

alleged existed in our work place.

JUDGE CUTLER: I'm going to deny the motion. I want to get all the evidence on the record and you can redo this -- set forth that with your briefs together with the law. You realize there is a new Supreme Court case in connection with some of this.

MS. BRINKMAN: Right. Thank you.

Then I will call Dr. Emmet Kelly.

Whereupon,

R. EMMET KELLY, M.D.

was called as a witness by counsel for the Respondent and, having been duly sworn by the Administrative Law Judge, was examined and testified as follows:

DIRECT EXAMINATION

BY MS. BRINKMAN:

Q Please state your complete name for the record.

A R. Emmet Kelly -- E-M-M-E-T Kelly, K-E-L-L-Y.

Q And what is your address?

A 665 South Skinker Boulevard, St. Louis, Missouri.

Q And what is your occupation?

A I am a physician.

Q Dr. Kelly, in which states have you been licensed?

A I have been licensed in Missouri, Illinois, and Arizona. At present, I am only licensed in Missouri.

Q What is your educational background?

1 A I received a B.S. degree from St. Louis University,
2 and an M.D. degree in 1932.

3 Q Have you served as a faculty member at any college or
4 university?

5 A Yes, I have -- for the past 30 years, I have been in
6 the Department of Internal Medicine at St. Louis University.
7 I am at present Assistant Professor of Clinical Medicine at
8 that institution. For the past ten years I have been Assistant
9 Professor of Community Medicine at St. Louis University.

10 Q Did you serve in the Military?

11 A Yes.

12 Q And in what capacity did you serve?

13 A I was the medical officer in charge of the civilian
14 population of Hedgewood arsenal and Pine Bluff arsenal chemical
15 workers.

16 Q Are you certified in any medical specialty?

17 A I am certified by the Board of Internal Medicine and
18 recertified in 1974. I am certified by the American Board of
19 Preventive Medicine and Occupational Medicine.

20 Q And are you a member of any professional society?

21 A Yes. I am a member of the American College of
22 Physicians, the American Society for Therapeutics and Clinical
23 Pharmacology -- I believe that's the correct name -- the
24 industrial -- the Occupational and Medical Association of the
25 American Academy of Occupational Medicine, and mutual state and

1 city medical societies.

2 Q Do you hold any hospital appointments?

3 A Yes, I am a staff member in Internal Medicine at the
4 St. Louis University group of hospitals, St. Mary's Health
5 Center, St. John's Mercy Health Center in St. Louis.

6 Q What are your current professional activities, Dr.
7 Kelly?

8 A I'm Associate Physician at the Sutter Industrial
9 Clinic in St. Louis. I'm a consultant in Occupational Medicine
10 on a private basis. I'm a medical director of the Consolidated
11 Aluminum Company.

12 Q What are your responsibilities as an Associate Physi-
13 cian on the staff of Sutter Clinic?

14 A The Sutter Clinic is an industrial clinic that has
15 about 1500 clients. They range from small -- three or four
16 people in a plant to a department store with 2,000 employees.
17 Or something like the Laclede Gas Company, which is a utility
18 which would have a number of employees. My position is to
19 evaluate any cases in which there is a possible connection
20 between their health and exposure to occupational conditions.
21 I have nothing to do with the traumatic type of injury.

22 Q And in that capacity, do you examine employees of
23 the various clients which the Sutter Clinic serves?

24 A Yes, I both examine employees and I go to the workshop
25 at various times.

1 Q So you actually observe the working conditions to
2 which the examined employees are exposed?

3 A That is correct.

4 Q What are your responsibilities as a consultant on a
5 private basis in occupational health?

6 A I see clients who are usually corporations -- or they
7 could be lawyers who send me cases who may or may -- both the
8 corporation and lawyer wants to know if there is a connection
9 between this employee's medical condition and his work exposure.

10 Q And what are some of the companies that you have
11 consulted for?

12 A Mallinkrodt Chemical, Chem-Tech Industries, General
13 Electric, Century Foundry, among others.

14 Q And what are your responsibilities as the Medical
15 Director for Consolidated Aluminum Company?

16 A Consolidated Aluminum has three primary smelter
17 operations in the United States, and that's about 15 extrusion
18 plants. They have about 7,000 or 8,000 employees. And we have
19 individual medical facilities at each of these installations,
20 and my responsibilities are to insure that there is adequate
21 medical representation and that they carry out a preventive
22 medical program. And we have a consulting industrial hygienist
23 that goes to these plants under my direction if there has to
24 be any air studies carried out.

25 Q By whom were you employed prior to your current

1 professional activities?

2 A From 1936, I was employed by Monsanto Company.

3 Q And for what periods of time?

4 A I was employed there from 1936 until 1942 on a part-
5 time basis. I had an individual -- a private practice at that
6 time. I was four years in the service, and I returned in 1946
7 as a full-time employee and Director of their Medical Department

8 Q And what were your responsibilities as Medical
9 Director at Monsanto?

10 A They were varied. First of all, I had the responsi-
11 bility of overseeing the medical program in all their plants.
12 At that particular time, we had about 42 plants in the United
13 States and 14 ex-USA, and about 56,000 employees. My job was
14 to see that they did not have any uncontrolled work exposures,
15 and a adequate or satisfactory medical preventive program was
16 carried out. In this, of course, we had three other physicians
17 under my direction in St. Louis, and we had individual physi-
18 cians varying from full-time physicians to on-call physicians
19 at the various installations because of -- depending upon the
20 size of the organization.

21 In addition, I had the responsibility for industrial
22 hygiene. We had three industrial hygienists who were --
23 hygienists who were connected with the Medical Department, and
24 they were there -- four we had -- and they -- their job was to
25 monitor the air levels and monitor the exposures at our various

1 plants. The Toxicological Department came under the Medical
2 Department's responsibility, and we had three toxicologists
3 whose job it was to investigate the harmful and non-harmful
4 effects of the products that our employees worked with or
5 products that we sold. We did not carry these investigations
6 out in our own laboratories at that time, but utilized indepen-
7 dent laboratories.

8 Q Was the medical division at Monsanto responsible for
9 investigation of complaints from purchasers or/and users of
10 Monsanto's products?

11 A Yes. Anybody who had a letter or complaint or
12 telephone call concerning the untoward effect of a compound on
13 their employees or their customers, that letter or communica-
14 tion would be directed to my desk, and I would -- our department
15 would handle it.

16 Q Did Monsanto produce polychlorinated biphenyls during
17 your tenure with the company?

18 A Yes, they did.

19 Q And during what period of time did Monsanto produce
20 PCB's?

21 A Monsanto started manufacturing PCB's in 1935. They
22 continued manufacturing them until 1977. During that time
23 they manufactured, we are unable to have figures from 1935 as
24 to the volume of 1935 up to 1956.. But from 1956 to 1977, we
25 manufactured approximately 900 million pounds of the material.

1 I would guess that during the period from 1935 to 1956, we
2 probably manufactured another 500 million. So we're talking
3 about a billion and a half pounds of material.

4 Q Were there any other domestic producers of PCB's other
5 than Monsanto?

6 A No domestic. There were foreigners in Italy, Spain,
7 France, Japan. And we did manufacture PCB's in Wales -- Mon-
8 santo did.

9 Q Uh-huh. At which Monsanto plants in the United States
10 were PCB's produced?

11 A They were manufactured in Anniston, Alabama, and a
12 plant called Sauget, Illinois, S-A-U-G-E-T, and this is a plant
13 just outside East St. Louis. So I'll refer to it as East St.
14 Louis after this.

15 Q During what period of time were PCB's manufactured
16 at the East St. Louis plant?

17 A From sometime in the middle 40's until they were
18 discontinued in 1977.

19 Q And for what period of time were they produced in
20 Anniston, Alabama?

21 A From 1935 until the late 40's -- there was little
22 lap-over while production was kept getting on stream at East
23 St. Louis that they manufactured them in -- continued manufac-
24 turing them at Anniston.

25 Q Under which trade names did Monsanto produce PCB's?

1 A Monsanto produced PCB's under the trade name of
2 AROCLOR. Other companies used the term askarel, which I
3 believe is General Electric's, and pyranol, which is Westing-
4 house.

5 Q And which grades of AROCLOR were produced by Monsanto?

6 A The grades were from AROCLOR 1016, which is a poly-
7 chlorinated biphenyl, to -- chlorinated to 16 percent -- to
8 AROCLOR 1268, which is a polychlorinated biphenyl which is
9 chlorinated to 68 percent. Some AROCLORS were fluoridated
10 terphenyls, such as 4485 -- that is a terphenyl which is
11 different than the biphenyls. It's one more phenalic ring --
12 phenyl ring.

13 Q And did Monsanto produce a grade of AROCLOR with 42
14 percent chlorine?

15 A Yes. That is an average chlorination. In other
16 words, there is a curve. In AROCLOR 1242, that means that the
17 average chlorination of this pound of AROCLOR is chlorinated
18 to 42 percent. That meant some of them -- that the average
19 and the highest amount was at 42 percent. There was a little
20 spill-over in the top and bottom. You could have some 1238 or
21 AROCLOR 1244, 1246.

22 Q Did Monsanto also produce 54 percent and 60 percent --

23 A Yes.

24 Q -- grades? While you were at Monsanto as Medical
25 Director, did you keep abreast of the literature on polychlorin-
ated biphenyls and their health effects?

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1 A Yes. Because, first of all, it was a very popular
2 compound as far as allegations of health effects are concerned.
3 In 1936 or '37, there was an epidemic of chloracne at the
4 General Electric plants in Massachusetts. These were workers
5 who were using coated wire which was coated with a mixture of
6 chlorinated naphthalene and chlorinated biphenyl. So there
7 was a conference in Massachusetts at which I was present to
8 determine the health effects of these -- of the biphenyl
9 separately, because after a while -- after -- the chlorinated
10 naphthalene was phased out of the wire coating, and chlorinated
11 biphenyl was used more or less exclusively at that time. We --
12 at that time, we had work done by Professor Drinker of Harvard,
13 and that was the basis for some of the air levels of -- that
14 were recommended for safe concentrations of the workshop.
15 Following that, we had work done at the Kettering Laboratory
16 here in Cincinnati. We also had, then, work done at the
17 Industrial Bio-Test Laboratories in Chicago. So we -- we were
18 quite abreast of the happenings with PCB.

19 Q How were you able to keep yourself informed of the
20 research and reported results of research that was being done
21 with respect to PCB's? What resources did you have?

22 A Well, we did have a library, of course, which had all
23 the majority -- I would say, all the occupational medical bulle-
24 tins, magazines, and periodicals in the United States. Our
25 toxicologist had the toxicological literature from the United

1 States and United Kingdom. They had a tox-line, which was a
2 computerized data base that we were able to get information on
3 any compounds that we needed.

4 In addition, of course, there were meetings that --
5 which our industrial hygienist went to, which our toxicologist
6 went to. They were members of the American Society of Toxicology
7 and anything that was reported there, they came back and reported
8 to the department.

9 Q As the Medical Director of Monsanto, were you responsible
10 for evaluating the health of Monsanto employees who were
11 exposed to PCB's in the work place?

12 A Yes, I was.

13 Q And what types of evaluation were performed by you
14 or under your supervision?

15 A Under my supervision, we had yearly examinations of
16 the individuals who were exposed to PCB's--both at Anniston
17 and at the East St. Louis plant. I myself in 19 -- just before
18 my retirement in 1975 -- it must have been 1973 or 1974 --
19 examined the work force at our department in East St. Louis.
20 That particular examination included the usual history physical,
21 a barrage of laboratory tests, and blood tests for PCB's.

22 Q What kinds of exposures were experienced by the
23 employees in the East St. Louis and Anniston, Alabama plants
24 who were working with PCB's?

25 A They were exposed both from the dermal aspect and

1 from the inhalation aspect. There also, of course, was eye
2 contact if they had some on their gloves and rubbed their eyes.
3 The extent of the exposure varied, of course, with the -- with
4 the time. In 1938, there was more of a laissez-faire attitude
5 in the work place, and we -- we made -- we made the chlorinated
6 biphenyl by taking the benzene, heating it in a pot--a closed
7 pot with molten lead that caused the diphenyl. This was then
8 chlorinated, and from the chlorinator it was discharged into
9 either a holding tank or a distilling column. And then from
10 the distilling column, it was discharged into drums. The drum
11 situation was the material was hot when it was drummed out, and
12 there was vapor inhalation. There was also skin exposure from
13 the nozzle -- it would be pulled off the drum and it would drip,
14 and they would wipe the top of the drum off. There was con-
15 siderable dermal exposure.

16 Q What types -- what were the results of these types
17 of evaluations that were performed under your supervision or
18 by you? What did you find?

19 A We found no evidence of systemic disease. We found
20 no evidence of any liver tumors. In the late 1930's, around
21 about 1936 or 1938, we had less than a half a dozen individuals
22 with chloracne, and that was a relatively small amount of chlor-
23 acne on the temples. And that cleared up with just some atten-
24 tion to housekeeping in the department.

25 Q Was the polychlorinated biphenyls with which the

1 Monsanto employees working generally in a heated condition?

2 A When they drummed it out, it was heated. If there
3 were leaks in pumps, it was at elevated temperatures.

4 Q Did you, during your years at Monsanto, observe in
5 Monsanto's employees any health effects from PCB exposure which
6 were likely to cause death or serious physical harm?

7 A None.

8 Q Did you observe any health effects from PCB's which
9 were likely to cause an other-than-serious health effect?

10 A Well, yes. I mean, if you consider those few cases
11 of chloracne. That's certainly -- I consider that "other than
12 serious". If you've got a person who rubbed pentachloro -- I
13 mean, polychlorinated biphenyl from his gloves in his eye, gets
14 a redness, and in two hours is gone, that certainly is a less-
15 than-serious effect. It's almost a diminimus effect.

16 Q Are PCB's, for example, if they're gotten into the
17 eye, a corrosive substance as far as human tissue or skin is
18 concerned?

19 A No, they are not corrosive as far as the human eye is
20 concerned. They are not corrosive as far as the human skin is
21 concerned. In rabbits, we dropped 100 percent PCB's into the
22 eye of rabbits, washed it out after two minutes, and the basis
23 at that particular time was a 41 percent score. That's of a
24 score of I think 120, and that's probably equivalent to 20 per-
25 cent Ivory soap solution.

1 Q So the amount of irritation that was evidenced in the
2 eye of the test animals after a two-minute presence of the PCB
3 substance was equivalent to soap in the eye?

4 A It depends on how much soap and how long you leave it
5 there. But, yes, it cleared up entirely so that we -- you had
6 a red eye -- you had redness of the eye, of course, just as
7 though if you took a shower in the morning you'd get redness of
8 the eye if you get soap in it. But I am not equating PCB with
9 Ivory soap. But that is -- a 10 to 20 percent Ivory soap solu-
10 tion was at that particular time the control subject -- the
11 control substance that was used in rabbit tests back in the
12 '40's when we did these tests.

13 Q Did Monsanto ever advise purchaser or/and users that
14 PCB's were a corrosive?

15 A Corrosive -- no, never.

16 Q Okay. In your opinion, is the availability of eye-
17 wash and shower facilities within one minute of a work area
18 where contact with PCB's might occur sufficient to protect
19 against adverse health effects from that contact?

20 A Yes.

21 Q And what's the basis of your opinion?

22 A Because I've seen people who have gotten the material
23 into their eye, and by the time they got over to an eye fountain
24 or to a bucket of water, more time elapsed than a minute and
25 their eyes were not -- suffered no permanent damage at all.

1 I've also seen people who had skin contact with fairly large
2 amounts of it who wiped it off with any kind of a cloth, and
3 then went down to the locker room and took a shower and changed
4 their clothes and had no ill effects.

5 Q Have you had an opportunity to review the photographs
6 that have been admitted as Complainant's Exhibits 1 and 7?

7 A Yes.

8 Q Have you visited the basement capacitor handling
9 location at 2004 Dana Avenue?

10 A Yes.

11 Q And when did you make that visit?

12 A Yesterday.

13 Q Did you observe during that visit the handling of
14 capacitors by C.G. & E.'s employees in the basement at Dana
15 Avenue?

16 A Yes.

17 Q And what did you observe?

18 A I observed that there were 55-gallon steel drums that
19 had -- in some instances were empty -- in some instances had
20 a capacitor inside that had a large trash bag -- a plastic,
21 probably polyethylene, trash bag -- in which these capacitors
22 were. I also observed them pick up the capacitors with a hoist,
23 move them over to the top of the drum, pulled this large sack--
24 50-gallon plastic sack--around the capacitor, let them drop the
25 capacitor in, tie a knot in the top, and put this into the drum.

1 I also saw them pick up capacitors that weighed about ten
2 pounds with their hands, take them over and drop them in a
3 sack, and drop them in the drum.

4 Q Did you observe during your visit whether any warning
5 signs were present in the work place?

6 A Yes, there were yellow placards that --

7 MR. HESLOP: Objection, Your Honor. I -- the visit
8 here yesterday, which is quite subsequent to the inspection.
9 And I fail to see the relevance unless C.G.& E. is attempting
10 to establish abatement of the problem at this time.

11 JUDGE CUTLER: Well, I fail to see the relevancy of
12 a visit that he had yesterday, as to the time when the
13 citations were charged.

14 MS. BRINKMAN: Fine. I'll withdraw the question.

15 JUDGE CUTLER: Okay.

16 BY MS. BRINKMAN: (resuming)

17 Q Dr. Kelly, have you read the transcript of all of
18 the testimony which was given in this proceeding on June 10th
19 and 11th?

20 A Yes.

21 Q I'd like to give you a hypothetical situation now.
22 In fact, I'll give you three of them, if I may.

23 For the first, I want you to assume that a group of
24 three or four C.G.& E. employees handle capacitors in the base-
25 ment of Dana Avenue as depicted in the photographs in

1 Complainant's Exhibits 1 and 7. I want you to assume further
2 that the capacitors contain the 42 percent chlorine grade PCB.
3 Assume further that the tasks performed in handling the capa-
4 citors are removing capacitors from racks, lifting capacitors
5 by hand and by fork-lift truck into drums and larger containers
6 and lifting capacitors out of drums by fork-lift truck in order
7 to make a record of the capacitor's serial number. Assume
8 further that only about 15 percent of the capacitors handled
9 are leaking. And assume further that the employees engaged in
10 this capacitor-handling operation for no more than four hours
11 on an occasion. I want you to assume finally that the employees
12 engaged in this capacitor-handling operation on an average of
13 one occasion per month.

14 Now, based on your education and training in occupa-
15 tional medicine and your experience of over 35 years at Monsanto
16 with employees exposed to PCB's, do you have an opinion to a
17 reasonable medical certainty, whether the exposure to PCB's
18 which I have asked you to assume, creates a substantial
19 probability that death or serious physical harm could result
20 to those employees?

21 A I do have an opinion.

22 Q And what is that opinion?

23 A It is my opinion that the exposure as you listed and
24 the exposure as depicted in the transcripts and the exposure
25 as illustrated by the pictures taken and submitted in evidence -

1 such an exposure by the C.G. & E. employees does not constitute
2 a --

3 Q Let me repeat it for you. Whether the exposure
4 creates a substantial probability that death or serious physical
5 harm could result in the employees.

6 A Does not create a substantial possibility --

7 Q Probability.

8 A -- probability that death or serious harm may exist.

9 Q What is the basis of your opinion?

10 A It's based on two things. One is the product itself,
11 and the other is the exposure. The product itself is an
12 industrial chemical, of course; it is not innocuous like Coca-
13 Cola. But for 35 years, I have seen workers exposed to much
14 greater exposure -- much greater amounts of PCB than has been
15 listed in the transcript. In the transcript, they stated that
16 17 micrograms was present on the skin of a person's body. I
17 think we ought to put that in a frame of reference we all know.
18 A microgram is a thousandth -- is a millionth of a gram. There
19 are four grams, roughly, in a teaspoonful. So that one micro-
20 gram is 1/250th of a teaspoonful -- or it's one -- and a drop
21 is 15 -- 15 drops roughly in a gram -- so we're talking about --
22 about 1/20,000th of a drop of this material on somebody's skin.
23 And I do not think that that is a sufficient exposure to cause
24 serious damage.

25 That -- from this -- it is true that I was at the

1 plant yesterday, which is not the time of the inspection. But
2 I observed the dike. I observed the condition of the floor.
3 There was not the staining of the floor which would be present
4 had there been a great deal of spillage. Anyone who is familiar
5 with a garage knows that you have oil from car drips there, and
6 you don't get the oil off the floor. So I didn't see any of
7 the staining on the floor that I would have thought that should
8 have existed had there been masses -- massive spilling.

9 MR. HESLOP: I'm going to object to that testimony,
10 Your Honor, on the basis of my previous objection.

11 JUDGE CUTLER: Objection sustained as to that portion
12 of his testimony.

13 MR. HESLOP: I would move that it be stricken as well.

14 JUDGE CUTLER: All right.

15 BY MS. BRINKMAN: (resuming)

16 Q Dr. Kelly, you observed the photographs in Complain-
17 ant's Exhibits 1 and 7. Would you tell whether you saw the
18 kind of spillage that might indicate a greater exposure -- the
19 greater exposure of which you speak in those photographs?

20 A I did not see evidence in those photographs.

21 Q I want to ask you now for my second hypothetical
22 to assume the same exposure to PCB's which I have previously
23 described in my first hypothetical, except I want you to assume
24 that the employees engage in that capacitor-handling operation
25 on two or three occasions per month instead of one occasion per

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1 month, and I ask you whether you have, based on your education
2 and training and your 35 years of experience with employees
3 exposed to PCB's, an opinion, to a reasonable medical certainty,
4 whether that exposure which I ask you to assume in my second
5 hypothetical creates a substantial probability that death or
6 serious physical harm could result to the employees?

7 A I do not consider that exposure sufficient that death
8 or serious physical harm is a --

9 Q Could result?

10 A -- would result as a possibility -- as a probability.

11 Q What is the basis for your opinion that you have just
12 given?

13 A The same reason that because I have seen individuals
14 at Monsanto plants and at some of our customers' plants who
15 were exposed considerably more at a magnitude of ten or 100
16 times more seriously exposed than the exposure as listed to me
17 in your question, and they did not experience any death or
18 serious harm.

19 Q For my third question, I ask you to assume the same
20 exposure to PCB's which I described in my first hypothetical,
21 except that I want you to assume that the employees engage in
22 the capacitor-handling operation on two or three occasions per
23 week. Based on that hypothetical, and based on your education
24 and training and your experience of over 35 years at Monsanto,
25 do you have an opinion, to a reasonable medical certainty,

1 whether that exposure to PCB's which I have just asked you to
2 assume in my third hypothetical creates a substantial probabi-
3 lity that death or serious physical harm could result to these
4 employees?

5 A I do not think it creates a substantial probability
6 that death or serious harm could result.

7 Q And the basis for your opinion?

8 A The same as the first two questions.

9 Q In your opinion, do the exposures that I described
10 in my hypotheticals 1 or 2 or 3 create a substantial probability
11 that some harm other than serious physical harm or death could
12 result to those employees?

13 A I would think that the only harm that they might get
14 from such an exposure as you described is if there was a splash
15 that got into their eye, or if they had eye contact from gloves
16 that might be PCB-contaminated. And I do not consider them
17 serious harm, but I think that could occur.

18 Q Did you earlier describe that kind of eye contact
19 resulting in irritation --

20 A Yes, I did.

21 Q -- as a diminimus harm?

22 A That's right.

23 Q Doctor, are you familiar with Dr. Renate Kimbrough's
24 animal studies concerning PCB exposure?

25 A Yes. She -- I am familiar with the paper she has

1 written.

2 Q Fine. Are you familiar with the study that she did
3 -- a feeding study on AROCLOR 1260?

4 A Yes.

5 Q What is your understanding of her findings as far as
6 the instance of cancer of the liver in rats that were fed PCB's
7 in that study?

8 A Dr. Kimbrough's study with rats using 19 -- AROCLOR
9 1260 was a direct contrast to a study that Monsanto had carried
10 out by the Industrial Bio-Test Laboratories of Chicago. That
11 study of theirs included AROCLORS 1254 and 1260 and, I believe
12 -- may I look at my notes, Your Honor?

13 JUDGE CUTLER: Are there any objections?

14 MR. HESLOP: I have no problem with that.

15 JUDGE CUTLER: Refresh his recollection.

16 BY MS. BRINKMAN: (resuming)

17 A They used 1242, 1254, and 1260. This consisted of
18 a two-year lifetime feeding test to rats and to dogs at three
19 levels. There were no tumors found in the liver of any of these
20 animals. These tumors -- these slides after Dr. Kimbrough's
21 study came out were rechecked by pathologists at the University
22 of Chicago, by pathologists at the Eppley Institute for Cancer
23 Research which is connected to the University of Nebraska
24 Medical School, and they agreed with the finding that there was
25 no tumors. This, of course, was 180 degrees difference from

1 Dr. Kimbrough's finding. So she was good enough to send slides
2 of her liver specimens to -- this happened after I left -- I'm
3 not sure if that happened after I left or just about the time
4 I was retiring -- so anyway, her slides were sent to Dr. Pavis
5 Pour, who is -- Pour, P-O-U-R -- at the Eppley, E-P-P-L-E-Y,
6 Institute for Cancer Research in Omaha, Nebraska. This is a
7 cancer research organization that is headed by Dr. Philip
8 Shubik, S-H-U-B-I-K, who was a cancer research man at the
9 Chicago Medical School. Dr. Pour disagreed with Dr. Kimbrough's
10 findings that there were 24 hepatocellular carcinomas.

11 MR. HESLOP: I'm going to object, Your Honor, here.
12 We're not dealing with the submitted report. We're dealing on
13 work -- evaluative work which was done by someone other than
14 Dr. Kelly. There's no foundation as to an evaluation by Dr.
15 Kelly of these specific results or that he even is qualified
16 as a toxicologist. He may be, but there is no foundation on
17 this point. And we're getting into the evaluative work of
18 another individual.

19 MS. BRINKMAN: Your Honor, I with a few more questions
20 to Dr. Kelly can establish that the work by the Eppley Insti-
21 tute was done at the request of Monsanto under the sponsorship
22 of Dr. Kelly's employer, and we do have a copy for admission
23 to the record of the response to Monsanto of the work that was
24 requested to be done on their behalf.

25 JUDGE CUTLER: All right. I'll permit the question

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1 since you have the supporting documents there.

2 BY MS. BRINKMAN: (resuming)

3 Q Doctor, if I may first ask you a question about the
4 review of Dr. Kimbrough's slides that was performed by the
5 Eppley Institute for Research in Cancer. Was that review per-
6 formed at the request of the Monsanto Company?

7 A That is correct.

8 Q And were the results of that review reported back to
9 Monsanto by the Eppley Institute and Dr. Pour?

10 A Yes.

11 Q Doctor, I'll ask you to look at what has been marked
12 as Respondent's Exhibit No. 7, and ask if you can identify that
13 document.

14 (The document referred to was
15 marked Respondent's Exhibit 7
16 for identification.)

17 A Yes, that is the document that was received on
18 October the 31st, 1975, by the Monsanto Company.

19 Q And can you identify what that document is?

20 A Yes. This is a report on the evaluation of tissues
21 that -- from Sherman rats fed AROCLOR 1260 by Dr. Kimbrough.

22 Q And I would ask that that document be admitted into
23 the record.

24 JUDGE CUTLER: Any objection?

25 MR. HESLOP: I'm going to object, Your Honor, I still

1 -- on the same grounds as previously stated that it's an
2 evaluation -- someone outside this witness. It is not the
3 witness's own evaluation of the situation. Now it's admissible
4 to say he has received that and -- essentially, Your Honor, to
5 prove the truth of what is contained in here, I think it is
6 inadmissible. If it's being admitted as something he drew
7 upon to support any of his other conclusions with regard to
8 the hazards of PCB exposure --

9 JUDGE CUTLER: Well, the objection's overruled, and
10 the exhibit is admitted.

11 (The document referred to, having
12 been previously marked for identi-
13 fication as Respondent's Exhibit
14 7, was received in evidence.)

15 MS. BRINKMAN: (resuming)

16 Q Doctor, if I may, I'd like to ask you a couple of
17 questions about the work that was done at Bio-Test Laboratories.
18 Am I correct that that work was done at the request of the
19 Monsanto Company?

20 A That is correct.

21 Q And were the results of that work reported back to
22 Monsanto by Dr. Calandra?

23 A Yes.

24 Q Doctor, let me show you what's been marked as
25 Respondent's Exhibit No. 8, and ask you if you can identify

1 that document.

2 (The document referred to was
3 marked as Respondent's Exhibit
4 No. 8 for identification.)

5 A Yes, I can.

6 Q What is the document?

7 A Well, this is a review by Dr. Calandra of the tech-
8 nical and regulatory aspects of the AROCLORS. In this, Dr.
9 Calandra reviews what work has been done at the various labora-
10 tories, and he quotes the differences in the results found by
11 various investigators.

12 Q And are the results at the Bio-Test Labs included in
13 that review?

14 A The reports are -- the work carried out does not list
15 the AROCLOR studies per se. It does state the opinion of Drs.
16 Gordon, Richter, et cetera, on the basis of their own studies
17 of AROCLOR and on their experience is that AROCLORS are not
18 carcinogenic. Now that report, of course, has been submitted
19 to the Food and Drug Administration and it's been submitted to
20 the Eckhart Committee of Congress -- the Calandra studies.

21 Q Let me ask you whether Monsanto requested independent
22 pathologists, in addition to Bio-Test, to review the Bio-Test
23 study that was done for Monsanto.

24 A Yes. They had Dr. Pour and Dr. Richter of the Uni-
25 versity of Chicago Medical School to review the slides.

1 Q Was that Dr. Pour or Dr. Gordon?

2 A I believe Dr. Pour reviewed these also. I may be
3 wrong. Dr. Pour probably did not review these slides. Dr.
4 Gordon and Dr. Richter of the University of Chicago -- Dr.
5 Richter is an independent pathologist.

6 Q I believe your testimony was that on the basis of
7 Bio-Test's own review of the slides and the independent review
8 of Drs. Gordon and Richter, the AROCLORS--both 1254 and 1260--
9 were found to be noncarcinogenic in the animals -- the two
10 species that were tested?

11 A Also 1242.

12 Q 1242. Thank you. I would ask that Respondent's
13 Exhibit No. 8 be admitted.

14 JUDGE CUTLER: Objection?

15 MR. HESLOP: I have the same objection --

16 JUDGE CUTLER: All right.

17 MR. HESLOP: -- as previously stated to R-7.

18 JUDGE CUTLER: Objection's overruled. The exhibit's
19 admitted.

20 (The document referred to, having
21 been previously marked for identi-
22 fication as Respondent's Exhibit
23 8, was received in evidence.)

24 THE WITNESS: Your Honor, what do I do this?

25 MR. HESLOP: Your Honor. I have been handed a message

1 Could I take -- could we take a five-minute break? Someone
2 wanted to discuss something with me. This is a convenient time
3 for --

4 MS. BRINKMAN: I have no objections.

5 MR. HESLOP: -- a break.

6 JUDGE CUTLER: How much further do you have in your
7 examination?

8 MS. BRINKMAN: I have about ten minutes.

9 JUDGE CUTLER: Will you be prepared then to do your
10 cross-examination as soon as the direct examination is through?

11 MR. HESLOP: If we could take a -- could we take a
12 15-minute break at this point and --

13 JUDGE CUTLER: Because I don't want to just take a
14 break now and then a break about ten minutes from now.

15 MR. HESLOP: Right.

16 JUDGE CUTLER: But do you have to have a break right
17 now?

18 MR. HESLOP: Yes. There is a matter that someone
19 wanted to discuss with me, and they had --

20 JUDGE CUTLER: All right. We'll take a recess, then.

21 MR. HESLOP: Thank you, Your Honor.

22 MS. BRINKMAN: Thank you.

23 (Whereupon, a short recess was taken.)

24 JUDGE CUTLER: The hearing will be in order.
25

1 BY MS. BRINKMAN: (resuming)

2 Q Dr. Kelly, were the Bio-Test slides--the results of
3 the Bio-Test study--were they sent to the F.D.A.?

4 A They were sent to the F.D.A. and the F.D.A. kept them
5 for a period of at least three years.

6 Q And did --

7 A Apparently --

8 Q -- the F.D.A. report back to Monsanto that anything
9 abnormal in those slides had been discerned by the F.D.A. or
10 any of its consultants?

11 A We got no report of any kind, but the F.D.A. did
12 allow PCB's to be used in foods at a certain level.

13 Q Has the National Cancer Institute, to your knowledge,
14 performed any animal study to determine whether PCB's cause
15 cancer?

16 A They have done a study on AROCLOR 1254.

17 THE WITNESS: What do I do with 7?

18 BY MS. BRINKMAN: (resuming)

19 Q I'll ask you to look at what has been marked as
20 Respondent's Exhibit No. 9 and ask you if you can identify that
21 document?

22 (The document referred to was
23 marked for identification as
24 Respondent's Exhibit No. 9.)

25 A Yes, this is a publication by the United States

1 Department of Government of work done at the National Cancer
2 Institute in Bethesda, Maryland, on our carcinogenic -- car-
3 cinogenesis program. It is the bio-assay of AROCLOR 1254 for
4 possible carcinogenicity.

5 Q And what is your understanding of the findings of
6 the National Cancer Institute study?

7 A I will quote what they said.

8 "AROCLOR 1254 was not carcinogenic in Fischer 344
9 rats; however, a high incidence of hepatocellular proliferative
10 lesions in both male and female rats was related to the
11 treatment."

12 But the bottom line, I think, is the first statement.
13 AROCLOR 1254 was not carcinogenic.

14 Q And that was the Monsanto product that was being used
15 in that study?

16 A Yes.

17 Q And the N.C.I. bio-assay of AROCLOR 1254 was done
18 after Dr. Kimbrough's study?

19 A It was published in 1977, and they -- I find it diffi-
20 cult to find out when they did the study. But it is my impres-
21 sion that it was done after Dr. Kimbrough's study.

22 Q Fine. In preparing for your testimony here today,
23 did you consult and rely on what's been marked as Respondent's
24 Exhibit No. 9, the N.C.I. bio-assay?

25 A That was one of the items I relied on.

1 Q Okay. Did you also rely on Respondent's Exhibits
2 No. 8 and No. 7?

3 A If No. 7 was Dr. Pour's report, I relied on that.
4 No. 8 was Dr. Calandra's review--I relied on that.

5 MS. BRINKMAN: I would move that Respondent's Exhibit
6 No. 9 be admitted.

7 JUDGE CUTLER: Any objection to 9?

8 MR. HESLOP: No objection.

9 JUDGE CUTLER: Admitted.

10 (The document referred to, having
11 been previously marked for identi-
12 fication as Respondent's Exhibit
13 No. 9, was received in evidence.)

14 BY MS. BRINKMAN: (resuming)

15 Q Doctor, are you familiar with the N.I.O.S.H. criteria
16 document on polychlorinated biphenyls?

17 A Generally familiar, yes.

18 Q Am I correct that that was published about 1977?

19 A That is correct.

20 Q Have you personally conducted a review of literature
21 on research in polychlorinated biphenyls that has occurred since
22 the research set forth in the N.I.O.S.H. criteria document?

23 A Yes, I have.

24 Q How did you conduct that review?

25 A I have access to a computerized set of data banks.

1 And we asked the computer to give us all information that would
2 be available on laboratory human studies of carcinogenesis with
3 PCB.

4 Q In your review, did you discover any research which
5 has been conducted and reported since that reported in the
6 N.I.O.S.H. criteria document which indicates that polychlorinated
7 biphenyls cause cancer in animals or in humans?

8 A I saw no report of any animal studies that were long-
9 term studies that lend support to the idea that AROCLOR -- that
10 PCB's cause cancer in the data that was spewed out by the com-
11 puter. As far as humans are concerned, there was this one case
12 that developed at the Mobil Oil Refinery in New Jersey, in which
13 three cases of malignant melanoma occurred in individuals who
14 worked with PCB -- but they also worked in a refinery. And an
15 oil refinery has a myriad of chemicals in the residues of the
16 distillation stills. There was no quantification of PCB, and
17 there were no -- there were -- there was no quantification of
18 the exposure, and there was no elimination of any of the other
19 types of exposure.

20 I also -- this was not in the computerized results
21 that I obtained -- but I obtained from Dr. George Roush the
22 personal communication in which he investigated histories of
23 the workers at our East St. Louis plant who worked with PCB's
24 for 30 years, and no cases of malignant melanoma were present.
25 I had the opportunity to talk with Dr. Bahn about a year ago,

1 and I asked her about the -- if she had any problems with the
2 concept of this being caused by PCB when these employees were
3 exposed to any number of refinery chemicals, and she said, yes,
4 she did have a problem with that.

5 Q And was Dr. Bahn the individual who first reported on
6 the incidence of melanoma in the Mobil Refinery?

7 A She was the senior author.

8 Q Doctor, has Monsanto published any document that is
9 a summary of the studies that have been done concerning the
10 uses, environmental and health effects of polychlorinated bi-
11 phenyls?

12 A Yes, it has.

13 Q Let me show you, though, what's been marked as
14 Respondent's Exhibit No. 10, and ask you if you can identify
15 that document?

16 (The document referred to was
17 marked for identification as
18 Respondent's Exhibit No. 10.)

19 A Yes, that is the document that has been published in
20 the last four to six weeks by the Monsanto Company. It is a
21 report on the uses, environmental and health effects and dis-
22 posal of polychlorinated biphenyls.

23 Q In your opinion, is this Monsanto report an accurate
24 review of the state of research on uses, environmental and
25 health effects and disposal of PCB's?

1 A Well, I think it's, as they state, it's a frank,
2 comprehensive presentation of the relative aspects of PCB
3 issues. You must realize, of course, that some people may take
4 a different point of view on what the accuracy or the relevancy
5 of some of the data here is concerned, much as some of the
6 Monsanto people take a different point of view of Dr. Kimbrough's
7 results than Dr. Kimbrough takes.

8 Q Did you rely on the recent Monsanto report which has
9 been marked Respondent's Exhibit No. 10 in preparing your
10 testimony for today?

11 A Yes, especially in epidemiological studies, because
12 those were carried out after I left Monsanto in 1975.

13 Q Thank you.

14 MS. BRINKMAN: I move that Respondent's Exhibit No.
15 10 be admitted.

16 JUDGE CUTLER: Any objection?

17 MR. HESLOP: No -- excuse me.

18 JUDGE CUTLER: Any objection?

19 MR. HESLOP: No objection.

20 JUDGE CUTLER: All right. It's admitted.

21 (The document referred to, having
22 been previously marked for identi-
23 fication as Respondent's Exhibit
24 No. 10, was received in evidence.)

25 MS. BRINKMAN: I have no further questions.

1 JUDGE CUTLER: Cross-examine?

2 MR. HESLOP: Thank you.

3 CROSS-EXAMINATION

4 BY MR. HESLOP:

5 Q Dr. Kelly, what is your background in toxicology?

6 A I have been responsible for obtaining, reviewing, and
7 criticizing toxicological reports of the work done by Monsanto
8 at independent laboratories since 1938.

9 Q Have you done any toxicological research yourself?

10 A No.

11 Q Do you consider yourself an expert in the field of
12 toxicology? Toxicological research?

13 A I think I'm an expert in interpreting the reports.
14 I'm not an expert in doing it.

15 Q In the field of pathology, what has been your
16 experience in that field?

17 A Practically none.

18 Q I would presume at that point you would not consider
19 yourself an expert in pathology?

20 A No. I would rely on experts.

21 Q All right. Why did Monsanto cease production of PCB's
22 in 1977?

23 A Monsanto ceased production in 1977 because there was
24 an accumulation of evidence that showed that these compounds
25 were persistent in the environment. They were present in the

1 food chain. They would be discharged into the rivers. The
2 plankton would eat these -- the shrimp would eat the plankton,
3 the fish would eat the shrimp, and the eagles and the peregrine
4 falcons would eat the fish -- especially the liver -- and the
5 PCB's were magnified in the food chain of these water species
6 and caused serious problems in the birds. They laid eggs with-
7 out shells or with very thin shells so that the hatch of the
8 many species of fish-eating birds was cut down enormously. So
9 Monsanto recognized that this was an environmental hazard and
10 therefore stopped it. They did not stop it because of any
11 worry about health effects in their employees or in their users
12 of these materials.

13 Q And how long was it produced at the Anniston, Alabama,
14 plant?

15 A Approximately from 1935 to the middle of 1940's.

16 Q And why -- do you know why production stopped at the
17 Anniston plant in the mid-40's?

18 A Oh, yes, it was a smaller operation, and it was an
19 inefficient operation. And it was far removed from the uses
20 -- from the customers so we made a bigger plant up at the East
21 St. Louis location.

22 Q And from the late 40's on, the East St. Louis plant
23 was the only PCB-producing plant of Monsanto?

24 A With the exception of Wales.

25 Q That would be in England?

1 A That's right.

2 Q All right. You had indicated studies by Drinker and
3 Bennett. Now what did they show?

4 A They showed that some of the PCB's caused liver
5 problems. They showed that if you dosed -- some of them did
6 not show a liver problem, so though Drinker dosed their -- his
7 animals with a known liver toxin, carbon tetrachloride, which
8 presumably knocked out a good part of the liver, and then he
9 dosed them with PCB's and developed liver hepatitis, a chemical
10 reaction of the liver, he did not carry out carcinogenic tests;
11 he did not carry out tests in 1938 that are the type of tests
12 that were done in the 60's.

13 Q You described your observations of employees of
14 Monsanto --

15 JUDGE CUTLER: Mr. Heslop, you'll have to stay close
16 to the microphone.

17 MR. HESLOP: I'm sorry, Your Honor.

18 BY MR. HESLOP: (resuming)

19 Q You described your studies of the employees of
20 Monsanto who had been exposed to PCB's, and I believe your
21 testimony was that you did not see any serious health effects.
22 Is that correct?

23 A That is correct.

24 Q What did your studies consist of?

25 A The studies consisted of evaluation of the health

1 records of the employees over a number of years.

2 Q Did it consist of any post-employment evaluation of
3 any employees?

4 A With the exception of the fact that we had a cancer
5 index for all employees who are covered under our group
6 insurance plan; this group insurance plan covered about 95 per-
7 cent of the people up until the time it was made non-contributor
8 Then it covered 100 percent of the ti -- of the people. When
9 anybody died of a cancer, this was reported to the medical
10 department, and it was put on our cancer index. We could not
11 find any cancer of the livers in any of our people who were
12 exposed to PCB's.

13 Q When did this reporting system go into effect?

14 A Approximately 1950.

15 Q 1950. And it has been in effect until this date?

16 A It was until 1975. I imagine it's -- it's increased
17 because now they're computerizing all their work records and
18 all their morbidity and mortality studies, so I imagine it's
19 enhanced. I can only speak until December of '55 -- '75.

20 Q Did you rely on anything else other than these cancer
21 index reports?

22 A For post-employee -- for post-retirement employees?

23 Q Post-retirement employees, yes.

24 A Nothing.

25 Q Was there any information concerning whether they were.

1 in fact, exposed to PCB's?

2 A When? I don't follow --

3 Q During their employment?

4 A Was there any information --

5 Q Did you have any information concerning these employees
6 that you said were studied concerning their levels of exposure
7 to PCB's?

8 A The levels of exposure were not quantified from the
9 standpoint of air analysis until probably the early 70's.

10 Q How many employees did this study cover?

11 A There were 350 in one study at the East St. Louis
12 plant. And there were between 40 and 60 at the Anniston,
13 Alabama, plant.

14 Q And were they compared to any employees that were not
15 exposed to PCB's?

16 A No. We were looking just for the one item of liver
17 problems.

18 Q By liver items -- or liver problems, were you
19 addressing liver problems in the sense of carcinoma?

20 A Carcinoma, chemical hepatitis.

21 Q You had also indicated that you had observed certain
22 individuals exposed to considerably more exposure than was
23 found in the basement area of the Cincinnati Gas and Electric
24 facility?

25 A That is correct.

1 Q And you had indicated that the employees did not
2 exhibit any death or serious physical harm?

3 A That is correct.

4 Q Were these the same employees you were talking about
5 with regard to your Monsanto study?

6 A Yes, these were all Monsanto employees.

7 Q All right. So this was not a different set of
8 employees you were referring to your --

9 A No. With the exception that one time I went to a --
10 a thermometer manufacturing institution someplace in the East.
11 They were making bellows -- transfor -- bellows part of a trans-
12 former. These people had their operation, which I certainly
13 don't approve of -- anyway, this is what they were doing. They
14 were immersing these bellows in liquid AROCLOR, filling the
15 bellows up, pulling them out with their hands, and setting them
16 on trays. They had some chloracne of various parts of the body
17 -- not -- not very gross, I didn't think. But after we told
18 them to use an instrument to pick these things up, they had no
19 more chloracne. I did not follow them at all after that one
20 particular visit.

21 Q You did no follow-ups then at that point?

22 A No.

23 Q I'd like to ask you what is -- concerning what has
24 been marked as Exhibit R-10 --

25 A I have one.

1 Q Do you know when this report was prepared?

2 A It was prepared in late 1979 or early 1980. I
3 received a copy one week ago, and the individual who gave me
4 the copy said he received the copies from the printer about
5 two weeks prior to that.

6 Q I'd also like to refer you to what has been marked --
7 or what has been marked as Exhibit R-9 as the bio-assay -- do
8 you have that with you there?

9 A May I have it back? It's over there, I think, Miss,
10 the second one. Yes.

11 Q I'd like to refer you to page 26 of that report --

12 A Yes.

13 Q And the second line -- well, at the end of the first
14 line on that page, "...however, a high incidence of hepato-
15 cellular proliferative lesions in both male and female rats was
16 related to treatment."

17 I would ask you first, what are hepatocellular pro-
18 liferative lesions?

19 A Hepatocellular obviously refers to liver cells.
20 Proliferative means that they're growing more than -- than the
21 normal liver cells. We find that if you give a chemical that
22 is harmful to the liver, the liver will enlarge. The liver
23 weight goes up. The reason it goes up is because you have
24 hepato-proliferative lesions in the liver.

25 Q Thank you. Referring you to Respondent's Exhibit 7,

1 and also hand him Exhibit 8, if you would, please.

2 First, to Respondent's Exhibit 7, who is Dr. Pour?
3 Do you know Dr. Pour?

4 A Dr. Pour is professor of pathology at the Eppley
5 Institute for Research in Cancer, which is a division of the
6 University of Nebraska Medical Center at Omaha.

7 Q And do you know whether Dr. Pour prepared this report
8 that was submitted?

9 A I cannot answer that myself, except that the covering
10 letter said, "...please find the report..." -- which -- in which
11 he said -- it appears it's his report. I don't know whether
12 he prepared the report or not, but the impression that I receive
13 from people at Monsanto who engaged Dr. Pour was he was engaged
14 to check the slides of Dr. Kimbrough, and we got a report from
15 Dr. Pour, so I would imagine Dr. Pour prepared the report.

16 Q Were any -- does the report reflect the finding of
17 any lesions on the livers of any --

18 A Oh, yes. It does.

19 Q Similar to the lesions referred to at the -- on page
20 26 of our 9? The hepatocellular proliferative lesions?

21 A He saw about 20 animals in which the nodules were
22 large, and it could be referred to as hepatocellular prolifera-
23 tive. He also stated, "However, no cytological," -- that means
24 cells, Your Honor, "criteria for malignancy could be found."

25 Q Was the test over a sufficient period of time to

1 detect cytological failures, do you know?

2 A These are Dr. Kimbrough's studies.

3 Q Yes, but, do you know whether their study took into
4 account any further damage which may have occurred?

5 A Who is "their", Mr. Heslop?

6 Q The -- Dr. Pour.

7 A Oh, well, Dr. Pour did not do a study --

8 Q Right.

9 A He critiqued or he examined the slides that were
10 furnished to him by Dr. Kimbrough.

11 Q All right. He just examined the photograph -- or
12 the slides --

13 A The slides.

14 Q -- depicting the liver?

15 A That is correct.

16 Q All right. So that it was not an independent test
17 by Dr. Pour?

18 A He did not feed rats.

19 Q Right. Okay. Respondent's Exhibit 8 -- that is the
20 Calandra report. Who again is Dr. -- at the end on the last
21 page, it reflects J. C. Calandra.

22 A Dr. Calandra --

23 Q Yes.

24 A -- is the professor -- is a professor of pathology at
25 Northwestern University Medical School. He has a Ph.D. and an

1 M.D. degree -- he was former -- he was the founder and former
2 president of Industrial Bio-Test Laboratories, which is an
3 independent testing laboratory.

4 Q All right. Did you personally review the data of
5 Bio-Test study?

6 A I personally -- the raw data?

7 Q Yes.

8 A No, I did not.

9 Q You were just advised of the conclusions of that
10 study?

11 A That is right. Except that we had pathologists who
12 went up to Industrial Bio-Test during the course of the review
13 -- of the test and would review the animals and review how the
14 test was getting along.

15 Q Were these pathologists from Monsanto or independent
16 pathologists?

17 A They were not pathologists. They were toxicologists.
18 It was Dr. Hunt, who is a Ph.D. toxicologist who previously
19 was with the health -- the F.D.A. and who came to work with
20 Monsanto in 1960. He died in 1970, I believe.

21 MR. HESLOP: Excuse me.

22 Q Do you know whether Bio-Test Laboratories are still
23 in existence?

24 A They were in existence in 1975. I do not know if
25 they still are in existence.

1 MR. HESLOP: I have nothing further, Your Honor.

2 JUDGE CUTLER: Mr. Hauck?

3 MR. HAUCK: No questions, Your Honor. Thank you.

4 JUDGE CUTLER: Redirect?

5 MS. BRINKMAN: No redirect.

6 JUDGE CUTLER: Thank you, Doctor, you're excused.

7 THE WITNESS: Thank you, Your Honor.

8 (The witness was excused.)

9 JUDGE CUTLER: Does the Respondent have anything
10 further?

11 MS. BRINKMAN: Nothing further, Your Honor.

12 JUDGE CUTLER: Government?

13 MR. HESLOP: May I have one moment here?

14 Your Honor, if we may, we would -- has the Respondent
15 rested?

16 JUDGE CUTLER: Yes.

17 MR. HESLOP: We would like to call Dr. Kimbrough on
18 rebuttal, please?

19 JUDGE CUTLER: All right. Are you sure this is in
20 rebuttal?

21 MR. HESLOP: Yes.

22 Whereupon,

23 RENATE D. KIMBROUGH, M.D.

24 was recalled as a witness by counsel for the Government and,

25 having been previously duly sworn, was further examined and

1 testified as follows:

2 DIRECT EXAMINATION

3 BY MR. HESLOP:

4 Q In regard --

5 JUDGE CUTLER: Stay close to the microphone.

6 MR. HESLOP: I'm sorry, Your Honor.

7 BY MR. HESLOP: (resuming)

8 Q In regard to Respondent's Exhibit 9, which is the
9 bio-assay of AROCLOR 1254, are you familiar with that report?

10 A I read it a while back.

11 Q All right. If -- I will hand you, or if it could be
12 handed to you, please -- and I'm referring you to page 26 of
13 that report. Do you agree with the findings that the AROCLOR
14 compound tested was not carcinogenic?

15 MS. BRINKMAN: Objection. I'm not sure that's
16 rebuttal. I mean, she didn't conduct the test. I don't think
17 the proper foundation has been laid.

18 JUDGE CUTLER: Well, she's the Government's expert,
19 and you brought this into issue. I think it's a proper question.
20 The objection's overruled.

21 MS. BRINKMAN: Is the question, does she disagree
22 that 1254 does not cause cancer?

23 MR. HESLOP: Do you agree or disagree with the con-
24 clusions of the report?

25 A I have some problems with this report, and the problem

1 are related to the interpretation of these types of lesions by
2 different people. There's been a lot of confusion in the past
3 in that some people have called certain liver lesions prolifera-
4 tive, other people have said that they are tumors. Because of
5 some of the more recent findings, there've been reviews on this
6 subject, and there's been a lot of argument, which goes back
7 to the 60's and the 50's what these types of lesions in the
8 liver actually mean. There recently was a report that came
9 out of the National Academy of Science, which has tried to
10 reclassify the liver lesions. And what used to be called
11 hepatocellular proliferative lesions are now considered by
12 most people to represent actually tumors.

13 So, in a way, all of the people -- and I think also
14 Dr. Pour and everybody -- they have -- they have looked at the
15 same material and they have just interpreted it differently.
16 The International Agency for Research in Cancer, for instance,
17 has also reviewed the evidence that's available on polychlorinat
18 biphenyls, and they have come out with a report and have stated
19 that polychlorinated biphenyls are carcinogens.

20 Q Thank you.

21 MR. HESLOP: I have nothing further.

22 JUDGE CUTLER: Just a moment. Do you have any
23 questions?

24 MS. BRINKMAN: No.

25 JUDGE CUTLER: All right. Thank you, Doctor, you're

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1 excused.

2 (The witness was excused.)

3 JUDGE CUTLER: Does either side have anything further?

4 MR. HESLOP: I have nothing further, Your Honor.

5 JUDGE CUTLER: Mr. Hauck, do you have any evidence
6 to present?

7 MR. HAUCK: No, sir.

8 JUDGE CUTLER: You do not? I think, then, that will
9 wrap up the hearing.

10 MS. BRINKMAN: Your Honor, may I put forth a motion
11 to dismiss at this time on the various elements of the citation?
12 Or --

13 JUDGE CUTLER: Well, I believe since we have all of
14 the evidence in, I believe it to be more appropriate if you
15 want to present everything in the brief. I think what we now
16 have is a decision on the issue.

17 MS. BRINKMAN: Okay. I thought maybe there would be
18 a possibility of reducing the number of issues for briefing,
19 but if you would prefer that we -- you know, we brief the entire
20 thing and then await your decision, I certainly will agree with
21 that.

22 JUDGE CUTLER: Well, I think it would be appropriate
23 that we wait and see what the record has -- the transcript --
24 and go over all of the evidence. I don't want to rule on any-
25 thing now that I've denied the previous motions. And I don't

1 think it's appropriate that I would go ahead and make a ruling
2 and not have the record in front of me.

3 As I've indicated previously, you do have or have
4 had for some time the previous transcript of the hearing, and
5 today's will be relatively short. So when I receive my copy
6 of the transcript of today's proceedings, I'll so advise you.
7 Then you have 20 days from the time you receive yours within
8 which to file briefs.

9 So, if there's nothing further, I'll adjourn the
10 hearing. Off the record.

11 (Whereupon, at 11:30 a.m., the hearing in the above-
12 entitled matter was closed.)

13 * * * * *

AUTHENTICATION

This is to certify that the attached proceedings before the Occupational Safety and Health Review Commission in the matter of:

Docket Number 79-5974

Place of Proceeding Cincinnati, Ohio

Date of Proceeding July 29, 1980

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Nina L. Robertson
Nina L. Robertson
Signed LORD REPORTING SERVICE
6946 Tanya Terrace
Reynoldsburg, OH 43068