

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION: MORRIS COUNTY
DOCKET NO. C-3939-84

DIAMOND SHAMROCK
CHEMICALS COMPANY,

PLAINTIFF,

VS

THE AETNA CASUALTY
AND SURETY COMPANY, ET AL.,

DEFENDANTS.

STENOGRAPHIC TRANSCRIPT

OF:

NON-JURY TRIAL

-----X
A F T E R N O O N S E S S I O N

DATE: OCTOBER 17, 1988
PLACE: MORRIS COUNTY COURTHOUSE
MORRISTOWN, NEW JERSEY

B E F O R E: HON. REGINALD STANTON, A.J.S.C.

TRANSCRIPT ORDERED BY: STEPHEN D. CUYLER, ESQ.

A P P E A R A N C E S:

MESSRS. PITNEY, HARDIN, KIPP & SZUCH,
BY: DENNIS LA FIURA, ESQ.

-AND-

MESSRS. CAHILL, GORDON & REINDEL,
ATTORNEYS FOR PLAINTIFF,

BY: WILLIAM E. HEGARTY, ESQ.
MICHAEL P. TIERNEY, ESQ.
RAYMOND L. FALLS, JR., ESQ.
LEONARD A. SPIVAK, ESQ.
MARSHALL COX, ESQ.
PETER F. LAKE, ESQ.
(Admitted pro hac vice)

DEBORAH A. NUTTING
OFFICIAL COURT REPORTER
MORRIS COUNTY COURTHOUSE
MORRISTOWN, NEW JERSEY

APPEARANCES (Continued):

MESSRS. CUYLER & BURK,
ATTORNEYS FOR DEFENDANT GENERAL
REINSURANCE GROUP, ET AL,
BY: STEPHEN D. CUYLER, ESQ. and

MESSRS. SHEFT & SWEENEY,
ATTORNEYS FOR DEFENDANT LLOYD'S, AND
LONDON MARKET COMPANIES
BY: PETER SHEFT, ESQ.
AND LEONARD A. SHEFT, ESQ.
(ADMITTED PRO HOC VICE)

MESSRS. DAY, BERRY & HOWARD,
ATTORNEYS FOR DEFENDANT AETNA CASUALTY,
BY: THOMAS J. GROARK, JR., ESQ.,
STEPHEN MOSER, ESQ., AND
JOSEPH L. HAMMER, ESQ.
(ADMITTED PRO HOC VICE)

MESSRS. MORGAN, MELHUIH, MONAGHAN,
ARVIDSON, ABRUTYN & LISOWSKI,
ATTORNEYS FOR DEFENDANT HOME INSURANCE CO.,
BY: HENRY G. MORGAN, ESQ.
AND STEFANO CALOGERO, ESQ.

MESSRS. PHELAN, POPE & JOHN,
ATTORNEYS FOR DEFENDANT AMERICAN REINSURANCE
COMPANY AND AMERICAN EXCESS INSURANCE COMPANY
BY: ROBERT J. BATES, JR., ESQ.
(ADMITTED PRO HOC VICE)

MESSRS. MUDGE, ROSE, GUTHRIE, ALEXANDER &
FERDON,
ATTORNEYS FOR DEFENDANTS INSURANCE COMPANY OF
NORTH AMERICA, CALIFORNIA UNION INSURANCE
COMPANY AND PACIFIC EMPLOYER'S INSURANCE CO.,
BY: PAUL R. KOEPPF, ESQ.
AND GEORGE A. PIERCE, ESQ.

APPEARANCES (Continued):

MESSRS. GARRITY, FITZPATRICK, GRAHAM,
HAWKINS & FAVETTA,
ATTORNEYS FOR DEFENDANT AMERICAN INTERNATIONAL GROUP,
BY: ANTONIO D. FAVETTA, ESQ.
AND RUDOLPH G. MORABITO, ESQ.

MESSRS. KUNZMAN, COLEY, YOSPIN & BERNSTEIN,
ATTORNEYS FOR DEFENDANT FIREMEN'S FUND,
BY: STEVEN A. KUNZMAN, ESQ.

MESSRS. LEVY, BIVONA & COHEN,,
ATTORNEYS FOR DEFENDANT FIREMEN'S FUND,
BY: DONALD M. GILBERG, ESQ.

MESSRS. GOLDEN, ROTHSCHILD, SPAGNOLA &
DIFAZIO,
ATTORNEYS FOR DEFENDANT ROYAL INDEMNITY,
BY: CHARLES W. MILLER, III, ESQ.

MESSRS. BUMGARDNER, HARDIN & ELLIS,
ATTORNEYS FOR DEFENDANTS U.S. FIRE INSURANCE
CO., AND LONDON GUARANTEE INSURANCE CO.
BY: MARK S. KUNDLA, ESQ.
AND MARY ELLEN MYERS.

MESSRS. WILSON, ELSER, MOSKOWITZ, EDELMAN & DICKER,
ATTORNEYS FOR DEFENDANT EVANSTON INSURANCE CO.
BY: THOMAS F. QUINN, ESQ.

MESSRS. TOMPKINS, MC GUIRE & WACHENFELD,
ATTORNEYS FOR DEFENDANTS FIRST STATE INSURANCE
CO. AND HARTFORD ACCIDENT AND INDEMNITY CO.
BY: REX K. HARRIOTT, ESQ.

A p p e a r a n e s (continued)

MESSRS. SCHENK, PRICE, SMITH & KING,
ATTORNEYS FOR DEFENDANT SAINT PAUL,
BY: DONALD BEDELL, ESQ.

MESSRS. JAMES AND ADDAS,
ATTORNEYS FOR DEFENDANT SOUTHWEST,
BY: FRANK ADDAS, ESQ.

MESSRS. BUMGARTNER, HARDIN & ELLIS,
ATTORNEYS FOR DEFENDANT GUARANTEE,
BY: CRAIG BROWN, ESQ.

MESSRS. GRIFFITH & BURR, P.C.
ATTORNEYS FOR DEFENDANT COMMERCIAL UNION
INSURANCE COMPANY,
BY: JAMES W. CHRISTIE, ESQ.

MESSRS. GORDON, GORDON & HALEY,
ATTORNEYS FOR WITNESS BLAIR,
BY: WILLIAM C. SULLIVAN, ESQ.

INDEX

<u>WITNESS</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>VOIR DIRE</u>
<u>JOHN BURTON</u>					
Mr. Moser	6				
Mr. Spivak		83			

AFTERNOON SESSION

1
2
3 JOHN BURTON, having been previously sworn, resumes the
4 witness stand and testifies as follows:

5 CONTINUED DIRECT EXAMINATION BY MR. MOSER :

6 THE COURT: Mr. Burton remains on the
7 witness stand under oath. When you're ready,
8 Mr. Moser, go ahead.

9 MR. MOSER: Thank you, your Honor.

10 Q Mr. Burton, this morning during the course
11 of your exam, I asked you a question about the alarm
12 system and whether you had made any effort to hide it,
13 and I think your answer in substance was given the
14 circumstances at the time you knew you did not.

15 What did you mean by your reference to the
16 circumstances at the time?

17 A Well, to answer your question, it reminded me
18 about the atmosphere about the alarm where it was
19 something -- something I thought was a clever strategy.
20 If anything I was proud of it. And it was kind of a
21 joke within one echelon of the division.

22 Q Now, with respect to the sewer hookup in
23 1956, did you make any tests before the sewer hookup
24 was put into place?

25 A I made tests of what was going into the

1 industrial sewer on that same street before we
2 connected into it.

3 Q And what was -- question withdrawn.

4 MR. SPIVAK: Could I have that answer
5 back?

6 THE COURT: Would you read the question
7 and answer back, please, Mrs. Nutting?

8 (Previous question and answer are read by
9 the reporter).

10 Q What was the purpose -- why did you make
11 those tests?

12 A Because I knew that the materials we were
13 putting in were violating Newark city rules. The same
14 time I was sure what we were putting -- well, the same
15 time I was sure other people were also in violation.
16 So I wanted to be able to show that what we were
17 putting in was not unusual.

18 Q Now, when the sewer was hooked up in 1956,
19 was it hooked up to what you've called the main
20 building?

21 A Not -- there's one unit that I'm uncertain about
22 in the main building. The miticide unit which was in a
23 different type of area than the other units, I don't
24 remember putting in a connection from it. But
25 logically I might have.

1 Q All right. Putting aside the miticide
2 building, miticide area for a moment, was the remaining
3 effluent from the main building directed to the sewer?

4 A No.

5 Q And is there any doubt in your mind about
6 that, sir?

7 A No.

8 Q Now, what were those effluents?

9 A Well, they were a variety of different types.
10 For example, we had sulfuric acid from the chlorine
11 drying unit in connection with the chloral production.
12 Effluent from that would be 80 to 85 percent sulfuric
13 acid saturate with chlorine.

14 Then we had what we called spent sulfuric acid
15 from the DDT operation which would be 80 to 85 percent
16 sulfuric acid containing some solid materials or
17 materials that solidified out on storage.

18 We had quite a large quantity of that from
19 operations such as the DDT washing we had dilute,
20 fairly large volumes of water containing small amounts
21 of organic.

22 From the monochloroacetic acid unit, we had
23 what was basically sodium hypochlorite solution where
24 we took the unreacted chlorine gas and adsorbed it in
25 caustic soda.

1 From the trichlorophenol unit we had, as I
2 mentioned before, a water layer from the anisole
3 separation, but in general it was two different types
4 of things, these concentrated sulfuric acids that would
5 have been a problem to transfer and handle in the trial
6 sewer and the dilute wash solution containing
7 relatively small amounts of organics or sodium
8 hypochlorite from the monochloroacetic unit which
9 would be relatively harmless. Sodium chloride being a
10 relatively common bleach.

11 Q Did you make your superior aware of
12 whether or not you were hooking up the sewer to the
13 main building?

14 A Again, I don't have any recollection of
15 specifically doing so, but in the context of the time,
16 my relations with my superiors, I would be absolutely
17 certain I did. Because in effect I would want to make
18 sure that they understood they were still violating the
19 law and for my own self-protection I would have made
20 sure of that.

21 Again, I'm thinking back to what my situation
22 and my relation with my superiors and the problem of
23 the plant as far as inspection was concerned. One of
24 the reasons. And this is -- I'm not positive -- sort
25 of vague in my mind. Might have run a pipeline

1 connection to the miticide unit in order to have an
2 effective token discharge to the 2,4-D sewer.

3 So the inspector never went really into the main
4 building. But still knew from the pipes that came out
5 of it that we had discharge from there. Asked, well,
6 what about effluent in the main building I would have a
7 pipe line I could point to, but this is supposition
8 again based on what my reasoning would have been at the
9 time.

10 THE COURT: Let me ask, why didn't you
11 hookup all of the main building to the public
12 sewer?

13 THE WITNESS: Well, effluents such as --
14 the DD -- the spent acid from the DDT unit, most
15 of that was sent to recovery. We were able to
16 get the sulfuric suppliers to take it back. It
17 was a polymer congealing in the storage tanks
18 and it would have been a physical problem in the
19 industrial sewer.

20 We had a long line from the industrial
21 sewer and were very concerned because when we
22 put it in there was less pitch from the inlet at
23 our place to the sewer in the street. In other
24 words, that very much less pitch than it should
25 have had probably so we had to be pretty certain

1 that nothing was going to precipitate or settle
2 out in that long horizontal stretch to avoid
3 plugging.

4 So anything that contained solid, such as
5 acid and DDT, would have been a major problem.
6 Things like this other concentrated sulfuric I
7 described would to some degree be a problem
8 because most of the effluent we were putting in
9 the industrial sewer was alkaline.

10 On the other hand, it was advisable to
11 keep as much acid out as possible for the same
12 reason. Any sodium 2,4-D that was in it reacted
13 with acid could precipitate and plug the sewer
14 so things such as muriatic acid, for example,
15 when we had to dump it, very clearly we dumped
16 that in the river for no other reason than not
17 create this kind of a problem.

18 So it would be for operating purposes,
19 danger plugging the sewer if we put much in the
20 way of acids into it. We did have some acid
21 from the 2,4-D and 2,4,5-T acid production. But
22 the sulfuric acid content of them was very
23 small. From the miticide, that had quite a bit
24 of acid content in it.

25 That's why I'm -- would have been

1 illogical to put that in as long as we had
2 access to the river with it. These dilute
3 solutions I mentioned would have been no problem
4 for plugging the industrial sewer. They were
5 simply a matter of this whole main building, the
6 floors were pitched towards the river. To have
7 diverted any of those effluents to the
8 industrial sewer we would have had to put in a
9 pit and pumps and pipe line and there would have
10 been quite a bit of additional expense.

11 So matter of view of expense, operating
12 safety in the industrial sewer, each one of
13 these effluents had some reason far as much more
14 convenient and from our point of view at that
15 time, to let it just go into the river. Also
16 these were batch operations so that you weren't
17 running a steady stream.

18 Again, in the case of inspections, you had
19 plenty of time, if you happened to be
20 discharging a tank at that time, to stop that
21 discharge.

22 THE COURT: Go ahead, please.

23 MR. MOSER: Thank you.

24 Q Now, in or around 1973, did you have
25 occasion to be in this plant?

1 A Yes.

2 Q And what were the circumstances in which
3 you found yourself in the plant in 1973?

4 A Well, an entrepreneur Bill Mitchell had leased
5 the plant from Diamond Shamrock with the purpose of
6 making a chemical -- I believe it was benzyl alcohol.
7 That project had failed, but meanwhile Diamond having
8 shut down the 2,4 -- having shut down the plant had a
9 need for 2,4-D acid in connection with retail
10 operations. So that Mitchell made a contract with
11 Diamond to produce 2,4-D acid for them and I believe
12 for some other companies but at least for Diamond.

13 But by that time the equipment had -- some of it
14 was in bad shape. Some of the piping had been taken
15 apart and the plant had generally degenerated. So Mr.
16 Mitchell wanted to, in effect, rebuild the plant to
17 make 2,4-D acid for Diamond, and he engaged me to in
18 effect look after the -- doing the work.

19 Q Now, when you were there, can you describe
20 for us the status of the main building in 1973 as
21 concerns the sewer?

22 A What was the last words?

23 Q How was the main building hooked up to the
24 sewer, if at all, in 1973?

25 A Okay.

1 MR. SPIVAK: Is there an adequate
2 foundation for this at this point?

3 THE COURT: Only if you made observations
4 and were able to tell. We don't know -- at
5 least I don't know what you did when you went
6 back into the building in 1973. Did you get
7 into the nuts and bolts of seeing how the
8 drainage was laid out, how the sewer discharge
9 was set up?

10 THE WITNESS: Well, in the main -- we only
11 used part of what is this new main building.
12 The part where the TCP operations carried out we
13 had no use for that and didn't use it.

14 THE COURT: When you say "we," are you
15 speaking in 1973 of Mitchell?

16 THE WITNESS: Yes, 1973. The only thing
17 we did in the main building -- or I'm sorry.
18 The only thing we did in the TCP area of the
19 main building was to take some tanks out of
20 there that we needed into the 2,4-D acid
21 production. And one tank, which was Diamond's
22 steam stripper tank, used that for some purpose.
23 I've forgotten what.

24 But I remember going in to check it out
25 for cleanliness. We operated the the downstream

1 end of this main building to make dichlorophenol
2 and monochloroacetic acid.

3 As far as the sewers were concerned, we
4 had no use for the sewer connection from the TCP
5 end of the building, but we ran across -- we had
6 trouble with the underground water line leaking
7 so we did quite a bit of digging up the ground
8 looking for leaks.

9 In the course of that we happened to run
10 across what looked like a terra-cotta sewer pipe
11 from the TCP end of the building running down
12 toward the main industrial sewer, but this was
13 purely by accident. We had no use for it, and
14 the waste effluents from the MCA and DCP units
15 which were now in the main building went into a
16 rather peculiar basin type of affair which was
17 on the land side of the river bulwark or piling
18 of the river.

19 It was not a sewer as such. It was
20 something -- they had excavated a pit. On the
21 land side of this bulwark, the river had a -- I
22 don't know exactly what you call it -- planks
23 that went up to make a vertical bank.

24 THE COURT: And did you see where this pit
25 drained, how the effluents from the pit drained?

1 THE WITNESS: Well, this bulwark was not
2 waterproof. In other words, there was space in
3 between so it simply drained through the piling
4 into the river.

5 THE COURT: Were there any pipes or
6 trenches leading away from the pit?

7 THE WITNESS: No. It was right adjacent
8 to the river. In fact, part of the river -- the
9 level would rise and fall with the river.

10 THE COURT: Go ahead.

11 Q The sewer that you did discover, was it
12 able in your judgment to handle all the effluents from
13 the main building?

14 MR. SPIVAK: Objection. Lacks foundation.
15 How did he know how much effluents there was in
16 the building in 1963?

17 THE COURT: We have to see the answer,
18 whether the witness is familiar with it.

19 I think what Mr. Moser is really trying to
20 figure out is how the plant when you came into
21 it in 1973, how its pipes were set up in terms
22 of managing the effluents from it.

23 Now, I understand that you only used part
24 of the plant with Mitchell in 1973, so perhaps
25 did not engage the entire system. But were you

1 able to get a handle on how the system was set
2 up?

3 A Well, the TCP end, which is the one part we did
4 not use, I don't know. The effluents could have gone
5 through this pipe I mentioned we ran across with the
6 industrial sewer or it could have gone to the river
7 since it was adjacent to the river, and I have no
8 opinion on that whatsoever.

9 THE COURT: Okay. How about the
10 downstream?

11 THE WITNESS: Nothing to indicate which
12 way it went.

13 THE COURT: Very well. How about the
14 downstream side which you began to use of the
15 main building?

16 THE WITNESS: That was all set -- well, in
17 the normal course of events, the only liquid
18 effluents directly from making -- I'm sorry. I
19 have to think one minute about one point. Okay.
20 I thought of my answer.

21 I was wondering where the chlorine went
22 but I remember now the set-up was such that the
23 excess chlorine from monochloroacetic acid went
24 to the dichlorophenol unit so in effect there
25 was no excess chlorine to be concerned with.

1 So, in the normal course of events under
2 this new set-up there would be no liquid
3 effluents from the -- no liquid chemical
4 effluents from the monochloroacetic unit or
5 dichlorophenol unit except one item and that was
6 a sulfuric drying tar which was in the gas line
7 between the two units.

8 That unit I remembered very well because
9 we had quite a bit of trouble operating it, and
10 I went back a number of times to try to solve
11 the operating problem. That unit drained into
12 this pit that I mentioned before.

13 THE COURT: Go ahead, Mr. Moser.

14 MR. MOSER: Thank you, your Honor.

15 THE COURT: 159A I take it is to simply
16 make 159 more legible.

17 MR. MOSER: It is, your Honor. I
18 represent to you that we have the first two
19 pages of exhibit 159 retyped into 159A for use
20 so we could all read it.

21 MR. SPIVAK: I have no problem with that.
22 My observation with respect to 159 is that as I
23 recall it is in fact two documents and that in
24 fact the witness at his deposition had no
25 familiarity with the second two pages of it.

1 MR. MOSER: You're correct. And don't
2 blame you. Be happy to have them taken off if
3 you like.

4 THE COURT: Why don't you do that. Take
5 the bottom two pages off 159. Perhaps get them
6 in through another witness. I am not precluding
7 that. Mr. Burton doesn't know anything about
8 them. They're not part of this document.

9 Q Mr. Burton, for convenience, we will -- get
10 to the substance of it. Look at exhibit 159A.

11 Just for the record, do you recognize exhibit
12 159 as a memorandum prepared by you on or about April
13 4, 1960?

14 A I don't remember it. I'm not disputing it, but
15 I don't remember it.

16 Q All right. Was -- are the initials in the
17 lower left-hand corner on the second page those of your
18 secretary?

19 A Yes. Yes.

20 Q And does it on its face bear all the
21 indications of a memorandum prepared by you until 1960?

22 A All of it except for one part.

23 Q Which is? Which is what?

24 A The third paragraph on page 2.

25 Q Paragraph --

1 A Starting with "We produce approximately 2,000
2 tons."

3 Q And what is it about that paragraph that
4 gets your attention?

5 A Because this is so full of gross errors of all
6 varieties that I have a hard time believing I ever
7 would have done it because I was normally careful and
8 meticulous. I notice one thing in connection with
9 that. I studied this and tried to figure out how I
10 could have done this.

11 One thing I did was always carefully read back
12 memos I did or letters I did with numbers to be sure
13 they were accurate, and I don't find my signature on
14 this.

15 Does the original have my signature on it?

16 Q I'm not aware whether there is a copy with
17 your signature or not to be honest with you.

18 Let me ask you this Mr. Burton: Who was Mr.
19 Weiner?

20 A Weiner was my superior. He was production
21 manager of the chlorinated products division.

22 Q And there are c.c.'s indicated. Who was
23 Mr. Siemoneit?

24 A He was a process engineer for the chlorinated
25 products division.

1 Q Who was Mr. Scovill?

2 A He was the general manager of the chlorinated
3 products division.

4 Q And who was Mr. Sutton?

5 A I'm not positive at that particular time but for
6 a long period he was the director of engineering for
7 the corporation, and I believe at that time he was
8 director of engineering.

9 Q Let me direct your attention to the second
10 paragraph of the document. The first sentence states
11 "Until approximately 1956 we disposed of all our plant
12 effluents into the Passaic River."

13 Is that sentence accurate?

14 A Yes.

15 Q The next sentence of the document refers
16 to the "Passaic Valley Sewerage Commission having
17 'officially objected' to our polluting the river."
18 What is meant by the term "officially objected?"

19 A We get some form of notice from them after the
20 inspector found this alcohol leak that I think I had
21 mentioned previously. I don't remember the nature of
22 the notice, but it required us to not pollute the
23 river.

24 Q Directing your attention to the next
25 sentence, it refers to "Since that time we run some of

1 our effluents to each of these outlets."

2 By these outlets, to what were you referring?

3 A Wait a minute till I read this carefully. Well,
4 that we run some of our effluents to the industrial
5 sewer and some of our effluents still to the river.

6 Q Was that true as of 19 --

7 A Yes.

8 Q -- 60?

9 A Yes.

10 Q Directing your attention to page 2, -- I'm
11 sorry. I have to -- the paragraph. I'm directing your
12 attention to that paragraph which refers to -- begins
13 with the words "We produce approximately 2,000 tons of
14 2,4-D."

15 Do I understand from what you've said thus far
16 that that paragraph is not accurate?

17 A It's grossly inaccurate.

18 Q Would you -- would you tell us how to make
19 the paragraph accurate?

20 A Yeah. Just to be -- well, do you want how I
21 calculated or simply the numbers?

22 Q No, explain to us how the calculation
23 could have been made.

24 A Okay.

25 MR. SPIVAK: Your Honor, might it help to

1 have the witness explain first in what way it is
2 inaccurate?

3 THE COURT: It might. Yes.

4 MR. MOSER: That's fine. I'll withdraw my
5 question.

6 Q Mr. Burton, to put it in context for us,
7 could you tell us what is inaccurate with that
8 paragraph and also explain what's inaccurate and how it
9 should be corrected, all right?

10 A Well, the 60 percent number is inaccurate.

11 Q All right. What should that number be?

12 A Approximately 70 percent.

13 Q Do you happen to know how --

14 A I know how I made the error if that's your
15 question.

16 Q How did you make the error?

17 A Pure carelessness. I have a sheet -- I still
18 have the sheet which I was keeping -- or made a
19 tabulation of 2,4-D yields from the period 1954 to
20 1957. And in one column of it it showed the yield to
21 2,4-D based on phenol. And adjacent column it showed
22 the yield to 2,4-D based on chlorine. And the average
23 of the figures based on chlorine is 59.2 percent.

24 So I must have used that number by mistake and
25 when I said slightly less, it's 60 percent because that

1 matches exactly.

2 So, again, I have no memory of doing it, but
3 that would make sense. Whereas, the column next to it
4 shows the yield based on phenol which by some
5 calculations I could work out to be 70 percent.

6 Q Just -- so the 60 percent number should be
7 73 percent?

8 THE COURT: 70.

9 A The 60 percent number should be 70 percent.

10 Q 70 percent. Now, if we change no other
11 numbers on this page, would that produce -- would the
12 use of the number 70 there produce more waste or less
13 waste?

14 A Less.

15 Q All right. What was the next --

16 A The next error is another embarrassing one where
17 I say this means we discard the molecular quota of 400
18 tons, and that is wrong.

19 Q And what should it be? What's wrong?

20 A If we use -- staying with the 60 percent, then
21 that number should be 1330 tons instead of 400. I can
22 show that when I do the correct calculation, if you
23 want.

24 Q Show us the correct calculation assuming
25 you use the 70 percent figure.

1 A Well, there's more errors in the same paragraph.

2 Q All right. Go ahead.

3 A Well, I have said that we have 400 tons of 2,4-D
4 equivalent in the waste per year. Then further down I
5 say three quarters of this is in the form of chlorophens
6 and come out with 110 tons of chlorophens which is
7 grossly inaccurate. I don't know without calculating
8 precisely what the number is but the 110 is much too
9 small.

10 All right. And then I said that we use 50 tons
11 of 2,4-D acid, and that again, if I use original basis,
12 is till half as much as it should be. That's why this
13 whole thing baffles me how I could have -- I can't
14 conceive I could have read this and not picked up these
15 gorss errors.

16 Q By the way, where were you in April 1960?
17 Physically, where did you work?

18 A Well, I was on sick leave. I was home and
19 apparently I was doing some work part time cause this
20 memo was obviously dated in April.

21 Q All right. What was the status of the
22 plant in April of 1960?

23 A Plant was not in operation.

24 Q And why not?

25 A Well, this was after the explosion. I don't

1 know at exactly which stage of -- probably still being
2 dismantled and equipment moved out.

3 Q All right. Now, have you made a correct
4 calculation --

5 A Yes.

6 Q -- along the lines that purport to be made
7 on exhibit 159?

8 A Yes. I tried to simplify this to make it as --
9 first of all, the number in my tabulation of phenol to
10 esters in the means is 67 and a half percent. But in
11 terms of effluent, that number has to be adjusted
12 because in the final product itself we had some 2,4-D
13 acid, we had some dichlorophenol, and when we
14 formulated products we formulated with the slight
15 percentage of excess just to be sure we met the minimum
16 strength.

17 If a product was four parts per gallon, we might
18 put in 4.02 or 4.03 to be sure we met the minimum, and
19 the same way the foreman doing the filling of small
20 containers for his own protection probably at least was
21 on the up side of the weight limit.

22 Q All right.

23 A So anyway, I assumed the amounts that we might
24 have -- one form or another had in the finished product
25 might be around two to three percent, so instead of 67

1 and a half percent I adjusted this up to 70 percent as
2 the best estimate of the yield figure during this
3 period of '54 to '57.

4 Q All right.

5 A Then just to make sure that this is a
6 reasonable -- well, this doesn't really enter the
7 calculation, but for my own benefit I wanted to check
8 that again, the standards for 2,4-D plants. And
9 Diamond's standard in 19 -- well, no, I didn't convert
10 these to percentages.

11 The Diamond standard in 1958 would be about 70
12 percent -- oh, it would be 74 percent yield. The
13 Diamond standard. But over the years the efficiency
14 was improving so I could understand that.

15 The plant that I put in Mexico City, started --
16 well I forgot what it started out but ended up with
17 efficient of 78 percent, but then I added some
18 improvements we didn't have at Diamond. Some. That
19 assures me the 70 percent yields in light of other
20 plants is a reasonable number.

21 Q All right.

22 A What I did, and I don't know if this is
23 understandable to anyone but an engineer or not, but if
24 we had one hundred percent yield, 94 ton -- this goes
25 by the molecular weights -- 94 tons of phenol, we

1 produced 221 tons of 2,4-D acid, at 70 percent yield 94
2 tons of phenol produced 155 tons of 2,4-D acid.

3 The difference between the 221 and 155 is 66
4 tons of waste calculated as 2,4-D acid equivalent. But
5 that's on the base again of 94 tons of phenol.

6 Now, to go from 94 tons of phenol to 2,000 tons
7 of phenol, I multiplied 2,000 by the ratio of 66 over
8 155 and I come up with 852 tons of 2,4-D acid
9 equivalent in the waste. Then I divide that into three
10 quarters and one quarter and correcting for the
11 molecular weight of dichlorophenol I have 471 tons of
12 chlorophens in the waste and 213 tons of phenoxyacetic
13 acids of various types in the waste.

14 So, those would be the best numbers based on my
15 starting premise of 2,000 tons a year production.

16 Q If you calculated it today and used the
17 right yield figure in that paragraph where it reads now
18 110 tons of chlorophens, you would insert 471 tons of
19 chlorophens?

20 A Right.

21 Q And where it reads 50 tons of 2,4-D acid,
22 sodium salt, and esters, you would add 213 tons?

23 A Right.

24 MR. SPIVAK: That's 248 sodium salt and
25 esters.

1 MR. MOSER: Yes, it was.

2 MR. SPIVAK: Of course.

3 Q Directing your attention, if I could, to
4 the last paragraph of your memo, it reads -- first to
5 your suggestions on handling the muriatic effluents is
6 to try to get sales to make commitments whereby we sell
7 it all, even at a lower price.

8 Do you know whether that was accepted?

9 A I remember distinctly at some point when I was
10 there that sales did drop the price from the selling
11 price of \$20 a ton to \$16 a ton. No. Okay. But I
12 remember now that had to be before this period because
13 I remember who the sales manager was at that time and
14 he had left the company by this time.

15 Q Uh-hum.

16 A Well, no. Actually what happened after this
17 time, after 1960, I wouldn't know anyway.

18 Q All right. In other words, you don't know
19 what happened?

20 A Right.

21 Q In response to that suggestion, do you
22 recall during your time replacing the floors in the TCP
23 area?

24 A Would you repeat the question please?

25 Q During the time you were plant manager, do

1 you recall replacing the floors in the TCP area?

2 A No. But, again, I -- I know how the floors
3 looked when we put in the first autoclave or were going
4 to and I know how they looked at the end so at some
5 point we had to resurface the floors.

6 Q Fair enough. What was the difference?

7 A When we resurfaced the floors we put a pitch to
8 them, pitch toward a drainage trench to facilitate
9 washing the floors easily and cleanly.

10 Q All right. Do you recall why that was
11 done?

12 A This is standard operating procedure with myself
13 everywhere.

14 Q All right. Now, during the period 1951 to
15 1960, did any of the processes that you described
16 discharge to the atmosphere?

17 A Did you say any of the products I described?

18 Q Yeah. Did any of the processes that you
19 described discharge to the air?

20 A Well, all of them had one way or another vented
21 to the air. Of course in most cases the materials we
22 were dealing with were relatively nonvolatile. And in
23 some cases, for example, in the hydrochloric acid
24 adsorption unit which adsorbed the HCL gas, we had
25 trouble -- not often -- but at times with the unit

1 which case some HCL gas would escape.

2 Q Were there any vents on the autoclave?

3 A Yes.

4 Q And where -- could you describe those
5 vents and how they operated?

6 A Well, I say it was a vent because there had to
7 be, but I don't remember whether we vented that into
8 the room or whether we -- as we probably did -- carried
9 the vent through the adjacent wall which would make it
10 outdoors. I don't remember. As far as I'm concerned,
11 doesn't matter.

12 Q How often did the vent serve its function
13 as a vent?

14 A Well, before pumping out the finished batch it
15 would be necessary to open the vent in order to enable
16 the material to flow out. And commonly, once the batch
17 was finished and cooled, the vent valve would be opened
18 so when water was added it would have an easy way for
19 the vapor to vent out at that time.

20 Q So it was used in connection with each
21 batch? It was used in connection with each batch of
22 product?

23 A Yes.

24 Q Now, this morning we went over a number of
25 processes. I'm afraid I skipped one, Could you

1 describe for us briefly the DDT process?

2 A DDT?

3 Q Yes.

4 A Well, it consisted of two parts. And I'm not
5 sure when Diamond bought the plant -- when I came with
6 Kolker we were -- reacting chlorine and alcohol to
7 make chloral which is one of the intermediates for DDT.

8 At some point -- I'm not sure whether this is
9 before or after Diamond bought the plant -- we switched
10 to using alkali as a raw material so the process was to
11 react acid alkali with chlorine which produces HCL gas
12 which we absorbed in water to form muriatic acid for
13 sale and unreacted chlorine gas from that operation
14 which originally we adsorbed in caustic soda to avoid
15 its discharge into the atmosphere, and later we put in
16 a unit whereby we dried the chlorine gas and compressed
17 it and recycled it back to the chlorination unit.

18 The product from the chlorinators was chloral
19 hydrate which we transferred to a still and added
20 concentrated sulfuric acid to it. And then from that
21 that formed chloral.

22 From that we distilled chloral which we used for
23 DDT or later sold as such. The sulfuric acid from that
24 separation we discharged to the river. The finished
25 chloral from that step was reacted with 20 percent

1 oleum which is a -- might say an over concentrate. 104
2 percent sulfuric. In other words, more than 100
3 percent sulfuric in strength.

4 We reacted with oleum and monochlorobenzene to
5 form DDT in a reaction vessel, or actually we had two
6 of them.

7 That reaction takes place over a period of
8 hours. Then the batch is warmed up so that the DDT is
9 on top as part of a top layer. The spent sulfuric
10 acid, in other words, what became of the oleum, forms a
11 bottom layer which we pumped out to one of two outside
12 storage tanks for shipment back to the sulfuric supply.

13 The top layer was transferred to a wash tank
14 where it was washed with water, then washed with
15 caustic soda to remove any traces of sulfuric acid
16 present. Then it was dried in a vacuum drier to remove
17 monochlorobenzene and traces of water.

18 The finished product at that time was molten DDT
19 and that we fed on to a specially designed flaking
20 system which converted the molten DDT to flakes of
21 solid DDT. And this we packaged and sold or used --
22 dissolved it in solvent and sold it as a solution of
23 DDT.

24 Q You made reference in that description to
25 the wash waters. What happened to the wash water?

1 A That was discarded.

2 Q And where was it discarded?

3 A The river.

4 Q And where was the material that you
5 extracted in the drying process discarded?

6 A Well, if there was any mon -- enough
7 monochlorobenzene in it to separate out as a separate
8 layer, we would recycle it, but the water part of what
9 came over the drying process was discarded to the
10 river.

11 Q What happened to spills or leaks from this
12 process?

13 A Well, in that area, we had the same type of
14 pitched floors and small drainage trenches to
15 facilitate washing the floor. These in turn led into
16 an underground pipe that led to the river.

17 Q You made reference to DDT spent acid and
18 tanks in which it was placed. Where were those tanks
19 located?

20 A They were on the upstream side of the main
21 building and on the end furthest away from the river.

22 Q Were they inside or outside?

23 A Outside.

24 Q How, if at all, were those tanks cleaned?

25 A That was a real-messy operation which is why I

1 remember it so well.

2 Q All right. Would you describe it?

3 A Periodically they would accumulate too much
4 solids so then be necessary to pump out all the
5 sulfuric possible and then do a very quick water
6 flush -- concentrated sulfuric acid is corrosive.
7 Diluted sulfuric acid is not corrosive. So it would be
8 flooding them in large amounts of water to flood the
9 sulfuric acid south before they had time to corrode.

10 Q Where would that wash water go out?

11 A This would go right onto the ground. These were
12 on ground with no -- no paving.

13 Q All right. And --

14 A And this was an area of the plant which wasn't
15 commonly used for walking or whatever. So from a
16 safety point of view it was satisfactory to dump it on
17 the ground. Then it would be necessary to physically
18 shovel out the solids.

19 Q And what would you do with the solids?

20 A I don't remember specifically.

21 Q I believe earlier in your testimony you
22 made reference to -- you used a phrase still bottoms.
23 Were there --

24 A I'm sorry. What was the first --

25 Q You used the phrase still bottoms?

1 A In connection with which operation?

2 Q In your testimony. I was going to ask you
3 if you could tell us those operations which produced
4 still bottoms.

5 A Well, we had still bottoms -- I mentioned this
6 in trichlorophenol. Is that what you're referring to?

7 Q Is that an example of still bottoms?

8 A Well, kind of an unusual example.

9 Q Why is that?

10 A Because normally you are distilling like
11 materials what is left in the still bottoms is similar
12 to what you distilled off. But in this case our still
13 bottoms were sulfuric acids with organics in them.

14 Q What did you do with those still bottoms?

15 A If it was hot concentrated sulfuric acid. We
16 discharged it to the nearby river.

17 Q Were there also dichlorophenol still
18 bottoms?

19 A Not in those --

20 Q No no. When you -- in the dichlorophenol
21 manufacturing process, did you create still bottoms?

22 A To go back to what I think I said before, in the
23 Kolker process, we distilled 2,4 dichlorophenol and
24 ended up with still bottoms which were -- well must
25 have a variety of things because they were black.

1 In other words, been some degeneration by heat.
2 But basically they would be 2,4,6 trichlorolphenol.
3 Those were the still bottoms at that time.

4 At sometime, I think about 1953, we discarded
5 that distillation. Later we did a distillation of
6 chlorolphens but for a different purpose.

7 Q As you know, Mr. Burton, in 1983, the DEP
8 investigated the Lister Avenue site.

9 MR. SPIVAK: I object, your Honor. I
10 don't know he knows that at all.

11 MR. MOSER: Question withdrawn.

12 THE COURT: All right. Fine.

13 Q Mr. Burton, are you aware whether or not
14 the Department of Environmental Protection has
15 investigated Diamond's site at 80 Lister Avenue?

16 A No. Except that I read -- I think I read this
17 in the papers -- they found Dioxin at the site. And
18 you told me or Mr. Cuyler they found various chemicals
19 there.

20 Q I'll represent to you they found
21 chlorobenzene there.

22 Does it surprise you chlorobenzene would be
23 found on this site?

24 MR. SPIVAK: Objection, form.

25 THE COURT: I think it's all right. In

1 terms of the processes that were employed when
2 you were at the plant, would you be suprised to
3 find that in the soils?

4 THE WITNESS: Well, I was sure that it
5 would be in the soil when I left. I'm not sure
6 over 18 years whether it would still be there.
7 But I would be sure it would be in the soil when
8 I left.

9 Q Why do you say that?

10 A Well, because we handled lots of
11 monochlorobenzene and -- for example, these DDT
12 residues I mentioned that we flushed out the tanks
13 before cleaning out the residue, there would be some
14 monochlorobenzene in there.

15 And in this residue itself, would have quite a
16 bit of sulfonated monochlorobenzene.

17 In the normal course over a period of time
18 loading or unloading tank cars outdoors, just plain due
19 to carelessness, operator error, you always spill a
20 little bit. Opening up the pipelines at the end of a
21 pumping operation. So then if you go to extra
22 procedures you could always assume a little bit gets
23 spilled.

24 And where this unloading of the monochlorbenzene
25 cars was done was in a dirt area so any spills or leaks

1 would be -- end up in the soil.

2 Q I'm going to direct your attention to 1960
3 so as not to try to ask you to be an expert on what
4 would remain in the soil for how long. But as of 1960,
5 would you expect to find benzene in the soil at Lister
6 Avenue?

7 A We handled I think benzene at one time, but that
8 was in an area near the river. I would not expect to
9 find benzene.

10 Q Would you expect to find DDT?

11 A Yes.

12 Q How about DDE? DDE as in egg.

13 MR. SPIVAK: Why don't we find out what
14 it is. Might help if you know.

15 Q Do you know what D as in David DE is?

16 A Yes.

17 Q What is DDE?

18 A It's a cousin of DDT.

19 Q All right. Would you expect to find this
20 family in the soil at Lister Avenue?

21 A Yes.

22 Q How about DDD?

23 A I'm sorry.

24 Q What is --

25 A I'm sorry. I'm not getting these letters

1 clearly.

2 Q Three D's?

3 A Three D's? What was the first one?

4 Q We have DDT as in tomorrow?

5 A Right.

6 Q E as in elephant. And D as in David?

7 A Well, without not knowing specifically I think
8 by the nature of them, I think yes because in
9 addition -- DDT was not a pure product. It was
10 something I think on the order of 90 percent of
11 actually pure DDT.

12 So these other isomers, and I'm not cognizant of
13 what specific isomers you're still talking about, but
14 various other isomers would be expected -- were present
15 with DDT, and if we have DDT in the soil you would
16 expect some of the other isomers to be present too.

17 Q Why -- why would you expect there to be
18 DDT in the soil?

19 A Well, because we handled large volumes of DDT.
20 At that time that was a 20 cent a pound chemical so we
21 weren't as careful as we would be with more expensive
22 chemicals.

23 And things like -- I say cleaning out the
24 sulfuric tanks. We also shipped many tank cars of DDT
25 solution which were loaded back in the same railroad

1 area and any accidental spills, those would contain
2 DDT.

3 In other words, we handled a lot of DDT and DDT
4 solutions in the ground area. And be a miracle if over
5 10 years fair amount didn't get spilled into the
6 ground.

7 Q How about 2,4 -- how about 2,4-D? In
8 1960, would you expect that 2,4-D to be in the soil?

9 A Well, for clarity, are you talking 2,4-D acid or
10 are you going to differentiate between different forms
11 of DDT. There's an acid sodium salt, various esters
12 which might be called simply DDT because that's the
13 principal component.

14 Q I'm now asking you about 2,4-D.

15 A Yeah. 2,4-D can be present as 2,4-D acid.
16 2,4-D sodium salt. 2,4-D esters.

17 Q Would you expect to find it in any of
18 those forms?

19 A Yes.

20 Q In 1960?

21 A Yes.

22 Q Would you expect to find it in all of
23 them?

24 A Well, as of 1960, yes.

25 Q All right. How about 2,4,5-T?

1 A Same thing applies, precisely.

2 Q 2,4,6-T?

3 A Yes. Same thing, precisely.

4 Q 2,4,5-T? I'm sorry. I just said that.

5 How about 1,2,4 trichlorobenzene?

6 MR. SPIVAK: Your Honor, on much of this
7 I think even though it was prefaced with an
8 admonition that he didn't want the witness to
9 testify as an expert, that is pretty much where
10 we're going in terms of whether or not with
11 respect to the process that in fact had been
12 terminated years later -- or years earlier in
13 some of these cases there would be expected to
14 be a residual amount of chemical in the ground.

15 Whether or not the substance was used
16 is -- and might have gotten out on the ground
17 during the course of the process is a different
18 question than whether or not he would have
19 expected it to be present in 1960.

20 THE COURT: I suspect both the questioner
21 and answerer have not been making allowance for
22 dissipation that might have occurred let's say
23 between 1954 when a product may have been
24 dropped and 1960, and I think they have probably
25 both been using 1960 as though everything

1 continued up to then when Mr. Burton left.

2 I think probably that's what's been going
3 on. But I also -- I think what really has
4 happened is the witness is identifying every
5 chemical that was used in the process while he
6 was there. And I think what he's really saying
7 is he wouldn't be surprised to find out the end
8 of that process it was on the ground.

9 MR. SPIVAK: If that's what's going on I
10 have no objection.

11 THE COURT: I think that's what's
12 happening, is it not?

13 MR. MOSER: That's right.

14 THE COURT: All right. Maybe just say
15 that.

16 Mr. Burton, the impression I'm getting
17 from your testimony is the operation is such
18 that really all of its products got spilled from
19 time to time on the ground during the course of
20 the manufacturing process, is that so?

21 THE WITNESS: Not quite all. At least it
22 would surprise me if certain of them were found
23 in the ground. For example, hexachlorobenzene
24 which we made in a unit between the main
25 building and the river, right on the river edge,

1 and everything there was pitched to the river as
2 far as washing down is concerned. And the
3 material was packaged at that spot. So that as
4 far as the process is concerned, I can't -- we
5 certainly had some spills but I can't conceive
6 of everything that was spilled not being flushed
7 directly into the river.

8 The only way I can conceive of
9 hexachlorobenzene being in the ground would be
10 in the process of loading boxcars a drum, fiber
11 drum, might have broken, which would be very
12 unusual. It's possible, but I would be
13 surprised at hexachlorobenzene being found now
14 or being in the ground in 1950 -- 1960.

15 I take an exception. I forgot the effect
16 of the explosion.

17 Q Passing --

18 A The explosion took place very close to the
19 hexachlorobenzene unit, and it's very likely
20 hexachlorobenzene was scattered in that area. And I
21 don't know how they went about excavation, what they
22 did with the concrete blocks, the floor of the main
23 building; but from that point of view, yes, it
24 certainly was scattered around from the explosion.

25 THE COURT: Then what you're saying, with

1 the exception perhaps of a few of the chemicals
2 that were used in the process, most of them from
3 time to time spilled out and would have gotten
4 on the ground.

5 THE WITNESS: If you say most, yes, except
6 several of them -- except for this explosion --
7 were not made or handled in areas where they
8 would be expect to be on the ground.

9 For example, the miticide chemicals were
10 all made in the center of this main building
11 which had a concrete floor, and normally spills
12 again would all be washed to the river. And
13 except for transferring or loading finished
14 containers into a truck, hard for me to conceive
15 how they would get in the ground.

16 THE COURT: Go ahead, Mr. Moser.

17 MR. MOSER: Thank you.

18 Q Have you given us all the exceptions from
19 from among those chemicals you would have expected to
20 be in the ground?

21 A As far as the products were concerned, I believe
22 so.

23 Q All right. Did -- did you ever consider
24 the feasibility of distilling chlorophenol wastes?

25 A Of distilling chlorophenol?

1 Q Yeah.

2 A Yes.

3 Q Did you do so?

4 A No.

5 Q Why not?

6 A Well, except for this initial period before we
7 changed the process.

8 Q Why didn't you?

9 A Because of the equipment for it would be too
10 expensive. The figure of 250,000 sticks in my mind,
11 but I'm not sure whether that's accurate. Anyway, it
12 was much more expensive than could be economically
13 justified.

14 Q So what happened with chlorophens instead?
15 Instead of distilling them, what did you do with them?

16 A Yeah, we used the crude chlorolphens as they
17 came from the chlorophenol reactor, and the impurities,
18 which were largely 2,6 dichlorophenol, instead of
19 separating them by distillation we separated them as
20 part of the 2,4-D acid process.

21 Q Do you recall the plant being visited on
22 occasion by Aetna inspectors or Aetna engineers or
23 whatever?

24 Do you recall any Aetna people visiting the
25 plant?

1 A Oh, yes, very well.

2 Q Did you ever consult with those people
3 about the chemistry at the plant?

4 A I remember discussing almost regularly with the
5 Aetna inspector various physical hazards we had because
6 his main knowledge was physical hazards, and that's
7 where he was a value to us in spotting physical hazards
8 such as how we handle ladders and so forth.

9 I don't remember, and I don't believe we ever
10 discussed or I ever discussed chemical hazards with him
11 because he was not knowledgeable of it, and unless
12 you're really knowledgeable, a little bit of knowledge
13 is an awkward thing.

14 Q All right. By the way, while you were at
15 the plant, did you read any scientific periodicals?

16 A Yes.

17 Q Did you read "Chemical Week"?

18 A Yes.

19 Q Now, you were present at this plant when
20 the TCP process was developed back when it was a Kolker
21 facility, right?

22 A Right.

23 Q Was the plant designed for TCP operations?

24 A You mean --

25 Q The building, the physical building?

1 A No.

2 Q How did this facility compare with other
3 chemical plants you were in?

4 MR. SPIVAK: I object. I don't think the
5 witness is really competent to answer that
6 question and also I think it's too broad a
7 question.

8 THE COURT: I think it is, too. Getting
9 us pretty far afield I think.

10 MR. MOSER: Your Honor, he testified that
11 he -- out of all the chemical plants he's been
12 in, far more chemical plants than Dr. Wolfskill,
13 for example,

14 THE COURT: I'm not sure that's so.

15 MR. MOSER: Doctor Wolfskill came to
16 testify to say how this plant compared to plants
17 at the time.

18 MR. KOEPPF: Your Honor, just in light of
19 your comment, Dr. Wolfskill was unequivocal in
20 his testimony prior to about the mid-1970's he
21 had only been in six chemical plants and even
22 then it wasn't as an employee or running the
23 plant.

24 MR. SPIVAK: I think we'll let his
25 testimony speak for itself, but I think you'll

1 find he was talking about a larger number of
2 chemical plants than that in total.

3 THE COURT: His experience related to
4 large number of plants. What is this you want
5 to get him to compare --

6 MR. MOSER: Compare this facility with
7 other chemical plants he was in.

8 THE COURT: When?

9 MR. MOSER: Before 1960.

10 MR. CUYLER: Judge, the purpose is that
11 Dr. Wolfskill testified having never been in
12 this plant at all that this plant was run
13 exactly the same way -- he was never in the
14 plant in the 1950's. Certainly wasn't in the
15 plant in the 1960's and yet he testified this
16 plant was run just like every other chemical
17 plant he knew about in the fifties and sixties,
18 and I'll make a proffer as to what this
19 testimony will be.

20 THE COURT: All right. You're going to
21 ask him -- let's see where we are. Doctor --
22 Mr. Burton, up until he came with Kolker,
23 wasn't a consultant. So, basically, I would
24 have expected him to be only in those plants he
25 worked in or perhaps he might incidentally have

1 gone to other plants in the same company or
2 might have had some -- visited some friends, but
3 he wouldn't as a regular thing be going around
4 seeing other plants.

5 He worked for US Rubber. He worked for
6 Physer. He worked I guess in three different
7 places for Haden Chemical. He worked for Roman
8 House Corporation and for J. T. Baker Chemical
9 Company.

10 MR. CUYLER: Judge, which made the same
11 products.

12 THE COURT: Well, J. T. Baker might be a
13 relevant experience because some of the things
14 are the same. DDT. There was 2,4-D.

15 MR. CUYLER: Perhaps we could ask the
16 witness what other Diamond Shamrock plants he
17 was familiar with during this period of his
18 employment and how did this plant compare as to
19 other Diamond Shamrock plants.

20 MR. SPIVAK: I still think the question
21 is much too broad, and I would also point out we
22 went through this elaborate processes with
23 respect to identifying expert witnesses and
24 submitting reports, and it appears to me they
25 are attempting to use Mr. Burton as an expert.

1 THE COURT: You see, the --

2 MR. CUYLER: Isn't an expert if you've
3 seen it. It's only an expert if you're like
4 Wolfskill who never saw anything and had to
5 guess.

6 THE COURT: No, that's --

7 MR. SPIVAK: Objection, your Honor.

8 THE COURT: That's clever, but not
9 accurate, Mr. Cuyler. The difference is
10 that -- the difference is that an expert
11 presumably sees so many particular instances
12 that he's able to draw some general conclusions,
13 but the -- we want to be careful we don't have a
14 witness testifying as an expert unless in the
15 first place he is an expert and in the second
16 place unless he's been labeled as such and then
17 he's gone through the drill the experts have in
18 terms of preparing a report.

19 It may well be in fact Mr. Burton could
20 qualify as an expert in a number of relevant
21 areas here but I gather that he was not so
22 qualified and identified and he did not submit a
23 report.

24 So, I think it would not be appropriate to
25 ask him at this stage, without any advance

1 notice, purporting to ask him to compare this
2 plant to -- with the chemical industry in
3 general or to US manufacturing processes or to
4 world wide manufacturing processes.

5 I think it might be appropriate to ask him
6 to draw comparisons between this plant and
7 specific other plants that he worked in that
8 perform comparable activity. J. T. Baker plant
9 is one that had some comparable activities, and
10 it may be that US Rubber or one of the Haden
11 plants also did. But so far I don't know that.

12 MR. CUYLER: The only other thing I would
13 add is to compare it as to other Diamond
14 Shamrock plants within his division with which
15 he was familiar. I think that's a very valid
16 comparison, too. Because -- well, again, I will
17 not do what Mr. Spivak suggested I was about to
18 do so -- it will come out on its own.

19 MR. SPIVAK: I think you have to
20 establish first a foundation. Casual visits to
21 a plant are not going to establish that
22 foundation.

23 THE COURT: They may or may not. But he
24 did work in the Baker chemical plant from '45 to
25 '49 so presumably knew what was going on there

1 at least in the section of it where he worked.
2 Hope so.

3 MR. COLOGERO: Your Honor, I would make
4 two points. First of all, your Honor, some
5 weeks ago you allowed Mr. Catania under Rule 56
6 to testify and give opinion testimony on what I
7 felt at the time, and I still feel at the time,
8 concerned information which he hadn't even had
9 an opportunity to observe but which he had
10 opportunity to receive from phone calls and make
11 some perfunctory investigation.

12 Last week we had Mr. Hutton give an
13 opinion as to what a great company Diamond
14 Shamrock is. I certainly think that we
15 certainly have a sufficient foundation laid from
16 this witness under Rule 56 to have him give an
17 opinion which is being asked for by Mr. Moser.

18 THE COURT: I'll let him compare this
19 plant to other plants that he saw at the time.
20 That's appropriate. He's not qualified as an
21 expert.

22 Then we also have to keep in mind that
23 with Mr. Burton, as with a number of other
24 witnesses, even though they haven't testified as
25 experts, we've allowed them to, you know, to

1 give quite a few opinions, to tell us, for
2 example, how chemicals work and how processes
3 work.

4 We've done that with a lot of people, even
5 though they haven't technically qualified as
6 experts. We had a lot of people do that. We
7 had Ingley do that. We had Mr. Giles do that in
8 another area. Mr. Steward in a sense gave quite
9 a few expert opinions although he was not an
10 expert.

11 I'll let this man give the same kind of
12 testimony. That is to say, testimony that's
13 primarily factual in its thrust and in its
14 intent but which does incidentally involve
15 considerable amount of expertise that's related
16 to the work that the man did.

17 MR. SPIVAK: I would also suggest the
18 question as framed is much too broad.

19 THE COURT: We're going to start over with
20 a different question.

21 MR. SPIVAK: Unless your Honor directs
22 otherwise, going to start comparing
23 pharmaceutical plants with chemical plants.

24 THE COURT: Physer plant I guess is a
25 pharmaceutical plant. I hope they're operated a

1 little built differently. Get little nervous
2 everytime I take a pill if they weren't.

3 Let's see. Why don't you take it perhaps
4 one plant at a time. One group of plants at a
5 time.

6 Q All right. Mr. Burton, first of all, how
7 many Diamond plants were you in prior to 1960?

8 A Prior to when?

9 Q Prior to 1960.

10 A Five.

11 Q All right. How would you compare this
12 plant to those five plants?

13 MR. SPIVAK: Objection, your Honor.

14 THE COURT: Did you get enough of an
15 exposure to the other plants to understand their
16 operations well enough to compare your
17 operations to them?

18 THE WITNESS: Yes.

19 Q Which -- which were the five plants? What
20 plants had you -- did you have an opportunity to
21 observe?

22 A Painesville; Mason City, Iowa; Greens Bayou;
23 Pasadena, Texas; and Belle, West Virginia.

24 THE COURT: Why did you go to those
25 plants? What was the occasion of your visits to

1 them?

2 THE WITNESS: Well, in each case was a
3 different reason. One time when I was filling
4 in for my boss at Cleveland and they had a
5 problem at Painesville, I visited the
6 Painesville plant to try to solve the problem.

7 Greens Bayou, since we made the same
8 product, DDT, there was a regular interchange of
9 visits to swap technology and so forth. The
10 Mason City plant, which was put in to formulate
11 products from the 2,4-D plant, I went out to
12 help set up the equipment procedure for
13 formulating.

14 The Belle plant, I think I only visited
15 that on these regular quarterly visits that a
16 couple of those were held or maybe more at the
17 Belle plant. Seemed to me I went there some
18 other time for some other reason but I don't
19 remember why.

20 The Pasadena plant -- well, okay there's
21 one I really didn't see enough to get a good
22 comparison because it was a big plant, but one
23 part of that was in the chlorinated products
24 division, and we did visit that as part of these
25 quarterly rotating visits.

1 THE COURT: Okay. Well, you had six
2 plants in your division and I gather the
3 quarterly visits rotated from one plant to
4 another --

5 THE WITNESS: Right.

6 THE COURT: -- so that every year and a
7 half you'd get to a plant on a quarterly visit
8 on the rotating quarterly visit?

9 THE WITNESS: Yes. I'm not sure whether
10 it precisely worked out that precise rotation
11 but that was the general idea.

12 THE COURT: Very well.

13 Q How did this plant compare to those other
14 Diamond plants?

15 A In terms of what?

16 Q In terms of its -- in terms of the
17 cleanliness of its operation, for example.

18 MR. SPIVAK: Objection, form.

19 THE COURT: I think it's all right. Go
20 ahead and answer if you can, please.

21 A You said cleanliness of the operation?

22 Q Yeah.

23 A Meaning were the floors equally clean?

24 Q For example.

25 A Maybe a little below average but no significant

1 difference.

2 Q How about in terms of the age of the
3 equipment?

4 MR. SPIVAK: Objection.

5 A The which of the equipment?

6 Q Age of the equipment.

7 THE COURT: I'll allow it.

8 MR. SPIVAK: The witness is objecting for
9 me. He's got the same problem. That's all
10 right.

11 THE COURT: The question is all right.
12 But if it doesn't make sense to the witness then
13 it's not a good question for other reasons.

14 A I would think if I tried to average the new
15 plants and old plants I'd say we were probably average.

16 Q How about the suitability of the building
17 for chemical manufacturing?

18 MR. SPIVAK: Objection.

19 THE COURT: You know, I think your real
20 problem is -- let me just ask, was it a general
21 practice in Diamond Alkali to discharge
22 effluents in substantial amounts to rivers if
23 there were rivers nearby?

24 THE WITNESS: Well, if you want a strict
25 comparison in the sense that let's say the Belle

1 plant they made chlorinated solvents and had
2 excess muriatic acid -- I've forgotten the name
3 of the main river that runs down there, but I
4 think they would have taken precisely the same
5 attitude as Newark as discharging into that
6 river because that river was an equally polluted
7 river.

8 The Greens Bayou plant, as I mentioned
9 before, had to be particular because they were
10 technically vulnerable to inspections. I don't
11 recollect anything about how the effluents in
12 the Painesville plant was handled.

13 The Mason City, Iowa plant would have
14 nothing more than washing the floor to take care
15 of. And I don't know anything about how the
16 chlorinated products section of the Pasadena
17 plant, what the effluents were, how they were
18 handled.

19 I'm pretty much in ignorance of these
20 other plants. Except for Greens Bayou. That I
21 knew specifically.

22 THE COURT: Okay. Very well.

23 Q How about, can you compare the effluents
24 from this plant with the effluents from the J. T. Baker
25 plant?

1 A Well, --

2 MR. SPIVAK: I object. I think it's a
3 lack of foundation type of objection. The J. T.
4 Baker plant, as your Honor pointed out,
5 discharged into a pristine area of the Delaware
6 River of which, for example, the city of
7 Philadelphia took its drinking water, to the
8 best of my recollection.

9 THE COURT: Unfortunately and horribly
10 enough the city of Philadelphia got its drinking
11 water well downstream. Why they did that for as
12 long as they did, I don't know.

13 MR. SPIVAK: No one took their drinking
14 water out of the Passaic in the vicinity of the
15 80 Lister Avenue plant.

16 THE COURT: No, they didn't.

17 MR. SPIVAK: It's a relevant objection.

18 THE COURT: The witness, incidentally, is
19 not making -- so far he's not making comparisons
20 unless he can fairly make them so I think the
21 question is all right in the sense of it's being
22 addressed to the witness who will correct for
23 any inappropriate factual premises built into
24 it.

25 But I think the question really is how

1 would you compare the management of effluent
2 from the processes which were being conducted in
3 the 80 Lister Avenue plant with the management
4 of effluent at the S. T. Baker plant in
5 Phillipsburg. How did they compare?

6 THE WITNESS: Well, in principle it would
7 be impractical to compare them simply because
8 the circumstances were so different. That is
9 the difference between the Passaic River and the
10 Delaware River. Comparing apples and oranges.

11 THE COURT: Well --

12 THE WITNESS: In terms of --

13 THE COURT: Go ahead.

14 THE WITNESS: In terms of practicality,
15 morality or whatever, I can't see how they
16 compare.

17 THE COURT: I get the impression from much
18 of what you're saying that you and others at
19 Diamond took the attitude that although it was
20 illegal it was probably not so bad to discharge
21 things into the Passaic River because it was a
22 heavily polluted river absent anything you did,
23 and what you did probably didn't make that much
24 difference to that river.

25 Is that you what your position was?

1 THE WITNESS: Almost but not specifically.
2 I was always concerned about these large
3 discharges of chlorophens into the river. That
4 part bothered me because there I thought there
5 was a potential danger and they were outstanding
6 in the amount of materials we were putting in
7 the river as compared to relative minor
8 discharges of the other chemicals.

9 THE COURT: Very well. Go ahead, please,
10 Mr. Moser.

11 Q Can you compare for us the housekeeping at
12 the J. T. Baker plant versus at the Lister Avenue
13 plant?

14 MR. SPIVAK: I'll note my objection for
15 the record, your Honor.

16 THE COURT: Okay. I'll allow the
17 question.

18 A Well, again, it's -- as the case of the river,
19 it's two different sets of circumstances. The 2,4-D
20 plant at J. T. Baker was a relatively small unit, and
21 it was installed in one large building that was put in
22 for manufacture of various chemicals.

23 Among the other chemicals manufactured in that
24 same building were pharmaceuticals. So it was
25 absolutely essential that we operate a strictly clean,

1 odorless 2,4-D plant, and we spent the money on details
2 and took care to make sure it was operated that way.

3 Q So you're saying you operated a chemical
4 facility and a pharmaceutical facility in the same
5 place?

6 A Same building. Which normally in the standards
7 of 2,4-D business be considered impossible.

8 Q What years did you do this?

9 A I'm sorry?

10 Q During what years did you do that at J. T.
11 Baker?

12 A At Baker?

13 Q Yes.

14 A Operation in this one building. The full scale
15 plant I think was approximately one year which would be
16 about 1947, thereabouts. I could add another plant to
17 that same one, without the question being asked. The
18 plant that I designed for Interprovincial Cooperatives
19 in Canada.

20 THE COURT: When did you design that?

21 THE WITNESS: Hum?

22 THE COURT: When did you design that?

23 THE WITNESS: 1962 or possibly '63.

24 Shortly after I left Diamond Shamrock.

25 MR. SPIVAK: If your Honor wants to hear

1 it I'll sit down.

2 THE COURT: I may if counsel persuades me
3 to. But see, one thing, we want to be aware of.
4 There is in effect an upgrading of standards
5 clearly as time has gone by, and once we get
6 beyond where the witness is operating at the
7 plant, I want to be careful about that.

8 I don't think I really want to hear about
9 that Canadian plant.

10 MR. MOSER: Your Honor, I point out the
11 operation of this plant at Lister Avenue in 1962
12 and 3 remains at issue in this case since
13 Diamond operated till '69.

14 THE COURT: I understand. This witness
15 wasn't familiar with what happened after '52 or
16 '63. We understand from most sources in most
17 respects it doesn't seemed to have changed too
18 much.

19 I think we're getting a little --

20 MR. CUYLER: I think if you heard it you
21 could draw the appropriate conclusions which
22 between what you heard happened in Diamond
23 Shamrock in '63 and what this witness told you
24 was being done in the Canadian plant in '63.

25 MR. L. SHEFT: If I may, aren't we talking

1 about whether the technology he was using in '62
2 was available earlier and used earlier?

3 MR. SPIVAK: I don't think that's what
4 we're talking about at all. I couldn't think of
5 anything that was much more remote from what the
6 true issues are in this case.

7 And the fact that state of the art
8 technology, if that's what it was, was being
9 utilized in the construction of the plant in
10 1962, does not -- there's no issue state of the
11 art technology was required to be used at the 80
12 Lister Avenue plant.

13 THE COURT: I agree. I think I'd rather
14 not get into it. Why don't we move to something
15 else.

16 MR. CUYLER: May I make a proffer at the
17 end of the witness' testimony then?

18 THE COURT: Yes, Mr. Cuyler.

19 MR. MOSER: Thank you, your Honor.

20 Q Mr. Burton, while you were at the plant in
21 1951 through 1960, do you recall that workers at the
22 plant experienced chloracne?

23 A Yes.

24 Q All right. During the period 1951 to
25 1954, what was the extent of the chloracne problem?

1 A When we first started the trichlorophenol unit,
2 I believe it was two workers that had what later would
3 be considered muttered cases of chloracne.

4 Q Did anyone else have chloracne at that
5 time?

6 A I only remember two.

7 Q How about during the period 1954 to 1960?

8 A I think it was in 1955 that we had a serious
9 outbreak of it, and it was a major problem from then
10 on.

11 Q Did anything change in the operation of
12 the plant that you ascribed as the cause of the
13 outbreak of chloracne?

14 A Well, in 1954 we switched from the dilution
15 process that I described earlier to the steam stripping
16 process. And the fact that we had this sudden -- when
17 I said we had a couple of cases at the start of the
18 plant, we ascribed that to the fact we were making our
19 own tetrachlorobenzene. So we we had this big outbreak
20 of chloracne in 1955. We ascribed it to the straining
21 in the dilution process to the steam stripping process.

22 Q Can you -- would you just describe for
23 us -- question withdrawn.

24 MR. MOSER: Excuse me. May I have a
25 moment, your Honor?

1 Your Honor, that document doesn't have a
2 stamp.

3 THE COURT: What is the number?

4 MR. MOSER: Plaintiff's Exhibit 104 is my
5 understanding.

6 THE COURT: P-104.

7 Q Mr. Burton, I show you what's previously
8 been marked Plaintiff's Exhibit 104, a memorandum
9 apparently from Dr. York to Mr. Scoville dated June 29,
10 1955 which refers to an inspection at the Newark plant.

11 Do you recall a visit in 1955 by Dr. York?

12 A Yes.

13 Q And what was your understanding of why Dr.
14 York came to the plant?

15 A Well, be normal management procedure. We had a
16 bad outbreak of serious dermatitis problem at the
17 Newark plant so the Diamond Shamrock headquarters -- I
18 don't know whether Dr. York was fully employed by them
19 or a consultant. But it would be natural for Diamond
20 to send in an expert to take a look at it.

21 Q All right. Before he got there, did you
22 believe Dr. York's visit would help?

23 A No.

24 Q Why not?

25 A Well, this chloracne was a very distinctive

1 problem. When we had the first outbreak I had one of
2 my chemists go to the New York Library and make a
3 thorough search of the literature for anything
4 pertaining to its cause or cure.

5 So as far as the technical aspect of what caused
6 and what could be done about it, at that point we
7 probably knew more about it than anybody in the general
8 medicine practice unless they happened to have specific
9 experience in chloracne because there is a history of
10 chloracne being caused by other chemicals, and it's
11 distinctive or quite distinctive from other ailments.

12 As far as housekeeping is concerned, obviously
13 we knew that we got something that is some kind of a
14 contaminant, we should do all we can to keep all forms
15 of housekeeping as strict as possible, and we had
16 already gone through all the normal procedures as far
17 as regular changes of clothes, regular showers, so
18 forth.

19 In other words, this was routine, which there's
20 nothing wrong with it but nothing helpful either.

21 Q By the way, when Dr. York came to the
22 plant, he had free run of the plant?

23 A I don't remember his visit, but we had no reason
24 not to so I'm sure he did.

25 Q Directing your attention to the second

1 paragraph on Plaintiff's 104, he writes "The plant has
2 a reputation of smelling bad. We verified that."

3 Do you agree the plant smelled bad?

4 A Yes.

5 Q And directing your attention to the fourth
6 paragraph, he writes "The skin disease is serious,"
7 apparently referring to chloracne.

8 Did you agree with that?

9 A Yes.

10 Q On the next page of the document refers to
11 the skin disease as being "very disfiguring."

12 From your observation was chloracne very
13 disfiguring?

14 A Very definitely so.

15 Q And can you describe for us how someone
16 who had chloracne looked?

17 MR. SPIVAK: I'm going to object in this
18 sense: There are mild cases, serious cases, not
19 so serious cases, moderate cases, a word the
20 witness used. Which do you want?

21 THE COURT: Well, I --

22 MR. SPIVAK: There are witnesses
23 testifying they had chloracne at the present
24 time and you looked at them and they didn't
25 appear to be --

1 THE COURT: Didn't see anybody who came
2 into this courtroom who looked bad from
3 chloracne. They didn't seem to have it very
4 visibly on their face. How it was of course on
5 parts of their body covered by clothing I don't
6 know.

7 But these men have all -- this plant has
8 been -- the workers who came in and testified
9 were all people who had been away from this
10 plant since 1969, and I don't think any of them
11 were in similar operations after that.

12 So, I would -- I would expect that their
13 chloracne would be very much better today than
14 when they worked at the plant.

15 MR. SPIVAK: And we don't mean to
16 denigrate the seriousness of the malady during
17 the time when the workers had it. My only point
18 really is with respect to the question, there
19 were people who had different types of cases,
20 and when you ask what did someone who had
21 chloracne look like, the witness might describe
22 someone who had a serious case or some --

23 THE COURT: I think he's being asked to
24 describe the typical worker in the plant who was
25 suffering from chloracne.

1 What did he look like? Was it something
2 that would be instantly obvious to somebody who
3 met him or was it --

4 THE WITNESS: Well, it was hard to say a
5 typical case. For example, I have chloracne
6 right now. So you go from that extreme to
7 extreme of someone like Walter Lammero who had
8 very bad chloracne, at least on his face and
9 probably other parts of his body that made him
10 really repulsive to look at and who had various
11 cases of all extremes between. And there was no
12 one group that you could say, well, most of them
13 looked like this, this is the typical case.

14 THE COURT: Did you have workers who quit
15 because of chloracne while you were there as
16 plant manager?

17 THE WITNESS: I only remember one worker
18 that quit and a couple of years later he came
19 back, wanted the same job back operating the TCP
20 autoclave.

21 THE COURT: One thought runs through my
22 mind, and maybe it's not a good thought and
23 somebody can tell me about it.

24 One thought that occurs to me, the workers
25 couldn't have been too upset by it or one would

1 have expected substantial numbers of them to
2 have quit.

3 THE WITNESS: As I remember, the period I
4 was at the plant we had a very low worker
5 turnover. I can't verify this without knowing
6 the number, but that was my impression. And
7 someone might have quit because of this, but
8 only one man sticks in my mind, but very likely
9 there are others I've forgotten about.

10 But we had no trouble, for example,
11 operating the TCP autoclave. Once we had a
12 chloracne problem it was made a voluntary job.
13 No one was assigned to it. But we always had
14 men wanting the job. They wanted the job. The
15 pay -- got the first class operators rate, and
16 other than chloracne was a relatively, might
17 say, easy job.

18 THE COURT: Go ahead, please.

19 Q Your Honor, I promise not to spend too
20 much time on this, but just so we understand, would you
21 describe for us -- describe for us how before --
22 question withdrawn.

23 You indicated that some cases of chloracne were
24 quite severe. Would you describe for us what somebody
25 who had a severe case of chloracne looked like?

1 A Well, --

2 Q And I'd ask you not to mention anybody's
3 name.

4 A The skin -- not the main problem but the skin
5 would darken. You break out in what starts as pimples,
6 become boils, become carbuncles, and you can have these
7 on various parts of your body. Sometimes on the face
8 or the back of the neck was common, the buttocks.
9 Almost any part of the body. Like your face was full
10 of boils you might say and turned dark at the same time
11 would be an extreme case.

12 Q You observed such a case? You have
13 observed such cases?

14 A Oh, yes.

15 MR. MOSER: Your Honor, I just need a
16 couple of minutes to check my notes.

17 THE COURT: Why don't we take a short
18 break. Do that. We'll break for 10 minutes

19 (Recess is taken).

20 THE COURT: Mr. Burton remains on the
21 stand under oath, and you may continue, Mr.
22 Moser, when you're ready.

23 MR. MOSER: Thank you, your Honor.

24 Q Mr. Burton, did you ever consider
25 chlorinating the effluents from the Lister Avenue

1 plant?

2 A We thought about it. And seems to me we made
3 one small experiment along that line, but I don't
4 remember why we didn't follow it up.

5 Actually later when this plant I designed for
6 Mexico City -- it was outside -- near Mexico City, not
7 in the city. But I consulted with them for a number of
8 years.

9 The rules down there changed because at that
10 time they discharged all the effluents into the Mexico
11 City sewer and the authorities objected to the
12 chlorophens they were discharging. So I recomended
13 this alkaline over chlorination of the effluent, and
14 tried it and it worked quite well.

15 They wanted me to come down and look at it to
16 see how well it was working. All they told me, it
17 didn't completely remove the chlorophens but brought
18 them down to a level where the Mexican sewer
19 authorities, or whoever they were, no longer objected
20 to it.

21 It was expensive because it used more alkali and
22 more chlorine, but --

23 THE COURT: I think the real question was
24 whether you thought of chlorinating the Newark
25 plant, and I gather you did but for some reason

1 you don't remember now you really didn't follow
2 through on it.

3 THE WITNESS: Right.

4 THE COURT: Very well. Go ahead, please.

5 Q Did you have the technology, did you have
6 the ability to do it in Newark?

7 MR. SPIVAK: Objection.

8 A Well it's a little bit different whether we have
9 the technological ability. We didn't know whether it
10 would work. Something we picked up in literature.
11 Lots of things you pick up in literature don't work
12 out.

13 Q Where did the industrial sewer lead?
14 Where did the industrial sewer -- where did effluents
15 that went into the industrial sewer ultimately go?

16 A Well, to my knowledge, it went to the Passaic
17 Valley sewage treatment plant down in the Doremus
18 Avenue area.

19 Q Where did the effluent from the sanitary
20 sewer go?

21 A I don't know. I had no problems or connections
22 with the sanitary sewer.

23 Q In 1956 when you hooked up the acid
24 building to the sewer did you have to make an
25 appropriation request to Cleveland in order to get the

1 money for the project?

2 A Yes.

3 Q And do you know whether or not along with
4 that request you submitted the order you received from
5 the Passaic Valley Sewerage Commission?

6 A I'm sorry. I didn't hear.

7 Q Do you know whether or not along with the
8 request you forwarded the order that you had received
9 from the sewerage commission?

10 A I don't know.

11 Q When you indicated I think that you read
12 "Chemical Week," over what period of years did you read
13 "Chemical Week"?

14 A Oh, I suppose 20, 30 years.

15 Q Was it read by others at Diamond to your
16 knowledge?

17 A I don't know specifically. I could make a good
18 guess but I have no specific knowledge.

19 Q All right. Mr. Burton, have you been paid
20 any money for consulting with counsel for the defendant
21 in this case?

22 A You being the defendant?

23 Q Yes.

24 A Yes. No, I haven't been paid any money.

25 Q Somebody promised that you'd be paid

1 money?

2 A Yes.

3 Q Can you describe what the arrangement you
4 have is?

5 A I would be paid \$750 a day which is my normal
6 rate for this type of work for whatever number of days
7 I put in on it.

8 Q How did that rate get set?

9 A That was the same rate as I charged some
10 companies last year. That in turn was set by what I
11 charged the lawyers in connection with the veterans
12 suit, and that in turn was set after the consultation
13 with an engineering firm as to what was a proper rate.

14 Q When you say in connection with the
15 veterans suit, what are you referring to? When you say
16 in connection with the veterans suit, what are you
17 referring to?

18 A I was a consultant for the -- what I know as
19 O'Brien's group of lawyers who were suing the -- one
20 time the government but mainly the producers of Agent
21 Orange for damage to the veterans.

22 Q And when you say that the \$750 a day is
23 the same that you -- fee that you were paid in
24 connection with your deposition, by whom were you paid
25 in connection with your deposition?

1 You're referring to your deposition in this
2 case, I take it?

3 A Yes. I don't know the name -- the long-winded
4 name of the law firm in New York.

5 MR. SPIVAK: That is inaccurate in terms
6 of the deposition. I'm sure there will be an
7 agreement the fee for the deposition was shared
8 by all the parties and I don't think there will
9 be a boo raised on the other side about that.
10 We did meet for a day prior to the deposition.

11 THE COURT: Very well.

12 MR. MOSER: That was my understanding.

13 A That was my understanding, but actually the
14 checks came from one firm.

15 MR. MOSER: Which I would have elicited
16 with one more question.

17 Your Honor, that's all I have of this
18 witness with one -- perhaps two, excuse me --
19 with one exception. And that is I want to go
20 back, at least re-offer the witness' ability to
21 describe the plant in Canada, and I raise that,
22 your Honor, because you've said on a number of
23 occasions that this was just another plant.

24 THE COURT: I have?

25 MR. MOSER: In words or substance you've

1 communicated, at least to some of us, the
2 perception that this, after all, was just
3 another plant, no better or worse than any other
4 and couldn't have been any different and
5 therefore really isn't -- its condition isn't at
6 issue.

7 THE COURT: I don't think -- if you got
8 that impression, it does not reflect any thought
9 of mine. I haven't drawn that conclusion.
10 Certainly haven't drawn that conclusion.

11 MR. L. SHEFT: Your Honor has lifted a
12 heavy burden from my shoulders, sir.

13 THE COURT: I -- I don't think I -- I
14 haven't even in my own mind figured out how this
15 plant measures up to whatever standards turns
16 out to be appropriate. But I think I may have
17 indicated earlier that the Passaic River was
18 heavily polluted and perhaps this plant didn't
19 make an enormous amount of difference to the
20 general condition of the Passaic River. I think
21 that's probably true.

22 That doesn't necessarily control what went
23 on in there. I'm saying the Passaic River in
24 the vicinity of Newark, New Jersey has, ever
25 since I've been a little boy, been a notoriously

1 polluted river both in terms of chemicals and in
2 the earlier days in terms of human waste; and
3 I'm 55 and I grew up not too far from the
4 Passaic River. So it's just been a horrible
5 river for many, many years. I have said that.
6 I'll say that now. And I suppose that would
7 have been so whether this plant ever came into
8 existence or not.

9 But, I think that's all I've indicated.
10 I've not indicated I think one way or another
11 that this plant was operated appropriately or
12 that it was no better or worse than any other
13 plant. I have not indicated that.

14 MR. SPIVAK: Or whether that may indeed
15 be relevant under the law of the State of New
16 Jersey.

17 THE COURT: Possibly.

18 MR. MOSER: On the happy note that it's
19 an open question and in the belief that it's
20 relevant --

21 THE COURT: All right.

22 MR. MOSER: -- I'd again re-offer the
23 testimony recognizing since you're the decider
24 if you don't want to hear it I don't want to
25 offer it.

1 THE COURT: When I speak of my knowledge
2 as a boy growing up around here, I'm not trying
3 to be a personal witness in the case myself; I'm
4 trying to simply indicate that anybody -- just
5 about anybody in northern New Jersey who was
6 vaguely aware of what was going on knows a lot
7 about the Passaic River.

8 It's the kind of thing you can take
9 judicial notice of, parts of it, I think. In
10 any event, you want to talk about the 1963 plant
11 in Canada and what the witness did up there.

12 MR. SPIVAK: We still object.

13 THE COURT: Okay.

14 MR. MOSER: Not if you don't want to hear
15 it.

16 THE COURT: I think the relevance is
17 marginal but let me just hear it and see where
18 it goes. Go ahead.

19 Q Mr. Burton, did you have occasion to work
20 on a plant in Canada in about 1963?

21 A Yes.

22 Q Could you describe for us the facility
23 involved?

24 A It included a plant for making chlorine and
25 caustic soda with which I had no connection.

1 The part that I was connected with in terms of
2 furnishing the process design and assisting in the
3 start-up was -- made monochloroacetic acid and
4 dichlorophenol, 2,4-D acid and 2,4-D esters, although I
5 personally didn't get involved in the 2,4-D ester part
6 of it.

7 Q All right. Would you compare the -- that
8 plant and its 2,4-D production with the J. T. Baker
9 facility you described earlier?

10 MR. SPIVAK: Objection on grounds the
11 witness had previously stated.

12 THE COURT: All right. I'll allow it. Go
13 ahead.

14 Q You can answer.

15 THE COURT: Answer the question. Go
16 ahead.

17 A Yes. It was somewhat similar. These people
18 were completely green as far as chemical manufacturing
19 is concerned, and I emphasized to them the odor
20 problem, the necessity of having a well-designed plant
21 in terms of the way the floors were laid out, the way
22 the ventilation system worked, the type of equipment
23 that was necessary, and perhaps because they were
24 somewhat of a government corporation there was never
25 any objection as far as expenditure for getting the

1 best type of equipment.

2 And we ended up with a very clean plant as far
3 as odors were concerned, and from my -- and I remember
4 that one particularly because unlike Newark, the last
5 day I was there, I spent all day in the plant and then
6 took a plane without changing my clothes back to New
7 Jersey, and whoever sat next to me didn't even smell me
8 which was an amazing experience in my history.

9 So we're very clean because the plant was
10 designed specifically with the problems in mind, unlike
11 the Newark plant where we fitted into an existing
12 building to considerable extent.

13 MR. MOSER: Thank you, your Honor. I
14 don't have anything more.

15 THE COURT: Anything else on the defense
16 side?

17 Mr. Spivak is going to do the questioning.
18 Go ahead, please.

19 CROSS-EXAMINATION BY MR. SPIVAK:

20 Q How many \$750 days are you going to put in
21 for for having consulted with defendants in this case,
22 Mr. Burton?

23 A Offhand, I don't know.

24 Q Well, how many days --

25 A I'm just trying to think to answer your

1 question. I'd say -- I don't know, but offhand I'd say
2 in the order of four or five.

3 Q And over how long a period of time have
4 you met with the defendant subsequent to the time that
5 your deposition was taken in this case?

6 A I think the first meeting -- I'm not positive,
7 but it was on a Monday. I think it was two weeks ago.
8 I'm not positive of that, though.

9 Q And you've met with defense counsel four
10 or five times in the two-week period prior to today, is
11 that correct?

12 A No. Actually three times altogether.

13 Q Three times altogether? But you've spent
14 some additional time that you intend to bill them for,
15 is that correct?

16 A Yes. They asked for some specific information
17 which took quite awhile to try to calculate, and then I
18 found I couldn't calculate it properly and wasn't used
19 anyway.

20 Q What information was that?

21 A This was try to calculate the amount of each
22 chemical effluent that went out from the plant each
23 year during this period.

24 Q And that would --

25 A But because of some parts of the calculation I

1 could do fairly well, but then I had some major
2 documents missing such as production rates so I decided
3 it was impossible to do it with any degree of accuracy.

4 Q If I inadvertently cut you off, don't let
5 me do that. I may jump in because I think you're
6 completed. You tell me if I've cut you off and you
7 continue your answer, all right?

8 I assume then they had requested you to tell
9 them how much TCP and 2,4,5-T effluent had gone out
10 from the plant, is that correct?

11 A That would be one item.

12 Q Yes. And you couldn't give them that
13 information today, is that accurate?

14 A No, because for one main reason I didn't have
15 the production rates.

16 Q Did you -- withdrawn. Did you read any of
17 the trial transcript that has been produced as a result
18 of this proceeding?

19 A Nothing that I can offhand recollect except some
20 things have been brought up today, for example, this,
21 and that 1960 memo where I made these gross
22 miscalculations. Might have been a couple of other
23 things but offhand I don't remember.

24 Q Have you done any other work for defense
25 counsel that you intend to bill them for other than the

1 four or five days at \$750 a day?

2 A No. Except for this work and trying to
3 calculate precise waste problems.

4 Q Have you received any other compensation
5 from the defense side of this litigation including from
6 any experts that they may have retained prior to this
7 four or five day period that you intend to bill them
8 for?

9 A No.

10 Q When you met with defense counsel, did you
11 go over with them the questions that you would likely
12 be asked today?

13 A No.

14 Q Now, you testified, Mr. Burton, that you
15 served as a consultant for the plaintiff's attorneys in
16 the Agent Orange litigation.

17 Isn't it also correct that you agreed to testify
18 as a witness against Diamond Shamrock in the Agent
19 Orange litigation?

20 A Yes. Well, this was against the manufacturers
21 in general, not specifically Diamond.

22 Q But including Diamond?

23 A Yes.

24 Q You didn't exclude Diamond?

25 A Right.

1 Q And when you consulted with the
2 plaintiff's attorneys in the Agent Orange litigation,
3 you provided them with copies of documents that you had
4 obtained from the 80 Lister Avenue plant when you
5 worked for Chemicaland in 1973, isn't that correct?

6 A No. I have the precise dates and the people
7 that attended and they told me they subpoenaed the
8 records from Diamond headquarters.

9 Q So your testimony is you identified
10 certain documents for them but did not produce any to
11 them?

12 A Correct.

13 Q Did you identify persons that you thought
14 that the plaintiffs in the Agent Orange litigation
15 would like to talk to in terms of the prosecution of
16 their case against the Agent Orange manufacturers?

17 A Well, they asked me how they could contact --
18 and they had a long list of people they wanted to
19 contact such as the plant manager at Monsanto that we
20 consulted with, different individuals who had worked or
21 worked at Diamond, and as best I could, I told them how
22 they might locate these people.

23 Q And you understood these were people who
24 would not testify favorably to the manufacturers, is
25 that correct?

1 A No, the list was so long that I didn't have any
2 impression either way. Some of them I was surprised
3 they wanted them, but they had a long list of names
4 they wanted to contact. But once that didn't make --
5 didn't register to me as -- apparently just wanted all
6 the information they could get was my impression.

7 Q Your testimony today is you did not give
8 them the names of people, correct?

9 A I did. Well, they wanted not only names like
10 who was it occupied this and that position at Diamond,
11 they wanted to know the names of people who they had
12 but didn't know how to locate them.

13 Q And you filled in the blank so to speak
14 for them, is that correct?

15 A As much as I could. Some of them I couldn't
16 fill in at all.

17 Q Now, you were present at the 80 Lister
18 Avenue site on the day of the explosion, is that
19 correct?

20 A Yes.

21 Q And you were seriously injured, were you
22 not?

23 A Yes.

24 Q You had a fractured skull, neurological
25 damage, broken leg and back injuries, is that correct?

1 A No, you have me confused with someone else.

2 THE COURT: What did happen to you? What
3 injuries did you get?

4 THE WITNESS: Had my skull crushed was the
5 main injury.

6 THE COURT: You had your --

7 THE WITNESS: Skull crushed which ended up
8 with losing the effective sight of one eye.

9 Q So you've had your vision impaired as a
10 result of that accident as well, correct?

11 A My hearing is a little impaired. I have a
12 little trouble hearing you.

13 Q That's all right. You just let me know.
14 Your vision was impaired as a result of that accident,
15 correct?

16 A Yes.

17 Q Let me show you a document that has
18 previously been marked as Plaintiff's Exhibit 747 for
19 identification, Mr. Burton.

20 Have you ever seen that document before?

21 A It looks familiar. I don't -- wait a minute.
22 Maybe just the form looked familiar and address looked
23 familiar but the description -- I guess if I had seen
24 it before I would have remembered it because the
25 description is totally wrong. Low leg fracture.

1 Q But the fractured skull, right side of the
2 head and back injuries are correct?

3 A Well it says possible back injuries.

4 Q Possible?

5 A Possible. There's no back injury.

6 Q And you're familiar with this form
7 generailly?

8 A Yes.

9 Q This was a form utilized --

10 A Yes.

11 Q -- at the 80 Lister Avenut plant during
12 the time you were at the plant?

13 A Yes.

14 Q You subsequently obtained a lawyer and
15 asserted a claim against Diamond with respect to the
16 injuries that you sustained in that explosion?

17 A No, I did not.

18 Q You did not. Mr. Burton, you recall that
19 you gave a deposition in the course of this litigation,
20 do you not?

21 In 1987 you testified just a few moments ago as
22 to who the checks came from when you testified at that
23 deposition. Do you recall that?

24 A Yes.

25 Q And when you gave that deposition, Mr.

1 Burton, you understood that you were under oath, did
2 you not, just like you are here?

3 A Yes.

4 Q What I'm going to do is refer you to
5 certain pages in the transcript of your deposition, and
6 I'm going to read to you the questions and the answers,
7 and I'm going to ask you after I get through doing that
8 whether you were asked those questions and whether you
9 gave those answers.

10 First I'd like to refer you, sir, to page 364.

11 THE COURT: Which deposition?

12 MR. SPIVAK: Those should be in
13 consecutive order. There are two volumes and
14 what we've done for convenience is put them
15 together.

16 THE WITNESS: 364?

17 Q 364, Mr. Burton. And at line 13 the
18 question is asked "Question: Did you submit a claim to
19 Diamond for your injuries" --

20 A Wait a minute.

21 Q Are you with me, sir?

22 A Don't have the right page apparently still.

23 Q Okay. Take your time.

24 A Yes.

25 Q All right.

1 "Question: Did you submit a claim to
2 Diamond for your injuries?

3 "Answer: I don't remember whether I
4 submitted a claim but Aetna kept badgering me to
5 settle it, and finally I went with a lawyer to a
6 compensation judge and he looked over the
7 records and made a settlement."

8 Did you provide that testimony to the
9 question that was put to you at your deposition,
10 Mr. Burton?

11 A Yes. But I did not -- the point is I did not
12 engage a lawyer myself. The lawyer I went with as I
13 recollect was Aetna's lawyer.

14 Q You did assert a claim against Diamond,
15 did you not? Well, let me withdraw that.

16 A I didn't initiate any claim against Diamond.
17 Aetna's representative contacted me several times and
18 asked me to make a settlement, and I was very busy at
19 the time and didn't want to simply take time off from
20 where I was working, and finally I said okay I'll go
21 with you. And I went with him one day to claims court.

22 At no time did I engage a lawyer or have a
23 lawyer representing me.

24 Q I'm sorry. I didn't hear the last --

25 A I say at no time did I engage a lawyer or have a

1 lawyer representing me. I was taken by Aetna's lawyer
2 to a court, let's get this settled and get this off our
3 books.

4 Q You have a great deal of faith.

5 Your status as a plant manager with Diamond
6 ended with the explosion, did it not?

7 A Well, I don't know what time -- for practical
8 purposes, yes. What time it officially changed, I
9 don't know.

10 Q Subsequent to the time that you came out
11 of the hospital, you were transferred by Diamond from
12 Newark to Cleveland. And that was in 1960, was it not?

13 A Correct.

14 Q And you weren't happy about the transfer
15 and resigned from Diamond's employ shortly after the
16 transfer. Is that a summary of what happened?

17 A Correct.

18 Q And you blamed your assistant Ray Guidi
19 for the explosion, did you not, Mr. Burton?

20 A Not in those words. He had -- no, I did not
21 blame him for it.

22 Q Did you assert that something that Mr.
23 Guidi did not do was responsible in part for the
24 explosion, Mr. Burton?

25 A Yes.

1 Q And what was it that Mr. Guidi did not do
2 that you asserted was in part responsible for the
3 explosion?

4 A Well, one of his specific jobs was to look after
5 the installation of new equipment. Putting new
6 processes into operation.

7 And when I visited Monsanto in connection with
8 this chloracne problem and found out they had had an
9 explosion a number of years before and they described
10 the measures they took to avoid such an explosion
11 happening again, and it seemed to be a proper thing to
12 do.

13 So when I came back I put in an appropriation
14 request and we went through the normal procedures of
15 putting in the same type of equipment which basically
16 converted the autoclave reaction to a continuous
17 reaction which greatly -- well, in effect would avoid
18 the danger of an explosion.

19 The equipment -- the equipment had all been
20 received but the transfer pump, which is the last bit,
21 needed to be put it into effect had not been installed,
22 and I was unhappy about this because Guidi should have
23 done more to expedite getting it in. I wouldn't blame
24 him for the explosion, but this was one factor in it.

25 Q That was one of the causes --

1 A Right.

2 Q -- for the explosion you've testified,
3 have you not?

4 A No. Well, maybe that -- I used the word cause.
5 That was -- I'm not sure that was correct or not. One
6 of the factors I would say that enabled it to take
7 place.

8 Q All right. When you were transferred to
9 Cleveland, Mr. Burton, who was made manager at the 80
10 Lister Avenue?

11 A Guidi.

12 Q Now, would you agree, Mr. Burton, that at
13 the latter part of your employ with Diamond your
14 relationship with your immediate superiors was what you
15 have described as antagonistic?

16 A Yes.

17 Q Do you have in your possession, Mr.
18 Burton, any documents that you removed with or without
19 permission from the plant at 80 Lister Avenue at any
20 time?

21 A Not that I know of. It could be a little
22 dubious. For example, I mentioned in calculating these
23 yields I had a pencil calculation of these.

24 At times I was working at home during this
25 interim in early 1960, and whether I prepared those

1 figures at home or prepared them at Diamond, I don't
2 know. But I didn't consciously take anything from the
3 Diamond plant.

4 Q And you haven't given any documents to the
5 defendants' attorneys here other than the notes that
6 you produced in connection with your deposition, is
7 that correct?

8 A Correct.

9 Q Now, Mr. --

10 A There was one -- okay. There was another piece
11 of paper, the same line. I don't know when and why
12 this was prepared. This was -- in fact, I have a copy
13 with me, a sort of a tabulation of the main things that
14 happened during the 1060's at Diamond. What time we
15 put in a certain process. What time someone left our
16 employ and so forth. This was a hand -- we used this
17 at the deposition because it was a handy guide as to
18 what happened when.

19 Q This was something that was at the
20 deposition then?

21 A Hum?

22 Q This was something that was present at the
23 deposition?

24 A Yes.

25 Q All right. Mr. Burton, you personally

1 were not convinced that Dioxin was the cause of
2 chloracne at the 80 Lister Avenue plant until sometime
3 after you left the employ of the company, is that
4 correct?

5 A Correct.

6 Q This was prior to the time that you left
7 the employ of the company you suspected that there were
8 certain chlorinated compounds that might be the cause
9 of the chloracne, but it was not until subsequent to
10 the time that you left the employ of the company that
11 you became confident that the 2,3,7,8-TCDD Dioxin
12 compound was the cause of chloracne, isn't that so?

13 A Correct.

14 MR. P. SHEFT: Objection.

15 MR. COLOGERO: Objection, form.

16 A Yes.

17 THE COURT: What's wrong with the form?

18 MR. COLOGERO: The first question you
19 were not convinced until you left the plant
20 which you believe is 1960, that Dioxin was the
21 cause of chloracne. He then follows up with a
22 question which he refers to chlorinated
23 compounds. Suspected chloracnegens.

24 THE COURT: I think it's pretty clear he
25 wouldn't be thinking about Dioxin in that --

1 MR. COLOGERO: I don't know if that's so
2 from the basis of the first question.

3 THE COURT: Did you think of Dioxin as
4 being the chloracne causing agent in 1960?

5 THE WITNESS: No. It was suspected that a
6 chemical of that class was the cause, but as far
7 as I knew specific Dioxin had not been
8 identified as the cause.

9 THE COURT: Why don't you rephrase your
10 question.

11 MR. SPIVAK: Your Honor, just for
12 clarification, so we don't have all these
13 objections popping up -- we probably will
14 anyway.

15 This man was examined for two full days by
16 counsel for the defense. What I'm trying to do
17 to avoid the objections and to make sure that
18 the witness understands my questions is to
19 utilize the precise formulation of words that
20 the witness utilized in answering the questions
21 so that at least the witness and I will have no
22 problem in communicating.

23 And if counsel has reviewed the deposition
24 transcript, which I'm sure they have, they will
25 understand that is precisely what is going on.

1 And if the witness -- what I will do if the
2 witness has a problem with it is not press the
3 question but go right to the transcript. I
4 don't want to fence with the witness; I want to
5 use his words.

6 THE COURT: Why don't you ask him now a
7 question that you'd like him to answer now.

8 MR. COLOGERO: Is it that we all have to
9 know the transcripts in and out to understand
10 what Mr. Spivak is asking Mr. Burton? Because
11 obviously your Honor hasn't read the transcript
12 in and out, and I don't understand that
13 objection to our objection.

14 If something is unclear in this courtroom,
15 I don't think we should have to rely on what
16 happened last year to understand it.

17 THE COURT: I think it might be helpful if
18 you asked him current questions and see where
19 that takes you, Mr. Spivak.

20 Q Mr. Burton, do you recall that you
21 received certain documents reporting on conclusions
22 that had been reached by Boehringer during the time
23 that you were employed at the 80 Lister Avenue plant?

24 A I have to get that question very precisely. Let
25 me answer what I think you intend.

1 At various times during the late 1950's
2 different personnel from Diamond headquarters visited
3 Boehringer in Germany, and they brought back verbal or
4 written reports of information they picked up there
5 which in some form verbally or written were transmitted
6 to me. So, in that fashion, I had information from
7 Boehringer.

8 Q Now, notwithstanding the information that
9 you had from Boehringer, the first time that you became
10 confident that Dioxin was the cause of chloracne was
11 after you left the plant, isn't that correct?

12 A Yes.

13 Q While you were employed at the 80 Lister
14 Avenue plant Diamond had not arrived at any firm
15 conclusion as to the identity of the choracnegen, isn't
16 that so?

17 A Yes.

18 MR. COLOGERO: Objection to the term --
19 I don't understand what the term firm conclusion
20 means, your Honor. I suppose as opposed to a
21 conclusion.

22 THE COURT: A firm conclusion?

23 MR. COLOGERO: As compared to a
24 conclusion. I don't understand what the term
25 firm conclusion means as opposed to conclusion

1 or suspect.

2 THE COURT: I --

3 MR. SPIVAK: I'll rephrase the question.

4 THE COURT: I understand what it means. I
5 don't see any problem with it.

6 MR. SPIVAK: Well, then --

7 THE COURT: Answer the question, would
8 you, please?

9 MR. CUYLER: I believe he did, your
10 Honor.

11 THE COURT: Okay. Read back -- read the
12 question and the answer back, please, Mrs.
13 Nutting.

14 (Previous question and answer are read by
15 the reporter).

16 Q You regarded Boehringer's report that
17 Dioxin was the chloracnegen as no more than a hint,
18 isn't that so?

19 A Well, I have to go back in a little bit of the
20 context of this whole -- my attitude during this
21 information.

22 My upbringing in the chemical business was that
23 trade secrets were highly guarded and you didn't get
24 up -- you didn't get reliable information from other
25 companies, particularly competitors. And that -- and

1 we often -- different places might do the same thing,
2 throw out hints to competitors designed to mislead them
3 so that information we got back free from Boehringer
4 via visits I didn't regard as reliable, and sometimes
5 it even seemed conflicting with different reports
6 different people would bring back.

7 So that we paid attention to it. In some cases
8 I think we tried in the plant to verify some
9 information that came back. But generally speaking, I
10 only gave it a moderate degree of credibility.

11 Q And even when Boehringer supplied Diamond
12 with a picture of the compound that Boehringer thought
13 in 1957 probably was the cause of some of the chloracne
14 problems, Mr. Burton, neither you nor Diamond's
15 research department in Painesville accepted that
16 Boehringer was correct in identifying that compound as
17 the chloracnegen, isn't that so?

18 MR. BATES: Excuse me, your Honor.

19 A I don't remember that specific occasion, but my
20 blanket statement holds for whatever information came
21 to me with Boehringer as the source.

22 THE COURT: Mr. Bates, you had a problem?

23 MR. BATES: I do, your Honor. As I
24 understood your Honor's ruling earlier in the
25 case with respect to Mr. Steward and Mr. Kennedy

1 who had been listed as witnesses by both
2 parties, your Honor was not going to limit the
3 scope of cross-examination to areas covered on
4 direct. And I have no problem with that
5 position by the Court.

6 But Mr. Spivak is now getting into an area
7 that was not covered on direct examination, and
8 seems to me if he is, he is taking the witness
9 on a direct examination rather than a cross
10 examination. And it seems to me that I have an
11 objection at least as to the form of the
12 questions. He is now getting into what I
13 consider to be direct examination of this
14 witness.

15 THE COURT: You think they're leading for
16 direct examination, is that the idea?

17 MR. BATES: Yes, your Honor.

18 THE COURT: I think Mr. Burton has to be
19 regarded as an adverse witness and -- as far as
20 Diamond is concerned at this point, and the real
21 problem is that you -- the real bottom line
22 answer on leading questions is that you may not
23 as some friendly witness but may as an adverse
24 witness.

25 MR. CUYLER: I'll take no part in this

1 debate other than to note the first attorneys to
2 my understanding that this witness talked to was
3 Mr. Cox and Mr. Spivak and that in fact he was
4 taken to lunch at a very fancy restaurant, and
5 it's not so much a matter of who he is going to
6 cooperate with as to whose side he helps in the
7 bottom line.

8 THE COURT: It may be. But the witness
9 was called by the defendants, and I think he was
10 called because he is obviously perceived by them
11 as being supportive of their position. Unless
12 I've misconstrued his testimony, and I'm not
13 evaluating it yet. But unless I've misconstrued
14 it, I think it's in favor of your side.

15 MR. SPIVAK: May have misconstrued it.

16 MR. CUYLER: I was just getting to a very
17 technical point. Usually when a lawyer seeks to
18 invoke the hostile witness rule he does so after
19 he has attempted to ask some non-leading
20 questions and demonstrated to the Court through
21 the reluctance or evasiveness of the witness
22 that it is impossible for the lawyer to in any
23 way conduct that type of examination because the
24 witness is in fact not cooperating.

25 What I am suggesting to the Court is that

1 we have a very cooperative witness who Mr.
2 Spivak will ask his questions in the appropriate
3 form and if witness will then somehow be evasive
4 and avoid the questions, I think it would be
5 more than proper for him to go over --

6 MR. SPIVAK: I don't agree with that at
7 all.

8 THE COURT: You may continue as you've
9 been doing, Mr. Spivak.

10 I think it is appropriate for Mr. Spivak
11 to ask leading questions as he wishes. I also
12 note this witness does not impress me as someone
13 who will be inappropriately led by a leading
14 question.

15 I think he analyzes questions carefully
16 and he makes careful distinctions in responding
17 to them. That's not again to evaluate his
18 ultimate credibility, but I just notice that
19 operation. Go ahead.

20 MR. BATES: I'd just like to state an
21 objection to this issue. He's beyond the scope
22 of direct.

23 THE COURT: Scope of direct is not a
24 problem. I always permit a witness to testify
25 about anything relevant about which he has

1 competent knowledge regardless of whether
2 he's --

3 MR. BATES: That wasn't my point, your
4 Honor. My objection simply would like to be
5 limited to the form of the question once he
6 gets --

7 THE COURT: Once he gets outside the
8 direct you think he should be restrained from
9 asking leading questions. That was --

10 MR. BATES: That's the only purpose.

11 THE COURT: I don't think that's the real
12 point of the leading question. Real point of
13 leading question is you don't want friendly
14 counsel leading friendly witness over hurdles
15 instructed by counsel.

16 Go ahead, please.

17 MR. SPIVAK: Thank you, your Honor

18 Q Mr. Burton, you answered the last question
19 that I put to you in terms of the totality of your
20 answer.

21 Let me ask you whether or not the totality of
22 your answer, the one that you gave previously, took
23 into account a memorandum addressed to you dated
24 September 18, 1957, from D. J. Porter in Painesville,
25 which has been marked as Defendants' Exhibit 40 for

1 identification. I don't have enough of these to go
2 around.

3 MR. COLOGERO: That's all right.

4 MR. SPIVAK: You've seen it.

5 MR. COLOGERO: Enough times.

6 A Is there a question.

7 Q There was. But let me give you another
8 one then. You recall receiving a copy of that
9 document, Mr. Burton?

10 A I recall one sentence in here referring to
11 continuous autoclave operation, and so, therefore, I'm
12 sure I received the whole memo.

13 Q Does your writing appear on the document,
14 sir? Does your writing appear on the document?

15 A It's addressed to me.

16 Q All right. And --

17 A Someone who put a note on here. That's not my
18 handwriting.

19 Q You're professed ubiety regarding the
20 information from Boehringer applies to this memorandum
21 that you received in 1957, isn't that correct?

22 A Well, if I could go back, I think I probably
23 would have promised to send over a copy which is his
24 report on the solution of the chloracne problem.

25 Now, if I want to reason what my reaction would

1 have been, I probably would have waited to get this
2 report on the chloracne problem, although I'm surprised
3 that I didn't follow it up to push where's that report,
4 when's it coming.

5 Q Mr. Burton, isn't it correct that both you
6 and Dr. Porter were puzzled as to the identity of the
7 chloracnegen after he spoke with Dr. Kudzsus at
8 Boehringer?

9 A There's a contradiction here in my mind because
10 I am very clear in my thinking that when the man from
11 Monsanto called me in 1961, identified Dioxin, I
12 remember my reaction that here's the long lost solution
13 to this puzzle. And yet here it is fairly clearly
14 identified and I can't reconcile in my mind why I
15 didn't feel more confident from this information.

16 Q Isn't it true, Mr. Burton, that you and
17 Dr. Porter took Boehringer's identification of the
18 compound as no more than a guess or a maybe?

19 A To some degree, oh, yes, that represents maybe a
20 slight exaggeration of my general attitude toward the
21 information we were getting. But on the other hand,
22 seeing this, it's quite specific.

23 Q Mr. Burton, when is the last time, if
24 ever, you read the transcript of your deposition
25 testimony in this litigation?

1 A Never read it.

2 Q Let me ask you to turn, sir, if you would,
3 to page 234 of your transcript commencing at line 13.
4 There's a question there:

5 "Question: Do you recall hearing from
6 Dave Porter in 1957 that Dr. Kudsus had
7 identified Dioxin as a probable cause of
8 chloracne?

9 "Answer: Not specifically, no. I
10 remember him talking about his visit to Germany
11 or a German's visit here, either way, but in
12 general we were still puzzled at that time as to
13 what was the chloracnegen. So if he identified
14 it, it was something that we didn't -- we took
15 as a guess or as a maybe."

16 Were you asked that question and did you
17 give that answer?

18 A Yes.

19 MR. COLOGERO: I object to that, your
20 Honor.

21 MR. MOSER: So do I.

22 MR. COLOGERO: The objection is this: We
23 have a document that is now before Mr. Burton
24 and Mr. Burton was asked to comment on it. And
25 now he is being impeached by his comments that

1 he gave in the deposition at page 234 when in
2 fact, your Honor, I believe that very exhibit,
3 which is now before Mr. Burton was shown to the
4 witness a few pages later in order to refresh
5 his recollection. And I think it's unfair to
6 ask a witness a question from -- and compare it
7 now to a deposition where he's just given the
8 question, he gives the answer and then he's
9 shown the document later on to refresh his
10 recollection.

11 THE COURT: It could be misleading but I'm
12 following it fairly closely. I heard him say
13 just a few minutes ago, too, that his reaction
14 to that letter was somewhat different than his
15 general reaction. I'm watching it. All right.
16 Go ahead.

17 Q Now, the word Dioxin does not appear in
18 that memorandum, does it, Mr. Burton, in the
19 memorandum?

20 A You talking about the deposition.

21 Q No.

22 A This?

23 Q The memorandum.

24 A Correct. I don't see it, but --

25 Q All right. When was it, Mr. Burton,

1 precisely, if you can recall, that you obtained the
2 information that identified this 2,3,7,8-TCDD Dioxin as
3 the chloracnege in Diamond's TCP?

4 A It was in August 1960, and I think I kept a
5 handwritten note when I wrote it down when I got this
6 information over the phone. And I think that went into
7 the file at the time I gave a deposition. Because I
8 remember some point about the date.

9 I said the deposition was August something and
10 then when I looked in my file and found this note and I
11 brought it in the date was a few days off but -- I'm
12 sorry. 1961. It was still sometime in August 1961.

13 Q 1961. Have you had occasion to look at
14 that note recently by the way?

15 A No. I'm not sure I still have it.

16 Q And where would it be if you don't have
17 it?

18 A Just that I have a whole lot of files and things
19 and from time to time I clean house and throw some out.
20 In looking through my files for more on this I didn't
21 run across it.

22 Q And was it Monsanto that gave you this
23 information in 1961?

24 A Weger, W-e-g-e-r, I think is written down on
25 this piece of paper.

1 Q Weger?

2 A Yes.

3 Q Now, prior to the time that you left
4 Diamond's employ, Mr. Burton, did Diamond have a
5 suspicion that a compound like Dioxin but that was not
6 the 2,3,7,8-TCDD Dioxin, might be the chloracnegen?

7 A Well, -- let's say the research department was
8 working on this problem, had mentioned, as I remember,
9 various types compounds similar to this as possible
10 causes.

11 Q And when you say compounds similar to
12 this, are you referring to diphenol ethers?

13 A Diphenol ethers. I'm not a chemist on the
14 specific nomenclature but chemicals of the kind Dioxin
15 turned out to be.

16 THE COURT: Would you read back the last
17 question and the answer up to the point of the
18 interruption?

19 (Previous question and answer is read by
20 the reporter).

21 THE WITNESS: Of the type Dioxin turned
22 out to be.

23 Q Your personal view in the 1950's was that
24 chloracnegen was a diphenol ether although you could
25 not prove it, is that correct?

1 A Well, only in terms of what the research
2 department told us and perhaps from information such as
3 this from Boehringer. I had no -- my own initiative I
4 had no chemical knowledge to try to diagnosis what it
5 was.

6 Q Where was the research department, Mr.
7 Burton, at that time?

8 A Painesville. Although some of the people in it
9 were headquartered at Cleveland. But the two were not
10 that far apart.

11 Q Let me show you a document that has
12 previously been marked as Plaintiff's Exhibit 142, Mr.
13 Burton, which is a memorandum from you to Mr. Sutton
14 dated June 18, 1957. And the question is whether or
15 not you sent that memorandum to Mr. Sutton with a copy
16 to Mr. Porter on or about the date that it bears?

17 A What's the question?

18 Q Did you send that memorandum, sir, on or
19 about June 18, 1957?

20 A Well, I don't remember the specific document.
21 But some of the points in this I remember were points
22 that occurred to me so the context of it fits in with
23 what I would have expected to have said.

24 Q Does looking at this document refresh your
25 recollection that it was your personal view that the

1 chloracnegen was a diphenol ether although you could
2 not prove it?

3 MR. COLOGERO: Objection, your Honor.

4 Personal view as to what time period?

5 MR. SPIVAK: As of June 18, 1957.

6 MR. COLOGERO: Fine, your Honor. Three
7 months before the other document.

8 A Yes. This fits in with --

9 Q And was the thought that the chloracnegen
10 might be a diphenol ether a lead that you obtained from
11 Dow?

12 A Well, I had forgotten completely this lead from
13 Dow. But if I said so, I presume it was so, but I
14 didn't remember getting that lead from Dow so that part
15 of the memo is news to me.

16 Q But that's what you wrote in June of 1957?

17 A I don't dispute it. I just say I don't
18 recollect it.

19 Q All right. Is it correct, Mr. Burton,
20 that there are approximately 70 dioxins?

21 A I don't know.

22 Q There are more than 50, would you agree
23 with that?

24 A I don't know.

25 Q Would you know they are a class of

1 compounds, is that correct?

2 A Yes.

3 Q And is it also correct one of them,
4 2,3,7,8-TCDD, was identified to you by Monsanto as the
5 cause of the chloracne?

6 A Correct.

7 Q In your view, Mr. Burton, did Diamond have
8 the ability to identify Dioxin in its TCP or 2,4,5-T
9 process stream at the time you left the plant?

10 A Well, it depends on how much personnel and
11 effort they assigned to the problem. It was identified
12 in Germany when they were forced to do it so I presume
13 if Diamond or any other company had put enough
14 personnel and worked hard enough on it they could have
15 done it also.

16 Q I'd like to refer you, sir, to page 180 of
17 your transcript. Line number 10.

18 A Which line?

19 Q Line number 10 where the question is

20 "Question: Do you know what, if any, efforts
21 Diamond undertook at the time to confirm whether this
22 family of compounds caused chloracne?

23 "Answer: They were doing some analytical work
24 but their infrared analysis, which was their mainstay,
25 as I remember, was not applicable to these kinds of

1 compounds."

2 Did you give that answer to the question,
3 question which was put to you, sir?

4 A Yes.

5 MR. MOSER: I object. That's not
6 inconsistent with any testimony given here and
7 if it's not it's not admissible.

8 THE COURT: See, there's an interesting
9 problem, you know, when people confront
10 witnesses with purportedly prior inconsistent
11 statements. I think there's often, in my
12 experience, fair leave for argument whether it's
13 fairly inconsistent but you don't know till they
14 try to do it and counsel has his view and you
15 have yours and I'll figure it out.

16 Q You testified that apparently the German
17 company had identified the chloracnegen. Do you know
18 whether they had done anything but identified it on a
19 theoretical basis so they could draw a picture of a
20 compound they did not identify?

21 A I have a little trouble comprehending your
22 question.

23 Q Let me restate it.

24 A I hear it but --

25 Q Do you know whether Boehringer had

1 identified Dioxin as being physically present in its
2 process stream by analytical methods as opposed to
3 having done some theoretical work and coming up with
4 the picture that appears on the exhibit that's in front
5 of you which I believe has been marked --

6 A I understand the question.

7 Q -- as Defendants' 40?

8 A I understand the question. No, I -- I didn't
9 question in my mind how they identified it. Although I
10 would have presumed that they had somehow or other
11 managed to isolate it, but actually when I got the
12 information from Monsanto, I took it to be the solution
13 to the mystery and I didn't think further as to how
14 they arrived at it.

15 Q I'm not asking you about Monsanto but the
16 German company that you testified to.

17 A Well, the information that Monsanto gave me is
18 what they had got from the German company.

19 Q That's what you were told by Mr. Weger?

20 A They bought the knowhow from Germany.

21 Q Monsanto bought the knowhow from Germany?

22 A Yes.

23 Q Isn't it a fact, Mr. Burton, it was Dow
24 that bought the knowhow from Germany?

25 A That was later in the sixties when Dow ran into

1 trouble.

2 Q And your testimony is that Monsanto did
3 not buy an exclusive license but bought a nonexclusive
4 license which permitted Dow to come in in the late
5 1960's -- rather mid-1960's and acquire the same
6 process from Boehringer?

7 A I didn't know anything about the nature of
8 either of these contracts. But, obviously, if -- and
9 I'm not even sure it was the same company because there
10 were several companies in Germany involved in making
11 trichlorophenol so I was told and sort of my
12 understanding was somewhat of a combined effort that
13 isolated it.

14 And I didn't write down the name of the company
15 that Monsanto bought the knowhow from, but I had the
16 impression, which was just a vague impression, it was
17 Scottish.

18 Q All right.

19 THE COURT: I think we better stop at this
20 point. It's 4:30. I have some conferences I
21 have to do. We'll stop and resume at 9. Is Mr.
22 Burton the last defense witness?

23 MR. CUYLER: Yes, and we'll just have a
24 few documents to put in. I think we'll be
25 finished tomorrow morning.

1 THE COURT: Have you figured out what
2 you're going to do on rebuttal, Mr. Spivak?

3 MR. FALLS: Not going to call a witness.

4 MR. SPIVAK: Not going to call a witness.


5 MR. CUYLER: I guess we're going to
6 finish the case tomorrow.

7 THE COURT: See you all at nine o'clock
8 tomorrow.

9 * * * *

10 C E R T I F I C A T E

11
12 I, DEBORAH A. NUTTING, a Certified
13 Shorthand Reporter of the State of New Jersey,
14 certify the foregoing to be a true and accurate
15 transcript of my stenographic notes.

16
17
18 
19 DEBORAH A. NUTTING
20 CERTIFIED SHORTHAND REPORTER
21 LICENSE NO. 959

22
23
24 Dated: October 18, 1988
25