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PITTSFIELD, MASS.
BERKSHIRE EAGLE
D. 30,000

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PCB-FILLED transformer, last of its breed, is completed by General Electric Co. assemblers Lawrence J. Ducharme, kneeling, and Casimer M. Ordyna and, at right, Edward M. Kulpa, the company's manager of transformer and regulator assembly.

Last PCB-filled transformer is shipped by GE plant here

By Ralph E. Brown

Workers at a Kennedale, Ky., factory sometime this week will uncrate a new General Electric Co. transformer that in the annals of water pollution is something of a landmark.

The device was built at GE's transformer manufacturing plant here, and it is the last one to be made by GE that is insulated with polychlorinated biphenyls.

The polysyllabic chemical, known more simply as PCB, is the key element in Pyranol, an insulating fluid GE developed here to replace oil.

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But it is also the key element in one of the major environmental conflicts the electrical industry has ever faced, and today marks the end of its use in Pittsfield.

As long ago as 1929, GE scientists discovered that PCB is an unusually stable, long-lasting substance that doesn't conduct electricity and is fire resistant. As such, although it is 40 times as costly, it is an ideal insulator for transformers and other electrical devices near or inside buildings.

Oil-filled transformers, if they explode, shower a cascade of burning oil drops around them, igniting anything nearby. PCB-filled devices don't.

PCB has, however, sent shudders through health and environmental officials. A Swedish scientist in 1966 looking for traces of DDT in dead fauna, PCB in plankton and birds at the bottom and the top of a food chain.

Other scientists later discovered that PCB caused skin disorders in humans, reproductive disorders in fish and cancer in laboratory animals. And last year, a possible link was established between PCB and cancer in humans.

Monsanto Chemical Co., the only domestic manufacturer of PCB, in January 1976 decided to end its PCB operations. GE, Sprague Electric Co. and other electrical manufacturers later decided to stop using PCB as insulating-fluid components. And the U.S. Environmental Protection Agency later said it planned to ban the substance completely.

But the characteristics of the substance that first attracted scientists to it — stability, long life — mean that the waste PCB emptied into rivers and landfill areas during the 40 years it was not thought to be harmful will persist for some time.

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GE last year agreed to pay a total of $4 million to the state of New York to search for ways to clean PCB from the Hudson River and to remove it. The state agreed to provide another $3 million.

GE scientists and engineers in Pittsfield have designed an incinerator to burn leftover PCB and a new silicone-based insulating fluid to replace it. The research has allowed GE to stop using PCB fluids here nine months before a self-imposed Dec. 31, 1977, deadline, and GE plants elsewhere will replace it by June.

But PCB's continued presence in the water and land, and in medical research laboratories, means that concern about it isn't going to vanish now.