

MARKING TWO PROGRESSIVE DECADES

MEDIUM TRANSFORMER PRODUCTS DEPARTMENT

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Mr. J. G. Bryant
MONSANTO INDUSTRIAL CHEMICALS COMPANY
2 Kimbrough Court
Wilmington, Delaware 19810

Dear Jim:

The quotation from the ELECTRICAL WORLD article you asked about was in reference to our now being prepared with knowledge as to what to expect generally in the case of a PCB spill. For example, we know what E. P. A. expects of us now that we have dealt with them. Of course, we also learned some procedural needs as well as equipment and manpower needs from our recent unhappy experience, but as of this writing we have not written a policy guide for future spills. Most of our effort, other than the cleaning up of the Tennessee spill, is being devoted toward preventing such occurrences in the future.

I received the bulletins on the use of fuller's earth in purifying askarels. Thank you for sending them. They will be of considerable help in clarifying the power factor question at American Electric Power Company who we expect will be visiting us the end of this week to discuss this subject.

Best regards,

R. W. Frahm
MANAGER - MARKETING

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IDS 003318

GE digs its way out after costly PCB spill

General Electric Co is still digging, and is uncertain when it may reach a cutoff point, in its effort to clean up a spill of toxic transformer oil near Kingston, Tenn., that already has cost the company about \$150,000.

The spill occurred March 5, when a 10,000-kva transformer being trucked from GE's plant at Rome, Ga., began leaking and was drained by the driver. According to a GE spokesman, the driver noticed the leak about three miles south of where the transformer, containing 1,500 gallons of Aroclor—a polychlorinated biphenyl (PCB) made by Monsanto Co—was finally drained.

The driver reportedly emptied the transformer on last-minute instructions from his dispatcher after a local law officer forbade further movement of the transformer while it was leaking. Earlier, the driver, after checking with the dispatcher, who in turn called GE, had been told to take the transformer to a GE repair shop in Knoxville.

Although they have a low acute toxicity, according to a computerized profile maintained by the Environmental Protection Agency's emergency branch in Atlanta, PCBs rapidly accumulate in the food chain, and are highly toxic when inhaled or ingested. In the case of the transformer oil jettisoned near Kingston, the PCBs covered an area of about one acre and penetrated as deep as 6 ft into the soil. State and federal officials are requiring the company to remove any earth in the area that contains a concentration higher than 5 parts per million. The GE official says that heavy rains in the area have washed the PCBs over a large area and are complicating cleanup efforts.

"We were totally unprepared for something like this," the GE spokesman admitted, "but you can bet your boots we're prepared now."

According to Al Smith and Dennis Dobbs, of EPA's Atlanta emergency branch, the government has spent about \$15,000 sampling wells within a 10-mile radius of the spill to ensure their safety as sources of drinking water. With 25 parts per billion used as the level at which long-term chronic effect on humans would occur, the monitoring found a level of 1 ppb or less in all of the wells but one.

The exception is on the farm where the spill occurred, and tests indicate

PCB levels there as high as 300 ppb. This well has been put off limits as a source of water. In addition, five wells around it are still being monitored to ensure that there is no movement of the chemicals; a decision will be made in September on whether to continue monitoring them.

Meanwhile, GE has been removing soil in the affected area, and at one point expected to complete excavation about mid-May. The excavated material already fills about 8,500 to 9,000 55-gal drums, some of which have been shipped to Rotstown, Tex., for burial; others will go to Model City, N.Y. The sealed drums will be buried in landfills designed to contain the PCBs in the event of drum deterioration. This disposal method was chosen because Monsanto, which owns the country's only PCB disposal facilities, isn't equipped to handle dirt, according to GE.

EPA officials say legal action against GE isn't contemplated, although on March 13 Paul Traina, chief of the enforcement division, sent a telegram to the company threatening such action if clean-up procedures were not begun immediately. After some initial reluctance, say EPA officials, the company's cooperation has been exemplary.

Although no civil suits against GE have been filed in the incident, some are expected.

A recent study of PCBs and the environment by a federal task force concluded that the use of PCBs should be curtailed, but not banned entirely. Specifically, their continued use as an insulant/coolant in transformers and capacitors was deemed necessary because of an increased risk of fire and explosion should an alternate product, namely mineral oil, be used.

Government and industry have taken



Ferranti ships record-size transformer

Ferranti-Packard Ltd's Power Transformer Division recently shipped the largest transformer, in physical size, it has ever built to B.C. Hydro. The 210-ton unit, valued at \$325,000, is 48 ft long and 24 ft high, and contains some 20,000 gal of oil. Power from the 100-Mva, 287-kv unit will be tapped at 13 and 25 kv to serve industrial and residential loads in the Kitimat (B.C.) area. The transformer, equipped with automatic voltage-control equipment, is pictured in Ferranti's Toronto shop just prior to disassembly for shipment.

significant steps to limit release of the once-widely-used chemicals to the environment. The federal government banned their use in pesticides in the fall of 1970 and, more recently, Monsanto (the sole US producer) quit supplying PCBs for uses other than as an insulating fluid in electrical equipment.

NEMA has also been in on the act. Earlier this year, it published a standards proposal containing guidelines for safe handling of the chemicals (EW, Feb. 1, 1973, p 43). ■

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