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Detoxifying Sierra Club's Headquarters

Surely that nice old brick and timber building that we are moving into is not toxic. Why would it need detoxifying? Our new headquarters building, like many buildings, contained various toxic materials like asbestos and PCBs. After removing them, we were pretty picky about allowing new toxics into the building.

The hot water lines from the boiler in the basement were coated with an asbestos coat for insulation. Asbestos is a good heat-resistent insulator--however, it's a carcinogen when it flakes into the air. So, early in the demolition schedule, workers in green "moon suits" roped off the area, hosed down the asbestos to keep it from becoming airborn and to soften it up, and peeled it off into plastic bags. From there, it headed for a hazardous waste dumpsite. We could have wrapped it with tape, left it on the pipes, and hoped the tape didn't decay. But it was far safer to remove it.

During construction, we were surprised to discover more asbestos, above the ceiling panels in the plenum on floors 3 and 4. The old rould hot air ducts are in 3 foot sections which were joined end to end by sleeving one over the other and sealing by taping with asbestos. So, we called back the green moon suits to peel off the tape and replace it with more mundane, and safer, tape.

We went searching for PCBs before we bought the building. The 3 transformers in the basement qualified as prime suspects. So we asked PG&E to test samples of their oil. They tested out to have no traces of PCBs. Hooray! But we wern't so lucky with the ballasts in the fluorescent fixtures. We took down some fixtures, ripped the backs off and removed the ballasts (which look somewhat like silver flashlight batteries). 90 percent had PCBs in the oil. If these ballasts overheat, they can burn, releasing a stinky black smoke containing, among other ingredients, dioxins. Dioxin is one of the most toxic chemicals known. Some buildings have been left vacant for long periods after a PCB fire. We replaced the old fixtures with new ones. The new ones are more energy efficient, and wired so that we can turn on only half if we want. The energy savings will pay for the new fixtures in a couple years.

Sensitive occupants of many new or newly redecorated buildings often suffer flu-like or other symptoms for months after moving in. Often, these symptoms can be traced to formaldehyde or other solvents which off-gas from acoustical tiles, paint, particle board, plywood, fabrics or carpet adhesives. It wouldn't do for Club employees to suffer these onslaughts. So we consulted an expert from UC Berkeley, Hal Levin.

The office paints we chose are relatively clean: they are water based. We can thank our local air quality board for eliminating organic solvents from paints in order to reduce hydrocarbon pollutant emissions into the air.

We are pretty good on formaldehyde too. We have a minimum of acoustical tiles and no particle board. The carpets are free of it and the plywood will have been in place, off-gassing, for 8 months before we move in.

The carpet adhesive, cementing the carpet in place, was another story. Adhesive manufacturers generally consider their ingredients to be trade secrets. Or maybe they hope to avoid suits by keeping the public ignorant. We could get little information on the first adhesive recomended to us. Having extracted as much information on ingredients from the second manufacturer as we could, we ended up having a week-old sample of adhesive-coated carpet sealed up a couple days and then trying the sniff test. We asked that the adhesive be applied as thinly as allowed. And we were thankful that we will have over a month after the carpets are laid before we move in.

I'll flesh this out after we do the test.