

1 background level. That is the opposite of what this witness
2 testified to. He testified that it was unexposed people
3 that have the background level of porphyria, of elevated
4 porphyrin.

5 MR. CARR: It's an endemic situation. The
6 testimony is that everybody has it, that it's in everybody's
7 tissue, that was the thrust of your question. It was the
8 thrust of his testimony, that everybody has it.

9 MR. KEINEMAN: That's got nothing to do with
10 2,4,5-T.

11 THE COURT: The objection is overruled.

12
13 (The following proceedings were had in the
14 presence and hearing of the jury.)

15
16 Q (By Mr. Carr:) Now have you considered in that
17 respect, Dr. Kilgore, the fact that Santophen manufactured
18 by Monsanto and used in the manufacture of Lysol has been
19 shown to have 2,3,7,8-TCDD as a contaminant along with other
20 dioxins?

21 A I would say yes.

22 Q And where did you learn that Santophen had the
23 2,3,7,8 and the Lysol had it, sir?

24 A I don't really know that. But what I'm saying --

1 Q Where did you learn that? Do you know that for a
2 fact, sir?

3 A I am aware that there is some connection.

4 Q All right. Where did you learn that there was a
5 connection; from whom?

6 A I'm sure it was from Monsanto.

7 Q Well, now, you say you're sure it's from Monsanto.

8 Did Monsanto tell you that their Santophen has 2,3,7,8-TCDD
9 in it, and that the Lysol has it in it?

10 A I think there was some statement to that effect,
11 yes.

12 Q All right. Now, Doctor, did they tell you how
13 much, what were the levels of 2,3,7,8-TCDD in the Lysol?

14 A No, I do not recall.

15 Q Well, did they discuss with you how -- the fact
16 that the Lysol that contains that 2,3,7,8 is sold throughout
17 the country?

18 A No.

19 Q Doctor, what official of Monsanto told you that
20 the Lysol has the 2,3,7,8-TCDD in it?

21 A I honestly don't recall.

22 Q Did you have a conference with more than one
23 official of Monsanto?

24 A No, several.

1 Q And did it come out in one of those conferences?

2 A A statement of some effect like that, yes

3 Q Doctor, how long ago was it that you learned that
4 Lysol has 2,3,7,8-TCDD in it?

5 A Two or three months, maybe.

6 Q Now, Doctor, this meeting that you had when you
7 learned that Lysol had 2,3,7,8 in it, was it at the Monsanto
8 Headquarters in Creve Coeur, was it at the plant in
9 Illinois, or was it in an attorney's office?

10 A It was an attorney's office.

11 Q And -- you've already said there was more than one
12 official present. Who were these officials of Monsanto that
13 were present to your best memory

14 A I honestly can't remember.

15 Q Did they give you documentation showing the amount
16 of 2,3,7,8 found to be in the Lysol?

17 A Not to my knowledge.

18 Q Doctor, did you at that meeting or any of those
19 meetings learn also that the Wed-B-Gon, known as 2,4-D,
20 manufactured from Monsanto's 2,4-Dichlorophenol, did you
21 learn that it too has levels of 2,3,7,8-TCDD in it?

22 A No, I did not.

23 Q Nobody told you that?

24 A No.

1 Q Did they tell you that the 2,4-Dichlorophenol from
2 which the 2,4-D is manufactured has 2,3,7,8-TCDD in it?

3 A I don't recall that.

4 Q Doctor, did anybody show you, or did you ask to
5 see any of the documents of Monsanto's own analysis showing
6 that their 2,4-Dichlorophenol manufactured, and in studies
7 that they made shortly after the Sturgeon accident, did
8 anybody show you or did you ask to see any of the documents
9 showing the levels of 2,3,7,8-TCDD in, not just the 2,4-
10 Dichlorophenol, but all of the Monsanto chlorinated phenols
11 that were being tested at that particular time?

12 A I've seen some tank samples announced with
13 orthochlorophenol, but that's all.

14 Q All they showed you for data was the data relating
15 to the orthochlorophenol, and they did not show you any data
16 relating to Santophen, or to 2,4-Dichlorophenol, or
17 parachlorophenol; is that correct, sir?

18 A I believe that's correct.

19 Q All right. Now, Doctor, when you gave your
20 opinions as to the reason fat tissue has 2,3,7,8-TCDD in it
21 as you have given that opinion, did you take into
22 consideration the fact that this Lysol that has 2,3,7,8-TCDD
23 in it is used practically in every American household?

24 A No, I don't think so.

1 Q Doctor, you do know, or do you know that 2,3,7,8-
2 TCDD can bioaccumulate in the body's tissues?

3 A No.

4 Q You don't know that, sir?

5 A No.

6 Q Has no one ever told you that it will
7 bioaccumulate, that Monsanto's own researchers have shown
8 that it bioaccumulates? They've never told you that, sir?

9 A No.

10 Q Now, Doctor, assume, if you will, that 2,3,7,8-
11 TCDD does bioaccumulate. There's disputes as to how long it
12 stays in the body. Monsanto says it stays three to five
13 years. There's disputes as to whether it reaches a steady
14 state, when it falls off. There's disputes of that sort.
15 Assume, sir, something that you did not know before that it
16 does bioaccumulate. Wouldn't the fact that Lysol has
17 2,3,7,8-TCDD in it be important -- as a power source of
18 2,3,7,8-TCDD that could bioaccumulate in the tissue, in the
19 human tissue.

20 A I don't think so.

21 Q Doctor, Lysol is used in practically every
22 household, is it not, sir?

23 A I don't know.

24 Q Well, Doctor, you do know that if you go into the

1 supermarket you see shelves loaded with Lysol products, you
2 know that, don't you?

3 A That's correct.

4 Q You've seen that. And presumably a significant
5 part of the American buying population buys that Lysol or
6 they wouldn't keep it in the supermarket; isn't that right,
7 sir?

8 A I'm sure that's correct.

9 Q In those quantities. You do know that it's used
10 in babies nurseries, for example, that they recommend that
11 it be used in babies nurseries. You know that, don't you,
12 sir?

13 A I believe so.

14 Q You do know that if the Lysol is in the products
15 that you wash it with or on the table or the babies toys
16 that it can be ingested that way; you do know that, don't
17 you, sir?

18 A You don't know that if the Lysol --

19 Q If the Lysol has the 2,3,7,8 in it, Dr. Kilgore,
20 and if a mother washes the baby's toy, or his cradle with
21 that Lysol, there is some 2,3,7,8-TCDD on that toy unless
22 it's completely washed off with water; isn't that correct,
23 sir?

24 A No.

1 Q Doctor, if there's 2,3,7,8 in the Lysol to start
2 with, and you put the Lysol on this pen, for instance, and
3 then you do not wash the Lysol off of this pen, there is
4 some amount of 2,3,7,8 -- first of all, there is some Lysol
5 on that pen; isn't there, sir?

6 A Yes, there is.

7 Q And there's some 2,3,7,8- TCDD in the Lysol;
8 correct, sir?

9 A I don't know that.

10 Q Doctor, you were told that. It was in the Lysol
11 on the pen, is it not, sir?

12 A Not necessarily.

13 Q What happens to it, sir? Why wouldn't it be on
14 the pen if it's in the Lysol?

15 A I would imagine it would depend from batch to
16 batch and the level. You can dilute out things, you know,
17 to the point where you can't detect it.

18 Q I'm not talking about detectability. I'm talking
19 about physical fact. You can dilute it ten million times.
20 There is still some there, is there not, sir, unless it's
21 washed off completely?

22 A For all practical purposes, no.

23 Q I'm not talking for all practical purposes. If I
24 put Lysol on this counter, for instance, if the Lysol has

1 2,3,7,8-TCDD in it, and the Lysol stays on that counter if
2 it's not washed off, it has in it some portion of all of the
3 ingredients of Lysol, doesn't it, sir?

4 A It could, yes.

5 Q Well, it would, wouldn't it, sir, if I put it on
6 this counter -- whatever amount I put on this counter, there
7 is some part of the ingredients of Lysol on this counter;
8 isn't there, sir?

9 A No, not necessarily.

10 Q Why not, Doctor? What happened to it?

11 A It depends on whether it's in there initially or
12 not.

13 Q That's right. If it's in there initially, sir.
14 If it's in the Lysol initially, and I put it on this
15 counter, it's on the counter then; isn't it, sir?

16 A That's correct.

17 Q And it will remain there until something happens
18 to it, won't it, sir, either volatilizes or washed off;
19 isn't that right, sir?

20 A That's correct.

21 Q One of the things that could happen to it is that
22 a baby could salivate and could put it in that child's
23 mouth; correct, sir?

24 A Yes, that's correct.

1 Q And that baby would get, therefore, if there was
2 2,3,7,8 in it, the baby would get the 2,3,7,8, wouldn't he,
3 sir?

4 A Correct.

5 Q In some. whatever the amount might be, depending
6 on what the ratio is or how it's diluted or how it mixes
7 with the baby's saliva, whatever the amount is, it's going
8 to get some of the 2,3,7,8-TCDD; isn't it, sir?

9 A That's correct.

10 Q Now, if 2,3,7,8 volatilizes, if a housewife, for
11 instance, or me on a Saturday afternoon, if I scrub a
12 basement floor, or a kitchen floor with Lysol and let it be
13 that way and don't just wash it off and remove it all, there
14 is some Lysol on my floor; isn't there, sir?

15 A Yes.

16 Q And if 2,3,7,8 volatilizes, and I suggest that you
17 don't agree that it does, if it does volatilize, it's in my
18 house and I'm inhaling, sir, everytime I go in that room, if
19 it does volatilize.

20 A I'm to assume that it volatilizes?

21 Q Yes, please do, because we have that testimony.

22 A Yes.

23 Q So each time I'm in that room that has the Lysol
24 in it, I am inhaling some part of the 2,3,7,8-TCDD that's in.

1 that Lysol, aren't I, sir?

2 A Possible, yes.

3 Q Yes. And I would do that for everyday, and if
4 I've used Lysol for years and years and years, I'm inhaling
5 Lysol in some amounts, whatever amount it might be, no
6 matter how diluted it might be, I'm inhaling some of the
7 Lysol over the period of time that I'm using the Lysol,
8 aren't I, sir?

9 A That's correct.

10 Q And inhaling the Lysol, I'm inhaling the 2,3,7,8-
11 TCDD contaminant, aren't I, sir?

12 A Yes.

13 Q Yes. And, Doctor, if it bioaccumulates in my
14 tissue then I have it, and everyday I breathe that Lysol air
15 in that basement or in that kitchen, everyday I am taking
16 some amounts of 2,3,7,8-TCDD into my body, aren't I, sir,
17 and keeping some part of it?

18 A If you assume that it bioaccumulates, yes.

19 Q Yes. If you assume it's bioaccumulated. Now --
20 and, Doctor, I can accumulate, and that TCDD is in my body,
21 and if I get another source of TCDD, say I go outside and I
22 have used Wed-B-Gon, or some other form of something that
23 uses 2,4-D, and if the 2,3,7,8 is in that, I'm on that lawn,
24 there I get 2,3,7,8-TCDD as well, don't I, sir, if it's in the

1 product to start with?

2 MR. HEINEMAN: Objection, your Honor. May Counsel
3 approach the bench?

4 THE COURT: Yes, you may.

5

6 (The following proceedings were had at the bench
7 out of the hearing of the jury:)

8

9 MR. HEINEMAN: There's no evidence in the case
10 whatsoever that there has ever been found 2,3,7,8-TCDD in
11 2,4-D, nor in Wed-B-Gon. Everytime when Mr. Carr has
12 examined a witness on this subject, he's asked the witness
13 to assume that it would be in the final product. There's
14 never been any evidence that it's there.

15 MR. CARR: Your Honor, Mr. Musgrave is the first
16 person that asked the witness to assume that it was in the
17 Wed-B-Gon. He demonstrated with his witness the amount
18 that would be there. We have cross examined a number of
19 witnesses. Mr. Wilson has admitted that on a manufacturing
20 process, in one manufacturing process it will be there and in
21 another manufacturing process it won't be there. He said he
22 had no knowledge as to the fact of the manufacturing process
23 that might destroy 2,3,7,8 was being used at the points in
24 time that's relevant in this case. We have plenty of

1 evidence to support the statement that it's there.

2 MR. HEINEMAN: Never been a single witness testify
3 that it's found in 2,4-D or in the Wed-B-Gon. Not one.

4 THE COURT: The objection is overruled. I'll make
5 it a continuing objection to the line of questioning.

6

7 (The following proceedings were had in the
8 presence and hearing of the jury:)

9

10 Q (By Mr. Carr) Doctor, I would be subject,
11 assuming that there is 2,3,7,8 in the finished product
12 Wed-B-Gon or 2,4-D, I would be subject to inhaling if it
13 does volatilize everytime I go out on my lawn, wouldn't I,
14 sir, the 2,3,7,8 contaminant?

15 A No, not necessarily.

16 Q Doctor, you say not necessarily. I take that to
17 mean that it is possible that it could occur.

18 A Theoretically possible, yes.

19 Q Doctor, if I sit down, if I play on my lawn,
20 that's been sprayed with a material that contains the 2,4-
21 Dichlorophenol, that in turn contains the 2,3,7,8-TCDD, I
22 would thereby be in contact with 2,3,7,8 just by playing on
23 my lawn, wouldn't I, sir?

24 A Theoretically, yes.

1 Q Doctor, there's no theory about it. If the
2 2,3,7,8 is in the 2,4-Dichlorophenol, and if the 2,3,7,8
3 being in the 2,4-Dichlorophenol, ends up in th 2,4-D, or the
4 Wed-8-Gon, and that ends up on my lawn, there is 2,3,7,8 on
5 my lawn, isn't there, sir?

6 A There could be, yes.

7 Q No, not could be. There would be. If what I told
8 you is correct to start with, there would be, would there
9 not, sir?

10 A If what you told me originally is correct, yes.

11 Q Yes. And each time I'm on my lawn, if my child
12 plays on the lawn, if my dog plays on the lawn, until it's
13 washed away, or degrades or volatilizes, whatever, until
14 that somehow is gotten rid of, I'm subject to ingesting or
15 taking in that 2,3,7,8, aren't I, sir?

16 A Yes.

17 Q Now, Doctor, if it does bioaccumulate, can that
18 not -- cannot a fact that Lysol is sold throughout this
19 country just by itself, isn't that fact alone sufficient to
20 account for some level of 2,3,7,8-TCDD in our body tissues
21 assuming that it bioaccumulates?

22 A Yes.

23 Q Doctor, you do know that toxic substances at some
24 levels can have no effect, and as you add to those levels

1 you can get to a toxic effect, can't you, sir?

2 A That's correct.

3 Q And you do know that you can have accumulation by
4 a chronic or long term daily exposure to something like
5 Lysol, and have a regular amount taken into your system, but
6 then you can be acutely exposed to that same toxic, and the
7 fact that you're exposed acutely in a larger amount doesn't
8 take away from, but rather it adds to the toxic effect of
9 the toxins already in your body, doesn't it, sir?

10 A No.

11 Q Doctor, are you saying that the acute exposure
12 does not add to the toxins that you already have in your
13 body?

14 A That's right.

15 Q Are you assuming that it's ingested, that it's
16 taken into the body?

17 A That's correct

18 Q And are you assuming then that the toxic substance
19 is in the body from an acute exposure?

20 A That's correct.

21 Q Will it not go through the fat tissues, sir, or to
22 the kidneys, or to the liver, like shown in the lady at
23 Seveso?

24 A It's possible, yes

1 Q That was an acute exposure at Seveso, wasn't it,
2 sir, the lady at Seveso that had the 1.84 parts per billion
3 in her fat tissue, that was considered an acute exposure,
4 wasn't it, sir?

5 A No, in my opinion.

6 Q What is your definition of an acute exposure?

7 A Well, an acute exposure to a toxin is something
8 that will cause a major clinical response.

9 Q Well, Doctor, you're talking about the result of
10 the exposure. You're not talking about the exposure itself.

11 The acute exposure, the definition I'm using acute is a one
12 shot exposure to it. That's the way I'm using it. The
13 dioxin that you get in the one shot exposure like at Seveso
14 would add to the dioxin you already have in your body if you
15 have it from these other sources, such as Lysol, or 2,4-D,
16 or 2,4,5-T; isn't that correct, sir?

17 A Correct.

18 Q Yes. And it would be a more intense or a kind of
19 a shocking effect when added to that which you've already
20 got, wouldn't it, sir?

21 A No.

22 Q Why not, Doctor?

23 A Because it depends on the level.

24 Q Well, Doctor, it depends upon the level. If that

1 level is high enough when added to the tissues that's
2 already contaminated with th 2,3,7,8-TCDD, it could have a
3 shocking effect, could it not, sir?

4 A No, not necessarily.

5 Q Why not, sir? Why not?

6 A Because when you get to high levels of the
7 chemical, frequently they're handled differently, the
8 compound is taken in on a chronic basis. The effect --

9 Q How does that work with 2,3,7,8-TCDD? Has there
10 ever been any studies to suggest that the 2,3,7,8 you get on
11 an acute basis, one time exposure would be handled
12 differently than what you get on a chronic exposure?

13 A No.

14 MR. HEINEMAN: Objection, your Honor, he cut the
15 witness off in the middle of the answer.

16 THE COURT: I don't think so.

17 Q (By Mr. Carr) Doctor, in point of fact, you'd
18 know, and we've gone through studies that show chronic low
19 dose exposure accumulated in the body can have more serious
20 effects than just a one time acute exposure. You remember
21 those studies, don't you, sir?

22 A Yes.

23 Q Yes. And so the chronic low dose exposure that we
24 have when we're exposed to Lysol, if it has 2,3,7,8 in it,

1 as you suggested -- as you stated that you know that it
2 does, that chronic exposure can have an effect upon our
3 body, and then when we're exposed to a larger, more massive
4 amount of TCDD, that can have a more injurious effect upon
5 the body, can't it, sir?

6 A No.

7 Q Why not, Doctor?

8 A Because you're talking about two different
9 biological consequences. A chronic level of exposure to
10 something does not necessarily cause the same biological
11 effect in an acute high level exposure to the same compound.

12 Q Doctor, I didn't suggest that it caused the same
13 thing, if you interpreted that in my question. I didn't
14 mean that. What I said was a more injurious consequence.
15 When you add the larger, the massive dose, the larger dose
16 to your body that's already crippled with a chronic dose --
17 that's an exaggeration to say crippled -- but has already
18 got in it a low dose exposure, a chronic dose. My question
19 is can adding that straw, you might say, to the camel's
20 back, can't that straw end up breaking the camel's back?

21 A No.

22 Q Doctor, is there any conceivable articles that you
23 have that you base that opinion upon that adding the massive
24 or the larger dose to the doses that's already accumulated

1 in your body would no add to the -- significantly add, I
2 might say, to the injurious effect?

3 A Sure.

4 Q What studies, sir?

5 A Lots of studies been done.

6 Q Name me the studies, Doctor. It's very well to
7 say lots of studies.

8 A I could not give you an exactly reference here. I
9 can give you an opinion.

10 Q Doctor, can you give me the name of an author,
11 just the name of an author that said such a thing?

12 A Wayland Jack Hayes.

13 Q Wayland Jack Hayes. What did he write, sir?

14 A He has a very extensive book on the pesticides in
15 man.

16 Q And in his book he says that the massive dose
17 doesn't significantly add to the cumulative of smaller
18 doses?

19 A I can't tell you the exact wording, but that kind
20 of information is in there.

21 Q Upon what did he base that, sir?

22 A I cannot give you a reference here.

23 Q Doctor, what theory did he base it upon?

24 A I don't understand.

1 Q Well, what was the rational? You're saying he
2 made that statement. Upon what did he base that conclusion?

3 A When DDT is stored in the body fat you have one
4 phenomena. When you are exposed to high levels of DDT it
5 has no impact on the body fat -- on the storage of DDT in
6 the body fat at all. It causes other kinds of damage.

7 Q Well, Doctor, the other kinds of damage is an
8 injurious effect added to the already chronic damage; isn't
9 it, sir? That's what I was asking you.

10 A No.

11 Q You've just got through saying that when you take
12 that dose it makes other damage, doesn't it, sir?

13 A Right.

14 Q Now is that more injurious than to have just the
15 low dose damage, to have this other damage added to it?

16 A No.

17 Q Doctor, if you've been damaged already by the DDT
18 in this case that has accumulated in your body, and you got
19 some damage already; right, sir?

20 A Right.

21 Q And Hayes says that when you have a massive dose
22 you get other damage, didn't he say that? Didn't you just
23 say that?

24 A That's right.

1 Q When you add the other damage to the damage
2 already existing, isn't that a more injurious effect, Dr.
3 Kilgore?

4 A If the dose is high enough.

5 Q Well, that's what we're talking about. So what he
6 said is you get other damage that is then added to the
7 already existing damage; isn't that right, sir?

8 A That's right.

9 Q Yes.

10 THE COURT: Mr. Carr, is this a good point to
11 break for lunch?

12 MR. CARR: Yes, it is.

13 THE COURT: We'll break for lunch at this time.
14 We will resume beginning at 1:15. The admonishments that
15 I've given you earlier will apply during this lunch period
16 also. Court is in recess.

17

18 (Lunch recess.)

19

20 Q (By Mr. Carr) Dr. Kilgore, on the subject of
21 volatilization that you have discussed, are you aware of the
22 fact that the scientists at Monsanto know that DDT has
23 probably -- has spread around the world because of its
24 volatility?