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PCBs at UCSC

Sex and the single transformer

Used as coolants and lubricants in many of the energy transformers on campus, PCB is a proven carcinogen linked to male sterility, genetic damage, nervous system disturbances, and skin irritations.

by Lynne Meyerson

Most people don't notice the big transformers behind the classroom units, in the basement of the Applied Sciences Building, and at eight other places on campus, but they pose one of the most significant health hazards at UCSC.

That's because they contain polychlorinated byphenal (PCB), a proven carcinogen which is linked to male sterility, genetic damage, nervous system disturbances, and skin irritations. Designated as toxic by the Environmental Protection Agency, PCBs are currently used as coolants and lubricants in many of the energy transformers on campus. The university has no plans to replace the transformers despite the known hazards they present.

Louis Fackler, director of campus facilities, sums up the problem this way: "Replacing a transformer—in fact, implementing most health and safety projects—jdoesn't obviously add anything. For your money, you don't get a new faculty position or an additional service. All you have is a new transformer which does the same thing as the old one."

The state of California recently estimated the cost of replacing all state-owned PCB transformers (which includes the ones at UCSC) at $36 million. Post-tax reform budget decisions will make any system-wide replacement a slow and gradual process.

PG&E, which is presently in litigation over a major PCB spill on August 26 in downtown San Francisco, has started a program to replace equipment (mostly telephone pole capacitors) that contains PCBs. They will not, however, replace university-owned transformers.

Attempts at getting information from PG&E on their program to replace PCB capacitors would make a story in itself. Apparently, most likely because they are in litigation, they release no information to the public. The result of six phone calls to various departments and a personal visit to the Santa Cruz office was a brochure on PCBs and about five assurances that "this may seem like I'm giving you the run-around, but..."

According to the company's two-page pamphlet, PG&E will replace all PCB capacitors during the next two years.

Fackler asserts that actual hazards to the campus from PCB are minimal. Unlike capacitors, which can explode, spreading PCB over soil, people, and plants, the major source of potential problems with transformers are slow leaks.

"Problems with our transformers leaking are unlikely," says Fackler, "since all of the are oversized, which means less pressure."

Certain contractors can filter out PCBs from transformers, and refill them with silicon or oil-based coolants. But this process requires substantial down time, several months of filtering, and costs up to 70 percent of the cost of replacing the entire transformer. In other words, if the transformer is old or even middle aged, "retro-filling" is unfeasible.

Additionally, the use of certain kinds of oil for replacement fluid creates a fire hazard. The resulting regulations regarding protective fire walls around the transformers make this option prohibitively expensive.

There are presently no laws requiring the replacement of PCB transformers with non-PCB ones, even though PCB is now banned. However, the owner of any PCB unit is responsible for any damage and disposal costs related to a PCB spill. Since PCB is considered a hazardous waste, any soil, rags, or any materials involved in a spill must be specially packaged, transported, and disposed. Only specially designed "Class 1" dumpsites which can handle toxic substances accept PCB-contaminated wastes. In the long run, doing nothing about a PCB transformer can be more costly than replacing or retrofilling one.

While the possibility of actual health damage to people on campus appears slight, most people would feel safer if there was no PCB on campus. Barring money from heaven, though, we are in for a wait.

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