1)

On Nov 17, 1969 we discussed with you the PCB problem and outlined a program for coping with it. At that time the decision was made to develop a plan to phase out ~~discontinue~~ the manufacture of Aroclor 1254 and 1260

Since then, as you well know, the pollution hysteria continues to grow and specifically in the area of PCB's the number of laboratories, governmental and university involved continues to increase as we predicted

At this meeting I wish to bring you up to date on the latest developments, the progress we have made and the need for modifying our strategy

Since November 1. Two publications have appeared which implicate PCB. The January-February, 1970 issue of Environment carried an article by Robert Rischbrough and Virginia Brodine. The presence of PCB in samples of human milk is first

the press has been relatively quite except for the recent flurry following Congressman Reyans press conf.

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publicly reported in this article. An article by Dr. David Peakall of Carnegie University appeared in the April issue of Scientific American. In this article the effect of DDT and PCB on egg shell formation and reproduction and emphasizing that problem has been apparent since the introduction of DDT to the environment is described. Three news articles were noted, one in the Miami Herald, another in the Tampa Tribune and the third in the Ann Arbor News, again describing the effects of DDT and PCB on the environment.

In March, we held discussions with DNR Pittsburgh and Oakland [illegible] Calif. They are personally convinced PCB's are harmful and were pleased that [illegible] was concerned and cooperative.

Also in March we [illegible] with about 50 technical representatives representing State, Federal and Canadian

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regulatory agencies in an objective [illegible] in Duluth, Minn. Analytical techniques, monitoring and toxicity of PCB were discussed. Absolute identification of [illegible] and its effect on the environment were identified as requiring considerable research. Concern was expressed by [illegible] present that some agency such as [illegible] would [illegible] precipitous action before [illegible] could be [illegible] which was believed to require at least one year. [illegible] presence & offer to cooperate was [illegible].

About two weeks ago we receive word from a Dr. Hill, [illegible] Health Dept, that his laboratory [illegible] PCB's in milk from an area [illegible] Columbus Ohio. They believed they [illegible] the source of PCB to deteriorating [illegible] applied to silos in 1967. This [illegible]

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was formulated using Aroclor 1254 and [illegible] 5460. We requested samples which [illegible] laboratory could analyze and so far our analytical work has shown chlorinated compounds similar to our Aroclor 1254 in the extract samples. The milk samples were contaminated during shipping and we have requested additional samples.

During our discussions with Dr Hill we were told that the FDA was considering establishing a PCB [illegible] of 0.2 ppm in food. Subsequent discussions with FDA personnel [illegible] that the FDA will in a [illegible] their offices that PCB content [illegible] 0.5 ppm in milk and 5 ppm [illegible] subject the milk or food to [illegible].

In the U.K we are also experiencing considerable concern. [illegible] Ministry of Agriculture, Fisheries and Fo[illegible] has repeatedly requested Monsanto to divulge our customers. From the U.S. point of view

we were reluctant to divulge this [illegible] because of adverse consequences worldwide. From the U.K. point of view divulging the customers' name with assurances that it would be kept in confidence and any information to be release would be cleared with both Monsanto and the customer is considered the wiser approach. We are receiving permission from NCR to divulge their name and will approach the Ministry on a basis.

In Europe we have assumed worldwide [illegible] and contacted the representatives of the European producers. Initially their response was indifferent. Subsequently Bayer, Germany, and Prodelac, France become more concerned and are cooperating with information exchange. The Italian producer does not believe he has a problem

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During our meeting with General Electric representatives in late January we discussed our decision to discontinue the manufacture of Aroclor 1254 and 1260. G.E. immediately challenged the decision on the basis that information available was not adequate to incriminate these Aroclors and that the adverse consequences of fire and explosions far exceed the potential threat to the environment. They also indicated that at the proper time they would be willing to have an officer of their company go on record as stating that the unavailability of these materials would result in serious power blackouts.

As you can see we are still very much on the defensive however considerable progress has been made.

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PCB CONTENT
PLANT EFFLUENT

Anniston

June, 1969	50 pounds per day	(5,000 ppb)
Present	5 pounds per day	(500 ppb)
October, 1970	2 pounds per day	(200 ppb)
Jan, 1971	.5 pounds per day	(50 ppb)
Sept, 1971	.05 pounds per day	(5 ppb)

Sauget

April, 1969	700 pounds per day	(3500 ppb)
March, 1970	200 pounds per day	(1000 ppb)
Current	65 pounds per day	(325 ppb)
Sept, 1970	55 pounds per day	(275 ppb)
Oct, 1970	10 pounds per day	(50 ppb)
Sept, 1971	1 pound per day	(5 ppb)

Newport

Current	30 pounds per day	(3000 ppb)

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In our plants control of emmission is progressing well. After initial audits all plants instituted programs for control of spillage, leaks and disposal. Our Newport plant installed and placed in service an interceptor pit to hold major spills. Emmission has approval and is proceding with a similar installation. This should be in service by the end of the third quarter. Reduction in PCB contents of our plant streams below the solubility level (50-200 ppb) will be achieved only after research work now underway is completed and plant units are designed and installed. Completion of this work is expected to occur in late 1971.

"A" We have worked closely with our customers and have offered our technical assistance on their disposal and effluent problems. Arrangements have been made for

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the return and recovery of some of these fluids. Successful control is possible for those uses which utilize Aroclors in closed, sealed systems. In those instances where control is virtually impossible e.g. coatings, adhesives, cutting oils, pesticide uses, we must discontinue sales or offer, preferably, an acceptable substitute product. These substitutes must be thoroughly evaluated to determine long term effect on the environment to avoid problems in the future.

In developing product substitutes we are very hopeful that the NCR applications in the U.S and U.K can be met with biodegradable hydrogenated terphenyls or alkylated biphenyls. Testing is active in NCR laboratories and plants. If successful complete conversion from Aroclor 1242 should be possible within a year to eighteen months

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The use of Aroclors to extend pesticide persistence is not one we are recommending at present but we still have some extremely minor sales through distributors which we are discontinuing. We have recommended to the U.S Department of Agriculture to reject Aroclors as an approved inert material when pesticide reregistrations occur this year.

We have developed or are making rapid progress in developing acceptable substitutes for sealants, coatings and industrial fluid use. By year end we should have replaced Aroclors in sealants and coatings or have discontinued sales. Also by year end about 50% of our Pydraul will have been reformulated with the remainder targeted for early 1971.

Toxicity Studies are now in the tenth month. Data todate

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indicate that Aroclors are mildly toxic to mammals however it is highly unlikely that this will be a significant factor in any decision regarding the banning or restricting of the use of Aroclors.

A major development has been achieved by our research department in refining our analytical procedures to the level that we now possess capabilities far exceeding many laboratories and unsurpassed by any. We are actively communicating our methodology to other laboratories to improve the type of information being generated. Our objective is to be considered experts with reliable results.

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Biodegradation studies have, thus far, confirmed our initial

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beliefs that the lower chlorinated biphenyls would degrade easily. We were disappointed in the resistance to degradation of some of the isomers in Aroclor 1242. This would tend to confirm the belief that some of the 5 and 6 chlorinated biphenyls being found in the environment could be residue from degraded Aroclor 1242. We are actively pursuing the possible use of distilled Aroclor 1242 with degradable components as a possible substitute with minimum loss of other favorable characteristics, e.g. fire resistance.

In summary I recommend that we proceed with the plan as presented and I particularly refer to the change in our strategy regarding the discontinuing the manufacture of Aroclors 1254 and 1260

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