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Closing of Ward Center and its nuclear reactor is announced  
By Cornell University administration

ITHACA, N.Y. — The Cornell University administration has announced its decision to decommission the TRIGA Mark II nuclear reactor and to phase out activities at the Ward Center for Nuclear Sciences, where the reactor is housed. The small, 500-kilowatt reactor has been used for research and teaching.

The decision, by Cornell President Hunter Rawlings and Provost Biddy Martin, will be forwarded to the Cornell Board of Trustees for approval. The action follows a Feb. 6 recommendation by a committee of the University Faculty Senate, composed of faculty from a variety of fields, that the reactor and center, located on campus, be closed. In March, a Faculty Senate vote overturned that recommendation and sent the matter to the administration for a final ruling.

However, the Cornell administration is recommending that the Ward Center's Cobalt-60 Gamma Cell, a dry irradiation facility used for sterilization, radiation testing and cross-linking of polymers, be maintained. The cell is mainly used by researchers in the Cornell College of Veterinary Medicine and the College of Agriculture and Life Sciences.

Robert Richardson, Cornell vice provost for research, said the decision to decommission the reactor was being made now because relicensing of the reactor by the Nuclear Regulatory Commission is scheduled for 2002-03, and thus the university was forced to make a decision about continuing operations. In a letter to Rawlings recommending the closing of the reactor and Ward Center, Richardson said, "We can no longer warrant spending Department of Energy (DOE) and Cornell funds to subsidize the TRIGA reactor. The reactor has far too little use. There is small chance that the demand will increase significantly in the next decade. Possession of the nuclear fuel is a liability to the university. The space occupied by the Ward Center is too valuable to justify the current use."

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The director of the Ward Center, Kenan Ünlü, said, “We are deeply disappointed by the decision of the Cornell administration. During the last year a significant amount of information regarding the current and immediate future uses of the reactor has been provided. These data show conclusively that the Ward Center is enthusiastically pursuing its mission and is admirably meeting its goals of providing research and analytical services to the university community. It also continues to contribute substantively to the training of students in physics, engineering and many other fields as well as providing analytical services to a number of corporations in upstate New York.”

The TRIGA (an acronym for teaching, research, isotope, General Atomics) reactor is the only remaining research reactor in New York state and one of 26 operating university research reactors in the United States. It was manufactured by General Atomics and switched on in the Ward Center, then known as the Ward Laboratory, in January 1962.

The reactor provides an intense source of thermal neutrons for use by researchers in analyzing materials through a tool called neutron activation analysis. The technique is used for analysis of the elemental composition of matter, particularly the detection of trace quantities of elements.

During the entire 1999-2000 school year, the TRIGA reactor was used for research by Cornell faculty members for only 226 hours, representing “a serious underutilization of this facility,” said Richardson. However, during the same time, industrial concerns used the reactor for 311 hours of paid time. Because Cornell no longer has a nuclear science and engineering program, the reactor is not used for nuclear science research. Instead, its users range from researchers studying rocks to those investigating ancient tree rings.

Ward Laboratory was built in the 1960s for instruction and research in the then-burgeoning field of nuclear engineering. But in 1995, the College of Engineering disbanded its Nuclear Science and Engineering Program due to the greatly diminished interest in nuclear power. Since then, Ward has operated as an independent, interdisciplinary center under an 11-member faculty advisory board.

However, Richardson noted in his letter, “Cornell no longer has substantial academic or research activities in nuclear science and engineering and has not since the mid-1970s.” Of the five full-time faculty directly associated with the program in 1993, only three remain, and only one still lists fission reactors as a main activity. The graduate field currently lists six faculty

members, of whom only three are actively involved in any aspect of nuclear engineering. There are fewer than six graduate students, including three Ph.D. students. “Only a very small number of students take courses that make extensive use of the reactor,” Richardson said.

The center has an annual operating budget of \$500,000, of which the university contributes \$200,000. The balance is made up by the center’s annual income from external users (anticipated to be about \$240,000), from external grants, from endowments and from internal user fees. Over the past decade, DOE funding to the center has averaged more than \$250,000 a year.

In his letter, Richardson supported the Faculty Senate recommendations that the gamma cell be maintained at a local facility. He added, “It is especially important that we be proactive in helping the staff who will be affected and in assisting in the transition for those who must transfer research to other facilities.”

The administration decision comes as the number of nuclear engineering departments and programs and nuclear research reactors in the United States has been declining. At the same time, Ünü said, “there has been an enormous growth in national awareness of the importance of sustaining and expanding our country’s expertise in the provision and use of nuclear energy.” The federal government, he said, has initiated an effort to rebuild U.S. nuclear research and education programs. He noted that on April 30, the DOE Nuclear Energy Research Advisory Committee recommended that the department immediately allocate \$250,000 each to Cornell, the Massachusetts Institute of Technology and the University of Michigan to ensure continued operation of those institutions’ research reactors. He said, “We could easily get \$1 million to \$1.5 million a year from new DOE programs.”

However, John Silcox, Cornell vice provost for physical sciences and engineering, commented, “Although there is an effort to persuade the DOE to support research reactors, the chance of these funds actually becoming available in the current political climate is very remote.”

**Related World Wide Web sites:** The following sites provide additional information on this news release. Some might not be part of the Cornell University community, and Cornell has no control over their content or availability.

- The Ward Center for Nuclear Sciences:  
<<http://www.osp.cornell.edu/vpr/ward/WCNS.html>>