not as highly educated as you are, sir.

A Then you are laboring under a handicap.

Q I can communicate with some people. Some people --

MR. ARMSTRONG: Scott is just as precise as he wants to be and just as well educated as anyone within this room.

THE WITNESS: Mr. Baldwin, with all respect, I will not answer these questions as you wish them answered. I will answer them in my words as I must state them because this is a professional report and the language is quite important. You garbled the last one up to a totally incorrect meaning and I could not agree to that.

MR. BALDWIN: I object to that as being not responsive.

BY MR. BALDWIN:

Q Now, let me say to you, Dr. Corn, that I am not going to ask my questions as you would like me to ask them, I am going to ask them as I see fit as a lawyer and the sooner you understand that the better off we are going to get along.

A Okay.

Q Now, then, was there not enough ventilation in that plant?

MR. KLAPPS: Objection, the question has been asked and answered and asked and answered.

THE WITNESS: The ventilation system was found to be inadequate in accord with the language in this report to which I refer you.

BY MR. BALDWIN:

Q Wouldn't that be another way of saying there wasn't enough ventilation?

A I don't phrase my answers that way, Mr. Baldwin.

Q You like to use those two dollar words.

MR. KLAPPS: No question pending.

BY MR. BALDWIN:

Q Is that right?

A No comment.

Q Now, what did you mean when you said that there was "insufficient air at local sites of dust emission was reflected in low air velocities at hood faces," what do you mean by that phrase?

A I meant that there are guidelines for the velocity of air that should exist at local exhaust hoods. My measurement of the velocity of air showed that there were lower than those recommended velocities. That is what that means.

Q Below the standards or the guidelines, is that what you are telling us?

A That is correct, they were below the guidelines for face velocity; that is discussed in the body of the report.

Q And what guidelines are you referring to?

A I am referring to the guidelines of the American Conference of Governmental Industrial Hygienists Manual on

Industrial Ventilation.

Q And you continued by saying, "And low air conveying velocities in branch lines and ducts," was that substantially the same except --

A No, that is different.

Q All right, explain.

A The hood face velocity is the velocity at the hood directly in front of the person working. A conveying velocity is the velocity to convey the dust to the collector in the duct far away from the man. If the conveying velocity is low, the duct will plug with dust and the result of that will be a lower face velocity at the place where the man is, so you must have an ability to convey the dust to the dust collector or you are going to reduce your effectiveness where the man is. There are two different --

Q Well, did you find that to be in compliance with the guidelines or below the requirements of the guidelines?

A I found that there were low conveying velocities as specified in the report. It was not in all ducts and I would have to consult the report for the specific ones.

Q Well, to use your scientific language, low as compared to what?

A To the guidelines.

Q All right, so they were below the guidelines, is that correct?

A I believe that is stated in the report.

Q Now, then, the next statement you make is that the ventilation system was submitted for builder and feeder areas to move approximately one-sixth of the air required to ventilate these processes. What did you mean by that?

A I estimated using the guideline and the size of the hood, the amount of air that should have been present, and compared that to the amount of air that was present to reach the conclusion of how much additional air was needed.

Q And you found that it was only one-sixth of the required capacity?

A Approximately.

Q In other words, it was five-sixths below the required capacity?

A As an estimate, that was my conclusion.

Q And that's the ventilation you are talking about?

A That is the ventilation for those specific areas I believe I said, yes.

Q Wouldn't that suggest to you that that wasn't enough ventilation for those areas?

MR. TRAIL: Object to the form of the question. It

has been asked and answered.

THE WITNESS: I think we have answered the same area of questions that you are interested in in different ways. I just do not subscribe to the way you ask.

BY MR. BALDWIN:

Q You don't like my language that that ain't enough ventilation, is that it?

A I think that the report --

Q You don't subscribe, they didn't teach you that at Harvard?

MR. TRAIL: Maybe this would be a good time for a break.

MR. BALDWIN: Well, let's answer the question first.

THE WITNESS: I think I have answered the question.

BY MR. BALDWIN:

Q You agree with me that there wasn't enough ventilation in those areas, don't you?

MR. TRAIL: Object to the form of the question. Also it has been asked and answered.

BY MR. BALDWIN:

Q Sir?

MR. TRAIL: Don't interrupt me.

THE WITNESS: It is clearly stated in the report

that I estimated that one-sixth of the air required was present. Now, you can phrase that conclusion any way you wish.

BY MR. BALDWIN:

Q That's not enough?

A Enough of what?

Q To meet the standard?

A It is one-sixth of the amount estimated on the basis of the guidelines.

MR. TRAIL: Off the record.

[Discussion off the record]

[Recess]

[4] BY MR. BALDWIN:

Q Okay. You found then inadequacy of the ventilation system and the resulting excess dustiness at the plant? Again, you have to say yes or no, she can't get you when you nod.

A Yes.

Q And you found that general housekeeping in the plant was poor?

A Yes.

Q And you didn't observe any worker wearing a respirator during that entire day?

MR. McGOUGH: For the record, for the sake of economy, I would like to object to this form of questioning in which

Dr. Corn is being asked to repeat what he said in the report that is put in evidence.

MR. BALDWIN: I thought we had finally found a common ground where he could understand my questions, I was beginning to read them like he asked.

MR. McGOUGH: Even I could understand your question, but it is just a waste of time.

MR. BALDWIN: Part of it is, part of it isn't.

BY MR. BALDWIN:

Q Go ahead.

A I answered yes.

Q And then you found that the workers were being exposed to excessive asbestos concentrations on a daily basis, didn't you?

A No, I did not.

Q All right.

A I found that this final paragraph, this short survey strongly suggests that employees at this plant are being exposed on a daily basis, to an excessive concentration.

I did not find that. I was not there on a daily basis, but my findings suggested that.

Q Did you ever find anything to change the basis for what you just said, that suggestion? Did you ever come across

any evidence to indicate that your suggestion was incorrect?

A No.

Q You found then that the system was rudimentary?

A Yes.

Q And that it needed a completely new design?

A That was my recommendation.

Q And that a patch-up wouldn't do it?

A That was my conclusion.

Q Now, when you said that the concentrations were excessive, what standards were you applying to there?

A The basis for comparison is discussed at length on pages 5 through 7 of the report. At the time of this survey, there were two different standards, a guideline of the American Conference of Governmental Industrial Hygienists which had been incorporated under the Walsh-Haley Public Contract Act and a British Occupational Society guideline. This is discussed on pages 5 to 7.

By either criterion, as the report discusses, the conclusion of excessive dustiness would have been reached.

Q And you recognized then, didn't you, as you do now, that the threshold limits should be used as guides in the control of health hazards and should not be regarded as fine lines between safe and dangerous conditions? You recognized that

principle, didn't you?

MR. McGOUGH: I object to the form of the question to the extent it incorporates the phrase "health hazards" which I do not recall the doctor talking about.

THE WITNESS: I quoted and designated that statement as a quote on page 5 and referenced the American Conference of Governmental Industrial Hygienists.

BY MR. BALDWIN:

Q And in precisely the language that I asked you, didn't you?

A Yes, that is referenced in that language.

Q And you used the words "health hazards" there, didn't you?

A I quoted the American Conference of Governmental Industrial Hygienists' use of the words "health hazards."

Q Well, it was used, wasn't it?

A I don't understand your question.

Q It was used as a part of your report?

A It is a quotation in my report referencing those who stated it.

Q Do you not recognize that as a principle?

A Yes, I recognize that as a principle.

Q And did you apply that principle at that time?

A What principle?

Q That I just read to you.

A I did not apply that principle. I compared measurements to that guideline. I did not apply that principle. I am quoting that for those who read the report to apply that principle. I am not applying it.

Q You did not regard those guides as fine lines between safe and dangerous conditions, did you?

A No. And I felt that those who read the report who see me comparing measurements with that guide should keep this in mind, that's why it is in there.

Q Right. It would not be proper practice according to the practice in the industry, good practice is to use those guides that you have referred to as fine lines between safe and dangerous conditions, would it?

MR. ARMSTRONG: I object to the form of the question.

BY MR. BALDWIN:

Q Go ahead.

A I am not sure I understand the question.

Q Well, I said it would not be proper to use those threshold limits as fine lines between safe and dangerous conditions.

MR. ARMSTRONG: I object to the form of the question.

THE WITNESS: As an industrial hygienist, I utilized threshold limit values as guides, I do not use them as fine lines.

BY MR. BALDWIN:

Q Between safe and dangerous conditions?

A Correct.

Q All right. Thank you. Now, you understood what the term health hazard meant there, didn't you?

A Yes, but that is an entirely different context. There is another portion of this which you have not read and that is the first paragraph which is also quoted, and I think, once again, you are simplifying a fairly complicated concept.

Q I am just asking a question, sir.

A No.

Q That doesn't seem too complicated to me, what I just asked.

A I am afraid it doesn't because you are not aware of all the information relevant to it.

Q Maybe I am not.

A Let me read it.

Q What question did I ask?

A You asked me did I not understand health hazards in that context.

Q All right, did you or not?

A It is a totally different content. Permit me to inform you why.

Q All right, go ahead.

A Okay.

"The threshold limit values refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect. Because of wide variation in individual susceptibility exposures of an occasional individual at or even below the threshold limit may not prevent discomfort, aggravation of a pre-existing condition, or occupational illness."

I cannot reach a firm conclusion on whether a health hazard existed or not, because I was there only one day, hence the term "suggests." I cannot reach the conclusion as to whether there is a health hazard because I am not aware of the exposure day after day, I was only there for one day, and, second, I am not familiar with the medical characteristics of the persons working in the plant, in other words, the susceptibility referred to in the concept.

For all of these reasons, engineers avoid using the term "a health hazard exists." We deal with guidelines, standards, adherence to guidelines and standards.

A whole other community of health specialists deals with arriving at the conclusion that you summarize in the question to me, "Dr. Corn, do you believe a health hazard existed," and that is why I could not answer your question.

Q So you are answering that question now, are you?

A I am not answering that question, I am elaborating on what a health hazard -- a concrete answer to a health hazard existing involves.

Q Which one of my questions are you answering now?

MR. TRAIL: Objection, objection, Mr. Baldwin, please refrain from badgering the witness. State the question that is pending.

MR. BALDWIN: I am trying to understand the question.

MR. TRAIL: Well, rephrase your question and ask it.

BY MR. BALDWIN:

Q I am asking now which one of my questions are you answering.

MR. TRAIL: Objection, that is clearly badgering the witness. State your question and he will answer it, if properq

THE WITNESS: I agree with that.

BY MR. BALDWIN:

Q Do you know which one of my questions you are

answering?

A I am not sure I know which one of your questions I am answering.

Q Okay.

A I am trying generally to give you a very preliminary education on what health hazard at the working environment involves.

Q I appreciate it, I will use all the knowldge I can get, all the help I can get.

A I appreciate that.

Q It might keep me healthy some day if I can find out what a health hazard is. You are now saying that health hazard is in your field?

MR. ARMSTRONG: I object to the form of the question.

MR. KLAPPS: Objection.

THE WITNESS: Certainly the question of health hazard is in my mind in the sense of occupational health as a field.

BY MR. BALDWIN:

Q So then now you told me that you couldn't say there is a health hazard for, as I understand it, two reasons, one, because you weren't there on a daily basis, and the other was you didn't know the particular idiosyncracies of the

individuals involved, is that right?

A That's correct.

MR. TRAIL: Objection in that it misstates the evidence and the testimony of the witness.

MR. BALDWIN: Well, he just said it is correct.

THE WITNESS: I can say that for a correct assessment I had not the full information required to reach that, and I therefore worded what I had full information to evaluate, that these results suggested that on the data base I had persons were being exposed to excessive concentrations.

Now, that clearly lays out how I judge excessive and it clearly spells out what these tests suggest to me and there are recommendations following from those conclusions.

BY MR. BALDWIN:

Q So to get back to my question, you said, if I understand it, the reasons you couldn't tell us there was a health hazard is because you didn't know what existed on a daily basis, you didn't know the particular susceptibilities of the individuals involved, isn't that right?

A The nature of the population at risk.

Q All right. Now, let's assume that the hazard existed on a daily basis as they were on the day that you visited the plant and that the people involved were normal

people out of a normal population, would you then say that there was a health hazard that existed at the plant that day after your visit?

MR. ARMSTRONG: Not only do I object to the form of the question but on the grounds that no proper foundation has been laid for this man to give an opinion on this subject. Indeed, he has indicated, number one, such is to be determined by an entirely different scientific community and, number two, he was unaware of differentiation, if any, between Chrysotile and Amosite.

BY MR. BALDWIN:

Q Go ahead.

MR. KLAPPS: I would object on the further basis that you are now asking this witness a hypothetical question of expert opinion, going beyond his factual experience and knowledge relating to the Tyler plant, and I think in all fairness to the witness he is entitled to know that you are seeking expert opinion testimony which is a matter of contract between an attorney and expert and under those circumstances this witness would be entitled to accept or reject the tender of such a contract.

MR. BALDWIN: My understanding of the Federal Rules is that a lay witness, if he wants to qualify as a lay witness,

can express an opinion.

BY MR. BALDWIN:

Q Now, go ahead and answer the question.

MR. KLAPPS: I would refer you to the case of Karp v. Cooley, 493 Fed. 2nd 408, 424-425, Fifth Circuit, 1974, which provided an expert witness to express an opinion outside his personal experience or knowledge only pursuant to voluntary agreement with counsel.

BY MR. BALDWIN:

Q Go ahead.

A I would never answer that question in my role as consultant and I would not answer it here.

Q All right. Then, so to make it clear, you are refusing to answer it?

A I am not capable of answering it, it is outside my field of expertise.

Q Your answer is that you are not capable of answering the question?

A Yes.

MR. ARMSTRONG: Let him answer.

MR. BALDWIN: For whatever reason he wants to say, I will listen. If you want to make a list of the reasons, you can.

MR. ARMSTRONG: Give him time to answer whatever else you do.

BY MR. BALDWIN:

Q You want to add something to the list?

A No.

Q You had heard that some forms of asbestos would cause cancer, hadn't you?

A I had heard that some forms of cancer --

Q Well, let's say that you are aware?

A I was aware of certain reports in the scientific literature on this subject, yes.

Q That asbestos in the raw form could cause cancer of the lung?

MR. ARMSTRONG: Object to the form of the question, it doesn't define the type of asbestos involved.

MR. BALDWIN: Go ahead.

MR. ARMSTRONG: Or the time frame.

THE WITNESS: I answered the witness, I was aware of certain reports in the scientific literature that certain forms of asbestos could cause cancer.

BY MR. BALDWIN:

Q Did you make in your mind any distinction between the forms of asbestos that would cause cancer and the forms

that would not?

MR. ARMSTRONG: Object to the form of the question, since "in his mind" doesn't refer to whether he interpretad the medical investigations that have been done to mean the same applied to Amosite or some other basis such as application of his engineering ventilation sanitary principles.

THE WITNESS: Let me content my answer in that form. No, no, for purposes of assessment of the environment and engineering controls.

BY MR. BALDWIN:

Q What did the term asbestosis mean to you?

MR. TRAIL: At what time?

BY MR. BALDWIN:

Q At that time.

A I was aware at that time of a form of fibrosis of the lung caused by asbestos dust known as asbestosis.

Q You knew that there was a progressive disease for which there was no known cure, didn't you?

A I think I was familiar with the -- with the clinical picture of asbestosis, yes.

Q Well, is that not in comportment with your clinical picture of asbestosis, it was a progressive, irreversible, incurable and terminal disease?

A Yes, sir.

Q All right.

MR. ARMSTRONG: Excuse me, please read that question and answer back.

[The Reporter read the record, as requested.]

BY MR. BALDWIN:

Q All right. Now, then, you discussed the various methods for counting fibers and what was your view as to whether or not to measure a fiber below 5 -- what is it, centimeters, microcentimeters or microns, or whatever it is, unit of measurement you used?

A I don't understand your question, sir.

Q Well, explain to me your measurement technique for counting fibers.

MR. TRAIL: Objection, in that it doesn't state any reference to what time you are referring to.

MR. BALDWIN: At that time.

MR. TRAIL: At that time refers to what?

MR. BALDWIN: When he made his survey. All of my questions refer to that.

THE WITNESS: I would refer you to pages 8 to 10 of the report which delineates the measurement methods, on pages 8 and 9 the fiber counting methods are described.

BY MR. BALDWIN:

Q Well, I am not going to accept that as an answer.

A Do I have to repeat everything in the report?

Q You have to answer my questions.

A But that is repeating.

Q You started out by wanting to read your report every time I asked you a question, you started that.

A I didn't know we were going to continue for every sentence in the report. I started to indicate it is in the report and you should refer to it. It is in the report clearly. I must ask if I should --

MR. KLAPPS: If that is what --

BY MR. BALDWIN:

Q You read whatever you deem necessary, I am not going to cut you off. It appears to me that you can't answer a question without reading your report, so if that is the way you want to answer them, go ahead.

A My report very clearly states the methodologies used in this survey, beginning onpage 8, assessment of air-borne dust.

Q Now, did your method of measuring these fibers include the counting of fibers?

MR. McGOUGH: I object to the question.

BY MR. BALDWIN:

Q Measuring these concentrations, I will include, the counting of fibers.

MR. McGOUGH: It seems to me that he is talking about assessment of airborne dust and I think later on he says microscopic evaluation of fiber and dust particle concentrations. Now, you just used the word "fibers" which is not consistent with what is before you.

BY MR. BALDWIN:

Q Go ahead, sir.

A I would like to read the methodologies we are discussing here.

Q I don't want you to read those seven and eight pages, I want you to answer my question.

A I am not prepared to tell you of a scientific methodology which is a very precise step-wise procedure off the cuff, and I submit pages 8 and 9 in answer to your question.

Q Did you measure dust concentrations?

A Yes, I measured dust concentrations.

Q Did you measure asbestos fiber concentrations?

A Yes, I measured asbestos concentrations.

Q And was the method used that of counting the asbestos

fibers?

A A method was used of counting asbestos fibers with the aid of a microscope.

Q And how long were these fibers that you counted?

A The fibers in accordance with the procedures by J. R. Lynch and Howard E. Ayer in the article "Measurement of Asbestos Exposure" which appeared in the Journal of Occupational Medicine, Volume 10, January 1968, includes fibers in excess of 5 microns in length.

Q Why did you not count fibers less than 5 microns in length?

A The technique for fiber counting utilized by the industrial hygiene profession as applied to asbestos recognizes that asbestos breakage causes fibers to be present below the resolution of the optical microscope, fibers which would require the electronic microscope to see, therefore an indicator method is used.

When we count asbestos fibers, we do not presume to count all the fibers present, we use a common methodology so we are talking about the same thing when each person counts fibers.

Very briefly, I adhered to that standard procedure referenced in my former sentence.

Q And the reason was it was just, in plain language,

it was difficult to see a fiber less than 5 microns in length with the equipment that you were using?

A No, that is not correct.

Q All right, what is correct?

A I have equipment at my disposal which includes, at that time, electron microscopy, but it would have been meaningless in terms of the commonly adopted guidelines or standards to make counts and compare them with the standard when the standard was based on other methodology.

Q Okay. So you didn't count microns -- fibers less than 5 microns because it did not comply with the accepted standard that you were using?

A I would like to --

Q As a guide, is that correct?

A Prior to answering your question, I would like to put on the record I did whatever was the procedure spelled out in that reference, that is what was done as the standard method. I followed the standard method not because I couldn't count more fibers using other scientific tools, but because I would be talking the same language as other people throughout the world.

Q But as just plain old everyday cornbread counting fibers, you had the tools to count fibers that were less than

5 microns in length, didn't you?

A Yes.

Q And you didn't do it, though, did you?

A No.

Q So to that extent your surveys or countings would not include asbestos fibers that were below 5 microns in length?

A My expression of the concentrations of asbestos in the air of this facility would adhere to the accepted methodologies of sampling and measuring asbestos in the air. It would not include the concentrations of all sizes of asbestos fibers in the air.

Q I will object to that is not being responsive. Now, my question is --

A I think that is the most complete and responsive answer I can give.

Q Well, unfortunately, you are not the one to decide whether your answer is complete and responsive.

MR. KLAPPS: Mr. Baldwin, your question was argumentative, I think that is the problem.

MR. BALDWIN: I haven't asked it yet.

MR. KLAPPS: Your prior question.

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MR. BALDWIN: I am fixing to ask another question.

BY MR. BALDWIN: (Resuming)

Q My question is, simply, I am trying to find out, yes or no, for my own information, whether or not, for whatever reason you want to ascribe, your method of counting included asbestos fibers of less than 5 microns in length; that's all I am asking.

A I do not believe they are included in the count for the standard method in this referenced article.

Q All right; so then they are not included in the count, for whatever reason. Is that correct?

MR. KLAPPS: Object to the question; it has been asked and answered.

MR. BALDWIN: He is saying he didn't believe; I don't know whether they were or not.

THE WITNESS: Yes, they were, for purposes not directly related to the comparison with the standard.

I added some extra data in this report. If you would refer to Table 2, you will see some of the numbers you are interested in, but they are not relevant to the professional decision of adherence to the standard.

BY MR. BALDWIN: (Resuming)

Q Are you telling me that you counted -- in Table 2,

/whd-2

you counted the fibers less than 5 microns in length?

A For my own information and for the information of the clients.

But in the report, the total of Columns 5 and 6 is what must be compared with the standard.

Q Okay.

A But Column 4 has the information you are after. But it is not -- it is not a relevant bit of information for reaching a conclusion as to excessive dustiness in terms of the existing standards.

Q Well, we will let somebody else decide whether it is relevant.

You are referring to that Table 2, page 12, are you?

A Yes.

Q All right. Now, what I am trying to find out, you then counted in Column 4 fibers that were less than 5 microns in length?

A Using a phase-contrast microscope; not using an electron microscope.

Q Did you or not count fibers less than 5 microns in length?

A I answered the question. I did, using a phase-

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contrast microscope.

Q You did, using a phase --

A Yes.

Q Okay. How small did that go?

A Approximately half a micron.

Q So you got every fiber from half a micron up to five microns?

A Approximately half a micron, up to five.

Q If you had had an electron microscope, you would -- would you have seen others?

A I would have seen additional fibers down to probably 100 Angstrom units, another factor of almost one thousand smaller.

Q All right.

So these -- I am not going over all your findings; they are set out in your report, aren't they?

A Yes, that is what I have been saying.

Q Well, let's just take one, for example, so I will know how to read it; okay?

A Sure.

Q Let's take 5/7, 2:30, --

"Breathing zone of Feeder Operator , Lines 1 and 2 during sweeping, feeding."

and just start out in the first column there and tell me what that column represents, and how it is to be interpreted by you.

MR. KLAPPS: What page are you reading from?

BY MR. BALDWIN: (Resuming)

Q It is on page 12, Table 2.

A I will read from page 11 of the report: "Results and Discussion."

Q Could you just look at that page and tell me what you mean without having to read something, Doctor Corn?

A I thought long and hard about how to interpret those findings, and I will not prostitute that period of thought to give you a quick answer.

Q You can not carry it in your head; is that what you are telling me?

A Absolutely not. To express it in the manner you wish it expressed, I will read my conclusions.

Q I want my question answered.

A It is going to be answered; it is in the report.

Q By reading the report?

A By reading the report.

Q Read what you meant when you said:

"Particles: 12.3±0.6"

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Tell us what you meant by that.

A "In the evaluation procedure, all particles and fibers in the Porton field of view were counted and the fibers were grouped by fiber length into three categories: less than five microns -- "

Q I don't want to be disrespectful, but I am going to object to this as not being responsive, and ask you to answer my question.

MR. TRAIL: Scott --

THE WITNESS: The answer is coming.

MR. TRAIL: Scott, that is not a proper objection. The witness is answering the question. If you want to impose your objection, wait until he finishes, and then pose it.

MR. BALDWIN: I don't want to waste time for him to read two pages that we have all read, --

THE WITNESS: It is one paragraph.

MR. BALDWIN: -- when the question doesn't call for it.

MR. TRAIL: If we are here until Friday, he is going to be able to answer his question completely.

MR. BALDWIN: I don't mind, I just hate to waste time.

MR. MC GOUGH: I think it is wasting time to ask

questions that are in the report.

MR. BALDWIN: It may be clear to you; it is not clear to me.

THE WITNESS: Have you read the relevant section of this report?

MR. BALDWIN: I have read it; yes.

BY MR. BALDWIN: (Resuming)

Q Now, tell me what that means. I have read it, and I still don't know what it means. Now you tell me what it means.

MR. MC GOUGH: I feel sorry for Mr. Baldwin, that he doesn't understand, but I don't think it is this witness's job to educate him.

MR. BALDWIN: That is what we are here for, to find out what the witness knows. That is what I am here for; you may be here for different reasons.

BY MR. BALDWIN: (Resuming)

Q Go ahead.

A May I interject that it is quite conceivable that this is a report that you may require the services of an industrial hygienist to understand.

Q No, I am not going to hire one of you guys, pay money.

Go ahead and answer my question.

A Okay; I will reread:

"In the evaluation procedure. all particles and fibers in the Porton field of view were counted and the fibers were grouped by fiber length into three categories: less than five microns, five to ten microns, and larger than ten microns. This procedure was repeated for a number of randomly selected fields on the face of the filter. Because only a portion of the total filter area was evaluated by this method, it was necesary to correct the count by the ratio of the total filter area to the evaluated area. The resultant particle or fiber number was divided by the volume of the air sample to obtain dust or fiber concentration expressed as millions of particles per cubic foot -- MPPCF."

Now, that to me is as clear as a bell.

MR. MC GOUGH: It is clear to me.

MR. KELLY: I think you are lying.

BY MR. BALDWIN: (Resuming)

Q It is all good and true, and mighty fine, too, but it ain't got nothing to do with the question I asked.

A Repeat it again; I will try again.

MR. KLAPPS: Don't ask him to repeat it. Rephrase

it.

MR. BALDWIN: No, I am not going to rephrase it; I am going to repeat it in the identical language.

BY MR. BALDWIN: (Resuming)

Q In column 3, you have written under there:

"Particles: 12.3±0.6"

what did you mean?

MR. TRAIL: I am going to object.

First, the question is asked and answered.

Second, your prior reference that you are not going to hire an industrial hygienist of your own does not permit you to request and solicit the opinions -- expert opinions -- of this witness.

MR. BALDWIN: You certainly don't suggest that I pay him for information I am getting today, do you?

MR. TRAIL: The objection is stated; go ahead.

THE WITNESS: I would be happy to try to -- I think your question is: what are millions of particles per cubic foot.

BY MR. BALDWIN: (Resuming)

Q No. What do you mean there, that you found 12 million -- or, 12.3 million particles per cubic foot? Is that what that meant?

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See, let me make a statement to you. We are going to have a jury some day, trying to resolve this case, and unfortunately, they may not be as educated as you, and we need -- I would like to try to explain some of this in language that they can understand, and that is why I am asking you what seems to you a question that is beneath your intelligence. It may be, but it is not mine.

Now, would you just try to aid me, sir, in answering my question, and that is: I want you to interpret one of these columns so that I and a jury can understand it, and then we can apply that knowledge, however naive it may be, to the rest of this without having to ask you about each one.

A All right; let me try to do that. Let me try to do that.

Q You think you could do that?

A I am not sure; I am not sure. I thought I did it, but let me try from another angle.

If you were to take one cubic foot of air --

Q No. Now, wait a minute; what I actually want to do -- let me explain to you what I want to do. Maybe we can save a lot of time.

I want to take a representative column, which is 5/7, 2:30 PM to 2:35 PM, and go across the board with Column

2, which is several parts -- 1, 2, 3, 4, 5, 6 and 7, and have you explain to me what you meant by each of those findings, and then we can take that knowledge and apply it to the rest of that chart.

A All right.

Q Now, do you follow me?

A Yes.

Q Now, let's take Column 3, to begin with, and just explain in plain old, common, everyday language what you meant when -- by the words in there, "12.3±0.6."

Would you tell us what that means?

A I will -- will you permit me to begin and finish, and I will tell you when I am through?

Q Yes, but bear in mind: you got some guy like me, now, that does not know a lot about this, that has got to understand what you are saying.

A That is what I am trying to --

MR. MC GOUGH: He is asking you not to interrupt him.

BY MR. BALDWIN: (Resuming)

Q All right; go ahead.

A 12.3±0.6 millions of particles per cubic foot means that there are present in a cubic foot of air that number

of particles and fibers, all opaque shadows seen under the microscope.

To estimate this number, a "fiber" is defined as a particle with a length-to-width ratio of at least 3 to 1. All particles do not have that length-to-width ratio.

12.3 plus or minus 0.6 includes the uncertainty in the estimates, because only a very small portion of the cubic foot of air was examined to get this estimate.

Therefore, we believe -- or, I believe, in this report, that the cubic foot of air in the breathing zone of the Feeder operator during the time period 2:30 to 2:35 PM on 5/7, had 12.3 plus or minus 0.6 million particles per cubic foot.

Q Okay. Now I understand that.

MR. FOWLER: That was an excellent illustration of a good question and answer. I think that was good.

MR. KELLY: Shall we all cheer?

MR. TRAIL: We might better break for lunch.

MR. FOWLER: Why don't we break for lunch?

MR. BALDWIN: Let's go on while it is in context with the other columns, in that fashion.

BY MR. BALDWIN: (Resuming)

Q What you are telling us, then -- now, let me ask

my questions the way I want to.

What you are telling me is that -- because I want to clarify it for you as well as me --

MR. ARMSTRONG: He is now --

MR. MC GOUGH: One moment he knows nothing, and now he is going to tell him what he means.

BY MR. BALDWIN: (Resuming)

Q Now, what you are saying there is that you found some 12 million --

A Million.

Q -- particles and fibers approximately per cubic foot of air.

MR. ARMSTRONG: Objection. That is not what he said.

MR. BALDWIN: Well, is it?

MR. ARMSTRONG: He didn't even measure the whole cubic foot.

MR. BALDWIN: I said "estimated."

MR . ARMSTRONG: You said "found."

MR. BALDWIN: I was trying to come back to it and clear it up, but you can't do it with the way these guys object.

MR. KLAPPS: You want your answer read back by the

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Reporter?

MR. BALDWIN: No.

MR. ARMSTRONG: His answer.

BY MR. BALDWIN: (Resuming)

Q What you are saying here is that you estimated that you found approximately 12 million particles and fibers per cubic foot of air; isn't that right?

MR. ARMSTRONG: Objection. That's not what he said.

THE WITNESS: It is not quite --

BY MR. BALDWIN: (Resuming)

Q How does that differ from what you said?

A On the basis of an air sample in the air zone of the Feeder operator taken during the five minutes: 2:30 to 2:35 PM on 5/7/69, I estimated that the air contained 12.3, plus or minus 0.6, million particles per cubic foot, defined as specified to include particles and fibers.

Q Well, I thought that's what I asked you.

And I will ask you again, so I can understand it -- and I am talking now not precisely, but i n general terms -- you estimated that you found approximately 12 million particles and fibers per cubic foot of air at that particular place and at that particular time; isn't that a general explanation of

what you found?

MR. ARMSTRONG: Object to the form of the question.

THE WITNESS: It is still not quite right. I know you think I am being excessively picky, but it is not quite right.

BY MR. BALDWIN: (Resuming)

Q All right. How is it not right?

I am trying to get that predicate so I can ask you another question and further clarify it, but go ahead and tell me how I am not right.

A I think you must include, on the basis of sampling a portion of the air and examining a sample, we estimate that the concentration of particles which includes particles and fibers as I defined them, in the air sample, was 12.3 plus or minus 0.6 million particles per cubic foot.

Q I thought that was what I asked you?

A You are not saying it quite right.

Q All right.

So then, what you are telling us, basically, is that it is not an actual count; it is an estimate?

A No. It is an actual count of a sample, with an estimate from the sample to the full area.

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Q All right. So it is not an actual count of a cubic foot of air?

A That is correct.

Q It is an estimate?

A It is an estimate of the contents of a cubic foot of air on the basis of examining the particles in a smaller volume of air than a cubic foot.

Q All right, and on that basis it represents approximately 12 million particles and fibers?

MR. ARMSTRONG: Object to the form of the question, including "fibers."

BY MR. BALDWIN: (Resuming)

Q Is that correct, with his objection?

A Yes.

Q So then, what you are saying is that it is not pure fibers; your count is not pure fibers?

A In Column 3, that is correct.

Q It includes also particles?

A Yes.

Q Which may be dust or something else -- not asbetos fibers; is that correct?

A Yes.

Q All right.

d-16

And the 0.6 is a tolerance that you have attached to it for a margin of error?

A 0.6, yes.

Q Excuse me; zero point six is the tolerance that you have attached to it as a margin of error, based on your experience and knowledge in the field?

A No.

Q Or based on the standard that you used?

A Based on the methodology explained in the report.

Q All right, then; let's go to the next column, Column 4, and explain what you meant by the term:

"3.60±0.28"

just like you did the other.

A I am referring again to an estimated concentration in a cubic foot of air, but in this case it only refers to fibers less than 5 microns in length, present.

The methodology of evaluation was the same. The sample volume as a fraction of the cubic foot of air was the same, but I am expressing the concentration of fibers less than 5 microns in length estimated to be in a cubic foot of air.

Q And you found approximately 3.6 million?

A Yes.

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Q Now --

A Per cubic foot.

Q Per cubic foot. All right.

Did that include particles as well as fibers, or just fibers?

A No, that's just fibers less than 5 microns.

Q All right.

Now, that's the one you said was made for your own use and not per any standard?

A Well, I wouldn't -- it was not made for my own use; it was a measurement made that I and others were very interested in at the time, but it could not be used to relate to a standard.

We were, in the scientific community, asking the question I think you are asking: if you have fibers greater than 5 microns in length present, what have you got less than 5 microns length?

At that time, there was very little such data, and these data were collected along with the other data.

Q Now, then, in Column 5, would you tell us what that means?

A It is the same type of measurement.

Q And read the numbers, please, so we will have it

in context?

A This is 0.64 plus or minus 0.12 fibers per cubic foot of air, referring to fibers between 5 and 10 microns in length, estimated on the basis of the same air sample at the same time -- 2:30 to 2:35 PM on the same day, 5/7.

Q And you found that to be 0.64?

A That's correct, plus or minus 0.12.

Q And what is the standard?

A The standard would have to combine Columns -- the sum to compare to the standard, you would have to combine Columns 5 and 6, which is done in Column 7.

Q Okay. Well, let's go on, then, to Column 6 before we do that.

Column 6, without being -- making --

A There is an error --

MR. ARMSTRONG: Why doesn't it add up to that last column? 5 and 6 do not add up to --

THE WITNESS: That's a typo.

MR. ARMSTRONG: I knew you would pick it up.

THE WITNESS: The others are correct. That was a typo.

BY MR. BALDWIN: (Resuming)

Q We will get back to get this in context, so someone

P. whd-19

trying to follow us will understand.

Column 6 means -- is interpreted the same way you would interpret Column 5?

A Yes, for fibers greater than 10 microns in length.

Q All right.

And that would mean that you counted the fibers greater than 10 microns, and you excluded those below 10 microns?

A Yes.

Q Now, then, the total, which would be Column 7, represents what?

A The sum of -- Column 7 represents the sum of Columns 5 and 6 concentration, since the standard or guideline refers to fibers greater than 5 microns in length, and that would include those between 5 and 10, represented in Column 5 and those greater than 10 microns in length represented by Column 6.

Q And what should the correct answer be?

A 0.78 is the correct sum for that column. The other columns are correct.

Q All right, then, the 0.92 that has been struck through was a typographical error?

A That was an error. I had it corrected in mine.

Q And if you added Column 4, you would get 4.38, wouldn't you?

A Well, that you could not compare -- if you had added 4, you could not compare it to any guideline.

Q I am not talking about guidelines.

A Yes, yes; you could certainly sum up to get the concentration of all observed fibers, using this phase-contrast technique.

Q And you would get what?

A I have not added them up.

Q Would you mind?

A I get 4.38 as the sum. Actually, you would not just add them up.

Let me interject here that a statistician would prevent us from doing what I have done here. You will notice my last column does not have the uncertainty figure in it. Addition of Columns 5 and 6 into my Column 7 left out the uncertainty figure. That is really a more complicated statistical procedure than is indicated here.

Q This would be an approximation?

A It is an approximation.

Q Would you characterize that as a fair approximation if you added them up that way?

d-21

A Yes. It is only the uncertainty that is the difficult number to pin down.

Q And what is the standard now?

A In terms of the guidelines, that should be compared to -- that that should be compared to, I will refer you to Table 1, page 6 of the report, which are the British guidelines that I was comparing to for Column 7, and that has -- the third table of Table 1, a less than 0.011 in Column 7 would mean negligible dust categories. A number between 0.014 and 0.054 in Column 7 would mean a low category.

A number between 0.054 and 0.28 in Column 7 would mean a medium category of dustiness, and a high category of dustiness would be for a number in excess of 0.28 in Column 7.

Q So you had a high concentration?

A That would be a high at that sample.

Q Above the standard?

A Yes, above the British guidelines.

Q And what about the American guidelines?

A The American guideline would reference Column 3, the particles and fibers, and you would have to look -- remember, I stated in a much earlier answer that regardless of which guideline you used, you would reach the conclusion that there was excessive dustiness.

J-22

Column 3 would be compared with the American guideline at that time, 5 million particles per cubic foot.

Q That would be a little bit better than twice that?

A So that one would be a little bit better than twice; that's right.

Q Twice in excess of the American guidelines?

A And it would be what -- approximately three times, a little less, the British guidelines.

End Tape #5

Start Tape #6

Q All right. Three times the British guideline and twice the American?

A That sample, yes.

Q Above, that is?

A Yes.

Q So then that standard, that sample would be out of compliance with the American standard by twice, and the British standard by three times? Is that right?

A I would not -- no; the standard refers to an 8-hour time period.

Q Well, at that particular time-period.

A And this is a five-minute sample.

Q Assuming it remained constant?

A If it remained constant, but that's a very big "if" in the sense of answering the question you pose; that is

/whd-23

why I use the phrase: "These results suggest..."

Q All right.

Well, it could be more, it could be less?

A Well, that -- these results suggest that that -- to me, that would stay above; that is so much above that they suggest that there is excessive dustiness. That is why I labelled the conclusion that way.

Q Well, don't they compel that conclusion?

A You might say that. To reach that conclusion and not use "suggest", I would have had to go back in here and sample 'round the clock for at least a week.

Q Is there any doubt in your mind that you would have found that had you done this, based on what you saw there?

MR. ARMSTRONG: Object to the form of the question.

MR. KLAPPS: We will join that objection; it causes the witness to speculate.

THE WITNESS: Professionally, even with the data I have had at hand, I would not want to jump --

BY MR. BALDWIN: (Resuming)

Q Are you satisifed that you made these samples on a normal working day?

A I believe it was a representative day; yes.

j-24 Q Okay. Now, one other question about these Columns that I want to clear up in my own mind.

Let's take Column 5 --

MR. KLAPPS: Mr. Baldwin, you want to take that break now?

MR. BALDWIN: This is the last question I want to ask him. Let's do that. It wouldn't take but a minute.

THE WITNESS: You promised.

MR. BALDWIN: I am not saying "the last question," but the last topic. It should not take long if he will try to cooperate.

Off the record, please.

(Discussion off the record)

BY MR. BALDWIN: (Resuming)

Q Okay; getting back to Column 5 -- you there?

A Yes.

Q Okay. Column 5, if I understand, it represents your estimated count of only fibers and not particles, including fibers; and am I right about that?

A Without -- with the proviso of fibers of 5 to 10 microns in length.

Q Yes , but we are talking about now what we counted.

A Yes.

')/whd-25

Q We are talking about fibers, as distinguished from Column 3, which also includes dust particles?

A Yes, but it is distinguished from Column 6, which includes fibers greater than 10 microns.

Q I am talking about --

Now, we are just talking about asbestos fibers, and nothing else, regardless of length.

MR. ARMSTRONG: Object to the form of the question.

The witness has previously defined fibers as being those particles whose length exceeds its diamater by three, and not an asbestos particle.

BY MR. BALDWIN: (Resuming)

Q That is what I am coming to. I want to find out what you are talking about.

A We did not perform the microscopic evaluation -- you can call it "petrographic" -- techniques that would be used to identify each fiber as asbestos. We defined fibers as I defined them, based on their morphology, their shape.

Q But right now we are talking about fibers as distinguished from particles?

A Yes.

Q And let's don't even be concerned about length, for the purpose of my question, until you can get me where I can

understand you; okay? Do you follow me?

A I think so.

Q So, then, Column 5, we are talking only about fibers?

MR. ARMSTRONG: Object to the form of the question. Object to the form of the question.

BY MR. BALDWIN: (Resuming)

Q Is that right?

A I would prefer you to phrase it that in Column 5 we are talking about fibers 5 to 10 microns in length and an estimated concentration per cubic foot of air.

Q All right, if you don't include in that sample, or that estimation, particles?

A That is right.

Q That is right -- what?

A We don't include particles in that estimate.

Q All right; okay.

Now, then, my next question is: what kind of fibers are you talking about?

A There is no work in this report that would contribute to the identity of the type of fiber. The assumption is made in the counting of fibers that they are representative of the bulk material used.

mmd-d27

Q That is, asbestos?

A That is correct.

As a check on that sample, to support that assumption, an outdoor air sample is made -- the fourth column down -- so you can compare what outdoor air in the vicinity of the plant contained with respect to fibers.

Q So what you are telling us is that the count in Column 5 was of fibers in excess of 5 microns in length, assumed to be asbestos fibers?

A In excess of 5 and less than 10 microns in length, yes.

Q Now, was that by actual count -- 1, 2, 3 -- or was that by an estimation on a volume basis, or how was that done?

A We did not count 12 million particles, which this number refers to; that is impossible.

We estimate the 12 million particles, and that estimation procedure is spoken of in the body of the report.

The number of particles counted can be derived from the standard deviation, the plus or minus.

Q Well, can you tell us in just layman's language how that count is done, without reading some technical language?

d-26

A It is done under the microscope. There is a sizing device in the microscope that permits the microscopist to relate that fiber, that size to a measuring device in the eyepiece so he could categorize them in the different breakdowns.

In general, these counts are based on somewhere between, I would say, 300 and 400 fibers counted in each category.

Q In other words, he will count a number of fibers in a given category, in a given section under his microscope, which is a measured section, and then he can compute that to the larger section; is that what you are telling me?

A Yes. It is a little more -- it is more rigorous, in that he goes to randomly selected fields in the microscope, so that he is getting a representative sample, but your statement that from this count he calculates upwards to the area is correct.

Q And in other words, you modified what I said by saying that he gets a random count so that he will have what he regards as a representative count and then multiplies it upward because of a known volume?

A That is correct.

Q So then, at best, those figures in Column 5 --

well, in all these columns, are estimates based on a sample counting?

A They are estimates, but that is why the standard deviation is included.

In other words, I feel that with 95 percent confidence, I can say to you that the estimate of the contents of the air, on the basis of samples, is between 3.6 plus or minus .28 and -- or, rather, I can say with confidence that the concentration of fibers or fibers and particles in air is, with 95 percent confidence, within the limits expressed here.

Q Has this actually been proven by any test methods?

A Yes. There is information in the literature which would back that statement with actual comparisons.

Q That there had been an actual count made at one time or another that would --

A Investigators have put this to the test by using different methods to estimate the air concentration and so on, to see if the microscopic estimating technique is reliable.

Q In comparing results of other methods?

A Yes.

Q That have been considered to be reliable?

A Well, this is considered to be reliable because of those comparisons.

)/whd-30

Q That's what I say; that they have compared those results with other methods that have been considered to be reliable, and found favorable results, and therefore they attach reliability to this?

A I think it is even stronger than that. I think this is considered perhaps the most reliable method, to which other methods will be compared.

MR. BALDWIN: Okay. You want to take that break?

(Whereupon, at 12:55 PM, the hearing was recessed, to reconvene at 2:00 o'clock PM.)

id Tape #6

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AFTERNOON SESSION 2:00 PM

Whereupon,

MORTON CORN

the witness on the stand at the time of recess, and having been previously duly sworn by the Notary Public, resumed the stand and was further examined, testifying as follows:

BY MR. BALDWIN: (Resuming)

Q Doctor, then to summarize, you found the ventilation in the dust-control system in the plant there to be unsatisfactory, as expressed on page 19 of your report?

A That is correct.

Q Now, then, you have told us, I believe, previously that you communicated these findings in very general terms, and when I say "these findings," I mean the findings of your report, orally to Mr. Padilla, of the Government; is that correct?

A No, not quite correct.

Q All right.

A Remember the citation that this company was facing was focused on ventilation. I was retained to perform a ventilation assessment; that was the main thrust.

At the same time, because it related to ventilation, I did some spot sampling for dust and air. The findings

/wd-32

of dust and air and ventilation were consistent.

I did not call Mr. Padilla to inform him of the findings of this report; I called him to inform him that the survey had been done, a report was in preparation. In the process of that transportation of information, he was quite concerned that the outcome of my ventilation assessment might be different than his own.

I think, in retrospect, he just wanted some professional colleague assurance that I found what he found, an-- -- as inadequate hood face velocities, and I in general confirmed that his citations were in the right ballpark, with my ventilation survey.

That is an accurate statement of what transpired.

Q And his citations were citations, to be specific, citations for the violation of the Walsh-Healey Act?

A For ventilation?

Q For ventilation violations?

A Yes. So what brought me into that plant was ventilation.

Q So then he at least at that time had your knowledge, which confirmed his findings as set forth in his citation as to ventilation?

A Yes, I think so. Yes, that's a fair statement.

/wnd-33

Q Now, did you find in your -- as a course of your business, that a copy of your report was furnished to the Government within 30 to 60 days of May 7th, by Pittsburgh-Corning?

A A copy of the report, I assume, was furnished, becasue there is a letter requesting such a copy, from Mr. Blair, I believe.

Q And what is the date of that letter, and may I see a copy of it?

A Well, let me see if I can find that.

Pardon me; there is a letter from me to Mr. Blair, telling him of the submission of the report. That is my letter to Mr. Blair, dated June 6th. I am writing to indicate I performed an industrial hygiene and ventilation survey, and the report was submitted on May 29. I tell him that in my letter.

Q All right, and may we have a copy of that letter, and I ask that it be marked Plaintiff's Exhibit No. 5 and attached to the deposition.

MR. TRAIL: June 6th?

MR. ARMSTRONG: That's June 6th, from you -- from Doctor Corn to --

THE WITNESS: Wendell Blair. And that the report

nd-34 has been submitted to the Corporation.

(Plaintiff's Exhibit 5 was marked for Identification)

BY MR. BALDWIN: (Resuming)

Q Your Plaintiff's Exhibit No. 5 went to Mr. Blair, with the Government?

A That is correct.

Q Indicating that you had run a survey; is that right?

A That is right, and that the report was submitted to the Corporation.

Q And you understood the very reason for your report was to give the Government a copy of it, ultimately, in due course of business in line with this citation?

A No, not quite. I recall seeing a request from Mr. Blair; I thought it was in my files.

Q All right. I have seen this letter. I don't know if this is in my files or not. I do not know if it is, but I knew that the Government had subsequently requested that report.

(Plaintiff's Exhibit No. 6 was marked for Identification)

sb/whd-35

BY MR. BALDWIN: (Resuming)

Q And that is in the form of a letter that you are now looking at, which has been marked as Plaintiff's Exhibit 6, which is dated --

A June.

Q -- June 16, 1969, to Mr. Stout from Mr. Blair? Is that correct?

A Yes.

Q Did you find that the Government was, in fact, furnished a copy of your report?

A No. I assumed that the Government was. I did not confirm that.

Q You found nothing to indicate that the Government was not?

A That is correct.

Q And you would assume, in the regular course of business, that it was?

A I assumed that if the request was made by Mr. Blair, that Mr. Stout would supply it.

Q So then, at least, on June 6th the Government knew that you had made an investigation, that it had been made the subject of a written report, and that it was in existence?

1-36

MR. KLAPPS: Objection. That assumes that the letter was received on the date it was sent.

BY MR. BALDWIN: (Resuming)

Q Well, June 6th or thereabouts?

A On June 6th I sent the letter.

Q Okay. Now, did you --

I believe we have established earlier that you recommended a total new redesign of the ventilation system?

A Yes.

Q Did you make any effort to determine what Pittsburgh-Corning did in that regard?

A I did not have to make any effort. Mr. John Hyde called me, indicating that he was assigned the responsibility for this design, and wished to work with me in a more distant relationship than we had had previously with respect to design of the Port Alleghany system which I was involved with.

Q When was this design completed and put in operation?

A The Port Alleghany system?

Q No. We are talking about Tyler.

A The Tyler design was never put in operation. The design was completed; I could not give you a firm date on that.

:/whd-37

Mr. Hyde worked on it through the bulk of the fall -- the summer and the fall. I would guess it was completed by the end of the year, but I can not confirm that.

Q You mean design-wise?

A Yes.

Q But the construction was never put into operation?

A No. I would say design was completed in the spring of the following year of '70.

Q But it was never put in operation?

A Never put into operation.

Q Never even begun, was it?

A I don't think the funding of the implementation, the engineering, was ever approved.

Q For whatever reason, it was never even begun, the construction of the design?

A That is my understanding. Yes.

Q Did you make it known to the Government -- Mr. Padilla -- that you found the ventilation condition there to be unsatisfactory?

A The only contact I had with Mr. Padilla, I have already described.

Q All right.

A That one telephone call.

1-38 Q Well, would it be fair to say that in that telephone call, even though you may not have used the term, you left the clear impression with him that the ventilation system at the plant was unsatisfactory?

MR. KLAPPS: Objection. The question has been answered.

THE WITNESS: That is not quite right.

BY MR. BALDWIN: (Resuming)

Q Okay.

A I have answered that before as reliably as I can remember it.

Q As you have answered before?

A Yes.

Q You do not wish to amplify on that?

A That is to the best of my ability to recall that conversation, what transpired.

Q Well, if it warranted a citation, would not that indicate it was unsatisfactory?

A The citation was quite specific, and my remarks were focused on the specifics of the citation, rather than the whole findings in my report.

Q All right.

A I assured him that his action would hold; that was

/whd-39

his concern -- was he going to be in a position of jeopardy as an inspector making a mistake, and I assured him that my findings will substantiate his citation.

Q Now, you returned in 1972, and why and at whose request?

A I returned in 1972 at the request of Mr. G. S. Gregory, Environmental Manager, or Environmental Control Manager -- I am not sure of his exact title -- for Pittsburgh-Corning Corporation, for the purpose of certifying the final cleanup of the facility.

Q Well, that was after the plant wasdismantled?

A Yes.

Q And did you make a report?

A Yes.

Q And do you have a copy of that with you?

A I have a copy of that with me.

Q And may I see it, please?

MR. TRAIL: Scott, I might just say at this point that the report has a number of photographs in it. That is not an additional copy; that is the only copy, so if you want to attach it to the deposition, we will have to make arrangements, because that copy has to remain in Doctor Corn's possession.

wnd-40

MR. KLAPPS: What is the date of that report?

MR. BALDWIN: June 28, 1972.

BY MR. BALDWIN: (Resuming)

Q I notice you got some of Baron's clients in here.

A They were the cleanup crew that had worked as specified in the report.

MR. BALDWIN: We will ask that the report be marked as Plaintiff's Exhibit No. 7 and attached, and further, ask that the Government arrange to make us copies of the photographs, with the understanding that Doctor Corn will keep his originals.

Is that satisfactory?

MR. KLAPPS: You want a copy of the photographs attached, as well as the documents?

MR. BALDWIN: Right.

MR. TRAIL: To the original of the deposition?

MR. BALDWIN: Right.

(Plaintiff's Exhibit No. 7 was marked for Identification)

BY MR. BALDWIN: (Resuming)

Q This visit, then, Doctor, was made after the plant had ceased to operate as a going concern?

A Yes.

Q And after it had been cleaned up, they sent you down to see if it was safe; is that it?

A I had had some input into the procedures after the equipment had been removed. I had no knowledge of the procedures to dismantle, but I had overseen a similar cleanup in the Port Alleghany works.

The purpose of this report and the work that I did, and that I verbally transmitted in the form of procedures, which are detailed in the report, was to assure that anyone that occupied that facility in the future, upon transfer to a new owner or to a new process, would not be exposed to concentrations of asbestos dust in excess of recommended guidelines or standards.

That is the purpose of that report.

Q What, if anything, did you do about the practice of dumping the asbestos dust, in raw form, on land?

A I had no contact, no solicitation of my opinion, involving that area of activity or dismantling of equipment.

The only area of my involvement was the physical facility remaining, and its certification for a potential new client or buyer of the premises.

Q That certainly would not be a good hygienic proced-

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ure, would it -- stacking it in raw form?

A I would rather not comment on that aspect of this.

Q Would you recommend that?

A Would I recommend what?

Q That practice?

A Which practice?

Q Stockpiling raw asbestos on land, not buried or not enclosed in any fashion?

MR. TRAIL: I am going to object to the question, because it calls for an expert opinion of the witness not related to his employment in Tyler, Texas.

BY MR. BALDWIN: (Resuming)

Q You have got your object; now, will you answer my question?

A I am going to stand on that objection, as expert testimony which I am not giving away here.

Q Are you saying that you are not qualified to give an opinion as to whether that is a good practice?

A I am saying that under the rules of the deposition as related to me, I am not to divulge -- there is no requirement that I divulge information to you that I would give as a consultant under fee. That is an expert opinion.

Q That is not my understanding of the rules, Doctor.

1-43

A You are calling for an expert opinion over and above what I did in this case. I had no involvement with this.

Q I am calling for an opinion; you call it whatever you want to, relating and relevant to the issues in this case, to which I think I am entitled to an answer, and we will join the issue on that.

A I will ask my Counsel to so advise myself.

MR. KLAPPS: I don't think you have laid adequate foundation to establish that this relates to Doctor Corn's personal activities or factual knowledge at the Tyler plant, and you are seeking to elicit expert-opinion testimony from him as an engineering consultant.

Apparently, you have chosen not to retain a consultant of your own, and I believe incumbent upon me to advise him that he has a right to decline to furnish such testimony.

MR. BALDWIN: I don't know of any rule that so provides, and I want my question answered.

THE WITNESS: On the basis that I was not so involved at Tyler, and that this phase of the operation had no relationship to me as a consultant, I decline to answer.

BY MR. BALDWIN: (Resuming)

Q Would you recommend that practice in Tyler or anywhere?

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A I decline to --

Q Based on your background and your knowledge as an industrial hygienist expert that you hold yourself out to be?

A I can not answer. It is not related to this work that I performed in this case, about which I am prepared to give you full informa tion.

Q This is not unrelated to this deposition and this lawsuit that is at issue, and I am going to ask that the Court Reporter leave a blank space, and I am going to certify this question to the Judge, and call that it be answered, and we either have to come back here, or you have to come to Marshall.

We are going to get an answer, or the Judge is going to rule that you do not have to answer -- one or the other.

(Leave two blank lines.)

BY MR. BALDWIN: (Resuming)

Q Now, Doctor, in order that we have a good record for the Judge, you have given us your background, haven't you?

A That is correct.

Q Do you hold yourself out to be an expert in any

J-45

A No.

Q All right.

If I understand your testimony, you have no particular expertise in any field?

A No. As I interpret your question, I do not claim expertise in any field, in the sense of all fields.

Q Well, name one.

MR. TRAIL: I am going to object. It is incumbent upon you, Mr. Baldwin, to lay the foundation for his expertise, not to solicit his own opinion of what his expertise is.

BY MR. BALDWIN: (Resuming)

Q You have made your objection; now he is telling me he is not qualified in certain fields. I want to find out what fields he holds himself out to be qualified in.

Tell us --

A I will be happy to tell you.

I am an expert in the evaluation and assessment of occupational health and safety hazards in plants and in engineering controls of these, and I am an expert in matters of air pollution, emissions.

I am not an expert in waste disposal.

Q So then, you were called down there to look at the cleanup operation of this plant, to see if it met with approval,

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were you not?

A No. I was called down, as I indicated before, and I will repeat -- to certify, in my professional judgment, that occupants of this building, no longer involved with processing of asbestos, would not be exposed to asbestos in air over and beyond the standard or recommended guidelines for asbestos in air.

Q Did you find asbestos stacked in raw form anywhere adjacent to that building?

A No, I did not.

Q Had you found it stacked in raw form adjacent to the building or on the premises, would you say that that occupant would be exposed to it?

MR. MC GOUGH: I am going to object to the question, because it goes clearly beyond the limitations of Doctor Corn's report.

MR. KLAPPS: I will join in that objection, and again restate that your are --

MR. MC GOUGH: I suggest you read Paragraph 1, the introduction.

THE WITNESS: I think the question goes far beyond what I was involved with here.

-47

BY MR. BALDWIN: (Resuming)

Q I am not limiting your questions to your report. You may want to try to limit your answers that way, if you want to or, unfortunately or fortunately for you, this lawsuit goes far beyond your report.

A I appreciate that, and it goes far beyond me, and there are others involved here. I am trying very hard to make my role and my expertise come to bear on this question.

Q You are refusing to answer a question and I am trying to find out the basis upon which you are refusing it, and I want to know if you feel like you are not expertise in the field, or because you feel like you are not being paid to give the opinion.

Now, which of the two is it?

MR. KLAPPS: Well, that is a totally unfair characterization, Mr. Baldwin.

MR. BALDWIN: No, it is not. That is what he has intimated.

MR. KLAPPS: Shall we agree that we speak one at a time, Mr. Baldwin?

MR. BALDWIN: Right, and you talk after I am finished.

MR. TRAIL: The objection has been stated on the

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record by Counsel for the Department of Justice and the United States; Doctor Corn is the witness, and the attorneys representing him have made the objection on the record.

MR. BALDWIN: Well, I understand you have made an objection on the record. I want you to have your objection, but I want my question answered for the record, too, because the Judge is going to have to pass on this.

THE WITNESS: Let me state quite clearly what is guiding me here.

I am Assistant Secretary of Labor for Occupational Safety, now. My replies and my answers to your questions are guided by the matter at hand. I do not wish to answer in a general manner questions that can be used beyond this deposition in any way relating to a general statement of opinion that reflects on my present position.

I am therefore restricting my comments to my role in this case. That is what is guiding me.

BY MR. BALDWIN: (Resuming)

Q Doctor, unfortunately, you got involved in this lawsuit, I did not involve you in this lawsuit -- of your own personal volition, before you became involved with the United States Department of Labor.

A That is right.

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Q And that involvement requires you to answer certain questions relevant to this lawsuit.

A And I am doing that.

Q All right.

Now, I deem a question relevant to this lawsuit to be: do you recommend the practice of stockpiling asbestos in the raw form in the open on land outside of any kind of enclosure?

MR. KLAPPS: Object. Now, let me augment my earlier objections.

I object on the ground that you are now asking the witness a hypothetical question or a question --

I thought we had an agreement, Mr. Baldwin, for a question which incorporates hypothetical circumstances, which I believe that the witness has a right to decline to answer for several reasons: first, professional reasons of his own, second, because Doctor Corn, in his present capacity, is free -- or rather, is in fact obligated not to provide consultative work to private individuals.

BY MR. BALDWIN: (Resuming)

Q Who do you work for, Doctor?

A I work for the United States Government.

Q Is not that owned by private individuals?

MR. KLAPPS: I object to the question.

THE WITNESS: That's a rhetorical question.

MR. FOWLER: Off the record a moment.

(Discussion off the record)

BY MR. BALDWIN: (Resuming)

Q Well, I am going to ask that this question, this whole colloquy be submitted to the Judge for a ruling as to whether you have to answer this question or not, because I deem it relevant, and I think I am entitled to an answer, and I am calling on you to make it, and I want to make it clear as to why you refuse.

A I have made it clear. It did not involve me at the time. I am not a waste disposal expert, and thirdly, I am restricting my replies to my involvement in this case.

Q Well, you accepted the money to go there to do this work down there at the Tyler plant?

A Yes, I did.

Q How much were you paid?

MR. TRAIL: Objection. Irrelevant.

MR. BALDWIN: It is not.

MR. TRAIL: It is irrelevant.

BY MR. BALDWIN: (Resuming)

Q I want you to tell us what you were paid for the

-51 work you did down at the Tyler plant in connection with Pittsburgh-Corning.

MR. TRAIL: Objection on the same grounds; it is irrelevant.

BY MR. BALDWIN: (Resuming)

Q Go ahead.

A I don't know. I would have to check my files, No. 1.

Q Check your files.

A And I will not check my files because I do not think it is relevant here.

Q Are you declining to answer this question?

A Yes.

Q All right.

We have set some ground rules, gentlemen.

Were you paid?

A I already answered yes.

Q Or did you work for nothing?

A I answered.

Q What was your answer?

A I answered yes.

Q Yes, you were paid?

A Yes.

/whd-52

MR. BALDWIN: I do not have any more questions, but I would like to see his file while Baron is asking whatever he wants to; I can thumb through it.

MR. KLAPPS: Well, unless Mr. Baron will be asking him questions pertaining to the documents.

MR. BALDWIN: If he does, I will make them available to him.

id tape #7

I just thought we would save some time.

BY MR BARON:

Q Dr. Corn, my name is Fred Baron, and along with Mr. Baldwin, I represent plaintiffs in this case. I have got a few questions for you, sir.

What was your connection with the Public Health Service when you were working with them?

A I was a research engineer, a --

MR. BALDWIN: Give me the file that you said we could see.

THE WITNESS: I was an assistant sanitary engineer, an officer in the Public Health Service, working as a research engineer at the Taft Sanitary Engineering Center in Cincinnati.

BY MR. BARON:

Q During what period of time was that, Dr. Corn?

A In July of 1966 through August of 1968.

Q Did you duties include making inspections and surveys of various plants?

A No.

Q What did they include?

A I worked as a research officer and constructed a prototype municipal incinerator, a model at the pilot plant scale, and evaluated that for air pollutant emissions under different conditions of firing and charging. That was the main project I worked on.

Q And I take it during the period of your time with the Public Health service you familiarized yourself with the general operation of the Public Health Service in Cincinnati, did you not?

A I am sorry, I couldn't hear your question because I had two conversations coming my way.

Q I take it during the period of time that you worked for the Public Health Service in Cincinnati, you familiarized yourself with the general structure and ongoing business of the Public Health Service, did you not?

A No, not really. I had really quite a focused involved, and role in the distribution of air pollution which had been performed in 1953, and we were literally starting the Federal role in air pollution. I was not cognizant of all activities of the Service.

Q All right, Dr. Corn, has it ever been brought to your attention that the Public Health Service, subsequent to the time you worked for them, undertook to survey the asbestos industry at the various plants?

A I am familiar with certain publications and the literature on concentrations of asbestos fiber in air in textile facilities by, I believe, Jerry Lane who was the primary officer of the Public Health Service.

Q Have you become familiar at any time with the fact the Public Health Service, in fact, surveyed all

asbestos manufacturing plants in the United States?

A No. In fact that is the first time I have ever heard that they surveyed all the facilities. I thought it was a representative sample of the facilities of the industry.

Q Okay, when did you first become aware that the Public Health Service had involved itself in such a service?

A When the publication by Lynch appeared, I believe, in the American Industrial Hygiene Journal, and I don't recall the year of that publication.

Q Would that have been prior to the time that you visited Pittsburgh Corning in Tyler in 1969?

A Yes, yes.

Q And would it have been prior to the time that you began work at Pittsburgh Corning's Port Alleghany plant?

A I would say it was probably, and I'm guessing, we can check this, it was probably pretty close to the initial involvement at Port Alleghany. It was in the mid-1960's.

Q What did you understand the purpose of the government survey to be?

A I thought it was a state of the arts assessment, and as I recall it was -- the report I had had eight textile plants reported on, so you supplied me, stating all facilities had been checked -- as to what kind of engineering technology could achieve in lieu of the changing

DW-4

views on what the standards should be. So I thought this was a dipping into to determine where are we at and what can engineering do for us to get further.

And, in fact, it reported, as I recall, the number of plants that were meeting the current standard, that weren't meeting it, and so on.

Q Did you at any time make further inquiry to attempt to gather statistics that the Government relied upon in making that survey?

A No. I did not.

Q Have you ever been advised by anyone that Pittsburgh Corning plant had been involved in that survey?

A No. In fact, this is the first that's ever been mentioned.

Q Now, Dr. Corn, we discussed in pretty good detail your relationship with Dr. Grant, and I believe your testimony was that you first met him in 1964, is that correct?

A That's correct.

Q And what was the occasion that you had come into contact with Dr. Grant the first time?

A I don't really remember that. But the first involvement we had together, I remember we went up to Port Allegheny together. He had joined the PPG Company, and at that time there was perhaps one industrial hygienist in the company. And he had indicated he needed additional resources,

and hoped we could work together as he proceeded to visit each of the PPG facilities which was his intention in taking over as medical director. He indicated to me he would personally visit each facility just as rapidly as he could.

So he, as I recall, put out, "as I need you, I haven't sufficient resources until I get this corporate medical are on the road, would you be available" and the first such visit we went on together was up to Port Alleghany.

Q Okay, and it was your understanding, was it not, Dr. Corn, that Dr. Grant had been employed by PPG Industries and was going to inspect all their facilities?

A Not inspect, he was going -- he felt that he wanted to be familiar with each. He did not inspect, and that was not in his -- his list of responsibilities as medical director.

Q And it just so happened that the Port Alleghany facility was the first one, is that correct?

MR. ARMSTRONG: Object to the form of the question, it suggests that the Port Alleghany facility was a facility of PPG.

THE WITNESS: I would like to clarify what I said earlier. It is the first time Dr. Grant and I came together. I have no idea where it was on his list of projected visits.

BY MR. BARON:

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Q Dr. Corn, were you paid by any entity to do your initial investigation of the Port Alleghany plant?

A In those years, I was paid through the Industrial Hygiene Foundation. All my billing went to the Industrial Hygiene Foundation.

Q Okay.

A I was also in accord with that role appointed a senior fellow of the Mellon Institute in which the Industrial Hygiene Foundation was located.

This had decided advantages to me in my university responsibilities. It made available to me all of the research facilities of that institute, and was also an incentive to promote this relationship.

Q All right.

Now, would it be fiar to say that the Industrial Hygiene Foundation in turn billed the various corporate entities for which they did the work?

A Yes.

Q There would be reference somewhere at the Industrial Hygiene Foundation as to who was billed for your time at the Port Alleghany plant, would there not?

A I would think so.

Q Dr. Corn, did you learn upon visiting with Dr. Grant that the Industrial Hygiene Foundation had, in fact, visited the Tyler Plant prior to the time that you went to Port

Alleghany?

A No.

Q All right.

When did you become aware of that fact?

A I became aware of the fact that there were prior visits to Tyler when I read Paul Brodeur's book, Expendable Americans.

Q You mean that you as a consultant working with the Industrial Hygiene Foundation in an asbestos plant in Port Alleghany, and then again as an independent consultant in Tyler, had no information whatsoever that the Industrial Hygiene Foundation had run a survey in 1962 or '63?

MR. ARMSTRONG: Objection, that is jury speech. He has answered the question.

THE WITNESS: I have answered the question.

BY MR. BARON:

Q Your answer is you did not?

A That's correct.

Q After your inspection of the Port Alleghany plant, did you go to other plants with Dr. Grant?

A Yes. I did work for PPG at several facilities, not always with Dr. Grant, sometimes alone, sometimes he would join me there. He would attend to many of the items he wished to attend to when we were there together. It was

not consistently, though, we were there together.

Q Was PPG, in fact, your biggest client, if that's the right term, during this period of time?

A No.

Q It took up a fair share of your time doing these inspections and investigations for PPG, did it not?

MR. ARMSTRONG: Object to the relative term?

MR. KLAPPS: Join in that objection.

BY MR. BARON:

Q Go ahead and answer the question.

A Well, I can place it in perspective. I had roughly fifty days a year and any weekends that the university permitted me for this type of work. And you can pretty well get a feel, for I used that fully. You can get a feel for the kind of time I could commit to this.

You must recall I was very busy teaching graduate students, I had research going on, I was anxious to publish my findings. This was one aspect of my life that I believed was essntial, that it was teaching me what the applications of that which we were researching and teaching at the university were. But it was no more than, I would say, even when I was pushing it very hard, 30 per cent of my work.

Q Upon what published material did you rely when you made your investigation of the Tyler plant in terms of

DW-9 criteria?

A The British guidelines was published in the Journal, the Annals of Occupational Hygiene I believe in 1968.

The American guidelines were the American Conference of Governmental Industrial Hygienists threshold limit values table.

I think this is an appropriate point to indicate that at the time this work was going on while I was referring to a 5 fiber per cc limit, expressed appropriately, this was a proposal. In the asbestor work I was doing in this period I was telling people you should think in terms of that, but I believe the 12 fiber per cc was still in effect. We could get those dates pinned down. I don't think the 5 had come in yet.

Q What period of time are we talking about, Dr. Corn?

A The '69 period, and the Tyler survey.

Q You were advising your clients that, in fact, they had better be watching for a 5 fiber situation rather than a 12?

A It had been proposed.

Q And was it your feeling at that time that it was imminent that the 5 fiber standard would be adopted?

A I expressed to anyone I was dealing with that in my opinion the 5 would be adopted, yes.

DW_10

Q And that was something you expressed to Dr. Grant, also?

A I am sure I did, yes.

Q All right.

Did you rely at all, Dr. Corn, on publications from the government concerning asbestos plants?

A Not -- in answer to your question, not for the relationship to the guidelines of the standards. I have cited the major sources that I relied upon there.

No, I did not.

Q But you were aware of the fact the government had done studies and was familiar with the condition inside asbestos plants in the United States?

MR. TRAIL: Object to the form of the question as leading.

BY MR. BARON:

Q Answer the question, please.

A No, I was not aware of all of the work. In fact, I responded earlier to your suggestion that the government had surveyed all facilities as a surprise. I knew the government was probing.

I also was supervising what I thought was one of the finest laboratories in this field for microscopy in the United States, and I think I was of the opinion that in terms of methodology we could teach the government a great

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deal, so I was not checking with the government, I was checking with the profession as contrasted to the government.

Q But with the publication of Lynch's findings you did know that the government had undertaken to investigate the asbestos industry, is that correct?

A I was aware of this report, yes, the published report.

Q You were aware that the government had this information in its possession?

MR. KLAPPS: Objection to the form of the question and the fact that the question assumes facts not in evidence.

BY MR. BARON:

Q Go ahead and answer the question.

A I have gotten mixed up with his answer.

Q Dr. Corn, you were familiar with the fact that the government did possess information concerning the state of the asbestos industry in the United States and what was occurring inside asbestos plants?

MR. KLAPPS: Same objection.

MR. TRAIL: And speculation.

THE WITNESS: No, I would have to answer that no. I knew the government was doing some work period.

BY MR. BARON:

Q Do you know Dr. Crowley?

A Yes. There are two Dr. Crowleys. I know a Dr.

Lester Crowley on a more professional exchange basis. I am acquainted with Dr. Louis Crowley.

Q Did you have any contact with Dr. Louis Crowley when he was working for the government?

A No.

Q After the initial inspection at the Port Alleghany plant but prior to the time you visited the Tyler plant, did you have any discussions with Dr. Grant concerning the Tyler plant?

A None whatsoever. I tried to indicate earlier that I had no contact, no focussing on the Tyler plant, until 1969.

Q Now, Dr. Corn, I take it that being in the area you were familiar with the various governmental agencies concerned with industrial hygiene, were you not, during that period of time?

A I was familiar with the division of occupational health of the United States Public Health Service that went through a whole series of name changes, so I don't even know what to refer to it as to which year, but that is the only agency. Your question was in the plural and I am not sure what others you have in mind.

Q Dr. Corn, what I have got in mind is the Pittsburgh Corning plant in Tyler received some nature of a citation in 1969 which initiated, apparently, your visit there did it not?

A Yes.

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Q And what was the basis or the law under which such a citation was issued?

MR. KLAPPS: I am going to object, that question has been asked and answered several times.

BY MR. BARON:

Q I want him to go through it again, if he would.

A I will be glad to indicate what that citation said to me.

I was aware of the Walsh-Healy Act. I knew it was administered through the Department of Labor. I at that time had no idea of the numbers of inspections or the activity of the program. It was one that I had not had contact with before, that was the first Walsh-Healy DOL citation I had come up against.

So I would say that I was aware that it existed, but I had not come into contact with the Department of Labor or through the administration of that act before.

Q Do you know what became of the citation in the Tyler plant, what the resolution was?

A No.

Q Did you understand that the Department of Labor under the Walsh-Healy Act had the authority to close the plant if it was in violation of the act?

MR. TRAIL: Objection, it calls for the -- I object, it calls for a legal conclusion on the part of the witness.

DW-14

BY MR. BARON:

Q Go ahead and answer it. I am asking for your understanding, I am not holding you to be an expert.

MR. TRAIL: I don't care how you qualify it, it is still a legal conclusion on the part of the witness.

MR. BALDWIN: You have made your objection, go ahead and answer the question.

THE WITNESS: I am not sure of what the objection is.

MR. BALDWIN: You don't need to be clear what the objection is.

THE WITNESS: I was not aware of the enforcement actions available to the Department of Labor on the basis of that violation, no.

BY MR. BARON:

Q Did anyone from Pittsburgh Corning or Dr. Grant advise you that the Tyler plant was in jeapordy of being closed prior to the time of your inspection?

MR. McGOUGH: I think I object to that question on the ground it assumes a fact that is not of record.

MR. KLAPPS: Could I have the question repeated, please?

MR. BARON: I am asking if anyone from Pittsburgh Corning or PPG advised him that the Tyler plant was in jeapordy of being closed as a result of the Labor Department

DW-15 citation prior to your inspection.

THE WITNESS: No.

BY MR. BARON:

Q No.

A The charge to me was to determine if the citation was valid or invalid.

Q All right.

A And assess the ventilation capability of this facility.

Q Okay, did you make such a determination as to whether it was valid?

A My report speaks to the ventilation system which I think it goes without saying indicates that the citation was confirmed.

Q After your report had been submitted to Pittsburgh Corning, did you receive any follow up inquiry from any official of the company?

A No. I next heard from Mr. Hyde.

Q Concerning his design?

A He had been authorized by the company to proceed with the design of a new system.

Q When you talked with Mr. Hyde, did you ask him about the outcome of the Labor Department citation?

A No.

Let me -- you simply don't as a consultant do that.

You are -- let me say, I would not. I do not explore beyond the relationship between myself and the company.

If the company had come back, "we disagree with your report, explain this to me," I would have answered it, but I would not initiate, "well, what the hell did you do with that report, what are you going to do down there," that's not my domain. I was called in as a ventilation and I provided my service to the company.

The next contact was Hyde saying, "I am authorized to proceed with the ventilation design, I want you to work with me," and that's what I did.

I did not explore the disposition of the citation. I did not explore what was going on in Tyler.

Q Subsequent to your report, were you advised or did you become aware of the fact that other individuals had been retained by the company to come down and make further inspections of the plant?

A No.

Q You know a Mr. DeStefano?

A Oh, Mr. DeStefano is an industrial hygienist employed in the glass division of PPG, yes, I do know him.

Q All right.

Are you aware of the fact that Mr. DeStefano at a time subsequent to your report visited the Tyler plant to examine the problem down there?

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MR. ARMSTRONG: Objection, no such evidence.

BY MR. BARON:

Q All right.

A I do not know that.

Q Did he ever discuss the Tyler plant with you, Dr. Corn?

A Never.

Q Did you ever issue any report of any form, oral or written, to Mr. DeStefano concerning the Tyler plant?

A No.

Q Dr. Corning, when you did this consulting work for Pittsburgh Corning or for whomever it was in 1969, you were not working through the Industrial Health Foundation at that time, were you?

A That's correct.

Q And I take it you were paid directly, were you not?

A That is correct.

Q Do you recall from what entity you received your check?

A Pittsburgh Corning.

Q DR. Corn, other than the conversations you had with Mr. Hyde subsequent to your report here, prior to the time that you went back down to look at the plant cleanup, did you have any other conversations with any official of either Pittsburgh Corning or PPG concerning the Tyler plant?

A Yes.

Q All right, who would that have been with and when?

A I had a discussion with Mr. Bierer, President of the company, at his request, and you have that file which recalls the date of that conversation.

MR. ARMSTRONG: What company?

THE WITNESS: The Pittsburgh Corning Company.

MR. BARON: All right, let's go ahead and mark this thing as an exhibit.

MR. BALDWIN: Let's mark everything in this file while you are at it.

MR. KLAPPS: Let the --

MR. BARON: Number 8 i s a letter to the Assistant Secretary for Occupational Safety and Health from -- it appears to be a letter and it is application for variance to the Occupational Safety and Health Administration

(Plaintiff's exhibit 8 was marked for identification.)

BY MR. BARON:

Q Now, Dr. Corn, when were you contacted by Mr. Bierer concerning this document?

A It did not concern that document.

Q All right, concerning the application for variance.

A It did not concern the application for variance.

Q What did it concern?

DW-19

A Mr. Bierer wanted to discuss the entire subject of asbestos, and I spent a morning with him.

Q What was the nature of your discussion?

A Virtually as much as I could inform him was in the area of my expertise of the current state and knowledge of asbestos, the findings I found, the implications of these findings. We talked at great length.

Mr. Bierer had recently come to the job, I forget the period of time, he indicated that this was a new area for him, he didn't know asbestos. He was impressed with the concern of all parties, and he would just like to talk for awhile, so we talked.

END

Tape#9

Jan 9

Q Do you remember when that was, Dr. Corn?

A You have a letter there that would fix that date. I wrote back to him after the morning, and that would give you that date.

Q I am sorry.

OK, let's call this Plaintiffs' Exhibit No. 9. It appears to be a letter dated October 7, 1969, to Mr. James H. Bierer from Morton Corn.

(The document referred to was marked Exhibit No. 9 for identification.)

THE WITNESS: No, it doesn't give the date of the meeting.

BY MR. BARON:

Q It would have been at a period within a week or so of that letter, Dr. Corn?

A Yes, it would have been shortly before the date of this letter.

Q Did you discuss with Mr. Bierer your findings at the Tyler Plant?

A Yes.

Q Did he ask for your recommendation?

A As I recall, the decision he was searching for was

whether to invest the kind of funds into this facility that the design was indicating would have to be invested.

This was a temporary structure post World War II and our effort at design, Mr. Hyde and some contact I had with Mr. Hyde, indicated a major alteration of facilities, so we -- What I think he was weighing, and this is conjecture, is what he was hearing from me and the investment in that facility for implementing this system.

MR. BARON: OK, would you mark this Plaintiffs' Exhibit No. 10, please?

(The document referred to was marked Plaintiff's Exhibit No. 10 for identification.)

BY MR. BARON:

Q Dr. Corn, can I just come over here and show you Plaintiffs' Exhibit No. 10 and ask you what that is?

A This exhibit is an outline of a seminar I presented to the staff of the Pittsburgh Corning Corporation Research Center on September 25, 1969, at the suggestion of Dr. Lee Grant and the invitation of, I believe, Mr. Holman.

Q This was prior to a meeting with Mr. Bierer, was it not?

A Yes, and perhaps this seminar was -- could have

er 3 prompted his request for the meeting.

Q. Dr. Corning, what was the purpose of the seminar?

A. To present in a relatively brief period of an hour to an hour and a half the perspective on asbestos as a material used in industry and what the scientific community was wrestling with, its biological effects and how it was assessed, what the guidelines were. It was a broad look at asbestos. It was modeled after a lecture that I gave at the university to first-year graduate students in this field, and the topical breakdown indicates it starts with the production properties and uses, goes on to biological effects, the assessment and some additional aspects.

Q. And this paper was prepared by you, Dr. Corn?

A. That's correct.

Q. Dr. Corn, was anybody else participating in this seminar in terms of giving information other than yourself?

A. No.

Q. I take it that you did a substantial amount of medical research to come up with some of this information, did you not, Dr. Corn?

A. As I said, this is modeled after material that I teach to first-year graduate students, and I do teach some of the, what I call, the first layer aspects of biological

er 4

effects of agents. The students take a more probing and in-depth course in toxicology, but I think I am capable of giving them the first introductory materials on this.

Q. To the biological effects of asbestos?

A. Yes.

Q. This is a course that you teach at the university?

A. I teach a course in industrial hygiene.

Q. Which is -- As a portion of it, does it not have, Dr. Corn, the biological effects of asbestos?

A. I refer to what is known, and as you can see, I have backed up, I do not presume to be an authority, I have included as the appendices the references to materials. I look at my role in that area as transmitting work of others, so there are results here with references from others that I refer to the students, in essence, repeating what has appeared in the literature.

Q. How long have you been teaching that course, Dr. Corn?

A. Since 1967.

Q. I take it that information on the biological effects of asbestos has been available for many years, has it not, Dr. Corn?

A. Yes, yes.

er 5

Q. In fact, when you were in college pursuing your degrees this material was available, was it not?

A. When I was in college as a graduate student in this field the asbestos -- aspects of asbestos were known, but that was all. Subsequently the lung cancers, the mesothelioma and pluralplaques appeared.

Q. This is information that was generally in the material that a student in this area would have to learn ever since you have been going to school anyway?

MR. ARMSTRONG: What information?

MR. BARON: The information concerning the biological effects of asbestos.

MR. ARMSTRONG: What information?

MR. McGOUGH: What kind of a student?

MR. ARMSTRONG: When?

MR. BARON: Let me rephrase the question.

BY MR. BARON:

Q. Dr. Corn, it is true, is it not, that a student going through school at the time that you did in an area that would be concerned with industrial hygiene would have become aware, should have become aware, of the biological effects of asbestos?

MR. ARMSTRONG: What biological effects?

er 6

MR. BARON: Just answer the question.

MR. ARMSTRONG: Don't.

My objection is that the witness previously testified that when he was in school the only adverse biological effects known to him caused by asbestos was asbestosis.

Now, if you are willing to accept that as this question, I have no objection to its form. If you mean something else, then, man, say so.

MR. BARON: You finished?

MR. ARMSTRONG: Yes, sir.

MR. BALDWIN: Maybe he has a very limited knowledge of asbestos.

BY MR. BARON:

Q Can you answer the question now?

A I would like, I really would like to answer. I would be pleased to answer if you could frame it a little differently.

Q OK, this material that you studied in college was generally available at that time to people interested in this area, was it not?

MR. ARMSTRONG: Object to the form of the question.

BY MR. BARON:

Q Go ahead.

er 7

A. I don't -- Let me answer the question even if it doesn't relate to the question, I will give you the answer.

The material available is in the scientific literature. For the purposes of this lecture to the students, I have referenced the scientific literature. This is highly controversial literature, let me make that clear. This is not an overwhelming consensus of opinion. I clearly tell the students that, and I tell them here are the references, you can explore this, these are the different viewpoints that emerge. I can't judge them, but I am giving you a picture of the state of the art, and I don't expect you to read all this while you are here; you may read it next year, the year after when you get out.

The student in graduate school gets a lot of material for future reference so what the student is going away with is a very superficial picture that it is believed, in the case of asbestosis, these are the effects. They would know that possibly there is controversy about the different forms, they would know some of the principal investigators, they would know where the key references are. I don't think they would dig into this material in depth; they just haven't the time during that graduate year.

Q. Dr. Corn, reflecting upon the time that you were

er 8 in college, this controversial material about asbestos was being published at that time, was it not?

MR. ARMSTRONG: Object to the form of that.

THE WITNESS: Quite the contrary.

MR. ARMSTRONG: Well, I object on the ground that there is no time frame, the man has been in college all his life and still is, and these consequences he has also not defined.

MR. McGOUGH: This literature -- incidentally, I would like to add my objection. Looking at Exhibit 10, it seems to me the references that Dr. Corn has in here, the earliest I can find is 1965.

BY MR. BARON:

Q Dr. Corn, I am, of course, referring to the information that you were relying upon when you were in college and the material you were studying.

A Permit me to differentiate. The material I learned in college on asbestosis was not controversial, that was medically accepted. The reason these references stem from '65 was there was a major conference on cancer, a worldwide conference in '64, that was the opportunity for many workers in this field to get together and stimulated a prolifery of work, the controversial asepcts of the biological effects of

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asbestos or carcinogenic aspects, not the asbestosis aspects.

So what I learned as a student was not presumed in a manner of being influx of new information; what students today are learning is being presented that way.

Q. OK. But the question of whether asbestos causes asbestosis among workers exposed to asbestos is not a controversial topic, is it, Doctor?

MR. ARMSTRONG: Excuse me. Would you read the question back, please?

(The reporter read the record as requested.)

THE WITNESS: The disease state of asbestosis is not a controversial subject. It is accepted in the medical community.

BY MR. BARON:

Q. All right. And has been since you have been in college, is that correct?

A. Yes.

Q. Was Mr. Bierer present at the seminar that you gave, Dr. Corn?

A. No.

Q. Was that the reason for your meeting with him at a later date?

A. Well, I don't know. The phone call from Mr.

er 10 Bierer came after the seminar requesting if I could be available to spend some time with him.

Q After the time that you spent with Mr. Bierer in late September or early October of 1969, when was the next occasion that you had contact with either Pittsburgh Corning or PPG individuals concerning the Tyler Plant?

A Mr. Hyde would call me as needed as he proceeded with the design. He had worked with me on the Port design, had learned a great deal and indicated he would like to go ahead calling on me as necessary with the Tyler design.

I think you have some correspondence in that regard, but there was a great deal of telephone engineering type resolution between myself and Mr. Hyde. I can't give you an idea of the frequency; it was fairly frequent as he came up against problems in his implementing the design.

Q All right. Now, other than Mr. Hyde, did you have any contact with either PCC people or PPG people concerning the Tyler Plant prior to the time that you got involved with this application for variance?

A No.

Q All right, how was it that you became involved with the application for variance, which is Plaintiff's Exhibit No. 9.

A I am not sure if it was Mr. Stout or Mr. Holman who called from Pittsburgh Corning indicating that on the basis of what we had learned in Port could I indicate the capability of the system being designed for Tyler,and because the two production facilities were very similar, I said I probably could give a professional opinion on what is about the best we can do with the best system in another facility and also mindful of the fact that it would be a tougher design job in Tyler.

Q Did he discuss with you the fact that they were preparing an application for variance?

A Yes. It was mentioned in that context, and there were several exchanges of wording. I did not see the total application for variance. I saw several wordings which I revised, and there was discussion that I felt it was possible for me to attest to, and you have in your possession that final copy.

Q Dr. Corn, did you actually read the application in its entirety prior to signing the affidavit?

A No, I did not. I only signed the affidavit that was with respect to my contribution. I did not see the entire application. The affidavit I signed is an attestment to the design capability that I believed could be achieved.

er 12

Q. And it was your opinion at that time that the revised threshold limit value for asbestos of 5 fibers per milliliter greater than 5 microns in length could not be obtained either in Port Alleghany or Tyler?

A. No, no. Excuse me.

MR. McGOUGH: Excuse me, what time is this you are speaking of?

MR. BARON: At the time that he signed the affidavit, which was August 3, 1971.

MR. McGOUGH: OK, thank you.

THE WITNESS: The 5 fiber per cc limit went in effect December 7, 1971. I signed this affidavit August of 1971, and the wording is quite carefully phrased, it has the following wording, in answer to your question, that "The revised threshold limit value for asbestos of 5 fibers per milliliter greater than 5 microns in length with existing dust collection systems in some areas of its Port Alleghany works and Tyler works," with existing dust collection systems.

BY MR. BARON:

Q. Now, I had understood that the dust collection system in Port Alleghany had been changed, had it not, Dr. Corn?

A. Yes, it had been changed.

er 13

Q Prior to this time?

A Yes, it had.

Q In compliance with your recommendation?

A In compliance with the bulk of my design.

Q But still it would not meet the new standards?

A The maintenance aspects of the plant had a major effect on the airborne concentration independent of the system. In other words, the system was very sensitive to the maintenance procedures by individuals in the processing operations, far more sensitive than we had hoped, so that on occasion due to maintenance procedures, we exceed the 5 fiber import.

Q OK. Prior to making this affidavit on the 3rd day of August 1971, did you reexamine the Tyler Plant to determine that this was true?

A No. I expressed the opinion here that with the very best maintenance, with the very best procedures, there would still be in some areas of these plants -- I was given the opinion that you could not meet the 5 fiber.

Q But you never did go back to the Tyler Plant before you made this affidavit, did you, Dr. Corn?

A No, but I knew what was in Tyler, and Tyler had not been changed.

Q And you had been advised that Tyler had not been

er 14 changed?

A Yes, I knew at this point in time it had not been changed.

Q By whom?

A By Mr. Hyde, I believe. In fact, there was some point in time where Mr. Hyde indicated the appropriation for the design had not been authorized. I don't know where that fell in.

Q Were you given a reason why Pittsburgh Corning was applying for a variance as to its Tyler Plant?

A Was I given a reason why? Let me think about that. No.

Q Subsequent or prior to the date that you signed the affidavit, had you been advised by Mr. Hyde that his proposed system would not be implemented in Tyler?

A I think I was. I think I was. I haven't got the -- no -- well, August '71, yes, it would have been before then, it would have been before then, yes.

Q Mr. Hyde advised you?

A That it had not been funded.

Q Nor that -- It was not going to be funded, was that what he advised you?

A No, it was not put in that sense. He indicated

er 15 the Board had met and they were not authorizing at this time the construction of the ventilation facility, of the implementation of the design.

Q And yet you signed the affidavit in support of the application for variance, did you not, Dr. Corn, with this information?

MR. TRAIL: I object to the question, it states facts that have not been testified to and misstates his testimony, as a matter of fact.

THE WITNESS: I think you could say that my affidavit appended to the variance could be viewed as supporting it. I viewed the affidavit as a statement of what conditions in the facility were and what you could expect at best.

Oh, perhaps I viewed this wrong, but I did not view that this was a support or nonsupport of an application for variance; it is a statement by an engineering specialist as to what you can do.

BY MR. BARON:

Q You understood the purpose of the application, did you not, Dr. Corn?

A Yes.

Q And you understood that your affidavit was going

er 16 to be appended to it, did you not, Dr. Corn?

A. Yes, I did.

Q. Were you aware of the fact at that time that the Pittsburgh Corning plant in Tyler had been reinspected by the Government?

A. Reinspected?

Q. Yes.

A. No. No.

Q. Dr. Corn, did you take the photographs that are appended to this May 7, 1969, report?

A. Yes, I did.

Q. Do you know where the original photographs or negatives would be?

A. I am not sure I have them. They were, I believe, Polaroids. Those were Polaroids. The clean-up is all 35 mm negatives, and they should be in my files, but the Polaroids were one shot, and I am not sure if I submitted them with the original report. I usually put the best material I can in with the transmitted report. They may have gone with the original.

Q. The original was submitted to Pittsburgh Corning?

A. Yes.

MR. BALDWIN: Would you look and see if you have

those Polaroids?

MR. ARMSTRONG: Why would you look over here? Is there something wrong with the balance of this room or something?

MR. BARON: Walter, would you check and see if you can find those photographs?

MR. McGOUGH: I have never seen them.

THE WITNESS: I can also check my files in Pittsburgh and see if I have those.

MR. McGOUGH: Did you ask Mr. Armstrong or me to do what?

MR. BALDWIN: I asked you, but Mr. Armstrong answered.

MR. ARMSTRONG: Oh, that's a dirty one, let the record show.

BY MR. BARON:

Q Doctor, are you a member -- strike that.

Have you ever been a member of the American Conference of Governmental Industrial Hygienists?

A Yes.

Q Are you still a member of that group?

A Yes, I am.

Q How long have you been a member?

er 18

A. Probably 10 years or so.

Q. And do you receive their various publications?

A. Yes.

MR. BARON: I have no further questions.

(Plaintiff's Exhibits 11 through 17 were marked for identification.)

(Recess.)

BY MR. KELLEY:

Q. Dr. Corn, as I understand it, you graduated from Harvard School of Public Health with your Ph.D. in 1961, is that correct?

A. No, from the Harvard Graduate School of Arts and Sciences, in 1961.

Q. Did you get your Ph.D. degree then?

A. 1961.

Q. From Harvard?

A. From Harvard. The only differentiation I called was the degree was the Division of Engineering and Applied Physics.

Q. And then you went to the, I believe you said, the National Science Foundation for a year?

A. I had a National Science Foundation award which I used to spend a year in London with the Medical Research

er 19 Council and the London School of Hygiene.

Q Did you receive any degree as a result of that study?

A No.

Q And then in September of 1962 you started teaching at the University of Pittsburgh, is that correct?

A That's correct.

Q And when you first started there, were you assistant professor or associate professor? Exactly what was your title?

A Assistant professor.

Q Now, what is your present title at the University of Pittsburgh?

A I am a professor of occupational health in the School of Public Health and an adjunct professor of chemical engineering in the School of Engineering on leave of absence.

Q Are those both full professorships?

A Yes, they are.

Q Are either of them endowed professorships?

A The School of Public Health is a school endowed.

Q By whom?

A That was a Mellon grant that established the school in 1949. That is our endowment.

er 20

Q. Just for the record, during the intermission I asked you to check through the Exhibits 1 through 17 which had been marked by the reporter. Were all of those exhibits, with the exception of Exhibit 6, taken from your file which was furnished to us here?

A. Yes.

Q. Now, do you still have this consulting firm in Pittsburgh?

A. I never had a consulting firm. I pursue this as

nd Tape 9

a professional practitioner.

bsp-1

Q Looking at Exhibit 17, I think --

A That is the letterhead, indicates my home address and my expertise as a professional, but I am not incorporated in the state of Pennsylvania.

Q Do you do any consulting work at this time or is your work confined strictly to government work?

A At the time I assumed this position I relinquished all affiliations with any other parties to become Assistant Secretary of Labor.

Q How long is your leave of absence from the University of Pittsburgh or is it indefinite?

A It is granted two years at a time, subject to renewal. I have an additional leave of two years, ending December, 1977.

Q The whether or not you return is dependent upon circumstances at that time, I take it?

A If I would request an additional leave or return would be the procedure.

The university is prepared to receive a request for extension and that would be considered and acted upon. If I wished to not return and that request was denied, I would relinquish my tenure chair and everything else.

Q When did you first start arranging this seminar that

bsp-2

Q When did you first start arranging this seminar that was held, I believe, in September of 1969, approximately?

A I just don't remember; I don't think it was a long period of arranging, but I don't have the date on that.

Q Was it prior to or subsequent to your visit to Tyler?

A Well, we have the date on that, I think -- was it not September?

Q September is the date of the seminar, but when did you start organizing it? Was it prior to or subsequent to your visit to Tyler?

A Oh, it would have been subsequent, I think. We are talking about in the neighborhood of scheduling that seminar a month ahead.

Q And what was it that compelled you to conduct the seminar; did someone request you to do it, or did you do it on your own initiative, or what?

A Dr. Grant requested that I do it.

Q Whose primary benefit was the seminar, if there was any primary beneficiaries of it?

A For the employees of the research center which included the middle-management and virtually everone at the center. We filled a room approximately this size. I would guess there were 40 to 50 persons present.

bsp-3

Q That is the Pittsburgh Corning Research Center in Presque Isle?

A Presque Isle.

Q Yes.

A Yes.

Q Where is Presque Isle?

A Just east of Pittsburgh. I believe it is Presque Isle Drive is the street, in Monroeville.

Q I see.

And what, if you know, is the Pittsburgh Corning Research Center?

A It was the research wing of the corporation. There were new products they were working on, much of which was done at the center. The engineering design group was at the center. I am not sure of all of the functions that were incorporated in that center.

Q Okay. Do you know if it was a separate corporation or was it simply a branch of Pittsburgh Corning?

A I always assumed it was a part of the company, not a separate corporation.

Q This seminar that was given in September of 1969, was it attended only by employees of Pittsburgh Corning or were other people there as well?

bsA-4

A Pittsburgh Corning employees and Dr. Grant was present.

Q Were there any employees of Pittsburgh Plate Glass there, as far as you know?

A No, not to my knowledge.

Q Do you have a list of the people who attended the seminar or is such a list available?

A No; I did not ask for a listing of who was in attendance. It may be available. I don't have it.

Q Was it actually sponsored by Pittsburgh Corning Research Center?

A It was posed at the research center. I assume it was sponsored by Mr. Holman at the suggestion of Dr. Grant.

Q Let me ask you this question. Were you simply paid a fee for conducting the seminar or did you actually make arrangements and take money from people?

A I was paid a fee for conducting the seminar.

Q By whom?

A Pittsburgh Corning.

Q Okay.

Now, I believe you told me that shortly after the seminar, you were called by Mr. Bierer to discuss the problems of asbestos with him and was that--

asp-8

A Yes.

Q And was that discussion held in Mr. Bierer's office?

A Yes.

Q Was there anyone else present at this discussion?

A No.

Q I believe you indicated that you spent about half a day discussing the situation?

A The bulk of the morning, as I recall; yes.

Q And during that time was asbestos and the operation of asbestos the subject under discussion?

A It was asbestos; it was a subject of fibers other than asbestos. At the time the company was experimenting with a new process utilizing mineral wool. There was some concern in the scientific community that all fibers may have certain biological activity. We discussed that state of knowledge as I was familiar with it. Again, I clearly at the time indicated this was not my strong point, but he was quite interested in pursuing, in addition to the engineering assessment of the plant, the biological state of the art.

I tried to the best of my ability to tell him about the evolving concerns which are still with us today for all fibrous materials and I think he was filled in broadly on the, on the problem facing him. Indeed, it was recognized to be a

bsp-6

problem.

There was some discussion on his part, all of which I did not understand, of the financial picture of the product. Apparently Unibestos financial picture declined in recent years. He was weighing, it appeared to me, the total picture of what this was as a continued involvement with this product, be it with asbestos, be it with mineral wool, if the pilot operation at port was successful, and I thought he was using me as a sounding board.

Q Did you make him aware, during that conference, of not only the dangers of asbestosis and people getting asbestosis from breathing asbestos dust, but also the dangers, however controversial they may have been, of carcinogenic reactions to --

A Yes; I did.

MR. MC GOUGH: May I suggest that you design what kind of asbestos you are talking about, what kind of fibers? It may make a difference.

BY MR. KELLY:

Q Well, the kind that was at the Tyler plant, I assume you were discussing about the Tyler plant and the Port Allegheny plant, were you not?

A I reviewed the findings of my report; I reviewed the

bsp-7 uncertainty with other information of asbestos, why I had invoked the Chrysotile standard for Amosite. I think I went over all of these uncertainties with him.

In fact, I recall thinking at the end of the conversation how he had just about extracted the bulk of my knowledge of the biological aspect of the substance.

Q Would you say then that if he were fortunate enough to have total recall that he probably could keep as much knowledge as you had at the time concerning the biological effects of asbestos?

A Well, no, in all fairness here, it really didn't make that much sense to him. Remember, this is the first time this man had ever -- and he expressed this more than once -- even dealt with the kinds of words I was dealing with and a lot of discussion was even going over what a lot of this meant.

Q Did you make him aware of the fact that the ventilation system at the Tyler plant was below the standards?

A Oh, yes.

Q And that the best levels were above the standards?

A Oh, yes.

Q Did you discuss with him the -- anything at all about putting in a new ventilation system that might cure these defects?

bsp-8

A Yes.

Q Is that perhaps, among others, a place cost was discussed?

A I don't recall.

I remember he brought up to me the financial picture for Unibestos over the last several years. It was a declining profits picture until it was almost a break-even picture, as I remember; and he did bring that up. I don't remember where it came up, in what context, but I clearly remember him introducing that subject.

Q Do you recall whether or not specifically the subject of the cost of a new ventilating system was brought up?

A Well, I certainly did speculate on that cost with him; yes.

Q I believe that's all I have.

Oh, one other question. I see I have got a note here.

I think you mentioned -- I may be mistaken; and correct me if I am wrong -- somebody told you that the Board of Directors of Pittsburgh Corning had either acted or failed to act upon the proposal for the ventilation system. What was it you told us about that?

A Mr. Hyde.

bsp-9

Q Mr. Hyde told you that the Board had declined to act on it; is that correct?

A I learned of that discussion through Mr. Hyde.

Q Did you discuss with Mr. Bierer or did he discuss with you at all the dangers to the workers of conditions at the Tyler plant?

A Yes.

Q Tell us what you recall about that discussion.

A I discussed much of the ingredients of the seminar material which I had at my disposal. I went over this as well as I gave it at the seminar; I presented it to him and the present indications of the effects of asbestos other than asbestosis.

Q Did you discuss with him the fact that the below standards of ventilation and the higher standards in dust made it more hazardous for the worker in Tyler than other --

A I think he was aware of that and the meaning I discussed, as we recalled the meaning of the standards, as we discussed earlier today, what is a threshold limit value.

MR. BALDWIN: Was that seminar written, the seminar that you had? Was there a written copy of it other than this outline?

THE WITNESS: No; I worked from notes and an outline.

bsp-10

MR. BALDWIN: There was no draft of it?

THE WITNESS: No; I do not write out lectures; I use an outline I distribute to participants which this is, or to students, and then my own notes to work from this.

MR. BALDWIN: Was there a tape recording?

THE WITNESS: No, not to my knowledge.

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MR. KELLEY: That's all.

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Tape 12

er 20

MR. BRIN: I have a couple of things, about 30 seconds.

EXAMINATION BY COUNSEL FOR THE DEFENDANTS

BY MR. BRIN:

Q Dr. Corn, what is the date of this resume of your professional qualifications; that is, Exhibit 1, as best you recall?

A That is part of a resume that was up to date prior to my assuming this position. This came from my file downstairs. I learned that the publications end of it is missing, and I have not looked at this since coming upon my present position, so the date of this would be October of last year.

Q All right, 1975?

A Yes.

Q And I assume that as of that time it was complete with reference to the categories that are set out there?

A To the best of my knowledge it is complete, yes.

Q And as to any preparation or firm that is not listed therein, can we take it that you, through that date, had not performed any consultative work for them or with them?

A It was my practice to add to that yearly, and I don't think I have missed any.

er 21

MR.BRIN: All right, that's all I have.

BY MR. ARMSTRONG:

Q Dr. Corn, in May of 1969, with respect to Amosite asbestos, was there simply insufficient data for dosage-response prediction of exposed populations?

MR. BALDWIN: Just a minute. I object to that because he is either going to cut the fish or cut bait in this deposition.

Now, he said he is not qualified to give a biological opinion, an opinion as to the biological effects of asbestos on humans, so I am going to object on that basis.

THE WITNESS: You can answer the question in a different way. I had only one guideline to work with as an engineer at that point in time, the Chrysotile guideline.

BY MR. ARMSTRONG:

Q Referring to page 6 of Exhibit 4, please, I call your attention to the next-to-the-last paragraph, the first sentence of the paragraph, and ask you to take a moment and read that to yourself.

MR. KLAPPS: I am sorry, what page?

MR. ARMSTRONG: Page 6.

BY MR. ARMSTRONG:

Q Does that sentence read as follows: "The problem

er 22 faced today with respect to Amosite asbestos is that there simply is insufficient data for dosage-response prediction of exposed populations"?

A. Yes.

Q. Does it read that way?

A. Yes, it reads that way.

Q. Did you believe that statement when you made it?

A. I am quoting, and that is referenced at the bottom of the page to Herbert Stokinger, the then, and I think still, head of the Occupational Health Toxicological Laboratories of what is now the National Institute of Occupational Safety and Health. That is Dr. Stokinger's opinion as presented in the paper referenced. It is not my opinion.

Q. Now, on the page previous, page 5, you have quoted from another source set forth in the first two paragraphs, and on that quotation you put the statement within quotation marks, is that true?

A. That's correct.

Q. Now, referring back to the sentence I read on page 5, that is not surrounded by quotation marks, is that correct?

A. That is right. That is not a direct quote, that is a summary statement extracted from the presentation of

er 23 Stokinger.

Q Now, when you put that statement in your report to Pittsburgh Corning without quotes, did you believe, with a reasonable degree of scientific accuracy you then possessed, it to be accurate?

A In answer to your question, it is not quite a question of believing in the way I am accepting the view of Stokinger who I have the highest regard for and in which -- this is his field of expertise. Therefore, I would say I do not believe or not believe; I am referring someone who wishes at a point in time reading from the person best qualified to give an opinion to the person who can do so. I haven't one belief one way or the other on that statement as stated here.

Q To your knowledge, did Dr. Stokinger's statement accurately reflect the literature as it then existed?

A To the best of my knowledge to comprehend that literature I would say, yes, that as I said earlier, I find the epidemiological literature very difficult to comprehend.

Q Now, do you recall during Mr. Baldwin's examination you testified, and this is merely in substance, and if I misstate it, please correct me, I will not do so intentionally, that you had no firm evidence that there was a difference in

er24 biological effects of Chrysotile and Amosite asbestos.

Now, Dr. Corn, did you have any firm evidence that the biological effect of those two types of asbestos were the same?

A. No.

MR. ARMSTRONG: No further questions.

THE WITNESS: No.

MR. ARMSTRONG: Thank you.

MR. FOWLER: I have a couple of questions.

XXXX EXAMINATION BY COUNSEL FOR THE PLAINTIFFS

BY MR. FOWLER:

Q. Dr. Corn, may I correctly assume that you did not make available your reports concerning the Tyler plant or any information you had that was not contained in the reports to the laborers at the Pittsburgh Corning plant in Tyler?

A. That is correct.

Q. All right. Did you make that kind of information available to any other person holding themselves out as being a representative of or affiliated with the Oil Chemical and Atomic Workers International Union?

A. No.

Q. Have you had any contact whatsoever with anycne holding themselves out to be affiliated with the OCAW at any

er 25 time concerning the Tyler plant and your work there?

A No.

MR. FOWLER: That's all I have.

XXX EXAMINATION BY COUNSEL FOR THE DEFENDANTS

BY MR. McGOUGH:

Q Dr. Corn, referring to your meeting with Mr. Jim Bierer, which I think you placed as sometime shortly before your letter of October 7, 1969 --

A Yes.

Q -- state whether or not in the course of that meeting you were informed or you discussed with Mr. Bierer the fact that following your visit there, were mandatory requirements for wearing masks at Tyler imposed, if you recall?

A No, I do not. That may very well have occurred. I don't think I have anything on record to so indicate. And I am not sure I discussed it with anyone. I think it is quite possible that that did happen. We talked after my visit -- I stressed this absence of respirators, and I think it would be quite logical to assume respirators went into much more prevalent usage after the visit.

Q And you may or may not have discussed that with Mr. Bierer?

A No, I do not remember that.

er 25

Q Would you state whether or not you discussed with Mr. Bierer at that meeting that following your visit there was a new program for annual chest X rays for employees set up? Were you aware that that was done, sir, or whether or not it was done?

A No.

Q Now, I want to refer you to what the plaintiffs have introduced in evidence from your file as PX-14, a letter dated March 25, 1970, from you to Mr. Hyde.

A Yes.

Q Would you take a minute and look at that, particularly with respect to the second paragraph?

A Yes.

Q I want to ask you a couple of questions. Is it correct, Dr. Corn, that when dealing with, let's say, asbestos, tha even the best ventilation system in the world may not be effective depending on how it is handled and how the operators and the people that work and run in the plant act?

MR. BALDWIN: Object to that as leading.

MR. McGOUGH: I am asking him to state whether or not. That's not leading.

THE WITNESS: I can give a very broad answer on ventilation systems.

ex 27

If you go to total enclosure, such as we go to in the radiation sector, then it is very difficult for any employee or representative of the employee or anyone to interfere with the operation of the system.

This is not a total enclosure system, this utilizes local exhaust hoods and booths. That system is very subject to maintenance and work practices.

BY MR. McGOUGH:

Q So that --

MR. BALDWIN: I object to that as not being responsive.

MR. McGOUGH: Off the record.

(Discussion off the record.)

BY MR. McGOUGH:

Q Is it fair to state whether or not -- Doctor, is it fair to say that regardless of how much money or time you spend on a ventilation system that is not a completely closed system, you may or may not be able to prevent, if you will, damage or injury to people working in that area?

A That's a question I really can't speculate on. It's got too much ingredients on it to answer, really.

MR. KELLEY: I object to it as speculative.

MR. BALDWIN: I object to it as having too many

er 28 ingredients, distasteful.

BY MR. McGOUGH:

Q Do you still believe, as you said to Mr. Hyde on March 25, 1970, and, "The best ventilation system can be fouled up by poor housekeeping practices or procedures by operators which do not utilize the available ventilation facilities"?

A Yes.

Q Do you know if you discussed that with Mr. Bierer?

A I don't recall.

Q You may or may not have?

A No, I don't think we got into that point.

The supervisory role in a plant must be exerted. This discussion has a long history relating to the Port Alleghany plant. The Port Alleghany design was implemented with some exceptions to my design, and it is one of those exceptions that led to the excursions beyond the limit.

What I was saying here is if a design is implemented and supervisory control is exerted, then you could meet, in the case of asbestos -- I am on record at the New York Academy of Sciences reading on asbestos, you can meet 2 fibers per cc, I believe with no conventional local exhaust design, you can meet ig.

er 29 In this particular facility with the kind of situation, supervisory and everything else, I thought we were going to have a tough time with the nature of the process, the supervisory control, of meeting 5, that's what I am stating here.

MR. McGOUGH: No further questions.

MR. BALDWIN: That shows good discretion on your part.

MR. BERNAYS: I pass.

MR. BARON: I have one question here.

XXXX EXAMINATION BY COUNSEL FOR THE PLAINTIFFS

BY MR. BARON:

Q I notice on your resume that you have done some work for the Thermal --

A Insulation Manufacturers Association.

Q Who is that, Doctor?

A That is a trade group of manufacturers producing asbestos, fiberglas, ceramic fibers, mineral wool, and I have been doing research for them at the University of Pittsburgh right up to the time I assumed this position, and on a couple of occasions I had been asked to independently involve myself in some aspects of their operations.

Pr - 12 Q This is just a trade organization of asbestos

er 30 insulation manufacturers?

A. They jointly support a research project to the university, quite a large research project which they share the cost of. It is assessed among the members.

Q. How long have they been doing this, do you know?

A. At the University of Pittsburgh our first award was in '73, I believe. They have been sponsoring research since the sixties, some of it at Berkeley, I know of, some at Harvard, and we picked up some, Pittsburgh.

Q. One other question here. Did you know Mr. McGough before today?

A. I thought we had met once. The name looked familiar, but when I saw him, I thought, no, we hadn't.

MR. McGOUGH: I used to wear my hair short.

BY MR. BARON:

Q. Dr. Corn, on your resume, you list here that you have done some work for Reed, Smith, Shaw & McClay in Pittsburgh, Pennsylvania. What type of work was that, sir?

A. I appeared for them as an expert witness, I believe, in a tow boat case on the Ohio River and the Monongahela River.

Q. Was that the only occasion you have had to work for that law firm?

er 31

A. I think it was.

Q. Was that a hygiene problem on that tow boat?

A. I evaluated the concentrations of Diesel fumes aboard the boat to try to determine if they were above or below standards for those components.

Q. Was this a personal injury case?

A. Yes.

Q. And you testified for the defendant in that case?

A. Yes. The concentrations were less than 5 percent of the standards in all cases.

Q. But you found what that law firm was contending, at any rate, in that particular case?

A. Yes.

Q. Was Mr. McGough the lawyer you were working for in that case?

A. No.

Q. Who was it, if you recall?

A. It wasn't Mr. McGough. Ayer was his first name. What is --

MR. McGOUGH: A retired partner now, his name is A. R. Hill, former great left-handed pitcher for the University of Pittsburgh.

THE WITNESS: That's who it was.

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BY MR. BALDWIN:

Q One final question. Is Tony Dorsett on a Mellon endowment?

A Gee --

(Discussion off the record.)

(Whereupon, at 4:15 p.m., the taking of the deposition in the above-entitled matter was concluded.)

(Signature not waived.)