

## Nuclear White Elephant

*Attempted revival of a lost cause.*

By Jan Collins Stucker

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After months of anticipation, the Reagan Administration has formally begun what it promised to do during the 1980 presidential campaign: revive the ailing nuclear power industry by, among other things, lifting the ban on commercial reprocessing of spent utility fuel clamped on by President Carter in 1977. The future of South Carolina's Barnwell Nuclear Fuel Plant, however, the only commercial facility in the United States that can be used for that purpose, remains as shadowy as ever. "I doubt if it [lifting the ban] will make any real difference," says Gerald Brubaker, a former staffer for the Council on Environmental Quality and now an aide on a subcommittee of the House Energy and Commerce Committee. "Short of direct federal subsidies or federal acquisition—and I don't see that in the cards—commercial reprocessing just isn't likely to happen, because it doesn't make economic sense."

Still, Congress continues to forge ahead. Although straining to make further spending cuts in apparently expendable items, such as welfare payments, food stamps, child nutrition programs, and the arts and sciences, it recently appropriated another \$10.5 million to the Barnwell plant, bringing to \$64 million the total expended in federal research funds in the past four years. Designed to spew out recycled fuel for nuclear power plants, this expanse of putty gray buildings located 60 miles southwest of Columbia, the state capital, has never opened. The largest modern spent-fuel reprocessing facility in the world has existed in a sort of half-life of federal research funds and development grants since the 1977 ban, which was imposed by Carter because of concerns that the recycled plutonium extracted during reprocessing could be hijacked by terrorists and turned into a nuclear bomb.

Although Secretary of Energy James B. Edwards, a former governor of South Carolina and a long-time supporter of the facility, calls the Barnwell plant a "second" Alaska pipeline, neither the private nor the public sector seems to want it. Its wealthy corporate owners—Allied-General Nuclear Services, a consortium of Allied Corporation, Gulf Oil, and Royal Dutch/Shell Oil—tried unsuccessfully for the past two years to convince the federal government to take the \$362-million facility off their hands, and recently announced plans to write off the plant and shut it down next October. The private utilities say they won't touch Barnwell either, even though they are fast running out of room to store spent fuel rods on site at the nation's nuclear power plants. The risk to their investors is too great because of the "uncertainty and unreliability" of government policy, they say, not to mention the unfavorable financial condition of the nuclear industry.

President Reagan and budget chief David Stockman rejected Secretary Edwards's pleas for federal acquisition of the plant, in a blunt memo in March 1981. (The government would have to spend at least \$710 million to complete the plant before it could be opened.) Representatives Morris Udall of Arizona and John Dingell of Michigan, both chairmen of key energy committees, are also flatly opposed to a federal takeover of Barnwell. Even a former supporter of the facility, South Carolina Representative Butler Derrick, has turned against it and led the unsuccessful fight in the House last summer to prevent the appropriation of another \$10 million in federal funds for this fiscal year. The money, argued Derrick, a Democrat, would "simply allow [the owners] another year to continue their lobbying for federal acquisition."

Of course environmentalists in South Carolina don't want the plant either. They point out that thousands of casks of dangerous radioactive fuel rods would come into the state from all over the nation, adding to the tons of low-level radioactive waste already buried at another site in Barnwell County. Reprocessing also produces dangerous high-level liquid wastes. The neighboring Savannah River Plant, a federal installation where parts for atomic weapons are produced, already is burdened with 22 million gallons of the stuff, the result of defense industry reprocessing. (Savannah River is one of three federal plants that reprocesses fuel for military purposes.) Many state officials, including Governor Richard W. Riley, oppose reprocessing and the additional high-level waste it would generate in South Carolina until the federal government decides how to solidify what waste already exists and where to ultimately store it. Fraught with political problems, the decision on where to locate a permanent national repository for high-level waste is not expected until the late 1980s or early 1990s, although President Reagan has expressed his intent to speed up the process.

The Barnwell plant has even received harsh words from Energy Secretary Edwards, known to be one of its staunchest allies. A week after he had been sworn into office last January, Edwards said publicly that the Barnwell plant was seven years old and already obsolete. After a hasty briefing by dismayed Allied-General Nuclear Services officials, Edwards beat a swift retreat. Today he says he is convinced the facility could be "revamped and modernized with no big problems and at no big cost."

With such a lengthy list of liabilities, how does the Barnwell plant continue to stay alive? It has become a symbol of the future of nuclear power to both its critics and its advocates. "The real cutting edge is the future of nuclear power," says David Berick of the Environmental Policy Center in Washington, which opposes reprocessing. "The fact that Barnwell is on the verge of being mothballed becomes highly symbolic." Reprocessing also is a crucial component of a dream of the atomic age that may be tattered, but is not dead. That dream, says Luther Carter, a reporter for *Science* magazine who is writing a book on nuclear waste, is "for long-term, abundant nuclear energy for the world based on reprocessing and the breeder."

The breeder reactor was the energy wave of the future, the old Atomic Energy Commission told Congress and the public as far back as the 1950s. It would actually "breed" nuclear fuel, producing more plutonium than it used, and thus would provide a renewable source of electricity. (In fact, however, the costs turned out to be much more than anticipated, as the ongoing controversy over the Clinch River Breeder Reactor in Tennessee has shown.) As for reprocessing, the federal government has continued to recycle fuel for military purposes for more than 30 years. When commercial nuclear power was first promoted by the federal government, it was assumed that spent fuel from reactors would be recycled in similar fashion for its leftover uranium and plutonium content. Allied-General Nuclear Services had no doubt this would be the case when in 1968, during the heyday of nuclear power, it bought land in Barnwell County for a civilian nuclear fuel reprocessing plant. But in the 1970s, concern grew in Washington about the nuclear bomb-quality plutonium, which could be diverted from a plant like Barnwell. In 1976 President Ford ordered a "delay" in civilian fuel reprocessing. The next year President Carter deferred commercial reprocessing "indefinitely."

Now the ban has been lifted, but the technical and economic problems associated with commercial reprocessing are clearer than ever. Simply put, commercial reprocessing is a money-loser, a fact acknowledged by even the nuclear industry's main lobbying group, the Atomic Industrial Forum, as recently as May 1981. According to one study, uranium prices would have to double before reprocessing spent fuel would break even, and then reprocessing would save only 2.5 percent on the

cost of generating electricity. But nuclear power plant cancellations, partially as a result of Three Mile Island, have made uranium supplies overly abundant. Until the worldwide glut of new uranium supplies runs out-- and no one can foresee when this will occur--reprocessing will not make economic sense. Even the nuclear industry has conceded this by shifting its rationale for federal takeover or government subsidies to two areas. One is that only the federal government can provide the safeguards necessary to prevent the extracted plutonium from being hijacked by terrorists. The other is that the plutonium is needed as initial fuel for the breeder reactor, which may come on line in the 21st century.

Even if commercial reprocessing did make economic sense, however, there is the knowledge that, although it has operated with mixed results in Europe, it has been a failure in the United States. The other two commercial facilities that were developed in this country ended in disaster. The facility at Morris, Illinois, never was brought on line because of faulty design and construction. The plant at West Valley, New York, operated only intermittently between 1966 and 1971. It eventually was shut down because of radiation leaks and high exposure levels to workers, leaving the state of New York with a billion-dollar cleanup and 600,000 gallons of liquid, high-level waste on the premises. (Both of these facilities, along with the Barnwell plant, are now being considered by the federal government as possible sites for temporary storage of high-level nuclear wastes.)

But Secretary Edwards remains undaunted. Believing that it "still makes sense to get the good out [of the spent nuclear fuel rods] and bury the bad," he is orchestrating a flurry of activity at the Department of Energy in an attempt to salvage the Barnwell plant. Under discussion are such proposals as a government- industry corporation as envisioned by Representative Manuel Lujan, Republican of New Mexico, that would buy Barnwell and allow utilities to contract with it for services, or the idea of private financing of Barnwell in return for federal loan guarantees and other assurances. The Bechtel Corporation, the giant San Francisco-based construction firm, which designed both the Barnwell and the West Valley facilities, has suggested forming a private consortium to purchase and operate Barnwell, but probably would do so only if it could be assured of federal licensing plus loan guarantees, and only if Congress passed a statute locking in commercial reprocessing for the long term. But those assurances, say congressional sources, are unlikely. Even if the assurances were possible, according to one official of Allied-General Nuclear Services (which wants no part of any sort of consortium), "anyone would have to have his head examined to put any private money into it." President Reagan's pledge to create the appropriate climate to resuscitate commercial reprocessing very likely would require the infusion of millions of dollars from the federal treasury, money which Reagan has repeatedly told Congress can no longer be squandered on costly, ineffectual domestic programs. If even Barnwell's owners agree that private reprocessing is "commercially impracticable," then surely hard-pressed taxpayers should not be asked to assume the cost.