Pentagon's liking. When House and Senate conferees met on 1 August to resolve the differences, they relied primarily on Courter's bill, not Pryor's, and thus eliminated several key provisions. Pryor had insisted, for example, that the Secretary of Defense report to Congress each time the Defense Department produced a weapons system that had failed its operational tests. This provision was dropped. Pryor's bill also said that the director of testing would be completely independent from other Pentagon officials, except the Defense Secretary. The compromise bill preserves this independence, but requires that DeLauer be kept informed of the test director's activities.

Nothing in the legislation requires that the advice of the testing director be accepted by the Defense Systems Acquisition Review Council, a clique of top Pentagon officials who have the final say on weapons production. The General Accounting Office has documented several instances where production was begun despite direct recommendations from the existing test office that it be deferred or limited in some fashion. An independent test director may be emboldened to prosecute the case against production more aggressively, but the groups arranged on the opposite side will continue to wield great influence.

More sweeping reforms were suggested recently by the President's Private Sector Survey on Cost Control, a specially appointed commission of corporate executives that spent 12 months looking for waste and inefficiency at the Pentagon. Their report, which was drafted by executives of the Prudential Insurance Company, the Foreign Policy Association, Johnson and Johnson, and Landmark Communities, Inc., recommended that the under secretary for research and engineering be stripped of all responsibility for weapons acquisition, allowing him to concentrate solely on research. "There are, of course, some arguments for tying research and engineering with procurement," the survey said. "Probably the one reason most often cited is that research and engineering are ongoing processes which continue into the procurement-production phases. While this is undoubtedly true, as the DOD operates today, this is one of the principal causes of stretched-out delivery cycles and resultant cost escalation." The survey also recommended that weapons acquisition for all three services be centralized in a single agency. Due to continuing Pentagon opposition to substantial reform, neither of these recommendations is likely to be implemented in the foreseeable future.—**R. Jeffrey Smith**

End of Road for Barnwell

Time and money have apparently run out on what was to have been the biggest commercial nuclear fuel reprocessing plant in the world. Federal funding of operations at the unfinished Barnwell Nuclear Fuel Plant in South Carolina ceased on 31 July. Unless unexpected help arrives, the work force there will be reduced to zero and the plant padlocked by the first of the year.

Barnwell was built entirely with private funds. The present owner of the plant is Allied General Nuclear Services, a partnership involving subsidiaries of the Allied Corporation, which holds a 50 percent share, and Gulf Oil and Royal Dutch/Shell, each of which holds 25 percent. In 1980 the companies served notice on the government that they would put no more money into the plant. An estimated $700 million would be required to finish the plant as planned. The owners in March filed suit against the government for $500 million to recover their investment plus interest in current dollars. The suit charges that the government induced the companies to invest in reprocessing facilities and then by a change of policy eliminated the reprocessing industry, thus violating the companies' constitutional rights against being deprived of private property for public use without just compensation.

Barnwell has operated in recent years on federal funding of about $10 million annually, which mainly supported a program of research directed toward developing safeguards for plutonium processing and handling.

The Reagan Administration favored completion of Barnwell and its operation as a commercial enterprise. President Reagan ruled out federal purchase of the plant, and a proposal that the government support the plant by guaranteeing purchases of plutonium never got beyond the discussion stage. The search for a formula under which industry could operate the plant profitably did not succeed and the owners set a deadline for finding a solution (*Science*, 1 October 1982, p. 32). Time has apparently run out.

Barnwell's fate was heavily influenced by the changing economics of the nuclear industry. The leveling off of growth in demand for electric power and the rising cost of nuclear plant construction resulted in a shrunken market for nuclear fuel.

Barnwell, however, was primarily a casualty of the controversy over plutonium. Reprocessing yields both uranium and plutonium. When the plant was planned, expectations were that plutonium would be needed for fuel in breeder reactors and also would be mixed with enriched uranium fuel in conventional reactors. Plutonium, however, is regarded as susceptible to diversion to nuclear explosives and critics pressed concerns about the effects of reprocessing on the international proliferation of nuclear weapons. As part of his policy to discourage development of an international plutonium economy, President Carter in 1977 decided to forgo domestic reprocessing and prohibited the use of plutonium as reactor fuel. This effectively stopped Barnwell in its tracks.

After Congress dropped funding for Barnwell from the DOE budget this spring, a last-ditch effort was made to keep reprocessing technology alive by Barnwell officials in concert with a group of utilities and energy companies. The aim was to make Barnwell a kind of demonstration facility, probably concentrating on available supplies of so-called low-burnup spent fuel containing 1 percent or more of uranium-235 that could be reprocessed profitably. The problem of what to do with the resulting plutonium would be resolved by transferring it to the government for use in its breeder reactor program. The project apparently foundered on the difficulties of raising an estimated $200 million needed to upgrade facilities at Barnwell to the standard required.

At Barnwell, staff has been cut from 300 to about 160 with the rest scheduled to depart by the end of the year. The owners are selling off heavy equipment for which there is an industrial market—cranes, generators, boilers. Barnwell's concrete buildings and basic processing equipment made of corrosion-resistant materials are said to be able to withstand deterioration over a number of years and would be eminently usable if the demand for reprocessing revives.—**John Walsh**