



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 10 TO

FACILITY OPERATING LICENSE NO. R-80

CORNELL UNIVERSITY TRIGA REACTOR

DOCKET NO. 50-157

1.0 INTRODUCTION

By letter dated December 11, 1996, Cornell University (licensee) submitted a request for amendment to Facility Operating License No. R-80 for the Cornell University TRIGA Reactor. The requested change would transfer a 16.0 gram plutonium-beryllium (Pu-Be) neutron source from Cornell's Zero Power Reactor license (No. R-89; Docket No. 50-97) to the Cornell TRIGA Reactor license.

2.0 EVALUATION

The licensee has, in a separate application, requested that the Zero Power Reactor (ZPR) license be converted to a possession-only license. The ZPR is on the same site (Ward Laboratory) as the TRIGA reactor.

Since the ZPR will be in a possession-only status, the 16.0 gram Pu-Be source on the ZPR license is no longer needed. In order to administratively consolidate the special nuclear material (SNM) in the licensee's possession, the licensee requests that its TRIGA Reactor license No. R-80 be amended to include the 16.0 gram Pu-Be startup source covered under its ZPR license.

The Pu-Be neutron source will be used for teaching purposes and instrument calibration at Ward Laboratory in the same manner that the two sources already on license No. R-80 are used. Having the third source available will increase the range of instrument testing capabilities the laboratory can offer, and will give university faculty more options in teaching nuclear laboratory courses. The source will not be used as a reactor startup source.

The licensee has requested that the license condition 2.B.2 be revised to increase the possession limit of Plutonium 239 to 50 grams from 35.0 grams to include the sum total of the 3 Pu-Be sources.

The Technical Specifications, specifically Section 4.7, "Special Nuclear Materials", in the TRIGA license currently requires the surveillance of the neutron sources already included on the license. The Pu-Be neutron source being transferred will be covered by this same technical specification. All other relevant TRIGA license technical specifications and conditions will also apply. The source will be stored in accordance with existing technical specification requirements for safe and secure SNM storage.

The staff concludes that the addition of the 16.0 gram Pu-Be source to the TRIGA Reactor license is acceptable and that it will be maintained and stored in accordance with existing Technical Specifications.

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 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 5, 1997