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An "emergency" kit for utility PCB spill cleanups from SED, Inc. contains 50 separate items.

Experience with PCB spill cleanup recounted

What would you do if a resident in your service territory called you, irate because she had just discovered her back-yard garden is the site of a former PCB spill?

Baltimore Gas & Electric's Carl Manger solved such a problem by going to the house, sitting down in the kitchen and eating a tomato from the garden.

Manger's story was part of a panel session at the EPRI PCB seminar devoted exclusively to relating utility experiences with PCB spills. Representatives from four utilities told how they handle spills, analyze and dispose of contaminated soil, deal with the local press, and soothe property owners.

Survey data released at the meeting by EEI shows that PCB spills are not rare. Each year, on average, 0.09 percent of PCB capacitors, for example, fail in such a way as to cause a spill. In addition 0.77 percent of PCB capacitors will experience "moderate" leaks of insulating fluid with at least 50 ppm PCB, and 2.3 percent will develop small leaks each year. For a utility with 10,000 pole-mounted distribution PCB capacitors, for example, that means there will likely be 9 PCB spills yearly. The utility industry has a total of 2.8 million PCB capacitors. That suggests 2500 PCB spills yearly.

The EEI survey also showed that contaminated mineral oil transformers can have PCB spills (0.007 percent a year), as well as voltage regulators (0.024 percent a year), oil-filled circuit breakers (0.008 percent), oil-filled reclosers (0.004 percent), and oil-filled switches and sectionalizers (0.007 percent.)

Most problems are caused by capacitors, however, which can rupture somewhat violently, spraying PCB liquids over neighboring property, passing cars, houses, etc. Federal regulations require that the spill be cleaned up and all contaminated material removed and disposed in approved landfills or incinerators. Local regulations are often stricter.

One of the immediate problems in a capacitor spill, related LAPWD's Earl Morrison, is to determine the boundaries of the spill, meaning generally the radius of soil with 50 ppm PCB or more. Soil samples are taken and sent to a lab for analysis. "We like to take a whole shovelful," Morrison said, smiling, "but that's not right." The top ¼ in. or ½ in. should be sampled, he explained. Results can be back in 2 or 3 hours, he added.

Overhead line crews are typically the first utility people on the scene, said the manager. They are trained and equipped to deal with spills. The area is cordoned off and absorbent material is spread to prevent runoff. Visibly contaminated soil is removed and put in drums while lab people sample to find the 50 ppm radius. Visibly contaminated shrubbery is pruned. Once, Morrison recalled, crews had to get a sod cutter and roll up a lawn— the soil beneath was OK.

Asphalt poses a tough problem, the manager explained, because the PCB can penetrate deeply. LAPWD policy is to bring in a backhoe and dig up the asphalt for removal.

Some problems are almost unsolvable, however. Morrison told how one capacitor rupture covered the front porch of a house and the residents, in the normal course of entering and leaving the house, tracked PCBs all over the house. "I don't find any place in books where it tells you how to find out if a rug is contaminated," said Morrison.

Northeast Utilities's Bill Renfro said his company keeps PCB spill cleanup kits, in 55-gallon drums, in strategic locations throughout the service territory. For large spills the company sends a 4000-gallon capacity tanker truck to drain the PCB contaminated transformer, Renfro added. If people are sprayed by a failed capacitor, they are advised to wash immediately and change clothes.

Harry Onishi of Commonwealth Edison reported concern on the part of utility workers who maintain PCB contaminated equipment. The utility measured the concentration of PCBs in the air in the maintenance shop and found the level was less than 1 percent of the OSHA limit.

Several members of the audience asked how the panel members handled reporting of spills. LADWP's Morrison said oil spills don't have to be reported to EPA unless the oil contains more than 10 lb of PCB. BG&E's Manger said such reporting is required by the federal "superfund" legislation.

Regarding public notification, Com Ed's Onishi said that the whole area is "kind of fuzzy." He said that his company's policy is to report a PCB spill to all the people directly affected, but not to local news media. When public questions arise about PCB spills, advised Northeast Utilities's Renfro, the best policy is to answer them forthrightly. If people don't get the answers from you, he added, they'll go to the press or politicians.

The panelists advised utility workers to be ready for unusual situations. For example, a capacitor can fail by opening a seam, spraying PCB liquid into the wind, and contaminating a large area or a distant spot like a backyard across the street.

Or, the PCB spray can hit a passing car, the panelists related. When the car can be identified — a contaminated parked car, for example, — the policy at Northeast Utilities is to wash the surface and notify the owner. If the owner isn't present, the company leaves a form on the car. "You can imagine what kind of response we get to that," said Bill Renfro.

Earl Morrison said policy at Los Angeles is to ask the car owner to bring his car to the company service center and put it on the wash racks used for company vehicles. (He noted that the wash water can't be discharged to a sewer under California law. It goes to a sump where the organic material is separated for disposal.)

BG&E's Manger recalled that one customer's nearly new Datsun 210 was sprayed by a failing PCB capacitor. When the resident complained, the company bought the car. Manger, in turn, bought the car from the company and now drives it, with license plate number PCB-1.

Several of the panelists noted that there are no comprehensive standards or guidelines for cleaning up PCB spills. Procedures have to be developed by each company using common sense and sensitivity to the delicate nature of the problem. They seemed to agree that EPA was generally reasonable about utility cleanup practices, but one noted that problems can arise—for example, when an agressive new EPA inspector locks horns with a relatively inexperienced cleanup crew foreman. The foreman, the managers noted, is the key man. He must make a number of on-the-spot judgments and deal with the immediate reactions.

Baltimore G&E's Manger said his company has put together a movie on the utility's PCB spill cleanup practices which is available to anyone. He added that a spill cleanup guide is being prepared for EPA that may be useful to utilities.

One nagging problem mentioned by all the panelists was the difficulty encountered in analyzing samples to determine what's contaminated and what isn't. All complained about the cumbersome nature and expense of getting accurate laboratory analysis, and the inaccuracy of many of the available methods.

Even when PCBs are measured, their source is not necessarily clear. LADWP's Earl Morrison described a case with PCB-spattered deck paint for which a detailed analysis finally showed the paint had 80 ppm of the PCB Aroclor 1260 from the capacitor and an additional 300 ppm Aroclor 1254, a slightly different PCB material that was used as a plasticizer in the paint used on the deck.

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