The story of PCBs is a morality play for our time.

PCBs (polychlorinated biphenyls) were discovered during the 19th century, when petroleum was still more of a curiosity than a recognized foundation for the world's most powerful civilization. As the automobile came into wider use during this century (Henry Ford invented the assembly line around 1910), the demand for gasoline grew. As gasoline was extracted from crude oil, great quantities of other chemicals, like benzene, were left over. Chemists started playing around with these chemicals, to see if something useful could be made from smelly by-products, like benzene.

If you heat benzene under the right conditions, you can glue two benzene rings together, creating diphenyl. If you then expose the diphenyl to chlorine gas under the right conditions, you can create chlorinated diphenyls, or biphenyls as we call them today. Adding more or less chlorine gives compounds with differing properties, and thus PCBs (polychlorinated biphenyls, all 75 of them) came into being. They aren't soluble in water, they don't burn, they don't conduct electricity, they do not degrade during use, and they conduct heat very well—viola! An excellent candidate for a variety of uses in the burgeoning fields of electric power equipment and electronics.

By 1914 enough PCBs had already escaped into the environment to leave measurable amounts in the feathers of birds held in museums today.[1]

By the mid-1930s, as we saw earlier (RHWN #327) Monsanto was producing PCBs commercially and PCBs had created a public health problem sufficient in size to attract academic researchers, the U.S. Public Health Service, and several large industrial producers and users of PCBs.

In 1936 a senior official with the U.S. Public Health Service described a wife and child, both of whom had developed chloracne, a combination of blackheads and "pustules," merely from contact with a worker's clothes. The same official wrote, "In addition to these skin lesions, symptoms of systemic poisoning have occurred among workers inhaling these fumes."[2]

By 1947, E.C. Barnes of Westinghouse's medical department wrote, in an internal company memo, that long-term exposure to PCB fumes "may produce internal bodily injury which may be disabling or could be fatal."[3]

By 1959, the assistant director of Monsanto's Medical Department would write to the Administrator of Industrial Hygiene at Westinghouse saying, "...sufficient exposure, whether by inhalation of vapors or skin contact, can result in chloracne which I think we must assume could be an indication of a more systemic injury if the exposure were allowed to continue."[4]

In 1968, when 1300 residents of Kyushu, Japan, fell ill after eating rice contaminated with PCBs, the world's public health establishment woke up from a long sleep and began to examine PCBs, which by this time were everywhere.

In late 1971, a group of Westinghouse staff met to discuss PCBs and they noted that PCBs concentrate in the food chain. A memo summarizing the meeting said, "It was generally concluded that...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 [sic] inappropriate for Westinghouse."[5] Yet the 1971 memo recommended continued use of PCBs.

Nearly 20 years later, in the late 1980s, researchers began to find that workers exposed to PCBs were dying of skin cancer and, perhaps, of brain cancer. Westinghouse and Monsanto maintain that they always informed their workers completely about the hazards of PCBs, but during the 1990s, workers have begun to sue for damages, saying the companies misled them.

Recently in a court in Travis County, Texas, Westinghouse released a 22-page memo that bears no date, but which company officials say was written by a Westinghouse staff lawyer in 1987 or 1988.[6] In the memo, the Westinghouse lawyer describes extensive paper and microfilm records held by the Westinghouse Industrial Hygiene Department: "The majority of the documents in Industrial Hygiene's files are potential 'smoking gun' documents," the memo says. The memo goes on, "The files are filled with documentation which critiques and criticizes, from an industrial hygiene perspective, Westinghouse manufacturing and non-manufacturing operations. This documentation often times points out deficiencies in Westinghouse operations and suggests recommendations to correct these deficiencies. Industrial Hygiene's files contain information which details the various chemical substances used at Westinghouse sites over the years and often times the inadequacies in Westinghouse's use and handling of the substances. The files contain many years of employee test results, some of them unfavorable," the memo says.[7]

The memo says that Westinghouse executives must ask certain questions before deciding to keep or destroy the smoking gun records. The first question is, "What are the chances of litigation? Is it pending or imminent?" The second question is, "In the case of litigation, which party would have the burden of proof?"

The memo then says, "We recommend that all such files generated prior to 1974 be discarded.... In our opinion, the risks of keeping these files on the whole substantially exceed the advantages of maintaining the records...."

Westinghouse officials deny that the memo was acted upon. They say they still have all the company's files intact. However, in a lawsuit against Westinghouse by Nevada Power and Light (NP&L), Westinghouse did not produce documents, such as correspondence between Westinghouse and Monsanto, requested by NP&L in a "discovery" proceeding. Monsanto, on the other hand, did produce correspondence with Westinghouse officials. [4] NP&L is suing Westinghouse, GE and Monsanto for $48.5 million in compensatory damages for costs the utility says it incurred because of PCBs in electric power equipment.

Furthermore, in sworn testimony in the NP&L case, three Westinghouse employees or former employees described how files that they maintained about PCBs were taken from them by members of Westinghouse legal staff in the 1980s and never returned to them.

It is not clear why Westinghouse handed over the "smoking gun" memo to opposing counsel in the Texas suit. In any case, Westinghouse attorneys tried to have the document declared "privileged" so that it would remain under wraps. On February 9, 1993, Texas Judge Paul R. Davis ruled against Westinghouse, saying the memo "falls within the crime/fraud exemption to privileged documents" under Texas law because, the Judge said, the memo was "prepared, and describe[s] a plan, to commit fraud on the courts of this nation." Westinghouse denies fraudulent intention, but destroying documents that might be needed in foreseeable litigation is forbidden under U.S. law.

Westinghouse will have many opportunities to redeem its good name in the next few years. If company officials still have all their company records dating back to the 1930s, they will be able to produce relevant documents during "discovery" proceedings in dozens of lawsuits now pending or already filed. More than a thousand individuals have already filed lawsuits against Westinghouse, seeking compensation for alleged damages from workplace exposures.

During this '90s, the PCB morality play will move through the courts, where Chapter 11 bankruptcy may be the only way out for the purveyors of PCBs.
Some may see in this history the malevolent machinations of corporate criminals. But others may find in this story well-meaning individuals trapped in circumstances they believe forced them to make choices that they, as individuals, could never condone.

In RHWN #327 we heard General Electric's F.R. Kaimer describe the HUMAN reaction of GE executives to the disfigurement and pain of GE workers exposed to PCBs: "[W]e had 50 other men in very bad condition as far as the acne was concerned. The first reaction that several of our executives had was to throw it out--get it out of our plant. They didn't want anything like that for treating wire. But that was easily said but not so easily done. We might just as well have thrown our business to the four winds and said, 'We'll close up.' Because there was no substitute and there is none today in spite of all the efforts we have made through our own research laboratories to find one."[7]

In the end, it does not matter what motivated the actors in our PCB story. Whether they were motivated by good or evil, the necessary remedy is the same.

As a society, and as a species, we cannot survive the launching of many more families of chemicals like PCBs or CFCs. Yet the corporate form of organization shields those who launch such chemicals, preventing them AS INDIVIDUALS from feeling the consequences of their actions. The way out of this thicket is to give back liability to all individuals, removing the corporate shield that prevents individuals from feeling the consequences of their own actions. Through reform of the corporate charter, we can return to everyone their essential human-ness, their responsibility for their own choices in their own lives.

--Peter Montague


[6] Undated "smoking gun" memo by Westinghouse attorney Jeffrey Bair and C.W. Bickerstaff, then Manager of Corporate Industrial Hygiene for Westinghouse.


Descriptor terms: pcbs; benzene; monsanto; phs; westinghouse; chloracne; kyushu, japan; japan; tx; nevada power & light; fraud; ge; petroleum; chlorinated hydrocarbons;