

FILE NAME: Chevron (CHV)

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John Spence

11/7/91

7. Started w/ Chevron 1945, retired 1982
8. research chemist → Harvard for I/H 1954
10. same floor as medical director
12. he led 4-5 I/H's by mid-1960's
17. all refineries had safety engs., there were annual mtgs
22. he attended API Medical Advisory Committee mtgs  
which had an I/H subcommittee
31. learned from Dinker + Hatch 1954, had Potley's, Brandt 1947
35. knew insulators at risk of A'sis in 1955
40. Chevron refineries had insulator precautions + mtg down  
to protect against asbestos in 1955
53. safety engineers heard about asbestos from NSC, API

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Mr. John A. Spence  
1081 Lea Drive  
San Rafael, CA 94903

November 7, 1991  
CSR No. 7645  
Job No. 18886-2

Re: Harold Dennis vs. Abex Corporation

The original deposition transcript taken in the above matter on November 7, 1991 is now available for reading and signing at our office.

For 35 days following this notice the deponent, either in person or by a signed letter, may change the form or the substance of the answer to any question, and may either approve the transcript of the deposition by signing it, or refuse to approve the transcript by not signing it.

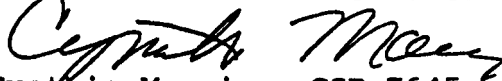
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You may read and correct your testimony from a certified copy of the original transcript which may be obtained only by the parties to this action at that party's expense.

Please telephone this office for an appointment if you desire to review the original deposition transcript.

Sincerely,

CALNORTH REPORTING SERVICE

  
Cynthia Manning, CSR 7645

cc: Counsel of record

11/10/91  
COPY

1 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA  
2 IN AND FOR THE COUNTY OF SAN FRANCISCO

3 - - -

4 HAROLD DENNIS, )

5 Plaintiff, )

6 vs. )

No. 902130

7 ABEX CORPORATION, et al., )

8 Defendants. )  
9 \_\_\_\_\_

10  
11  
12  
13  
14 VOLUME I

15 DEPOSITION OF JOHN A. SPENCE

16 Thursday, November 7, 1991

17 (Pages 1 - 69)  
18  
19  
20  
21

22 Reporter:

23 CYNTHIA L. MANNING,

24 CSR No. 7645  
25  
26

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## I N D E X

## WITNESS:

John A. Spence

## EXAMINATION BY:

Page

James L. Hand, Esq.

5

Robert Beale, Esq.

63

## FURTHER EXAMINATION BY:

James L. Hand, Esq.

64

NOTE: No deposition exhibits were marked.

- - -

1 BE IT REMEMBERED that, pursuant to  
2 Subpoena, and on Thursday, the 7th day of  
3 November, 1991, commencing at the hour of 3:10  
4 p.m., at the Law Offices of BRAYTON & ASSOCIATES,  
5 999 Grant Avenue, Novato, California 94948,  
6 before me, CYNTHIA L. MANNING, CSR No. 7645, a  
7 Notary Public in and for the County of Sonoma,  
8 State of California, there personally appeared

9 JOHN A. SPENCE,  
10 called as a witness by the Plaintiff herein, who  
11 being by me first duly sworn, was thereupon  
12 examined and interrogated as is hereinafter set  
13 forth.

14 The law offices of BRAYTON &  
15 ASSOCIATES, 999 Grant Avenue, Novato, California  
16 94948, by JAMES L. HAND, Esquire, appeared as  
17 Counsel on behalf of the Plaintiff; and

18 The law offices of JACKSON &  
19 WALLACE, 33 New Montgomery Street Tower, 18th  
20 Floor, San Francisco, California 94105, by ROBERT  
21 BEALE, Esquire, appeared as Counsel on behalf of  
22 Plant Insulation; and

23 The law offices of HARDIN, COOK,  
24 LOPER, ENGEL & BERGEZ, 1999 Harrison Street, 18th  
25 Floor, Oakland, California 94612, by JAMES P.  
26 DOWNS, Esquire, appeared as Counsel on behalf of

1 Western MacArthur; and

2 The law offices of SEDWICK, DETERT,  
3 MORAN & ARNOLD, One Embarcadero Center, 16th  
4 Floor, San Francisco, California 94111, by MARK  
5 B. JACOBS, Esquire, appeared as Counsel on behalf  
6 of Chevron Corporation.

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## EXAMINATION

1  
2 BY MR. HAND: Q. Would you please  
3 state your name for us.

4 A. John A. Spence.

5 Q. Mr. Spence, I am James Hand. I  
6 introduced myself to you earlier today.

7 Our office represents a number of  
8 plaintiffs in asbestos litigation in Northern  
9 California, mostly involving shipyards, but with  
10 a fair amount of cases involving construction  
11 sites and refineries and powerhouses and other  
12 locations.

13 We have subpoenaed you today to come  
14 testify before us so that we can learn more about  
15 the events that give rise to some of the asbestos  
16 litigation in Northern California.

17 Have you ever been deposed before?

18 A. Yes.

19 Q. Can you tell me on approximately  
20 how many occasions?

21 A. I guess two times.

22 Q. You may remember, but I will remind  
23 you, that although we're in informal surroundings  
24 here today, you are giving testimony under oath,  
25 just as you would be in a court of law.

26 Is that understood?

1 A. Fine.

2 Q. And if I ask a question that you  
3 don't understand, please let me know, and I'll  
4 rephrase it.

5 Is that all right?

6 A. Fine.

7 Q. Am I correct that on neither of the  
8 other two occasions when you gave deposition  
9 testimony was asbestos at issue?

10 A. Correct.

11 Q. You are presently retired; is that  
12 correct?

13 A. Yes.

14 Q. Can you tell us when you retired?

15 A. '83, '82.

16 Q. Have you had an opportunity before  
17 you came here today to give deposition testimony  
18 to meet with counsel for Chevron Corporation?

19 A. Restate that, please.

20 Q. Have you had a chance before you  
21 came here today to discuss your upcoming  
22 deposition with counsel for Chevron Corporation?

23 THE WITNESS: You're counsel for -- yeah.  
24 You're not with Chevron.

25 Okay. Yes.

26 MR. HAND: Q. And you have an

1 attorney, Mr. Mark Jacobs, with you here today;  
2 is that correct?

3 A. Yes.

4 Q. Can you tell us when you first  
5 began work for Standard, and we'll get to the  
6 exact name in a moment, but the Standard or  
7 Chevron group of companies?

8 A. 1945.

9 Q. And what was the company known as  
10 at that time that employed you?

11 A. Chevron -- I guess it was Chevron  
12 Research.

13 Q. Or I suppose it wasn't even known  
14 as Chevron back in '45, was it? It was still  
15 Standard Oil?

16 A. No, I think the research operating  
17 company might have been Chevron.

18 Q. And can you tell us your first  
19 position with Chevron Research?

20 A. Research chemist.

21 Q. And how long did you remain with  
22 Chevron Research?

23 A. By that do you mean with Standard?

24 Q. Let's just take the company called  
25 Chevron Research first.

26 A. Nine years.

1 Q. And that would take us up to about  
2 1954?

3 A. Yes.

4 Q. And then what did you do?

5 A. The company elected to send me back  
6 to Harvard.

7 Q. And what did you study back at  
8 Harvard?

9 A. Industrial hygiene.

10 Q. And how long were you at Harvard?

11 A. One year to get a masters.

12 Q. And then you obtained your masters  
13 degree about 1955?

14 A. Yes.

15 Q. And did you return to Chevron  
16 Research?

17 A. No, I returned to the corporation.

18 Q. At that time Chevron Corporation?

19 A. Yes, I guess -- yes, probably was.

20 Q. And were you with Chevron  
21 Corporation then from 1955 until you retired?

22 A. Yes.

23 Q. And I'm sorry, I missed the year  
24 that you retired. 1983 you said?

25 A. I guess it was mid-'82.

26 Q. When you began work at Chevron

1 Corporation in 1955 what was your job position?

2 A. Industrial hygienist.

3 Q. Did you have a -- strike that.

4 What was the exact title of the position,  
5 was that it, industrial hygienist?

6 A. Corporate Industrial Hygienist is  
7 as close as I can come.

8 Q. A lot of these events occurred a  
9 long time ago, so we understand if you can just  
10 give us your best estimate or the best of your  
11 recollection. If you don't remember, let us know  
12 and that's fine as well.

13 A. Thank you.

14 Q. At some point at Chevron  
15 Corporation did you become the head of the  
16 Industrial Hygiene Department?

17 A. Yes.

18 Q. And when would that have been?

19 A. Well, I was always the head.

20 Q. When did they actually have a  
21 formal department that they called it?

22 A. Well, they had a section -- you're  
23 playing with words on a department. I would say  
24 they had a section in Safety Division --

25 Q. Fine.

26 A. -- within a matter of a couple of

1 years because we started adding people, but I was  
2 the manager of the Chevron Environmental Health  
3 Center later.

4 Q. And when did that begin?

5 A. That would be -- I really don't  
6 remember the date.

7 Q. The approximate year? Early '60s?  
8 Mid-'60s?

9 A. Let's see. That would be '82 --  
10 '72. Somewhere around '70. '70, '72.

11 Q. I need a little more help  
12 understanding the structure in 1955.

13 A. Okay.

14 Q. Was there a Safety Division?

15 Is that the term you used?

16 A. There was a Corporate Safety  
17 Division. The fledgling industrial hygiene was  
18 put under the Safety Division, so it would  
19 effectively work through the field safety system;  
20 but there was also a broken line where I reported  
21 to the medical director of the corporation.

22 Q. How would you characterize the  
23 relationship between the medical director and the  
24 Corporate Safety Division?

25 A. It was on the same floor very close  
26 and I was the liaison between the two.

1 Q. But the two were separate, one did  
2 not report to the other?

3 A. That's correct.

4 Q. Who would Corporate Safety Division  
5 have reported to in 1955?

6 A. General manager of personnel for  
7 the corporation.

8 Q. And within Corporate Safety  
9 Division there were sections; is that correct?

10 A. Yes.

11 Q. And one of those sections was  
12 industrial hygiene?

13 A. Right.

14 Q. What were the other sections?

15 A. Compensation, Workmen's  
16 Compensation. So I guess it would be three,  
17 basically three sections.

18 Q. I missed one. Industrial Hygiene.

19 A. Safety.

20 Q. And Worker's Compensation?

21 A. And Worker's Compensation.

22 Q. Then in 1955 were you head of the  
23 industrial hygiene section?

24 A. Head of myself, yes.

25 Q. Was it a one-person section?

26 A. For the first year.

1 Q. And then about 1956 additional  
2 professionals were hired into that section?

3 A. Yes.

4 Q. And what were their job titles?

5 A. Industrial hygienists.

6 Q. You then began to supervise other  
7 industrial hygienists?

8 A. Yes.

9 Q. Let's take a look at what the  
10 structure was like, let's say, about ten years  
11 later, mid-'60s. Was there still a Corporate  
12 Safety Division?

13 A. Yes.

14 Q. And were there still the same three  
15 sections?

16 A. Yes.

17 Q. But the industrial hygiene section  
18 had changed so that instead of having one  
19 professional, yourself, there were several  
20 professionals?

21 A. (Witness nods head.)

22 Q. Is that "yes"?

23 A. Yes.

24 Q. Because of the court reporter, we  
25 need you to answer verbally.

26 A. That's right. I get carried away.

1           Q.     Can you tell me about how many  
2 industrial hygienists were on board by the  
3 mid-'60s?

4           A.     I am afraid I'm not very close on  
5 this. There weren't many, four, five, something  
6 in that order. Somewhere in there we were  
7 getting toxicologists, but I can't tell you when  
8 just exactly.

9           Q.     What would the organization's  
10 structure have been?

11          A.     Pardon me?

12          Q.     Would that have been within  
13 industrial hygiene, within safety, or would this  
14 have been some other organizational unit?

15          A.     They were with the Safety  
16 Division -- I mean the Industrial Hygiene  
17 Division.

18          Q.     So around the mid-'60s you were  
19 supervising perhaps three or four other  
20 industrial hygienists and maybe one or two  
21 toxicologists?

22          A.     I can't tell you the mid-'60s. I  
23 don't remember the dates. It could be later. I  
24 just don't remember.

25          Q.     Once the toxicologists were hired,  
26 were they under your supervision?

1 A. Yes.

2 Q. When you were first employed by  
3 Chevron Corporation as an industrial hygienist,  
4 what were your duties?

5 A. To develop a program to protect the  
6 employees, to make sure that our products were  
7 safe for their intended use.

8 Q. Which employees were you concerned  
9 with protecting the health and safety of?

10 A. Corporate employees, corporate  
11 family.

12 Q. By that do you mean all employees  
13 throughout the family of companies?

14 A. Chevron.

15 Q. So it would not have been simply  
16 employees of Chevron Corporation, it would have  
17 always included, for instance, employees of  
18 Chevron Chemical?

19 A. Yes.

20 Q. In the mid-1950s, to the best of  
21 your memory, what was the Chevron organizational  
22 unit that operated the Richmond refinery?

23 A. Well, the operating company. The  
24 names change over the years, so I can't tell you  
25 in the '50s just exactly what the name was.

26 Q. At some point the Richmond refinery

1 was operated by a company referred to as Western  
2 Operations; is that correct?

3 A. Yes. Yes.

4 Q. What's your understanding of the  
5 full name of that company?

6 A. I don't understand your question.

7 Q. Was the full name of the company  
8 Western Operations, Inc., or was it Chevron  
9 Western Operations, Inc., or what name do you  
10 understand the company had?

11 A. I just recall Chevron -- Western  
12 Operations, Inc., as an operating company of  
13 Chevron.

14 Q. And you understood in 1955 when you  
15 became the industrial hygienist at Chevron  
16 Corporation that one of your duties was to  
17 establish a program of industrial hygiene to  
18 protect the health and safety of workers of  
19 Western Operations, Inc.?

20 A. No. No. They developed their own  
21 program. I merely was there to counsel, advise.

22 Q. What do you understand was the  
23 program of industrial hygiene in effect at the  
24 refineries in the mid- and late 1950s?

25 A. Well, the safety engineer was in  
26 charge of advising the local management, and

1 safety provided coverage instructions and safety  
2 equipment, and they had regular safety meetings  
3 with the employees to educate and advise on  
4 hazards.

5 Q. As you understood it, by the late  
6 1950s each refinery had one or more safety  
7 engineers?

8 A. To the best of my recollection.

9 Q. Do you have any understanding as to  
10 whether there was a safety manual provided to the  
11 local refineries that was not developed at each  
12 refinery one by one; that is, I don't care  
13 whether it's a manual developed by Western  
14 Operations and disseminated to all the refineries  
15 through Western Operations, or developed by  
16 Chevron Corporation, or developed by an outside  
17 company.

18 What I am looking for is your best  
19 recollection, in essence, on did each refinery  
20 develop their own safety and health manual, or  
21 were they provided some material outside of the  
22 local refinery?

23 Do you understand what I mean?

24 MR. JACOBS: I am going to object to the  
25 question as compound, vague. It's got ambiguous  
26 components and a couple of non sequiturs within

1 it, which make it argumentative.

2 MR. HAND: Q. You may go ahead, Mr.  
3 Spence.

4 MR. JACOBS: Did you understand the  
5 question? If you don't understand the question,  
6 you can ask Mr. Hand to rephrase the question.

7 THE WITNESS: Rephrase it. Apparently I  
8 missed the point.

9 MR. HAND: Q. Well, I don't think you  
10 missed the point. The question is whether  
11 material was provided from outside of the  
12 refinery or everything was initiated and  
13 generated internal from the refinery?

14 A. That's easy to answer. Information  
15 was provided to the refinery.

16 Q. And who provided that information?

17 A. Well, we provided it from the  
18 corporation, industrial hygiene. The corporation  
19 safety provided it. The API provided it. They  
20 had an annual safety engineers meeting where  
21 representatives from all the refineries came to  
22 the corporation and information was provided at  
23 that time.

24 Q. Do you recall by the late 1950s  
25 there being some type of an organized manual that  
26 would be periodically updated as opposed to

1 merely a series of separate communications  
2 provided?

3 Was it organized in some way that you can  
4 recall by chapters or numerically?

5 A. I don't recall specifically such a  
6 manual, but I wouldn't necessarily have that  
7 manual.

8 Q. You don't recall being provided a  
9 draft of a manual for periodic or annual  
10 revision?

11 A. No, not a manual.

12 Q. What I am trying to understand,  
13 then, is by the late 1950s, if a question on  
14 industrial hygiene arose at the local refinery,  
15 what the nature of the material is that they  
16 would have to consult to address that question,  
17 whether they could have, for instance, looked in  
18 Chapter Number 3 of the Safety Manual, or looked  
19 at Section 1.7 of the Industrial Hygiene Manual  
20 or the Operating Manual?

21 What do you understand existed at the  
22 local refineries by the late 1950s that addressed  
23 industrial hygiene concerns?

24 A. I really don't understand your  
25 question.

26 MR. JACOBS: That's because it's

1 argumentative and compound and it assumes facts  
2 which haven't been testified to, and there are  
3 certain aspects of it that are vague and others  
4 which are ambiguous. So maybe Mr. Hand would  
5 rephrase the question for you.

6 THE WITNESS: I just don't understand  
7 "the manual."

8 MR. HAND: Q. Okay. Sure. Well, that  
9 is, for instance, the local refinery has a  
10 question on -- let me strike that.

11 What would a chemical be that would be  
12 found in many refinery operations that would  
13 require some precautions be taken in the late  
14 '50s? Like methyl or ethyl ketone?

15 A. Phenyl. What's your question then?

16 Q. Phenyl?

17 A. Well, yeah.

18 Q. Is that one of the chemicals that  
19 one would have to take some precautions when  
20 handling?

21 A. Yes.

22 Q. Phenyl.

23 A. I just used that.

24 Q. If the question arose in the local  
25 refinery in the late 1950s as to what precautions  
26 could be taken when working with phenyl, would

1 the local refinery personnel look in the P  
2 Section under phenyl? Or would they have a  
3 section of a manual that addresses chemicals?  
4 Would the manual be organized numerically,  
5 alphabetically?

6 I'm trying to understand what existed at  
7 that time.

8 MR. JACOBS: Let me object to the  
9 question. It's argumentative in any one of a  
10 number of ways, James, because it assumes the  
11 existence of things which, number one, may not  
12 exist; number two, if they do exist, may not be  
13 identical over the broad variety of locations  
14 which are implicit in your question.

15 I mean, Mr. Spence has described safety  
16 procedures at a local level, and you're trying to  
17 extrapolate all the information and put it into a  
18 manual which doesn't seem to exist. And it makes  
19 your questions argumentative, and it makes them  
20 compound in a way that makes it very difficult  
21 for Mr. Spence to answer.

22 MR. HAND: Q. Well, all I'm trying to  
23 look at is whether there was some type of manual.

24 Can you give us your best recollection of  
25 what you understood existed at the time at the  
26 refineries?

1           A.     There was a wide variety of  
2 literature, sources; for example, from API, for  
3 example from us, from other safety engineers,  
4 from other refineries. So they had all kinds of  
5 reference material to go to.

6           Q.     But not organized in a manual of  
7 some sort and by subject matter?

8           A.     I couldn't tell you what the  
9 individual refinery had at that time.

10          Q.     I believe earlier you described  
11 annual meetings of plant safety personnel?

12          A.     Corporate meetings, yes.

13          Q.     What do you mean by a corporate  
14 meeting?

15          A.     Well, it would be safety engineers  
16 from, say, the Richmond refinery, the El Segundo  
17 refinery, Chevron Chemical, and any other  
18 operating unit that wanted to send a person.

19          Q.     Have you previously addressed some  
20 of those meetings?

21          A.     Yes.

22          Q.     Have you previously attended  
23 meetings of the API?

24          A.     Yes.

25          Q.     Which sections of the API have you  
26 attended meetings of?

1           A.     The name of the sections varies  
2 with time, but it was initially the Medical  
3 Advisory Committee.

4           Q.     And subsequently?

5           A.     Well, the name changed. I am not  
6 going to go through all of the changes.

7           Q.     Can you remember any other  
8 variations of the name?

9           A.     Not really. Not accurately, no. I  
10 think one was possibly Health and Biological  
11 Science.

12          Q.     Do you recall there being at some  
13 point in the past an Industrial Hygiene  
14 Committee?

15          A.     Yes, that was a subcommittee of  
16 that committee.

17          Q.     Industrial Hygiene Committee was a  
18 subcommittee of the Medical Advisory Committee?

19          A.     Right. Most medical directors took  
20 their industrial hygienists as their technical  
21 advisors.

22          MR. HAND: I'm sorry, could you -- Court  
23 Reporter, could you read that back?

24                 (The Reporter read the record as follows:

25                 "Right. Most medical directors took  
26 their industrial hygienists as their

1 technical advisors.")

2 MR. HAND: Q. Let's see if I  
3 understand this a little better.

4 In the late 1950s there would be meetings  
5 of something called the Medical Advisory  
6 Committee of the API?

7 A. (Affirmative nod.)

8 Q. Is that right?

9 A. Yes.

10 Q. And there were then subcommittees,  
11 is that an accurate way to describe it?

12 A. Yes.

13 Q. And one of those subcommittees was  
14 the Industrial Hygiene Subcommittee?

15 A. Yes.

16 Q. What were some of the other  
17 subcommittees of the Medical Advisory Committee?

18 A. Over the years there were so many  
19 subcommittees, I'm sorry, I can't -- I can't  
20 recall any of them.

21 Q. I know you can't recall all of  
22 them. Can you recall one or two for us?

23 A. There was a subcommittee on  
24 asphalt.

25 Q. And that would have been within the  
26 Medical Advisory Committee?

1 A. Yes.

2 Q. Can you recall --

3 A. That was evaluating toxicology of  
4 asphalt.

5 Q. Can you recall one or two others?

6 A. Not in the 1950 era. Over the  
7 years there was so many. I just can't separate  
8 them.

9 Q. Can you recall any names of any of  
10 the other subcommittees at any time?

11 A. Well, there was one on noise.

12 Q. Any on specific chemicals?

13 A. I can't go back to the 1950s.

14 Sorry.

15 Q. Well, or even some time in the  
16 1960s or the 1970s?

17 A. I draw a blank.

18 MR. JACOBS: It's okay.

19 MR. HAND: Q. Can you remember any  
20 more at this time?

21 A. I am blank now.

22 Q. That's fine. If it comes to you a  
23 little later, let us know. Is that all right?

24 A. All right.

25 Q. Do you recall there ever being any  
26 subcommittees that addressed medical or safety

1 aspects of silica?

2 A. No.

3 Q. Do you recall there ever being any  
4 subcommittees that addressed medical or safety  
5 aspects of asbestos?

6 A. No. There was a subcommittee on  
7 product labeling.

8 Q. There was a subcommittee on product  
9 labeling?

10 A. Yes.

11 Q. Did they, to the best of your  
12 recollection, have any discussion about asbestos?

13 A. No.

14 Q. Do you recall there ever being any  
15 discussions at any of these subcommittees as  
16 regards asbestos, including the Industrial  
17 Hygiene Committee?

18 A. No, I don't recall any.

19 Q. Do you recall there ever being any  
20 discussions at any of these subcommittees on the  
21 methods of dust control?

22 A. No, there was no subcommittee on  
23 dust control.

24 Q. I understand it was not a  
25 subcommittee on dust control. My question is  
26 whether dust control was ever discussed at any of

1 (Counsel and witness confer.)

2 THE WITNESS: Pardon?

3 MR. HAND: Q. I'm sorry. Your  
4 attorney was talking to you so we lost the  
5 question.

6 Were there any meetings of the Industrial  
7 Hygiene Subcommittee that you attended where  
8 asbestos was ever discussed?

9 A. Not to the best of my recollection.

10 Q. Do you recall ever being told by  
11 any other employees -- strike that.

12 Do you recall ever being told by anyone  
13 of discussions of asbestos at any Industrial  
14 Hygiene Subcommittees meetings?

15 A. Not that I recall.

16 Q. Do you recall ever seeing minutes  
17 of any Industrial Hygiene Subcommittee meetings  
18 where the issue of asbestos was addressed?

19 A. No.

20 Q. And let's make it a little broader.  
21 Have you ever been present where there was any  
22 discussion of asbestos where there were persons  
23 present representing other oil refinery  
24 companies?

25 MR. JACOBS: Are we talking about at the  
26 API now?

1 MR. HAND: No. Anywhere.

2 Q. For instance, if you went to visit a  
3 Shell refinery, or to visit a Phillips refinery,  
4 or you just met with a fellow industrial  
5 hygienist from Exxon, and one of the issues that  
6 you discussed or that others discussed in your  
7 presence was asbestos.

8 So the question is, then, do you recall  
9 there ever being any discussion of asbestos where  
10 persons were present representing other refinery  
11 companies?

12 A. I do not recall it; however, it is  
13 not improbable or impossible that at the American  
14 Hygienist Association there would have been a  
15 technical paper on measuring asbestos and I could  
16 have been in the audience. So, you know, I can't  
17 say no; but I don't recall it.

18 Q. All I am asking is whether you  
19 recall any.

20 A. Yeah, well, I don't recall.

21 Q. And outside of formal meetings, did  
22 you, yourself, ever discuss asbestos with anyone  
23 from another refinery company?

24 A. I don't recall.

25 Q. Do you recall ever seeing any  
26 written information evaluating the thermal

1 effectiveness of nonasbestos versus  
2 asbestos-insulating materials?

3 A. No.

4 Q. Do you have any understanding as to  
5 whether health aspects of asbestos was ever  
6 discussed at any meeting of the Medical Advisory  
7 Committee?

8 A. I am sure it was.

9 Q. Why?

10 A. Pardon?

11 Q. Why?

12 A. Because it's just logical that it  
13 would have been discussed. I do not recall the  
14 specific situation.

15 Q. Did you attend any meetings of the  
16 Medical Advisory Committee as opposed to the  
17 Industrial Hygiene Subcommittee?

18 A. Yes.

19 Q. Those two bodies would meet  
20 separately; is that correct?

21 A. They could meet together and they  
22 could meet separately.

23 Q. Do you recall there being publicity  
24 coming to your attention in approximately the  
25 mid-1960s of research being done through the Mt.  
26 Sinai group and Dr. Irving Selikoff of health

1 aspects of asbestos?

2 MR. JACOBS: Objection, vague as to time.

3 Go ahead.

4 THE WITNESS: The name Selikoff and Mt.  
5 Sinai is familiar to me. I cannot recall  
6 specifically if it had anything to do with  
7 asbestos. I may or may not have been privy to  
8 it.

9 MR. HAND: Q. Do you recall by the  
10 mid-1960s any of the industrial hygiene books or  
11 other publications that you had access to at  
12 Chevron? Any of the classics in the field that  
13 you would have had in your possession or had  
14 access to?

15 A. I don't remember the names. That's  
16 a long time for me.

17 Q. Well, let me take a short break  
18 here, I think I have a few names, and maybe I can  
19 ask you about them in particular.

20 A. I might recognize them once I hear  
21 the name.

22 Q. I suspect you will.

23 Let's take a quick break then.

24 (Recess taken.)

25 MR. HAND: Q. Mr. Spence, I did after  
26 some work find my list of some of the old

1 publications.

2 Do you recall having access at Chevron in  
3 the early or mid-1960s to any of the publications  
4 by Patty?

5 A. Yes.

6 MR. BEALE: Patty?

7 MR. HAND: P-a-t-t-y.

8 THE WITNESS: Right. Frank Patty.

9 MR. HAND: Q. Frank Patty's  
10 "Industrial Hygiene and Toxicology"?

11 A. Right. We had that.

12 Q. Did you also have access to Drinker  
13 and Hatch's, "Industrial Dust"?

14 A. Yes, had that at school, had all of  
15 those at school.

16 Q. I'm sorry, what?

17 A. Yes.

18 Q. At school you also had used that as  
19 a reference book?

20 A. Yes.

21 Q. And that would have been at Harvard  
22 '54-55; is that correct?

23 A. Yes.

24 Q. And also Elkins' publication,  
25 "Chemistry of Industrial Toxicology"?

26 A. Yes.

1 Q. Also Brandt's publication,  
2 "Industrial Health Engineering"?

3 A. Yes.

4 Q. And wasn't there an early  
5 publication by Rutherford Johnstone?

6 A. The name is very familiar, but I  
7 can't visualize the book.

8 Q. Do you recall having access to L.T.  
9 Fairhaul's, "Industrial Toxicology," publication?

10 A. That's also a familiar name, but I  
11 can't visualize the book.

12 Q. The masters degree that you  
13 obtained from Harvard in 1955 would have been in  
14 industrial hygiene?

15 A. Yes.

16 Q. Do you recall during that year at  
17 Harvard studying any information or material on  
18 silicosis-producing materials, such as coal or  
19 silica?

20 A. Yes.

21 Q. And do you recall studying methods  
22 of reducing the risk of producing silicosis or  
23 similar diseases?

24 A. Yes.

25 Q. And do you recall among those  
26 methods of reducing the risk of producing

1       silicosis would be the use of masks and  
2       respirators?

3             A.       Yes.

4             Q.       And do you also recall that another  
5       method of reducing the risk of causing silicosis  
6       would be a wet-down operation?

7             A.       Yes.

8             Q.       And, indeed, the use of masks and  
9       respirators and wet-down procedures is something  
10      you studied generally as regards dust, nuisance  
11      dust; is that correct?

12            A.       Dust in general.

13            Q.       Dust in general. That's correct?

14            A.       Yes.

15            Q.       Do you recall during the year that  
16      you were at Harvard any mention whatsoever of  
17      asbestos?

18            A.       Yes.

19            Q.       In what context?

20            A.       Being able to look through the  
21      microscope and see fibers and different types of  
22      asbestos that are more dangerous than others.

23            Q.       And did you understand during your  
24      studies at Harvard that prolonged exposure to  
25      asbestos could produce a disease called  
26      asbestosis?

1 A. Prolonged and massive, yes.

2 Q. Do you recall any discussion of  
3 what trades or occupations were at risk for  
4 developing the disease asbestosis?

5 A. Yes.

6 Q. And what trades were they, as you  
7 understood it?

8 A. Well, I have to reach. Colored  
9 cloth, colored textiles, mining, manufacturing.

10 Q. Plant workers?

11 A. Yes.

12 Q. Would it also include the  
13 insulators, people who made their --

14 A. Yes.

15 Q. -- livelihood out of insulating?

16 A. They zeroed in, as I recall, on the  
17 shipyards; they were at the peak right then.

18 Q. And people who were applying  
19 asbestos-insulating materials to pipes?

20 A. Yes.

21 Q. And boilers?

22 A. Yes, particularly in enclosed  
23 places.

24 Q. And do you also recall during your  
25 year of study at Harvard a discussion of possible  
26 diseases resulting from prolonged exposure to

1 nuisance dust?

2 A. Yes, but I don't specifically --  
3 yes.

4 Q. And do you recall any discussion  
5 during your year at Harvard of the possibility  
6 that prolonged exposure to asbestos can increase  
7 the risk of developing cancer?

8 A. I don't recall that at Harvard.

9 Q. Do you recall that at a later date?

10 A. Yes.

11 Q. When was that?

12 A. I don't know.

13 Q. In what context?

14 A. Well, I don't know how I absorbed  
15 it.

16 Q. Do you recall whether it was an  
17 article that you read, or a meeting you attended,  
18 a discussion you overheard?

19 A. I don't know where I picked that  
20 up.

21 Q. After you began your work at  
22 Chevron Corporation, were there any industrial  
23 hygiene publications that you received on an  
24 ongoing basis, something published a couple of  
25 times or several times a year?

26 A. Well, the Industrial Hygiene

1 Journal, and seemed like we got data sheets.

2 Q. What's a data sheet in that  
3 context?

4 A. Well, they could come from  
5 anywhere. We were always writing away for data  
6 sheets. We would get them from different  
7 companies. We would get them from safety  
8 organizations, industrial hygiene.

9 Q. A data sheet would tell you the  
10 composition of a material?

11 A. And sometimes pretty general, yes.

12 Q. Do you recall any other  
13 occupational or trade journals that you received  
14 at Chevron Corporation?

15 A. My mind is a blank. We got quite a  
16 few of them. I would recognize them, but they  
17 don't come to mind right now.

18 Q. When you were at Harvard during  
19 your year of study there, did you learn how to  
20 perform air sampling?

21 A. Yes.

22 Q. And what did you learn about air  
23 sampling?

24 A. We learned the instruments, the  
25 equipment, the criteria for evaluating the data;  
26 actually did field samples at school.

1 Q. Do you recall whether any of that  
2 field sampling included measurements of the  
3 presence of asbestos?

4 A. We actually through a microscope  
5 measured fibers of asbestos.

6 Q. Had you collected it somewhere?

7 A. No.

8 Q. Where did you understand that  
9 asbestos originated from?

10 A. Laboratory samples.

11 Q. You did not, then, during your year  
12 of study at Harvard do any air sampling that  
13 included measurements for asbestos?

14 A. No.

15 Q. Did you at any time after that year  
16 at Harvard participate in or direct the air  
17 sampling that included measurements of asbestos?

18 A. I personally did not.

19 Q. Did you ever direct that other  
20 people take air samples of asbestos?

21 A. I don't recall any case.

22 Q. Was there at any time during any of  
23 the refinery operations, to the best of your  
24 knowledge, any sandblasting that occurred?

25 A. Yes.

26 Q. Did you ever make any

1 recommendations as to health and safety  
2 precautions to be followed when persons were  
3 engaged in sandblasting?

4 A. I personally didn't. My staff may  
5 have.

6 Q. Would you agree with me that based  
7 on the knowledge that you had by the mid-1960s,  
8 you would recommend that persons engaged in  
9 sandblasting wear masks or respirators when doing  
10 so?

11 A. Yes.

12 Q. And would you also agree with me  
13 that -- well, strike that.

14 Is it your understanding that there were  
15 persons working at, and I will call them Chevron  
16 refineries, and by that I mean refineries within  
17 the Chevron group of companies, whether it's  
18 Eastern Operations or Western Operations, or some  
19 other unit, but the question is, did you  
20 understand that there were persons working at  
21 refineries within the Chevron group of companies  
22 in either the 1950s or 1960s whose job title was  
23 insulator?

24 A. I couldn't answer that.

25 Q. Did you on any occasion prior to  
26 1970 visit any of the refineries operated within

1 the Chevron group of companies where you saw  
2 persons either applying or removing insulation  
3 materials?

4 MR. JACOBS: That's at any time before  
5 1970?

6 MR. HAND: Correct.

7 THE WITNESS: I don't recall, but I could  
8 have.

9 MR. HAND: Q. Can you give us some  
10 idea of the frequency with which you would visit  
11 any of the refineries?

12 Let's say during the late 1950s or early  
13 1960s, was that something unusual or relatively  
14 common, and what frequency are we talking about?

15 A. I would visit the Richmond refinery  
16 three or four times a year. El Segundo maybe one  
17 or two times a year in the '50s.

18 Q. And maybe some of the other  
19 refineries once in a while?

20 A. Once in a while. My staff might  
21 also visit.

22 Q. Were you aware by 1965 that  
23 asbestos-containing materials were in use for  
24 insulation purposes at any of the refineries?

25 A. I would guess so, yes.

26 Q. You believe so?

1 A. Yes.

2 Q. Do you recall ever providing any  
3 guidance to safety engineers at any of the  
4 refineries as to when masks and respirators  
5 should be used?

6 A. When I came back from Harvard I  
7 visited particularly the two big refineries  
8 there, and I was impressed that the safety  
9 engineers were well up on asbestos and they had  
10 active programs which I was pleased with.

11 Q. And as you understood it, they were  
12 aware by the mid-1950s of asbestos hazards and  
13 were taking appropriate precautions?

14 A. Yes, they had precautionary  
15 equipment and wet-down procedures.

16 Q. And as you understood it, they were  
17 generally following those procedures?

18 A. Yes.

19 Q. Did you ever recommend to refinery  
20 personnel that they investigate the suitability  
21 of nonasbestos-insulating materials to be used  
22 instead of asbestos-insulating materials?

23 A. I personally don't recall advising  
24 them on that.

25 Q. Would you agree with me that it is  
26 accepted industrial hygiene principle to

1       substitute nonhazardous materials for hazardous  
2       materials to the extent practicable?

3             A.     Yes.

4             Q.     Are you aware whether  
5       asbestos-containing spray acoustical material was  
6       ever applied at any of the refineries?

7             A.     No.

8             Q.     You were never consulted as to the  
9       desirability of applying spray acoustical  
10      material, were you?

11            MR. JACOBS: To what?

12            THE WITNESS: No.

13            MR. HAND: Q.     Let's say the isomax  
14      unit?

15            A.     No.

16            Q.     Is it also an accepted principle of  
17      industrial hygiene to provide the workers with  
18      information as to where hazardous materials are  
19      present so that they may take proper precautions?

20            A.     Yes.

21            Q.     So to the extent that persons are  
22      engaged in removing asbestos-containing materials  
23      in the 1960s, you would encourage that they be  
24      told that those materials contained asbestos if  
25      it is known?

26            A.     Yes.

1 Q. And if one had some uncertainty as  
2 to whether material contained asbestos or not in  
3 the 1960s, in general, one could request data  
4 sheets from the manufacturers; is that correct?

5 A. Yes.

6 Q. Do you have any understanding as to  
7 when air sampling for any purpose was ever done  
8 prior to 1970 at any of the refineries within the  
9 Chevron group of companies?

10 A. Would you restate it, please.

11 Q. Sure. Do you have any  
12 understanding as to whether air sampling was ever  
13 done for any purpose prior to 1970 at any of the  
14 refineries within the Chevron group of companies?

15 A. Oh, yes.

16 Q. For what purpose was air sampling  
17 done?

18 A. Off the top of my head I couldn't  
19 tell you, but we did it.

20 Q. Do you know whether that air  
21 sampling was done for -- strike that.

22 Do have any understanding as to whether  
23 any of the air sampling was done to measure the  
24 level of airborne dust of any sort?

25 A. I would say yes.

26 Q. Do you know whether the results of

1 any of that air sampling done prior to 1970 was  
2 reported to the Industrial Hygiene Section of the  
3 Corporate Safety Division of Chevron Corporation?

4 A. Yes.

5 Q. When you obtained your masters  
6 degree in industrial hygiene from Harvard, did  
7 you understand that TLVs had been established for  
8 asbestos?

9 MR. JACOBS: By whom?

10 MR. HAND: By anyone.

11 THE WITNESS: I am getting confused  
12 because I don't know whether TLVs were invoked at  
13 that time.

14 MR. HAND: Q. That's what I am asking.

15 A. I don't remember.

16 Q. Did you understand that --

17 (Counsel and witness confer.)

18 MR. HAND: Q. -- threshold limit  
19 values came to be in vogue for asbestos by the  
20 early 1960s?

21 A. I don't know.

22 Q. As an industrial hygienist at  
23 Chevron Corporation, did you strive to be  
24 informed as to the existence of threshold limit  
25 values as to any materials that might be present?

26 A. Yes.

1 Q. Within the Chevron companies?

2 A. Yes.

3 Q. Do you know whether air sampling  
4 was ever done at any of the refineries within the  
5 Chevron group of companies where the results for  
6 asbestos were in excess of five fibers per cubic  
7 centimeter?

8 A. I don't recall any.

9 Q. Do you recall whether air sampling  
10 was ever done at any of the refineries within the  
11 Chevron group of companies where the results of  
12 that air sampling for asbestos exceeded  
13 applicable OSHA standards?

14 A. I don't recall any.

15 Q. As the head of industrial hygiene  
16 for Chevron Corporation, do you have any opinion  
17 as to whether there were any operations at any of  
18 the refineries that were likely, at least on  
19 occasion, to generate airborne asbestos in excess  
20 of five fibers per cc?

21 A. I don't recall any.

22 Q. And I apologize if I go over  
23 something that you may have touched on just a few  
24 moments ago.

25 MR. JACOBS: James, let me just ask you,  
26 when you talk about five fibers per cc, we're

1 talking about an eight-hour time-weighted  
2 average, aren't we?

3 MR. HAND: Whatever. Whatever time  
4 period, whether you're talking maximum  
5 exposure --

6 Q. You were not making any such  
7 distinction in your mind, were you, Mr. Spence?

8 A. No.

9 Q. What I was going to apologize for  
10 is I don't know if I touched on this quite this  
11 way before.

12 Did you ever recommend that air sampling  
13 be done at any of the Chevron refineries to  
14 determine the levels of asbestos present in the  
15 air?

16 A. No.

17 Q. Do you know whether any of the  
18 refineries ever received any literature from the  
19 API as regards asbestos controls?

20 A. I can't say for sure. They could  
21 have.

22 Q. You just don't know one way or the  
23 other?

24 A. No. I was not privy to what they  
25 received.

26 Q. Do you recall Chevron Corporation

1 issued a material data sheet as regards asbestos  
2 at any time prior to 1970?

3 A. Not specifically.

4 Q. As an industrial hygienist, would  
5 you agree with me that applying  
6 asbestos-containing material in a spray form is  
7 likely to produce a higher level of airborne  
8 asbestos in that general proximity than applying  
9 it in a block form?

10 A. I have no data in which to evaluate  
11 that.

12 Q. Did you ever become aware that  
13 certain brands of asbestos pipe insulation  
14 contained higher percentages of asbestos than  
15 others?

16 A. I have no knowledge of that.

17 Q. As we sit here today, would you  
18 have any opinion as to whether persons who are  
19 mixing water with an asbestos-containing cement  
20 material in order to apply it to elbows or bends  
21 in pipes should wear a mask or a respirator  
22 because of possible health hazards from that  
23 activity?

24 MR. JACOBS: I'll object to the question  
25 as being an incomplete hypothetical.

26 MR. HAND: Q. You may go ahead.

1           A.     Well, any time they have good  
2 ventilation it would be advisable still to wear  
3 protective equipment.

4           Q.     And would your opinion be the same  
5 for those persons who are engaged in removal of  
6 asbestos-containing pipe and block insulation  
7 from vessels and columns?

8           MR. JACOBS: Same objection.

9           THE WITNESS: Same. You wear protective  
10 equipment and you also use water spray to knock  
11 down the dust, keep it to a minimum.

12          MR. HAND: Q.     Did you ever participate  
13 in any discussion of whether or not  
14 asbestos-containing materials no longer should be  
15 used at the refineries?

16          A.     No.

17          Q.     Did you ever participate in any  
18 discussion of how to monitor refinery activities  
19 to make sure that the levels of asbestos in the  
20 air level at the refineries did not exceed OSHA  
21 standards?

22          A.     No.

23          Q.     Mr. Spence, do you ever recall  
24 seeing a document entitled, and I am only giving  
25 you the first page of it, "Dust Producing  
26 Operations in the Production of Petroleum

1 Products and Associated Activities"?

2 A. I don't recall it. No, I don't  
3 recall it.

4 Q. Let me show you another front page  
5 of a document. This is a document entitled, "A  
6 Study of Dust Control Methods in an Asbestos  
7 fabricating Plant."

8 Do you recall ever seeing this document  
9 before?

10 A. No.

11 Q. Let me show you another one I think  
12 you will recall.

13 A. Okay.

14 Q. This one is a memorandum that  
15 appears to be addressed to you.

16 A. Stan Dryden worked for me, yeah.

17 Q. I'm sorry. This is from Stan  
18 Dryden?

19 A. Yes.

20 Q. This is a July 26, 1972 memorandum,  
21 and at the top you have a note in it addressed to  
22 what looks like the initials DHB.

23 A. That's corporate safety engineer.

24 Q. Corporate safety engineer. What  
25 is --

26 A. I worked for him.

1 Q. So in 1972 the structure would be  
2 you were still head of Industrial Hygiene  
3 Section?

4 A. Yes.

5 Q. But above you at the Corporate  
6 Safety Division level would be the corporate  
7 safety engineer; is that right?

8 A. Yes.

9 Q. Well, that's something we didn't  
10 talk about actually. Let's go back to 1955. We  
11 have these three sections within the Corporate  
12 Safety Division?

13 A. Right.

14 Q. How was the Corporate Safety  
15 Division staffed in 19 --

16 A. There was a manager of safety and I  
17 reported to him; my section reported to him.

18 Q. What were the other professional  
19 positions, as best you can recall them, within  
20 the Corporate Safety Division?

21 A. There was Corporate Safety and  
22 Worker's Compensation.

23 Q. And then in 1972 was there still a  
24 manager of safety?

25 A. Yes, still the same organization.

26 Q. But you just referred to that same

1 individual a moment ago as the corporate safety  
2 engineer.

3 A. The manager of safety.

4 Q. It's all the same?

5 A. Yes, still the same person.

6 Q. Who was that manager for the  
7 corporation of safety?

8 A. At what time?

9 Q. Let's take 1955.

10 A. Mike -- no. Donovan, but he died  
11 within a few months, so it would have been Mike  
12 Lovejoy.

13 Q. And who was it in 1972? It was  
14 DHB?

15 A. Dan Barber.

16 Q. Would you agree with me based on  
17 your knowledge of industrial hygiene by the early  
18 1960s that those persons with substantial  
19 exposure to asbestos should either wear  
20 disposable clothing or at least clothing that  
21 they would not take home with them?

22 MR. JACOBS: What time period are we  
23 talking about now?

24 MR. HAND: By the mid-1960s.

25 THE WITNESS: I don't know. I wasn't in  
26 that close contact with the problem.

1 MR. HAND: Q. Was that a principle of  
2 industrial hygiene that you were familiar with by  
3 the 1960s, that those persons who come into  
4 contact with hazardous materials should in  
5 general try to avoid taking those materials home  
6 with them; that is, they should either have  
7 special work clothing that is disposable or at  
8 least left behind at the work site?

9 MR. JACOBS: I'll --

10 THE WITNESS: I can't advise.

11 MR. JACOBS: Let me object to the  
12 question first. The question is vague with  
13 respect to "hazardous materials."

14 MR. HAND: Q. You may go ahead.

15 A. I can't answer that because it  
16 depends on the material and what the hazard is,  
17 degree of hazard, and the chance for contact.

18 Q. Would you agree with me that by the  
19 mid-1960s, as a prudent industrial hygienist, you  
20 would recommend that asbestos-insulating  
21 materials being removed from pipes and vessels  
22 and columns should be discarded in sealed  
23 containers?

24 A. I don't -- I can't give you an  
25 answer to that. I don't know.

26 Q. You don't have enough information?

1           A.     Yeah, I don't know. Depends on  
2     how -- no, there are too many parameters. I  
3     can't give you an answer.

4           Q.     In order to have more information  
5     to be able to give industrial hygiene  
6     recommendations, would you recommend that air  
7     sampling be done to determine the amount of  
8     asbestos present in the air from such activities?

9           A.     If it seemed to indicate it in a  
10    specific situation that it could be a problem.  
11    We relied heavily on the safety engineer's  
12    opinion as to the field situation.

13          Q.     Do you recall providing those  
14    safety engineers with any education, any  
15    information, as to possible hazards involved with  
16    asbestos materials?

17          A.     They already had that information.

18          Q.     And they received that from what  
19    sources?

20          A.     From --

21          MR. JACOBS: Asked and answered.

22          THE WITNESS: From safety -- what is it?  
23    The National Safety, what do you call it,  
24    Counsel.

25                 They also had API committees on safety  
26    which they dealt with all these materials, too.

1 MR. HAND: Q. Well, that would be a  
2 committee separate and apart from the Medical  
3 Advisory Committee and the subcommittees?

4 A. Yes.

5 Q. So there was also some safety  
6 committee within the API?

7 A. Yes.

8 Q. Do you recall the name of that  
9 committee?

10 A. I would just guess it's Safety  
11 Committee.

12 Q. Did you ever go to any meetings of  
13 the Safety Committee or any subcommittees of the  
14 Safety Committee?

15 A. Not that I recall. I may have been  
16 invited once to talk on noise, but I am not sure  
17 of that.

18 Q. As regards noise, did you ever  
19 recommend that acoustical insulation materials be  
20 used at the refineries to reduce noise hazards?

21 MR. JACOBS: I'll object to the term  
22 "acoustical insulation materials" as vague and  
23 ambiguous.

24 MR. HAND: Q. You may go ahead.

25 A. I do not recall recommending any  
26 asbestos-containing materials be used for

1       acoustical control.

2               Q.       So it's also safe to say, and I  
3       think we had addressed this earlier, that you  
4       were not aware of the use of any  
5       asbestos-containing acoustical-containing  
6       materials at the refineries; is that correct?

7               MR. JACOBS:   Asked and answered.

8               THE WITNESS:   No.   Pardon?

9               MR. JACOBS:   Asked and answered.   He  
10       already asked you, and you already answered that.

11              MR. HAND:   Q.       As regards the other  
12       question, so that we can pin this down just a  
13       little bit more, did you ever recommend that  
14       acoustical insulation materials --

15              A.       Yes.

16              Q.       -- be used at any of the  
17       refineries?

18              A.       Yes.

19              Q.       And as part of those  
20       recommendations, do you recall specifically  
21       recommending that asbestos materials not be used  
22       for acoustical purposes?

23              A.       I don't recall.   Normally I would  
24       recommend things like fiberglass.

25              Q.       Do you recall whether fiberglass  
26       could be sprayed?

1 A. No.

2 Q. Would you agree with me that as a  
3 principle of industrial hygiene, employees of  
4 independent contractors who do work at the  
5 refineries and who may come into contact with  
6 hazardous materials should be told where those  
7 materials are present?

8 A. Yes.

9 Q. Was it your understanding --  
10 (Counsel and witness confer.)

11 MR. HAND: Q. What I was about to ask  
12 was, was it your understanding that by 1965 that  
13 the respirators with filters were generally more  
14 effective in reducing the amount of dust inhaled  
15 than disposable so-called paper masks?

16 MR. JACOBS: Object to the question in  
17 that your description of the respirators is  
18 vague.

19 MR. HAND: Q. Go ahead.

20 A. I have no time frame with which to  
21 evaluate the effectiveness of the respirator  
22 protection.

23 Q. Did you ever participate in or make  
24 recommendations as regards the efficacy of  
25 various types of respiratory protection?

26 A. I personally have not.

1 Q. Did you ever attempt to find out  
2 what levels of airborne asbestos were present at  
3 any of the refineries?

4 A. I personally made no studies  
5 either.

6 Q. And did you ever recommend that  
7 each of the refineries make such a study?

8 A. No.

9 Q. Do you have any idea or any  
10 understanding as to whether each of the  
11 refineries ever did make such a study?

12 A. No.

13 (Counsel and witness confer.)

14 MR. HAND: Q. Did you ever receive  
15 from any of the other oil companies, other than  
16 through the API, any industrial hygiene  
17 information?

18 A. Yes.

19 Q. Just in a very general sense, what  
20 was the nature of that information that you  
21 recall?

22 A. When I got out of Harvard I visited  
23 Exxon and Mobile -- Mobile or a couple of them,  
24 and they already had industrial hygienists; so  
25 they filled me in on what they had found in  
26 general would be problem areas that I would be

1 interested in.

2 Q. Was Exxon generally regarded by the  
3 late 1950s as the leader in industrial hygiene  
4 among the oil companies?

5 A. Yes.

6 Q. You must have met James Hammond?

7 A. Oh, yes.

8 Q. Before you became an industrial  
9 hygienist at Chevron, was there anyone present at  
10 Chevron that you understood was providing  
11 industrial hygiene information for the  
12 refineries?

13 A. The safety engineers were keeping  
14 up, to a certain extent, in industrial hygiene  
15 problems.

16 Q. The safety engineers at the  
17 individual refineries?

18 A. Yes, at Chevron Chemical. They're  
19 the ones that put pressure on the corporation to  
20 set somebody up to help them technically.

21 Q. Do you have any understanding as to  
22 whether these plant safety engineers by the mid-  
23 and late 1950s generally had any formal training  
24 in industrial hygiene?

25 A. I don't know. They would probably  
26 get some training through API at maybe their

1 general meetings on industrial hygiene.

2 Q. That would be training through  
3 these Safety Committee meetings?

4 A. Possibly.

5 Q. Any other training through the API?

6 A. Not that I know of.

7 MR. JACOBS: What time period are we  
8 talking about, James?

9 MR. HAND: In the 1950s?

10 THE WITNESS: Early '50s.

11 (Counsel and witness confer.)

12 MR. HAND: Q. Do you recall --

13 A. Yeah, I don't -- I think the  
14 discipline really in the petroleum industry was  
15 just emerging '50, '55.

16 Q. What's the nature of the training  
17 the API provided in health and safety to safety  
18 engineers during the 1960s, as best you  
19 understand it? Only through the safety committee  
20 meetings?

21 A. I don't -- I really don't know.

22 THE WITNESS: Is it conceivable we can  
23 have a five-minute break?

24 MR. HAND: Yes. And I think we'll be  
25 ready to finish soon.

26 (Recess taken.)

1 MR. HAND: Q. Let's pick up again.  
2 When you first began your work, Mr. Spence, at  
3 Chevron, was there a medical director there?

4 A. Yes.

5 Q. I hope I didn't ask this before.  
6 Who was that medical director?

7 A. Lee Curtis.

8 Q. And you understood that Mr. Curtis  
9 was a medical doctor?

10 A. Oh, yes.

11 Q. And all subsequent medical  
12 directors you understood were medical doctors?

13 A. Yes.

14 Q. Do you have any opinion as to  
15 whether they would have received publications,  
16 the publication entitled, "American Medical  
17 Association Journal"?

18 A. Pardon me?

19 MR. JACOBS: The AMA Journal?

20 MR. HAND: Yes.

21 Q. Do you have any understanding as to  
22 whether those persons as medical doctors would  
23 have received the AMA Journal?

24 MR. JACOBS: Objection, calls for  
25 speculation.

26 THE WITNESS: I would just have to

1 speculate that they got it, but I didn't see it.

2 MR. HAND: Q. That's fine.

3 In terms of some of the long-time  
4 industrial hygienists at other oil companies,  
5 there was a fellow at Phillips named Lucian?

6 A. Lucian Renes.

7 Q. Who was an industrial hygienist?

8 A. Yes.

9 Q. Do you recall who was a long-time  
10 industrial hygienist at Shell?

11 A. Charlie Hine is an MT. He really  
12 did that initially. It was a year later that  
13 they got an industrial hygienist.

14 Q. Shell did not establish an  
15 Industrial Hygiene Department as early as  
16 Phillips and Chevron; is that correct?

17 A. That's my understanding.

18 Q. Besides James Hammond, were there  
19 other long-time industrial hygienists at Exxon  
20 that you dealt with?

21 A. Nathan Van Hendricks was the  
22 corporate head.

23 Q. He was the corporate what?

24 A. Corporate head industrial  
25 hygienist.

26 Q. Do you know whether Mr. Van

1 Hendricks is still alive?

2 A. Best of my knowledge he is. I  
3 think he lives in Georgia.

4 Q. Retired from Exxon?

5 A. Oh, yes.

6 Q. Did you ever have any dealings with  
7 anyone in industrial hygiene from Tosco?

8 A. I don't recall his name. He wasn't  
9 in the early years.

10 Q. Which other oil companies had  
11 industrial hygienists back in the '50s or early  
12 '60s?

13 A. Bill Rheinhart who was SOCONY.  
14 SOCONY merged with Mobile. Art Pabst was Mobile.

15 Q. How about Texaco?

16 A. I knew that was coming. I could  
17 see his face. Excuse me. Don't write all that  
18 down. I don't recall.

19 Q. Can you recall the names of any of  
20 the industrial hygienists at any of the other oil  
21 companies, other than the ones we have just  
22 mentioned, in the '50s or early '60s?

23 A. No.

24 Q. After you obtained your masters  
25 degree from Harvard, did you ever attend any  
26 meetings of any sort where asbestos was

1 discussed, any professional meetings?

2 A. I don't recall. I could have, but  
3 I don't recall them.

4 Q. Give me just a moment, I may be  
5 finished.

6 MR. HAND: Does anybody else have any  
7 questions? If somebody wants to ask a few before  
8 I finish, that's fine.

9  
10 EXAMINATION

11 BY MR. BEALE: Q. I am Robert Beale.

12 I have a couple of names. There is some  
13 names you said. There was Bill Rheinhardt at  
14 Mobile?

15 A. No. No.

16 Q. What did you say? You went through  
17 some names real fast.

18 A. Did I say Bill Rheinhardt?

19 MR. HAND: At SOCONY.

20 THE WITNESS: That's wrong. Bill  
21 Rheinhardt worked for me. Bill was at Harvard  
22 with me.

23 I'm sorry, I can't remember his last  
24 name, but Bill Rheinhardt is wrong. Thank you for  
25 bringing that up.

26 Q. He worked for you at Chevron.

1 And then you mentioned an Art Pabst?

2 A. Pabst, P-a-b-s-t.

3 Q. Like the beer people?

4 A. I guess so.

5 Q. And he worked at where?

6 A. He was Mobile.

7 Q. So then at Phillips you said Lucian  
8 Renes?

9 A. Lucian Renes. R-e-n-e-s, I think.

10 Q. And at Shell?

11 A. Charlie Hine. Dr. Charlie Hine.

12 Q. How do you spell his name?

13 A. H-i-n-e.

14 Q. Just trying to get the names.

15 Thanks.

16 MR. JACOBS: James?

17

18 FURTHER EXAMINATION

19 BY MR. HAND: Q. Were you aware, Mr.  
20 Spence, that at times in the past Chevron made  
21 some products that contained asbestos in them?

22 A. I think -- yes.

23 Q. Were you ever consulted with  
24 respect to what precautions should be taken when  
25 handling the asbestos that would go into those  
26 products?

1           A.       Specifically, I don't recall it;  
2           however, I would expect we would have had  
3           somebody looking at it, asbestos into asphalt.

4           Q.       And you don't recall what  
5           precautions were taken to minimize the risk of  
6           adverse health consequences for those persons  
7           working with the asbestos?

8           A.       I wasn't involved.

9           Q.       You similarly were not involved in  
10          the decision to cease manufacturing  
11          asbestos-containing products, were you?

12          A.       I would have no authority to do  
13          that.

14          Q.       Were you consulted at all?

15          A.       I don't recall.

16          Q.       Do you recall any discussions with  
17          industrial hygienists from other oil companies as  
18          regards whether or not there were health hazards  
19          in refinery operations from any of the materials  
20          being used?

21          MR. JACOBS: Wait a second.

22          MR. HAND: Q.       In other words, for  
23          instance, did you --

24          A.       Pardon me just a minute.

25          MR. JACOBS: Let me object to the  
26          question as being ridiculously overbroad,

1       terribly vague, wonderfully ambiguous and  
2       marvelously obscene.

3               Can you answer the question?

4               THE WITNESS: I didn't even hear it  
5       because my mind was going back to Texaco. Alan  
6       Duley. When you get older there is always a lag.

7               MR. HAND: Q.     Well said. For some of  
8       us younger ones there is often a lag also.

9               A.     Wait until you get down to my age  
10      and see how long your lag is.

11              Q.     Well, the question was, in effect,  
12      do you ever recall discussing with someone like  
13      Mr. Duly, 'Do we have a problem with such and  
14      such a chemical? We use it in our refinery'  
15      operations, do we have a problem or do we not  
16      have a problem? And if we do have a problem,  
17      what are we going to do about it?'

18              A.     We always do that. That's the  
19      reason we get together to try and help each  
20      other.

21              Q.     With the API?

22              A.     Yes.

23              Q.     And do you recall meetings with any  
24      of the other industrial hygienists outside the  
25      API?

26              A.     Yes.

1 Q. Call them up on the telephone?

2 A. Yes.

3 MR. HAND: Thanks, Mr. Spence. I have  
4 nothing further.

5 (Deposition concluded at approximately  
6 5:30 p.m.)

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## REPORTER'S CERTIFICATE

STATE OF CALIFORNIA )

COUNTY OF SONOMA )

I, CYNTHIA MANNING, a Certified Shorthand Reporter in and for the State of California, do hereby certify:

That JOHN A. SPENCE, witness in the foregoing deposition was by me first duly sworn to testify to the truth in the within-entitled cause;

That said deposition was reported at the time and place therein stated by me, CSR No. 7645, and thereafter transcribed under my direction; after which, the witness was afforded the opportunity to read, correct and sign the deposition;

That if unsigned by the witness, the witness shall not have availed himself of the opportunity to sign, or the signature has been waived.

I further certify that I am not interested in the outcome of said action, nor connected with, nor related to any of the parties in said action, or to their respective counsel.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_, 1991.

  
CYNTHIA L. MANNING, CSR No. 7645

## DECLARATION OF WITNESS

I, JOHN A. SPENCE, hereby declare that I have read the foregoing testimony on Pages 1 to 141 inclusive, and the same is a true and correct transcript of my said testimony, except as I have corrected any answer in ink, initialed such correction, and stated on the margin my reason for making same.

1. ( ) The Deponent failed to appear to read, correct, or sign his/her deposition.

2. ( ) The Deponent refused to read,, review, or sign his/her deposition for the following reason(s):

3. ( ) The Deponent approved his deposition by letter (with) or (without) corrections, attached hereto and made a part of this deposition herein.