**MEMORANDUM**

TO: J. Randall Jones; Doug Cohen

FROM: C. H. McCrea

RE: Nevada Power v. Monsanto et al; Newly discovered Westinghouse internal memo regarding PCBs.

DATE: April 8, 1992

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Attached is memo from David McCrea enclosing a confidential internal memorandum dated December 28, 1971 which was distributed to certain Westinghouse personnel strictly on a "need to know" basis (note "Proprietary Class 1" legend in upper right hand corner of cover page). David obtained this recently in one of his other cases.

We do not have any other document that so explicitly details the scope and extent of the "guilty knowledge" of the defendants in this case on this date (now more than 20 years ago). Remember that these defendants to this date insist that PCBs are safe!

Paul Merrell and Bill Snyder called; they thought we ought to file this with the 9th Circuit without delay as additional and newly discovered evidence, because it certainly is powerful on the "guilty knowledge" allegations that are the foundation of our fraud and failure to warn claims. I suggested that if the 9th Circuit is disposed to rehear its decision, it will give us an opportunity to respond to the defendants' petition. The memo would produce maximum impact used if and when that time arrives, and it is not necessary to file it if the court is not disposed to rehear the case.

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# Memo

To Counsel In PCB Litigation :

The Dec. 28, 1971 "Minutes of pcb status" was reviewed by me on April 8, 1992. The (W) minutes appear to be based on a detailed report by T.O. Munson. Be advised that Dr. Munson testified for me in the Conard case in federal court.

Please read slowly & carefully.

DAVID McCREA
April 8, 1992

RM-40781

**PROPRIETARY CLASS**

Strictly limited distribution. Cannot under any circumstances be distributed outside the company. Inside the company, recipient must have a specific need for the information in the conduct of his assigned responsibilities.
DESTROY BY BURNING OR SHREDDING

PITTSBURGH - R&D Cntr
Research Laboratories
236-7743
December 28, 1971
Minutes of pcb status

*From* :
*WTN* :
*Date* :
*Subject* :

S. W. Herwald
W. E. Shoupp
D. Berg
J. C. R. Kelly
E. V. Somers
G. C. Gainer
T. O. Munson
L. Mandelcorn
S. Jordan

The addressees of this letter met on December 28 to review the present situation with respect to polychlorinated biphenyls (pcbs) and to define a possible position for Westinghouse in the use of these materials.

The principal use of pcbs in Ⓦ is in power transformers and power capacitors. The reason for using pcbs is related to the unique combination of electric and non-flammability properties of the liquid. No other material has yet to be identified which has both these characteristics and, therefore, there is no immediate replacement for pcbs in these applications. In a separate note, Lyon Mandelcorn will outline in more detail the specific electrical characteristics of pcbs which make them acceptable for power transformers and capacitors. It came out later in the meeting that another very large use of these materials is in lightning ballasts associated with all fluorescent lights being used in commercial and residential applications. Capacitors in motor starters are also another big potential use for these fluids. Figures were not quoted as to the relative use of pcbs in our power capacitors and transformers versus the amount we use in our lighting ballasts.

It became clear as the discussions progressed that the biological activity of pcbs was at best poorly defined. However, several points can be made:

(1) The higher chlorinated biphenyls appear to concentrate in the fatty tissue and in the liver of fish, birds, and some animals.

(2) The toxicity of pcbs in any absolute terms cannot be expressed, but there is some indication that the lower chlorinated biphenyls (3 or less) appear to be more toxic than the higher chlorinated biphenyls.

(3) With respect to birds and, in particular, leghorn chickens, the reproductive cycle is adversely affected by the presence of pcbs. Specifically, the hatchability of the eggs is reduced.

(4) The only documented case of ingestion in humans is one that occurred in Japan. As a result of this ingestion, the people broke out into a rash-type condition known as chloracne and suffered nausea. Children born to the adult victims of the ingestion suffered brown pigmentation of the skin which, at the latest report given by Munson, has persisted through three years of age. There is much controversy as to whether the conditions brought on in the Japanese exposure were due to the pcbs or to an impurity called chlorinated dibenzo furane. Monsanto claims that pcbs manufactured by European chemical companies contain about 15 to 20 ppm of the chlorinated dibenzo furane. There is no known analytical data reported as to whether the pcbs ingested by the Japanese did or did not contain this impurity.

Monsanto claims that the product made in this Country is essentially free from this impurity. However, we have no analytical data either from Monsanto or our own which confirm or deny the existence of this impurity in the product we use. Mandelcorn and Gainer were of the opinion that it would be a relatively straightforward analytical procedure to determine if material which we use contains this chemical.

Munson reported the results of some studies as to how pcbs are disseminated into the environment. Seventy-five per cent is attributed to plasticizers, lubricants, hydraulic fluids, and incineration of pcb materials in open dump burning. The remainder comes from other sources in which include release to the environment from the electrical industry. A survey of the distribution of pcbs versus DDT indicates that in rural areas the ratio of pcb to DDT is about one to one. However, as one approaches highly populated areas, the ratio of pcb to DDT increases to about three to one. The concentration of pcbs in the environment appears to be about 1 ppm. However, when certain species of animal life are analyzed, it is observed that there is a very significant concentration factor of the pcbs from the 1 ppm generally distributed to many times that in the various tissues and organs of the fish or animal species.

It was generally concluded that although the biological information has yet to be systematized, there is sufficient evidence that pcbs can be deleterious to the health of animal and human life and that the risks of ignoring the evidence that does exist was inappropriate for Ⓦ. The biodegradability of the material may, at this point in time, be of a secondary issue. There is now so much pcb in dumps, in the ground, in the river and ocean beds, that unless steps are taken to reduce the source of pcb contamination, the burden in the environment will have no chance of decreasing. Putting it another way: If the materials are, indeed, biodegradable with a relatively long half-life, unless we stop the source of pcb pollution, we will not be able to rid the environment of pcbs.

The immediate actions for Ⓦ are the following:

(1) Continue the use of 1016 in capacitors and 1242 in transformers. There is no immediate substitute meeting both the flammability and electrical requirements available to us today.

(2) Sign an agreement with Monsanto on the purchase of these materials, making sure that the conditions are such that our liability is incurred only from the date of the agreement.

(3) Notify all of our customers about the nature of pcbs, the hazards associated with them, and provide them with instructions for disposal of units containing these materials. Although it wasn't brought out at the meeting, it might be pertinent to ask our customers to sign an agreement similar to the one that we would sign with Monsanto.

(4) Set up rigid specifications for the material we purchase. For example, specifying the amount of toxic impurities allowable such as chlorinated dibenzo furans.

(5) Institute strict quality control measures in our primary manufacturing plants on the acceptance of the pcb material from our supplier as well as in our manufacturing operation. These quality control procedures would include an adequate disposal system and monitoring.

(6) Provide facilities for disposing of solid waste material, such as paper, film, and other insulation, containing pcbs. The liquid would be shipped back to Monsanto

for incineration. All of our customers would be instructed to return failed or non-servicable units to (W) so that the pcb in the unit could be disposed of adequately.

(7) Investigate the possibility of identifying the pcb materials which we use by a tracer or some other technique. The Research Laboratories will investigate the technical feasibility of such a technique and the Legal Department will investigate the desirability of tagging the material we use.

(8) All the M & R shops throughout the Country will be alerted to the nature of pcbs and a procedure set up for the proper use and disposal of the liquid and solid waste.

(9) Westinghouse will participate in an industry and Government program to establish the proper use and handling of pcb material. There seems to be little doubt that with appropriate safeguards, these materials can be used in closed systems.

(10) Every effort will be made to develop more biological information on these materials, both from our own studies and those being conducted around the world.

(11) Westinghouse will encourage through NEMA or other industrial organizations that uniform standards in the use, handling, and disposal of pcbs be encouraged with respect to electrical apparatus.

(12) The Research Laboratories will take the lead in formulating a long-range program which would have as its end objective the elimination of pcbs in both capacitors and transformers. The program will be planned with the full cognizance and participation of the divisions involved.

(13) An attempt will be made to obtain records of our field performance of units containing pcb materials.

G. W. Wiener
Research Director - Power Systems