



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 11 TO

FACILITY OPERATING LICENSE NO. R-92

THE UNIVERSITY OF TEXAS

DOCKET NO. 50-192

1.0 INTRODUCTION

By letter dated August 1, 1988, as supplemented on September 13, 1988 and March 9, 1989, the University of Texas (Texas) requested changes to the Technical Specifications of Facility Operating License No. R-92 for the University of Texas TRIGA Mark I Research Reactor. The requested changes would allow certain surveillance requirements to be postponed if the reactor is not operable and would change the definition of reactor secure. These surveillances must be completed if the reactor is returned to operation.

2.0 EVALUATION

Operation of the TRIGA Mark I reactor was terminated on April 29, 1988. The radioactive reactor fuel is currently decaying (cooling) prior to transfer to a new TRIGA reactor facility that is being built by the university. After the fuel transfer, the Mark I reactor facility will be decommissioned. To maintain the reactor in a subcritical condition, prevent unnecessary operation of the reactor and activation of reactor components, and to postpone surveillance activities that do not affect the safety of the shutdown reactor, Texas has requested that certain surveillance requirement intervals be extended if the reactor is not operable. Postponed surveillances must be completed if the reactor is to be returned to operation at some point in the future.

The surveillances affected involve measurement of shutdown margin and control rod reactivity worth, reactivity worth measurements of experiments, transient rod inspection and maintenance, reactor pulse measurements, reactor scram time measurements, safety channel tests and functional checks, calibration of the power level monitoring channels, and testing of power level safety circuits. None of these surveillances is required to ensure the safety of the shutdown reactor.

The licensee requested that the requirement to visually inspect the control rods for deterioration at intervals not to exceed two years also be postponed if the reactor is not operable. The control rods are needed to maintain the reactor in a subcritical condition if a core with critical mass is present. It is important to ensure that deterioration is not occurring. Based on a telephone call with the licensee on November 16, 1988, the licensee agreed that this surveillance will not be postponed.

The definition of reactor secure is modified by adding that the reactor is secure when there is insufficient fissile material or moderator in the reactor, control rods, or adjacent experiments to attain criticality under optimum conditions of moderation and reflection. This will allow the licensee to remove fuel from the sub-critical reactor without becoming current on surveillance requirements. The existing definition of reactor secure required the reactor to be in operation whenever fuel was moved regardless of the reactivity of the reactor or its ability to attain criticality. If the reactor was to be in operation, then surveillance requirements had to be current. This change eliminates needless reactor operation and activation of reactor components and fuel.

Because these surveillance requirements can only be postponed while the reactor is not operable and the change to the definition of reactor secure affects the sub-critical reactor, the staff concludes that this amendment does not change previously evaluated accidents or create the possibility of a new or different kind of accident and does not involve a significant reduction in any margin of safety. Therefore, the changes are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes in inspection and surveillance requirements. 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 there is no significant increase in individual or cumulative occupational radiation exposure. 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.

4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously evaluated, or create the possibility of a new or different kind of accident from any accident previously evaluated, and 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 the proposed activities, 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 the health and safety of the public.

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Dated: April 21, 1989