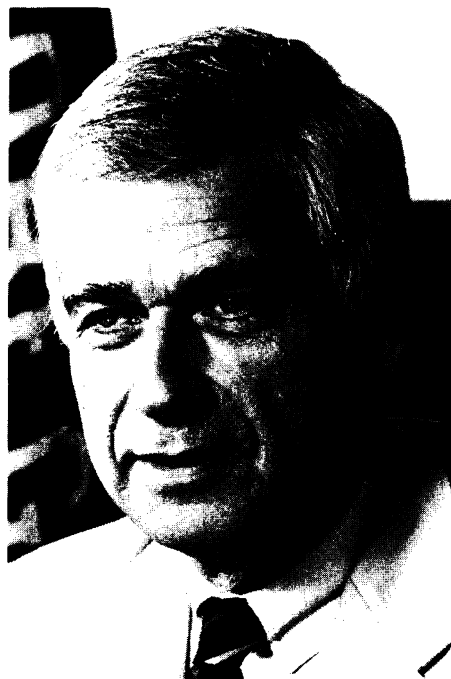


million from DOE's budget request for projects aimed at keeping the reactor in operation until 2025. Instead, the subcommittee directed that \$20 million be spent on safety projects with a view to closing the facility in the mid-1990's. Hatfield, who chairs the full Appropriations Committee and its energy subcommittee, said in a statement that "any extension of the life of the N-reactor would



Senator Hatfield. *Extending the life of the N-reactor would be economically "foolish."*

be foolish from an economic standpoint."

The reactor, which produces plutonium for nuclear weapons, has a massive graphite moderator similar to that of the devastated Chernobyl plant. It also lacks the containment structures required on civilian power plants, which are supposed to prevent radioactive fission products from reaching the environment in the event of a severe accident. For these reasons, critics have urged that the N-reactor be shut down.

The GAO study concluded, however, that although there are some similarities between the two reactors, there are also some key differences. The most significant concerns the reactors' response to increases in the temperature of the coolant. In the Chernobyl plant, a rise in temperature causes an increase in the nuclear chain reaction. This can lead to instabilities in the core and cause difficulties in controlling the reactor. This instability is now believed to be a critical element in the progression of the Chernobyl accident. In contrast, an increase in coolant temperature in the N-reactor causes the plant's power to decline.

In addition, the GAO study concluded

that some of the safety systems employed at the N-reactor offer advantages over those of the Chernobyl plant. For example, it takes about 1.5 seconds to insert control rods into the N-reactor for emergency shutdown, while the operation takes some 10 seconds in the Chernobyl plant.

The GAO study is far from the last word on the implications of the Chernobyl accident for DOE's reactors. Last month, at DOE's request, the National Research Council began an analysis of the safety of 11 facilities, including military reactors at Hanford and Savannah River, North Carolina. ■ COLIN NORMAN

Senate Amendment Seeks Curb on Pork Barrel Funding

The Senate has adopted an amendment to a military funding bill that could make it more difficult for Congress to order the Defense Department to bankroll specific university projects that have not been fully reviewed and properly authorized. The amendment, proposed by Senators John Danforth (R-MO) and Jeff Bingaman (D-NM), was approved by the Senate with virtually no debate and it has drawn very little public attention.

The measure, which was attached to the Defense Authorization Bill, states that that bill does not authorize expenditure of any Defense Department funds on university projects unless the Secretary of Defense has determined that the projects have some military relevance and "that the grant or contribution is based on the technical merit of the proposed research." In practical terms, the amendment is designed to prevent the Senate Appropriations Committee from directing the Defense Department to fund particular projects that have neither been reviewed by the department nor authorized by the appropriate congressional committees.

Last year, the Senate Appropriations Committee earmarked some \$65.6 million of defense R&D funds for specific university projects that had not gone through the usual merit review. Danforth led an unsuccessful attempt to delete the funds by offering an amendment on the Senate floor in June (*Science*, 11 July, p. 145). This time, he is attempting to tie the appropriations committee's hands by getting the Senate to state in advance that no funds have been authorized for such projects. Although it falls well short of being a blanket prohibition against pork barreling, the measure would make any

earmarked funds much more vulnerable to challenge.

The House version of the defense authorization bill contains no similar provision, but members of the House Armed Services Committee are clearly in sympathy. The House committee's report on the authorization bill contains a strong statement condemning the practice of pork barrel funding of university facilities and says "if it were possible to do so, the committee would propose to erect a permanent bar against earmarking of funds for research and research facilities." This sentiment suggests that Danforth's amendment is likely to survive when a House-Senate conference committee irons out differences between the House and Senate versions of the bill. Members of the Armed Services Committee will represent the House in the conference committee.

The measure applies only to Defense Department funds. There are, of course, other budgets to raid. Just last month, the House approved expenditure of some \$69.7 million of Department of Energy funds on eight projects that have not gone through the usual review procedures (*Science*, 8 August, p. 616.) ■ COLIN NORMAN

Biotech Field Test Halted By State Court

Plans to conduct an outdoor experiment in California with a genetically altered microbe are on hold again.

On 4 August, the Sacramento County Superior Court issued a temporary restraining order that barred University of California researchers from starting the field test on 6 August. The scientists, Steven Lindow and Nickolas Panopoulos, have modified bacteria to prevent frost formation on plants and had planned to test them on potato plants in Tulelake, located in northern California.

The court action was based on charges brought by a local citizens group and the activist Jeremy Rifkin. They claimed that the state department of food and agriculture, which had sanctioned the experiment, had failed to conduct its own environmental impact analysis of the proposed test as required by state law. A court hearing is scheduled for 22 August.

The experiment was approved in May by the U.S. Environmental Protection Agency after a lengthy and rigorous review, but since then it has been stymied because of community opposition. ■ MARJORIE SUN