STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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In the Matter

of

Alleged Violations of Sections
17-0501, 17-0511 and 11-0503 of
the Environmental Conservation Law
of the State of New York by:

GENERAL ELECTRIC COMPANY

Respondent.

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TRANSCRIPT OF CONTINUED PROCEEDINGS

in the above-entitled matter at a public hearing called by the New York State Department of Environmental Conservation at Room 106, 50 Wolf Road, Albany, New York, continuing on Tuesday, November 25, 1975 at 9:00 a.m.

PRESIDING:

ABRAHAM D. SOFAER, ESQ.,

Hearing Officer.

APPEARANCES:

(As heretofore noted.)



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18, previously marked for identification, were received in evidence, this date.)

MR. SOFAER: Thank you, Doctor.

Next witness.

(Discussion off the record.)

MR. EVANS: With respect to counsel's question concerning the temperature at which PCBs, at which the operation in which PCBs are impregnated into the capacitors, I am informed that the highest temperatures at which PCBs are present are 110 degrees centigrade.

MR. SOFAER: Is that satisfactory?

MS. CHASIS: Yes.

MR. SOFAER: Proceed, Mr. Evans.

MR. EVANS: I would like to call Mr. Papageorge.

WILLIAM PAPAGEORGE,

called as a witness in behalf of the respondent, being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION BY MR. EVANS:

Q. Mr. Papageorge, what is your employment and position?



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A. I work for the Monsanto Company. My position has the title of manager of product acceptability.

Q. And in that assignment do you have and have you had responsibilities related to the manufacture and sale of PCBs?

A. Yes, I do.

Q. And would you describe for us, please, what that responsibility is?

A. Well, it is rather very broad in nature. I am to keep abreast of all developments relating to PCBs, keep my managers in Monsanto advised about any recommendations or changes that I see are in order. I think that pretty well describes it.

Q. Have you at my request made a compilation of the sales of PCBs by Monsanto since 1957 and the applications for which those sales were intended?

A. Yes, I have.

(A document was marked for identification as Respondent's Exhibit 19, this date.)

Q. I hand you Respondent's Exhibit marked 19 for identification, Mr. Papageorge, and ask if you will describe it for me.

A. It is a three-page document entitled "PCB



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Manufacture and Sales, Monsanto Industrial Chemical Company, 1957 through 1964," and on it are listed the amounts produced by year, the amounts sold by year, the categories of types of applications to which sales were made, and then thereis a breakdown by PCB grade by Monsanto trademark in terms of quantity sold for each of those years, wherever the data was available, it is not totally complete.

Q. With respect to -- you spoke of the first page covering the period 1957 through 1964?

A. That is correct.

Q. The second page covers what period?

A. 1965 through 1974, and the third page is a quarterly summary of 1975 through the third quarter.

Q. Was this exhibit prepared within Monsanto at your request?

A. Yes.

Q. So far as you know, does it accurately reflect the original records of the information which is set forth?

A. Yes.

Q. Calling your attention to the category "Domestic Sales," would you explain the application which is



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represented by the designation "Heat Transfer"?

A. This application involves the use of the PCB fluids in enclosed systems in which the fluid is heated by oil or gas flame in an area where such a flame can be tolerated. The heated fluid is pumped then to another part of the establishment where flame cannot be tolerated because of fire or explosive conditions. The heat in the fluid is used to perform some part of the process. The cooled fluid is returned back to the source of heat and the cycle is repeated.

Q. And with respect to the next category "Hydraulics Lubrication," would you explain that application?

A. That category explains the use of fluids in which PCBs is one ingredient of several, and the intent here is for energy to be transmitted through the fluid to perform some desired action. That describes the hydraulic fluid application.

The lubricant application described in this instance is the use of the very same fluids in gas compressors where the function is primarily lubricants.

Q. And under the category "Miscellaneous Industrial"?



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A. This is rather a catch-all category and includes such things as vacuum pump fluid, cutting oils, turbine oils, turbine fluid.

Q. And "transformer and capacitor use," at least the capacitor use has been described here, what is the transformer use?

A. That again is an application in which PCBs are at least one ingredient, and in that application it is to serve as an insulating fluid, electrically insulating as well as conducting heat such that units operate at the right temperatures.

Q. We have described the capacitor application so I ask you next about the "plasticizer applications".

A. Plasticizer applications I think should be more correctly described as miscellaneous, and we call it plasticizer because it just so happened in our organization the individuals who market plasticizers handled this as part of their sales product. Applications in this category would include the application in adhesives, the application in special paint coatings, lacquers, varnishes, the application in the carbonless copy paper, encapsulated ink coatings, caulking and sealant



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materials also fall in this category.

Q. Finally the category "Petroleum Additives."

A. You will note that only shows up in one year, 1969, again because a petroleum additives marketing group handled it for that particular year. That application is similar to the miscellaneous industrial; some of the miscellaneous industrial were dropped down to petroleum additives and then reverted back the following year.

Q. Opposite each one of these applications for the years indicated is set forth the quantities of PCBs sold for that use during each year, is that correct?

A. Not by use but by type, the types.

Q. I am looking still at the heading "Domestic Sales" by category to explain that the figures which appear to the right of each of the individual categories sets forth the quantity sold for that application during the year specified, is that correct?

A. That is correct.

Q. And the material under the heading "Domestic Sales" by PCB grade indicate for each PCB grade listed the



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quantities of sales during each of the years specified?

A. That is correct.

Q. Is that right?

A. That is right.

MR. EVANS: I offer Respondent's Exhibit 19 into evidence.

MR. SOFAER: Any objection?

MR. GITLIN: Except as to relevance.

MR. SOFAER: You object on the basis of relevance, Mr. Gitlin?

MR. GITLIN: Yes.

MS. CHASIS: I do not object.

MR. SOFAER: Overruled. Received in evidence.

(Respondent's Exhibit Number 19, previously marked for identification, was received in evidence, this date.)

MR. EVANS: That's all, Mr. Papageorge.

MR. SOFAER: Mr. Gitlin?

MR. GITLIN: That concludes the direct examination?

MR. EVANS: Yes.



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MR. SOFAER: Shall I go ahead, Mr. Gitlin, just one question?

MR. GITLIN: Yes.

MR. SOFAER: Could you look at the third page of that, sir, and explain those designations for 1975 in the columns 1Q, YTD, 2Q and so forth?

THE WITNESS: The 1Q is our symbol for the first quarter, that is January, February and March; the YTD is the year to date, that is cumulative as we go across the page; 2Q is second quarter, which includes April, May and June.

MR. SOFAER: All right, and so forth. O. K., Mr. Gitlin.

CROSS-EXAMINATION BY MR. GITLIN:

Q. Mr. Papageorge, did there come a time that you testified in August of this year before the Wisconsin Department of Natural Resources regarding PCBs?

A. Yes, sir.

Q. Do you have a copy of your prior testimony with you today?

A. No, sir.



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MR. GITLIN: I am marking a document entitled "Before the Department of Natural Resources, Public Hearing to Review and Receive Public Comment Upon Proposed Administrative Rules Relating to the Discharge of Polychlorinated Biphenyls (PCBs) Into the Waters of State." This hearing was held August 28th and 29th, 1975. I am marking that Number 49.

(The document above described was marked for identification as Department's Exhibit Number 49, this date.)

MR. EVANS: 74 pages, Mr. Gitlin?

MR. GITLIN: I am only going to be referring to very few.

MR. EVANS: Which ones?

MR. GITLIN: Page 32.

MR. SOFAER: You may ask your question, Mr. Gitlin.

MR. GITLIN: Well, I will have to show him --

MR. SOFAER: There may be no objection to the question, in which case we are holding things up unnecensarily.



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BY MR. GITLIN:

Q. Let me show you a copy of Page 32 of that document and ask you if this is a transcript, recorded transcript of what you said at the hearings in Wisconsin on August 28th and 29th of this year.

MR. EVANS: I can object at this stage or at the stage when some other question is asked, but I object to this as not proper cross-examination, unrelated to the direct testimony of the witness which has to do with the sale and use of PCBs.

MR. GITLIN: It is unrelated to the testimony of the witness, but it is related to issues which are present in this proceeding.

MR. SOFAER: This is an administrative proceeding, Mr. Evans, and the witness is here, and if he can supply testimony related to the issues in the case I will allow him to be asked the question, although I am aware of your objections and there are limits.

MR. EVANS: I have to take an exception.

MR. SOFAER: There are limits to which



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this kind of method of proceeding can go.

MR. GITLIN: There is a question outstanding, Mr. Papageorge.

MR. SOFAER: Insofar as you can ascertain, is that a transcription of your testimony?

THE WITNESS: In the short time I have had to look it over, it appears to be just that, yes, sir.

BY MR. GITLIN:

Q. Now on this page which I have showed you there is a transcription of a discourse between yourself and a Dr. Milling, is that correct?

A. Yes, sir.

Q. And you discussed with Dr. Milling in that testimony the results of toxicity experiments which had been performed by the Monsanto Industrial Chemicals Corporation on Aroclors 1016 and 1242, is that correct?

A. I discussed the studies conducted by a consultant laboratory for Monsanto.

Q. Thank you, and you were asked whether there had been any work done with Aroclor 1016, is that correct?



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A. Yes.

MR. EVANS: The record will show I have a continuing objection to this testimony on the grounds that it is improper cross-examination.

MR. SOFAER: Mr. Evans has a continuing objection.

BY MR. GITLIN:

Q. And the response to that question was: "The work with Aroclor1016 which came about later was confined to the 90-day study which was identical to the 1242. So we conclude that the two-year would probably look like the 1242." Then Dr. Milling asked, "So, well, it seems to me, then, Aroclor1016 then is not any less toxic, is that right?" Then your answer: "We have never -- yes, that is right, we have never claimed it is less toxic, we said it is more degradable," is that an accurate reflection of your testimony at that time?

A. Yes.

MR. GITLIN: That's all.

MR. SOFAER: Have you seen that, Ms. Chasis?

MS. CHASIS: No. Mr. Gitlin, do you



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have a copy of that?

MR. GITLIN: Yes. (Document handed to Ms. Chasis.)

MR. SOFAER: Any further questions, Mr. Gitlin?

MR. GITLIN: Yes. No, I have no further questions of this witness.

MR. SOFAER: Ms. Chasis?

MS. CHASIS: Yes.

MR. SOFAER: Doctor, is there any scientific reason why Monsanto calls Aroclor$_{1016}$ 1016?

THE WITNESS: No, sir.

MR. SOFAER: Is there any reason for me to think that Aroclor should be called anything other than 1241, Aroclor$_{1016}$ should be called anything other than 1241 because it contains 41 percent chlorine?

THE WITNESS: Well, it is my understanding that it is a little bit above 41 percent, between 41 and 42.

MR. SOFAER: So it should be 1241 plus?

THE WITNESS: That would be following



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the old nomenclature, yes, sir.

MR. SOFAER: There is no reason why I shouldn't regard it in that light?

THE WITNESS: That is correct.

MR. EVANS: In terms of degree of chlorination?

THE WITNESS: Correct.

MR. EVANS: Not in terms of composition, is that correct?

THE WITNESS: That's correct.

MR. SOFAER: All right, Ms. Chasis.

CROSS-EXAMINATION BY MS. CHASIS:

Q. Mr. Papageorge, based on the sales, domestic sales indicated for 1974 of Aroclor 1016, and based on what we know concerning the General Electric purchases, it would appear that something on the order of 40 percent of Monsanto sales of 1016 in that year were to G.E. for use at the Fort Edward and Hudson Falls facilities, is that borne out by your knowledge?

A. I do not follow sales numbers that closely so I can't say, I don't know.

Q. But that doesn't surprise you if, in effect, G.E.



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was one of the prime purchasers of the 1016?

A. G.E. is a prime customer, yes.

Q. Of the 1016?

A. Yes.

Q. On the last page of Exhibit 19 it is indicated that in capacitors both the Aroclors 1221 and 1016 are utilized. In what capacitors is the 1221 used?

A. I am not a capacitor expert so I can't tell you.

Q. Do you know what uses 1221 is put to as compared to 1016?

A. I understand it is used in like manner for special kinds of capacitors, and that's all I know.

MR. SOFAER: Speak up, Mr. Papageorge.

THE WITNESS: I understand Aroclor 1221 is used in like manner as Aroclor 1016 in the manufacture of capacitors, but I do not know what type of capacitors are involved.

BY MS. CHASIS:

Q. Now if one looks at the trends in utilization of Aroclors, it appears that 1242 has been replaced by 1016 in connection with capacitors, but not in connection with transformers; do you know what the



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reason for this is?

A. Well, it is my understanding that Aroclor 1016 cannot function in a transformer application.

Q. It cannot at all?

A. That is correct.

Q. In your opinion what is the best method for disposal of Aroclor 1016 as a waste product?

MR. SOFAER: Could you ask whether he has an opinion on that?

BY MS. CHASIS:

Q. Did you have an opinion on that?

A. Yes, I do, the best method, of course, is high temperature incineration which breaks it down into the very basic water, carbon dioxide and HCL.

Q. Do you know the temperature that is called for to provide that?

A. It has to exceed theoretically about 1700 degrees Fahrenheit, but we feel more comfortable if it exceeds 2,000; our unit is normally operated at 2400 to 2700.

Q. Centigrade?

A. Degrees Fahrenheit.

Q. Fahrenheit?



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A. Yes.

Q. To your knowledge are the products, the waste products produced by General Electric disposed of in a fashion which meets your recommended best disposal?

A. I don't know what they do at their -- with their products.

Q. Does Monsanto establish any kind of guidelines with respect to methods of disposal?

A. We have had discussions, I don't know that one would call them formal guidelines listed in any documents of any sort.

MR. SOFAER: I must remind you, Ms. Chasis, of the direct examination and what its content was.

MS. CHASIS: Yes. That's all.

MR. SOFAER: Any further questions?

RECROSS EXAMINATION BY MR. GITLIN:

Q. I have one additional question that just came up. Mr. Papageorge, are you at all familiar with the manner in which the PCBs are manufactured by your employer?

A. Yes, sir.



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Q. Are all of the different Aroclors which are used as electrical grade fluid treated with absorbent clays to remove their impurities?

A. Yes.

Q. They all are?

A. Yes.

MR. GITLIN: No further questions.

MR. SOFAER: Mr. Evans?

MR. EVANS: No questions.

MR. SOFAER: Mr. Papageorge, thank you very much. You are excused. The hearing will now adjourn for lunch for one hour. We will meet at a quarter to two.

(Whereupon at 12:45 p.m. a luncheon recess was taken to 1:45 p.m.)



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