

1 IN THE CIRCUIT COURT
2 TWENTIETH JUDICIAL CIRCUIT OF ILLINOIS
ST. CLAIR COUNTY

3 FRANCES E. KEMNER, et. al.)
4 Plaintiffs,)
5 VS.) NO: 80-L-970
6 MONSANTO COMPANY,)
7 Defendant.)

8
9
10 REPORT OF PROCEEDINGS

11 Before the HON. RICHARD P. GOLDENHERSH

12 JURY TRIAL

13 July 25, 1985 (morning session)
14

15 APPEARANCES:

16 Mr. Rex Carr
17 Mr. Jerome Seigfreid
On Behalf of the Plaintiffs;

18 Mr. Kenneth Heineman
19 Mr. Joseph Nassif
On Behalf of the Defendant.

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23 Debra M. Musielak, CSR, CM
24 Official Court Reporter

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EXHIBITS SUBMITTED ON BEHALF OF THE PLAINTIFF:

Plaintiff's Exhibit No.:

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920	(report)		54
922	(same as Plf. 1513)	32	
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1 BE IT REMEMBERED, that on the 25th day of July,
2 1985, the same being one of the regular judicial days of said
3 court, the above-styled cause came on regularly for hearing
4 before the HONORABLE RICHARD P. GOLDENHERSH, one of the
5 Judges at the St. Clair County Building, 10 Public Square, in
6 the City of Belleville, County of St. Clair, State of
7 Illinois. Whereupon the following proceedings were had:

8 COURT CONVENED:

9
10 DR. GEORGE ROUSH

11 (being called as a witness on behalf of the Plaintiff under
12 Section 2-1102, upon being previously sworn, continued to
13 testify as follows)

14 CLARIFICATION EXAMINATION

15 BY MR. KENNETH HEINEMAN

16 Q. Roush, when we left off yesterday at noon time, we
17 were just about to talk about Lowell West, sir?

18 A. Yes, sir.

19 Q. Now, with respect to Lowell West, sir, based upon
20 the records that you have before you, would you include
21 Lowell West in Table 1, in the exposed group under one of the
22 cancers listed there?

23 A. No, sir.

24 Q. And why not, sir?

1 A. Because a physician didn't mention the fact that he
2 had a skin tumor, only said he has Chloracne.

3 Q. Now, why in your mind would you differentiate
4 between what the physician reported and what was reported by
5 the individual who the interviewer --

6 A. Well, several things. The physician did
7 examination the man and he did know the condition of his
8 skin, and he knew whether he had any of the cancerous lesions
9 on his face, and not seeing them, he thought there was not
10 any reason for saying this man had a skin cancer. Might have
11 had a lump that was taken off, but it was probably not
12 cancer.

13 Q. All right.

14 A. You'd have to talk to him to get the full story,
15 but that's what the record said.

16 Q. Said you'd have to talk to whom?

17 A. That doctor that made no mention of the skin
18 cancer.

19 Q. All right. Now, did Dr. Suskind have access to
20 those physicians?

21 A. Yes, sir.

22 Q. And prior to classifying those people one way or
23 the other, did he have the opportunity to discuss with his
24 physician --

1 A. Yes.

2 Q. Exactly what his findings were?

3 A. Yes, sir.

4 Q. And did he have the opportunity to discuss what the
5 man told the physician at the time of the physical
6 examination?

7 A. Yes, sir.

8 Q. All right. Now, with respect to Keith Hill, sir.

9 A. Yes, sir.

10 Q. Based upon the records that you have before you,
11 would you include Keith Hill in Table 1 as an exposed person
12 for both bladder cancer and skin, cancer as he's listed here?

13 A. Yes, sir. He was exposed. He did have a malignant
14 mole. That means he had a melanoma, and the doctor so listed
15 it, so that should been reported, he did have a skin cancer
16 called a melanoma.

17 Q. All right, so you would list him for a skin cancer?

18 A. Yes, sir.

19 Q. All right. Now, with respect to the bladder cancer
20 for which Mr. Hill is listed in Plaintiff's Exhibit 1473 C,
21 would you list him for a bladder cancer?

22 A. No, sir.

23 Q. And would you tell us why not?

24 A. The doctor made a specific point of saying the man.

1 had a benign bladder neck tumor. That's not a cancer.

2 Q. All right, sir. Now, sir, with respect to Clarence
3 Matheny, sir, based upon the records that you have before
4 you, would you include Mr. Matheny in Table 1 as an exposed
5 person with a cancer?

6 A. Yes, sir.

7 Q. All right. And for what cancer would he be listed?

8 A. Bowel.

9 Q. All right. The bowel -- would the bowel and the
10 colon be equated, we are talking about the same thing?

11 A. Yes.

12 Q. All right. With respect to Mr. Roy Woodall, sir,
13 based on the records that you have before you, would you
14 include Mr. Woodall in Table 1 as an exposed person having a
15 cancer?

16 A. Yes, sir, I would include him because he had a
17 basal cell carcinoma, it was identified as a basal cell
18 carcinoma. The answer is yes, he was exposed and had a skin
19 cancer.

20 Q. Now, with respect to June Martin, sir, based upon
21 the records that you have before you, would you include June
22 Martin in Table 1 as an exposed person who had a cancer?

23 A. Yes. He had a bladder cancer identified by the
24 doctor, and he was exposed.

1 Q. With respect to Frank West, sir, based upon the
2 records that you have before you, would you include Frank
3 West?

4 A. Yes, sir. He was exposed and he had skin cancer.

5 Q. All right. So he would go in Table 1 as an exposed
6 person with a skin cancer?

7 A. Yes, sir.

8 Q. With respect to Mr. James McGinn, sir, based on the
9 records you have before you, would you place him in Table 1
10 as an exposed person with a type of cancer?

11 A. Yes.

12 Q. All right. And where would you place him?

13 A. On exposed skin cancer.

14 Q. Okay. And with respect to Thomas Waldorf, sir,
15 would you place him in Table 1, based upon the records you
16 have before you as an exposed person with a cancer of one
17 sort or another?

18 A. The physician's record was not clear, but in the
19 recording on the physical examination there was no mention of
20 a skin cancer, so it's difficult to say whether he had one or
21 not. I'd put a question mark there. You need more
22 information. You ought to talk to the doctor and read what I
23 couldn't read.

24 Q. So on the copy you have, you can't read it, sir?

1 A. Yes, although the implication is it's not there
2 because it wasn't mentioned, but we don't have the whole
3 record in our hands.

4 Q. All right. Dr. Suskind, of course, did he have the
5 original record?

6 A. Yes, sir.

7 Q. And he could see the original record and talk to
8 the physician?

9 A. Right.

10 Q. So you would say need more information here?

11 A. Yes.

12 Q. Now, with respect to Charles Dunn, sir, based on
13 the records you have before you, would you include Mr. Dunn
14 in Table 1 as an exposed person with a cancer?

15 A. Yes, sir.

16 Q. All right. And what is that based upon, sir?

17 A. Based on the doctor saying he had a skin cancer as
18 well as the workers saying it and the fact he was exposed.

19 Q. And now, Mr. William McClanahan, sir, based upon
20 the records you have before you, would you include Mr.
21 William McClanahan in Table 1 as an exposed person with a
22 type of cancer?

23 A. Yes, I would like to talk to the physician about
24 that, the fact that Mr. McClanahan denied having a skin

1 cancer, and the doctor -- and the basis for him saying he had
2 one, but, on the physical examination he did find a skin
3 cancer, and that may have influenced his opinion of what was
4 before. But, in fact, he had one at the time he was being
5 examined, so it probably means he had one before, but I'm not
6 sure what the doctor meant when he said skin cancer.

7 Q. So --

8 A. I would say yes, he had skin cancer.

9 Q. So you would include him?

10 A. Yes, sir. But I would like to talk to him and find
11 out why he took, when the worker said he denied he had the
12 cancer, he may have had a pre-malignant one taken off before
13 and the doctor said he probably had had it when he went --
14 could have been a pre-malignant one, so it isn't clear.

15 Q. Now, with respect to Mr. James Lewis, sir, based
16 upon the records that you have before you, would you include
17 Mr. Lewis in Table 1 as a person who is exposed and who would
18 be listed as having some sort of cancer?

19 A. I'd say yes for skin cancer.

20 Q. All right. And what about the --

21 A. And yes for the colon.

22 Q. Or bowel?

23 A. Yes.

24 Q. Now, with respect to Mr. Roy Rogers, sir, based

1 upon the records that you have before you, would you include
2 Mr. Roy Rogers as an exposed person with a cancer?

3 A. He had recurrent skin cancer. I don't understand
4 why the man denied that he had the cancer, that's hard to
5 figure out, but that should be resolved by talking to the
6 physician and understanding what he thought about that.

7 Q. All right.

8 A. And again, I suspect it's because he had
9 pre-cancerous lesions on his face. Now, -- but he was not
10 exposed by as far as Dr. Suskind had said, and I would agree
11 with him.

12 Q. Based upon the records that you have before you?

13 A. Yes, sir. There was no evidence that he had
14 exposure?

15 A. Significant exposure?

16 A. The way I should put that when I say no, he had --
17 he worked in an area where he had probably what would be
18 called minimal exposure, you can't prove he didn't have any.

19 Q. Now what do you mean by that, sir?

20 A. He worked in let's see, what was it? I've
21 forgotten what it is.

22 Q. Why don't we pull out the record,, sir and see if
23 that will help you.

24 A. Right.

1 Q. Let's see if we have that other exhibit.

2 A. Rogers, 422. Yes, 422. Should I go over the
3 record?

4 Q. Yes, please, sir, I just want to be sure we got --
5 since it doesn't have his name on it, I want to be sure we
6 have the right number. Yes, sir.

7 A. Yes.

8 Q. Please go ahead.

9 A. On the work record, he was a production helper up
10 to 1948, and he couldn't have had an exposure at that time.
11 And he worked as a warehouseman shipping, and after three
12 years he was foreman. And, he was in receiving, which means
13 receiving of non-2,4,5-T and non-dioxin exposure from 1960 to
14 1973, and the only time that he really had any possibility of
15 being involved was when he worked in the warehouse from 1949
16 to 1955, and it's hard to say that he had no exposure, but,
17 the exposure was minimal to none.

18 Q. Now, why would you come to that conclusion, sir?

19 A. Because the nature of the operation is that they do
20 not do anything but handle the material that's going to be
21 sent out, and the sending out of the 2,4,5-T that was shipped
22 out was shipped out in that, in three different forms. It
23 was shipped out in bags for awhile, it was shipped out in
24 cardboard drums, I call them, and they shipped them out in

1 aluminum bins. And the exposure of this man, he had nothing
2 to do with bagging, so there was not a dusty job. He really
3 had no exposure. That doesn't mean that there couldn't be a
4 little bit of a material on the surface of the bag. But
5 that's all. And, there could be occasion where they would
6 spill a bag and break it and have to sweep it up, but again,
7 there is little to know personal contact with any place
8 except the little bit that would be on the surface of the
9 bag. So you can't say none, but, so close to being none it
10 wouldn't be compared with the other types of exposures. So I
11 say no exposure.

12 Q. When you say the other types of exposures, what are
13 you talking about?

14 A. In the production unit in making of the 2,4,5-T and
15 TCP.

16 Q. People that were in there every day?

17 A. Yes.

18 Q. Now with respect to Curtis Postlethwite, based upon
19 the record you have before you, would you include Mr.

20 Postlethwite in Table 1 with a person with exposed cancer?

21 A. No, sir, the doctor didn't mention the fact that he
22 had any problem with his skin and made no suggestion that he
23 had anything would be called a skin cancer.

24 Q. So on this occasion you were relying upon -- are

1 you relying upon the report of the physician as opposed to
2 what the individual told the interviewer?

3 A. Yes, sir.

4 Q. And why would you be doing that, sir?

5 A. Because the physician was there and talked to him
6 and to drew his own conclusions about whether that man had a
7 lump that was taken off of his skin maybe, and looking at his
8 skin in general.

9 Q. So the physician was able to examination his skin?

10 A. Yes, sir, and he didn't think it was worthwhile
11 mentioning.

12 Q. Now, with respect to Mr. Homer Scarberry, sir,
13 based upon the information you have before you, would you
14 include Mr. Scarberry among the exposed people in Table 1
15 with a type of cancer?

16 A. No, sir.

17 Q. And can you tell me why not?

18 A. When Mr. Scarberry was operated on in 1972 for a
19 lung tumor, if the man had a lung cancer he would have had an
20 operation in addition to having been opened and having the
21 tumor taken out. He would have had a partial lung resection
22 or a total lung removal if he had cancer, and he didn't have
23 that done. So, I don't believe he had a -- didn't have a
24 lung cancer. And if he had a bowel cancer -- we had another

1 case where a man had a colostomy, where if the tumor is in
2 the distal part of the colon the man has had his rectum taken
3 out and the put an opening in his abdominal wall for drainage
4 of the gastrointestinal content. He didn't have that, and if
5 he didn't have a distal colon, he would have had a partial
6 colectomy or part of the colon taken out, just like President
7 Reagan had part of his colon taken out for only a polyp, so,
8 neither one of those things are cancers. They were both
9 tumors that were found to be benign when they got in and
10 looked at them.

11 Q. Now, sir, you refer to the President Reagan
12 operation?

13 A. Yes.

14 Q. Was not that polyp found to be malignant at the
15 time it was removed?

16 A. Yes. Yes.

17 Q. How would you differentiate that from this
18 statement by this physician?

19 A. Because when they got in there and found the tumor
20 and found it was a cancer they did a more radical resection.
21 They took out all of the adjoining colon above and below it,
22 as well as all the blood drainage and supply to that part of
23 the colon they took out. So they do a very wide resection to
24 make sure that they have got all possible cancer, and they

1 didn't do it in this case.

2 Q. So, because of the information that the doctor
3 recorded, you would not include either?

4 A. That's right.

5 Q. Of those as cancers?

6 A. That's right.

7 Q. Now with respect to Mr. Chester Gorrell, sir, would
8 you include Mr. Gorrell in Table 1, based upon the records
9 you have before you as on exposed person who had a cancer?

10 A. No, sir, and the reason I wouldn't put him exposed
11 is because he was not exposed.

12 Q. And on what do you base that conclusion, sir?

13 A. We did discuss this one before about his exposure.
14 And, what I checked into utilities, just to be sure, the
15 utilities. Mr. Gorrell worked in -- he produced steam that's
16 required and compressed air that's also required, and they
17 compressed ammonia, primarily for refrigeration, and that are
18 the exposures he had, and his time was working in that
19 operation.

20 Q. Would Mr. Gorrell -- he was classified as a utility
21 worker, sir?

22 A. Yes. I don't have that record here. 128.

23 Q. 128?

24 A. Yes. And his name is on it.

1 Q. Okay. As a utility worker, sir, where would he be
2 employed at the Nitro plant?

3 A. Mr. Gorrell -- I've got the names mixed up, I
4 should look at the record. Yes. He was a utilities
5 supervisor from 1945 to 1976. And so he was in that
6 operation where they made steam, compressed air and
7 compressed ammonia.

8 Q. He was a utilities supervisor?

9 A. Yes, sir.

10 Q. Now, would that be in the power plant?

11 A. Yes.

12 Q. Now, the power plant services the plant with power,
13 is that right?

14 A. Yes.

15 Q. But how do they do that?

16 A. By power. They have got pipelines carry the
17 material wherever it's needed, the compressed air and the
18 steam and the ammonia.

19 Q. So would a person who worked in the power plant be
20 exposed to the production facility?

21 A. No, sir.

22 Q. Now, sir, if we go through all of those people that
23 we have just been through, and total up what the conclusions
24 you've reached with respect to the inclusion of them, with

1 respect to Chester Gorrell skin cancer, you would say that
2 skin cancer should not be included?

3 A. That's right. Right.

4 Q. With respect to Mr. Scarberry, there would be no
5 bowel and no lung, correct?

6 A. Correct.

7 Q. Now, with respect to Mr. Postle -- try that one
8 more time. With respect to Mr. Postlethwite, you would not
9 include him in a skin cancer, correct?

10 A. Right.

11 Q. With respect to Mr. Rogers on a skin cancer, you
12 would not include him, is that right?

13 A. That's right.

14 Q. With respect to Mr. Waldorf?

15 A. You skipped those others?

16 Q. Well, those you are including, are you not, sir?

17 A. Yes, yes. You are right. I'm sorry.

18 Q. All of those are being included?

19 A. Yes.

20 Q. Okay. With respect to Mr. Waldorf, that you need
21 more information?

22 A. That's right.

23 Q. So that would be skin?

24 A. Question.

1 Q. Question mark? With respect to Mr. Hill you would
2 not include the bladder?

3 A. That's right.

4 Q. Because it was -- the doctor said it was a benign
5 bladder?

6 A. Right.

7 Q. With respect to Mr. Lowell West, you would not
8 include him on the skin?

9 A. Right.

10 Q. Right? With respect to Mr. John Selby with respect
11 to skin cancer, you would need more information?

12 A. That's right, with respect to Mr. Harry Honaker you
13 would include him but one time?

14 A. Yes.

15 Q. That's right?

16 A. That's right.

17 Q. So you would not include both?

18 A. You can't have two people. The way they record
19 that we have here is -- we are saying that on the Suskind
20 table it talks about persons with cancer, and even though
21 he's got two cancers, he only can have one cancer, can't have
22 two people.

23 Q. The way the data --

24 A. -- is presented.

1 Q. Is presented. Now, what would happen, sir, if you
2 listed him twice?

3 A. It would mean that another person had to have had
4 the cancer. If I only had two people there and one man had
5 two cancers and the other one did not, if I put down on that
6 Table 2 cancers, that would mean they each had one, they
7 can't --

8 Q. Now, sir, with respect to that, you recall the
9 Moses study, do you not?

10 A. Yes, sir.

11 Q. Of the Nitro population?

12 A. Yes, sir.

13 Q. In what fashion did she express the cancers
14 observed?

15 A. She expressed it in the same way that Dr. Suskind
16 expressed it, but she put that extra cancer as a footnote
17 down below the table, also had such and such a cancer.

18 Q. Now, did Dr. Suskind put such a footnote below?

19 A. No, he did not.

20 Q. Dr. Moses did, however?

21 A. Yes.

22 Q. Now, which one of those cancers would you list and
23 which would you not?

24 A. I don't know how you decide.

1 Q. All right. One would go and one would not?

2 A. But the way Suskind has it reported, he doesn't say
3 which type, all he says that has cancer.

4 Q. Well, if Mr. Honaker has a prostate and the
5 leukemia, correct, sir?

6 A. Yes.

7 Q. He does list, and he's exposed, does he say, does
8 he list the prostate cancer along the exposed in the footnote
9 down here?

10 A. Yes. Yes. I think he reported the prostate
11 because the leukemia is missing.

12 Q. So he listed the prostate and not the leukemia?

13 A. Yes. Yes. And prostate, but not for a table.
14 Depends what we are trying to do now.

15 Q. If we are to assume that the leukemia is the one
16 that came out, then we are listing the ones that would come
17 out here, right, not the ones that stayed in?

18 A. Yes, right.

19 Q. So the prostate would not be listed here?

20 A. That's right.

21 Q. Okay. Now with respect to Mr. Edward Volz, sir,
22 said yes on the skin, no on the bladder?

23 A. Yes.

24 Q. Because the doctor said the bladder was benign?

1 A. That's right.

2 Q. So we would take one bladder out for Edward Volz,
3 correct?

4 A. That's right.

5 Q. With respect to Mr. Harry Reynolds, sir, you listed
6 him as not exposed?

7 A. Yes.

8 Q. Therefore, his bladder would be taken out?

9 A. Right.

10 Q. With respect to Mr. Edward McDade, sir, on the
11 skin, you said need more information?

12 A. Yes, sir.

13 Q. What would you do with that?

14 A. Question mark.

15 Q. Question mark on skin. With respect to Mr. John
16 Hein, sir, you said you needed more information there?

17 A. Yes.

18 Q. And what was that for?

19 A. Because he had a tumor of the colon without any
20 further definition and it could well be that he also is a no
21 cancer.

22 Q. All right. Well, should he be removed or should
23 there be a question mark?

24 A. I think he should be removed.

1 Q. You think this should be a no here?

2 A. Yes. I'd like to look at that and see if we
3 recorded it when we went through there correctly.

4 Q. Number 26, sir.

5 A. Yes. Hein. 26. The record here, as I looked at
6 it, it has malignant cancer removed, and so I'd call him a
7 cancer.

8 Q. I'm sorry, sir, what is it you are referring to?

9 A. I had listed him in my list as yes rather than no
10 when I had reviewed them before, and so my question is how I
11 recorded this up here.

12 Q. All right.

13 A. I put down that --

14 Q. Let's make sure we are looking at the right
15 record.

16 MR. CARR: Doctor, did you say you had a list that
17 you prepared?

18 A. Huh?

19 MR. CARR: Did you say you had a list that you
20 prepared?

21 A. I went through those, went through them and
22 recorded what I thought when I went through them.

23 MR. CARR: Where is that list? May I see it?

24 A. Yes, sir.

1 MR. CARR: Would you have it marked, please?

2 A. And here's the other one on skin.

3 MR. CARR: Oh, you have two.

4 A. I can't see the --

5 MR. CARR: I can't hear you.

6 A. I'm trying --

7 MR. CARR: I'm not asking you for an explanation,

8 I'm asking you to speak loud enough so it can be on the

9 record that I can hear you.

10 A. Yes, sir.

11 Q. Maybe that's not the right record, that's part of

12 that Plaintiff's Exhibit or maybe I've got the wrong one.

13 Hein's number 26. Okay, there we are.

14 A. Yes.

15 Q. All right.

16 A. The record shows he had a cecum tumor and I'm still

17 saying I need more information.

18 Q. So you were looking at the Hein record when you

19 recorded this?

20 A. Right.

21 Q. Okay. So need more information, is that correct?

22 A. Yes, sir.

23 Q. All right, so you would put a question mark for

24 Hein under bowel, is that right?

1 A. Yes.

2 Q. And the other Edward Miller and Willard Crites you
3 said you would include?

4 A. Yes.

5 Q. All right. Sir, if we take Plaintiff's Exhibit
6 1474, with respect to the bladder cancers, this exhibit, does
7 this exhibit reflect that there were two reported and three
8 omitted?

9 A. Yes.

10 Q. And you would also omit three?

11 A. Yes.

12 Q. With respect to the colon cancers reported, sir,
13 how many are reported, according to this exhibit?

14 A. Three.

15 Q. And --

16 A. Plus one.

17 Q. One omitted. And with respect to colon, you would
18 take one off?

19 A. Yes.

20 Q. And maybe question another?

21 A. Yes.

22 Q. Now, with respect to Mr. Hein, does it appear that
23 Dr. Suskind included him?

24 A. Yes.

1 Q. Reported on him?

2 A. Yes.

3 Q. Now, with respect to skin cancer, sir, there are
4 how many reported, according to this exhibit?

5 A. Eight.

6 Q. How many are omitted, according to this exhibit?

7 A. Seven.

8 Q. And on your list of skin cancers you would remove
9 how many for sure?

10 A. Four.

11 Q. With respect to those three, what would you need?

12 A. More information.

13 Q. So you would for sure take four off?

14 A. Yes.

15 Q. And perhaps all seven?

16 A. It could well be.

17 Q. But you need more information based upon the
18 information that you have in the records before you?

19 A. All we have is this very limited record, and they
20 had more information.

21 MR. CARR: No, Dr. Roush, they did not. If they
22 did, then Monsanto is in contempt, because we asked for all
23 of the data that Suskind had, and the record is clear on
24 that. I've asked the jury to be instructed to disregard the

1 last statement of the doctor.

2 MR. HEINEMAN: Your Honor, may I respond to that?

3 THE COURT: Sure.

4 MR. HEINEMAN: I believe there has been a great
5 deal of evidence here that Dr. Suskind had available to him,
6 the work records in Nitro, and to my information that
7 information was made available to Mr. Carr, Nitro work
8 records.

9 THE COURT: Well, assuming that that is so, I don't
10 think that addresses the point Mr. Carr made. The objection
11 is sustained. The jury is ordered to disregard that remark.
12 I'm talking about things that have not been made available.
13 So the objection is sustained.

14 Q. (by Mr. Heineman) Dr. Roush, did Dr. Suskind have
15 access to the Nitro work records?

16 A. Yes, sir.

17 Q. All right. Did he have access to Max Galloway?

18 A. Yes, sir.

19 Q. Who is, I think you described him before as what,
20 sir?

21 A. He's environmental man at this time, but he had
22 been personnel before.

23 Q. He was in the Personnel Department at the plant?

24 A. Yes.

1 Q. And, whatever conclusions Suskind made, were they
2 made based upon the information that he had?

3 A. Yes.

4 Q. All right. Now, with respect to the --

5 A. The other thing is he had access to the physician
6 who did the examinations.

7 Q. All right. Through -- would that be through oral
8 communication?

9 A. Yes. Yes.

10 Q. Now, Doctor, with respect to the prostate cancer
11 that's reported here, that is reported, and none omitted
12 according to this Plaintiff's Exhibit 1474?

13 A. Yes, sir.

14 Q. With respect to the leukemia, it's listed as
15 omitted in Plaintiff's 1474?

16 A. Yes, sir.

17 Q. And you would omit that as well?

18 A. For only one purpose, we have got one person with
19 two diseases. The reason that was left off --

20 Q. So which -- you would do either one or the other?

21 A. That's right, and record it someplace else.

22 Q. And so, as Plaintiff's Exhibit 1474 demonstrates,
23 Dr. Suskind reported the prostate and omitted the leukemia,
24 correct?

1 A. Yes, sir.

2 Q. And it could have been done the other way around?

3 A. That's right.

4 Q. Now, with respect to lung cancer, sir, there is one
5 omitted, is that right, according to Plaintiff's Exhibit
6 1474?

7 A. Yes, sir.

8 Q. And would you also omit that lung cancer?

9 A. Yes, sir.

10 Q. So, with respect to a final tally here, sir, on the
11 number of cancers which Mr. Carr listed on Plaintiff's
12 Exhibit 1474 A as omitted, how many of those would you omit?

13 A. I'd have to look at that. Nine.

14 Q. What about the other four?

15 A. I would take off the skin as well, those four,
16 that's all I would do at this time.

17 Q. Because of --

18 A. The question --

19 Q. Question marks?

20 A. Yes.

21 Q. As you sit here right now, you would need more
22 information before you would take those off?

23 A. Yes, sir.

24 Q. Is that right?

1 A. Yes, sir.

2 Q. Dr. Roush, there is, I think, at least one of those
3 people would was included twice for both a skin and a bowel,
4 correct?

5 A. I don't recall which ones they were.

6 Q. Mr. James Lewis?

7 A. Yes.

8 Q. All right. Sir, now why would you include both two
9 cancers in the case of a skin and the bowel, and only one in
10 the case of --

11 A. On Honaker.

12 Q. One in the case of leukemia and prostate?

13 A. It's the way the chart was made up, the table was
14 made up. Because they list skin cancer separately from other
15 cancers.

16 Q. So that one person could be in there twice if he
17 had a skin cancer and something else?

18 A. Yes, sir.

19 Q. Now, that's because why?

20 A. The way the table was prepared. If they would have
21 put the skin cancers with the other cancers, then you
22 wouldn't have done that, you'd only list him once.

23 Q. But in this case skin cancer was listed separately
24 from other cancers?

1 A. Yes, sir.

2 Q. And why was that done?

3 A. Because of our ability to tell in any single person
4 whether -- what is reported skin cancers is truly a skin
5 cancer, and the other is that many people have operations for
6 or have skin cancers taken off that are not recorded
7 anyplace, so the prevalence of how many skin cancers there
8 are happening in the general public is not well defined.

9 Q. So they -- do they need to be analyzed separately?

10 A. Yes, sir.

11 Q. From other cancers?

12 A. Yes, sir.

13 Q. Now, sir, with respect to those persons who are
14 reported in skin cancer, but who were reported in the records
15 to have multiple skin cancers, should they be listed more
16 than once in the skin cancer category?

17 A. No, sir, they only can be listed once on that
18 table.

19 Q. Because of what reason, sir?

20 A. One man got multiple skin cancer is the same as the
21 man having one cancer, as far as that table is concerned.

22 Q. One which kind of cancer?

23 A. Skin cancer.

24 Q. All right. So whether it's one or more skin

1 cancers, there will be a listing in skin cancer?

2 A. That's right.

3 Q. And whether there is one or more other types of
4 cancers, it will be listed once in other cancers?

5 A. Yes, sir.

6 Q. And the only time they will appear twice is if they
7 have a skin and another?

8 A. That's right.

9 Q. Okay. Now, sir, with respect to the Marion Moses
10 study of the Nitro population, you were talking about people
11 that may be minimally exposed, I think, in the case of one of
12 those people. How did Dr. Moses handle that in the Moses
13 study?

14 A. In order to do an epidemiologic study, in a good
15 fashion, we really should be able to identify those who are
16 clearly exposed and those who are clearly not exposed. In
17 the study of dioxin, because of our inability to measure it,
18 we usually go to some kind of a qualitative evaluation, means
19 he had some and he had a lot. And that's exactly what Marion
20 Moses did. She said there were some who clearly had no
21 exposure; there were some who had minimal exposure; some who
22 had moderate, and those who worked in the plant were heavily
23 exposed. The plant where they made trichlorophenol and where
24 they had the 2,4,5-T they had heavy exposure. So it was

1 clearly a difference of degree of exposure.

2 Q. And, so how does she correlate the data, by what
3 marker?

4 A. She didn't feel comfortable doing that, so she
5 ended up by just comparing those with and without Chloracne.

6 Q. All right, sir. So she did not or did she throw in
7 marginally exposed people with heavily exposed people to
8 arrive at the population?

9 A. She probably mixed them up and just took them, you
10 no, with and without Chloracne.

11 Q. All right. So the marker was Chloracne and not the
12 level of exposure?

13 A. Chloracne means heavily exposed whenever they got
14 it. Know Chloracne means some exposure but considerably less
15 than those who had Chloracne. And the purpose of that is
16 those who have just a little bit, if they are going to have a
17 response, are going to be a little response, and those who
18 have got Chloracne are going to have a significant response.

19 Q. All right. So to that degree can the data in the
20 Moses study be correlated to some sort of level of exposure?

21 A. Yes, sir.

22 Q. Insofar as it is manifested in a Chloracne
23 reaction?

24 A. That's right.

1 MR. HEINEMAN: May I have a moment, Your Honor?

2 THE COURT: Sure. Would this be a good point for a
3 short break?

4 MR. HEINEMAN: That would be fine, Judge.

5 THE COURT: Gentlemen, could I see you at the bench
6 for a minute, please?

7 (Following a Side Bar conversation which was had outside the
8 hearing of the Court Reporter and the jury, the following
9 proceedings were had in open court.)

10 THE COURT: Okay, ladies and gentlemen, we will
11 take a short recess at this time. I would remind you, and
12 this would go for any other breaks that we take, that you are
13 not to discuss this matter among yourself, with anyone
14 outside the jury panel, or as of yet form any opinions or
15 conclusions about the matters on trial. Court will be in a
16 short recess.

17 (Following a recess, these proceedings were had in open
18 court.)

19 Q. (by Mr. Heineman) Dr. Roush, let me hand you what
20 I've had marked as Defendant's Exhibits 922 and 923, they are
21 also marked as Plaintiff's Exhibits 1513 and 1514, you see
22 that, sir?

23 A. Yes, sir.

24 Q. Can you tell us what those are, please?

1 A. Those are -- those two sheets are my work sheets
2 that resulted from my going through those twenty-some records
3 and looking at the complete records for the first time and
4 trying to decide what conclusions I would come to by looking
5 at the records regarding whether they had cancer or not.

6 Q. Now, sir, in court you were shown Plaintiff's
7 Exhibit 1468 for the first time, correct?

8 A. Yes, sir.

9 Q. And at that time did Mr. Carr provide us with a
10 copy, with a set of a copy of the same records?

11 A. Yes, sir.

12 Q. All right. Now, when you prepared Defendant's
13 Exhibits 922 and 923 --

14 MR. CARR: Counsel, let's get the record straight,
15 1468 was supplied to us by you, if that's the group exhibit.
16 Is it not the group exhibit.

17 MR. HEINEMAN: 1468 was among a whole lot of
18 records supplied to you, is it not?

19 MR. CARR: But the point is, you said I supplied it
20 to you. The point is --

21 MR. HEINEMAN: You supplied it to the witness is
22 what I said.

23 MR. CARR: No, you said I supplied it to you for
24 the first time.

1 MR. HEINEMAN: No, sir.

2 MR. CARR: The point -- those are your records you
3 supplied to me by order of Court.

4 MR. HEINEMAN: Those are among many records we
5 supplied to you.

6 MR. CARR: That's correct.

7 MR. HEINEMAN: And you selected this group as
8 Plaintiff's Exhibit 1468.

9 MR. CARR: No doubt about that.

10 MR. HEINEMAN: You gave them to this witness and
11 gave us a copy of that Plaintiff's Exhibit 1468, correct?

12 MR. CARR: No doubt about that either.

13 MR. HEINEMAN: All right. There we are.

14 Q. (by Mr. Heineman) Now, Dr. Roush, in the process
15 of preparing 922 and 923, which set of documents of 1468 did
16 you look at?

17 A. What do you mean which set?

18 Q. Well, this set was here in the courthouse, wasn't
19 it?

20 A. Yes, sir.

21 Q. Did you look at our set?

22 A. Yes, sir.

23 Q. Our set. Okay. Now, I want to get back to the
24 John Hein situation.

1 A. Yes, sir.

2 Q. All right. Now, first of all, let me hand you
3 what's been marked 923 again, Defendant's 923 there, how do
4 you have Mr. Hein listed?

5 A. As having a bowel cancer.

6 Q. All right. And it's not -- you list him as having
7 a cancer?

8 A. Yes, sir.

9 Q. Okay. Now, what is the basis upon which you made
10 that determination when you reviewed the records that we made
11 available to you?

12 A. It was on sheets that were attached to the Hein
13 record rather than just the record here that we are reviewing
14 here.

15 Q. Well, wait a minute, let me go through this pile
16 with you here, sir. Here -- what's that?

17 A. That's Mr. Hein's record as given to us by Suskind.

18 Q. All right. But, also in this pile, sir --

19 A. Yes, sir.

20 Q. -- are those two sheets, are they not?

21 A. Yes, sir.

22 Q. Now, were they attached when you looked at the
23 record, and we were going through this yesterday?

24 A. No.

1 MR. CARR: They were attached. They have always
2 been attached. They were given to you that way, they were
3 put into evidence that way.

4 MR. HEINEMAN: They are not attached right here.

5 MR. CARR: If they are not attached it's because
6 the witness has detached them. They were attached when they
7 were offered and admitted into evidence. They were
8 attached. You have a copy on your desk where they were
9 attached. There were no loose sheets when that exhibit was
10 put into evidence and when the witness had it.

11 MR. HEINEMAN: Mr. Carr, they are loose right now.

12 MR. CARR: Yes, they are loose right now but the
13 witness has had it, and you have had it. And you had the
14 exhibit and it's attached to your sheet. Attached to that
15 sheet. Been attached to the beginning.

16 MR. HEINEMAN: Certainly attached here.

17 MR. CARR: Yes, certainly was attached there.

18 THE COURT: Gentlemen, could I see you at the bench
19 for a minute?

20 (The following Side Bar conversation was had outside the
21 hearing of the jury.)

22 THE COURT: What is the point of all this?

23 MR. HEINEMAN: I want to clear up, Judge, is the
24 fact that the document that demonstrates that Mr. Hein has a

1 malignancy are those two sheets. All right.

2 THE COURT: Okay.

3 MR. HEINEMAN: When he went through this with me
4 yesterday, all he picked up was this. This document doesn't
5 say anything about a malignancy. This does. This was
6 attached to that here. I'm not implying any impropriety on
7 anyone's part. I'm just explaining why he said there was a
8 malignancy when he looked at this sheet with this, and not
9 malignancy when he looked at this alone. That's the point.

10 THE COURT: Maybe I'm missing something, but since
11 they were all supplied, since they were all attached, I mean,
12 why don't you just ask him that. What difference does it
13 make what was attached, what wasn't? It was all given to
14 you.

15 MR. HEINEMAN: All right. Okay, I'm going to get
16 on with that.

17 THE COURT: Okay.

18 (The following proceedings were had in open court.)

19 Q. (by Mr. Heineman) Now, Doctor, let me refer you to
20 this record.

21 A. Yes, sir.

22 Q. Right here. Separately from this, okay?

23 A. Yes, sir.

24 Q. Now, with respect to this portion of the Hein

1 record, tell us what that indicates with respect to his
2 colon? Well, first of all, what is in there in that portion
3 that addresses Mr. Hein's condition with respect to his
4 colon?

5 A. The record says he had a colon tumor removed, and
6 the history as recorded by the physician said he had a colon
7 tumor removed in 1974, and the abnormal findings as listed by
8 the physician was a cecum tumor, and so he had a tumor of the
9 colon.

10 Q. All right, sir. Now, what is listed in here in
11 that portion of the Hein record?

12 A. It lists that he had a carcinoma of the colon with
13 colectomy, and this is the basis why I said that he had a
14 bowel cancer in my notation.

15 Q. All right. Now, what -- in what posture should
16 John Hein be placed as a result of the consideration of both
17 of those records.

18 A. He had a colon cancer, and the interviewer -- and
19 he was exposed.

20 Q. All right. John Hein told the interviewer that he
21 had a bowel cancer?

22 A. Yes.

23 Q. The doctor said there was a colon tumor?

24 A. Yes, sir.

1 Q. This other medical records say it's a malignant
2 tumor?

3 A. Yes, sir.

4 Q. Correct?

5 A. Yes, sir.

6 Q. Now, that being the case, what would be the status
7 of John Hein?

8 A. Colon cancer exposed.

9 Q. So he should be a yes?

10 A. Yes.

11 Q. That being the case, sir, the Hein entry on this
12 page should be, what should be done with it?

13 A. It should be on -- shouldn't be on that list.

14 Q. Should not be on this list?

15 A. That's right.

16 Q. All right. And should Mr. Hein be included as an
17 exposed person with a tumor, with a cancer in Table 1?

18 A. He should be on that exposed list and listed under
19 the cancer of all sites.

20 Q. Cancer of all sites?

21 A. Yes.

22 Q. All right. Now, would you describe for me those
23 two portions of the Hein exhibit.

24 A. This one said that he had a tumor, and that we

1 needed more information, and this extra sheet of paper
2 supplies more information than is available here that said he
3 had a colon cancer.

4 Q. All right.

5 A. You need both.

6 Q. What is this portion here that you have in your
7 right hand?

8 A. This is the summary of all the data that was
9 gathered on Mr. Hein by the Suskind study when they were down
10 in Charleston. That's all the information available.

11 Q. And what does this record -- what is this record
12 regarding Mr. Hein?

13 A. This is several sheets out of apparently all the
14 sheets out of Mr. Hein's medical record at the Nitro plant.
15 It doesn't have a name on top, so I'll have to presume it,
16 but it does describe, it's got his name on it, got a number
17 187, but it talks about he had a burn in the area of his
18 right foot, and the kind of thing you would have in a plant,
19 but then it does say, I don't know the date, but it says 1976
20 that he had an -- in January of '76, he had a carcinoma of
21 the colon with partial resection of his colon. Then the
22 second page is a further, a notation on a pre-employment
23 examination. I don't understand why it's pre-employment
24 examination, but it talks about a malignant resection of -- a

1 malignant -- I can't read the next word, but resection of the
2 colon, and then the next sheet is just a recording of the
3 physical examination forms. But, those -- obviously all
4 three of them were from the medical records at the plant.

5 Q. All right. Now, the medical records at the plant
6 are separate records from the record prepared in the course
7 of the Suskind Nitro morbidity study, is that right?

8 A. Yes, sir.

9 Q. But were they available to Dr. Suskind, the medical
10 records at the plant, when he was making his conclusions?

11 A. Yes, sir.

12 Q. Now, with respect to Defendant's Exhibit 922, which
13 is also Plaintiff's Exhibit 1513, would you tell me what
14 those notations mean at the bottom?

15 A. All right. I took the -- I don't know which one of
16 the charts, no, the other one, just a listing of -- and I
17 went through that list.

18 Q. By that list you are referring to 1473 C?

19 A. Yes. And I divided those up into those with skin
20 cancer and those with cancer of all sites except skin.

21 Q. All right. Now, each of your lists has a title to
22 it, does it not?

23 A. Yes.

24 Q. And what does that title say?

1 A. Suskind Health Effects, Suskind Human Health
2 Effects-2,4,5-T.

3 Q. And does it have any numbers in the upper
4 right-hand corner?

5 A. Yes, sir, it has 1473 and 1474 on both of them.

6 Q. All right. And the numbers of those exhibits here
7 are 1473 C and 1474 A, correct, sir?

8 A. I don't know.

9 Q. You want to look at them?

10 A. That's A, yes.

11 Q. C, this one?

12 A. Yes, sir.

13 Q. All right. Now, so, where did those numbers come
14 from?

15 A. Well, there are 28 there and I divided them up into
16 skin cancers to reflect the Suskind chart separating the skin
17 cancers from the other sites, and so I have one list titled
18 skin cancers, one titled skin cancers, and then I listed all
19 from that list on my work list, so I have all the skin
20 cancers listed according to that file.

21 Q. And how about the other sheet which is exhibit,
22 Defendant's Exhibit 923 and Plaintiff's Exhibit 1514?

23 A. Then after I had taken those skin cancers off, I
24 went down then and picked up all those that were not on the

1 skin cancer list to make a list of twelve. So I have sixteen
2 skin cancers on that list, so the 28, 16 skin cancers and
3 there are 12 other cancer sites.

4 Q. All right. Both of those were taken from this 1473
5 C list?

6 A. Yes, sir.

7 Q. And, the other exhibit also has the same title at
8 the top of it, does it not?

9 A. It has listed Suskind human health effects 2,4,5-T,
10 and then it lists cancer of all sites except skin, that
11 reflects the title that's on the Suskind chart.

12 Q. And in the upper right-hand corner do some numbers
13 appear on that exhibit as well?

14 A. Yes, sir.

15 Q. 1473 and 1474?

16 A. Yes, sir.

17 Q. Are the numbers that appear -- All right. Now,
18 what did you do in preparing each of those exhibits, sir?

19 A. I just went through those records and tried to
20 decide if I were given this responsibility to decide whether
21 they had a cancer or not. I went through them like I had any
22 medical records and drew my conclusion whether they had a
23 skin cancer, cancer of another site, and then I also looked
24 at them to decide whether I thought their exposure was real

1 or not, whether there was exposure or whether there was not
2 exposure.

3 Q. All right. And in doing that, did you also
4 consider Plaintiff's Exhibit 1474?

5 A. Yes, sir.

6 Q. Okay. And how did you consider that?

7 A. I didn't repeat that table or summary of it, what I
8 did was I took that and just tried to decide whether I could
9 identify the bladder cancers there, and primarily I was
10 looking at the ones that were omitted to see whether they
11 were -- whether I would come to the same conclusion.

12 Q. All right. And that would be omitted as reported
13 on Plaintiff's Exhibit 1474 A?

14 A. Yes, sir.

15 Q. And then did you report conclusions on those two
16 documents, those exhibits?

17 A. Yes, sir. Yes, sir.

18 Q. All right. Now, what does this mean here, this
19 thing at the bottom of Exhibit 922?

20 A. I recorded that. I said that there were 16 skin
21 cancers on that list, and I went through it and I said that
22 there were five that would not have been included on that
23 list, that I would take five off.

24 Q. Now, sir, here is your description of the skin

1 cancers?

2 A. Yes, sir.

3 Q. And you've listed four here?

4 A. Yes, sir.

5 Q. Which is the fifth, do you know?

6 A. It has to be either Waldorf -- I have listed
7 Waldorf as no confirmation.

8 Q. So, on your list you would take -- that you
9 prepared originally, you would take Waldorf off?

10 A. The reason when I went back over this is that --
11 when rereading this is I really can't be sure what the
12 physician really recorded. That's the basic difference. A
13 medical record of the physician isn't clearly enough stated
14 so I can really draw conclusions.

15 Q. Is this the one where the copy is bad?

16 A. Yes.

17 Q. And you can't read a portion of it?

18 A. Yes, sir.

19 Q. All right. So that is the -- if you put Waldorf
20 in, that would be the five that you have listed there?

21 A. Yes, sir.

22 Q. All right. With respect to the bladder, are those
23 the three that you have listed there?

24 A. Yes, sir.

1 Q. And how about the bowel, Scarberry listed as one
2 you would take off?

3 A. Yes, sir.

4 Q. How about the lung, Scarberry?

5 A. Yes.

6 Q. And leukemia?

7 A. I -- on my list I said leukemia not recorded by the
8 M.D.

9 Q. Okay. This is the one where there was the prostate
10 and the leukemia?

11 A. Right.

12 Q. And you could not report either one?

13 A. Right.

14 MR. HEINEMAN: I have no further question of the
15 witness at this time, Your Honor.

16 THE COURT: Mr. Carr?

17

18 RECROSS EXAMINATION

19 BY MR. REX CARR

20 Q. Doctor, ordinarily I would start right out with the
21 subject we just left, that's freshest in your mind and the
22 jury's mind, but there is an exhibit I'm missing I need. I
23 will have it at one. So I'd like to start with you back at
24 the beginning of your Clarification Examination by Mr.

1 Heineman. And to refresh your memory in that respect, you
2 started out discussing your visit with Dr. Suskind that you
3 had during our recess?

4 A. Yes, sir.

5 Q. And, as Mr. Heineman has now brought out that's
6 even occurred more recently, you have bills that indicate
7 that you have just paid the Suskind bill for your Krummrich
8 study, is that correct, Dr. Roush?

9 A. Yes, sir.

10 Q. Dr. Roush, when you testified here before the break
11 and before your visit with Suskind, you called this Krummrich
12 study the final report, did you not, sir?

13 A. I called it a final report after Dr. Suskind said
14 to call it the final report.

15 Q. Doctor, you called it the final report before you
16 had the visit with Suskind, did you not, sir?

17 A. I had -- I can't give you the date but I would
18 think that's right.

19 Q. And as a matter of fact you testified in this court
20 on May 31st before your visit with Suskind that this
21 Krummrich study, this exhibit that you got on September 29th,
22 1980, was the final report, didn't you, sir?

23 A. I assumed -- the only problem I've got--

24 Q. Excuse me, my question is simply did you not so

1 testify under oath in this court before you went back and
2 discovered those documents and had your visit with Dr.
3 Suskind?

4 A. Yes, sir.

5 Q. Yes. And, at that time, before you had those other
6 things take place, you considered it the final report, did
7 you not, sir?

8 A. I called it the final report.

9 Q. Well, you called it what you considered it to be,
10 did you not, sir?

11 A. At Dr. Suskind's request.

12 Q. Now, Doctor, again, your testimony under oath
13 before you visited Dr. Suskind, did you recall this
14 testimony, sir --

15 A. I remember discussing it but I --

16 Q. Did you recall that I asked you specifically and
17 your answer was. You did get that final report.

18 MR. HEINEMAN: You have the citation?

19 MR. CARR: 66 and 67 of his testimony of May 31st,
20 this year.

21 Q. (by Mr. Carr) And starting at Page 66, I asked you
22 the questions, the Krummrich study was done, your answer to
23 -- I started to ask you a question you said. "The Krummrich
24 study was done by Suskind and we were not given copies of

1 that report." And then I said, "Well, Doctor, we will get to
2 that shortly, Doctor." You said, "All right." Question:
3 "In any event you haven't read it, is that right?" Your
4 answer was, "I haven't looked at it. I read the final report
5 but not the individual histories." Then my question: "That's
6 what I'm talking about, the final report, you have got that?"
7 Answer: "The final report. You have got that and you have
8 read that? Yes, sir." Do you recall those being your answers
9 under oath at that time, Dr. Roush?

10 A. Yes, sir.

11 Q. You were telling the truth then, weren't you, Dr.
12 Roush?

13 A. I don't know.

14 Q. Dr. Roush, you were aware that this Krummrich study
15 had been analyzed by us, your counsel knew that we had the
16 records, you were coming here to testify as to the head of
17 the department?

18 A. Yes, sir.

19 Q. Those people -- and, you do know the difference
20 between something that is the truth and is not the truth,
21 don't you, sir?

22 A. Yes, sir.

23 Q. And, when you testified that you read the final
24 report, you were testifying to that, to the truth, weren't

1 you, Dr. Roush?

2 A. I was testifying that I had read the report, not
3 the final report.

4 Q. Doctor, this is your language, not mine, see that
5 sir, where it says your words, sir, the final report, I read
6 the final report, you didn't say I read the report, you said
7 I read the final report, didn't you, Dr. Roush?

8 A. Yes, sir.

9 Q. Doctor, all this business about getting this
10 correspondence and those other things that you all delivered
11 to me last week, last Friday, for the first time --

12 A. Yes, sir.

13 Q. This all came about because you were concerned that
14 you had testified that you had the final report and that you
15 had not given it to the workers, and you knew that during our
16 break that I gave it to the workers, you knew all that,
17 didn't you, sir?

18 A. No, sir.

19 MR. HEINEMAN: Object, Your Honor, are you
20 suggesting those documents were created, Mr. Carr, at that
21 time?

22 MR. CARR: Counsel, I have no knowledge of where
23 those documents were or how they came to be, how long
24 Monsanto knew this was a final report. I do know this, that

1 among the documents you gave me was a voucher dated May 30th,
2 1985, in which Dr. Sprall had written on it Final Report
3 Payment, I know that. That took place before the break, as
4 well.

5 MR. HEINEMAN: This testimony is on the 31st,
6 correct, sir?

7 MR. CARR: That's correct. Well you couldn't
8 hardly get the bill dated May 30th, counsel, it was dated in
9 Cincinnati May 30, couldn't very well have gotten it and
10 marked it Final Payment, final bill in time for Dr. Roush to
11 know about it and testify here the very next day. The bill
12 counsel, if you recall is dated May 30th, dated at
13 Cincinnati.

14 MR. HEINEMAN: Didn't he tell you about a prior
15 phone call before the visit, Mr. Carr?

16 MR. CARR: Counsel, he told me so many things about
17 those calls and about those conversations with Dr. Suskind,
18 it's difficult for me to keep it straight.

19 THE COURT: Objection is overruled. You may
20 proceed, Mr. Carr.

21 Q. (by Mr. Carr) Doctor, in any event, you now are
22 aware of the fact that you had information in your hands and
23 Monsanto's hands since September 29th, 1980 and you had not
24 given it to your workers, isn't that right?

1 A. Yes, sir.

2 Q. Yes. Doctor, you've also brought out here with Mr.
3 Heineman that you have given information to the workers as to
4 the effects of dioxin and you told them about how dioxin is
5 harmful, you recall Mr. Heineman just going through that with
6 you, I think it was yesterday or the day before yesterday?

7 A. Yes, sir.

8 Q. Now, you went through all your records, didn't you,
9 Dr. Roush, to try to find documents that would support the
10 thesis that Mr. Heineman was going to bring bring here that
11 you had informed your workers as to the health effects of
12 dioxin. You've made a study for that, didn't you, sir, find
13 out what documents you had?

14 A. I went back to clarify in my mind what had been
15 given.

16 Q. Yes. You went back as far as 1979, didn't you,
17 sir?

18 A. I didn't limit it on time.

19 Q. You went back then as far as you could to find out
20 what you told the workers about dioxin and the health
21 effects, didn't you, sir?

22 A. That's right.

23 Q. Sir?

24 A. Yes, sir.

1 Q. And you brought in that information, didn't you,
2 the totality of the information that you and others, I take
3 it, discovered as to the health effect of dioxin, did you do
4 that?

5 A. Yes, sir.

6 Q. Sir?

7 A. Yes, sir.

8 Q. And that was Monsanto's Exhibit 920, wasn't it,
9 sir?

10 A. I don't know.

11 Q. I just had it here a second ago, Your Honor. Here,
12 I have it now. You recall the testimony that Mr. Heineman
13 was bringing up for clarification, had to do with the fact
14 that we had pointed out, that you had pointed out to others,
15 people that you were going to contract with, people that had
16 the ability to sue you, that you had pointed out, and by you,
17 I mean Monsanto, you had pointed out the various problems
18 that scientists suspect of being caused by dioxin, including
19 cancer, liver, nerve changes, all this, that's shown on
20 Exhibit 1494 D, you recall that?

21 A. I remember that exhibit.

22 Q. You recall that he asked you about Exhibit 920, you
23 have of Monsanto Exhibit 920, or did you take it, counsel?

24 MR. HEINEMAN: I think it's here.

1 MR. CARR: All right, fine.

2 Q. (by Mr. Carr) I hand you now Defendant's Exhibit
3 920, and ask you if -- could you mark this? Ask you to look
4 at Plaintiff's Exhibit 1515 and see if that isn't a page
5 taken from Monsanto Exhibit 920, that is Roman Numeral II-3?

6 A. Yes, sir.

7 MR. CARR: Offer 1515 into evidence, if it please
8 the Court?

9 MR. HEINEMAN: May I see it, please?

10 MR. CARR: Sure.

11 THE COURT: Any objections?

12 MR. HEINEMAN: Your Honor, I would -- one moment.
13 Your Honor, I would object only if he offers just this part
14 of it. Can't we have the entire exhibit in, and refer to
15 this page? I think it would be helpful to the jury to have
16 the whole exhibit.

17 MR. CARR: I have no objection to the entire
18 exhibit, Your Honor. Fine with me.

19 THE COURT: Fine. It's all admitted into
20 evidence. 920 is admitted into evidence by agreement, Page
21 1515 being part of an admitted exhibit, is admitted into
22 evidence.

23 Q. (by Mr. Carr) Doctor, what do you really tell the
24 workers that the health hazards are associated with dioxin in

1 this Exhibit 1515?

2 A. We tell them that there are chlorinated
3 dibenzo-dioxins found in chlorophenols and it states that
4 there is much concern about by environmentalists and
5 government officials over their potential health hazards, and
6 very little is known about the potential toxicity of dioxin,
7 what exposure to dioxins may result in skin a condition
8 called Chloracne, there may be reversible liver effects as
9 well.

10 Q. So you actually tell them two things, that you can
11 get a skin condition called Chloracne, and that some
12 reversible liver effects have been reported, don't you, sir?

13 A. Yes, sir.

14 Q. Now, by reversible, you mean to tell them that
15 there are liver effects that will go away, will have no long
16 lasting consequences, don't you, sir?

17 A. Yes, sir.

18 Q. And, that is all you tell the workers, don't you,
19 sir?

20 A. Yes, sir.

21 Q. You don't tell them about what you told the workers
22 that were going to work for you, and that could sue you, that
23 they are suspected of causing certain types of cancers, you
24 don't tell them that, do you, sir?

1 A. No, sir.

2 Q. And you, of course, knew that in 1979, didn't you,

3 sir?

4 A. Yes, sir.

5 Q. You don't tell your workers that it can cause liver

6 and nerve changes, do you, sir?

7 A. No, sir.

8 Q. You knew that in 1979, didn't you?

9 A. Yes, sir.

10 Q. Sir?

11 A. Yes, sir.

12 Q. You don't tell them that there can be other

13 possible injuries at certain concentrations, do you, sir?

14 A. No, sir.

15 Q. And you knew that as well, didn't you, sir?

16 A. Yes, sir.

17 Q. As a matter of fact, those things that are listed

18 in Plaintiff's Exhibit 1267 A, that are the toxic effects of

19 2,3,7,8-TCDD in man, all of those things have been known,

20 were all known in 1979, weren't they, sir?

21 A. No, sir.

22 Q. They weren't known? Which of those things were not

23 known in 1979?

24 A. There are a number of those things --

1 Q. Which things were not known in 1979?

2 MR. HEINEMAN: Objection.

3 A. Cardiovascular disorders.

4 MR. HEINEMAN: Doctor, please let me make my
5 objection. All right?

6 A. Yes, sir.

7 MR. HEINEMAN: He interrupted his answer. He
8 started to say a number of things, then Mr. Carr cut him off.

9 THE COURT: Objection is overruled.

10 Q. Cardiovascular disorders were not known as a toxic
11 effect in 1979?

12 A. Questionable.

13 Q. Doctor, my question is it was known and reported in
14 1980, this is dated December '79, is it not, sir?

15 A. Yes, sir.

16 Q. It had been reported to be a toxic effect of
17 2,3,7,8-TCDD in man prior to December of '79, had it not,
18 sir?

19 A. No, sir, it was reported -- that list says it but
20 that isn't what is correct.

21 Q. Doctor, now we are back to quarreling about whether
22 or not you personally believe those to be toxic effects or
23 not. We don't need to go through all that. We have gone
24 through that once. The Northwestern people listed it as

1 toxic effects in man in their protocol, did they not, that
2 you paid for, correct, sir?

3 A. Yes, sir.

4 Q. And, Doctor, some scientists had said prior to
5 December of '79, that all of those were possible toxic
6 effects of 2,3,7,8-TCDD exposure in man, did they not, sir?

7 A. No, sir.

8 Q. Sir?

9 A. No, sir.

10 Q. Which ones were not, cardiovascular disorders were
11 mentioned as possible disorders before December of '79, were
12 they not, sir?

13 A. Yes, sir, possible.

14 Q. And urinary tract disorders were also mentioned,
15 were they not, sir? Which one of those toxic effects was not
16 known prior to 1979, or was not known at 1979?

17 A. Cardiovascular should not be on there.

18 Q. Doctor, my question is has it not been reported and
19 has it not been reported by reputable scientists that
20 cardiovascular disorders may result from dioxin exposure?

21 A. No, sir.

22 Q. That has not been reported?

23 A. No, sir.

24 Q. And so whoever wrote that down is either not a

1 reputable scientist, or he is misquoting what somebody said,
2 one of the two?

3 A. No, sir.

4 Q. Well, it's on this list, is it not, sir?

5 A. Yes, sir.

6 Q. And the people at Northwestern are reputable
7 scientists, aren't they, sir?

8 A. Yes.

9 Q. And the people that wrote the Huff-Moore, those
10 studies, are reputable scientists?

11 A. Yes, sir.

12 Q. And included cardiovascular disorders, didn't they?

13 A. No, sir, they put there as a question rather than
14 real, none of -- there has never been anywhere --

15 Q. Doctor, did Northwestern put this in as a question?

16 A. Yes, sir.

17 Q. Where does it say question, where in the protocol
18 that we went through ad nauseum for some length of time,
19 where did she say there was any question about it, they said
20 and we quoted the line from the text, and you read the line
21 of the text, those are the toxic effects in man, didn't they,
22 sir?

23 A. No, sir.

24 Q. Doctor, do you recall reading that line from that

1 text?

2 A. Yes, sir.

3 Q. Did I quote it to you directly?

4 A. You read the line correctly.

5 Q. They said that in that protocol, did they not, sir?

6 A. Yes, sir.

7 Q. Doctor, you did not, and this was known to man, to
8 scientists, to the world, before they put it in this Table 7,
9 wasn't it, sir?

10 A. Known what?

11 Q. The scientific studies that have been made that led
12 to the conclusion that cardiovascular disorders should be
13 included in the list, those studies were performed, the
14 reports were written before December of '79, weren't they,
15 sir?

16 A. No, sir.

17 Q. When were they written then?

18 A. They were written, but they didn't say what you
19 said.

20 Q. Doctor, the studies that Northwestern used in
21 making their statement, and that the people that wrote this
22 article that we went through, those were studies that were
23 performed before December of '79, weren't they, sir?

24 A. Yes, sir.

1 Q. And, you at Monsanto were aware of those studies,
2 weren't you, sir?

3 A. Yes, sir.

4 Q. Now, are there, is there anything in here where
5 studies were not done relating to those disorders?

6 A. I don't understand your question.

7 Q. Is there anything listed here, sir, where the
8 worked not been done prior to December of '79?

9 A. There hadn't been any work done on cardiovascular,
10 urinary tract.

11 Q. Doctor, we just went through the cardiovascular.
12 There was scientific studies made, were there not, sir?

13 A. Yes, sir.

14 Q. Those were made before December of '79, were they
15 not, sir?

16 A. Yes, sir.

17 Q. Is the same thing also true for the urinary and the
18 respiratory and all nose other things listed here, sir, the
19 work in that was done before December of '79, wasn't it, sir?

20 A. Yes, sir.

21 Q. Doctor, the only thing that you mentioned here is
22 reversible liver and Chloracne, isn't that correct, sir?

23 A. Yes, sir.

24 Q. Doctor, what is potential toxicity? What do you

1 mean when you say potential toxicity?

2 A. It's a misuse of the word potential toxicity in
3 this sentence.

4 Q. Doctor, you brought in the exhibit, it is your
5 exhibit. I'm now asking you what is meant by saying
6 potential toxicity.

7 MR. HEINEMAN: Object, Your Honor. He hasn't
8 established that this man was the author of it. He just
9 brought a document in to court. Now, if he wants his opinion
10 on what potential toxicity means, that's one thing, but I
11 think he's asking him to speculate about what the author here
12 meant.

13 THE COURT: Objection is overruled. I don't think
14 that's what the question calls for.

15 A. Would you read back the question?

16 COURT REPORTER: "Doctor, you brought in the
17 exhibit, it is your exhibit. I'm now asking you what is
18 meant by saying potential toxicity?"

19 A. Potential refers to the likely hazard of exposure
20 to dioxin.

21 Q. Doctor, how do you determine potential toxicity?

22 A. Potential toxicity comes from both animal studies
23 as well as human experience.

24 Q. Now, Doctor, there had been done prior to December

1 of 1979 a great deal of animal study work relating to the
2 toxicity of 2,3,7,8-TCDD, had there not, sir?

3 A. Yes, sir.

4 Q. And a lot was known about the potential toxicity of
5 2,3,7,8-TCDD?

6 A. Yes.

7 Q. Barrels and barrels was known, wasn't it, sir?

8 A. Not barrels -- there were a lot of studies.

9 Q. Doctor, it states in here, you say very little is
10 known concerning the potential toxicity of dioxin, is just
11 one hundred percent false, isn't it, sir?

12 A. No, sir.

13 Q. Doctor, a lot was known, you had scientific work
14 had been done with all kinds of animals, you created cancers,
15 you created deaths, you created liver, you created all kinds,
16 ever possible thing that could happen to an animal through a
17 toxic substance had already been done by December of 1979,
18 had it not, sir?

19 A. Yes, sir.

20 Q. And, all that was a large scientific body of
21 information dealing with potential toxicity of dioxin, wasn't
22 it, sir?

23 A. Yes, sir, in the animal.

24 Q. And, Doctor, that is the reason you do the work

1 with the animal, so you'll know the possible, the potential
2 toxicity of when man is exposed to that substance, isn't that
3 correct, sir?

4 A. No, sir.

5 Q. That isn't the reason you do it?

6 A. That's part of it.

7 Q. That is one of the reasons that it's done, isn't
8 it, sir?

9 A. Yes, sir.

10 Q. So as to demonstrate the potential toxicity of the
11 substance?

12 A. No, sir.

13 Q. Sir?

14 A. No, sir.

15 Q. Isn't that the reason the FDA requires that you do
16 animal studies with every drug before you can even use it in
17 the clinic on an experimental basis with humans, it has to go
18 through the animals first, doesn't it, sir?

19 A. Yes, sir.

20 Q. In order to discover the potential toxicity of that
21 drug?

22 A. No, sir.

23 Q. Doctor, why do they put it with the animals, why
24 did the FDA require that every drug that is put on the market

1 in the United States, first, before they can even go and work
2 with humans with it, that it goes through the animal test?

3 A. To determine the possible health effect.

4 Q. And the possible health effect is potential
5 toxicity, isn't it, sir?

6 A. No, sir.

7 Q. When you are talking about toxic effects, aren't
8 you talking about health effects?

9 A. Yes, sir.

10 Q. And, Doctor, then when they do it for those
11 possible health effects, they are dealing with toxicity,
12 aren't they, sir?

13 A. Yes, sir, in the animal.

14 Q. That's exactly what I said, they are doing that
15 before they allow it to go to humans, aren't they?

16 A. Yes, sir.

17 Q. They want to determine the potential toxicity of
18 that substance, don't they, sir?

19 A. No, sir?

20 Q. Sir?

21 A. No, sir.

22 Q. Doctor, is toxicity equivalent to health effects?

23 A. No, sir.

24 Q. When you talk about toxic effects aren't you

1 talking about health effects?

2 A. You may.

3 Q. When you are talking about toxicity here, you are
4 not talking about something in the abstract, you are talking
5 about possible health effects, both in Exhibit 1267 A, and in
6 Exhibit 1515, aren't you, sir, Monsanto Exhibit 920?

7 A. Yes, sir.

8 Q. So they are both talking about the same thing,
9 aren't they, sir?

10 A. No, sir.

11 Q. Doctor, do you understand what you are saying here?

12 A. Yes, sir.

13 Q. This is talking about -- the Exhibit 1267 is
14 talking about health effect in man, is it not, sir?

15 A. Possible health effect.

16 Q. And this is talking about possible health effect,
17 isn't it, sir?

18 A. Yes, sir.

19 Q. All right. So, the possible health effect in man
20 is demonstrated by what happens to animals, isn't it, sir?

21 A. No, sir -- possible, yes, sir.

22 Q. That's what I said, Doctor.

23 A. I'm sorry, yes, sir.

24 Q. Now, a lot is known about the possible health

1 effects in man, isn't it, sir, by virtue of animal studies?

2 A. Yes, sir.

3 Q. Yes. So this statement here where you say that
4 very little is known about concerning the potential toxicity
5 of dioxins is false, isn't it, sir?

6 A. No, sir.

7 Q. Well, Doctor, let's go through it one more time.

8 A. Yes, sir.

9 Q. A lot is known about the potential toxicity of
10 dioxins by virtue of animal studies, isn't it, sir?

11 A. No, sir.

12 Q. Oh, no? Have the animals been studied to determine
13 what the toxic effects upon them are going to be?

14 A. On who?

15 Q. On the animals, sir?

16 A. Yes, sir.

17 Q. So a lot is known about the toxic effects of dioxin
18 on animals, isn't it, sir?

19 A. Yes, sir.

20 Q. That work is done in order to determine what might
21 possibly be the effects upon man, isn't that right, sir?

22 A. Yes, sir.

23 Q. So that information leads to and assists you in
24 determining the potential toxicity of dioxin and other drugs

1 or other substances in man, isn't that correct, sir?

2 A. Yes, sir.

3 Q. So then a lot is known about the potential toxicity
4 of dioxin, isn't it, sir?

5 A. For whom?

6 Q. Doctor, do you enjoy playing this game with me?

7 A. No, sir.

8 MR. HEINEMAN: Objection. Object to the
9 characterization of a game.

10 THE COURT: Objection is overruled.

11 A. Would you repeat the question?

12 Q. You answered the question, Doctor. Doctor, if you
13 don't enjoy then, would you please listen to my questions and
14 answer truthfully, if you can?

15 A. Yes, sir.

16 Q. A lot is known about the potential toxicity of
17 dioxin insofar as it effects animals, isn't that right, sir?

18 A. Yes, sir.

19 Q. And the reason you do the work in animals is to
20 determine what the potential toxicity in man, don't you?

21 A. No, sir?

22 Q. Sir?

23 A. No, sir.

24 Q. What other reasonable --

1 A. To find a possible.

2 Q. Is potential and possible equivalent words?

3 A. Not to me.

4 Q. What does "potential" mean? Have the capacity to
5 do something? Isn't that what it means, sir, that it may do
6 something, not necessarily that it will do it, but that it
7 has the power to do it, has the possibility of doing it?
8 Isn't that what you mean when you say potential?

9 A. No, sir.

10 Q. Doesn't potential mean that it has the power to do
11 it?

12 A. Yes.

13 Q. And when you say that this has the potential
14 toxicity, you mean that it may do it, it has the power to do
15 it, it may not do it, but it has the power to do it?

16 A. Yes, sir.

17 Q. Now, you know that this has the power to do it in
18 the animals?

19 A. Yes, sir.

20 Q. But you don't know whether or not for sure it can
21 do all those things in man, isn't that right, sir?

22 A. Yes, sir.

23 Q. So, it has the possible toxicity to man as shown by
24 the fact that it has toxicity to animals?

1 A. Possible.

2 Q. Yes. And, Doctor, you didn't tell your workers
3 that, did you, sir, in this exhibit?

4 A. Yes, sir.

5 Q. Where did you tell them that, Doctor?

6 A. When we say potential toxicity of dioxins is known
7 --

8 Q. No, no, no, you say very little is known, you don't
9 say it's known. The truth of the fact is that a lot was
10 known but you told them very little was known?

11 A. We are talking about man here.

12 Q. We sure are.

13 A. Yes, sir.

14 Q. That was exactly what my question was aimed at, Dr.
15 Roush?

16 A. Yes, sir.

17 Q. Now, where do you tell them about those possible
18 toxic effects of dioxin, sir?

19 A. We didn't think that there was --

20 Q. My question is where do you tell them that, sir?

21 A. We don't.

22 Q. As a matter of fact, you tell them just the
23 opposite, don't you sir, you tell them that very little is
24 known, don't you, sir?

1 A. Yes, sir.

2 Q. Doctor, is there any other document -- you've had
3 all this time to come up with this information of what you
4 told your workers about the possible health effects of dioxin
5 to counter what you are telling the outside people that can
6 sue you. What other document is there that?

7 MR. HEINEMAN: Objection, Your Honor, about the
8 constant reference to someone who can sue them. Mr. Carr
9 doesn't know that. That isn't evidence in this case. It's
10 just meant to try to inflame the jury, and I object to it.

11 THE COURT: Objection is overruled.

12 Q. Doctor the thrust of my question is what other
13 information do you have, what other document do you have that
14 you can give us that you told your workers about the possible
15 health effects of exposure to dioxin?

16 A. Other documents --

17 Q. Yes, Doctor?

18 A. In our newspaper that goes out, there have been
19 other statements about the effects of dioxin on man.

20 Q. Where are they, Doctor?

21 A. I don't have them with me.

22 Q. Well, Doctor, I don't have them either, and they
23 were supposed to be produced to me. Doctor, this exhibit
24 dated December of 1979 --

1 A. Yes, sir.

2 Q. Is the best that you at Monsanto can do to come up
3 and demonstrate what you in fact told the workers, isn't that
4 right, sir?

5 A. Yes, sir.

6 THE COURT: Gentlemen, could I see you at the bench
7 for a minute, please?

8 (Following a side bar conversation which was outside the
9 hearing of the Court Reporter and the jury, the following
10 proceedings were had in open court.)

11 Q. Doctor, you have never told anybody else,
12 customers, the public, the people at Sturgeon, you've never
13 told anybody else, other than, or any more than what you've
14 told the workers as shown in Exhibit 1515, or Monsanto's 920,
15 isn't that correct, sir?

16 A. I don't know.

17 Q. Doctor, isn't it a fact that the position that
18 you've taken with your workers, as shown by Exhibit 1515,
19 Monsanto Exhibit 920, isn't it a fact that this is the same
20 position that you at Monsanto have taken with regard to the
21 public that might be exposed to dioxin in your products, to
22 the people at Sturgeon that might be exposed to the dioxin in
23 your chemicals, and to everybody else that has any connection
24 with Monsanto produced dioxins?

1 A. No, sir.

2 Q. What other position have you taken, sir?

3 A. We were concerned --

4 Q. Excuse me, what other position have you taken,
5 other than what is stated in this exhibit?

6 A. I don't know what you mean by position.

7 Q. Doctor, you've taken a position here demonstrated
8 by this document that you brought into court to show how
9 forthcoming you have been about knowledge of dioxin to your
10 workers?

11 A. Yes, sir.

12 Q. And there are no other documents. I want to know,
13 sir, what position have you taken with the world at large,
14 the plaintiffs in this case, your customers of your
15 chemicals, your workers, anybody else other than the position
16 that is manifested and demonstrated and stated in Monsanto
17 Exhibit 920?

18 A. No other document that I know of.

19 Q. Has there been any public -- well, all your public
20 pronouncements come in the way of press releases -- those
21 would be a document, so there isn't anything else then, is
22 there, sir?

23 A. We told the employees at Nitro related to there
24 exposure to dioxin.

1 Q. Did you tell them that in writing?

2 A. No, sir.

3 Q. Doctor, did you have a stenographer write down what
4 you told them?

5 A. We have records that Dr. Suskind was down there and
6 told them about the study.

7 Q. Did you tell them something other than you told the
8 workers at Krummrich as shown in Exhibit 920?

9 A. Yes, sir.

10 Q. What else did you tell them, sir?

11 A. They were given copies of all the tables from the
12 Suskind final draft report, all those tables were presented
13 to them over a period of two or three hours.

14 Q. Doctor, those tables, and we will get to that on
15 this morbidity study in a moment, those tables simply compare
16 the ailments of highly exposed people to people who are not
17 so highly exposed?

18 A. Yes, sir.

19 Q. Doctor, there isn't anything in your studies, in
20 this Suskind study that tells those people whether they are
21 healthy or sick, all they do is compare the extent of
22 sickness. There are no normal reference ranges given in
23 those studies?

24 A. No, sir.

1 Q. And so they are really not given any information
2 other than comparing them to one another, that's all they are
3 given, isn't that right, sir?

4 A. Yes, sir.

5 Q. Doctor, where is the -- is the document where you
6 tell those people that they can have cardiovascular
7 disorders?

8 A. It's in Dr. Suskind's report.

9 Q. Does it say there that they can get a
10 cardiovascular disorder from exposure to dioxin?

11 A. No, sir.

12 Q. But, you know that and we have demonstrated that,
13 that's considered by some scientists as a potential problem
14 with dioxin exposure?

15 A. No, sir.

16 Q. Doctor, didn't we just get through going through
17 that?

18 A. Yes, sir.

19 Q. And, Doctor, what they were told in your morbidity
20 study is that they have the same rate as others in the
21 Kanawha Valley?

22 A. Yes, sir.

23 Q. And you have said that's because the people that
24 live in that valley have an unusual lifestyle that makes them

1 more susceptible to cardiovascular heart disease, isn't that
2 right?

3 A. Yes, sir.

4 Q. You didn't tell those people that exposure to the
5 chemicals that Monsanto puts out in that valley might be a
6 cause of those cardiovascular disorders, did you, sir?

7 A. No, sir.

8 MR. HEINEMAN: Objection, Your Honor, there is no
9 evidence of that.

10 THE COURT: Objection is overruled.

11 Q. And you well know, though, don't you, Doctor, that
12 the chemicals emitted by that plant may well contribute to
13 cause or to cause cardiovascular disorders, you know that,
14 don't you?

15 A. No, sir.

16 Q. Didn't Mr. Heineman suggest to you that because
17 those people in a question, and it was passed over, I don't
18 know that you had an opportunity to respond, but didn't he
19 suggest to you that the cardiovascular disorders in that
20 valley were because of the chemical companies that were lined
21 up there in the valley, you recall him asking that question?

22 A. Yes, sir.

23 Q. And, did you not agree or did you even answer that
24 question?

1 A. No, sir.

2 Q. You didn't answer that, did you, sir?

3 A. No, sir.

4 Q. He just passed that over, hoping that it would
5 appear that Monsanto's position is that the chemicals caused
6 it, but there wouldn't be anything on record to support that
7 isn't that right, sir?

8 A. I don't know.

9 MR. HEINEMAN: Objection.

10 THE COURT: Objection is overruled.

11 Q. Your position, in fact, Monsanto's position in fact
12 is that those chemicals put out by Monsanto and the other
13 chemical companies in that valley haven't caused or
14 contributed to cause the heart disease, isn't that correct,
15 sir?

16 A. Yes, sir.

17 Q. And it is Monsanto's position that the 34 percent
18 higher heart disease death rate in that valley is simply
19 because all the people in that valley live a lifestyle, they
20 eat more fat food, they smoke more, they drink more, they
21 sleep less, they do everything different in that valley in
22 Nitro West, Virginia, in Charleston, West Virginia, they do
23 all those things in that area differently than the rest of
24 us, and that's the reason they have got their heart disease,

1 that is your position, isn't it, Doctor?

2 A. Yes, sir.

3 Q. But you at Monsanto have never examined the people,
4 you have never done a study to determine whether their
5 lifestyle is any difference than anybody else's, isn't that
6 also correct, sir?

7 A. Yes, sir.

8 Q. And it's also correct that you have not one single
9 bit of information, other than the fact that they have got a
10 34 percent higher death rate from heart disease than the rest
11 of the country, you haven't one single bit of information
12 other than that fact, isn't that right, Dr. Roush?

13 A. Yes, sir.

14 Q. Now, and this is something that you've also told
15 your workers there at Nitro, isn't it, sir?

16 A. Yes.

17 Q. You've got a 34 percent higher death rate from
18 heart disease, but it's not caused by the chemicals that you
19 are exposed to, it's caused because you live
20 extraordinarily fast or unusual or live differently than the
21 rest of the country lives. That's what you are telling them
22 in effect?

23 A. No, sir.

24 Q. What are you telling them, sir?

1 A. We are telling them that there is no more mortality
2 in the workers in our plant than there is outside of our
3 plant.

4 Q. In that valley?

5 A. In that valley.

6 Q. Yes.

7 A. And the fact that the workers who aren't exposed to
8 dioxin, who do not have Chloracne, have the same amount of
9 cancer, same amount of cardiovascular disease, and that there
10 is no increase, no difference between the two; says that
11 there is no relationship between their exposure and
12 cardiovascular disease, and that's exactly the same thing
13 that Moses found.

14 Q. Moses said, in effect, that it was the chemicals in
15 the Kanawha Valley?

16 A. No, sir.

17 Q. Didn't she?

18 A. No, sir.

19 Q. Well, we will get into that when I get to the
20 Moses-Selikoff study. Did not Moses and Selikoff point out
21 that the heart rate was higher in the Kanawha Valley than the
22 rest of the country?

23 A. Yes, sir.

24 Q. Did Moses-Selikoff say that that was because of the

1 lifestyle that they had there?

2 A. No, sir.

3 Q. What did they say caused that?

4 A. They didn't say why, just that it was the case.

5 Q. But now your position is that it's the lifestyle
6 and not the chemicals?

7 A. Yes, sir.

8 Q. But Moses-Selikoff didn't take that position, did
9 they?

10 A. Yes, sir.

11 Q. Where did they take that position?

12 A. They took the fact that we found an excess of heart
13 disease, and the same level of excessive heart disease was
14 found in the valley, and saying that that means that our
15 experience within the plant was not exaggerated over the
16 non-exposed.

17 Q. Doctor, everybody in that valley is exposed to
18 those chemicals, this effluent from those chemical plants,
19 isn't that correct, sir?

20 A. Yes, sir.

21 Q. All you are comparing is more heavily exposed with
22 less heavily exposed, with less heavily exposed. That's all
23 you are comparing when you talk about those people in that
24 valley?

1 A. Yes, sir.

2 Q. So, Doctor, you can't use the words unexposed in
3 describing the people in that valley, can you, sir?

4 A. It's so small that you can't measure it.

5 Q. Doctor, there is all kinds of things so small you
6 can't measure it, you are still exposed to it.

7 A. It's possible.

8 Q. Doctor, Moses-Selikoff did not say anywhere that
9 that valley had a different lifestyle than the rest of the
10 country, did they, sir?

11 A. No, sir, they did not.

12 Q. Suskind didn't that say either, did he, sir?

13 A. No, sir.

14 Q. Nobody said that except you and Monsanto, isn't
15 that correct, sir?

16 A. Yes, sir. So did Moses.

17 Q. I thought I just asked you if Moses-Selikoff said
18 that and you said, no, she didn't say that?

19 A. She said there was excess cardiovascular disease.

20 Q. That's exactly what she said, didn't attribute that
21 to the lifestyle, did she, sir?

22 A. Yes, sir.

23 Q. Where did she attribute it to the lifestyle?

24 A. It's implied in that sentence.

1 Q. Because someone has a higher death rate, that is
2 implied that it's from a lifestyle, not from the chemicals?

3 A. Yes, sir.

4 Q. Doctor, were on earth did you go to school? How
5 can you possibly say there are 34 percent people in Kanawha
6 Valley that have higher death rates and that means ipso facto
7 that it's their lifestyle. There could be a million things
8 that could cause that, and that's an exaggeration, other than
9 lifestyle, isn't that right, sir?

10 A. No, sir.

11 Q. Well, where did Moses-Selikoff say that it was the
12 lifestyle? Don't give me the implication, we can read and
13 interpret the words, Doctor, did she say that that higher
14 death rate from heart disease was from lifestyle?

15 A. No, sir.

16 Q. All she said there is a higher death rate from
17 heart disease among the Monsanto plant workers and there is
18 also a higher death rate in that valley, that's what she
19 said, didn't she, sir?

20 A. Yes, sir.

21 Q. And, Doctor, you know as you sit there, you know in
22 your heart and in your mind that those people in that valley
23 live exactly the same way the rest of us live?

24 A. No, sir.

1 Q. You don't know that?

2 A. No, sir.

3 Q. Doctor, why? What makes you say -- they have a
4 higher death rate. What makes you say they live different
5 than the people here in Belleville?

6 A. One of the most heavily studied medical problems
7 today is heart disease, and the risk factors that contribute
8 to heart disease are well described, the magnitude is just
9 horrendous.

10 Q. Yes, I agree.

11 A. All right, smoking, obesity --

12 Q. Yes.

13 A. Cholesterol, high blood pressure, inactivity, all
14 of those are well recognized factors.

15 Q. No doubt about it.

16 A. And there are -- the doctors in Kanawha Valley will
17 talk about the lifestyle abnormalities as the basis for their
18 heart disease, the good ones, the University of West Virginia
19 in Charleston will say the same thing.

20 Q. Doctor, the lifestyle that you are describing will
21 cause heart disease, and it's all through the country?

22 A. Yes, sir.

23 Q. And it's what has gone to make what is the standard
24 death rate in the United States, all those people doing those

1 things all thrown in together make up that standard, doesn't
2 it, sir?

3 A. Yes, sir.

4 Q. All right. Now, so that is taken care of when you
5 look at the standard. Now, the people in Kanawha Valley, has
6 anybody said that that large group of people live differently
7 than anybody else?

8 A. Yes, sir.

9 Q. Who said it?

10 A. The doctors at West Virginia Medical School.

11 Q. Who said it, sir?

12 A. Dr. Waldman, the profes --

13 Q. What did he say?

14 A. He said the people's heart disease that he examined
15 from Nitro was related to their lifestyle.

16 Q. Now, Doctor, that may well be. Isn't what it
17 means, Doctor, if you are overweight, and if you smoke, and
18 if you don't exercise that there is a risk, an important risk
19 that you are going to have heart disease?

20 A. Yes, sir.

21 Q. Now, that's the risk that applies to every person,
22 but that person put in Kanawha Valley, that person that
23 doesn't exercise, and those other things, and has high
24 lipids, that person put in Kanawha Valley has his lifestyle

1 there just as he has the lifestyle elsewhere, and that person
2 is subject along with others to a higher death rate by virtue
3 of the fact that he is in Kanawha Valley?

4 A. No. No, sir.

5 Q. No? Doctor, has anybody said that isn't a fact?

6 A. Yes, sir.

7 Q. Who said that, sir?

8 A. There are populations in the United States where
9 people do not smoke, do not eat meat, do not drink, and just
10 those three factors, and their heart disease is very low.
11 Those people are vegetarians.

12 Q. Nobody is quarreling with that. That goes in to
13 make up the average death?

14 A. No, sir.

15 Q. Doctor, the people at Rush City, a subdivision of
16 East St. Louis, I'm sure you are familiar with it, aren't
17 you, sir?

18 A. I know --

19 MR. HEINEMAN: Object, Your Honor, that has
20 absolutely no relevance to this case.

21 MR. CARR: It has indeed relevance, Your Honor.

22 THE COURT: Go ahead, Mr. Carr.

23 Q. (by Mr. Carr) Those people are living adjacent to
24 the Monsanto Krummrich plant, you know that, don't you, sir?

1 A. Yes, sir.

2 Q. And you know that on occasion they get exposed to
3 chemicals and chemical discharge from that plant that the
4 workers don't get exposed to, you know that, don't you, sir?

5 A. Not that the workers don't get exposed to.

6 Q. Doctor, you know the workers have their -- as soon
7 as a spill takes place, as soon as this valve gets stuck or
8 can't close, or a pipe pops, that chemical goes out and the
9 workers have their alarm system and they immediately take
10 protective measures, don't they, sir?

11 A. Yes, sir.

12 Q. So that to prevent them from being exposed to that
13 escaping chemical?

14 A. Yes, sir.

15 Q. Now the people of Rush City, they don't have those
16 rubber suits and respirators, do they?

17 A. Yes, sir, they do not.

18 Q. That chemical comes down in Rush City, doesn't it,
19 sir?

20 MR. HEINEMAN: Your Honor, may I have this be a
21 continuing objection?

22 THE COURT: Sure.

23 MR. HEINEMAN: To this totally irrelevant line of
24 questioning, which in my view is being offered to introduce

1 inflammatory matters in front of the jury, and I object to it.

2 THE COURT: Objection is overruled. It is
3 relevant, it's not inflammatory. Mr. Carr, you may proceed,
4 I will note it as a continuing objection.

5 Q. (by Mr. Carr) Doctor, in addition to that kind of
6 accidental discharge, the people of Rush City living closer
7 to that chemical plant and those things, because you gave an
8 example the other day about how the closer you are the more
9 risk you have. They have a greater risk to the things that
10 come out of that plant than the people say in Belleville,
11 don't they, sir? Belleville being some five to ten miles
12 from that plant?

13 A. Greater exposure.

14 Q. They have a greater exposure, therefore greater
15 risk?

16 A. Not necessarily.

17 Q. Doctor, I thought you've been telling us all the
18 time that the risk is related to the dose?

19 A. Yes, sir, absolutely.

20 Q. And those people are exposed to greater dose than
21 the people in Belleville, aren't they, sir?

22 A. Yes, sir.

23 Q. Therefore they have a greater risk?

24 A. Depends on the level that will produce an effect.

1 Q. . Whatever is there, they have a greater risk if it
2 is one one-ten-billionth, they have a greater risk than the
3 people in Belleville, who may be exposed to one
4 one-ten-trillionth, isn't that right?

5 A. No, sir.

6 Q. They don't have a greater risk?

7 A. No, sir.

8 Q. Then there is no relationship between dose and
9 exposure or risk?

10 A. No, sir.

11 Q. You are saying there is or is not?

12 A. There is a correlation.

13 Q. There is. And, Doctor, doesn't it follow that the
14 people in Rush City are exposed to a higher level of
15 contaminant coming out of that plant than the people at
16 Belleville?

17 A. Yes, sir.

18 Q. And if there is any risk connected with that
19 exposure, they are at greater risk, aren't they, sir?

20 A. Yes, sir.

21 Q. Now, that same thing, Dr. Roush, is also true for
22 the people of the Kanawha Valley, isn't it, sir?

23 A. What the same is true?

24 Q. The people living closer to Monsanto's plant are at

1 greater risk for accidental exposure, and for just every day
2 exposure to those contaminant discharged by that plant,
3 aren't they, sir?

4 A. No, sir.

5 Q. It's true for the people here in St. Clair County
6 that's connected with the Krummrich Plant at Sauget, it's not
7 true for the people at Kanawha Valley?

8 A. Depends on what chemical you are talking about.

9 Q. Doctor, whatever the chemical may be?

10 A. No, sir.

11 Q. Doctor, did the Krummrich Plant for years
12 manufacture chemicals that had in it 2,3,7,8-TCDD?

13 A. I don't think so.

14 Q. What makes you say you don't think so, Dr. Roush?

15 A. We haven't been able to measure it in most of our
16 chemicals.

17 Q. Doctor, what chemicals haven't you -- how about
18 2,4,5-T?

19 A. 2,4,5-T, yes.

20 Q. Sir?

21 A. Yes, sir.

22 Q. Manufactured for years at Nitro, wasn't it, sir?

23 A. Yes, sir.

24 Q. And dioxin is in that 2,4,5-T at Nitro, no question

1 about that?

2 A. Yes, sir. No, sir.

3 Q. There is also 2,3,7,8-TCDD found in the chemical
4 manufactured at Sauget, Illinois, isn't that correct?

5 A. TCDD, yes.

6 Q. 2,3,7,8-TCDD?

7 A. Some chemicals, yes.

8 Q. Now, Doctor, the people at Kanawha Valley are
9 exposed to that, were exposed to that 2,3,7,8 TCDD, were they
10 not, sir?

11 A. I don't know.

12 Q. Doctor, do you not remember agreeing with me that
13 they are exposed to dioxins put out by that plant, you recall
14 that, sir, your testimony earlier in this case?

15 A. Yes, sir.

16 Q. That was the truth then, wasn't it, sir?

17 A. No, sir, we are talking --

18 Q. Was it a lie then?

19 A. No, sir.

20 Q. Was it a mistake, those people at Kanawha Valley
21 exposed, do they have some exposure to dioxin emitted in the
22 fumes, emitted in the air, in the dust, in however it goes
23 through, do they have some exposure to the dioxin?

24 A. Theoretically.

1 Q. And they have it -- if the dioxin is manufactured
2 there it can and does escape, doesn't it, sir?

3 A. Yes, sir.

4 Q. There was an escape in 1949, wasn't there, sir?

5 A. Some, yes, sir.

6 Q. And the people of Kanawha Valley are exposed to
7 those dioxins that are contained in your effluence, in your
8 gases, in your smoke, in your steam, and in your accidental
9 discharge, and in the dust blowing off from your plant,
10 aren't they, sir?

11 A. Yes, sir.

12 MR. CARR: Your Honor, that would be -- I've gone
13 past noon.

14 THE COURT: Ladies and gentlemen, we will break for
15 lunch at this time. We will start again at one o'clock. The
16 admonishments that I've given you earlier will apply during
17 this lunch break also. Court is in recess for lunch.

18 COURT ADJOURNED:

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1 STATE OF ILLINOIS)
)
2 TWENTIETH JUDICIAL CIRCUIT) SS
)
3 COUNTY OF ST. CLAIR)

4

5 I, DEBRA M. MUSIELAK, certify the foregoing to be a
6 true and accurate transcript of the testimony and proceedings
7 in the above-entitled cause.

8 Dated this 26 day of July, 1985.

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Debra M. Musielak

1 STATE OF ILLINOIS)
)
2 TWENTIETH JUDICIAL CIRCUIT) SS
)
3 COUNTY OF ST. CLAIR)
4

5 I, RICHARD P. GOLDENHERSH, one of the Judges in and
6 for the Twentieth Judicial Circuit, do hereby certify that I
7 have examined the aforesaid transcript of proceedings, and
8 certify the foregoing to be a true and accurate transcript of
9 the testimony and proceedings in the above-styled cause.

10 Dated this _____ day of July, 1985.

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HON. RICHARD P. GOLDENHERSH

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