

General Manager W. F. Willis testified that a realistic assessment of power demand shows that "TVA may not need to build additional generating capacity until well after the year 2000. Actual loads are likely to be closer to the low forecast than the high forecast. . . . In light of this, TVA is in no position to buy some or all of the Clinch River plant's capacity." Willis said that TVA might be willing to run the plant or transmit its power to other customers—for a fee, of course.

William Chandler of the Environmental Policy Institute said that the breeder and its output may be unsalable. He cited a 1982 Congressional Research Service study indicating that the southeastern region (which the breeder would supply) is likely to have an extra margin of generating capacity amounting to 35 percent in 1990 and 26 percent in 1995. A 20 percent margin is considered adequate to meet sudden demand peaks. In this glutted environment, Chandler said, the breeder is likely to be a weak competitor. It will be a less reliable and more expensive source of power than conventional plants nearby.

The absurd conclusion, according to Senator Humphrey's staff, is that it may be necessary to subsidize the breeder's commercial operation in order to make the plant pay for itself in the free market. This symbolic form of private financing might cost more than a straightforward federal grant.

—ELIOT MARSHALL

## Landsat Agonistes (Continued)

Landsat 4, already hampered by the failure of one set of antennas, now faces a progressive deterioration in its power supply: the electrical connections to its solar panels appear to be working loose as the spacecraft repeatedly heats up in the sun and cools in the earth's shadow.

So far, the problem only affects two of Landsat's four solar panels, and one of those still provides partial power; however, operators have already noted warning signs in the final two panels.

In the meantime, there is enough power remaining to operate the spacecraft's one operational instru-

ment, the multispectral scanner. Landsat's experimental instrument, an advanced scanner known as the Thematic Mapper, has not been an issue since February, when there was a failure in the antenna that beams its data to the ground.

However, Landsat 4 does carry another set of antennas that can route the Thematic Mapper data through the Tracking and Data Relay Satellite (TDRS) launched by the space shuttle Challenger in April. When and if NASA ever gets the luckless TDRS into its proper orbit (*Science*, 29 April, p. 484), the Landsat team will have to start making trade-offs between the two instruments.

—M. MITCHELL WALDROP

## Formaldehyde Ban Is Overturned

When the Consumer Product Safety Commission last year banned the use of urea formaldehyde foam insulation, the action seemed to be based on solid scientific evidence. But in March, a U.S. Court of Appeals overturned the ban. It ruled that the commission had failed to provide "substantial evidence" that formaldehyde posed an unreasonable health risk. The court's decision appears to demand an inordinate amount of proof to regulate a potentially harmful substance. The commission will appeal the ruling by 5 May.

To the surprise of industry and others, the Fifth Circuit Appeals Court in New Orleans delved deeply into the scientific issues, rather than faulting the ban on procedural grounds. The panel of three judges said in its decision that the commission failed to demonstrate that formaldehyde leaching from insulation would create an unreasonable risk of cancer or cause acute health effects.

An official at the commission argues that the court made serious scientific errors. For example, the judges ruled that the commission's reliance on 240 rats in a single industry-sponsored study was "not good science . . . to make precise estimates of cancer risk." In fact, the use of hundreds of animals at a single exposure level is a large enough sample to determine risk. In another instance, the court

said that findings of a second study at New York University did not support the industry study. The court, however, did not compare the animals at the same stage in the two experiments. If the right comparison had been made, according to the commission official, the studies would have shown similar risk estimates.

David Vladeck, a lawyer at Public Citizen Litigation Group, which petitioned the court in the case, says that the commission could have strengthened its case considerably by using more recent data from the industry study, which showed an even greater potential cancer risk. He says, "The commission did not do a good job on the case."

Vladeck says that the court's ruling does not bode well for the regulation of formaldehyde and other substances. Other federal agencies are considering the regulation of formaldehyde, but the court's ruling may "provide them with an excuse to further bury the matter," he says. Jacqueline Warren, an attorney for the Natural Resources Defense Council, comments that the court "seems to be saying that quantitative risk assessment is not valid." She asserts that the court appears to be requiring a standard of proof tantamount to a body count.

A significant factor in the court challenge to the ban was that the Formaldehyde Institute was successful in having the case heard in the Fifth Circuit, which frequently rules in favor of industry. When the ban went into effect at noon on 2 April 1982, lawyers for the industry and Public Citizens were poised at courthouses in Washington, D.C., and New Orleans in a race to file first and challenge the ban. Public Citizen sought to block the industry's suit and filed in Washington on the premise that it wanted the ban broadened. The D.C. circuit court is known to be more sympathetic and knowledgeable about scientific issues.

Public Citizen lost the race by 10 seconds. It clocked in at 10 seconds past noon, according to a court clerk's reading of a wall clock. A clerk in the Fifth Circuit marked the industry's petition 12 noon because the office did not have a clock with a second hand sweep. Perhaps these races to the courthouse should be refereed by the National Bureau of Standards.

—MARJORIE SUN