millers are experiencing is in part their fault, argues Burstein. Forcing utilities to take delivery of uranium under "take-or-pay" contracts in the face of plant delays and cancellations, EEI officials note, has contributed to surpluses and falling prices. Similarly, the industry's reluctance to renegotiate prices for uranium to be delivered under long-term contract has led utilities to buy cheaper foreign uranium—a major factor in the decline in the domestic industry.

While the prospects for the bailout legislation passing Congress seem slim, it may trigger oversight hearings in the House Energy and Commerce Committee and elsewhere. Indeed, unless greater attention is paid to the problem, Representative Richardson fears cleanup could be delayed into the 21st century. Litigation challenging EPA's authority to set air and water standards, maximum radon emission levels from tailing piles, and ground-water contamination protection contribute to the uncertainty. Now being decided by the U.S. Circuit Court of Appeals for the 10th District (Denver), these issues are likely end up before the Supreme Court.

Even if the litigation ends soon, the mill tailings cleanup could be delayed further by structural weaknesses in the 1978 law. Surety bonds, for example, which are meant to guarantee that funds will be available for stabilizing sites if a mill operator defaults, appear inadequate—totaling about $300 million. Mills also can continue to defer the day of reckoning on cleanup by postponing final retirement dates for facilities.

And, Larry Boggs, senior counsel for the American Mining Congress, complains that too many federal agencies are involved. "The legislation is so poorly drafted as to be unbelievable," says Boggs. "The Congress was asleep." But it is doubtful that Congress will move to overhaul the legislation any time soon. Representative Morris K. Udall (D–Ariz.), chairman of the House Interior Committee, normally might lead such a fight, but staffers say he is waiting for the appeals court to rule. That decision could come by January.

Nevertheless, Congress is showing signs of impatience with the inaction on tailings cleanup. Representative Edward J. Markey (D–Mass.), chairman of the energy conservation and power subcommittee, may probe the cleanup issue in hearings on the uranium industry scheduled for this fall. Comments David Schooler, chief counsel for the subcommittee, "When you see a situation as messed up as this, there is a temptation to write a new law."—**MARK CRAWFORD**

Test Wrecks Reactor, Delights Researchers

On 9 July 1985, a small nuclear reactor in the Idaho desert suffered a loss-of-coolant accident that resulted in a partial core meltdown. The accident, which released highly radioactive fission products into the reactor vessel and associated structures, wrecked parts of the plant. Those operating the facility are delighted.

The "accident," which in some respects mirrored the events at Three Mile Island, was the final test in a series of experiments at the Department of Energy's Loss of Fluid Test Facility (LOFT) at Idaho Falls. Researchers uncovered several fuel elements in the center of the reactor's core for about 30 minutes in an attempt to simulate an accident in which cooling water is lost.

Designed to obtain a better understanding of what will happen in a reactor undergoing a severe nuclear accident, the experiment should provide some crucial information on the types of fission products that are likely to be released. This information, in turn, could play an important role in nuclear regulation because it should help determine whether radionuclides in some types of accidents are likely to be trapped within the plant or be released into the environment.

An especially important element in this respect is iodine. Until recently, it was assumed for regulatory purposes that in a severe accident iodine would be released in its volatile elemental form and would escape in large quantities from the plant. Thanks in part to analyses of what happened at Three Mile Island, however, it is now widely believed that iodine will be converted to cesium iodide, which is soluble and far less volatile than iodine itself. The LOFT test should provide some direct experimental data on this.

It will, however, be several weeks before radioactivity in the crippled LOFT facility declines to levels that will permit researchers to obtain all the samples they need to analyze exactly what happened in the reactor. At this point, all they know is that the fuel cladding ruptured under the intense heat and that radioactive elements were released into the reactor vessel.

Officials of the Organization for Economic Cooperation and Development, which funded and planned the LOFT test, are happy that the uncovered core reached temperatures that should have caused it to melt. According to David Hicks of the U.K. Atomic Energy Authority, there was some concern when the experiment was being planned that the thing would fizzle—that sufficient radionuclides would be released to wreck the reactor but temperatures would not climb sufficiently to simulate a real accident.

—**COLIN NORMAN**

Illinois, Cornell Sign Supercomputer Contracts

Cornell University and the University of Illinois have now signed contracts with the National Science Foundation (NSF) to operate supercomputer centers, without agreeing to restrictions on who can have access to the machines. Officials from the State Department and the Department of Defense had originally wanted the contracts to bar use of the machines by citizens of Soviet bloc countries and China, to guard against use of the supercomputers to run military programs, but the two universities refused to accept any restrictions (*Science*, 12 July, p.148).

The matter is far from settled, however. An interagency committee is developing federal rules on access to supercomputers, and if the Administration eventually comes up with a policy limiting access on the basis of citizenship, NSF would have to go along with it. The Cornell and Illinois contracts would then have to be renegotiated. As one university official noted, that would put the universities in the uncomfortable position of either changing their policies in a way that restricts academic freedom or giving up the contracts.

Two other NSF-funded supercomputer centers, at the University of California at San Diego and Princeton University, signed contracts that commit them to whatever federal policy is finally adopted. However, if restrictions are imposed, there are likely to be serious objections from members of the academic consortia that operate the two centers.—**COLIN NORMAN**