



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 4 TO

FACILITY OPERATING LICENSE NO. 5-89

CORNELL UNIVERSITY

DOCKET NO. 50-97

1.0 INTRODUCTION

By letter dated November 1, 1996, as supplemented on November 27 and December 11, 1996, Cornell University (CU or licensee) submitted a request for amendment to Facility License No. R-89 and Appendix A, "Technical Specifications for the Cornell University Zero Power Reactor." The requested changes would remove authorization from the license to operate the reactor, authorize possession-only of the reactor, and change the technical specifications (TSs) to remove or modify operational TSs that are not needed for possession-only status. The Cornell TRIGA MARK II reactor (License No. R-80, Docket 50-157) will continue in operation at the same site.

2.0 EVALUATION

The licensee has committed to remove all fuel from the reactor core and to not store or place fuel into the reactor grid plate or tank. The three control rod clusters with lower fuel follower sections will also be removed. The fuel elements removed from the core will be stored in a subcritical and safe geometry having a Keff of no greater than 0.8 for all possible conditions of moderation and reflection. The fuel will be stored in the facility's secure fuel storage areas until such time as arrangements can be made for shipping it offsite for ultimate disposition.

The 16.0 gram plutonium-beryllium source is being removed from this license and is being transferred to the TRIGA license. The TRIGA license amendment is being processed concurrently with this possession-only license amendment.

The revised technical specifications reflect the possession-only status of the reactor facility and will continue to assure the health and safety of the reactor staff, the public, and the environment. The amended technical specifications include radiation monitoring, surveillance of the shutdown reactor, and administrative functions.

The licensee will maintain the existing security and emergency plans since the plans are common to both the ZPR and TRIGA reactor.

The staff concludes that the amended license and technical specifications will continue to assure that the various activities permitted under the possession-only license status will be conducted without significant risk to the health and safety of onsite personnel or the public or to the environment.

### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes in inspection and surveillance requirements. The staff has determined that this amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released off site, and there is no significant increase in individual or cumulative occupational radiation exposure. Accordingly, this amendment conforms to the eligibility criteria for categorical exclusion presented in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

### 4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and (3) the issuance of this amendment will not be inimical to the common defense and security or the health and safety of the public.

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Date: February 12, 1997