

ORIGINAL

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEVADA

NEVADA POWER COMPANY,

Plaintiff,

-vs-

MONSANTO COMPANY, GENERAL
ELECTRIC CORPORATION, et al.,

Defendants.)

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CV-89-555-LDG (LRL)

DEPOSITION OF JOHN H. CRADDOCK

On the part of the Plaintiff

March 19, 1993



Concannon
& Jaeger

General
Court
Reporters

705 Olive Street, Suite 604
St. Louis, Missouri 63101
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CV-89-555-LDG (LRL)

MONSANTO COMPANY, GENERAL)

ELECTRIC CORPORATION, et al.,)

Defendants.)

DISCOVERY DEPOSITION OF WITNESS, to be used in an action pending in the District Court of the United States, for the District of Nevada, wherein NEVADA POWER COMPANY is Plaintiff, and MONSANTO COMPANY, et al. are Defendants, pursuant to Notice, under the provisions of Rule 26 of the Rules of Civil Procedure, taken on March 19, 1993, at the law offices of Messrs. Husch & Eppenberger, 100 North Broadway, St. Louis, Missouri, before John T. Concannon, a Notary Public within and for the State of Missouri.

A P P E A R A N C E S

The Plaintiff was represented by Mr. Ralph A. Bradley, of the law firm of Bradley & Merrell, c/o Jones, Jones, Close & Brown, 300 South Fourth Street, Ste. 700, Las Vegas, Nevada, 89101.

The Defendant, Monsanto Company, was represented by Mr. Bruce A. Featherstone, of the law firm of Kirkland & Ellis, 1999 Broadway, Ste. 4000, Denver Colorado, 80202.

1 JOHN H. CRADDOCK, PhD
2 a witness of lawful age, being first sworn to tell the
3 truth, the whole truth, and nothing but the truth, deposes
4 and says as follows:

5 DIRECT EXAMINATION

6 QUESTIONS BY MR. BRADLEY:

7 Q. Mr. Craddock, my name is Ralph Bradley and I
8 introduced myself to you just a few moments ago, correct?

9 A. Correct.

10 Q. I represent Nevada Power Company in a lawsuit
11 that they brought against Monsanto, General Electric and
12 Westinghouse. You understand that, don't you?

13 A. Yes, I do.

14 Q. Are you here, today, represented by an
15 attorney?

16 A. Mr. Featherstone.

17 Q. If, during the course of the deposition, I ask
18 a question that's not clear, will you tell me?

19 A. Certainly.

20 Q. And if, at any time, you want to take a break,
21 just let us know and we'll accommodate you, all right?

22 A. That's fine.

23 Q. Have you had your deposition taken before?

24 A. Yes, I have.

25 Q. When?

1 A. Two or three times probably. The latest may
2 be a year-and-a-half ago, two years ago. Something like
3 that.

4 Q. And where was it that your deposition was
5 taken a year-and-a-half ago?

6 A. It was here, in St. Louis.

7 Q. And in what kind of case?

8 A. It was a environmental cleanup case.

9 Q. Involving what product or chemical?

10 A. It was involving PCBs.

11 Q. Do you remember the name of the case?

12 A. I think I was Thoreau Die Casting versus
13 Monsanto.

14 Q. Do you recall what the general areas you
15 covered in your deposition?

16 A. Vaguely. Some health effects, some regulatory
17 matters; general chemical and physical properties of PCBs,
18 things like that.

19 Q. All right. Prior to that, when did you have
20 your deposition taken?

21 A. It was probably a year, couple of years
22 earlier than that.

23 Q. In what case did you give testimony in, in
24 that matter?

25 A. I think it was known as the One Marketplace

1 case.

2 Q. And what was the general subject matter of
3 what you testified to in your deposition in that case?

4 MR. FEATHERSTONE: Well, as I said before, Mr.
5 Bradley, that's covered by a confidentiality protective
6 agreement order and for the same reasons, he won't describe
7 that. You know he testified there. I let him answer that
8 question, or he gave a deposition.

9 MR. BRADLEY: All right. As long as it's
10 clear I'm not waiving my right to question him in the event
11 you're wrong.

12 MR. FEATHERSTONE: I didn't ask you to waive
13 your right. I understand.

14 MR. BRADLEY: Well, let me ask it this way.
15 To make the record clear, are you instructing him not to
16 answer.

17 MR. FEATHERSTONE: I am.

18 MR. BRADLEY: Okay.

19 Q. (By Mr. Bradley) Prior to that, when did you
20 give a deposition?

21 A. I don't specifically remember another case but
22 I may have or I may not.

23 Q. Did you keep copies of the transcripts of your
24 deposition?

25 A. No.

1 Q. Have you testified in any trials?

2 A. I think the only thing I've testified in was
3 the One Market Plaza case.

4 Q. And the testimony you gave in the One
5 Marketplace case was in addition to the deposition you gave
6 in that case?

7 A. I believe that's correct.

8 Q. Did you review any documents in preparation
9 for today's deposition?

10 A. Yes.

11 Q. What documents did you review?

12 A. General literature that had to do with PCBs,
13 historical actions, publications.

14 Q. Did you seek out that literature yourself or
15 is that literature that was provided to you?

16 A. I provided a list of documents and it was
17 provided to me by counsel.

18 Q. Okay. To whom did you provide the list of
19 documents?

20 A. Mr. Featherstone.

21 Q. Do you recall what the titles were of any of
22 those documents?

23 MR. FEATHERSTONE: Well, which ones now, Mr.
24 Bradley?

25 MR. BRADLEY: The ones that he reviewed.

1 MR. FEATHERSTONE: Okay.

2 A. I don't recall specific titles, no.

3 Q. (By Mr. Bradley) Why don't you tell me what
4 you do recall about the documents you reviewed?

5 A. I asked for some generic --

6 MR. FEATHERSTONE: No. No, Dr. Craddock. In
7 response to that question, identify - to the extent you can
8 - the documents that you reviewed.

9 A. Okay. I looked at documents that had, by
10 Jacobson and documents by Greta Fine, and some documents by
11 Walter Rogan. I looked at some documents by Dr. Renata
12 Kimbrough; I looked at some documents submitted to the 1981
13 EPA rule-making by the Chemical Manufacturers Association
14 trade groups; I looked at copies of the Materials Safety
15 Data Sheet for PCBs which I had generated previously; I
16 looked at some documents that were published by EPRI
17 Electric Power Research Institute, had to do with
18 transformers that contained PCBs and other electrical
19 devices; I looked at -- Let's see. Reviewed articles of
20 health effects of PCBs that was put together by Dr. Gaffey
21 and published.

22 Q. (By Mr. Bradley) And published?

23 A. And published. That's generally most of it.

24 Q. Do you recall the date of the EPRI material
25 that you reviewed?

1 A. It was material from roughly 1982 to -- The
2 last conference was 1991.

3 Q. Did you review any EPRI material that was
4 generated in the 1970s?

5 A. No.

6 Q. 1960s?

7 A. No.

8 Q. Is Greta Fine a researcher?

9 A. Yes.

10 Q. Jacobson is a researcher?

11 A. Correct.

12 Q. Water Rogan is a researcher?

13 A. That's correct.

14 Q. Renata Kimbrough is a researcher?

15 A. Yes.

16 Q. Do you know the article, or excuse me, the
17 date of the article by Dr. Gaffey?

18 A. The -- I think the document that I looked at
19 was a 1981 document that was submitted as an appendix to
20 the Chemical Manufacturers Association comments to EPA. I
21 think it was subsequently published in Peer Review Journal
22 in '82 or '83. First document was a draft of an oral
23 presentation that he had made, preprint.

24 Q. I'm going to ask you some questions about your
25 educational background.

1 A. Okay.

2 Q. Where did you attend college?

3 A. Undergraduate school was Memphis State

4 University.

5 Q. Did you receive a degree from Memphis State?

6 A. Yes. A B.S. Degree.

7 Q. In what?

8 A. Chemistry.

9 Q. In what year?

10 A. 1958.

11 Q. What did you do upon completion of your

12 Bachelor's degree?

13 A. I went immediately to graduate school.

14 Q. Where?

15 A. Vanderbilt University in Nashville, Tennessee.

16 Q. I'm sorry?

17 A. Vanderbilt.

18 Q. Vanderbilt. Did you receive a graduate degree

19 from Vanderbilt?

20 A. Yes, I did.

21 Q. What degree?

22 A. Ph.D. in Chemistry.

23 Q. In what year?

24 A. 1961.

25 Q. And was your Ph.D. in a particular area of

1 chemistry?

2 A. Inorganic chemistry.

3 Q. What is inorganic chemistry?

4 A. Inorganic chemistry is the chemistry of other
5 than carbon animals primarily.

6 Q. What did you do for work upon completion of
7 your Ph.D?

8 A. I was employed by the M.D. Kellogg Company in
9 New York City, New York.

10 MR. FEATHERSTONE: N or M?

11 A. M.

12 MR. FEATHERSTONE: M?

13 A. Mother.

14 Q. (By Mr. Bradley) Was that in 1961?

15 A. 1961, correct.

16 Q. What was your job title there?

17 A. I think it was a research chemist, or research
18 specialist.

19 Q. And what kind of work did you do?

20 A. I investigated petrochemical catalytic
21 reactions using pressure metal atoms in solution.

22 Q. How long did you have that job?

23 A. I was with M. W. Kellogg until 1965.

24 Q. What did you do in 1965?

25 A. I joined Monsanto Company, St. Louis.

1 Q. Why did you join Monsanto?

2 A. Very good opportunity for a significant
3 promotion - group leader. Starting up a group of chemists
4 in this particular field, which was a hot field of
5 chemistry at the time.

6 Q. Were you solicited -- Was your employment
7 solicited or did you apply for a job?

8 A. No. I applied for a job.

9 Q. What was your job title when you began work
10 with Monsanto?

11 A. Again, it was something like a research
12 chemist. Maybe a research specialist.

13 Q. And what kind of work did you do as a research
14 specialist in 1965 with Monsanto?

15 A. I did exploratory work in chemistry of
16 petrochemicals. Catalytic chemistry, catalytic reaction
17 with precious metals.

18 Q. Similar to the work you did with M. W.
19 Kellogg?

20 A. Correct.

21 Q. How long did you have that job title?

22 A. Probably six months to a year.

23 Q. What was your next job title?

24 A. I think it was -- Whatever the title was,
25 research chemist or research specialist, it was more or

1 less a payroll category, which made me a senior staff
2 member. I had junior members that worked for me then.

3 Q. And were you doing the same type of work?

4 A. Yes.

5 Q. What was your next job title with Monsanto?

6 A. Research group leader.

7 Q. When were you a research group leader?

8 A. I started in '65. Probably '67 to '69,
9 something like that.

10 Q. What did you do as a research group leader?

11 A. I conducted research myself and managed a
12 small group of other chemists and chemical engineers doing
13 catalytic chemistry.

14 Q. Also with petrochemical reactions involving
15 precious metals?

16 A. Right.

17 Q. When was your next job title change?

18 A. Probably in about '71, '72. Somewhere in that
19 time frame.

20 Q. My notes indicate you were a research group
21 leader beginning in '67 and going to '69; is that correct?

22 A. Whenever the next job was. It was research
23 group leader one and research group leader two. These are
24 pay scale changes.

25 Q. And then what job title did you get in '71 or

1 '72?

2 A. I moved to the title of supervisor of
3 commercial development.

4 Q. What work did you do as supervisor of
5 commercial development?

6 A. This was a, sort of an interim position. The
7 director of the central research department was trying to
8 move projects faster from research into the operating units
9 of Monsanto. Central research is considered a corporate
10 function. Manufacturing was done in operating companies
11 which had profit responsibilities. This was a trial
12 program to see if they could take an active researcher, or
13 research manager who had moved projects to a certain stage
14 which were ready for commercialization and to move them
15 faster into commercialization by transferring the research
16 manager with the project.

17 Q. How long were you supervisor of commercial
18 development?

19 A. This particular function, probably a
20 year-and-a-half, two years. Something like that.

21 Q. What products were you working with as
22 supervisor of commercial development?

23 A. Originally, it was the manufacture of acidic
24 acids, appropriate acid. Petrochemical base products of
25 that type.

1 Q. And did the type of product you worked with
2 change?

3 A. Yes. I moved in this function into what was
4 known then as the hydrocarbons and polymers division, which
5 was in charge of large volume petrochemical derived
6 products.

7 Q. Did -- Well, you said you moved into the
8 hydrocarbons and polymer division. Was that part of a
9 different division or department?

10 A. Yes. That subsequently became the, almost
11 like an operating company.

12 Q. And in the corporate structure of Monsanto, to
13 whom did the hydrocarbons and polymer division report to?

14 A. Well, it had its own division general manager,
15 who subsequently reported up to the, I think to the
16 chairman and CEO.

17 Q. Did the hydrocarbons and polymer division
18 include production containing PCBs?

19 A. No.

20 Q. What did you do next for employment within
21 Monsanto?

22 A. I subsequently was transferred from the
23 hydrocarbons/polymers division to Monsanto Industrial
24 Chemicals Company, Food and Fine Chemicals Division.

25 Q. What was the Monsanto Industrial Chemicals

1 Company?

2 A. That was the company that had profit
3 responsibility for industrial chemicals, which were sort of
4 intermediate volume things that were generally sold to
5 other companies or industries for manufacturing purposes.

6 Q. Are you familiar with the letters put
7 together, MCS?

8 A. Well, that's -- I think that acronym stood
9 for several things over the years, okay?

10 Q. What has it stood for over the years, by
11 years?

12 A. It's hard to -- At times in research, it
13 stood for Monsanto Company Symposia. They would have their
14 own series of lectures and visiting dignitaries that would
15 come in and give essentially technical presentations in the
16 research center. It was called an MCS series chemical
17 symposium. I think at one time, it referred to part of the
18 computerization effort within Monsanto. They were trying
19 to develop a group -- A group was trying to standardize
20 all computers throughout the company on research. People
21 had one kind of computer, everybody had other different
22 things. That was corporate research. Different operating
23 units, whether they were divisions or companies, and these
24 names changed from time-to-time, their own separate
25 department would have whatever type of computer system they

1 wanted. They were trying to develop a Monsanto computer
2 system so that everybody would have the same type of
3 machine, and they could talk to each other and transfer
4 data and disks, and it had something to do with that at one
5 point. At one point in time, it had to do with a Monsanto
6 chemical sample identification.

7 Q. When does it have to do with a Monsanto
8 chemical sample identification?

9 A. Ever since I've been at Monsanto, it's had to
10 do with that. When you're in research, you develop a new
11 composition or a new composition to Monsanto, you send it
12 to the library information center and if it was something
13 new or different, you'd get an MCS number. It was just a
14 means for internal identification while they were pursuing
15 whether it's patentable or a different formulation or
16 however it was handled. Primarily, it had to do with the
17 old organic division, I think, and it's probably still
18 used. I don't know if they still do it, but the numbers
19 still exist.

20 Q. Do you know whether, if a product manufactured
21 by Monsanto originated with an MCS number, whether it
22 always maintained it's - it was always identified by that
23 MCS number?

24 A. Well, that MCS was unique. It represented a
25 specific product or formulation or compound or something.

1 It may take on other names when it became commercialized,
2 it dropped the MCS name, but it was -- You know, the MCS
3 number was never issued to another entity. It's like a
4 social security number. One owner has that.

5 Q. Roughly, what year did you transfer to the
6 Monsanto Industrial Chemicals Company?

7 A. Probably about '74, somewhere in that time
8 frame.

9 Q. And you were with the Food and Fine Chemicals
10 Division?

11 A. That's correct.

12 Q. What did you do with that work?

13 A. I was a manager of commercial development,
14 working in the area of food additives. Primarily, food
15 preservatives.

16 Q. How long did you have that job?

17 A. Until 1977.

18 Q. What did you do in 1977?

19 A. 1977, I remained in Monsanto Industrial
20 Chemicals Company and transferred to the newly formed
21 Environmental Operations Department.

22 Q. What was the Environmental Operations
23 Department when you transferred to it in 1977?

24 A. It was a new department. It was in its
25 infancy. It was established to provide information to the

1 operating plants about the new environmental regulations
2 which were just coming in. It was just after the TSCA Act
3 was passed and the RCRA Act was fixing to be passed, or
4 several very important environmental laws came in about
5 this time. So this was a unit within the Industrial
6 Chemicals Company which operated thirty-odd plants in this
7 country at the time and several in Europe, to provide
8 uniform information, uniform systems for the recordkeeping
9 and for compliance and whatever, with the environmental
10 regulations which were just beginning to be passed and come
11 into being.

12 Q. What was your title when you worked with the
13 environmental operations department?

14 A. Something like manager of product safety, or
15 something like that.

16 Q. The whom did you report?

17 A. To Robert Nelson.

18 Q. And was what Robert Nelson's position when you
19 were reporting to him?

20 A. He was the director of this group. I'm trying
21 to think what his title was. May be Director of
22 Environmental Affairs, or something like that.

23 Q. Whatever his title was, he was director of the
24 Environmental Operations Department?

25 A. No. There was a separate title, a DEO, and

1 that was occupied by another person who had the title of
2 DEO.

3 Q. All right. And who was the head of the DEO?

4 A. The DE for the industrials chemicals company
5 was a man by the name of Dr. Clayton Callis.

6 Q. C-a-l-l --

7 A. - i-s.

8 Q. "DEO" is the Department of Environmental
9 Operations?

10 A. Director of the Environmental Operations.

11 Q. What work did you do as manager of product
12 safety?

13 A. I was responsible for regulations which were
14 being promulgated under the Toxic Substances Control Act,
15 and seeing that these were implemented within the operating
16 plants for MCC; I was responsible for work that was
17 required to produce material safety data sheets, or I
18 worked with other people that would make sure we had that
19 information, and the sheets were up-to-date and so forth;
20 did some work with that. I did things generally that came
21 under the new TOSKA law. There were certain recordkeeping,
22 reporting requirements, inspections required. That type of
23 thing.

24 Q. I take it, when you became manager of product
25 safety, you were working with products manufactured by

1 Monsanto that contained polychlorinated biphenyls?

2 MR. FEATHERSTONE: You take it, what? May I
3 hear the question, please?

4 MR. BRADLEY: Let me just rephrase it /

5 THE WITNESS: It's kind of broad.

6 MR. FEATHERSTONE: Yes.

7 MR. BRADLEY: I'll rephrase it.

8 MR. FEATHERSTONE: Let Mr. Bradley ask his
9 question. I don't need to hear it back if he's going to
10 rephrase it.

11 Q. (By Mr. Bradley) At some point in time in
12 your career with Monsanto, did you begin work with products
13 containing polychlorinated biphenyls manufactured by
14 Monsanto?

15 A. Yes.

16 Q. When would that have occurred?

17 A. That was this time.

18 Q. 1977?

19 A. That's when I came to that job function,
20 that's correct.

21 Q. Prior to coming into that job, were you aware
22 that Monsanto manufactured products containing
23 polychlorinated biphenyls?

24 A. Yes.

25 Q. When did you first hear the term

1 polychlorinated biphenyl?

2 A. It's hard to say. I first used
3 polychlorinated biphenyls when I was a researcher in the
4 laboratory.

5 Q. And when was that?

6 A. It was probably in the late '60s, somewhere
7 like that. Probably in '67 to '69. That time frame.

8 Q. What research were you doing with PCBs in the
9 laboratory between '67 and '69?

10 A. PCBs were used in the laboratory as a safety
11 requirement. It was used in what's known as oil baths or
12 high temperature baths, or to maintain uniform temperature
13 for carrying out exploratory chemical reactions.

14 Q. Did you take any precautions while working in
15 the lab between '67 and '69 when you were working with
16 PCBs?

17 A. Well, there's always precautions that you take
18 in the laboratory when you use -- The precautions that
19 were taken with PCBs were similar precautions that were
20 required with any higher temperature bath. You had to use
21 it in a ventilated fume hood; the fume hoods had to be
22 safety approved and have doors that would close, so you
23 could stick your hand in there, in case the reaction that
24 you were doing were explosive. The precautions were
25 primarily for the exploratory reactions, not necessarily

1 for the oil bath, except for oil baths that were flammable.
2 You had to make sure that you had fire extinguishers, or
3 extinguishers immediately beside the hood. That was the
4 advantage of PCBs. It removed the hazard for fire and
5 flames should there be an explosion during the exploratory
6 reaction.

7 Q. When you worked with PCBs, though, you worked
8 with ventilated fume hoods?

9 A. Yes. That's standard procedure for working
10 with any exploratory chemical in a laboratory that is vapor
11 pressured. Petrochemical reactions in small glass ampules
12 that are sealed, you heat these things up. So you have to
13 have them in a place, if they rupture, that you don't spew
14 through the building.

15 Q. Explain for me what a fume hood is?

16 A. A fume hood is just a piece of equipment
17 that's in any laboratory. It's usually a chemical
18 workbench that's covered with a fume hood that has a
19 separate ventilation system. It has usually what's
20 referred to as a negative air pressure so that any venting
21 of any of the materials in the hood would be pulled into
22 the hood and reduce pressure so it's not pushed out into
23 the laboratory. The laboratory ventilation system is
24 usually tied in with the rest of the building, the office
25 space in the complex. So when you're doing any types of

1 chemical reactions with things that have odors, high vapor
2 pressure or whatnot, you use a fume hood to contain the
3 vapors, and they're vented separately to some other
4 treatment center.

5 Q. When you were working with PCBs in the lab --
6 First of all, did you work with PCBs in the lab during any
7 period other than '67 to '69?

8 A. Not that I recall.

9 Q. When you worked with PCBs in the labs, did you
10 wear gloves?

11 A. Not necessarily.

12 Q. Okay.

13 A. The PCBs were a vehicle in a tank, so the
14 other -- All it was, it was just like -- It was an oil
15 bath, and you would immerse reaction flasks, or hook them
16 in the thing and the bottom part of the flask was heated by
17 the medium, so you didn't use open flame. So you didn't
18 touch the PCBs.

19 Q. What did you use to immerse the flask into the
20 PCB bath?

21 MR. FEATHERSTONE: It wasn't a PCB bath. It
22 was an oil bath.

23 THE WITNESS: These were PCB baths that
24 replaced an oil bath.

25 MR. FEATHERSTONE: I misunderstood.

1 A. Oil baths are flammable, they ignite. PCB
2 baths don't. They don't give off the fumes because the
3 boiling point of PCBs is several hundred degrees lower -
4 centigrade lower - than what you would operate if you would
5 use an oil bath. Depending on the equipment we're using,
6 you usually use standard laboratory glasswear, and it was
7 on a laboratory frame behind it. Things you've seen in the
8 movies of the mad scientist, where you have the bars going
9 across and you clamp different glass sizes to this to hold
10 them in place. And so whatever the clamp was that you were
11 going - that you mounted this flask into the reaction with,
12 that's what you held it with. It clamped around the neck
13 tightly. When it came out, it looked like a little handle
14 but the end of the handle was a device that would attach it
15 to an apparatus. Before you did an experiment, you made
16 sure all these things fit in place and certain things were
17 static and fixed, and changed what was in the reaction
18 flask.

19 Q. You did immerse your hand or arm into the PCB
20 bath?

21 A. No. Not at four hundred degree Fahrenheit, I
22 don't think so.

23 Q. And when the flask came out of the PCB bath,
24 would you handle the flask?

25 A. Ultimately.

1 Q. Did you wear gloves when you handled the
2 flask?

3 A. Sometimes. After the flask cooled, the first
4 thing that you did was you had to clean off the outside of
5 the flask of whatever it was - whether it was PCBs or oils
6 - and the procedure was essentially the same thing. You
7 pulled the flask out, lifted it up, let it drain back over
8 the bath, then you would take - usually, you'd use a glove
9 or something, not to get chemicals on your hand - and you
10 would wipe the bottom of the flask with a paper towel or
11 lab wipe, they called it, and you'd take the bath out, put
12 it over a, -- Every organic chemistry lab has a cleaning
13 bath, which is essentially a large reactor that contains
14 some type of chemicals to clean glassware, and this can be
15 anything from simple Acetone purge to achromatic acids and
16 you clean the bottom of the flask with that and rinse it.

17 Q. I take it, the gloves that you wore were
18 nonporous gloves?

19 A. General laboratory gloves, or some type of a
20 rubber stuff that are impervious. General laboratory
21 gloves that are just impervious to most chemicals. Later
22 years when plastic rolltop gloves were used, they were used
23 in the laboratory because they use the gloves and you
24 disposed of them. It was just a plastic glove, one-time
25 use. Went into the chemical waste disposal.

1 Q. You've describe for me generally what you did
2 as manager of product safety. I'd like you to now be more
3 specific about the work that you did as manager of product
4 safety.

5 MR. FEATHERSTONE: Wait a minute. What
6 specifically do you want him to talk about?

7 MR. BRADLEY: Go ahead and answer the
8 question.

9 A. Well, primarily was responsible for
10 regulations under the Toxic Substances Control Act to
11 assure that plants were in compliance with those
12 regulations.

13 Q. (By Mr. Bradley) What would you do to make
14 certain plants were in compliance with those regulations?

15 A. First thing is, you had to obtain copies of
16 the regulations. In conjunction with the environmental law
17 department, you had to interpret these, distill them,
18 Federal Register Notices, down into some practical steps
19 for operations, so that environmental supervisors and our
20 operating facilities could understand and implement with
21 normal plant personnel. So we did this type of thing.

22 Q. All right.

23 A. If the records were required to be kept, then
24 we would try to develop a simple format, or form, or system
25 to recommend to the plant so everybody didn't develop a

1 different type form, because we had thirty-three that I had
2 responsibility for. We wanted all of the information
3 collected in the same way because from time-to-time, you
4 were required to make, or you could be required, the way
5 the laws were written, to make corporate reports.
6 Therefore, you had to be able to compile the data. So we
7 did those kinds of things. We provided advice and answered
8 questions for the plants.

9 Q. Advice on how to comply with the --

10 A. How to comply with the regulations.

11 Q. What documents did you review, if any, prior
12 to beginning your work as manager of product safety?

13 A. In '77?

14 MR. BRADLEY: Yes.

15 A. Primarily, the emerging TOSKA regulations.
16 That was my responsibility.

17 Q. Other than the emerging TOSKA regulations, did
18 you review any documents prior to becoming manager of
19 product safety?

20 A. I don't recall.

21 Q. Do you recall whether you reviewed any
22 internal memoranda regarding the toxilogical features of
23 PCBs?

24 A. I know I didn't do that because I wasn't
25 really involved with that area of PCBs at that time.

1 Q. All right. During your work as manager of
2 product safety, did you generate any documents?

3 A. Yes.

4 Q. What kinds of documents did you generate?

5 A. As I said, I generated documents for use by
6 the plants, summarizing proposed regulations under TOSKA,
7 newly passed or - what's the word? One time they propose a
8 regulation, comment on it and they have the final
9 regulation. The final regulations were sent to the plant
10 because, in summary fashion, they had to be implemented in
11 a uniform way. The proposed regulations -- Industry was
12 asked to comment on the proposed regulations. We would
13 summarize these, try to summarize the pertinent points.
14 Sometimes, the proposed regulations would offer
15 alternatives. We would try to summarize these in some
16 simplified way and submit these to the plants, and say
17 which of these can be implemented easily, least manpower,
18 this type of thing, compile these into a corporate answer
19 or comment to the agencies for development of the final
20 rules. Those kinds of documents. I monitored compliance
21 by the plants. Periodically, I'd visit the plants,
22 thirty-three plants. I'd probably visit a plant a month -
23 - sometimes, if I could, two plants a month - just to see
24 what they were doing, how they were doing. It was kind of
25 an informal plant visit or inspection, answer questions.

1 If records were required to be kept, look at their record
2 logs to see if they were doing things, requirements for
3 keeping records. Make sure they're doing them in ink.
4 Plant people will do it with whatever they can scratch on.
5 So you have to look and make sure these things are there.
6 That kind of thing. Generate summaries of those annually,
7 how many plants were --

8 Q. Would you generate reports concerning the
9 plants that you had visited regarding their compliance?

10 A. No. Generally, these were verbal and oral,
11 because I wasn't -- It wasn't a scorekeeping thing. It
12 was to make sure that if -- TOSKA is a funny law. You
13 don't necessarily submit reports to, under TOSKA every
14 year.

15 MR. FEATHERSTONE: John, the question is
16 whether you submitted reports on your inspections.

17 A. No.

18 Q. (By Mr. Bradley) Did you submit -- Did you
19 write reports that were submitted to any governmental
20 agencies while you were manager of product safety?

21 A. I don't think so.

22 Q. Did you help in preparation of any documents
23 submitted to a governmental agency while you were manager
24 of product safety?

25 A. Yes. Comments on proposed rule makings, this

1 type of thing.

2 Q. All right. And how long were you manager of
3 product safety?

4 A. Until 1980.

5 Q. What job did you move to in 1980?

6 A. In 1980, I still had the title of manager of
7 product safety. As manager of product and environmental
8 safety, and I had responsibilities for managing PCB issues.

9 Q. Did you have responsibility for managing PCB
10 issues prior to 1980?

11 A. From '77 until '80, I the part of PCB issues
12 that had to do with plant compliance.

13 Q. And in 1980, how was your PCB responsibility
14 expanded?

15 A. Instead of just having the responsibility for
16 the plant compliance of the industrial chemicals plant, I
17 became the corporate focal point for PCB information and/or
18 managing PCB questions.

19 Q. What did you do, if anything, to prepare you
20 for your expanded job responsibility in 1980?

21 A. I read available summary records of Monsanto's
22 PCB activities and history, and of PCB history that had to
23 do with the passage of the TOSKA Act and publication of the
24 subsequent regulations.

25 Q. Did you review any toxicological information

1 regarding PCBs prior to, or to prepare you for your
2 expanded responsibilities in 1980?

3 A. Yes, I did.

4 Q. What did you review?

5 A. There was a -- In 1979, Monsanto submitted
6 data to a Congressman Eckhart's subcommittee.

7 Q. Do you know what state Congressman Eckhart was
8 with?

9 A. I don't know.

10 Q. Do you recall the name of the subcommittee?

11 A. It had to do with hazardous waste. They were
12 looking at some of the hazardous waste and asking some
13 specific questions about history.

14 Q. What other toxicological information did you
15 review on PCBs to prepare you for your expanded job
16 responsibilities in 1980?

17 A. There was a volume published by the National
18 Academy of Sciences entitled "PCBs," which was a review up
19 to that point in time, 1979, of the environmental
20 toxicology knowlege of PCBs.

21 Q. What else?

22 A. There was a document that was published in
23 1952. I think the title of it was "Polychlorinated
24 Biphenyls," and it was - it was a result of a review of the
25 known properties, health properties and so forth, what was

1 known about PCBs up to that point in time, May of 1972,
2 when it was published. This was a report of the
3 Interdepartmental Task Force on PCBs.

4 Q. In 1972?

5 A. Yes, that was published in 1972. I reviewed
6 this in 1980.

7 Q. You had originally said 1952, but you mean
8 '72?

9 A. No. 72.

10 Q. What else did you review, if anything?

11 A. Those were really the big summaries that were
12 available that I recall, was the National Academy summary,
13 the Eckhart report and --

14 MR. FEATHERSTONE: Interdepartmental Task
15 Force?

16 A. Yes.

17 Q. (By Mr. Bradley) I'm going to show you
18 Plaintiff's Exhibit 1373 and ask if that is a document that
19 you reviewed to prepare for your expanded responsibilities
20 in 1980?

21 A. This is the NIOSH document, and I have looked
22 at this. I'm not sure this is the first thing that I
23 looked at, at that point in time, but I have seen this and
24 I have read this thing, yes.

25 Q. Do you recall when you saw and read that

1 exhibit?

2 A. It was sometime during 1980, but it was not
3 one of the first things I did.

4 Q. And is this a document that you maintained in
5 your files within Monsanto?

6 A. Yes. I had a copy of this in my office, a
7 bound copy, published by NIOSH.

8 Q. Does that appear to been an accurate, true and
9 accurate copy of the criteria put out by NIOSH on
10 polychlorinated biphenyls?

11 A. As far as I can tell from the cover. This is
12 a loose-leaf photocopy of it. I assume it's the same
13 document.

14 Q. This is the kind of document that -- Well,
15 did you keep other types of -- Excuse me. Did you keep
16 other documents of a similar type as part of your job
17 responsibility at Monsanto?

18 A. I obtained -- I don't know what you mean by
19 "similar type," but yes, I obtained documents published by
20 the U.S. Government and kept them so I could understand
21 what was in them and what, if any, requirements were
22 dictated by the documents.

23 MR. BRADLEY: All right. This would be a good
24 time for me to take a break, if it's acceptable to
25 everybody else.

1 MR. FEATHERSTONE: That's fine

2 THE WITNESS: Fine with me.

3 MR. BRADLEY: See you back at 1:10.

4 MR. FEATHERSTONE: Fine.

5 (Whereupon, a luncheon recess was taken.)

6 Q. (By Mr. Bradley) Have you ever had contact
7 with a trade association comprised in whole or in part of
8 electrical utility companies?

9 A. Yes.

10 Q. Which trade associations?

11 A. Edison Electric Institute; Edison Electric
12 Institute/USWAG; American Public Power Institute; National
13 Rural Electric Cooperative Association. I can't think of
14 anybody else offhand.

15 MR. FEATHERSTONE: Can I hear those back? I
16 missed the first and last one.

17 (Whereupon, the reporter propounded the previous question.)

18 Q. (By Mr. Bradley) When did you first have
19 contact with EEI?

20 A. Approximately 1980.

21 Q. What is EEI? Excuse me. What was EEI in
22 1980?

23 A. It's the Edison Electric Institute.

24 Q. And who were its members?

25 A. It's my understanding they're primarily

1 members of public stock-held utilities. I think that's how
2 it's defined.

3 Q. Do you know whether Nevada Power Company was
4 ever a member of Edison Electric Institute?

5 A. I don't know.

6 Q. Would Edison Electric Institute be located in
7 a city?

8 A. Yes.

9 Q. New York?

10 A. No.

11 Q. Where?

12 A. Washington, D.C.

13 Q. Did you have communication with more than one
14 person at EEI?

15 A. Yes. Their staffs changed over the years.

16 Q. Which personnel at EEI did you have
17 conversations with regarding PCBs, if any?

18 A. Cory Trench.

19 Q. C-o-r-y, T-r-e-n-c-h?

20 A. Right. John Novac. Those are the two staff
21 members of the EEI I had conversations was.

22 Q. Did you have conversations with anyone at EEI,
23 other than those two staff members regarding PCBs?

24 A. Well, there were members of the committees,
25 which were probably utility companies.

1 Q. Do you know whether the committee members were
2 electric utility companies or is that a guess you're
3 making?

4 A. Well, the USWAG Committee - Utility Solid
5 Waste Activity Group - are all members of the utilities
6 industry.

7 Q. All right. Anyone, other than the two staff
8 members that you mentioned and members of the Utility Solid
9 Waste Activity Group that you had contact with from EEI,
10 that you had contact with regarding PCBs?

11 A. They had various hired outside counsel from
12 time-to-time that represented them.

13 Q. Attorneys?

14 A. Yes.

15 Q. Have we now covered the types of people you
16 spoke with at EEI regarding PCBs?

17 A. That's right.

18 Q. Did you provide any written documents to EEI?

19 A. Yes.

20 Q. You, personally?

21 A. Yes.

22 Q. What documents?

23 A. When you say "you, personally," maybe I sent
24 them personally.

25 Q. Do you know whether Monsanto submitted documents

1 to EEI beginning in 1980?

2 A. Some.

3 Q. What documents did Monsanto submit to EEI
4 beginning in 1980?

5 A. Mondanto made available documents that had to
6 do with health effects of PCBs, studies done by outside
7 consultants for Monsanto, published peer review journal
8 literature that happened to be collected by me that other
9 people might have.

10 Q. When you say that Monsanto made available,
11 documents, does that mean that you provided them to EEI, or
12 what do you mean when you say documents were made
13 available?

14 A. I guess what I meant was what I thought you
15 meant when you said did we make documents available.

16 Q. All right. Did you provide documents to EEI
17 beginning in 1980 regarding PCBs?

18 A. To those people that I've named as contacts,
19 yes.

20 Q. By making them available, what you mean is you
21 gave them documents?

22 A. Yes.

23 Q. Are those documents that you reviewed in
24 preparation for your deposition today?

25 A. Some of them may be included.

1 Q. In your office -- Let me ask this first. Are
2 you still a Monsanto employee?

3 A. No.

4 Q. You're retired?

5 A. Yes.

6 Q. When did you retire?

7 A. January 29th, 1993.

8 Q. Congraduations.

9 A. Thank you.

10 Q. When you retired, was there a file which had
11 the documents Monsanto sent to EEI regarding PCBs?

12 A. I don't recall a specific file labeled "EEI"
13 with documents.

14 Q. All right. Do you recall, though, there being
15 a file that contained the documents that were sent by
16 Monsanto to EEI beginning in 1980 regarding PCBs?

17 A. The documents that were sent to EEI should
18 still be in the Monsanto files. They're just pulled from
19 wherever they are as the need or the questions arose.

20 Q. And if you were going to go back to your
21 office, how would you identify which documents Monsanto
22 sent to EEI beginning in 1980 regarding PCBs?

23 A. I'd have to specifically try to remember what
24 document was given to them and then look appropriately.

25 Q. When you sent documents to EEI -- Well, let

1 me rephrase that. When you provided documents to EEI, were
2 those documents provided with a cover letter?

3 A. Sometimes; sometimes not.

4 Q. How would you go back and identify which
5 documents Monsanto provided to EEI regarding PCBs beginning
6 in 1980 that were not accompanied by a cover letter?

7 MR. FEATHERSTONE: Just answered that.

8 Objection. Cumulative.

9 A. I'd just have to try to identify them and
10 recollect what they were.

11 Q. (By Mr. Bradley) Have you ever done that?

12 A. No.

13 Q. Who did you speak with at APPI regarding PCBs,
14 if anyone?

15 A. I don't recall a specific name at APPI.

16 Q. Do you know whether Monsanto provided any
17 documents to APPI beginning in 1980 regarding PCBs?

18 A. APPI was, from time-to-time, a member of the
19 Industry Consensus Group that worked on PCBs and also, the
20 consensus group that worked on PCBs which included two
21 environmental groups. As a participant, they were shared
22 all information that was passed around or worked out in
23 these committee meetings. So it's a very informal transfer
24 by everybody, but everybody's information was shared back
25 and fourth around the table.

1 Q. Were you a member of the Industry Consensus
2 Group that worked on PCBs?

3 A. Yes.

4 Q. When was the Industry Consensus Group that
5 worked on PCBs formed?

6 A. Roughly, late 1980 or early 1981.

7 Q. Who else were members?

8 A. The Chemical Manufacturers Association was a
9 member. I was Monsanto's representative there. Edison
10 Electric Institute/USWAG was a member; National Electrical
11 Manufacturers Association was a member.

12 THE WITNESS: Did you say the Industry
13 Consensus Group or the --

14 MR. FEATHERSTONE: Industry Consensus Group.

15 A. Those are the major members of the Industry
16 Consensus Group. From time-to-time, as regulations came in
17 that these people were particularly interested in, APPI was
18 a member; American Association of Railroads was a member;
19 Iron and Steel Institute was a member. Whatever the trade
20 association is - was - that represents the Automobile
21 Manufacturers. They've changed that name a time or two. I
22 don't know if it's American Automobile Manufacturers or
23 what, headquartered in Detroit; the two APIs, American
24 Petroleum Institute and American Paper Institute, were both
25 separately members from time-to-time; maybe the American

1 Fertilizer Institute was a member. Lots of trade
2 associations came in and out. Those are the ones that come
3 to mind.

4 Q. (By Mr. Bradley) And did you indicate that
5 the Industry Consensus Group working on PCBs included two
6 environmental groups?

7 A. The Industry Consensus Group was named by the
8 trade press and that included the groups I mentioned, plus
9 the NRDC and EDF.

10 MR. FEATHERSTONE: The question was whether
11 the Industry Consensus Group included those two
12 environmental organizations.

13 A. I thought he said did the consensus group.

14 MR. BRADLEY: No.

15 MR. FEATHERSTONE: No. He said Industry
16 Consensus.

17 A. Industry Consensus did not include
18 environmental organizations by definition.

19 Q. (By Mr. Bradley) What was the difference, if
20 any, between the Industry Consensus Group working on PCBs
21 and the consensus group working on PCBs?

22 A. The industry group contained only industry
23 members who reached a position. They would present their
24 position with the environmental groups who reached a common
25 position, and we reached one position for both PCB

1 consensus groups.

2 Q. Other than EEI/USWAG, were there any members
3 of the consensus group that had electric utility companies
4 as members, that you know of?

5 A. APPI, NREA.

6 Q. Do you recall who the representative was from
7 APPI in the consensus group?

8 A. No.

9 Q. Was there more than one?

10 A. Various groups sent various staff people,
11 members, from time-to-time. They just sent a
12 representative.

13 Q. What kind of groups were sending people as
14 representatives for APPI with the consensus group?

15 MR. FEATHERSTONE: Object to the form of the
16 question.

17 A. I guess I don't understand what you want.

18 Q. (By Mr. Bradley) Okay. I think, then, that I
19 didn't understand your answer. When you said that various
20 groups would send different representatives, you mean the
21 APPI would send --

22 Q. APPI as a group -- Okay. This company sent
23 one of their members, or if one of their members wanted to
24 go, they might attend. They might send staff people. They
25 all had paid staff members, as well as members of their

1 group who were on the committee. You may have one person.
2 You may have five people in that group who could be staff
3 people, could be paying members of the group or outside
4 counsel or consultants. Whoever they wanted to bring.

5 Q. The consensus group was formed for what
6 reason, do you know?

7 A. Yes.

8 Q. What?

9 A. EDF and NRDC filed suit in 1979 challenging
10 the PCB regulations under TOSKA. CMA, USWAG, EEI/USWAG and
11 NIOSH filed as intevenors in the lawsuit. They began
12 working to try to resolve these issues and began trying to
13 help EPA frame a new set of regulations which would be
14 acceptable to the groups and which would be acceptable by
15 the Eighth District Circuit Court of Washington D.C.

16 MR. BRADLEY: I'm sorry. Would you read that
17 answer back to me?

18 MR. FEATHERSTONE: It's the Court of Appeals.
19 Whatever it is. It's the D.C. Court of Appeals.

20 MR. BRADLEY: You can change it to D.C. Court
21 of Appeals.

22 Q. (By Mr. Bradley) The consensus group was not
23 formed as a result of an order from a Judge, was it?

24 A. No.

25 Q. And were reports generated from the consensus

1 group?

2 A. No. Not as you'd normally think of a report,
3 no.

4 Q. Were there agenda items for consensus group
5 meetings?

6 A. There was an informal agenda any time there
7 was a meeting, yes.

8 Q. Were papers presented to the consensus group?

9 A. From time-to-time, there were working papers
10 that one side or the other would present.

11 Q. Did Monsanto present any papers to the
12 consensus group?

13 A. No. Monsanto, as Monsanto, was not a member
14 of the consensus group.

15 Q. Well, as Monsanto's representative -- I
16 thought you indicated you participated as Monsanto's
17 representative.

18 A. Yes, I participated as Monsanto's
19 representative.

20 MR. FEATHERSTONE: Wait a minute. He was
21 Monsanto's representative at the Chemical Manufacturers
22 Association.

23 A. Right.

24 MR. FEATHERSTONE: Which was a member of the
25 consensus group.

1 MR. BRADLEY: All right.

2 Q. (By Mr. Bradley) Did the Chemical
3 Manufacturers Association present any documents to the
4 consensus group?

5 A. Yes.

6 Q. By documents --

7 A. They presented all sorts of documents
8 suggesting language for various points of contention;
9 technical documents supporting their position for using
10 such language and interpretation; contractor studies that
11 were done on behalf of the chemical industry to answer
12 questions that were asked; a review of the health effects
13 literature of PCBs.

14 Q. Did you participate in the development of that
15 review?

16 A. Yes.

17 Q. And in your participation in the development
18 of that review, were you participating as a Monsanto
19 representative?

20 A. On the CMA portion, yes. I was Monsanto's
21 representative on the CMA panel, right.

22 Q. Do you know whether documents were maintained
23 by anyone at the conclusion of the work of the consensus
24 group?

25 A. The final documents that were submitted to the

1 agency I think would probably be maintained.

2 Q. To EPA?

3 A. To EPA. There were formal comments that were
4 submitted in the rule -- There was rule making involved,
5 and these were voluminous. CMA submitted a large thing,
6 the utility people submitted separately a large thing.
7 Lots of documents were submitted to the record and were
8 kept.

9 Q. I'm going to show you Plaintiff's Exhibit 1220
10 and ask you to review that.

11 A. Okay.

12 Q. That's a document, "Polychlorinated Biphenyls,
13 a Perspective," and it has your name, "John H. Craddock,
14 Ph.D., Monsanto" on it. Is that a document that you wrote?

15 A. Yes, sir.

16 Q. What year did you write that?

17 A. 1981 is the date on the front, January 30th.

18 Q. Oh. At the bottom?

19 A. The date of this version, yes.

20 MR. BRADLEY: So many numbers down there, I
21 couldn't see it.

22 Q. (By Mr. Bradley) And is that a true and
23 accurate copy, as best you can tell, of the document that
24 you prepared?

25 A. From glancing through it, it looks so, yes.

1 Q. And why did you prepare the document?

2 A. I'd have to try to recollect a date. I think
3 this version was given as a result of a request to make a
4 presentation before the Chamber of Commerce in the City of
5 Dayton, Ohio.

6 Q. When you wrote this, was it based upon
7 information that you gathered while you were working at
8 Monsanto?

9 A. Yes.

10 Q. Is this the kind of information you would have
11 given to the Chemical Manufacturers Association?

12 MR. FEATHERSTONE: Object to the form.

13 A. It's the kind of information. Whether this
14 speech was actually a published document or written
15 information that was provided to the people directly, I
16 don't know.

17 Q. (By Mr. Bradley) Do you know whether this
18 document was ever provided to the Chemical Manufacturers
19 Association?

20 A. I doubt if this document, as such, was
21 provided to CMA. It was a speech for a specific purpose,
22 specific organization, function.

23 Q. And did you keep copies of the speeches that
24 you gave during the time you were a Monsanto employee?

25 A. Probably.

1 Q. Kept them in your files?

2 A. I had a reading file that most anything I
3 wrote was kept in the files. If you could remember the
4 date, you could retrieve it.

5 Q. You maintained that as part of the business
6 work you did there, at Monsanto?

7 A. Yes.

8 Q. I'm now going to hand you Plaintiff's Exhibit
9 1224 and ask you to review that.

10 A. Okay.

11 Q. This is a December 12, 1980 letter from David
12 Forsyth Zoll, Z-o-l-l, Assistant General Counsel for
13 Antitrust and Regulatory Litigation of the Chemical
14 Manufacturers Association to CMA members potentially
15 affected by regulation of PCBs; is that correct?

16 A. That's correct.

17 Q. Dated December 12th, 1980.

18 Q. That's correct.

19 Q. On the 6th page at the bottom, it indicates
20 that you were a member?

21 A. Correct - of the CMA task force.

22 Q. Have you seen this document before today's
23 date?

24 A. I saw it when it was issued back when.

25 Q. Does this appear to be a true and accurate

1 copy of that?

2 A. It does, as far as I can remember.

3 Q. Is this a document that you would have also
4 maintained in your files at Monsanto?

5 A. Maybe. This one may have been discarded after
6 the request was fulfilled.

7 Q. I'm going to show you Plaintiff's Exhibit
8 1532.

9 A. Okay.

10 Q. This is a February 9th, 1981 letter from you
11 to Mr. Charles, G-r-i-g-a-l-a-u-s-k-i, Physical Scientist
12 and Enforcement Office, Region V, U.S. Environmental
13 Protection Agency; is that correct?

14 A. That's correct.

15 Q. And in it, in the letter, you say, "Attached
16 for your information is a copy of my recent presentation
17 entitled 'Polychlorinated Biphenyls - A Perspective' that
18 was presented as part of the City of Dayton, Ohio Chamber
19 of Commerce Education Program and News Media Support
20 Subcommittee briefing to local news media and city/area
21 government officials in late January." Is that correct?

22 A. That's correct.

23 Q. Did that refer to Plaintiff's Exhibit 1220?

24 A. Yes.

25 Q. Did you speak with anyone at NRECA beginning

1 in 1980 regarding PCBs?

2 MR. FEATHERSTONE: NRECA? Is that what you
3 said?

4 A. National Rural Electric Cooperative
5 Association.

6 MR. BRADLEY: Yes.

7 A. I don't remember the exact date when NRECA
8 became involved. 1980 was the formative year but from
9 time-to-time when things got moving, NRECA representatives
10 attended some of the meetings, presentations, seminars,
11 whatnot. Early in 1980, NRECA people were present.

12 Q. (By Mr. Bradley) Which meetings and seminars
13 were NRECA representatives attending?

14 A. I believe they were -- EPA held a major
15 symposium on PCB health effects in 1982, known as the
16 Bethesda Conference. I believe they were in attendance
17 there. They may have attended some of the Industry
18 Consensus Group meetings where presentations were made to
19 EPA staff, or the rule-making negotiations.

20 Q. You don't know whether they attended or not?
21 You just don't know?

22 A. No. They came in and out.

23 Q. Did Monsanto provide any documents to NRECA
24 regarding PCBs, and beginning with 1980?

25 THE WITNESS: Directly to NRECA?

1 MR. BRADLEY: Yes.

2 A. I can't remember.

3 Q. (By Mr. Bradley) I'm getting confused here
4 with all my acronyms. Did you indicate whether Monsanto
5 had any, or provided any documents to APPI beginning in
6 1980 regarding PCBs?

7 A. I don't recall specific submissions from
8 Monsanto to APPI.

9 Q. Whatever submissions may have come from there,
10 whatever participation they may have had regarding the
11 industry consensus group -

12 A. That's correct.

13 Q. - did Monsanto provide any documents to
14 particular electric utility companies beginning in 1980
15 regarding PCBs?

16 A. Yes.

17 Q. What documents did Monsanto provide to
18 electric utilities companies regarding PCBs beginning in
19 1980?

20 A. Specifically, we prepared a material safety
21 data sheet, a generic material safety data sheet, on PCBs
22 to answer many of the questions raised by the regulatory
23 agencies. They were made available to anybody who asked
24 for them.

25 Q. All right. So if a utility company called and

1 asked for an MSDS, you would send it to them?

2 A. Yes.

3 Q. And if they didn't call and ask for one, none
4 was sent?

5 A. That's correct.

6 Q. All right. Other than the MSDS, did Monsanto
7 provide any information - excuse me - any documents to
8 electric utility companies regarding PCBs beginning in
9 1980?

10 A. We had many specific requests from specific
11 utilities, and information was always provided in response
12 to their questions.

13 Q. So again, if someone had contacted Monsanto,
14 they'd be given information?

15 A. Yes.

16 Q. If they didn't contact Monsanto, they wouldn't
17 be given information?

18 MR. FEATHERSTONE: I object to the form of
19 that question.

20 Q. (By Mr. Bradley) Is that correct?

21 A. I guess I'm confused about the question. If
22 somebody asked for information, okay, they received
23 information to answer their question, to satisfy their
24 question.

25 MR. BRADLEY: All right.

1 A. Obviously, if they didn't ask, you couldn't
2 give them anything.

3 Q. (By Mr. Bradley) And other than the specific
4 request from specific utilities and the MSDSs, did Monsanto
5 provide any information to, directly to electric utility
6 companies regarding PCBs beginning in 1980?

7 MR. FEATHERSTONE: Objection. Cumulative.
8 Already asked and answered.

9 A. Those are the things that I recall directly,
10 responses to direct questions. Otherwise, they got it from
11 the trade associations or the Federal Register program.

12 Q. (By Mr. Bradley) I'm now going to show you
13 Plaintiff's Exhibit 1234 and ask you to review that.

14 A. Okay.

15 Q. Is that an MSDS sheet prepared by Monsanto,
16 October, '88, regarding PCBs?

17 A. Yes, it is.

18 Q. And is that an MSDS that would have been sent
19 to any electric utility company who requested a copy of an
20 MSDS?

21 A. Anybody who requested it after this date would
22 have received this copy. There were different versions.
23 This was an update, as it states.

24 Q. Does that appear to you to be a true and
25 accurate copy of the MSDS that Monsanto prepared on that

1 date?

2 A. Yes.

3 Q. And did Monsanto keep copies of those MSDSs in
4 their files as part of their regular business activities?

5 A. Yes.

6 Q. I'm now going to show you Plaintiff's Exhibit
7 1232 -- or excuse me - 1232, and ask you to review that.

8 A. Okay.

9 Q. Is that also an MSDS sheet prepared by
10 Monsanto regarding polychlorinated biphenyls?

11 A. Yes.

12 Q. Is there a way of telling what the date was of
13 the preparation of this documents?

14 A. Page 6 of 6, center of the page.

15 Q. It indicates it was issued 10-15-85?

16 A. Correct.

17 Q. And is this a true and accurate copy of the
18 MSDS prepared by Monsanto, 10-15-85?

19 A. It appears to be, right.

20 Q. And is this a document that was maintained in
21 your files at Monsanto as part of your regular business
22 activity?

23 A. Yes.

24 MR. FEATHERSTONE: Wait until he finishes his
25 question.

1 Q. (By Mr. Bradley) Who prepared the MSDSSs?

2 A. They were prepared under my direction and I
3 prepared much of them, myself.

4 Q. Prepared, based upon the information that you
5 had gathered at the time regarding the safety in handling
6 of PCBs?

7 A. Information that I had gathered. Information
8 that was in the published literature and information that
9 was in Monsanto files.

10 Q. Do you know whether, beginning in 1980, anyone
11 from Monsanto had direct oral or written contact with
12 anyone from Nevada Power Company?

13 A. I don't recall.

14 Q. Do you know whether anyone in Monsanto
15 beginning in 1980 had contact with anyone who indicated
16 they were going to have direct contact with Nevada Power
17 Company?

18 A. No.

19 Q. Do you know of any person who gave information
20 to Nevada Power Company regarding the studies that had been
21 performed over time regarding PCBs?

22 MR. FEATHERSTONE: May I hear the question,
23 please.

24 (Whereupon, the reporter propounded the previous question.)

25 THE WITNESS: You want to know if I know a

1 name that gave something to that company, that name? Is
2 that specific? Is that what you're asking?

3 MR. BRADLEY: A name or a group.

4 A. The electric utility trade associations - EEI,
5 USWAG - made available to their members copies of this CMA
6 submission to EPA in response to the 1981 rule-making. As
7 an appendix, as part of that submission to the Federal
8 agencies, several Monsanto documents summarizing
9 information we had in our files was prepared by our staff
10 and were included to the agency. So the members of the
11 consensus group, which included the utility trade
12 associations, made available to their members and
13 participants this information, which we freely made
14 available through CMA to them.

15 Q. Now, how do you know that EEI, USWAG made
16 available to their members this type of information?

17 A. They asked for copies of the information,
18 asked if it was free to be distributed. CMA's answer is
19 yes, it is.

20 Q. Did anyone from EEI, USWAG show you documents
21 that indicated they were, in fact, distributing that
22 information to electric utility companies?

23 A. No.

24 Q. Did anyone from EEI, USWAG indicate to you
25 orally that they were distributing that CMA material and

1 Monsanto material to electric utility companies?

2 A. Their representatives asked if it was
3 available to be distributed. I assumed that meant they
4 were going to distribute it, since we made it available to
5 them.

6 Q. Other than EEI, USWAG, do you know of any
7 person or group that gave information to electric utility
8 companies regarding the studies that had taken place over
9 time regarding PCBs?

10 A. No.

11 Q. Do you know whether, beginning in 1980,
12 electrical utility companies received warnings regarding
13 the actual or potential hazards of PCBs from any source?

14 A. If they received the material safety data
15 sheets, they received the warnings that were contained
16 therein.

17 Q. Other than the MSDSSs, were there any --

18 MR. FEATHERSTONE: You already asked about the
19 CMA submission. Is that in addition to that, Mr. Bradley?

20 A. The information published by the EPA in the
21 Federal regulations which govern PCBs and their uses, they
22 certainly should have received that.

23 MR. BRADLEY: Okay.

24 Q. (By Mr. Bradley) Any other warnings?

25 A. Those would be the ones that come to mind.

1 Q. Did you maintain the title Manager of Product
2 and Environmental Safety from 1980 to your retirement?

3 A. No.

4 Q. What was your next job?

5 A. My job function remained the same, maybe some
6 expanded activities. My title changed and increased, more
7 or less, as direct responsibility for the function and
8 salary level increased.

9 Q. But the kind of work you did stayed the same?

10 A. Yes.

11 Q. Until you retired?

12 A. That's correct.

13 Q. In the documents submitted by Monsanto to CMA,
14 did Monsanto indicate when it first learned that PCBs were
15 absorbed through the skin?

16 A. I don't specifically recall that.

17 Q. In the documents submitted -- Well, let me
18 back off for a moment. Do you know whether the CMA
19 submission to the consensus group, or to the Industry
20 Consensus Group, either one, indicated when Monsanto first
21 learned that PCBs are absorbed through the skin?

22 MR. FEATHERSTONE: Well, let me -- I'm sorry.
23 Let me hear the question now back, please.

24 (Whereupon, the reporter propounded the previous question.)

25 MR. FEATHERSTONE: Okay.

1 A. I don't recall any specific dates.

2 Q. (By Mr. Bradley) In the submissions to the
3 CMA, did Monsanto indicate that it knew as early as 1937,
4 that workers exposed to Halowax developed severe cases of
5 chloracne?

6 A. I don't specifically recall papers that were
7 submitted.

8 MR. FEATHERSTONE: That were what?

9 A. That were presented to the group.

10 MR. FEATHERSTONE: Okay.

11 A. CMA group.

12 Q. (By Mr. Bradley) In the CMA documents that
13 they submitted to the consensus group - by that, I mean the
14 Industry Consensus Group and the consensus group - did CMA
15 report that Monsanto knew as early as 1937 that workers
16 supposed to Halowax developed chloracne?

17 A. I don't recall.

18 Q. Have you heard of Halowax?

19 A. Yes, I have.

20 Q. What is Halowax?

21 A. Halowax was a wax that was used as a coating
22 agent, I believe. Sometimes, a coating on wire cable.

23 Q. What was it comprised of?

24 A. It was a mixture of chlorinated organic
25 compounds, and I don't think I even know what the

1 composition is.

2 Q. Do you know whether chlorinated diphenyl was
3 part of the composition?

4 A. I don't know offhand.

5 Q. In the submission given by Monsanto to the
6 CMA, did Monsanto indicate that it knew as early as 1937
7 that if someone who had been exposed to PCBs had an
8 acne-like condition, that it could be a sign of more
9 serious systemic poisoning?

10 MR. FEATHERSTONE: Object to the form of the
11 question.

12 A. I specifically don't know.

13 Q. (By Mr. Bradley) Do you whether the CMA, when
14 it sent documents to the consensus groups, whether it
15 informed readers that Monsanto knew as early as 1937 that
16 if someone exposed to PCBs developed an acne-like
17 condition, that it could be a sign of systemic poisoning?

18 MR. FEATHERSTONE: Object to the form of the
19 question.

20 A. I don't think -- I'm not sure any of us knew
21 what systemic poisoning is. I'm not sure they would have
22 used that wording, no.

23 Q. (By Mr. Bradley) Do you know what systemic
24 poisoning is?

25 A. No, I don't.

1 Q. I guess in fairness, you're not a medical
2 doctor?

3 A. No.

4 Q. You're not a toxicologists?

5 A. No.

6 Q. And you're not an epidemiologist?

7 A. No.

8 Q. I'm going to show you now Plaintiff's Exhibit
9 979.

10 MR. BRADLEY: And for the record, John, I'm
11 not going to give you a copy of that only because we've
12 used it so many times, unless you want me to.

13 A. Okay.

14 Q. (By Mr. Bradley) Have you seen that document
15 before today?

16 A. Yes, I have.

17 Q. Where did you see that?

18 A. I read it at my office at some time.

19 Q. Okay. And did you read the portion towards
20 the back that contains the round table discussion?

21 A. At one time, I've read this whole paper but I
22 don't specifically recall what's in it.

23 Q. Did you understand the paper when you read it?

24 A. I generally understood the paper and what the
25 paper was saying, yes.

1 Q. Do you know whether Monsanto, when it made its
2 submissions to CMA, included information reflected in
3 Exhibit 979?

4 A. Most probably they did.

5 Q. And do you know whether CMA, when it made its
6 submissions to the consensus groups, whether it informed
7 its readers that Monsanto had participated in a round table
8 discussion regarding Exhibit 979?

9 A. I doubt if anybody mentioned a round table
10 discussion.

11 Q. Do you know whether the CMA submission to the
12 consensus groups indicated that Halowax was comprised in
13 part of chlorinated diphenyls, which are the same as PCBs,
14 and that it was reported as early as 1937 by Dr. Lewis
15 Schwartz that if you are exposed to a mixture of
16 chlorinated naphthalenes and chlorinated diphenyls in the
17 mixture and percentages reflected in this exhibit and you
18 developed an acne-like condition, that that is a sign of a
19 more serious systemic poisoning?

20 MR. FEATHERSTONE: Object to the form of the
21 question.

22 A. I don't know.

23 Q. (By Mr. Bradley) Did the submission to CMA
24 indicate that Monsanto knew in the 1940s that there were
25 tests that showed PCBs could cause liver damage?

1 A. Most probably.

2 Q. Did the CMA document submitted to the
3 consensus groups indicate that as early as the 1940s,
4 Monsanto knew that exposure to PCBs caused liver damage?

5 A. I doubt if CMA singled out Monsanto knew
6 something when they presented a document because they were
7 representing the industry, not a particular company.

8 Q. Did Monsanto, in its submissions to the CMA,
9 indicate that it knew, Monsanto knew as early as 1956 of
10 the toxicity of the vapors of Aroclor 1242 and 1254?

11 A. Most probably.

12 Q. And did the CMA submission to the consensus
13 groups inform readers that Monsanto knew as early as 1956
14 of the toxicity of the vapors of Aroclor 1242 and 1254?

15 A. I don't think CMA identified that Monsanto
16 knew anything. That's not the form of the presentation.

17 Q. Do you know what polychlorinated
18 dibenzylfurans are?

19 A. Yes.

20 Q. Are they considered to be more toxic than
21 PCBs?

22 A. They are reported to be more toxic than PCBs,
23 yes.

24 Q. On a level of two or three hundred times, do
25 you know?

1 A. I don't think that's correct.

2 Q. What do you think is correct?

3 A. I think the numbers that I've heard is they're
4 reported, the order of magnitude, to be a factor of ten,
5 twenty. Something of that order.

6 Q. Did Monsanto report to CMA that
7 polychlorinated dibenzylfurans were present in PCBs
8 manufactured by Monsanto?

9 A. I don't think that Monsanto reported that to
10 CMA, no.

11 Q. Do you know whether CMA, in its submissions to
12 the consensus groups, reported that Monsanto knew
13 polychlorinated dibenzylfurans were present in PCBs
14 manufactured by Monsanto?

15 A. Again, CMA didn't report anything that said
16 that Monsanto knew it. Dibenzylfurans were covered in
17 CMA's report.

18 Q. Did Monsanto report to CMA that chronic
19 poisoning may occur with repeated exposures to sufficient
20 concentrations of PCB vapor, and that Monsanto knew that as
21 early as 1947?

22 A. I don't think Monsanto reported information in
23 that format for those dates.

24 Q. And CMA wouldn't have reported it in that
25 format to the consensus groups?

1 THE WITNESS: Wouldn't have?

2 MR. BRADLEY: Would not have.

3 A. No, because there was a TLV established for
4 vapor exposure.

5 Q. Did Monsanto report to CMA that it knew in
6 1947 that repeated exposure to PCB vapor may produce
7 internal bodily injury which may be disabling or could be
8 fatal?

9 A. I don't know, recall that.

10 Q. And that probably wasn't in what CMA
11 distributed to the consensus groups?

12 MR. FEATHERSTONE: Object to the form.

13 MR. BRADLEY: All right. Then let me ask it
14 this way.

15 Q. (By Mr. Bradley) Did CMA report to the
16 consensus groups that Monsanto knew in 1947 that repeated
17 exposures to PCB vapor may produce internal bodily injury
18 which may be disabling or could be fatal?

19 A. CMA didn't report to the consensus group that
20 Monsanto knew any particular facts at any particular time.
21 It's the same answer.

22 MR. BRADLEY: I have nothing further for this
23 witness in his personal capacity.

24 MR. FEATHERSTONE: Okay.

25

John H. Craddock
JOHN H. CRADDOCK

Subscribed and sworn to before me this 13th day
of May, A.D., 1993.

Josephine S. Hiblock
Notary Public

Notary Public within and for the State of Missouri.

MY COMMISSION EXPIRES THE 15th DAY OF
January, A.D., 1995.

JOSEPHINE S. HIBLOCK
NOTARY PUBLIC STATE OF MISSOURI
ST. LOUIS COUNTY
MY COMMISSION EXP. JAN. 15, 1995

John F. Lunsford
NAME OF WITNESS

DEPOSITION CORRECTION SHEET

In Re: Nevada Power Company v. Monsanto, et al.

Upon reading the deposition and before subscribing thereto, the deponent indicated the following changes should be made:

Page 5	Line 12	Should Read: I think <u>it</u> was <u>STROM</u>
Reason Assigned For Change:		DIE CASTING
Page 5	Line 25	Should Read: ONE MARKET <u>PLAZA</u>
Reason Assigned For Change:		
Page 8	Line 9	Should Read: <u>that had been published by</u>
Reason Assigned For Change:		
Page 8	Line 20	Should Read: <u>that were put together</u>
Reason Assigned For Change:		
Page 9	Line 21	Should Read: <u>published in a peer reviewed journal</u>
Reason Assigned For Change:		
Page 9	Line 23	Should Read: <u>that he had made, a preprint.</u>
Reason Assigned For Change:		
Page 11	Line 5	Should Read: <u>than carbon atoms</u>
Reason Assigned For Change:		
Page 11	Line 8	Should Read: <u>M. W. Kellogg Co.</u>
Reason Assigned For Change:		
Page 11	Line 21	Should Read: <u>using precious metals</u>
Reason Assigned For Change:		

John H. Caldwell
NAME OF WITNESS

DEPOSITION CORRECTION SHEET

In Re: Nevada Power Company v. Monsanto, et al.

Upon reading the deposition and before subscribing thereto, the deponent indicated the following changes should be made:

Page 14 Line 23, 24 Should Read: manufacture of acetic acids and propionic acid.
Reason Assigned For Change:
Page 20 Line 24 Should Read: The DEO for the...
Reason Assigned For Change:
Page 20 Line 21 Should Read: TSCA law.
Reason Assigned For Change:
Page 23 Line 10 Should Read: in a laboratory that exerts a relatively high vapor pressure.
Reason Assigned For Change: doesn't make sense
Page 25 Line 11 Should Read: going to use
Reason Assigned For Change:
Page 26 Line 15 Should Read: Acetone purge to CHROMIC ACID
Reason Assigned For Change:
Page 26 Line 19 Should Read: laboratory gloves
Reason Assigned For Change:
Page 26 Line 22 Should Read: plastic rods of disposable gloves were used
Reason Assigned For Change: "Sense"
Page 28 Line 1 Should Read: we had 33 plants the
Reason Assigned For Change:

John H. Lumber
NAME OF WITNESS

DEPOSITION CORRECTION SHEET

In Re: Nevada Power Company v. Monsanto, et al.

Upon reading the deposition and before subscribing thereto, the deponent indicated the following changes should be made:

Page	28	Line	15, 17	Should Read:	<u>TSCA regulations</u>
Reason Assigned For Change:					
Page	29	Line	6	Should Read:	<u>TSCA</u>
Reason Assigned For Change:					
Page	29	Line	16	Should Read:	<u>plants, and see</u> <u>which. . .</u>
Reason Assigned For Change:					
Page	30	Line	12, 13	Should Read:	<u>TSCA</u> that
Reason Assigned For Change:					
Page	31	Line	11	Should Read:	<u>until '80, I had</u> <u>the part...</u>
Reason Assigned For Change:					
Page	31	Line	23	Should Read:	<u>TSCA</u>
Reason Assigned For Change:					
Page	32	Line	9	Should Read:	<u>environmental and</u>
Reason Assigned For Change:					
Page	32	Line	23	Should Read:	<u>1972</u>
Reason Assigned For Change:					
Page	36	Line	20	Should Read:	<u>John Novack</u>
Reason Assigned For Change:					

John F. [Signature]
NAME OF WITNESS

DEPOSITION CORRECTION SHEET

In Re: Nevada Power Company v. Monsanto, et al.

Upon reading the deposition and before subscribing thereto, the deponent indicated the following changes should be made:

Page	30	Line	21	Should Read:	staff members of
Reason Assigned For Change:	same				EET that I had conversations with.
Page	35	Line	20	Should Read:	Do you know
Reason Assigned For Change:	SP				
Page	39	Line	8	Should Read:	congratulations
Reason Assigned For Change:	SP				
Page	43	Line	5	Should Read:	APPI, <u>NRECA</u>
Reason Assigned For Change:					
Page	44	Line	10	Should Read:	regulations under
Reason Assigned For Change:					<u>TSCA,</u>
Page	64	Line	18	Should Read:	<u>debenzofurans</u>
Reason Assigned For Change:	SP				
Page	65	Line	4	Should Read:	reported to be of
Reason Assigned For Change:	same				an order of magnitude,
Page	65	Line	13, 16	Should Read:	<u>debenzofurans</u>
Reason Assigned For Change:	SP				
Page		Line		Should Read:	
Reason Assigned For Change:					

1 STATE OF MISSOURI)
) SS
2 COUNTY OF ST. LOUIS)

3 I, John T. Concannon, a Notary Public within and for
4 the State of Missouri, duly commissioned, qualified and
5 authorized to administer oaths and to take and certify to
6 depositions, do hereby certify that pursuant to Notice in
7 the civil cause now pending and undetermined in the
8 District Court of the United States, within and for the
9 District of Nevada, entitled NEVADA POWER COMPANY
10 Plaintiff, -vs- MONSANTO COMPANY, et al., Defendants, to be
11 used in the trial of said cause in said Court, I was
12 attended at the law offices of Messrs. Busch & Eppenberger,
13 100 N. Broadway, Suite 1300, in the City of St. Louis,
14 State of Missouri, by Ralph A. Bradley, attorney for the
15 Plaintiff; by Bruce A. Featherstone, attorney for the
16 Defendant, Monsanto Company; and by JOHN H. CRADDOCK, the
17 witness, in said office on March 19, 1993.

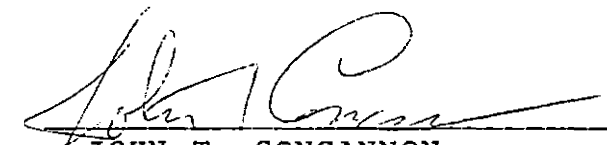
18 The said witness, JOHN H. CRADDOCK, being of sound
19 mind and being by me first carefully examined and duly
20 cautioned and sworn to testify the truth, the whole truth
21 and nothing but the truth in the case aforesaid, thereupon
22 testified as is shown in the foregoing transcript, said
23 testimony being by me reported in shorthand and caused to
24 be transcribed into typewriting, and that the foregoing
25 pages correctly set out the testimony of the aforementioned

1 witness, JOHN H. CRADDOCK, together with the questions
2 propounded by counsel and the remarks and objections of
3 counsel thereto, and is in all respects a full, true and
4 complete transcript of the questions propounded to and the
5 answers given by said witness; and that said testimony, so
6 transcribed, was subscribed to by the witness on the 13th
7 day of MAY, A. D., 1993.

8 I FURTHER CERTIFY that I am not of counsel nor
9 attorney for any of the parties to said suit, nor related,
10 nor interested in any of the parties or their attorneys.

11 WITNESS MY HAND and Notarial Seal, given this 27
12 day of July, A. D., 1993, at St. Louis, Missouri.

13 MY COMMISSION EXPIRES SEPTEMBER 12, 1994
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JOHN T. CONCANNON,
Notary Public, within and
for the State of Missouri

1
2
3
4 April 18, 1993

5 Bruce A. Featherstone, Esq.
6 Kirkland & Ellis
7 1999 Broadway - Ste. 4000
8 Denver, Colorado 80202

9
10 Re: Nevada Power Company -v-
11 Monsanto Company, et al.

12 Dear Mr. Featherstone:

13 This letter, incorporated as the last page of Mr.
14 Craddock's deposition, taken on March 19, 1993, will serve
15 as notice to you that his testimony is now ready for
16 reading and signing of same. You will recall you indicated
17 a preference for him reading his deposition, rather than
18 waiving signature.

19 Enclosed please find the original signature page of
20 Mr. Craddock's deposition, along with an eratta sheet.
21 Please have Mr. Craddock read and sign his deposition and
22 return the original signature page to me. I will then
23 return the signature page to the original transcript, and
24 notify Mr. Bradley of any corrections the witness may have
25 made.

Thank you for your cooperation in this regard.

Sincerely,

JOHN T. CONCANNON
Shorthand Reporter

Concannon & Jaeger
General Court Reporters
705 Olive Street - Ste. 604
St. Louis, Missouri 63101

JTC:md