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10/2/79 FYI: J. Ortiz
F. Provorny
J. Weber
D. Wood
R. Isham

FROM: G. Young

Meat, Oil Most Serious Threats

PCBs Subject of 35 Inquiries By Environmental Authorities

By Kimberly Mills
and Robert Engelman
A Member of the Staff

A deadly chemical found in a side of beef in Newton, Kan., and tentatively identified on roads in a Johnson County landfill, has been the subject of 35 investigations and inquiries in the last year by the regional office of the Environmental Protection Agency here.

The region consists of Missouri, Kansas, Iowa and Nebraska.

Some of these inquiries into local uses of the substance, actually a family of chemicals known as polychlorinated biphenyls or PCBs, apparently have been routine and have uncovered no imminent hazards.

But two EPA investigations appear substantially more serious. One involves a batch of meat apparently contaminated with a PCB-laden oil rub and the other centers on a dust-control oil used at the landfill.

EPA officials refused to reveal details of the investigations, citing exemptions under the federal Freedom of Information law. The agency has until Sept. 17 to respond to a freedom of information request recently filed on the matter.

The Occupational Safety and Health Administration has mounted two investigations of PCBs in conjunction with the EPA. OSHA officials also declined to furnish information beyond saying no imminent danger was involved in either case.

One investigation is being handled by the Kansas City area OSHA office, which covers the western three-fifths of Missouri. The other is under the supervision of the Wichita OSHA office, which covers all of Kansas.

Last week, tests on a side of beef sold by a Newton farmer to a local family showed PCB contamination above 1,000 parts per million. Federal regulations, which banned the manufacture and sale of PCBs May 31, also require special disposal methods for anything contaminated with PCBs at more than 50 parts per million. The tainted meat was prevented from reaching any other markets.

Another PCB investigation, this one within the metropolitan area, surfaced with the revelation that oil spread to control dust on roads in the Johnson County landfill may have contained the chemical. Although PCBs have been found in a 1,000-gallon oil drum owned by Deffenbaugh Disposal Service Inc. at the landfill, neither state nor EPA investigators will say whether that oil was spread on the roads.

The owners of the disposal service, also connected with a petroleum company in Kansas City, have refused to comment on the investigation.

A docket log of EPA investigations into PCBs included the names of a Lebanon, Mo., electrical cooperative and two Kansas City electrical products wholesalers. The local companies said they had been questioned by the agency about disposal of PCB-laden capacitors and fluorescent light bulb ballasts, but that no problems had surfaced.

Both companies said they no longer sell the products and don't have them in their inventories.

In Lebanon, an official of the La-Clede Electric Co-op confirmed the utility was visited by EPA officials "just like all the others in this part of the state."

Don Clark, operations superintendent, said he was not sure why La-Clede's name appeared alone in the EPA docket log, and insisted the utility—which covers parts of six counties around Lebanon—had had no problem disposing of power line capacitors containing PCBs.

"Several of the utilities in southern Missouri, including ours, gathered the capacitors and deposited them with the Shelby Power Corp. in Marshfield, Mo.," Clark said. "A chemical company collected them and hauled them to Utah, where they were buried in deep silos in the middle of the desert."

In the last few years, only a few PCB investigations have been conducted by OSHA, officials said, because of the "limited amount of exposure in the region that we're aware of."

The Food and Drug Administration also is involved in the Newton investigation to determine whether there was any criminal negligence. And the number of local, state and federal agencies concerning themselves with PCB indicates just how prominent a chemical it has become.

In Malignant Neglect, a new book describing known or suspected cancer-causing agents in the environment, PCBs are labeled "probably the most widespread chemical contaminant known to mankind," found even in animals 11,000 feet below the surface of the North Atlantic Ocean.

While the chemical just now is receiving intensive study—after being used for 50 years—much is known about its properties. And what has made it so attractive to industrialists, its indestructible nature, worries environmentalists.

PCBs, introduced for commercial use in 1929, are made by controlled chlorination of biphenyl, a derivative of benzene. Initially the clear liquid was used for transformer and capacitor fluids, but its uses expanded greatly before its major manufacturer, Monsanto, stopped production two years ago. The company made 1.4 billion pounds of PCBs over almost five decades.

Out of this, 758 million pounds still are in service, 290 million pounds are in dumps and landfills and 150 million pounds are in the soil, water and air. According to EPA calculations, 10 million pounds of PCBs contaminate the environment each year through vaporization, leaks and spills.

PCBs are used in hydraulic fluids; adhesives for making brake linings, clutch faces and grinding wheels; washable wall coverings and upholstering materials; adhesives for envelopes and tapes; coatings for ironing board covers; plastic bottles and "carbonless" carbon papers and as an additive in paints and varnishes.

Although the chemical no longer can be made or sold, and its disposal is highly regulated, experts forecast PCBs will be present for years to come in the country's waters and soils, animals, birds and people. According to the EPA, 91 percent of all Americans have detectable levels of PCBs in body tissues, with 40 percent registering at least one part per million. That level is increasing, experts say.

Since the chemical's dangers have been publicized, studies of workers exposed to it have revealed many symptoms, including a type of skin disease called chloracne, digestive disturbances, jaundice, impotence, throat and respiratory irritations and severe headaches.

The effect on 1,000 Japanese who in 1968 accidentally ate rice oil contaminated with 1,000 to 3,000 parts per million of PCBs was even more severe. They suffered chloracne, loss of hair, fatigue, nausea, deformities of joints and bone, poor development of teeth in

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children and stillborn children. Some died.

Inhalation through the air and absorption through the skin by workers also is possible, but "what the long-term effects are nobody knows," said Dr. Peter Baxter, an epidemiologist at the Center for Disease Control in Atlanta.

Baxter said it is unlikely that people who come into contact with PCBs in greatly diluted amounts would be greatly harmed, but he said scientists are reticent to give "anyone absolute assurance about anything" that has been studied as little as PCBs.

Service and maintenance workers who handle electrical transformers or capacitors naturally would have a higher exposure, but the physical effects resulting from those contacts over a long period of time are unknown, said Dr. Trent Lewis, chief of toxicology with the National Institute of Occupational Safety and Health in Cincinnati. People who come in contact with the chemical contained in everyday products, such as flame-proofed yarn or waterproofed canvas, are "pretty safe," he said.

What disturbs scientists like Baxter and Lewis is the durability of PCBs. Only two methods are viewed as feasible for destroying PCBs--burning it at a temperature between 2,000 and 3,000 degrees Fahrenheit or exposing it to ozone and ultraviolet light. Neither method is in widespread use, however.

For that reason, the government has handed down strict rules for disposing of the chemical when it no longer is needed, such as when an electrical transformer is taken out of service. For transformers containing PCBs in the most dangerous classification—above 500 parts per million—the liquid must be stored at one of eight EPA-approved chemical waste landfill sites.

Three of the sites are in New York with one each in Alabama, California, Kentucky, Oregon and Idaho.

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IEC Sets Standard For Banned Chemical

GENEVA — The International Electrotechnical Commission has finally gotten around to writing an acceptance and maintenance spec for an unacceptable, untenable material—PCB askarels, which are insulating fluids used in transformers and oil-filled paper capacitors. These DDT-like chemicals are banned in Japan, the U.S., Canada and some European countries.

The IEC, which sets electrical and electronics standards for 43 nations (about 80 percent of the world's population and 95 percent of all electricity users), will eventually issue standards that cover all aspects of selection, construction and maintenance of askarels and askarel-containing products.

All aspects, that is, except disposal of the non-biodegradable environmentally dangerous chemicals. According to an IEEE representative, transformer and capacitor manufacturers have warehouses full of askarels and old products containing askarels. These manufacturers have no acceptable way of disposing of them.

Askarels came into use as a replacement for inflammable transformer oils. Later, they were found to be as persistent in the environment as DDT and came under strict controls.

Monsanto was the only U.S. producer of askarels. Until it was shut down last year by the EPA, Monsanto operated an incinerator for disposing of askarels. Electronics manufacturers stuck with the askarels are still waiting for a disposal standard.

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