NRC Faults Utility, Delays Reactor Start-up

No fine could have been harder on the owner of the Salem-1 nuclear plant than the action taken by the Nuclear Regulatory Commission (NRC) on 14 April. The agency refused to allow the reactor to be restarted. Salem, owned by New Jersey's Public Service Electric and Gas Company, failed to shut down twice in February when a safety circuit breaker stuck open (*Science*, 15 April, p. 280). The plant has since been closed while the NRC investigates, costing the company about $330,000 a day.

At the meeting on 14 April, the NRC staff recommended that the utility be permitted to turn on the reactor, because improvements in management and hardware have been made since the incident in February. But the commissioners did not agree. To the apparent dismay of company officials in the audience, the NRC decided to postpone action on Salem for at least a week.

While no formal vote was taken, three of the five commissioners—John Ahearne, James Asselstine, and Victor Gilinsky—blocked a restart when they said that questions about the fitness of the company to operate the reactor had not been fully answered. In particular, they wanted the staff to confirm that proposed changes in training had been carried out, and that top management understood the seriousness of its mistake in allowing standards to slip.

The audience stirred when Gilinsky said that if this had happened in Japan, the company's top executives would have resigned. "We need a change of style at corporate headquarters," he said. He also suggested that the NRC should consider whether or not the company was fit to hold an operating license. One utility executive muttered afterward, "It was devastating. They don't want a pound of flesh; they want 5 pounds."

The NRC staff also came in for some criticism because of its failure to secure precise evidence of what had gone wrong at Salem. It came out in the meeting that the staff never had examined the parts that actually failed. They had been shipped to the manufacturer, Westinghouse, before the NRC investigators had a chance to see them.

The majority wanted to hold up its decision on restarting the reactor until they had decided what enforcement action or fine would be imposed. Chairman Nunzio Palladino said he expected that the enforcement and restart decisions would be made within a week.—**ELIOT MARSHALL**

Ohio State's Telescope Given Stay of Execution

An extraordinary rescue mission may have saved Ohio State University's radio telescope from being torn down to make way for a golf course. The telescope is "off the critical list, but still in guarded condition," says George Foster, an Ohio businessman who has played a key role in keeping the instrument alive.

Although the telescope itself is owned by Ohio State, the land on which it sits was owned by Ohio Wesleyan University. Earlier this year, Ohio Wesleyan sold it to the Delaware Country Club as part of a 260-acre tract that the club wanted for an extension of its golf course and for residential development (*Science*, 18 February, p. 821). Ohio State's lease, which expires on 31 August, was canceled, and the new owners wanted the telescope removed from the site.

Negotiations between Ohio State and the country club got nowhere. Then Foster stepped in. An engineer who has launched four companies, Foster got together a Committee to Save the Telescope, consisting mostly of local businessmen.

The committee first explored the possibility of moving the telescope to another site—several were offered—but found that the only helicopters capable of lifting sections of the instrument are built in the Soviet Union. Then, on 2 April, committee members met with representatives of the country club and "reviewed ways in which the telescope could enhance their operation," says Foster.

Although he declines to discuss specifics of how an instrument the size of three football fields could enhance a golf course and residential development, Foster says the upshot of the meeting was that the golf club has agreed to extend the lease beyond the 31 August deadline. Foster hopes a permanent settlement can be worked out by the end of the year.

Why did Foster come to the rescue? He says he has worked for the past 18 months on a task force looking at ways to bring high-technology industry into Ohio. "It sure isn't going to help when we knock down a world-renowned facility for a golf course," he says.—**COLIN NORMAN**

Communications Satellite Rescue in Real Jeopardy

The National Aeronautics and Space Administration (NASA) has revealed that the chance of rescuing a critical communications satellite may be lower than it previously stated. The satellite, which was launched from the space shuttle Challenger on 5 April, was placed in the wrong orbit by a malfunctioning booster rocket (*Science*, 22 April, p. 385).

Officials at NASA and at TRW Inc., where the $416-million satellite was designed, initially thought that the satellite was deployed intact, and that small thrusters could be used to correct its orbit by late April. Subsequently, they discovered that two of the thrusters were inoperable, apparently because they were struck by the booster after it separated from the satellite. "Possibly they broke off," says Ronald Browning, the satellite program manager at NASA's Goddard Space Flight Center.

The damaged thrusters are supposed to control the satellite's roll. Previously, NASA said that at least one functioning thruster would be needed for the orbit correction. Officials at Goddard and NASA's satellite communications center in White Sands, New Mexico, are now trying to devise a way to correct the orbit without the thrusters. No decision will be made until early May. "I wouldn't venture to estimate the probability of success," says Browning.

There is also some concern that additional thrusters, used to control the satellite's pitch, were damaged, as well as the satellite's thermal insulation—although this is as yet unproved. Both the insulation and the additional thrusters are located near

the two inoperable roll thrusters.

The satellite, meanwhile, has been placed in a slow roll in order to conserve as much hydrazine fuel as possible. Three-quarters of the fuel will be needed if the satellite is to be moved from its present low elliptical orbit into a geosynchronous orbit, where it is expected to transmit data to earth from Landsat 4, Spacelab, the Space Telescope, and future shuttle flights. If the rescue should fail, a replacement satellite can be launched, but not in time to be used during the Spacelab flight scheduled for September.

—R. JEFFREY SMITH

Weather Satellite Sale Gets a Hearing

Commerce Secretary Malcolm Baldrige played to a packed house last week as Congress held the first of its long-awaited hearings on the Administration's plan to commercialize the land and weather satellites. Representative James H. Scheuer (D–N.Y.) chaired the hearing, which was a joint endeavor between his natural resources subcommittee and the space subcommittee of Representative Harold Volkmer (D–Missouri). The proposal to turn satellites over to private business has been stirring up controversy ever since it was made public last March (*Science*, 11 February, p. 752; 25 March, p. 1410).

The Commerce Secretary reiterated the Administration's belief that private sector involvement in remote sensing will be crucial in meeting the competition from foreign satellites, particularly those planned by the French and the Japanese. He also maintained that, after 5 years of studies on Landsat commercialization, it is time to act.

But Baldrige did offer an important concession to critics of the Administration's plan, in which the land and weather satellite systems would be offered up for bid either separately or together. It would only be an experiment, he said. It is entirely possible that none of the bids will be acceptable—in which case the Administration will abandon the idea, and he will personally push for a vigorous remote sensing program within the government.

Under questioning by Volkmer, however, Baldrige admitted that, so far, the United States is the only nation to think about commercializing its weather satellites. Moreover, the Japanese and French Landsat's will be heavily subsidized, with the respective governments launching and operating the satellites and only then providing data to the open market.

"If *we* stayed with government-operated satellites, wouldn't that make us more competitive?" asked Volkmer. Baldrige said yes—it is just that the Administration does not want to keep bearing the expense of these satellites.

Scheuer challenged the Administration's view and, in particular, pointed to the President's own Private Sector Survey on Cost Control, which recently concluded that "the concept of commercializing land sensing satellites and weather satellites as a package should not be pursued."

He also quoted a scathing review of the Administration plan by the National Academy of Public Administration, which concluded that "the proposal . . . fails to meet sensible criteria of preservation of the national security, the existence of competition . . . and the appropriate relationship between the public and private interest."

On the whole, however, the committee members seem disposed to let the Administration try its experiment. If they reject it now they will have to devise—and fund—an alternative. The question is, Who will keep the U.S. remote sensing effort going if that experiment fails?

—M. MITCHELL WALDROP

NSF Nominee Wins Committee Approval

Edward A. Knapp, President Reagan's nominee to head the National Science Foundation (NSF), got the stamp of approval of the Senate Committee on Labor and Human Resources on 13 April after assuring committee members that he would resist any attempts to politicize appointments to NSF and its advisory committees. He gave the assurances after being asked by Senator Edward Kennedy (D–Mass.) at a hearing on his nomination to respond to "allegations and charges about politicization of the agency under your leadership."

What prompted this exchange was Knapp's request for the resignations of NSF's deputy director and an assistant director last year in a move that was widely perceived as a bid by the White House Office of Presidential Personnel to get Reagan appointees in all the top NSF positions (*Science*, 24 December, p. 1286). Knapp told the committee, however, that "It was my decision to ask for the resignations . . . I wanted my own team." Asked by Kennedy whether appointees to NSF's advisory committees are screened for their political views, Knapp said "To my knowledge there have been no political tests applied to any appointees to these committees," and added that he would resist any such screening.

As for the vacancies in the top posts at NSF, Knapp said that a list of candidates for deputy director has been sent to the White House by the National Science Board, and a short list for three assistant directorships will be sent in the next few weeks. Since all are presidential appointments, the White House has the final say.—COLIN NORMAN

Genentech Bows Out of NYU's Malaria Project

Genentech, the south San Francisco gene-splicing company, formally told New York University (NYU) last month that it will not collaborate on malaria research. This suggests that NYU's recent cloning of a malaria antibody will not lead to the rapid commercial development of a vaccine.

The proposed venture between Genentech and NYU ran afoul of ownership rights. Genentech wanted an exclusive license to market the vaccine. But one of the funders of NYU's research, the World Health Organization, also exercised a contractual claim on the patent (*Science*, 4 February 1983, p. 466). In the end, according to Genentech spokesperson Susanne McKean, "We had to draw the line, because we have too many potential products. With this one, the complications were extensive. We decided we can't do everything we would like to do."—ELIOT MARSHALL