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

SAFETY EVALUATION BY THE

OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 8 TO

FACILITY LICENSE NO. R-120

NORTH CAROLINA STATE UNIVERSITY

DOCKET NO. 50-297

Introduction

By letters dated July 26 and October 15, 1984, the licensee requested an amendment to Operating License No. R-120 for the PULSTAR reactor facility. The requested amendment would make certain changes in the technical specifications, Appendix A, of the license. These changes were of several types: (1) to reflect changes in the licensee's organization, (2) to correct inconsistencies or ambiguities in the current technical specifications, (3) to reflect current practice in surveillance intervals recommended in ANSI/ANS 15.1 (1982), "The Development of Technical Specifications for Research Reactors," (4) to reflect changes required by current NRC reporting practices, and (5) to make certain changes in authorized operating procedures.

Evaluation

The licensee has provided justification for each of the proposed changes in the technical specifications, and has shown that all except one are administrative or editorial in nature, and that they do not decrease any margins of safety. The staff concurs with the licensee's determination. The one exception, footnote (6) to specification 3.6a, would allow the opening of a reactor bay door for up to five minutes while the reactor is operating in a non-pulsing mode. The proposed change would also require that both audible and visual indications be available so that the reactor operator can verify the status of reactor bay doors. During normal reactor operation, there is no significant concentration of airborne radioactivity in the reactor bay, so opening a door for a short time would not release a significant quantity to unrestricted areas. In the event of any abnormal release of radioactivity into the reactor bay during the five minutes that a door might be open, the various radiation monitors would so indicate, and alarm if the radiation level is high enough, thus putting the reactor bay in the confinement mode. The confinement mode condition includes the self-closing of any open reactor bay doors. Based on the above considerations, the staff has concluded that even in the unlikely event of an abnormal release of radioactivity into the reactor bay, acceptable provisions have been made to prevent an uncontrollable release to the unrestricted environment.

Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a no significant hazards consideration finding with respect to this amendment. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth 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.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated or does not create the possibility of a new or different kind of accident from any accident previously evaluated, or does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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 to the health and safety of the public.