

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF WEST VIRGINIA
CHARLESTON, WEST VIRGINIA

JAMES M. ADKINS, Administrator of)
the Estate of Ralph E. Adkins,)
Deceased, et al,)

Plaintiffs,)

vs.)

No. 81-2098)

MONSANTO COMPANY, a Delaware)
Corporation,)

Defendant.)

Deposition of
EDWIN L. HEAD
taken on behalf of the
Plaintiffs.

Reporter: M. Joy Springer

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Messrs. Calwell, McCormick &
Peyton,
by W. Stuart Calwell, Jr., Esq. For Plaintiffs,

Messrs. Bowles, McDavid, Graff & Love,
by Thomas E. Scarr, Esq.
and Deborah A. Sink, For Defendant.

IT IS STIPULATED AND AGREED by and between
counsel for the plaintiffs and counsel for the defendant
that the deposition of EDWIN L. HEAD may be taken pur-
suant to Rule 26(a) of the Federal Rules of Civil Pro-
cedure, on behalf of the plaintiffs, on July 7, 1983,
at the Radisson Hotel, Room 215, 9th Street and Conven-
tion Plaza, St. Louis, Missouri, before M. JOY SPRINGER,
a Notary Public within and for the County of Madison,

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1 with Monsanto that caused you to be connected with or
2 have any relationship with the Nitro Plant?

3 A Not directly. I've not been associated
4 directly with any of the products of the Nitro Plant.

5 Q What are the duties of your present job?

6 A MIC is the basic chemical company at
7 Monsanto. My job is to direct the market research
8 activities, both for new growth and existing markets,
9 traditional market research. We have a small department
10 that does that for the chemical industry. I also have
11 the advertising and public relations functions for MIC.

12 Q Are you familiar with an Ad Hoc group
13 or Committee that has come to be known as the Nitro
14 Task Force?

15 A I'm familiar with that group, yes.

16 Q And were you a member of the Nitro
17 Task Force?

18 A No, I was not.

19 Q Did you receive memoranda and be on
20 the mailing list of the Nitro Task Force?

21 A I got copies of their meetings.

22 Q And why would you see copies of their
23 meetings?

24 A At that point in time my job with
25 Monsanto was not, not my present job, but I was Director

1 of Planning for the Detergents and Phosphates Division
2 at Monsanto Company, which no longer exists. It's
3 been integrated into another unit.

4 Q And I assume that the Nitro Plant
5 had something to do with detergents and phosphates?

6 A No, it did not.

7 Q Why would you have been on the mailing
8 list for the minutes of this meeting?

9 A In this previous job we were conducting
10 a study of one of our businesses, a commercial and
11 technical study, of one of the businesses of that
12 group. One of the members of that study team, technical
13 member, was also a member of the Nitro team and suggested
14 that there might be methodology evolving from that study
15 that would be useful to the study we were conducting
16 in the Detergent/Phosphate Division.

17 Q You had a health study underway?

18 A No. It was a commercial and technical
19 study of one of our processes and businesses.

20 Q And there was a member of the Nitro
21 Task Force --

22 A I'm not sure he was a member of the
23 Nitro Task Force. He was at least an advisor to that
24 Task Force and also an advisor to the other Task Force.
25 The idea was that we might be able to use some of the

1 methodology that they were using in the other study.

2 Q In the Nitro Task Force study?

3 A We might be able to use things that
4 they were doing in terms of analytical procedures.

5 Q What was the Nitro Task Force doing?

6 A Well, as best I recall the minutes of
7 the meeting, they were looking at the environmental
8 health or status of some of the units of that plant.

9 Q At least, somebody in the company or
10 you felt that there was some connection between that
11 undertaking and the undertaking you were involved in?

12 A It was recommended to me that they
13 might be developing some information and methodology
14 that could be useful to the study that I was conducting,
15 that my team was conducting.

16 Q But your team had nothing to do with
17 health or hygiene?

18 A No. We were looking specifically at
19 a business that was losing money and also had potential
20 environmental problems that would require infusion of
21 capital long term.

22 Q So it was from the potential environ-
23 mental problems standpoint?

24 A Yeah, and also economic.

25 Q Would these problems have anything to

1 do with chloracne or dioxins?

2 A Dioxins were involved.

3 Q And what product were you working with?

4 A Monsanto's trade name for it is
5 Santophen, S-a-n-t-o-p-h-e-n. See if I can recall what
6 it is chemically. It's ortho-benzyl-para-chlorophenol.
7 It's a chlorinated phenol compound, it's a derivative
8 of chlorinated phenol, and in the process the potential
9 for producing dioxin exists.

10 Q You were chlorinating a benzene ring
11 in there some way?

12 A Chlorinating phenol.

13 Q You know what isomer you thought you
14 might have a potential problem with?

15 A The potential exists for all types of
16 dioxin in this distillation process, and we were de-
17 veloping analytical procedures to see if they existed,
18 and if so, where.

19 Q Did you expect in your process that
20 2,3,7,8 tetrachlorodibenzo-para-dioxin would be created?

21 A My technical people told me we had
22 the potential of producing that isomer.

23 Q From your knowledge of that project,
24 was that the one you were most concerned about, or did
25 you make any differentiation between the isomers?

1 A I believe that there was more concern
2 expressed about that isomer than the other isomers.
3 We were interested in eliminating, if they existed,
4 all forms of dioxin, but I believe I was advised that
5 2,3,7,8 had greater potential health hazards.

6 Q And who advised you of that?

7 A I can't give you a name. We had a
8 number of technical advisers. It would be from Mon-
9 santo's Research Department.

10 Q Anybody from the Medical Department?

11 A We did have a member of the Medical
12 Department that was not on the team, but he did dis-
13 cuss with us about what was known in the state of the
14 art of dioxin and its impact on health.

15 Q And what did that person or the Medi-
16 cal Department tell you in that regard?

17 A They told me that the impact or effect
18 of dioxin on human health was not fully defined. They
19 had the potential in certain applications or certain
20 exposure conditions to be harmful, that they have
21 definitely been proven to cause chloracne in some cases,
22 including an incident in Italy which they cited as the
23 first reference to it, and that the impact on health
24 in other forms was being studied and we did not know them.

25 Q Were you advised as to what was suspected

1 in terms of health problems with 2,3,7,8?

2 A No. As I recall, I asked the question
3 and they answered, "We don't know yet."

4 Q So you asked, well, you know it causes
5 chloracne, what else does it do?

6 A Yeah.

7 Q And the response you got was, "We
8 don't know"?

9 A "We don't know."

10 Q Were you briefed at all on the chloracne
11 problem at the Nitro Plant in connection with your con-
12 versations about --

13 A I was not.

14 Q Is Santophen a new product, an experi-
15 mental product?

16 A No. Santophen has been on the market
17 for I don't know how many years, at least twenty. It's
18 used in hard surface cleaners. The most popular one is
19 Lysol. It's the disinfectant in the disinfectant Lysol.

20 Q Where is it manufactured?

21 A It's manufactured in Monsanto's
22 Krummrich Plant in Sauget, Illinois.

23 Q And what was your mission involving
24 Santophen?

25 A My primary objective in our mission was

1 to make a recommendation to Monsanto management as to
2 the future economic viability of that unit. We have
3 since made that recommendation, and it was to close
4 the unit. The problem is there is a lower cost dis-
5 infectant available on the market today. We do not
6 compete costwise, and our major customer switched to
7 another product and the writing was on the wall.

8 Q I think I can see why you would have
9 been included on the Nitro Task Force mailing list be-
10 cause that product had the potential of creating or
11 throwing this isomer of dioxin.

12 A The process has that potential. One
13 of the things, of course, we were trying to determine
14 is whether to recommend whether we stay in this business
15 or not for the future environmental integrity as well
16 as economic.

17 Q And was the environmental assessment
18 in terms of health and exposure on the part of the
19 worker a factor in your decision to discontinue the
20 product?

21 A That's hard to say. I can tell you it
22 was not a major factor in my recommendation. The de-
23 cision, the recommendation was made on the fact that
24 we were losing money and we saw no way of reversing
25 that position because of our cost position due to these

1 competitive products.

2 Q At that production unit were you ex-
3 perienicing the same or any problems with chloracne or
4 the associated complaints that the Nitro Plant had ex-
5 perieniced in the '60's?

6 A I don't believe so. I don't know any
7 reports of chloracne from this unit in the plant. I'm
8 not entirely sure of that, but it did not surface in
9 our review. It was not a problem that was considered.

10 Q Is the entire product manufactured at
11 the Krummrich Plant?

12 A Let's see if there's any imported raw
13 materials. The raw materials for benzene -- It's a
14 self-contained unit.

15 Q And at the intermediate step --

16 A We buy some chlorine.

17 Q But the step in the manufacture of
18 Santophen where you might create one of these dioxins
19 takes place at the Krummrich Plant?

20 A It does, yes. It's a distillation
21 operation in the unit.

22 Q Did you remain on the mailing list for
23 the Nitro Task Force through its entire --

24 A I'm not sure how long they were in
25 existence. I didn't follow that activity because it

1 wasn't my responsibility. I stopped receiving their
2 reports when we completed our study. I know we com-
3 pleted our study before they were through with theirs.
4 I suspect, don't know, there were additional reports I
5 did not receive.

6 Q When were you first advised about
7 dioxin? When I say "dioxin," I'm generally referring
8 to 2,3,7,8-TCDD.

9 A I believe that my first knowledge
10 that there was even such a compound as dioxin in any
11 form came when I read a report of a Seveso incident
12 in Italy in the mid-'70's some time, I think about
13 1975 or '6. I read a report of that eruption and
14 followed through some of the problems that ensued.

15 Q And was that in connection with your
16 work or just a general reading?

17 A It was general reading. I think I
18 read it in Fortune magazine.

19 Q And as far as Monsanto is concerned,
20 the only briefing -- and we'll call it briefing -- that
21 you had was in connection with your investigation of
22 the Santophen process about dioxin?

23 A I can't say that for sure because it
24 was connected to Santophen in some way. I was also
25 recipient of some information about the Sturgeon spill

1 because that product, orthochlorophenol, came out of
2 the same unit, and the Manager of the Detergent and
3 Phosphates Division had a number of briefings about
4 the Sturgeon incident and the dioxin and contents of
5 that car.

6 Q Did you ever work for Dr. Callis?

7 A I know Dr. Callis. I've never worked
8 for him. I worked with him.

9 Q In the Phosphates Division or the
10 operational division that makes phosphates, is that
11 generally where you run into the orthochlorophenols?

12 A Yes.

13 Q Is that where you have spent most of
14 your career with Monsanto?

15 A Most of my career, a substantial part
16 of my career, has been associated with inorganic chemi-
17 cals, detergent phosphates and alkyl benzenes, sur-
18 factants, products that serve the detergent industry.

19 Q Many of those products have the capa-
20 bility of throwing an isomer of dioxin, do they not?

21 A The only one I'm aware of -- I'm not
22 an organic chemist -- the only one I'm aware of is the
23 orthochlorophenol unit. I don't believe the capability
24 exists -- Almost all of our other products are inorganic
25 and they are derivatives of white or yellow phosphorus.

1 The one exception would be what's called detergent
2 alkylate, which is an alkylated benzene ring, but I
3 don't think from my limited knowledge of chemistry --
4 The surfactant in detergents like Tide and heavy-duty
5 laundry detergents are either an alkylbenzene or alcohol.
6 We do not make the alcohols. We make alkylbenzene --
7 but I doubt if there is any.

8 Q In the work that you have done that
9 may have involved an orthochlorophenol, did you receive
10 any instruction or information from Monsanto regarding
11 the potential there for throwing a tetra level dioxin?

12 A Yeah. It's the same source, same
13 potential source as the one that would get into the
14 Santophen. The orthochlorophenol, the material that
15 was spilled in the train wreck at Sturgeon, Missouri,
16 is a byproduct of the Santophen process. You chlorinate
17 phenol and you react it with benzylchloride, you make
18 Santophen. A byproduct is orthochlorophenol, which
19 Monsanto sold to makers of pentachlorophenol.

20 Q Were you given any instructions or
21 cautions about the potential in the byproduct ortho-
22 chlorophenol for the dioxin contamination?

23 A I was not.

24 Q And did you learn in connection with
25 your Santophen project that there was in fact an ongoing

1 body of knowledge that Monsanto had about potential
2 for these 2,3,7,8 tetrachlorodibenzo-para-dioxins in
3 connection with the orthochlorophenol?

4 A I don't believe so. My first knowledge
5 that there could have been dioxin in orthochlorophenol
6 came from the Sturgeon spill, but I don't know what
7 existed prior to that.

8 Q When did you lose contact with the
9 Nitro Task Force?

10 A I don't know. I think it must have
11 been the fourth quarter of 1979. We were conducting
12 this study in 1979. I believe we had completed it
13 by the third quarter and I would have had no further
14 need.

15 Q Did you have any contact with Raymond
16 Suskind in connection with your work --

17 A No, I've never met Dr. Suskind.

18 Q Any inquiry made of you by the Medical
19 Department or Dr. Suskind or anybody else regarding
20 any health problems that the workers involved with the
21 Santophen might have had?

22 A Not of me.

23 Q And you know of no such inquiry or study?

24 A I'm not aware of it if it has. I've
25 read that Dr. Suskind had done some work involving the

1 Krummrich Plant, but I don't know what that was.

2 Q Did you ever attend any of the meetings
3 of the Nitro Task Force?

4 A No, I did not.

5 Q Did you ever talk with Montie Throdahl
6 about it?

7 A No, I didn't.

8 Q In your career with Monsanto you
9 never had any connection with 2,4,5-T?

10 A No. Maybe an indirect connection
11 many years ago. I was the Marketing Manager in selling
12 anhydrous ammonia and nitric acid and some industrial
13 nitrogen products, and some of our distributors that
14 handled my product sold 2,4,5-T, but that's not a
15 part of my business.

16 Q Were you ever made aware of the
17 chloracne problem at Nitro related to 2,4,5-T before
18 you got involved with this Santophen project?

19 A No, I don't believe I was aware of it
20 until we started studying the chlorophenol business.

21 MR. CALWELL: All right, Mr. Head.

22 It has been a pleasure talking with you today,
23 sir.

24 THE WITNESS: Thank you.

25 Edwin L. Head
Edwin L. Head

1 STATE OF ILLINOIS)
2) SS.
3 COUNTY OF MADISON)

4 I, M. JOY SPRINGER, a Notary Public, duly
5 commissioned and qualified in and for the County of
6 Madison, State of Illinois, do hereby certify that
7 pursuant to notice came before me on the 7th day of
8 July, 1983, at the Radisson Hotel, Room 215, 9th
9 Street and Convention Plaza, St. Louis, Missouri,
10 EDWIN L. HEAD, who was by me duly sworn to testify
11 to the truth and nothing but the truth of his knowl-
12 edge touching and concerning the matters in contro-
13 versy in this case; that he was thereupon carefully
14 examined upon oath, and his examination reduced to
15 writing under my supervision; that the deposition is
16 a true record of the testimony given by the witness;
17 and signature of the witness was not waived.

18 I FURTHER CERTIFY that I am neither attorney
19 nor counsel for nor related to nor employed by and of
20 the parties to the action in which this deposition is
21 taken; and further, that I am not a relative or em-
22 ployee of any attorney or counsel employed by the
23 parties hereto, or financially interested in the
24 action.

25 IN WITNESS WHEREOF, I have hereunto set my



JUL 20 1983

FROM NAME LOCAL OR PHONE

LAW DEPARTMENT

T. M. Bistline - E2ND - 4-2989

DATE July 18, 1983

SUBJECT

REFERENCE

TO E. J. Head - B2SB

*Summary?
Send on
to Charles H
OMB
7/21/83
vf*

Attached is the transcript of your deposition which was recently taken in the Nitro litigation. Would you please review the attached to make certain all your answers have been recorded accurately. If the transcript is accurate, please sign on the page indicated and return to me.

If you have any questions, please do not hesitate to call.

T. M. Bistline
T. M. Bistline
↑

TMB/vf/b6

Enclosure