

UNITED STATES NUCLEAR REGULATORY COMMISSION  
ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT  
REGARDING PROPOSED AMENDMENT APPROVING DECOMMISSIONING PLAN  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN  
DOCKET NO. 50-356

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of a license amendment approving the decommissioning plan for the University of Illinois at Urbana-Champaign (licensee or UIUC) Low Power Reactor Assembly (LOPRA) located on the licensee's campus in Urbana, Illinois, in accordance with the application dated February 10, 1995, as supplemented on April 24, 1995, and October 2, 1996. The approved decommissioning plan will be a supplement to the Safety Analysis Report.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

By application dated February 10, 1995, as supplemented, UIUC requested authorization to decommission and partially dismantle the LOPRA, Facility Operating License No. R-117, in accordance with the decommissioning plan submitted as part of the application and to terminate Facility Operating License No. R-117. There are two reactors at UIUC, the Advanced TRIGA Research Reactor (TRIGA) and the LOPRA. The LOPRA was created when a subcritical assembly authorized under the TRIGA license was upgraded in 1971 to sustain nuclear fission in a self-supporting chain reactor and licensed as

a separate reactor. The LOPRA will be converted back into a subcritical assembly by partial dismantling. All byproduct and special nuclear material under the LOPRA license will then be transferred as part of the decommissioning effort to Facility License No. R-115 for the UIUC TRIGA. Amendment No. 9 to the TRIGA license authorizing possession of the LOPRA byproduct and special nuclear material was issued on August 8, 1996.

Need for Proposed Action:

The proposed action is needed in order to convert the LOPRA back into a subcritical assembly, transfer the byproduct and special nuclear material to the TRIGA license, and terminate the LOPRA license.

Environmental Impact of the Proposed Action:

All proposed operations in connection with decommissioning and dismantling of the LOPRA will be carefully planned and controlled; all contaminated components will be removed, packaged, and shipped offsite or transferred to the TRIGA license; and radiological control procedures will be in place and implemented to ensure that releases of radioactive wastes from the facility are within the limits of 10 CFR Part 20 and are as low as reasonably achievable (ALARA).

All decommissioning activities will be performed by trained personnel in accordance with previously reviewed procedures and will be overseen by experienced health-physics staff. Solid and liquid waste will be removed from the facility and managed in accordance with NRC requirements. The NRC staff estimates that the collective dose equivalent to the UIUC staff and public for the project will be less than 1 mrem.

On the basis of a review of the specific proposed activities associated with the dismantling and decontamination of the UIUC-LOPRA, the staff has determined that there will be no significant increase in the amounts of effluents that may be released off site, and no significant increase in individual or cumulative occupational or population radiation exposure.

The staff has also determined that the proposed activities will not have any significant impacts on air, water, land, or biota in the area or any other significant environmental impact.

Alternative Use of Resources:

The only alternative to the proposed decommissioning, dismantling, and decontamination activities is to have UIUC maintain possession of the reactor. This approach would include monitoring and reporting for the duration of a safe storage period until the TRIGA is decommissioned. However, UIUC intends to convert the reactor to a subcritical assembly under the TRIGA reactor license. This alternative would not be responsive to the licensee's request. The alternative of not decommissioning reactors was rejected in the "Generic Environmental Impact Statement on Decommissioning," NUREG-0586. No alternative appears that will have a different or lesser effect on the use of available resources, and other alternatives need not be evaluated.

Agencies and Persons Consulted:

The NRC staff consulted with the Illinois State official regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for the proposed action based upon the foregoing environmental assessment. The Commission concludes that the proposed action will not have a significant effect on the quality of the human environment for the reasons given above.

For detailed information with respect to this proposed action, see the application for a license amendment dated February 10, 1995, as supplemented. These documents are available for public inspection at the Commission's Public Document Room, 2120 L Street, NW, Washington, DC 20037.

Dated at Rockville, Maryland this 10th day of January 1997.

FOR THE NUCLEAR REGULATORY COMMISSION



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