

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

JOAN MAERTIN, Executrix of)
the Estate of Lothar)
Maertin, JOAN MAERTIN,)
individually and in her) Cause No. L-95-CV
own right, et al.,) 02849 (JBS)
Plaintiffs,)
vs.)
ARMSTRONG WORLD INDUSTRIES,)
INC.,)
vs.)
MONSANTO COMPANY AND AMERICAN)
MINERAL SPIRITS COMPANY,)
Defendants.)

DEPOSITION OF PAUL BENIGNUS
Taken on Behalf of the Defendants

June 26, 1998

Condensed Transcript and Word Index

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1 going to ask you a series of questions and
2 you'll be expected to answer them as completely
3 as you can. I'm definitely not asking you to
4 guess or speculate. If you don't hear my
5 question or you don't understand it, just let me
6 know and I'll be happy to repeat it or rephrase
7 it. If you do answer a question, that will
8 indicate you both heard it and understood it; is
9 that okay?
10 A. Yes, sir.
11 Q. And I do ask that you keep your voice up since
12 we're conducting this deposition by telephone,
13 sometimes it's hard to hear. Also, if you need
14 to take a break at any time let us know. As
15 long as there is not a question outstanding,
16 we're more than happy to accommodate that.
17 Also, do you understand, Mr. Benignus, your
18 testimony is being taken down by the court
19 reporter and will appear in a written
20 transcript?
21 A. Yes, sir.
22 Q. Do you understand that if for any reason at the
23 time of trial of this case that you're not
24 available to appear at trial that that
25 transcript could be admitted just as if you were

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1 testifying live?
2 A. Yes, sir.
3 Q. With that said, the only other thing just for
4 convenience, do you understand that when I refer
5 to PCBs today I'm referring to polychlorinated
6 biphenyls?
7 A. Yes, sir.
8 Q. And also, just to keep the transcript as short
9 as possible, I'll refer to Armstrong World
10 Industries which was formerly known as Armstrong
11 Cork Company just as Armstrong; is that okay,
12 you'll know what I'm talking about?
13 A. Yes, sir.
14 Q. Mr. Benignus, can you give me a thumbnail sketch
15 of your educational background?
16 A. In June of 1933 I got a bachelor of arts degree
17 from Illinois College, major in chemistry, minor
18 in education. You ready?
19 Q. Yes, I'm still here?
20 A. In June of '34 I got a master of science degree,
21 Washington University, organic synthesis.
22 Q. That was organic synthesis?
23 A. Yes, organic chemistry, synthesis of drugs and
24 medicinals is what it was. That was my formal
25 education.

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1 Q. Did you take any additional postgraduate
2 courses?
3 A. To a slight degree. It didn't amount to
4 anything.
5 Q. Did you go to work full-time after you received
6 your master's?
7 A. Yes, I was employed by Monsanto in their organic
8 chemicals division starting in August of 1934.
9 Q. Overall how long were you employed by Monsanto,
10 until to what year?
11 A. I retired in 1974.
12 Q. You've been retired --
13 A. 40 years.
14 Q. I'm sorry?
15 A. It was a sojourn of 40 years.
16 Q. Have you been in retirement for almost 25 years?
17 A. You got it right.
18 Q. I'm sorry, what was the position that you
19 assumed first in August of 1934?
20 A. From 1934 to '35 I was in the analytical
21 laboratories. That's where all the new chemists
22 started. And then 1936 and in 1937 I was in a
23 plant control lab that was out in the plant
24 doing analytical control work on whatever
25 chemical was being manufactured that I was

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1 connected with.
2 Q. Okay.
3 A. Then in 1938 and 1939 I was in the application
4 research laboratory.
5 Q. Was this still in the organic chemicals
6 division?
7 A. Yes, it will all be in the organic chemical
8 division until I tell you I made a move.
9 Q. Okay.
10 A. Now, in October, 1947, I moved to Monsanto's
11 inorganic division. I left the organic division
12 and was invited to go to the inorganic
13 division. That was in October of 1947. And to
14 keep you abreast, I had a specific assignment to
15 work on non electrical uses for PCBs and it's
16 significant to tell you that Dr. Jenkins, the
17 head of the research department in the inorganic
18 chemicals division, he handled all the
19 electrical uses of PCBs directly and mainly with
20 Mr. Frank Clark at General Electric Company who
21 was the inventor of PCBs, which they discovered
22 in 1929 as a dielectric and which they
23 patented. In -- by -- put it this way -- by
24 1954 PCBs were moved out of the inorganic
25 division and into the organic division where you

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1 know by now that I originally started. There, 2 the non electrical uses became split into 3 several departments and the thing of 4 significance to me was that Dr. Jenkins was 5 moved out of the inorganic division from 6 Anniston into the organic research in St. Louis 7 and he no longer handled the electrical 8 dielectric applications and I was -- wound up 9 taking his responsibility for handling these 10 PCBs in the electrical industry. 11 MR. DiMURO: Let's let Mr. Turet ask 12 you some questions. I think you're going to 13 roll on here. Let him ask you or else I think 14 we're going to be here a while. 15 A. Let me say this for your benefit. By 1954, I 16 was 100 percent handling PCB dielectric 17 applications. 18 Q. How long did you continue 100 percent PCB 19 dielectric? 20 A. Until I retired. 21 Q. Did you have a particular job title from 1954 22 on? 23 A. I was a technical person throughout my career at 24 Monsanto. And I did have a calling card, such 25 thing as marketing manager of dielectrics.	1 A. Exactly. 2 Q. Did you work on PCBs during your time as an 3 analytical chemist in the lab? 4 A. No. 5 Q. How about once you became an analytical control 6 worker in the plant control lab? 7 A. No. 8 Q. Did your responsibilities differ in that 9 position from what they had been before? 10 A. Essentially not. 11 Q. Now, between 1938 and '39 you indicated that you 12 went into the applications research area? 13 A. Yes. 14 Q. Did you deal with PCBs during that stint? 15 A. No. 16 Q. Were you still based in St. Louis during that? 17 A. I was always based in St. Louis. 18 Q. Now, between 1939 and you then jumped ahead to 19 1947, you said you moved to the inorganic 20 division. What did you do between 1938 and 21 1947? Was it all applications research? 22 A. No. I guess you lost a bit, but that's all 23 right. I'll go over it again. 24 Q. Okay. Why don't you pick it up in 1939? 25 A. 1939, from 19, say from 1940 to 1945, I was in
Page 10	Page 12
1 Well, no, it was world marketing manager of 2 dielectrics. I never used it. 3 Q. Okay. So you remained as the marketing manager 4 for dielectrics in substance from 1954 all the 5 way through to 1974? 6 A. Yes. In substance I wish to emphasize it was in 7 technology. I was not a salesmen. 8 Q. Okay. Just to go back and fill in a couple of 9 gaps, the positions that you held in the 10 analytical lab as chemist, where was that based? 11 A. All of this was based at St. Louis, Monsanto at 12 St. Louis. 13 Q. Okay. 14 A. The whole works. 15 Q. And as an analytical lab chemist, what types of 16 job responsibilities did you have? 17 A. An analytical chemist analyzed the products that 18 were being manufactured to check to see that 19 they would conform with the specifications 20 assigned to these products to see that they're 21 okay. 22 Q. By specifications do you mean physical 23 constants? 24 A. Exactly. 25 Q. Like viscosity?	1 the organic development department of the 2 organic chemicals division. 3 Q. What were your responsibilities within the 4 organic development department? 5 A. I had a laboratory and I did whatever the men in 6 the organic development department of the 7 organic chemicals division wanted done. 8 Q. Did that include tests conducted on new 9 products? 10 A. Not on any new products. 11 Q. Did it consist of testing of new applications 12 for existing products? 13 A. Not to any extent. 14 Q. Okay. Maybe I should just ask in an open ended 15 way. Can you describe for me specifically what 16 it was that you would be asked, that you were 17 asked to do by the organic development 18 department? 19 A. I was asked to -- this was during the war years 20 -- I was asked to try various things that 21 obviously would be of interest as plasticizer 22 use, and various other kinds of applications. 23 There was a broad spectrum of things here if I 24 have to go into that. 25 Q. Did you do any work with PCBs?

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1 A. Yes.
2 Q. What type of work did you do between 1940 and
3 1945 with PCBs?
4 A. I did some analytical work much as I would have
5 been doing as an analytical chemist on PCBs. To
6 the best of my recollection, this was done on
7 behalf of PCBs because until the advent of the
8 war they were manufactured only at Anniston,
9 Alabama, but during the war they were
10 manufactured also by request of the government
11 at the Monsanto Illinois to have two sources of
12 supply. Best I recall, this isn't important, I
13 was asked to do some analytical work, as we
14 discussed earlier was check the physical
15 constants, which is routine stuff.
16 Q. Did you do any specific work during the war
17 years on applications for PCBs?
18 A. Yes. I developed a formulation to preserve wood
19 against rotter organisms, wood decay and
20 termites. And this formulation, I selected
21 Aroclor 5460. This is not a PCB, it's a PC
22 three.
23 Q. Polychlorinated terphenyl?
24 A. Yes, you're right 60 percent by weight
25 polychlorinated terphenyl, that I used in this

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1 wood treating formulation as a resin.
2 Q. Did you do any work involving applications for
3 PCBs during the war years?
4 A. No, I wasn't connected with it.
5 Q. How about -- let me double check my years here.
6 What did you do between 1945 the 1947?
7 A. Well --
8 Q. Did you hear my question?
9 A. Yes, I heard your question. I think I told you
10 in October of '47 I left the organic division
11 and went into the inorganic division. Now --
12 Q. What were you doing before you went into the
13 inorganic division?
14 A. You're asking what did I do between -- after you
15 asked, I think, after 1945 up to '47.
16 Q. Right?
17 A. All right. I was in -- I did some work in the
18 organic chemicals division's sales development
19 department. And the reason for this is that
20 during the war I developed a system to preserve
21 cotton equipage. These were the war years and
22 this was important to the military. This was
23 before the advent of nylon and polyester, things
24 that do not degrade in the soil, and our
25 military was using cotton in the South Pacific

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1 and badly in need of a system that would protect
2 it against degradation and breakdown. I
3 developed such and then traveled to textile
4 mills and showed them how to apply it. That's
5 what I did in those years.
6 Q. Did this formulation you developed include PCBs?
7 A. No.
8 Q. Now, once you moved into the inorganic division
9 and you were assigned to work on non electric
10 uses for PCBs, what specific types of paths did
11 you undertake?
12 A. I would describe this. We didn't develop
13 anything, although it was called the inorganic
14 division development department, we didn't
15 develop a thing that I know of. And what we did
16 do, however, we tried to keep abreast of what
17 uses people in industries in this country and
18 maybe elsewhere found and selected PCBs to apply
19 and use. We tried to keep abreast of this.
20 That was what I did.
21 Q. Okay. How did you go about keeping abreast of
22 what uses different industries made of PCBs?
23 A. To begin with, one would hear that from
24 marketing people and one would hear about this
25 from someone in industry finding PCBs of

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1 interest to them for this or that or the other
2 purpose and informing us of this interest and
3 coming to us to talk about it.
4 Q. Was there a coordinated effort before you
5 assumed that position to keep track of what uses
6 were being made of PCBs?
7 MR. DIMURO: You said before he
8 assumed that position?
9 MR. TURET: Yeah.
10 Q. When you assumed the position did you see
11 evidence in the form of documents that there
12 already were compiled lists of uses to which
13 PCBs had been put?
14 A. Yes, to some extent because I wasn't the first
15 one in the picture.
16 Q. Fair enough. What kind of documents do you
17 remember that listed uses of PCBs as of the time
18 you assumed that position in 1947?
19 A. Well, I can take you back to the first
20 application that I knew of for PCBs,
21 polychlorinated biphenyls. Aroclor 1254, our
22 trade name for it, was as a plasticizer for
23 nitrocellulose. And the nitrocellulose was used
24 in lacquer. It was used in, I recall knowing,
25 and I refresh my mind right now, it was used

Page 17 1 one, wasn't a tremendous use, but it was used as 2 lacquer, I'm pretty sure, on lead pencils, made 3 of wood the kind we kids used in school, lead 4 pencils. Another use of the nitrocellulose -- 5 I'm differentiating between this and using it 6 for the obvious purpose, which is a lacquer, say 7 on furniture and wood. Another use was, I 8 understand, as a lacquer for nitrocellulose that 9 was used in hat bands, particularly hat bands 10 for straw hats. Because of the stability of the 11 PCBs, it doesn't hydrolyze, it's not affected by 12 water or sweat. It isn't affected by acid or 13 alkali, it's not active as a fungicide or 14 biologically, it's completely inert. But it 15 plasticized the nitrocellulose. So it was used 16 in hat bands for straw hats that I heard of. It 17 was used in the early days, I'm going back to 18 the early 1930s, to put this in perspective, it 19 was used, according to my understanding, in 20 cellulose, nitrocellulose cuffs on the sleeves 21 of men's shirts and I believe also in the stiff 22 nitrocellulose removable collars that were used 23 on, also on men's shirts. I mention this as one 24 of the early uses that I was aware of. 25 Q. Were these uses still being made in 1947 when	Page 19 1 A. T-O-R-N-I-S-I-T-E, I believe. Anyway, it was 2 used in rubber based paints. 3 Q. Going back into that time period, what were 4 rubber based paints used for? 5 A. Rubber based paints were used as coatings for 6 metal in corrosive environments such as in 7 factories and so forth. But they were used as 8 road marking paint. They, I think, were used as 9 coating on these cones they used on road 10 markings. Being water resistant they were used 11 where they might be exposed to water a lot. 12 Q. When in documents in this case we've seen 13 references to highway paint, is that the type of 14 paint, rubber based paints those references are? 15 A. I can't say that that's what the references 16 were, or had any references to this. I'm just 17 telling you I was aware that they were used in 18 road marking paints, yeah. 19 Q. Do you know whether during the 1947 to 1955 time 20 the Aroclor PCBs products also were used in 21 other kinds of paint? 22 A. Other types of paints. I know during this point 23 in time there was a styrene water emulsion paint 24 that had been developed and Aroclor PCBs was 25 selected as a plasticizer, but that product
Page 18 1 you assumed this position? 2 A. I don't think they had mens shirts with 3 cellulose cuffs and collars in 1947. I wouldn't 4 have worn one. 5 Q. How about lacquer on pencils? 6 MR. DAVIDSON: If you know? 7 A. I really don't know. 8 Q. During the time when you had this position 9 between 1947 and 1954, were the PCBs also being 10 used as plasticizer for polyvinyl chloride 11 coating? 12 MR. DiMURO: You said between '47 and 13 '55? 14 Q. '55, yes. 15 A. Well polyvinyl chloride, as I recall, came to be 16 in the 1940s and I'm sure they would have been 17 tried as plasticizer for polyvinyl chloride. I 18 don't know if they were used. They were, a 19 thing that I am more clear about was that PCBs, 20 Aroclor 1254, in combination with terphenyls, as 21 you know, that we mentioned that the 60 percent 22 chlorinated terphenyl, that was used as a 23 plasticizer for rubber, rubber based paints. 24 One name here that I recall was Tornisite. 25 Q. Can you spell that for me?	Page 20 1 never went to market. 2 Q. So you don't know of any instance where it was 3 actually used in the styrene water emulsion 4 paint? 5 A. It was not used in the styrene water emulsion 6 paint, no, it was not, not the system that I'm 7 talking about. 8 Q. How about during that time period, do you know 9 of uses where the PCB containing Aroclors were 10 used in fire retardant paint for coating? 11 A. Fire retardant paint? 12 MR. DiMURO: Object to the form. You 13 can answer if you can, Mr. Benignus. 14 A. I don't know what you mean by fire retardant 15 paint. PCBs are not fire extinguishers, you 16 know. They do not support and sustain 17 combustion, but they're not fire extinguishers, 18 no. I would answer your question by saying no, 19 I didn't know such a thing ever existed. 20 Q. Okay. In sheer curiosity, during that period of 21 time do you recall PCB containing Aroclors being 22 used in dentures or medical products? 23 A. Yes. Specifically Aroclor 5460, this was not a 24 PCB but you know what 5460 is. That mixed with 25 wax was known as a lost wax casting process used

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1 for making dentures as you asked, yes.
2 Q. Were there any other applications that you can
3 think of other than the ones you've already
4 mentioned during the 1947 to 1955 time period?
5 A. Well, other --
6 Q. Non dielectric?
7 A. What?
8 Q. Non dielectric uses?
9 A. Well, there were obviously other uses. PCB was
10 used as a hydraulic fluid in Lester Phoenix die
11 casting machinery. That's one example.
12 Q. I'm sorry, did you finish your answer?
13 A. Well, it's up to you. I'm not trying to be
14 difficult.
15 Q. How about plasticizer uses?
16 A. How about what?
17 Q. How about uses of PCBs as plasticizers?
18 A. Oh, plasticizers.
19 Q. Yes, can you think of applications in which they
20 were used during '47 to '55?
21 A. Well, we mentioned the rubber based paints.
22 That was the predominant one as far as I know.
23 And I'm pretty sure that's what I knew. I was
24 the one there, that this is correct. I would
25 say the rubber based paints, then it was used in

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1 some varnish, I think. And as we earlier spoke
2 in nitrocellulose lacquer which in later years
3 was replaced by other lacquer base materials.
4 Q. During the time when you were in the inorganic
5 division doing the work with non dielectric PCBs
6 did you have opportunity to oversee the research
7 reports generated by other Monsanto researchers
8 doing applications research on PCBs?
9 A. Nobody would have prohibited my seeing them, but
10 nobody was coming to me at this time you're
11 talking about with what was going on in the non
12 electrical because everybody knew I concentrated
13 on the electrical industry use of PCBs. I
14 didn't have anymore to do with the non
15 electrical.
16 Q. I'm sorry. I thought you said between 1947 and
17 1954 that your area was the non dielectric
18 uses. Did I misunderstand?
19 A. I don't think you did. Let's go back. From
20 1947 is when I went into the inorganic division,
21 and I think you have it right. My interest
22 there was strictly non electrical applications.
23 Q. In that position did you have occasion to see
24 research reports being done by other Monsanto
25 researchers on non dielectric uses for PCBs?

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1 A. Not that I know of. I don't know of any.
2 MR. DAVIDSON: Craig, you're going to
3 have to speak up a little bit. We're having a
4 problem hearing you.
5 MR. TURET: I will do my best.
6 Q. Just want to flip ahead for a moment. During
7 the period of time when you moved on into the
8 organic division 1954 or '55 on?
9 A. Yes, okay.
10 Q. Who was your supervisor?
11 A. There were -- the organic division had various
12 facets, so I was told to report to a Si
13 Newcome.
14 Q. What was his position within Monsanto?
15 A. He was in charge of an oil additives group that
16 made oil additives.
17 Q. How about as we moved into the 1960s, did he
18 still remain your supervisor?
19 A. No, he was long gone.
20 Q. Who was your supervisor in 1960?
21 A. 1960 -- I think the man who replaced Newcome in
22 this oil additives area. You want the name?
23 MR. DiMURO: He wants the name if you
24 can remember.
25 A. George Buchanan.

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1 Q. Mr. Buchanan was in charge of oil additives?
2 A. Yes.
3 Q. With the division?
4 A. Yes, but I was under that group or with that
5 group.
6 Q. Before I go on, do you remember, Mr. Benignus,
7 ever hearing while you were at Monsanto that
8 there were reports of the occurrence of chick
9 edema?
10 A. No, I didn't hear about chick edema. That's one
11 I missed.
12 Q. I didn't finish the question, but do you know
13 what I refer to when I ask about chick edema?
14 A. Yeah, it came up --
15 MR. DiMURO: To the extent, Mr.
16 Benignus, you had any conversations with us, I
17 don't want you to divulge them to Mr. Turet.
18 The question is did you know about chick edema
19 back when you were at Monsanto.
20 A. I said no. I had nothing to do with it.
21 Q. Do you remember a time where you learned about
22 the works done by a scientist in Sweden finding
23 PCBs in the environment there?
24 A. I heard about that.
25 Q. Do you remember roughly when?

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1 A. Roughly, I believe, I could be wrong because I 2 wasn't directly connected with this, roughly I 3 believe I heard about this in, I would say 1966, 4 I believe, somewhere in there. I merely heard 5 about it. I think I know what you're referring 6 to. 7 Q. How did you hear about it? 8 MR. DiMURO: Object to the form. Go 9 ahead. 10 A. Well, I wasn't the only one to hear about it. 11 It just came up. Nobody came to me to inform me 12 about it. It wasn't of my doings or concern. 13 Yes, I heard about it. 14 Q. So it was just general discussion? 15 A. Yes. Thank you. 16 Q. Did you ever remember seeing any documents back 17 in 1966 or '67 that related to this report of 18 PCBs in the environment? 19 MR. DiMURO: Object to the form. You 20 can answer. 21 A. Well, what do you mean by documents? 22 Q. Tell you what, why don't we do this: Would the 23 court reporter pull out the document that was 24 marked as Keller 2? 25 MR. DiMURO: I've given the witness a	1 Q. Separate group? 2 A. Entirely, had nothing to do with dielectrics. 3 That's why I don't see any of these things 4 you're talking about now. We already found 5 that -- Oh, I'm not supposed to -- 6 MR. DiMURO: Wait for his question. 7 A. Okay. Let's go. 8 Q. Okay. I have no further questions on that 9 document. Let me have the court reporter to 10 pull out Keller 3. 11 MR. DiMURO: The witness has it. 12 Q. Mr. Benignus, this is a January 26, 1967, 13 letter. Have you seen this document before 14 today? 15 A. I'm included in the distribution, so I would 16 assume I've seen it. 17 Q. Do you remember it? 18 A. Well, I haven't read it. I don't know what's in 19 here, but I was not involved with it, I can tell 20 you that without reading it, but I was copied in 21 on it. 22 Q. Let me direct your attention to the second 23 paragraph on the first page. 24 A. Okay. 25 Q. Which says, "to eliminate any earlier
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1 copy of Keller 2. 2 Q. Mr. Benignus, the document you're being shown is 3 one that was marked as Keller 2, a December 1, 4 1966 letter. Have you ever seen it before 5 today? . 6 A. I don't think so. I don't recognize this. 7 Q. It's addressed to a GR Buchanan in St. Louis? 8 A. Yeah, okay, I told you Buchanan was there. 9 Q. Is that the same Buchanan? 10 A. Yes. 11 Q. By the way, flip to the second page, an 12 enclosure that came with it. Have you ever seen 13 that document before? 14 A. No, I've never seen this before. 15 Q. Okay. On the first page there is a -- in the 16 upper right-hand corner there is a list of 17 names? 18 A. Yeah. 19 Q. Who is RA Steenrod if you know? 20 A. Yes, I do know. He was a salesman in the 21 marketing activity in the, what they called the 22 functional fluids group. 23 Q. Did the functional fluids group include 24 dielectric fluids? 25 A. No.	1 confusion" -- 2 MR. DiMURO: The second paragraph on 3 the third page or first page? 4 MR. TURET: First page. 5 A. Okay. I'm reading it. 6 Q. "To eliminate any earlier confusion that there 7 may have been, I should like to emphasize that 8 there is no doubt that the chemical which is the 9 subject of the investigation and the news 10 release is chlorinated diphenyl, i.e., 11 Aroclor." 12 A. Correct; I've read it. 13 Q. Do you remember discussions that related to that 14 specific topic? 15 A. I had none, but I received a copy of this so I 16 was aware of it. No one came to me with this. 17 Q. Do you know why you were CC'd on this letter? 18 A. Yeah, because I was well-known and I was in the 19 organization, but I had no direct assignment, 20 did nothing about it. I read it and was aware 21 of it. 22 Q. This letter -- 23 A. I agreed with what it says. 24 Q. I'm sorry, I didn't mean to cut you off. The 25 letter comes from a David Wood?

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1 A. Right.
2 Q. Did you have occasion to work with Mr. Wood in
3 your career?
4 A. Yes.
5 Q. What types of interaction did you have with him?
6 A. Well, he was located in London, Brussels,
7 Belgium. He was over there and that's where
8 this what he's talking about came from. Didn't
9 come from here.
10 Q. The Brussels facility is a facility of Monsanto?
11 A. Yes, that was a facility, business office in
12 Brussels. It had been earlier in London and was
13 moved to Brussels.
14 Q. And the letter is addressed to Mr. Buchanan
15 again?
16 A. Yes.
17 Q. Your supervisor?
18 A. Yes.
19 Q. To your knowledge, was Mr. Buchanan directly
20 involved in this issue of PCBs in Sweden?
21 MR. DiMURO: I'll object to the
22 form. You can answer if you can.
23 A. Well, he's addressed, this thing is addressed to
24 him. That's all I know about it.
25 Q. Okay. So you don't know one way or the other

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1 whether he was involved in the letter?
2 A. Excuse me?
3 Q. You don't know one way or the other what his
4 involvement was?
5 A. What his involvement was, no. This was
6 something new that just came up. That was the
7 status of it, I can say that much about it,
8 probably the first he ever heard of it.
9 Q. Just so I'm clear on terminology, did dielectric
10 fluids include capacitors?
11 A. Yes, you're right, capacitors and fire resistant
12 transformers.
13 Q. You were working principally in what in the
14 1960s?
15 A. That.
16 Q. On the second page of the letter you're looking
17 at, under Effect in Sweden, "this matter was
18 raised with us by every capacitor manufacturer
19 in Sweden that we visited." Did you back in the
20 1960s hear anything about people from Monsanto
21 visiting with capacitor manufacturers in Sweden?
22 A. Yeah, but not because of what I'm looking at
23 here. I called on capacitor people in Sweden
24 myself with Wood. That was his job over there.
25 And at the time there was nothing ever discussed

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1 about what's in this memo here by Wood. This is
2 all brand-new.
3 Q. So when you went with Mr. Wood to visit
4 capacitor manufacturers, what was the purpose in
5 your participation?
6 A. Technology, dielectric technology.
7 Q. Farther down in that same paragraph there is a
8 reference to, there is a statement says, "Jensen
9 stated that he had been approached personally by
10 several workers associated with chlorinated
11 diphenyls for non electrical uses and these
12 workers were quite worried as to the possible
13 effects on their health."
14 MR. DiMURO: Actually, it says Jensen
15 comma however comma. You left a word out.
16 MR. TURET: That's true, I left
17 however out.
18 Q. Mr. Benignus, do you recall back in the 1967
19 time frame any discussions within Monsanto about
20 concern of human beings associated with PCBs?
21 A. No. As far as I know, I heard none, and this is
22 all never heard of before, so the answer is, I
23 suppose the correct answer is no.
24 Q. I have no further questions on that document.
25 MR. TURET: Chris, would you pull out

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1 Keller 7?
2 MR. DiMURO: This is the October 21,
3 memo with attachment.
4 MR. TURET: Yes.
5 MR. DiMURO: Okay, the witness has
6 it.
7 Q. There is one name listing on top of the
8 circulation list, at least on the copy I have.
9 I don't know whether you were on it or not. Can
10 you tell me whether you've ever seen this
11 document before?
12 A. Well, I'm trying to look at this thing, what it
13 is. Risebrough, I've heard that name. I don't
14 think I've seen this. I had nothing to do with
15 it, and I don't think I've seen it. I don't
16 think I ever got it. If I did, I would have
17 nothing to do with it; it wasn't my business.
18 1968 -- well, that again is shortly after this
19 thing came to light about something in a sea
20 eagle. I had nothing to do with that.
21 Q. Do you remember any discussions or documents
22 within Monsanto that addressed the issue of a
23 study by Professor Risebrough?
24 MR. DiMURO: Object to the form. You
25 can answer.

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1 A. As I said already, I had heard of this
2 Risebrough. He was a professor in biology, I
3 believe, or industrial hygiene, I don't know,
4 but Risebrough, yes, I had heard that name.
5 Q. Do you remember specifically in the course of
6 your employment at Monsanto any meetings or
7 discussions about Professor Risebrough's
8 findings?
9 A. No, I was not in that area. I was not an
10 industrial hygienist and so forth.
11 Q. Was Mr. Buchanan still your supervisor as of
12 October, 1968?
13 A. I'm not sure, but I believe Buchanan -- I
14 believe he may have been there. He may not, but
15 it was around that time that this oil
16 administrative group department, whatever you
17 want to call it that we've mentioned, was sold
18 and was no longer with Monsanto, and he went
19 with that. So it can be he wasn't there. Is he
20 on this distribution?
21 Q. No. Did you have a supervisor of any type in
22 October of '68 as best you can recall?
23 A. Everybody was my supervisor. You ask everybody,
24 I was a technologist. I responded to everybody,
25 but I was not active in what you're talking

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1 about here. Probably Buchanan, October -- my
2 guess is that he was either gone or on the way
3 going out the door at this time. There was that
4 change.
5 Q. Now, did you also in the context of the
6 responsibilities you had in the 1960s also have
7 any responsibilities for hydraulic fluid?
8 A. No.
9 Q. That was a separate area?
10 A. Yes.
11 Q. Do you remember hearing anything about the
12 Escambia River in Florida, PCB contamination?
13 A. No.
14 Q. Do you remember hearing anything back in the
15 1960s about leakage of hydraulic fluid from a
16 Pensacola plant of Monsanto?
17 A. No, I was not in that area.
18 MR. TURET: Chris, would you please
19 pull out Keller 13?
20 MR. DAVIDSON: The witness has Keller
21 13.
22 Q. Mr. Benignus, I recognize your name is not on
23 the distribution list at the top. Have you ever
24 seen the document that's been handed to you as
25 Keller 13 before?

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1 A. I'm trying to look at it. I never received
2 this. I never saw it until right now. I'm
3 trying to look at it. Is that what you want me
4 to do?
5 Q. No. Tell you what, I will direct you to a few
6 sentences in it and ask you about those rather
7 than having you read the whole thing. On Page 3
8 at the top?
9 A. My pages are not numbered.
10 Q. The third page, Page 3 is numbered three at the
11 top?
12 MR. DiMURO: What does it have, Bates
13 number?
14 MR. TURET: PRR 025247.
15 MR. DiMURO: Okay.
16 Q. Direct your attention to the paragraph second
17 from the bottom, the first sentence says: "The
18 organic division which produces this series of
19 very profitable products has a concerted effort
20 underway to protect continued sales and uses."
21 Based on your employment with Monsanto in the
22 August, September 1969 time period, which is
23 when this document refers to, what did that
24 mean?
25 MR. DiMURO: Objection to form.

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1 A. I never discussed this or never saw it. I don't
2 know what's in the minds of these people who
3 received it. I can't at this time try to think
4 what's in the mind of whoever wrote this. I'm
5 looking. Page 4, Dr. Kelly, he was a medical
6 director. This is different typing from this.
7 Did Dr. Kelly write this?
8 MR. DiMURO: I think it's just the
9 type size is different.
10 A. They say only the type size. Well, Dr. Kelly
11 wrote it. He's the medical director. I can't
12 assume at this time what was in Dr. Kelly's
13 mind.
14 Q. Just asking generally do you know whether back
15 in September of 1969 there was a concerted
16 effort underway to protect continued sales and
17 uses of PCBs containing products?
18 MR. DiMURO: Object to the form. You
19 can answer.
20 A. I don't know. I wasn't in that area. If you
21 want to know about dielectrics, I can answer
22 your question. This seems to be -- I don't
23 know. This seems -- I can't -- this seems to be
24 and so forth, but you're really addressing
25 something here that was not in my business

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1 area. I wasn't connected with it. I was in the
2 dielectric area.
3 Q. Was there any concerted effort underway in the
4 dielectric area to protect continued sales of
5 PCB containing dielectric fluid?
6 MR. DiMURO: Object to the form. You
7 can answer, Mr. Benignus.
8 A. Well, I know what you're driving at. Would you
9 repeat this, please?
10 MR. TURET: Could the court reporter
11 read it back, please?
12 (Question read)
13 MR. DiMURO: Note my objection. You
14 can answer.
15 A. Well, you're talking about 1969?
16 Q. Correct.
17 A. Well, Aroclor PCB was used exclusively by the
18 electrical industry for very, very essential
19 application in capacitors and transformers for
20 which I guarantee you there was no replacement
21 at this point in time. I think I've answered
22 your question.
23 Q. If I'm understanding you correctly, this wasn't
24 an issue for dielectric fluid at the time?
25 A. Yes, you're right. As far as you and I are

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1 concerned, as far as I'm concerned, this was no
2 issue in the dielectric area.
3 Q. Were you aware back in the fall of 1969 that
4 there was a committee created to study the
5 potential environmental contamination issues
6 associated with PCBs?
7 MR. DiMURO: Objection to the form.
8 A. I would have to say no doubt I heard of this. I
9 didn't participate.
10 Q. And the committee that you heard of, is that one
11 that would have included Mr. Wheeler?
12 A. I would think so. He was an industrial
13 hygienist.
14 Q. Did any of the people on the committee that you
15 have a general recollection of approach you for
16 your input about PCB products?
17 A. PCB problems?
18 Q. No, PCB products?
19 A. Excuse me. No.
20 Q. Did anybody approach you to compile information
21 about volume of sales of PCB containing
22 dielectric fluids at the time?
23 A. They didn't have to approach me; I kept a record
24 of that in the electrical industry, but not
25 outside the electrical use.

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1 Q. What types of records did you keep at the time
2 of the sales of dielectrics in the electrical
3 industry?
4 MR. DiMURO: Objection to the form.
5 You can answer.
6 A. I kept a record of who bought it and the amount
7 for capacitors and transformers. Also the
8 economics of this. I did that myself.
9 Q. Just to clarify, I think you answered this
10 question already, but which product lines were
11 included within functional fluids?
12 A. I will do my best. I wasn't in functional
13 fluids. Heat transfer, hydraulic fluid,
14 perhaps, I would assume, this is an assumption
15 but it's a logical one, some --
16 Q. I couldn't hear you.
17 A. I said I think my assumption here is logical, I
18 would assume it was used in some lubricant of
19 some type.
20 Q. Have you finished your answer?
21 A. I'm still trying to think. Yeah, let's say I've
22 finished. I've done my best. This was 50 years
23 ago.
24 Q. Let me know when you have finished.
25 MR. DiMURO: He's done.

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1 Q. Transformer fluids, are they included as
2 functional fluids?
3 A. No, sir.
4 Q. That's dielectric?
5 A. That's dielectric.
6 Q. Do you recall any letters that went out to the
7 dielectric customers in the 1960s that related
8 to these reports of potential environmental
9 pollution by PCBs?
10 MR. DiMURO: Object to the form. You
11 can answer it.
12 A. Well, I would have known about it because I was
13 the one handling dielectrics. So I didn't send
14 such letters out myself, but if they had, I
15 think I would have known about it. There is no
16 reason why I wouldn't. I had very close contact
17 with the electrical industry. This other stuff
18 you're talking about, I wasn't even in, not in
19 these days.
20 Q. Perhaps you misunderstood my question. My
21 question is do you remember such a letter going
22 out to the dielectric customers in the 1960s?
23 MR. DiMURO: Object to the form. I
24 think he said he recalled letters. I think
25 that's what his answer was.

Page 41 1 Q. Was that your answer? I understood you to say 2 if there were you would have known about it. 3 A. I would think so. They didn't send it to me 4 that I remember but I think I would have known 5 that it was sent to the electrical industry. We 6 kept very close contact. I did. 7 Q. Let me just ask it again because I still am not 8 clear here. Do you know whether there were 9 letters that went out from Monsanto to Monsanto 10 dielectric customers in the 1960s? 11 MR. DiMURO: I think what Craig is 12 trying to ask, and Craig, correct me if I'm 13 wrong, is do you recall any specific letter or 14 letters going out in that time period, not 15 whether if there was a letter you probably would 16 have known about it, he's asking whether you 17 recall any letters. 18 A. You're making this plural and along the lines 19 you're talking about, let me make it singular as 20 far as I'm concerned. I do believe that 21 Monsanto did send a letter to the people you're 22 inferring or referring me to. So I believe as 23 far as a singular one, I would answer your 24 question in the positive. 25 Q. Is it your recollection that that one letter was	Page 43 1 Is there another place within Monsanto back in 2 the 1969, 1970 time frame from which one would 3 obtain specific dollar volume information about 4 sales of PCBs to dielectric customers? 5 A. Certainly, from the accounting department. 6 Q. Do you remember any discussion within Monsanto 7 back in the late 1960s that related to the 8 possibility that lawsuits could be filed against 9 Monsanto based on PCBs in the environment? 10 MR. DiMURO: I'll object to the form, 11 also instruct the witness, to the extent you are 12 going to reveal any communications you had with 13 Monsanto counsel, those are privileged and I 14 would instruct you not to reveal those 15 communications. Subject to that you may 16 answer. 17 A. Would you please repeat the question? 18 MR. TURET: Would the reporter read 19 it back, please? 20 (Questions read.) 21 A. Absolutely not. 22 Q. Do you remember back in the 1969 to 1970 time 23 frame whether there was any discussion within 24 Monsanto about discontinuing the manufacture of 25 PCBs completely?
Page 42 1 sometime before 1970? 2 MR. DiMURO: Object to the form. 3 A. I, offhand I would be guessing. 4 MR. DiMURO: I don't want you to 5 guess, Mr. Benignus. 6 Q. I don't want you to guess or speculate. 7 A. I really don't know. 8 Q. Mr. Benignus, if I see references in documents 9 put together by Monsanto back in the 1969 to 10 1970 time frame to specific dollar volumes of 11 sales to dielectric customers, was that 12 information that was compiled by you? 13 MR. DiMURO: Object to the form. 14 A. I didn't have to compile it. I told you already 15 I had my own. 16 Q. Were you the source of that information? 17 MR. DiMURO: Objection to form. I 18 don't know what document you're talking about. 19 Was he the source of some sales volume 20 information in a document that you're not 21 showing him? If you can answer, go ahead. 22 A. I think I can answer. I would say no to your 23 question I was not the source of that, but I 24 wasn't precluded from it. 25 Q. Now, I'm not asking whether you were precluded.	Page 44 1 A. Yes. 2 Q. What do you remember specifically about those 3 discussions? 4 A. Well, I'll tell you what I remember. I wasn't 5 in those discussions, but I knew that this was 6 being discussed. I know that you said you 7 included 1970. This matter of the 8 environmentalists objecting to PCBs on whatever 9 basis they had, which I think was that it didn't 10 biodegrade, it was refractory, other than that, 11 all I can say, that PCBs are very stable 12 materials, inert and so forth, yes, this thing 13 ballooned at this time. It was publicized, I 14 think by now, they found it in a sea eagle and 15 whatnot and the news media had it on the front 16 pages, and I'm sure that people at Monsanto, I'm 17 sure, you know, this came to the attention of 18 the people in charge of Monsanto Corporation, 19 the executive committee, the trustees, the top 20 management, and yes, there was a judgment made. 21 We seemed to be making something that some 22 people object to and we've got other things to 23 do than hear nothing but this PCB stuff which we 24 don't understand anyhow, and the 25 environmentalists are all concerned about. And

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1 I'll tell you very straightforward there was a
2 decision made, get out of this business, for
3 everything.
4 Q. When was that decision made, to the best of your
5 understanding?
6 A. Well, I know they went out of the non electrical
7 business in 1970. And from my position in the
8 electrical industry, which was a highly
9 essential application, I know exactly what
10 happened.
11 Q. That ultimately resulted in exiting the market
12 completely in 1977?
13 A. Yes, it was terminated in 1977. Monsanto wanted
14 to terminate it in 1970. We weren't allowed
15 to. Congress wouldn't allow us to terminate the
16 electrical in 1970. It was sold on hold
17 harmless and whatnot. The electrical industry
18 had nothing else to use. They had to find
19 something, and in answer to your question, as
20 soon as they found a replacement for PCB in
21 capacitors, that day, that hour that GE said
22 they were going to market with dioctyl
23 phthalate, that was the end of it. That wasn't
24 Monsanto's doing.
25 MR. TURET: Chris, would you pull out

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1 Keller 16 and show it to Mr. Benignus?
2 MR. DiMURO: The witness has it.
3 Q. The document you're being shown is a memo
4 entitled The PCB Pollution Problem dated January
5 21 or 22, 1970?
6 A. Yes.
7 Q. Do you remember the meeting with GE that's
8 reflected in this memo?
9 A. Certainly I do.
10 Q. You were present for this meeting?
11 A. I think I arranged it to be held.
12 Q. To the best of your recollection is that the
13 first meeting that you held with GE at which the
14 issue of PCBs in the environment was addressed?
15 A. I don't know, but this is a well organized
16 comprehensive meeting representing all GE
17 locations. That's as comprehensive as you can
18 get, and then look at the Monsanto people
19 there. Yeah, this was an important meeting. I
20 think my only connection was arranging it with
21 the people at GE on behalf of the rest of the
22 industry. This is dated 1970.
23 Q. Did you have regular dealings as part of your
24 job duties with GE before this meeting?
25 A. Of course. We go back to what we already said

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1 in the 1950s, roughly I would say '53 or '54 I
2 took over the handling of dielectrics from Dr.
3 Jenkins who handled it directly with Frank
4 Clark, the inventor of PCB dielectrics at
5 General Electric and this dealt with a GE
6 discovery in 1929 or 1930 and their use and
7 patent. They established the uses. We
8 cooperated with these people and as I already
9 told you, we didn't invent PCBs as dielectric at
10 Monsanto but we certainly pursued it with the
11 electrical industry and you're talking to the
12 guy who took this over.
13 Q. Was it part of your job responsibilities to
14 interact with all of the major dielectric
15 customers of Monsanto during your tenure?
16 MR. DiMURO: I'll object to the form.
17 MR. DAVIDSON: Craig, what's the
18 relevance of all this? Was Armstrong using
19 dielectric transformers?
20 MR. DiMURO: We seem to be getting --
21 I'm going to let you continue your inquiry.
22 MR. TURET: I'm not that far from
23 being finished.
24 MR. DiMURO: Mr. Benignus, have you
25 heard Mr. Turet's question or would you like it

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1 read back?
2 THE WITNESS: I don't know. I sort
3 of lost it.
4 MR. DiMURO: Why don't we have the
5 question read back for you?
6 (Question read)
7 A. Yes, that was it.
8 Q. Do you remember a specific meeting with
9 dielectric customers of Monsanto during the
10 1960s any discussions about PCBs having been
11 identified in the environment?
12 MR. DiMURO: Object to the form. You
13 can answer.
14 A. Sure I can answer. GE knew as much.
15 Westinghouse knew as much. People in the
16 electrical industry that served with me. I was
17 chairman of the subcommittee of American Society
18 of Testing and Materials. I was on the
19 Institute of Electrical and Electronic Engineers
20 which was the transformer arm of the
21 International Electro Technical Commission which
22 was worldwide. Yes, we certainly interacted
23 among ourselves, we certainly did. And I think
24 the thing that you perhaps should know is that
25 in 1960, you're talking again '60, wasn't that

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1 when they found it in a sea eagle? Westinghouse
2 and GE knew they found it in the sea eagle just
3 as Monsanto did in 1960.
4 Q. Are you talking about the studies that we talked
5 about before?
6 MR. DAVIDSON: The Risebrough
7 article?
8 A. Politely, yes.
9 Q. So those were topics of discussions?
10 A. Yes.
11 Q. In meetings because they were as well aware of
12 it as Monsanto?
13 A. Certainly, yes.
14 Q. Just a couple final questions. In the course of
15 your duties at Monsanto, did you have occasion
16 to speak with employees of Armstrong?
17 A. No.
18 Q. Did you ever experience employees of Armstrong
19 coming out to St. Louis for meetings?
20 A. No. They wouldn't have called on me if they
21 did.
22 Q. To your knowledge, were they a dielectric
23 customer of Monsanto?
24 A. No, they didn't make capacitors or transformers.
25 MR. TURET: I have no further

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1 questions.
2 MR. DAVIDSON: Carolyn?
3 MS. O'CONNOR: No questions at this
4 time.
5 MR. DAVIDSON: Off the record a
6 minute.
7 MR. DiMURO: We're going to take a
8 two-minute break and let you know whether or not
9 we're through.
10 MR. DiMURO: I have a couple of
11 questions for Mr. Benignus.
12
13 EXAMINATION
14 QUESTIONS BY MR. DiMURO:
15 Q. Mr. Benignus, are you on any medications right
16 now?
17 A. I take an inhalant. One is Beclovent that
18 strengthens and enlarges the tubes that go to
19 the lungs.
20 Q. Other than that medication, are you on anything
21 else?
22 A. No.
23 Q. How is your overall health?
24 A. Fine.
25 Q. And how old are you going to be?

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1 A. In August, 89.
2 Q. Are you still fairly active?
3 A. I play tennis and I play golf and I swim. I
4 would be doing that if I wasn't in this thing
5 here, that's what I would be doing right now.
6 It's pretty damn hot here.
7 MR. DiMURO: I don't have further
8 questions. Craig, do you have anything?
9 MR. TURET: I'm done. Mr. Benignus,
10 thank you very much.
11 (Witness excused)
12
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1 STATE OF _____)
2 COUNTY OF _____)
3 I, PAUL BENIGNUS, do hereby certify:
4 That I have read the foregoing deposition;
5 That I have made such changes in form
6 and/or substance to the within deposition as
7 might be necessary to render the same true and
8 correct;
9 That having made such changes thereon, I
10 hereby subscribe my name to the deposition.
11 I declare under penalty of perjury that
12 the foregoing is true and correct.
13 Executed this _____ day of
14 _____, 1998,
15 at _____,
16
17 _____
18 NOTARY PUBLIC
19
20 My Commission expires: _____
21
22
23
24 _____
25 PAUL BENIGNUS

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1 CERTIFICATE OF REPORTER
2 STATE OF MISSOURI)
3) SS
4 COUNTY OF ST. LOUIS)
5 I, NANCY A. KUNCAITIS, a Registered
6 Professional Reporter and Notary Public in and
7 for the State of Missouri, the officer before
8 whom the foregoing deposition was taken, do
9 hereby certify that the witness whose testimony
10 appears in the foregoing deposition was duly
11 sworn by me; that the testimony of said witness
12 was taken by me to the best of my ability and
13 thereafter reduced to typewriting under my
14 direction; that I am neither counsel for,
15 related to, nor employed by any of the parties
16 to the action in which this deposition was
17 taken, and further that I am not a relative or
18 employee of any attorney or counsel employed by
19 the parties thereto, nor financially or
20 otherwise interested in the outcome of the
21 action.

22 NOTARY PUBLIC in and for the
23 State of Missouri

24 My commission expires 11-22-01
25

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1 7494 Ethel Avenue
2 St. Louis, Missouri 63114
3 Phone (314) 644-2191 * Fax (314) 644-1334
4 July 10, 1998
5 Latham & Watkins
6 One Newark Center
7 Newark, New Jersey 07101-3174
8 Attn: Christopher DiMuro
9 In Re: Maertin v. Armstrong
10 Dear Mr. DiMuro:
11 Please find enclosed your copy of the deposition
12 of Paul Benignus taken on June 26, 1998 in the
13 above-referenced case. Also enclosed is the
14 original signature page and errata sheets.
15 Please have the witness read your copy of the
16 transcript, indicate any changes and/or
17 corrections desired on the errata sheets, and
18 sign the signature page before a notary public.
19 Please return the errata sheets and notarized
20 signature page to Craig Turet, One Liberty
21 Place, Philadelphia, Pennsylvania 19103-7396 for
22 filing prior to trial date.
23 Thank you for your attention to this matter.
24 Sincerely,
25
26 Nancy A. Kuncaitis
27 Encl: Transcript
28 Signature page
29 Errata Sheets
30
31 cc: C. Turet
32 C. O'Connor

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