Monsanto

LAW DEPARTMENT

Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

March 13, 1981

Mr. James H. Schink
Kirkland & Ellis
Standard Oil Building
200 East Randolph Drive
Chicago, IL 60601

Dear Jim:

Please find enclosed an executed document of Mr. William R. Richard, Jr. regarding his testimony involving Outboard Marine Corporation. You will also note that there are some changes which Mr. Richard has made in the context of his deposition.

If I can be of further assistance, please let me know.

Sincerely,

Jay R. G. Ortiz

JRGO:mjf

cc: Mr. David Moore

RECEIVED
MAR 16 1981
DAVID M. MOORE, II

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

THE UNITED STATES OF AMERICA, Plaintiff,	)	
vs.	)	No. 78 C 1004
OUTBOARD MARINE CORPORATION AND MONSANTO COMPANY, Defendants.	)	

I hereby certify that I have read the foregoing transcript of my deposition given at the time and place aforesaid, consisting of Pages 1 to 331, inclusive, and the attached corrections and I do again subscribe and make oath that the same is a true, correct and complete transcript of my deposition so given as aforesaid, as it now appears.

William R Richard Jr

William R. Richard, Jr.

Subscribed and sworn to
before me this 24 day
of March, A.D. 1981.

Virginia Schroeder

Notary Public.

VIRGINIA SCHROEDER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES 8/29/83
ST. LOUIS COUNTY

Thea L. Urban
Certified Shorthand Reporter
134 South La Salle Street
Chicago, Illinois 60603
312 782 3220

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WILLIAM R. RICHARD, JR., being first duly sworn on oath, states that he has made the foregoing corrections to the transcript of his deposition taken on January 15 and 16, 1981 and that with such corrections the transcript is a true, correct and complete transcript of the aforesaid deposition.

William R Richard Jr
William R. Richard, Jr.

SUBSCRIBED AND SWORN to before me this 12th day of ~~February~~ March, 1981.

Virginia Schroeder
Notary Public

VIRGINIA SCHROEDER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES 8/29/83
ST. LOUIS COUNTY

WATER_PCB-SD0000022289

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

THE UNITED STATES OF AMERICA,

Plaintiff,

vs.

OUTBOARD MARINE CORPORATION AND MONSANTO COMPANY,

Defendants.

No. 78 C 1004

DEPOSITION OF
WILLIAM R. RICHARD, JR. CORRECTIONS

Page No.	Line No.	Reads	Should Read
6	22	was a research director for Schwinnigen Resins	was a research chemist for Shawinigan Resins
	24	Is the Schwinnigen Resins Corporated related	Is the Shawinigan Resins Corporation related
7	6	Monsanto and 50 percent owned by Schwinnigen Power	Monsanto and 50 percent owned by Shawinigan Power
	12	went to Schwinnigen Resins?	went to Shawinigan Resins?
	14	Then you worked at Schwinnigen Resins	Then you worked at Shawinigan Resins
	20	to Monsanto from Schwinnigen Resins Corporation?	to Monsanto from Shawinigan Resins Corporation?
8	4	from college until you went to Schwinnigen Resins	from college until you went to Shawinigan Resins
	20	When you went to Schwinnigen Resins, what	When you went to Shawinigan Resins, what
	22-23	I was doing process work at Schwinnigen. Schwinnigan Resins made resin and I was working on a	I was doing process work at Shawinigan. Shawinigan Resins made resin and I was working on a

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Page No.	Line No.	Reads	Should Read
9	11	They make. Schwinnigen made resin, polymer.	They make. Shawinigan made resin, polymer.
10	9-10	butynol is a four-membered aliphatic alcohol and it is stearified. Monsanto did not make that product.	butanol is a four-membered aliphatic alcohol and it is esterified. Monsanto did not make that product.
	13	One of the suppliers of commercial solvent.	One of the suppliers was Commercial Solvents.
	16	were working at Monsanto before you went to Schwinnigen	were working at Monsanto before you went to Shawinigan
	21	analysis on butyral resins.	analysis of butyral resins.
11	2	After you worked at Schwinnigen Resins and	After you worked at Shawinigan Resins and
	14-15	You take vinyl chloride, copolymers, suspend in water, polymerize it into solubility.	You take vinyl chloride, or comonomers, suspend in water, polymerize it in suspension.
12	1	A calender is a machine that rolls plastic	A calender is a machine that rolls plastic,
16	20	proprietary compositions. Symogi has some and there	proprietary compositions. Ciba Geigy has some and there
17	3	duced some phosphate esters which were used in part	duced some phosphite esters which were used in part
18	1	Samaris, S-a-m-a-r-i-s.	Samaras, S-a-m-a-r-a-s.
18	22	There was a central research and normally	This was a central research department and normally
19	15	went by the group leader; Cosmon's group, J. Harris' group.	went by the group leader; Kosmen's group, J. Harris' group.
	22	Oxidation, aromatics.	Oxidation of aromatics.
20	2	Cosmon's group worked on detergents. J.	Kosmen's group worked on detergents. J.
	12	for phosphate esters.	for phosphite esters.
	14	which you are familiar with phosphate esters as	which you are familiar with phosphite esters as

Page No.	Line No.	Reads	Should Read
21	24	Polymerization of ethylene into polyglycol.	Polymerization of ethylene into polyethylene.
22	12	Earl Eleesenkamp.	Earl Gluesenkamp.
	13	What was Mr. Gleesenkamp's title?	What was Mr. Gluesenkamp's title?
23	4	Calvin, the group leader.	Calfee, the group leader.
	13	To polymer ethylene and polyglocol.	To polymerize ethylene into polyethylene.
26	23	It was based on Ziegler calculus chemistry.	It was based on Ziegler catalyst chemist.
27	4	an active ethylene polymerization.	an active ethylene polymerization catalyst.
	8	Both processes had been used commercially.	Both processes have b-en used commercially.
28	4	No. I reported to Mr. Gleesenkamp.	No. I reported to Mr. Gluesenkamp.
	5	Mr. Gleesenkamp who had been Director of	Mr. Gluesenkamp who had been Director of
	10-11	some time and then reported to Glueesenkamp a while later. Symogi was Gleesenkamp's boss.	some time and then reported to Gluesenkamp a while later. Symogi was Gluesenkamp's boss.
	18	It was a soul-searching project aimed at	It was a new research project aimed at
	20	product.	products.
29	1-2	inorganic accommodations with nylon and marketed under the trade name Vydyne, I think is the spelling.	inorganic compositions with nylon and marketed under the trade name Vydyne, I think is the spelling
38	3	stearify and you have a difficult esterification	esterify and you have a difficult esterification
	11	In the case of amine, it would form an amine acid	In the case of amine, it would form an amide with the acid
	23	I believe Kevler.	I believe Kevlar.

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Page No.	Line No.	Reads	Should Read
41	16	Are there different formations of Skydrol?	Are there different formulations of Skydrol?
43	4	Malacha is the marketing man, but I don't	Mollica is the marketing man, but I don't
45	1	An intermediate, Furandione.	An intermediate, Furadan.
	2	What is furandione?	What is Furadan?
46	15	we have discussed maleic anhydra, sulfuric acid	we have discussed maleic anhydride, sulfuric acid.
47	13	Cyclohexanol, presently to make cyclohexene.	Cyclohexanol, presently to make cyclohexylamine.
	23	Probably phthlate esters.	Probably phthalate esters.
48	3	in use as an intermediate in making adiptic acid	in use as an intermediate in making adipic acid
	4	Adiptic?	Adipic?
	6	What is adiptic?	What is adipic?
	7	D_6, dibasic acid.	C_6, dibasic acid.
49	5	and base chemicals.	and basic chemicals.
52	5-6	from our byproducts; buy products in teams, what division, what teams, intermediates would be related	from our byproducts; byproduct streams; what division, what streams, intermediates would be related
	9	views for hiring and new chemists and new engineers	views for hiring new chemists and new engineers
53	12	to a General Manager, Dmythyszin.	to a General Manager, Dmytryszyn.
54	22	Language analysis and problems.	Logic analysis and problems.
57	19	Industrial Institute sponsored a course at Harvard	Industrial Research Institute sponsored a course at Harvard
61	1	Do any of them relate to hydrocarbons?	Do any of them relate to chloro hydrocarbons?

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Page No.	Line No.	Reads	Should Read
62	13	TAPP. I have forgotten the exact title.	TAPPI. I have forgotten the exact title.
66	21-22	Westinghouse, the generic name, I think was called Ascurals, GE had another, Pyrenol.	Westinghouse had Inerteen. The generic name, I think was called Askarels. GE had another, Pyranol.
68	11	About 1966, you think?	About 1976, you think?
69	6	Typical ones were like aspirin, ascorbic	Typical cones were like aspirin, sorbic
70	8	familiar with a melt adhesive's name.	familiar with a melt adhesive's game.
	19	Rosin, maleic anhydride in formulated sizes	Rosin, maleic anhydride in fortified sizes
	24	Both are trade names. Again, it is formulated	Both are trade names. Again, it is fortified
73	4	MIC was created from, we strayed from	MIC was created from, we stemmed from
75	13	in the main staff.	in the business staff.
76	14	The first was Wobers.	The first was Wobus.
	18-20	Who succeeded Mr. Wobers? Mr. Creace, Jim Creace. Who succeeded Mr. Creace?	Who succeeded Mr. Wobus? Mr. Cresce, Joe Cresce. Who succeeded Mr. Cresce?
77	15	the Efforts and Environmental Concerns. He was to	the efforts on environmental concerns. He was to
82	2	weren't fire-resistant as the Aroclors.	weren't as fire-resistant as the Aroclors.
	15	The Arocloric fluids can operate at the	The Aroclor fluids can operate at the
86	16-17	There might be traces of SCH and we start with a phosphoric oxychloride and SCH is given off	There might be traces of HCl and we start with a phosphoric oxychloride and HCl is given off
	18	If you have small traces of nitrogen chloride	If you have small traces of hydrogen chloride
	19	creating that instability and metal alkyl attack	creating that instability and metal attack,

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Page No.	Line No.	Reads	Should Read
88	16	We wanted to build a thermostability.	We wnated to build thermostability.
	19	wanted to build fire-resistance against phenolics	wanted to build hydrolytic resistance against phenolics
90	7	phosphate esters tested in chickens of neurological	phosphate esters tested in chickens against neurological
	19	I think they call it chickadema.	I think they call it chickedema.
93	15	of work on chickadema, for example. I don't know if	of work on chickedema, for example. I don't know if
94	5	our storage, ran acute toxicity tests, kept track	our short time, ran acute toxicity tests, kept track
	9	Robert Levinskas.	George Levinskas.
105	21	whole bunch of others.	whole bunch of isomers.
	23	Or at least 200 micrometers. I don't	There are at least 200 isomers. I don't
106	4	These were adapted from soluble kinds of	These were adapted from tests on soluble kinds of compounds,
108	20	was Dr. Sager.	was Dr. Saeger.
	22	S-a-g-e-r.	S-a-e-g-e-r.
	23	Is Dr. Sager also a Monsanto employee?	Is Dr. Saeger also a Monsanto employee?
110	1	Yes. Arochlorinated biphenyls, is that	Yes. Are chlorinated biphenyls, is that
111	5	It was aimed at a dielectric lubricity	It was aimed at a dielectric fluid
	12	retain some fire-resistance or with sufficient di-	retain some fire-resistance and with sufficient di-
	20	1248 was pretty solid.	1268 was pretty solid.
113	20	And Pydraul 8200, which Aroclor was in that?	And Pydraul A-200, which Aroclor was in that?

Page No.	Line No.	Reads	Should Read
115	10-12	contained four chlorine atoms, showed biodegradability and at the time frame of days, weeks and months. There are some chlorine, five isomers that also de-	contain four chlorine atoms, showed biodegradability and in the time frame of days, weeks and months. There are some five (chlorine) isomers that also de-
	18	the bugs, microbes a period of time to adjust to the	the "bugs", microbes a period of time to adjust to the
	21	bugs can feed partly on it, partly on the Aroclor,	"bugs" can feed partly on it, partly on the Aroclor,
118	6	wouldn't degrade in the time frame that we were talking	would degrade in the time frame that we were talking
	14	isomers. You understand that these are all smithers	isomers. You understand that these are all mixtures
120	2	Government task force, and they did a lot of work on	Government task force. We did a lot of work on
121	23	I guess, June of '60, so the results were coming out	I guess, June of '69, so the results were coming out
127	17	to me, probably I saw it in the early part of '67.	to me, probably I saw it in the early part of '68.
	20	first one I heard about, would be Jansen-Widmark.	first one I heard about, would be Jensen-Widmark.
128	15	for DDT residues and in fish samples.	for DDT residues in fish samples.
129	7-8	whether we couldn't begin to -- Jack, or I shouldn't say Jack, to improve our analytical capability so	whether we couldn't begin to -- jack, or I shouldn't say jack, to improve our analytical capability so
	21	once you got the economic equivalent. Sample prepara-	once you got the cracking pattern. Sample prepara-
131	8	for proteins, but the details of this you need -- I	from proteins, but the details of this you need -- I

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Page No.	Line No.	Reads	Should Read
132	7	Who would, Dr. Keller on the developing of	Who helped Dr. Keller on the developing of
	12	Dr. Kelly later on, but I guess the development	Dr. Kahle later on, but I guess the development
	15	not sure when Kelly came and Mieure came.	not sure when Kahle came and Mieure came.
	17	K-i-e-h-l-e?	K-a-h-l-e.
133	11	chemical engineer from Pittsburgh, Polytechnic.	chemical engineer from Worchester, Polytechnic.
	12	He was hired Product Manager.	He was hydraulic fluid product manager.
135	19	Probably interested in keeping the chlorinated	Probably interested in keeping the higher chlorinated
137	2-3	and terphenyl and make some water phenol. Then you do water distillation and make separations.	and terphenyl and make some higher polyphenyls. Then you do fractional distillation and make separations.
	11-12	After the fracturing of distillation? After the fracturing of distillation.	After the fractionating by distillation? After the fractionating by distillation.
	22	the four chlorines out -- in other words, the lower	the four chlorines biodegraded -- in other words, the lower
138	4	went to Sweden and in Sweden couldn't find Jansen,	went to Vweden and in Sweden couldn't find Jensen,
	8	that looked like Clofin 50.	that looked like Clophen 50.
	9	What is Clofin 50?	What is Clophen 50?
	11	it is a germing product.	it is a German product.
	13	I think probably Baird, but they supply,	I think probably Bayer, but they supplied
	17	On the polymerization, you said you	On the metabolism, you said you
	21	biphenyl plasticizers.	biphenyl isomers.

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Page No.	Line No.	Reads	Should Read
139	21-22	Well, I guess nobody knew who was Aroclor or chlorinated biphenyl but they might take an	Well, I guess nobody knew whether it was Aroclor or another manufacturer of chlorinated biphenyl but they might take an
142	12-13	certainly the business director, in this case, Larry Birch, would be coordinating this whole effort because	certainly the business director, in this case, Howard Bergen, would be coordinating this whole effort because
151	10-11	I would think you would have to have a, run a pump reaction, water or something like that. In	I would think you would have to have a runaway pump reaction with water or something like that. In
152	15	If there is just visual property data, then that	If there is just physical property data, then that
156	5	If you had, for example, invented a new	If you had, for example, to invent a new
157	7	deal than, say, applied sciences in '69 than we did	deal then in applied sciences in '69 than we did
159	11	formulating base stock and figuring testing, I'd say	formulating base stock and functional testing, I'd say
	20-23	The AIT test like the Computer of Minds would be placing special explosion on a special apparatus, maybe phenol, or once in a while we had to go to an insurance, fire test at an insurance	The pressure AIT test was run at the Bureau of Mines. We would be placing special emphasis on a special apparatus, maybe pumps or once in a while we had to go to an insurance tester, fire test at an insurance
160	4	that would impact the time frame because of the dif-	would that impact the time frame because of the dif-
164	8	before it was a prepared product. It was assigned a	before it was a proposed product. It was assigned a
166	16	I think principally elemental problems	I think principally enivornmental presence
169	1-2	and I guess he had contacted Baird to find out what Clofins they were making and perhaps what they were	and I guess he had contacted Bayer to find out what Clophens they were making and perhaps what they were

Page No.	Line No.	Reads	Should Read
170	5	the possibility of it, but I read it in early '67.	the possibility of it, but I read it in early '68.
173	3	actually not reclaim so much, not to collect, but to	actually reclaim not to distill, but to
	8	On occasion, we worked with Findett and	On occasion, we worked with Findett and had
	10	occasion with Findett. Later on in '71, '72 area	occasion with Findett. Later on in '71, '72 era
181	19	we actually contacted Mehler at Marketing and contacted	we actually contacted Mehler at Milwaukee and contacted
	23	ing these contracts with these people and develop	ing these contacts with these people and develop
185	2	Lou Stark, Wayne Pogue.	Lou Stark, Don Pogue.
192	14	could be incinerated. This was my responsibility was given to CED. That was Bob Kuntz.	could be incinerated. This was not my responsibility. It was given to CED. That was Bob Kountz.
	20	companies within Monsanto and Kuntz. I think this	companies within Monsanto. And Kountz, I think his
196	20	No, I don't know his age from school.	No, I don't know his degree from school.
211	5	I can't recall. There was a formal committee.	I can't recall. There was no formal committee.
214	11	It is the address, Residence 1, probably.	It is the address, Research 1, probably.
223	13	Yes, there are discharges.	Yes, there were discharges.
226	10	Too high of viscosity.	Too high in viscosity.
265	15	concentration and so forth in the waystreams down and	concentration and so forth in the wastestreams down and
270	9	as Coolenal, early designation, and maybe its	as Coolanol, early designation, and maybe it

Page No.	Line No.	Reads	Should Read
274	1	on the description of Aroclor and then signed a con-	on the incineration of Aroclor and then signed a con-
	20-21	8 CL that was being generated. The Aroclors are degraded to things like CO2 and 8CL.	HCl that was being generated. The Aroclors are degraded to things like CO_2 and HCl.
275	2	exact temperatures. A CL product are 2,000 C. and	exact temperatures. For Aroclor product temperatures are 2,000°C. and
	12	There are over 99.99 percent, like that.	These are over 99.99 percent, like that.
	19	Kluntz.	Kountz.
	24	Johnson.	John Zink.
279	11-12	We found that, Monsanto developed in '72, it went back and analyzed what products we had made	We found that, Monsanto reported in '72. We went back and analyzed what products we had made
280	18	would be and if theoretically would be high, much	would be and it theoretically would be high, much
	24	It didn't depend on maleic anhydride testing. The	It didn't depend on metabolic testing. The
281	11	Like he says, this is distribution--I guess	Like he says, there is distribution--I guess
	23	looked simply like 5460. The details of this, Keller	looked simply like 1260. The details of this, Keller
284	1	may have been others later: Mieure, Keller and so forth.	may have been others later: Mieure, Kahle and so forth.
301	14	They had unusual difficulty. I think	They had the unusual difficulty. I think
306	13	On the instance of Pydraul?	In the instance of Pydraul?
308	9	wanted to see Johnson Motors' reclaimed fluid.	wanted to see Johnson Motors' reclaim fluid.
309	9	Monsanto and Environ. Rechem. later.	Monsanto and Enviro-Chem later.

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Page No.	Line No.	Reads	Should Read
309	12	What was Environ. Rechem.?	What was Enviro-Chem?
	13	It was a unit in Monsanto that was set up to	It was a unit in Monsanto that was set up to do
	19	How long was Environ. Rechem. in business?	How long was Enviro-Chem in business?
	23	Overall was with Environ. Rechem.?	Overall was with Enviro-Chem?
310	1	from Environ. Rechem.	from Enviro-Chem.
	2-3	He was doing the proposals for Environ. Rechem?	He was doing the proposals for Enviro-Chem?
	11	cifically where there was a specific product, that is	cifically was there a problem with a specific product, that is
317	11	Mark Gibbs.	Marvin Gibbs.
331	7	toxic effects and then relate those to a situation	toxic effects and then relating those to a situation

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