

IN THE COURT OF COMMON PLEAS
LAKE COUNTY, OHIO

RUTH N. BURNHEIMER, etc. CIVIL DIVISION

Plaintiff,

vs.

Case No. 91 CV00165 3
Judge Parks

UNIROYAL CHEMICAL CO.
INC., et.al.

Defendants.

DEPOSITION TRANSCRIPT OF:
J. Dexter Forbes, M.D.

DEPOSITION DATE:
October 14, 1992

PARTY TAKING DEPOSITION:
Plaintiff

COUNSEL OF RECORD
FOR THIS PARTY:
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LANCIONE
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Cleveland, OH 44114

REPORTED BY:
Lois Sikoski, RPR
Notary Public

Uniroyal had begun epidemiology studies for the vinyl chloride workers at Painesville at the University of North Carolina; this had been done earlier in 1972

- 77 1 Forbes stated that acroosteolysis hand x-rays had been taken and there was an annual surveillance program going on for workers prior to that time from the 1960's; also, Dr. Harris was keeping in touch with recommendations as far as standards were concerned and in fair touch with Dr. Viola and Maltoni's work
- 79 11 Exhibit 14 to Mr. Leech's deposition - Dr. Forbes thinks that some parties at Uniroyal must have had this document in 1972
- 79,80,81 19,10,16,2 Exhibit 16 to Mr. Leech's deposition - memo that Dr. Forbes wrote to Dr. Harris - Dr. Forbes had some oversight responsibilities for occupational safety as it transpired at Monochem plant; shared responsibilities with the on-site doctor (can't remember name); he would have been a regular physician and not specifically trained in occupational safety

lmb[2/15/94]

DEPOSITION OF J. DEXTER FORBES, M.D.,
a witness, called by the Plaintiff for examination, in
accordance with the Ohio Rules of Civil Procedure, taken
by and before Lois Sikoski, a Notary Public and Registered
Professional Reporter, in and for the Commonwealth of
Pennsylvania, at the offices of Allegheny County Airport,
US Air Club, Coraopolis, Pennsylvania, on Wednesday,
October 14, 1992, commencing at 12:32 p.m.

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* I N D E X *

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1 J. DEXTER FORBES, M.D.,
2 having been duly sworn,
3 was examined and testified as follows:

4 - - - -
5 EXAMINATION
6 - - - -

7 MR. BRODHEAD: Let the record reflect that
8 the deposition of Doctor Forbes is being taken
9 originally pursuant to agreement and has been
10 noticed subsequently.

11 Let the record further reflect that in
12 communication between counsel for Uniroyal and my
13 office, it was originally stated that Doctor Forbes
14 had to depart the airport at 4:30. Upon arriving
15 here today, I'm informed by counsel for Uniroyal
16 that Doctor Forbes has a need to conclude this
17 deposition at 2:30; is that correct?

18 THE WITNESS: That's correct.

19 MR. BRODHEAD: In view of that, I'm unable
20 to agree, although I will attempt to conclude the
21 deposition today.

22 BY MR. BRODHEAD:

23 Q. That having been stated, I would ask the doctor to
24 state his full name for the record.

1 A. J. Dexter, D-e-x-t-e-r, Forbes.

2 Q. Doctor, what does the J stand for?

3 A. John.

4 Q. Briefly, could you go through your formal education
5 for me up to the time you went with Uniroyal, sir.

6 A. I'm a graduate of Haverford College, Haverford,
7 Pennsylvania, Bachelors of Arts. I'm a graduate of
8 Temple University, MD degree, one year rotating
9 internship, Cooper Hospital, Camden, New Jersey; the
10 University of Michigan for my occupational medicine
11 residency, three years with a Master of Public
12 Health degree during that period of time. That's
13 the end of my formal training.

14 Q. And subsequent to that formal training, Doctor, what
15 employment did you take?

16 A. Well, I was in my third year of residency at General
17 Motors Corporation in Lansing, Michigan, and that
18 was my first full position in industry I think.

19 Q. In occupational medicine?

20 A. That's true. Subsequent to that, I was in the Navy
21 during the Vietnam era. And I spent two years of
22 active duty at the Norfolk Naval Shipyard, where I
23 was a lieutenant and rose to the rank of a
24 lieutenant commander. With the completion of that

1 two-year period, should I keep going on?

2 Q. Please do, Doctor.

3 A. I was asked to return to the General Motors
4 organization and maybe I should cut it off.

5 Q. That's okay. Go ahead.

6 A. And I declined and took an opportunity with Western
7 Electric Company. I was with that company for about
8 a year and a half.

9 And then, in November 1971, I took the
10 Uniroyal opportunity as the corporate medical
11 director. I was with Uniroyal from November 1971
12 until about mid year 1985 when the company went
13 through a leverage buyout and effectively dissolving
14 a lot of the corporate positions.

15 Q. I'm told you're now with Miles Laboratories; is that
16 correct?

17 A. Miles, Incorporated.

18 Q. And did you come to that position in mid '85?

19 A. No. I joined Miles probably in the spring of 1987.

20 Q. Did you have an interim position?

21 A. Yes, I did. I was an assistant medical director at
22 Union Carbide Corporation, again, for about a year
23 and a half.

24 Q. What are your duties position or your position

1 presently?

2 A. Well, I plan, administer, and develop and as much as
3 possible audit the medical programs of Miles with
4 probably the greater emphasis in the chemical
5 division.

6 Q. Did you have any experience with vinyl chloride
7 professionally speaking prior to coming with
8 Uniroyal in November of '71?

9 A. No direct professional experience.

10 Q. What were your duties as corporate medical director
11 for Uniroyal?

12 A. Well, that was a company when I joined it, Peter, of
13 about 60,000 employees. That's large by standards
14 then. It is large by standards now. I planned,
15 developed, and administered the programs with the
16 company. We had many locations and many employees
17 as I've just indicated.

18 Q. Can you outline for me as best you can recall,
19 Doctor, what was the chain of command, if you will,
20 that starting from the top down to the
21 implementation level at the individual plants, who
22 were the persons or if you can't recall the
23 positions, responsible for implementation of
24 policies and procedures as they pertained to

1 employee health?

2 A. Well, I'd have to answer that the locations were all
3 set up, as I recall, under a factory manager and a
4 factory manager had his own direct reporting staffs.
5 The medical organization at the plant level was
6 typically, as I remember, under the industrial
7 relations group. Industrial relations often now
8 called personnel or human resources, but it was
9 under the industrial relations group typically the
10 medical group. At the corporate level of the
11 medical function reported to the staff of
12 vice-president for administration, and we were
13 closely associated though not in direct report line
14 with such people that you have probably come into
15 contact with as the toxicologist, the industrial
16 hygienist, and some of the others who would have
17 activity to some degree in this sphere.

18 Q. Were these people answerable to you?

19 A. At one point and probably that needs to be defined.

20 Q. Please do.

21 A. The point which they became answerable to me was
22 later on in the '70s, and I don't remember the
23 precise date. I have to guess. It could have been
24 1977. It could have been as late as 1978. But

1 importantly, in 1971, and again, I'm thinking these
2 people mutually agreed upon the definition, I'm
3 thinking the industrial hygienist and toxicologist.
4 You are too?

5 Q. In part.

6 A. Are there any more I should be answering for?

7 Q. We'll get to that in a moment.

8 A. Should I define my answer to those two?

9 Q. Please.

10 A. Those two did report directly to Mr. Daniel Dudrow,
11 D-u-d-r-o-w, who was I think safety and security
12 manager in the corporate level. He then reported in
13 kind, and, in turn, to the director of industrial
14 relations who I think later became a vice-president
15 of industrial relations.

16 Q. And that was?

17 A. I'm thinking of a Robert E. Lowell, and ultimately,
18 Mr. Lowell reported to my common superior, the
19 vice-president of staff administration. I think
20 that was his title.

21 Q. Who was your predecessor?

22 A. A Dr. Jack Wolfsie.

23 Q. How long did he serve?

24 A. I would be guessing. I have an idea. Should I

1 enter it?

2 Q. Just roughly and understanding that you're
3 guesstimating, Doctor.

4 A. Somewhere in the mid to early '60s to 1971. My
5 sense is that it was somewhere in this seven or
6 eight years. I could be -- I know this won't get in
7 the transcript, but I'm expressing kind of a
8 guesstimate here.

9 Q. Understood. Doctor, do you have any knowledge as to
10 the present whereabouts of Doctor Wolfsie?

11 A. I thought he retired to Florida, but I'm not more
12 specific in my knowledge.

13 Q. Did you have any overlapping meetings or tenure with
14 Doctor Wolfsie?

15 A. No, I did not.

16 Q. You had no personal contact with him whatsoever
17 regarding the changing of the guard, if you will?

18 A. No, I didn't, Peter. That is a good question. I
19 knew him in the profession of occupational medicine,
20 but I think there was a good gap of, oh, boy, I'd
21 guess at least a half year the point where he
22 departed to become medical director of a New York
23 organization and I coming in the fall of 1971.

24 Q. Do you know the New York corporation to which he

1 went?

2 A. Yes.

3 Q. That was?

4 A. Equitable Life Insurance.

5 Q. What was his position there?

6 A. Well, I said a moment ago, medical director. He
7 could have been assistant medical director or a
8 title that would be akin to that.

9 Q. Excuse me for repeating.

10 A. Surely.

11 Q. Was there a de facto or interim person who took that
12 position during that half a year or so, to your
13 knowledge?

14 A. Well, in the way you put the question, first, there
15 wasn't a named person and there was no formal
16 intermediate person. I think like many positions
17 where there's a vacancy, the people who best can try
18 to answer questions, and cover things, and get the
19 help they need, I speculate that that's the sort of
20 thing that occurred. But there was no named person.

21 Q. In other words, making due with given resources
22 until you arrived?

23 A. I think so. Now, all the locations, again, had
24 plant physicians, at least part-time contract plant

1 physicians. I amend my answers to all the locations
2 of size. Certainly, I think the ones we might be
3 thinking about or the one we might be thinking about
4 have a part-time plant physician, and, of course,
5 we, too, at corporate headquarters had a person that
6 served us as the location physician.

7 Q. That was?

8 A. Well, when I came that was a Dr. Philip Henry,
9 H-e-n-r-y. And, he again, was just a corporate
10 headquarters physician who was on duty, oh, an hour
11 or two a day. He did not get into matters like this
12 to my knowledge.

13 Q. Are you familiar with an entity known as Monochem?

14 A. Yes.

15 Q. Was it independent, to your knowledge, from
16 Uniroyal?

17 MR. DEAN: I object to the form of the
18 question. I think it's rather vague, but obviously
19 the witness can do the best he can with it.

20 A. It would be hard to say independent as such. It was
21 jointly owned to my knowledge. And I think that it
22 was a 50/50 ownership of the Borden Company and the
23 Uniroyal, Incorporated group.

24 BY MR. BRODHEAD:

1 Q. Was that entity, that is, Monochem, part of your
2 responsibility in any regard to your knowledge?

3 A. Only indirectly, and in the sense of a 50 percent
4 interest in the business of the Borden interest
5 understood too.

6 Q. Did you become involved in the overseeing of the
7 health and safety of the Monochem employees in any
8 respect?

9 A. I would say more indirectly than in Painsville.

10 Q. How so? What is the distinction?

11 A. Well, there are several distinctions. One is the 50
12 percent ownership situation. Secondly, it became
13 rather apparent early on that in terms of this
14 situation at hand with vinyl chloride -- and I
15 suppose you would like me to answer in regard to the
16 perspective to that -- I accepted and the industry
17 learned that the exposures in the production of the
18 vinyl chloride monomer such as was the duty of the
19 Monochem plant.

20 Q. That being an outdoor facility, correct?

21 A. An outdoor facility and rather controlled in terms
22 of releases. The exposures there were very, very
23 low and though when this news first hit in early
24 1974 about the disclosed Goodrich cases, I think the

1 industry properly looked at everything from monomer
2 production, to polymerization, to fabrication
3 probably into the end of consumer product use. I
4 think it soon became apparent that the monomer
5 production did not produce appreciable exposures.
6 Consequently, to answer your question, my duties
7 were really directed more to Painsville.

8 Q. May I fairly infer, Doctor, from your answer, that
9 given the nature of the production that it was
10 outdoors, and the way it was set up, that ambient
11 levels would be far lower and different than they
12 would be at Painsville; is that correct?

13 A. I think that's correct.

14 Q. Did you ever visit the Monochem facility?

15 A. I think I must have, but I'm trying to recall how
16 many times. I'm not exactly sure. But I visited
17 that complex. So that it is just questionable how
18 many times I actually visited the Monochem facility.

19 Q. Was that an acetylene based production?

20 A. I believe it was.

21 Q. Do you have any knowledge of the fact that Uniroyal
22 produced its own vinyl chloride monomer at
23 Painsville prior to the creation of Monochem?

24 A. I have no knowledge about that.

1 Q. Do you regard vinyl chloride as a toxic chemical?

2 MR. DEAN: Excuse me. Today?

3 MR. BRODHEAD: Sure.

4 A. Well, I would have to regard it today as a toxic
5 chemical.

6 BY MR. BRODHEAD:

7 Q. When you came to Uniroyal in 1971, what other
8 chemicals were being worked with regularly or
9 produced that you would today regard as toxic other
10 than vinyl chloride, if you can recall, Doctor?

11 A. That I would regard today as being toxic?

12 Q. Yes, today.

13 MS. KOESTER: I object to the relevancy.

14 Go ahead.

15 A. That's a very large question.

16 MR. DEAN: I'm not sure I understand. The
17 products just used at the Painsville plant that he
18 would regard as toxic?

19 MR. BRODHEAD: No, among the whole realm.

20 A. I could give you examples, but I wouldn't profess to
21 give you a comprehensive list that was all
22 inclusive. To lead things off, we worked with lead,
23 benzene, acrylonitrile, asbestos. And for heaven's
24 sake, not all in the same place, but in a different

1 operation.

2 BY MR. BRODHEAD:

3 Q. There was acrylonitrile as well at the Painsville
4 plant, was there not?

5 A. I believe that there was some operation in that
6 area, yes.

7 Q. But not lead or asbestos?

8 A. Lead I think not, asbestos, as you may know, has
9 become an issue because of its ubiquitous character.
10 So to say there was no lead -- no asbestos
11 somewhere, I would say not in production.

12 Q. Of course insulation application?

13 A. In insulation matters. But in answer to your
14 question, I don't know of any production that
15 involved asbestos use in Painsville.

16 Q. When you arrived in November of 1971, did Uniroyal
17 have in place or at its disposal the availability of
18 medical literature with respect to these substances
19 you've just described, including vinyl chloride?

20 MS. KOESTER: You're talking about the
21 list that he just gave you?

22 BY MR. BRODHEAD:

23 Q. Yes, Doctor.

24 A. Did Uniroyal have available -- I guess I'm just

1 restating your question. You know, if I could use
2 an analogy, it's like asking me whether a law firm
3 had available information and a composite knowledge
4 of the lawyers in that group as a reflection of
5 their own training, background, experience,
6 education, their own armamentarium of literature,
7 journals, and books. So in that combined sense, I
8 would say, yes, there was a knowledge base that
9 probably the company had in some respects and in
10 some respects the knowledge base that I had.

11 It's probably, fair to say that all of the
12 substances I've named had a great swelling of
13 information in terms of what we learned about them
14 in the '70s and '80s.

15 So that your fund of knowledge in 1971, as
16 you just asked me by today's standards, for probably
17 all of them, would be judged now to be incomplete.

18 Q. To your knowledge, when you arrived in November of
19 1971, did Uniroyal undertake to compile world
20 literature concerning the harmful effects of vinyl
21 chloride exposure?

22 A. Did we attempt to compile it? Not at that time to
23 my knowledge.

24 Q. The same question, except at that time, did anyone

1 at Uniroyal attempt to familiarize his or herself
2 with the existing world literature concerning the
3 harmful effects of vinyl chloride?

4 A. I think from the early '70s on there was a concerted
5 effort to be on top of the situation. And I feel
6 that our toxicologists was -- had strived to be in
7 complete touch as complete touch as he could be over
8 the subject and the developments in the world
9 research theater.

10 Q. Would it be -- excuse me.

11 A. I would amend my answer about being on top of vinyl
12 chloride information in 1971 to say I certainly
13 believe to say, and I knew this to be the case, that
14 Dr. Walter Harris was completing versed on the
15 acroosteolysis threat that was perceived to be a
16 problem in some companies.

17 I'm not sure that our Painsville plant,
18 the PVC plant ever did register a single case of
19 this have however. But he was in touch on the world
20 literature on this.

21 In the early '70s then produced more
22 mileage in the animal theater. Up until the 1974,
23 early in the year disclosure that there were human
24 things as well.

1 Q. May I correctly infer from your answer that, Doctor,
2 that it was beginning in the early '70s, that to
3 your knowledge at least, personnel at Uniroyal,
4 either through Doctor Harris or otherwise, began to
5 familiarize itself with and/or compile existing
6 world literature concerning the harmful effects of
7 vinyl chloride exposure?

8 MS. KOESTER: I'm going to object to the
9 question. That shows an inaccurate statement of his
10 testimony.

11 BY MR. BRODHEAD:

12 Q. You may answer, Doctor.

13 A. Well, I'm bothered by the way you've placed it,
14 Peter, because when you say compile, it seems to me
15 a systemic effort to function almost like a
16 librarian and organize blocks of information. That
17 connotes a concerted effort to do just that.

18 When you do that, as opposed to trying to
19 be in touch with an issue, you're doing two
20 different things. And I would say we were in touch
21 with the issues and my predecessors were in touch
22 with the acroosteolysis developments of the mid '60s
23 which preceded my arrival.

24 Q. The Dinman study?

1 A. The University of Michigan study which probably was
2 the Dinman study. And I think too Doctor Harris was
3 in touch and communicated well with what he knew
4 about the animal research chiefly going on in Italy.

5 Q. Did Doctor Harris, in, fact go to Italy to Professor
6 Maltoni's laboratories?

7 A. I think he did at one point.

8 Q. Are you familiar with the MCA?

9 A. Yes, I know about the MCA.

10 Q. Were you yourself active in that organization?

11 A. I would say I was not.

12 Q. That is the Manufacturing of Chemists Association?

13 A. That's right.

14 Q. Who --

15 A. Let me say I was not in the sense I wasn't the
16 principal company representative. It would be
17 inaccurate to say that I never went to a MCA
18 meeting. I believe there were special meetings
19 called that may have summoned physicians if they
20 were available in companies to come meet. I could
21 have been to several of those. I think I was to
22 several of those.

23 Q. Regarding vinyl chloride?

24 A. Yes.

1 Q. Beginning when?

2 A. I'd have to think, but it seems to me it was
3 probably to be sure some time after January 1974.

4 Q. All right. In other words, your involvement with
5 the MCA would be after NIOSH was informed about the
6 angiosarcomas at the Louisville plant?

7 A. I believe that would be accurate. In searching my
8 memories prior to today, I can't recall of any
9 previous involvement.

10 Q. Generally speaking, Doctor, from the time you began
11 in November of 1971 at Uniroyal, would it be your
12 prerogative or someone else's prerogative to
13 conceive and undertake to implement protective
14 measures in the work environment at the plant level
15 with respect to exposure to vinyl chloride?

16 A. After the point of arrival, would that have been my
17 prerogative?

18 Q. Yes, Doctor.

19 A. Is that the question?

20 Q. Yes, Doctor.

21 A. It would not have been chiefly mine. In fact, I
22 really don't think it would have been mine at all
23 functionally. That would have been more the domain
24 of safety and industrial hygiene.

1 Q. All right. And the people at that time were who,
2 that is, at the corporate level?

3 A. At the corporate level, there's corporate safety
4 manager who, of course, is the person who was the
5 superior of the two gentlemen I mentioned, the
6 industrial hygienist, the corporate industrial
7 hygienist, Lawrence Deringer, LF Deringer. Do you
8 need the spelling?

9 Q. No, thank you. Where is he located?

10 A. Well, he did live in Newton -- he did live in a
11 small Connecticut town near Middlebury, New Town,
12 Connecticut. I don't know where he is right now.

13 Q. Was he with Uniroyal at the time you started?

14 A. Yes, he was. And then Dr. Walter Harris.

15 MR. DEAN: Excuse me.

16 A. He would have been the toxicologist, I'm sorry
17 Doctor Harris, to correct my answer, is the
18 toxicologist, although he reports to Mr. Dudrow and
19 did report to Mr. Dudrow, correction, although he
20 reported to Mr. Dudrow during the period 1971 to, as
21 I said, '77 or '78, remember, I wasn't sure of the
22 latter date, the involvement of Doctor Harris in
23 this answer is inaccurate.

24 Q. Please, clarify.

1 A. The safety manager was Mr. Dudrow, and his safety
2 members, and the industrial hygienist was Dr.
3 Lawrence Deringer, Mr. Deringer, correct?

4 MR. DEAN: Off the record.

5

6 (Whereupon, there was a discussion off
7 the record.)

8

9 BY MR. BRODHEAD:

10 Q. Would it then be safe to say, forgive me if I'm
11 confused, Doctor, would it then be safe to say that
12 with respect to the prerogative to implement,
13 conceive and implement protective measures at the
14 plant level with respect to toxic exposure to vinyl
15 chloride at the time of your arrival in November
16 1971 that would have been in the hands in one
17 respect or another of Mr. Dudrow, Mr. Deringer, and
18 Mr. Harris, or Doctor Harris?

19 A. That is an incomplete answer. I feel it needs to be
20 clarified because I believe as stated personal
21 protective measures would more typically come from,
22 again, the safety group, the industrial hygiene
23 group, but there is a character of the strong
24 recommendation of the toxicologist perhaps entering

1 into it. But I think the two others need to be
2 particularly brought into a role of greater
3 emphasis.

4 The second reason that answer needs
5 refinement is the fact that in none of these
6 answers, if we really considered the importance of
7 the location, certainly they were charged with a
8 knowledge of what was going on at the site of any
9 problems with housekeeping, with ventilation, any
10 readings that they might be involved in that could
11 be reason to act upon. They would have first
12 knowledge of this. This is why you have location
13 people.

14 So I guess the fuller answer is the
15 combination of your corporate and location people
16 must work together.

17 Q. Corporate would more likely conceive and the plant
18 or the local would implement; is that correct?

19 A. I think that that's fairly accurate. You know there
20 are instances where it could come the other way,
21 somebody sees something.

22 Q. The information flows the other way?

23 A. Surely, surely.

24 Q. The safety group was headed by whom?

1 A. That was Robert G. Havener, H-a-v-e-n-e-r. I
2 apologize. That was the principal safety person
3 under Mr. Dudrow.

4 Q. And then, of course, with respect to hygiene that
5 would be Deringer's domain and as to toxicology that
6 would be Doctor Harris; is that correct?

7 A. Yes, that's right.

8 Q. Are you familiar with the ACGIH, the American
9 Conference of Government and Industrial Hygienists?

10 A. Yes, I've heard of that group.

11 Q. Do you have any specific knowledge as to its history
12 or how it was formed?

13 A. I don't have a good recollection at this point.

14 Q. Are you familiar with the concept threshold limit
15 value?

16 A. Yes, I am.

17 Q. What was the threshold limit value for vinyl
18 chloride in the work environment as of your coming
19 on board in November of '71?

20 A. I think it was 500 parts per million.

21 Q. Was that a time weighted average or an absolute
22 ceiling?

23 A. I think it may have. I'm just thinking. I think at
24 first it might have been a time weighted average,

1 but later time it became appreciated as a ceiling
2 value. I am not sure whether it was recognized to
3 be a ceiling value in November of '71 or whether it
4 could have been just a time weighted average at that
5 point. I'm pretty certain that at some point the
6 500 was accepted as a ceiling value.

7 Q. Doctor, I'm going to represent to you that the ACGIH
8 formed a committee on threshold limit values in June
9 1938.

10 I'm further going to represent to you that
11 there is a work written by a WG Frederick entitled:
12 The birth of the ACGIH threshold limit values
13 committee and its influence on the development of
14 industrial hygiene.

15 I'm going to further to read to you from
16 Mr. Frederick's work, and I quote: "I feel that a
17 committee like ours representing nearly all of the
18 government enforcing agencies could, with
19 justification, establish arbitrary limits which
20 appear reasonable for different classes of material
21 which as yet have been inadequately or not at all
22 investigated from the standpoint of the industrial
23 toxicologist. The fact that some folks will
24 disagree with such values should do much to

1 stimulate the needed research and investigation."

2 My question to you, Doctor, is that from
3 the time that you came on board in November of 1971
4 until OSHA's intervention in 1974 what, if any,
5 stimulation or experimentation occurred within
6 Uniroyal through industrial toxicology or otherwise
7 to assess the adequacy of the 500 part per million
8 TLV?

9 MRS. KOESTER: I object. Go ahead you may
10 answer.

11 THE WITNESS: Did you object?

12 MRS. KOESTER: Yes. You could go ahead
13 and answer under my objection.

14 A. I think the best answer to that and the accurate
15 answer is that the work of Doctor Harris was one in
16 which he was remaining in touch as best an American
17 industry person could be in touch with international
18 activity in the animal area. You're talking rats,
19 and possibly mice, and hamsters. But I think rats
20 is principally and that was the work of Viola and
21 Maltoni whom you mentioned.

22 BY MR. BRODHEAD:

23 Q. Correct.

24 A. I believe that Doctor Harris issued a memorandum

1 some time in 1972 that will verify that, in fact,
2 his feeling was that we ought to move toward 50 part
3 per million. And he recommended strongly that we
4 adopt that as our standard. So I think that
5 evidence is that Uniroyal was mindful that we ought
6 to try to come in at a tenth of what the recognized
7 ACGIH level was.

8 Q. Was that recommendation in response to any
9 particular laboratory data?

10 A. Well, I can't recall if it was in response to any
11 particular data, but again, you operate under the
12 collective sum of your knowledge and the way it's
13 pushing you. And I believe that his feeling was
14 that, based upon the development of the tumors in
15 the Viola and the Maltoni studies, that we had to go
16 on that way. Even though we didn't have any human
17 evidence and this was the best policy, best
18 approach.

19 Q. Would you defer to Doctor Harris, whose deposition
20 is presently scheduled, as to whether or not he did
21 indeed issue such a recommendation as to when he, in
22 fact, if at all, issued such a recommendation?

23 A. By deferring, do you mean withdraw my statement?

24 Q. Not withdraw but would you concede he would have

1 superior knowledge as to the particulars of what you
2 have just stated?

3 A. I would say that as the originator of the
4 recommendation, probably would, yes.

5 Q. Let's go back to the 500 part per million TLV. In
6 November 1971, to your knowledge, what equipment, if
7 at all, existed at the Painsville plant which was
8 capable of monitoring whether or not the work
9 environment did, in fact, comport with the TLV
10 limit?

11 A. I don't know what equipment they had at that time.
12 I would have to ask industrial hygiene. And I would
13 have asked at that time that question.

14 Q. Mr. Ben Leech has already been deposed in this
15 matter and has testified that prior to the OSHA
16 intervention that there existed no equipment at the
17 Painsville plant which monitored vinyl chloride
18 levels other than those for explosiveness limits.

19 My question to you, Doctor, is do you have
20 any information, as you sit here today, which would
21 contradict that statement?

22 A. I'm not able to add to that statement at all or --

23 Q. Would it be a fair statement then, Doctor, that so
24 far as you know, there was no equipment at the

1 Painsville plant prior to OSHA intervention which
2 monitored for the 500 part per million TLV?

3 MS. KOESTER: Objection.

4 BY MR. BRODHEAD:

5 Q. You may answer, Doctor.

6 A. I would, to use your term, I think deferral to
7 Mr. Leech would be the best answer here.

8 Q. Fair enough. Thank you. Assuming for the sake of
9 the question, your memory to be accurate concerning
10 Harris's 50 part per million recommendation, might i
11 infer from your previous answers that was, in fact,
12 not implemented until after OSHA intervention?

13 A. It would be hard to say at this point in time with
14 the passage of 18 years that it was or was not
15 implemented when somebody makes a statement and a
16 recommendation that we move as a goal to this level,
17 I feel you're talking about a target. You're
18 talking about an objective. You're talking about
19 trying to move toward a desired result.

20 To implement suggests that you're there
21 and you fulfilled it. That's inconsistent with
22 moving toward a target. You have to move toward it
23 before you get there. And that was what Walter
24 Harris's recommendations were in 1972. I can't

1 remember the month. But he felt that we needed to
2 be in tract to do this.

3 So I feel at the corporate level, there
4 was an awareness, and a commitment, and an interest
5 in human health as expressed by that.

6 Q. As you sit here today, are you able to tell me
7 whether or not that 50 part per million monitoring
8 was implemented prior to OSHA intervention?

9 MS. KOESTER: I'll object. I think it's
10 the same question.

11 A. Monitoring, well, a lot of the monitoring at that
12 time, if as you've stated, if it did, in fact, not
13 exist at the locations, depended upon the corporate
14 and industrial hygienist. I, therefore, would
15 conclude that if any monitoring was conducted in the
16 absence of plant equipment, it would have had to
17 have been done by the plant industrial hygienist,
18 the corporate industrial hygienist, excuse me.

19 BY MR. BRODHEAD:

20 Q. Mr. Deringer?

21 A. And there was only one corporate hygienist.

22 Q. That was Mr. Deringer?

23 A. Yes, I'm sorry, yes. I would conclude, and it's
24 only speculation, that there might have been some

1 measuring done in that period of time on the
2 corporate basis, but I don't recall the data.

3 Q. As of the time you began in November of '71 and up
4 until OSHA intervention, are you aware that any data
5 was collected at the Painsville plant with respect
6 to what were the levels of ambient vinyl chlorides
7 to which the workers were being exposed?

8 A. Again, what was the time frame of the question?

9 Q. After you began in November of 1971 and before OSHA
10 intervention.

11 A. Now, OSHA intervention, in terms of the permanent
12 standard was in the fall of 1974.

13 Q. No, I mean, when they began to come into the plants
14 in the winter of '74, excuse me, the early months of
15 1974?

16 A. I could tell you there was a great deal of measuring
17 in 1974. You would expect that to be the case.

18 Q. But what I want to know is before OSHA set foot in
19 the plant to begin discussion of ambient levels,
20 what was it, if anything, that Uniroyal had done on
21 its own prerogative without government prodding to
22 measure the ambient levels of vinyl chloride?

23 A. I would have to go back and be shown documents of
24 measurements in '72 or '73 or very, very late in

1 1971. I don't have a recollection of those pieces
2 right now.

3 Q. Right.

4 A. And I think there might be some better people to
5 answer that question.

6 Q. Such as Doctor Harris?

7 A. Possibly so, yes.

8 Q. Or Mr. Deringer?

9 A. Or perhaps questions handled by Mr. Leech.

10 Q. Fair enough.

11 A. Although I don't remember when he arrived at
12 Painsville.

13 - - - -

14 (Document marked for identification
15 Deposition Exhibit No. 1.)

16 - - - -

17 BY MR. BRODHEAD:

18 Q. Doctor, I'm showing you what has been marked Exhibit
19 1, and they're all preceded by your last name.

20 Doctor, this is a document which purports to be
21 entitled a Bibliography on Vinyl Chloride Prepared
22 by the Office of Occupational Health Surveillance
23 and Biometrics and the Office of Research and
24 Standards Development, National Institute for

1 Occupational Safety and Health, May 22, 1974.

2 Have I correctly identified that document,
3 Doctor?

4 A. That's correct.

5 Q. Have you seen it prior to today?

6 A. I'm going to take a moment to review it. Well, it
7 looks like a collection of pages that are not in any
8 kind of order. Page 1 or so is in the back, which
9 is numbered Page 79. It is next to the end of the
10 packet. Page 80 is about the first page of the
11 document. So I don't know whether the document is
12 complete. And I don't remember if I ever saw it
13 before.

14 Q. I'll concede to you, Doctor, that the pages are out
15 of order.

16 A. It looks comprehensive.

17 Q. But my point is it's more with reference to the fact
18 that NIOSH had prepared a bibliography which is
19 dated May of 1974?

20 A. That's right, that's what it says.

21 Q. As best you can recall, had you ever been provided
22 with a bibliography with respect to the harmful
23 effects of vinyl chloride by NIOSH?

24 A. I don't see any cover letter on this, and a fair

1 answer to your question, if this were to have come
2 in to Uniroyal, I don't know to whom it was
3 directed.

4 Q. Would it not likely go to you?

5 A. There's a possibility that it would, again, go to
6 Doctor Harris or anybody else who might have been
7 deemed a person who should receive this. It's
8 possible it could have even come into a business
9 manager.

10 Q. I've reorganized the pages. And it begins with a
11 list of journal abbreviations and the pagination
12 continues through Page 9.

13 A. Yes.

14 Q. Now that I've fixed the page numbering, does that
15 appear to be, as best you can tell, a complete
16 document?

17 A. Well, I'm not able to tell because it jumps around
18 so much and to try to pick up a chronology through
19 the numbers is not going to work. It appears to be
20 alphabetized.

21 Q. And the pagination is in sequence?

22 A. No. It jumps around.

23 Q. The page numbers.

24 A. I'm sorry. I'm just looking at the other numbers.

1 The pages are okay, but it no longer has Page 79 or
2 80. They've been taken out.

3 Q. It goes up to Page 9?

4 A. Yeah, but you've removed a couple of pages.

5 Q. My suggestion to you is that I have erroneously put
6 them in there.

7 A. Yes, what were they a part of?

8 Q. I apologize for that. This is a list of 26
9 references. If you want to mark those separately,
10 I'll be happy to do that as Exhibit 2.

11 A. They are not part of the bibliography then.

12 MR. BRODHEAD: Off the record.

13 - - - - -

14 (Whereupon, there was a discussion off
15 the record.)

16 - - - - -

17 BY MR. BRODHEAD:

18 Q. Thanks, Doctor. Doctor, are you aware as to whether
19 or not NIOSH, in the Federal Register of January
20 30th, 1973, issued a notice concerning 23 agents,
21 one of which was vinyl chloride?

22 A. I don't remember that. January 1973?

23 Q. Right.

24 A. What was that in context to?

1 Q. NIOSH through --

2 A. Do you know?

3 Q. Excuse me. I'm trying to answer your question.

4 NIOSH through the Federal Register was attempting to
5 compile information. I have such a document. It is
6 marked as Exhibit 2.

7 And it states in part that: Any person
8 having information or data which is not readily
9 available in open scientific literature in any of
10 the areas listed above. I'll show the document
11 momentarily, Doctor, or in any other area which the
12 person considers relevant to the establishment of a
13 safe and healthful occupational environment
14 involving the agent set forth above is invited to
15 submit such information with accompanying
16 documentation to the assistant director for research
17 and standards development, National Institute for
18 Occupational Safety and Health, and gives the
19 address after that. And it is signed by Marcus M.
20 Key. I'll show you the document.

21 Have I correctly identified that, Doctor,
22 Exhibit 2?

23 A. Yes.

24

(Document marked for identification
Deposition Exhibit No. 2.)

- - - -

BY MR. BRODHEAD:

Q. Now that you've seen it, do you have any
recollection of having previously seen the document?

A. I don't recall seeing this. I don't remember.

Q. NIOSH documentation subsequently reveals that there
were three, and three only, responses received; one
was from the Manufacturing Chemists Association
dated March 7th, 1973, and contained their
recommended precautionary label as stated from their
chemical safety data sheet, SD-566, the 1972
revision. The second was from the Mine Safety
Appliance Company, March 16, 1973, and provided
information on methods for sampling and analyzing
for vinyl chloride. The third and last response was
received from the Industrial Safety Equipment
Association, May 3rd, 1973 and provided
recommendations on the use of personnel protective
respiratory equipment for exposure to vinyl chloride
at concentrations in excess of 200 parts per
million.

My question to you, Doctor, is: Do you

1 recall whether or not there were any discussions at
2 Uniroyal of which or to which you were privy wherein
3 the NIOSH requests and its bulletin was discussed?

4 A. I don't recall such meetings, but organizationally,
5 this does not mean it might not have occurred.
6 Again, with my telling you earlier, and in the
7 record, that the industrial hygienist and the
8 corporate toxicologist reported to the safety
9 organization, it's not clear to me, in addition to
10 memory being a problem over 18 years, as would be
11 expected, understood I hope, that whether these
12 things took place or not in each and every aspect, I
13 can't say. I might not have been able to say the
14 same day.

15 Q. I understand, Doctor. I'm only asking to the best
16 that you can recall?

17 A. Yes.

18 Q. Your caveat is well understood.

19 A. Okay, good.

20 - - - -

21 (Document marked for identification

22 Deposition Exhibit No. 3.)

23 - - - -

24 BY MR. BRODHEAD:

1 Q. I've marked as Exhibit 3 just the section from the
2 NIOSH literature which chronicles the portion I've
3 read to you?

4 A. I see that.

5 Q. Do you understand that I've read to you from the
6 document?

7 A. Yes, that's true.

8 Q. Thank you very much. Doctor, I asked you or
9 mentioned the name of Dr. Marcus Key, does that ring
10 a bell with you?

11 A. Yes, he was I guess the director or chief of NIOSH
12 during that period.

13 Q. Have you met the man personally?

14 A. I think some years later, I did meet Doctor Key. I
15 don't know how many years later, but it strikes me
16 it was some time later on in the '70s.

17 - - - -

18 (Document marked for identification
19 Deposition Exhibit No. 4.)

20 - - - -

21 BY MR. BRODHEAD:

22 Q. Doctor, I'm showing you what has been marked Exhibit
23 4. It purports to be a clipping from the Washington
24 Post dated Monday, May 20th, 1974. The headline is:

1 Mono chloride linked to cancer. Chemical hazard
2 kept quiet.

3 My question to you, Doctor, is a specific
4 one, and I'll show you the document and allow you to
5 answer. In the second column, it states that: In
6 January, 1973, five months after Maltoni found the
7 first rat angiosarcoma, a team of three US Chemical
8 Industry scientists visited him in Bologna to learn
9 about his work.

10 My question to you, Doctor, is: Is that
11 visit what we might have or what I referred to
12 previously, which has Doctor Harris going to
13 Professor Maltoni's laboratory?

14 MS. KOESTER: I'll object.

15 A. I don't know when Doctor Harris visited Doctor
16 Maltoni specifically.

17 BY MR. BRODHEAD:

18 Q. Doctor, I understand completely that we're working
19 with 18 years of memory. And I understand further
20 that some of these questions are taxing your memory
21 or you simply can't answer. But my last question to
22 you on this document is: Are you able to state that
23 it is your recollection or not your recollection
24 that Doctor Harris went to Professor Maltoni's

1 laboratory in January of 1973?

2 A. I'm unable to state the time of that visit. And I'm
3 unable to state there were additional people with
4 him, and if there were, who they were. I just don't
5 recall.

6

- - - -

7

(Document marked for identification

8

Deposition Exhibit No. 5.)

9

- - - -

10 BY MR. BRODHEAD:

11 Q. Thank you, Doctor. Doctor, I'm showing you what is
12 marked Exhibit 5. It's an article called: The
13 Vinyl Chloride Disease. And the author's name shown
14 is PL Viola. It shows the summer of 1970. Have I
15 correctly identified that document?

16 A. You have.

17 Q. Would you look at it briefly and see if it appears
18 to be a complete copy of the article.

19 A. Some of the copying raises question because the
20 pagination gets dropped. It goes from ten to an
21 unnamed page, unnamed unnumbered page, unnumbered,
22 now to 14. It sounds good.

23 Q. That's logical?

24 A. It sounds good, and I have not, to my knowledge,

1 seen this. I don't remember seeing it. I'm
2 flipping through it fast here.

3 Q. It appears to be a complete copy, does it not?

4 A. It could be.

5 Q. There's nothing that you see which overtly
6 demonstrates to you that it is not a complete copy?

7 A. Right.

8 Q. I think you've answered my next question, you're not
9 familiar with it?

10 A. I don't remember ever seeing it.

11 Q. Doctor, do you have any recollection as to whether
12 or not there was an international conference on
13 oncology in Houston in May of 1970 at which Doctor
14 Viola presented the findings which are demonstrated
15 in the paper, which is Exhibit 5?

16 A. I actually have no knowledge of that.

17 Q. That was before your tenure?

18 A. I was with another company at that time.

19 Q. Would I be better off asking Doctor Harris?

20 A. I think that would probably be a better direction
21 for that question.

22 Q. Doctor, is it your understanding that NIOSH was
23 first informed about angiosarcomas related to vinyl
24 chloride on or about January 22nd, 1974 by BF

1 Goodrich people?

2 A. It sounds like a very good date, although I can't
3 attest to it being the date. It strikes me
4 somewhere in the 20s of January, 1974.

5

- - - -

6

(Document marked for identification

7

Deposition Exhibit No. 6.)

8

- - - -

9

BY MR. BRODHEAD:

10

Q. Doctor, I have marked Exhibit 6, which it's a letter
11 from J. William Lloyd, director of Office of
12 occupational health of surveillance and biometrics.

13

A. Yes.

14

Q. For the Department of Health, Education and Welfare,
15 specifically NIOSH. Are you familiar with Doctor
16 Lloyd?

17

A. I do remember the name at this point as the name I
18 heard. I forget his position in NIOSH. I guess his
19 title is there in the letter.

20

Q. Correct. In this letter, Doctor Lloyd refers to a
21 meeting between NIOSH and the Manufacturing Chemists
22 Association, that is MCA of July 17th, 1973. My
23 question is: Do you have any knowledge of that
24 meeting, Doctor?

1 A. Let me just kind of work with this in front of me.

2 Q. Sure.

3 A. No, I don't have any knowledge of that meeting.

4 Q. In that letter, Doctor Lloyd also indicates that he
5 was, that is, NIOSH, was never informed of the
6 angiosarcoma evidence of Doctor Maltoni prior to
7 January 22nd of 1974; is that correct?

8 MS. KOESTER: I'm going to object. I
9 mean, he stated he doesn't remember this letter.

10 A. I don't remember this letter and I don't see where
11 that's stated.

12 MR. BRODHEAD: Let me see if I can help
13 you. Let's go off the record for just one second.

14 - - - -

15 (Whereupon, there was a discussion off
16 the record.)

17 - - - -

18 A. Would you restate your question, please.

19 BY MR. BRODHEAD:

20 Q. Sure. All I'm trying to establish, Doctor, is that
21 apparently, according to Doctor Lloyd, there was
22 some confusion as to whether a representative of
23 NIOSH was present with some industry representatives
24 in Doctor Maltoni's laboratory. Doctor Lloyd

1 apparently clears it up that there was not?

2 A. I understand.

3 Q. And furthermore indicates that until the BF Goodrich
4 Louisville angiosarcomas was brought to his
5 attention, NIOSH had no knowledge of angiosarcomas;
6 is that correct?

7 MS. KOESTER: Objection, foundation. You
8 can answer.

9 BY MR. BRODHEAD:

10 Q. If you understand.

11 A. He seems to be saying that.

12 Q. All right. Thank you, Doctor. I'll try to move on
13 and see if we can finish before 2:30.

14 - - - - -

15 (Document marked for identification
16 Deposition Exhibit No. 7.)

17 - - - - -

18 BY MR. BRODHEAD:

19 Q. I'm showing you what has been marked as Exhibit 7,
20 Doctor. It's a June 4th, 1974 letter to Mr. Marvin
21 Rowlands, of the American Medical News from Marcus
22 Key.

23 A. And director of NIOSH I trust still.

24 Q. Correct. He says in the first paragraph, he refers

1 to rather, a Russian study concerning the harmful
2 effects of vinyl chloride exposure in 1949, and in
3 general, the tenor of the letter, he's trying to
4 clear up some confusion as to dates of when what
5 occurred.

6 My question to you is a specific one,
7 Doctor, and that is, when, if at all, were you first
8 aware of a Russian study concerning vinyl chloride
9 exposure in 1949?

10 A. You would have to familiarize me with more of that
11 reference because I don't recall a particular study
12 you're citing.

13 Q. Might I do better to take that up with Doctor
14 Harris?

15 A. Perhaps.

16 Q. All right.

17 A. And, again, with Russian studies, again, I wonder
18 during that time era whether it was published and
19 recognized journals, availability becomes a
20 question. You can appreciate things have certainly
21 changed today in terms of getting knowledge out of
22 that country, but I just don't know what the
23 situation was at that time.

24 It could be relevant to how much

1 information one might be expected to know in the
2 free world at that time. Now, that's an answer from
3 somebody who is unfamiliar with the study, so I
4 would direct that to Doctor Harris.

5 - - - -

6 (Document marked for identification
7 Deposition Exhibit No. 8.)

8 - - - -

9 BY MR. BRODHEAD:

10 Q. Doctor, I'm showing you what is marked Exhibit 8,
11 which is a letter to Dr. Marcus Key from Professor
12 Maltoni. I'm reading from the first paragraph on
13 the second page in which he states quote: "As far
14 as your specific inquiry is concerned, may I point
15 out that I never stated that NIOSH knew of
16 experimental evidence because a representative came
17 to Bologna on any occasion. It appears that there
18 may have been some misapprehension arising from
19 confusion between information received and an actual
20 visit to Bologna.

21 My question to you is a simple one,
22 Doctor: Does that seem to comport and confirm the
23 fact that there was not a NIOSH representative
24 present in Maltoni's laboratory in January of '73?

1 MS. KOESTER: Objection, foundation.

2 A. Where is that wording in the letter again? I'd like
3 to read the phraseology.

4 BY MR. BRODHEAD:

5 Q. Sure.

6 A. Thank you. It would appear that he's saying he
7 never stated that NIOSH knew of experimental
8 evidence because a representative came to Bologna.

9 Q. Right. In other words, he never made a
10 representation that there was, in fact, a NIOSH
11 representative there, correct?

12 MS. KOESTER: You're asking if that's his
13 interpretation of the letter?

14 MR. BRODHEAD: Yes.

15 A. It would appear that that could be one
16 interpretation.

17 BY MR. BRODHEAD:

18 Q. Thank you, Doctor. And I understand that this is a
19 letter you probably have not seen before, correct?

20 A. Oh, no. I certainly was not copied.

21 - - - -

22 (Document marked for identification
23 Deposition Exhibit No. 9.)

24 - - - -

1 BY MR. BRODHEAD:

2 Q. Doctor, I'm showing you what has been marked as
3 Exhibit 9, and which is a letter of May 28th, 1974
4 to Mr. Richard Kenyon, acting editor, Chemical and
5 Engineering News from Dr. Marcus Key, assistant
6 surgeon general and director of NIOSH.

7 The last paragraph on the first page
8 indicates: That in July 17th, 1973, Doctor Key and
9 several members of his staff met at MCA's request in
10 the Parklawn building with an MCA delegation which
11 included representatives of a Imperial Chemical
12 Industries, Ethyl Corporation, Dow Chemical
13 Corporation, and Union Carbide Corporation.

14 Was Doctor Harris involved in the MCA
15 committee as it related to vinyl chloride?

16 A. He was involved in MCA work related to the vinyl
17 chloride. When you say the committee, I'm not sure
18 whether at the point of expansion of our concern
19 whether there could have been possibly several
20 committees. So I do note the absence of Uniroyal
21 there, so that he was involved, but apparently he
22 wasn't involved with this particular group.

23 Q. Right. My question was it really a general --

24 A. It's very vague because it says an MCA delegation,

1 so one does not know the composition of that
2 delegation. That's not very precise in the letter.

3 - - - -

4 (Document marked for identification
5 Deposition Exhibit No. 10.)

6 - - - -

7 BY MR. BRODHEAD:

8 Q. All right. I'll try to get precise then, Doctor.
9 I'm showing you what is marked as Exhibit 10. I'm
10 representing to you, Doctor, that Doctor Keith
11 Jacobson was a member of that delegation on behalf
12 of NIOSH, and that what is Exhibit 10 are Doctor
13 Jacobson's recollections of that meeting.

14 He indicates further, and I'm going over
15 this document with you, you can see it, correct?

16 A. Um-hum.

17 Q. That there was a member of ICA, that there was a
18 doctor from Italy, that there was a Doctor Rinehart
19 from Ethyl Corporation, a Doctor Rowe from the Dow
20 Corporation, a Mr. Wheeler from Union Carbide, and
21 George Best on behalf of MCA?

22 A. Yes.

23 Q. Are you familiar with some or all of these
24 individuals?

1 A. I know some of those names. I don't know them on
2 any personal level.

3 Q. Did you confer with any of these people at any time
4 regarding the vinyl chloride hazard?

5 A. I don't recall ever doing so.

6 Q. All right. Referring to the next paragraph, Doctor,
7 according to Doctor Jacobson's notes, NIOSH
8 representatives included Dr. Frank Mitchell, Dr. Don
9 Lassiter, Mr. Richard James, Dr. Marcus Key, and
10 Doctor Jacobson; is that correct?

11 A. I see that, yes. It says that.

12 Q. This meeting took place in July of 1973 after the
13 visit to Doctor Maltoni's laboratory. My question
14 to you is: Do you know if the MCA people divulged
15 to NIOSH at that time what they knew about
16 angiosarcomas and vinyl chloride exposure?

17 A. No, I don't know.

18

- - - -

19

(Document marked for identification

20

Deposition Exhibit No. 11.)

21

- - - -

22 BY MR. BRODHEAD:

23 Q. Doctor, I've marked as Exhibit 11 a five-page
24 document. I'm representing to you that these are

1 notes from Mr. Richard B. James taken at that
2 meeting and/or compiled thereafter. As I pointed
3 out previously, he was on the NIOSH team.

4 A. That's right.

5 Q. The fifth page has the initials RBJ, correct?

6 A. That's right.

7 Q. Again, I'm representing to you that these are the
8 notes of Mr. Richard B. James. I want to refer to
9 the last sentence: If asked to sum up the meeting
10 in a few words, I would say I was given the
11 impression that MCA was saying that some other
12 people had done some poor work, that there was no
13 suspected problem to show that they were interested,
14 and to say they have started some studies despite
15 the fact that they don't think there is any serious
16 problem.

17 My question to you, Doctor, is as best you
18 can tell, have I correctly read Mr. James's last
19 sentence?

20 A. I think you're pretty accurate. It has a lot of
21 cross outs and insertions in somebody's handwriting,
22 but I think you've read it pretty accurately.

23 Q. Thank you very much.

24 A. As stated.

1 Q. Forgive me, Doctor, I asked you previously if you
2 knew of a Dr. William Lloyd?

3 A. Yes, he was in NIOSH, but I didn't remember his
4 title.

5

- - - -

6

(Document marked for identification

7

Deposition Exhibit No. 12.)

8

- - - -

9

BY MR. BRODHEAD:

10 Q. I'm showing you what has been marked as Exhibit 12.

11 A. Yes.

12

MR. BRODHEAD: Off the record.

13

- - - -

14

(Whereupon, there was a discussion off

15

the record.)

16

- - - -

17

BY MR. BRODHEAD:

18

Q. Exhibit 12 is entitled: Risk Benefit Decisions and
19 the Public Health, Proceedings of the Third FDA
20 Science Symposium held at the United States Air
21 Force Academy, Colorado Springs, Colorado, February
22 15 to 17, 1978.

23

The second page is entitled: The

24

Fallacies of Acceptable Risk, Dr. William Lloyd,

1 Occupational Safety and Health Administration.

2 Are you familiar with the document,

3 Doctor?

4 A. I don't believe that I've seen it. I don't know
5 whether it was published. Was it published in the
6 literature?

7 Q. So far as I know it is published, but it's a 1978
8 document.

9 A. But they seem to be proceedings of the symposium, so
10 I don't know who the recipients would have been. I
11 don't remember seeing it.

12 Q. Fair enough, Doctor. That's okay. I just wanted to
13 read to you a portion of the document.

14 A. Yes.

15 Q. And find out what position, if any, you do have on
16 what Doctor Lloyd had to say. The first death from
17 angiosarcoma of the liver that I'm aware of among
18 polyvinyl chloride workers occurred on September
19 2nd, 1957. The second death occurred at the same
20 Canadian plant December 21st, 1975. And before the
21 health community became aware of the possibility of
22 a serious health hazard related to vinyl chloride
23 exposure on January 22, 1974, eight cases of
24 angiosarcoma of the liver had already been seen at

1 this plant. I would suggest to you that the
2 frequency of such a rare disease in a plant
3 employing at most a few thousand workers over the
4 years and perhaps only several hundred should have
5 become apparent to an unsophisticated management and
6 most certainly would have been obvious to company
7 medical personnel or medical consultation.

8 In addition to high liver cancer mortality
9 of the Canadian workers, the unusual age
10 distribution should have alerted management and
11 medical personnel to a very unusual problem. The
12 first case died at age 41, the second at age 43, the
13 third at age 42. Of the ten deaths reported from
14 the plant to date, eight died at age 53 or younger.
15 The oldest death occurred at age 61.

16 Doctor, I'm going to take a break now, and
17 I want to make clear to you that he's now talking
18 about a Canadian experience, and he's going to
19 switch now to American plant experience. And it's a
20 new paragraph.

21 Quote: "Let us look now at our experience
22 in the United States. The first death from
23 angiosarcoma of the liver reported in the United
24 States that I'm aware of occurred on August 19th,

1 1961. This was a worker from the Goodyear plant in
2 Niagra Falls, New York, a plant which closed before
3 the alert in 1974. Three deaths from this plant
4 were observed before the date of the alert. Without
5 detracting from the efforts of the Doctor Creech,
6 the BF Goodrich consultant, who first alerted the
7 health community to the problem of angiosarcoma of
8 the liver in PVC workers, we should also note that
9 six deaths prior to January 2nd, 1974, including the
10 three reported by Doctor Creech, were from the BF
11 Goodrich plant in Louisville, Kentucky. Again, we
12 should note the unusual ages of death for these
13 workers. They were all dying on the job with three
14 of the deaths in the forties and one at age 37. Any
15 systematic medical surveillance by the company, even
16 as gross as looking at the death experience, should
17 have alerted them to the problem. It also should be
18 remembered that the workers at these plants have
19 been found to have higher rates for cancers of other
20 sites and very high rates of non-malignant liver
21 disease which might have alerted the company to the
22 problem. In addition to identifying such a serious
23 health problem, by reference to even simple
24 surveillance of company records or records of their

1 insurance underwriters, the excess of cancer at
2 working ages at these plants might have been
3 identified by reference to routinely collected death
4 certificates.

5 Now, Doctor, excuse me for taking the time
6 to read of all that. I had a reason for it and I'll
7 try to get to the point quickly.

8 At any time prior to NIOSH intervention,
9 are you aware that Uniroyal monitored the incidence
10 of cancer deaths among its employees in any specific
11 category? And I understand you came in in November
12 of '71.

13 A. The NIOSH revelation, to clarify, being the one of
14 January 31st, 1974 in Marcus Key's letter to the
15 MCA. You're familiar with that? This is the one in
16 which they discussed the visit to Goodrich. And it
17 is my only recollection that it got out there in
18 that form.

19 Q. This is after the Goodrich experience?

20 A. Yes. There was only -- I only have one recollection
21 of Uniroyal's monitoring cancer. And it was through
22 something else you've probably been made aware of,
23 possibly by Mr. Leech or others, that we had a
24 probably state-of-the-art for that time study going

1 on with the University of North Carolina, which was
2 a three-part Uniroyal university study.

3 Q. Does that have to do with the rubber industry?

4 A. Absolutely. So with that, there was a donning of a
5 kind of new age of epidemiology and interest. And I
6 think it was really a study in an industry that was
7 really ahead of its time and set the pace for a lot
8 of studies today. Yes, and that anteceded (SIC)
9 preceded the 1974 revelations because we were
10 already underway in 1972 with the work. And I might
11 say parenthetically, when I realized not off the
12 record that one of the attractions to this Uniroyal
13 job to me personally was the recognition that I
14 could join a company which was this far-sighted to
15 be involved in such an arrangement as this. So
16 again, through the university as our contractor, we
17 were involved in compilation of causes of death and
18 to be sure that included cancers.

19 Q. That study had in large measure to do with what were
20 the adverse health effects of any polymerization
21 vapors, for example?

22 A. Well, there were some studies about that later on.
23 I don't recall those dates. But the early work,
24 that's noteworthy was in, oh, boy, ten or 15 year

1 study it seemed to me of mortality analysis in the
2 industry.

3 Q. Getting now specific to vinyl chloride, was there
4 any monitoring of cancers among the vinyl chloride
5 by Uniroyal prior to NIOSH intervention in 1974?

6 A. Monitoring of cancers?

7 Q. In the vinyl chloride workers.

8 A. Not due to the vinyl chloride workers, I do not
9 recall that this was done or had been done.

10 Q. I want to go back to something from Doctor Lloyd
11 that I read to you previously. And my question is
12 do you agree or disagree. It's in the second
13 paragraph having to do with the American experience.
14 Quote: "Again we should note the unusual ages of
15 death for these workers. They were all dying on the
16 job with three of the deaths in the forties and one
17 at age 37.

18 Now, beginning with the following
19 sentence, Doctor, I want to know whether, as a
20 general statement, you agree or disagree: "Any
21 systematic medical surveillance by the company, even
22 as gross as looking at the death experience, should
23 have alerted them to the problem.

24 As a general statement, and not

1 necessarily specific to Uniroyal, do you agree with
2 Doctor Lloyd's assertion in the context in which it
3 exists?

4 A. I think I have to think of the context in which
5 Doctor Lloyd was presenting this paper. It was now
6 1978. It was literally four years later. It is
7 looking back through the retrospectroscope. It is
8 constructing a good call doing things better. All
9 of us have to try to do things better.

10 I think Doctor Creech received a good
11 credit for what he did. I don't know whether it
12 could have been done any sooner. You're back into
13 the old question of when does suspicion become fact?
14 When do hunches need to get checked out?

15 Q. Can we agree, Doctor, that with respect to the
16 Painsville plant and that was the only monomer
17 conversion plant of Uniroyal's, was it not?

18 A. The polymerization plant?

19 Q. Correct.

20 A. That I am aware of, yes.

21 Q. Would it be fair to state that prior to NIOSH
22 intervention in 1974, so far as you know, the vinyl
23 chloride workers were not required to wear
24 respirators, true?

1 A. I'm not aware of whether that's true or false.

2 Q. Okay. The ambient levels of vinyl chloride were not
3 monitored to determine if they were in accordance
4 with then existing threshold value limitations?

5 A. I'm not aware if that's true or false. And I would
6 allude to my earlier answer that if there was
7 monitoring, it was more likely to have occurred at
8 the corporate level.

9 Q. All right.

10 A. And I'll leave it at that.

11 Q. There was not any monitoring of liver function among
12 the vinyl chloride workers?

13 A. Not until 1974 in any kind of organized, concerted
14 way. I'd have to stop, however, to pause because I
15 would want to be most accurate in answering your
16 question. And you would want me to be also.

17 We had a plant physical examination
18 program, and I would just have to hesitate to look
19 back to see what tests we did prior to that. I
20 don't recall how many blood chemistries, if any, we
21 did back in those earlier days.

22

- - - -

23 (Document marked for identification

24 Deposition Exhibit No. 13.)

1
2 BY MR. BRODHEAD:

3 Q. Doctor, I'm showing you what has been marked Exhibit
4 13. I'm trying to help out the reporter to get the
5 title down. And it is an article entitled:
6 Proportional Mortality Among Vinyl Chloride Workers
7 by Monson and Peters. It appears to be a 1974
8 article. I just want to read to you the summary,
9 Doctor, if I may. Do you mind if I show this to the
10 reporter?

11 This is the first paragraph of the
12 article, which is entitled summary. A proportional
13 mortality analysis of one hundred and sixty-one
14 deceased workers in two plants using vinyl chloride
15 a 50 percent excess of deaths due to all cancers was
16 seen. Specific sites of cancer with the greatest
17 excess included liver and biliary tract, lung, and
18 the brain. The excess and fatal cancer was seen
19 mainly in men who died before age 60. Also there
20 was a trend in time in the ratio of observed to
21 expected deaths since 1970 over twice as many cancer
22 deaths as expected have occurred.

23 My question is a simple one, Doctor. Do
24 you have any basis upon which to dispute the Monson

1 and Peters summary as I read it to you?

2 A. Well, no, I don't, but I'm not really that familiar
3 with their study.

4 Q. Okay. Thank you, Doctor.

5 A. I would add in terms of my recollection.

6 Q. We agree that vinyl chloride is known to cause
7 hematic angiosarcoma, correct?

8 A. It has been associated with it, yes. It appears to
9 be the agent.

10 Q. Can we agree that it has been demonstrated to cause
11 adenomas and adenocarcinomas of the lung?

12 A. I'm not as familiar with that effect.

13 Q. Might I better take up that with Doctor Harris?

14 A. Perhaps.

15 Q. Can we agree that it has been known to cause
16 neuroblastoma of the brain?

17 A. It could have been. What is the date of that paper?

18 Q. 1976.

19 A. This could have been a later linkage.

20 Q. Sure. I'm trying retrospective to today, Doctor.

21 I'm not trying to narrow you down to any point in
22 time as far as this question is concerned. Can we
23 agree that it has been associated with lymphoma and
24 various other tumors in a variety of animal species?

1 A. I was familiar with the variety of tumors in
2 animals. I don't recall the specific tissue types
3 at this point. You're being very specific in the
4 question. I remember a variety of different tumors.

5 Q. In any event, when we talk about the carcinogenicity
6 of vinyl chloride, can we agree that in addition to
7 angiosarcoma it has been linked to other liver and
8 biliary cancer? By the way, I'm referring for the
9 purpose of this question the National Institute of
10 Health docket called Vinyl Chloride, an Information
11 Resource, which is dated March 1978. Perhaps if I
12 just went through what it states are the
13 carcinogenic effects.

14 A. Please read.

15 Q. And, again, my question is: Would you agree or
16 disagree? It lists in addition to angiosarcoma of
17 the liver, other liver and biliary cancers, agree or
18 disagree?

19 A. Well, I would like to read the context.

20 Q. Okay.

21 A. If you could restate your question, please.

22 Q. I'll move on because the other liver and biliary
23 cancer is, as it states here, is only suggestive.

24 A. There has been some association, but nowhere nearly

1 as definite as the rarely and more specifically
2 identify the cancer angiosarcoma.

3 Q. We've already covered I believe central nervous
4 system tumors and lung cancer at least so far as
5 your understanding was concerned, correct?

6 A. Um-hum.

7 Q. There also have been reported an increase lymphatic
8 and hematopoietic systems, correct?

9 A. I've seen some studies that indicate some increase
10 in those areas.

11 Q. As well as cancer of the buccal cavity and pharynx,
12 correct?

13 A. Yes, but ironically, those were the lowest exposed
14 group so it is kind of a difficult --

15 Q. Nexus?

16 A. Those relationship dose response relationship at
17 best. In fact, it seems to be more inverse.

18 Q. Let's talk for a minute, if we can, about
19 non-carcinogenic effects of vinyl chloride. It is
20 known to be associated with disturbances in the
21 liver function, correct?

22 A. That's possible. I could not be very specific at
23 this point.

24 Q. Fair enough. In fairness to both of us, I'm trying

1 to move along because you need to go, right?

2 A. Yes.

3 Q. It has been associated with acroosteolysis?

4 A. Yes.

5 Q. Radiographic and histological changes in the lung?

6 A. Well, they have been reported according to that.

7 Q. Hematologic changes?

8 A. They've been reported by several others. Now, could
9 we stop a minute just to clarify.

10 Q. Sure.

11 A. This is a compilation of much research with an eye
12 toward, no doubt, pulling in as many effects as
13 possibly can be found, even although they might be
14 in one or two studies. That is a lot different than
15 hitting the nail on the head and saying it's agreed
16 and accepted. Some of the things could be outliers
17 and the reported, for completion, for completion of
18 completeness of data, so that there's no weighting
19 of the evidence in that. It's a recitation. Do you
20 understand the point I'm making?

21 Q. I do, Doctor. I'm just trying to cover the gambit
22 of adverse health effects that have been noted in
23 the literature.

24 A. Yes.

1 Q. Doctor, if I represented to you that the MCAs
2 chemical safety data sheet for vinyl chloride first
3 published in 1954, stated quote: "Aside from the
4 risk of fire or explosion, vinyl chloride presents
5 no other very serious problem in general handling.
6 Again, do you have any basis to dispute that as you
7 sit here today?

8 A. From the '50's, is that the date?

9 Q. 1954.

10 A. It was probably consistent with what was known about
11 vinyl chloride at that time.

12 Q. With regard to the revised chemical safety data
13 sheet on vinyl chloride?

14 A. 1972.

15 Q. Did we mark that? That sheet has been previously
16 marked as Exhibit 14 in Mr. Leech's deposition. I
17 just want to refer you to the section with respect
18 to health hazards. It states in Paragraph 3.1.1:
19 That chronic overexposure may produce liver injury;
20 is that correct, Doctor?

21 A. Yes, I see that.

22 Q. My question to you is: When were you first aware
23 that liver injury was associated with vinyl chloride
24 exposure?

1 A. That would be very difficult to say.

2 Q. Would it pre-date the May '72 date of that MSDS?

3 A. I don't think so.

4 Q. What does that mean to you chronic overexposure may
5 result in liver injury?

6 A. It is awfully vague. There was no knowledge of
7 human cancer as you and I both know.

8 Q. No, I don't know that, Doctor.

9 A. We have to know that based on --

10 Q. No, I don't have to know that.

11 A. Well, I know that based on 1974 revelation from the
12 Goodrich plants. So I'm accepting that as the
13 cornerstone of the first fact. I thought we used
14 that as a kind of BCAD divider. That's the first
15 knowledge of human cancers at that point.

16 To cite them back to 1958, because Doctor
17 Lloyd gave a paper in 1978 citing cases in
18 retrospect occurring in the '50's was not known by
19 this compiler of the data sheet in 1972.

20 Q. Doctor, let me, my question to you is, I'm trying to
21 move on here.

22 A. My interpretation of that is your question, correct?

23 Q. It's vague, is it not?

24 A. It's very vague. And liver injury is a catch all

1 term. I don't think it necessarily refers to tumors
2 by any means.

3 Q. What does that mean to you? You have a BA, a MD,
4 and a Ph.D.?

5 A. Yes.

6 Q. You're one of the most educated men I've ever met.
7 You're telling me that's vague?

8 A. It seems vague.

9 MS. KOESTER: What does it mean to him
10 today is what you're talking about?

11 MR. BRODHEAD: Right.

12 A. I think the massive dosage level a thousand parts
13 per million, or higher, or exceeding the 500 number,
14 which I think is cited in this report as level, you
15 could risk possible malfunction in liver function
16 tests of some sort.

17 BY MR. BRODHEAD:

18 Q. Okay.

19 A. It doesn't get precise as to what the nature of the
20 injury is.

21 Q. Does that statement suggest to you that liver
22 function levels should be monitored among those
23 occupationally exposed, that one sentence alone?

24 A. The lead into that statement is that primary hazard

1 to vinyl chloride is associated with excessive
2 respiratory exposures. Again, sentence two, the
3 exposure to high levels may some produce lung
4 injury, lung irritation, correction, irritation not
5 injury.

6 Chronic exposure may produce liver injury.
7 The suggestion is they're talking about very high
8 dosages for exposures. So that it is just hard to
9 say whether the routine monitoring of people who had
10 exposures below the threshold limit value, where I
11 indicated to you earlier the targeted 50 PPM, later
12 on in 1972 would have been warranted based upon just
13 that.

14 Q. Would you agree with me that in a plant that is not
15 monitoring ambient vinyl chloride levels, it would
16 be difficult to pinpoint those individuals who are
17 getting chronic over exposure, wouldn't it?

18 MS. KOESTER: Objection.

19 BY MR. BRODHEAD:

20 Q. You may answer.

21 A. I don't know that we've concluded that the plant
22 wasn't monitoring.

23 Q. I want you to assume for the sake of my question
24 that it is not, please.

1 A. That would be a difficult assumption to make. I
2 believe that there probably were corporate
3 industrial hygiene measures of that plant that could
4 have been used as a decision model. I do not have
5 any in my possession.

6 Q. Let's take a hypothetical then, just assume a vinyl
7 chloride polymerization facility, which in May of
8 1972, is not monitoring ambient levels.

9 A. Yes.

10 Q. And assume further that the MSDS information that is
11 conveyed to that plant, with respect to potential
12 adverse health effects states only chronic
13 overexposure may produce liver injury.

14 Would you agree with me as a general
15 statement in the absence of data which monitors the
16 ambient levels of exposure, it is difficult, if not
17 impossible, to identify those individuals who are
18 getting chronically overexposed; isn't it?

19 MS. KOESTER: Objection.

20 BY MR. BRODHEAD:

21 Q. You may answer.

22 A. It is difficult to even evaluate the problem, but
23 you can't say, in fact, there are or are not
24 chronically overexposed individuals. You just don't

1 have enough to work on based on your assumption.

2 Q. Right, because of the lack of monitoring, correct?

3 MS. KOESTER: Objection.

4 A. As you set up your in your assumption.

5 MR. BRODHEAD: Off the record.

6 - - - -

7 (Whereupon, there was a discussion off
8 the record.)

9 - - - -

10 BY MR. BRODHEAD:

11 Q. Doctor, why don't we agree, I am going to attempt to
12 finish this.

13 A. I believe you are.

14 Q. And I can't promise you and I have to reserve my
15 right to protect my client, but I'm going to attempt
16 not to put you through anymore of this if I can. If
17 I have to come back, I have to come back it.

18 I'm showing you what has been marked as
19 Exhibit 14. It is an article entitled:
20 Angiosarcoma of the liver and vinyl chloride and
21 polyvinyl chloride workers.

22 On Page 2 of that document, Doctor, it
23 chronicles at least known angiosarcomas world wide,
24 including the United States, correct?

1 A. Yes, sir.

2 - - - -

3 (Document marked for identification

4 Deposition Exhibit No. 14.)

5 - - - -

6 BY MR. BRODHEAD:

7 Q. And there appears to be a number of USA
8 angiosarcomas approximately 16 in number; is that
9 correct?

10 A. Yes.

11 Q. Those go back to as early as August of 1961, do they
12 not, that is the date of death?

13 A. I see one dated '61. That's the earliest I see.

14 Q. Do you know when the angiosarcoma deaths actually
15 occurred that were reported by BF Goodrich?

16 A. There were four cases they discussed. I'm not sure
17 how many were deceased. I'm not sure.

18 Q. If I would represent to you that one of those four
19 were the August of '61 death, would you have any
20 basis to dispute that representation?

21 A. I wouldn't have because I'm not sure when the dates
22 were for those cases. As you and I know, however,
23 they did not put this all together until evidently
24 January 1974 or very close to that time?

- - - -
marked
No. 15.
- - - -

Q. I'm going to try it up with this exhibit, Doctor. Exhibit 15, which is a NIOSH letter from Patricia Foley, which is really in the form of a memorandum dated March 27th, 1974.

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1 1972.

2 Q. That was specific to the rubber industry, wasn't it?

3 A. Yes, and that plant was a specific plant covered in
4 the agreement.

5 Q. But it didn't have to do with vinyl chloride? I
6 want you to restrict yourself to vinyl chloride.

7 A. I feel I have to say that that was included in the
8 study because if problems in any of the participant
9 plants were found, they would have emerged from the
10 study in due time as research unfolded. It was not
11 restricted to any particular plants other than
12 participating united rubber workers plants eligible
13 in that study.

14 Q. Do you know if, in fact, that went into the Fairport
15 facility in Painsville? Do you whether, in fact,
16 they went into the Painsville plant?

17 A. I think at some point they did, but I can't say
18 before 1974.

19 Q. The actual researchers would be in the best position
20 to testify?

21 A. They certainly would, but I want to tell you,
22 please, that in epidemiologic investigation had
23 begun, and that should be given to the credit to the
24 answer.

1 Two, as far as medical surveillance, I did
2 mention that acroosteolysis hand x-rays had been
3 taken and there was an annual surveillance program
4 going on for workers prior to that time from the
5 '60s.

6 Doctor Harris then in terms of keeping in
7 touch with recommendations as far as standards is
8 concerned, the toxicologic investigation was staying
9 in touch with MCA work and I think he was in fair
10 touch with what was going on with Doctor Viola and
11 Doctor Maltoni.

12 Q. I get the impression from your answer that I would
13 be best served by consulting the rubber industry
14 studies, URW studies, as well as consulting with
15 Doctor Harris with respect to the specifics of the
16 four areas that you have just taken in?

17 A. Yes, I would like to introduce a document, please.
18 I would like to go back to Plaintiff's Exhibit 14.
19 Dr. Robert Spirtas was associated with the
20 University of North Carolina, and there is his
21 paper.

22 Q. That's in 1977 paper, correct?

23 A. Yes, but again, it evolves from works he must have
24 done back in those periods of time that he was

1 there.

2 Q. He's actually --

3 A. I don't know where he was when he wrote this in all
4 fairness, Peter. I would want to be accurate. I
5 don't know where he was sent. It seemed the safest
6 from the illness effects section Robert Taft
7 Laboratories back in Cincinnati, NIOSH.

8 Q. Right. He's updating the NIOSH register, correct?

9 A. I guess he is.

10 Q. Isn't that a subtitle to the article?

11 A. I don't know if he's from there, or whether Rose
12 Kaminski is from there. Doctor Spirtas left the
13 University of North Carolina at some point, and I
14 don't where he was when he wrote that.

15 Q. But Doctor Spirtas was on top of this, and we'll
16 have to get that from him, or sources close to him.
17 Are you suggesting to me that he would have known
18 about the 1961 angiosarcoma of the liver, which is
19 documented here?

20 MS. KOESTER: Objection.

21 A. He would have known? In what point in time?

22 BY MR. BRODHEAD:

23 Q. Prior to NIOSH intervention.

24 A. No, I don't think so.

1 MR. BRODHEAD: Doctor, I'd like to reserve
2 my opportunity to complete my examination. I'm
3 going to defer to Mr. Dean at this point. I want to
4 reserve so to ask you more.

5 - - - -

6 EXAMINATION

7 - - - -

8 BY MR. DEAN:

9 Q. I'll be very brief.

10 A. Thank you.

11 Q. But this is the vinyl chloride chemical safety
12 sheet, which is marked Exhibit 14 to Mr. Leech's
13 deposition. It's not marked to your deposition. I
14 think it was shown to you. Yeah, it's right there.
15 My question is simply this: Is it fair did Uniroyal
16 have access to this document in 1972?

17 A. I think some parties in Uniroyal must have had this
18 about that time.

19 Q. That's all the questions on that document. And then
20 finally, Exhibit 16, to the Leech deposition was, at
21 least the first page of it, was a memo you wrote to
22 Doctor Harris?

23 A. Yes.

24 Q. And I draw your attention to the last paragraph of

1 that document where you're referencing work,
2 studies, and conclusions, work done and conclusions
3 drawn as it relates to Monochem's plant at Geismar,
4 Louisiana, correct?

5 A. Yes.

6 Q. I take it from that memo that as part of your job
7 responsibility at Uniroyal you had some oversight
8 responsibilities for occupational safety as it
9 transpired at the Monochem plant?

10 A. I think that word some oversight is probably fairly
11 and accurate, yes.

12 Q. And was there any other occupational medicine person
13 that you shared those responsibilities with?

14 A. I can't remember the name of your physician, but
15 that would be the answer.

16 Q. But he would have been like the on-site doctor?

17 A. That's true.

18 Q. He made reference to on-site doctors at plants
19 throughout the course of the day's deposition?

20 A. That's right.

21 Q. So you would have shared those responsibilities with
22 him; is that right?

23 A. Yes, he being the local agent and I being --

24 Q. Do you remember what his name was?

1 A. I'm questioning that, but I don't remember.

2 Q. He would have been just a regular physician and not
3 specifically trained in occupational safety, is that
4 right, if you can recall?

5 A. I don't remember the name of the physician.

6 Q. Okay. Thank you.

7 A. Thank you.

8 MR. BRODHEAD: I'd like to reserve my
9 right to inquire should that be necessary, Doctor.

10 Thank you very much.

11 MS. KOESTER: Doctor, I'm to advise you
12 about signature. And I think we discussed this
13 earlier. She's going to be typing up this
14 transcript. You would have the right to review it
15 and correct any inaccuracies in her taking down the
16 testimony given here today or you can waive that
17 right.

18 THE WITNESS: I would like to see the
19 transcript.

20 - - - -

21 (Whereupon, the proceedings were concluded
22 at 2:40 p.m.)

23 - - - -

24

1 COMMONWEALTH OF PENNSYLVANIA) CERTIFICATE
2 COUNTY OF ALLEGHENY) SS:

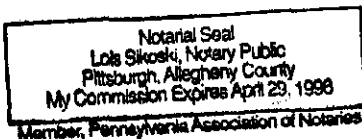
3 I, Lois Sikoski, a Notary Public and Registered
4 Professional Reporter, in and for the Commonwealth of
5 Pennsylvania, do hereby certify that the witness, J.
6 DEXTER FORBES, M.D., was by me first duly sworn to testify
7 to the truth, the whole truth, and nothing but the truth;
8 that the foregoing deposition was taken at the time and
9 place stated herein; and that the said deposition was
10 recorded stenographically by me and then reduced to
11 printing under my direction, and constitutes a true
12 record of the testimony given by said witness.

13 I further certify that the inspection, reading and
14 signing of said deposition were not waived by counsel for
15 the respective parties and by the witness.

16 I further certify that I am not a relative,
17 employee or attorney of any of the parties, or a relative
18 or employee of either counsel, and that I am in no way
19 interested directly or indirectly in this action.

20 IN WITNESS WHEREOF, I have hereunto set my hand and
21 affixed my seal of office this 19th day of October, 1992.

22 Lois Sikoski
23 Notary Public



1 COMMONWEALTH OF PENNSYLVANIA) E R R A T A
 2 COUNTY OF ALLEGHENY) S H E E T

3 I, J. DEXTER FORBES, M.D., have read the foregoing
 4 pages of my deposition given on October 14, 1992, and wish
 5 to make the following, if any, amendments, additions,
 6 deletions or corrections:

7 Pg. No. Line No. Change and reason for change:
 8
 9
 10
 11
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 18
 19

20 In all other respects the transcript is true and correct.

21 _____
 22 J. DEXTER FORBES, M.D.

23 Subscribed and sworn to before me this
 24 _____ day of _____, 1992.

 Notary Public

(LS)

AUL, KARLOVITS & FULESDAY, INC.
312 Boulevard of the Allies
Pittsburgh, PA 15222
(412) 261-2323

October 19, 1992

TO: J. Dexter Forbes, M.D.

RE: DEPOSITION OF J. DEXTER FORBES, M.D.

NOTICE OF NON-WAIVER OF SIGNATURE

Please read your deposition transcript. All corrections are to be noted on the preceding Errata Sheet.

Upon completion of the above, you must affix your signature on the Errata Sheet, and it is to then be notarized.

Please forward the signed original of the Errata Sheet to Peter J. Brodhead, Esq. for attachment to the original transcript, which is in his possession. Send a copy of same to all counsel, and also a copy to me.

Please return the completed Errata Sheet within thirty (30) days of receipt hereof.

Lois Sikoski, RPR
Court Reporter