



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 12 TO

FACILITY LICENSE NO. R-53

UNIVERSITY OF OKLAHOMA

DOCKET NO. 50-112

1.0 INTRODUCTION

The University of Oklahoma (UO) submitted an application, pursuant to 10 CFR 50.90, for a change of status from operating to possession-only for their 100 watt (thermal) AGN-211P research reactor on October 15, 1987 and supplemented on November 19, 1987 and February 18, 1988. The application included revised technical specifications, physical security plan and requested that an exemption from the requirements of an emergency plan be granted.

2.0 EVALUATION

The reactor has *not* operated since April 1986. All fuel has been removed from the reactor and has been placed in approved storage containers, which have a Keff less than 0.8 and contain less than 400 grams of U-235 each. The containers are stored in locked rooms in the reactor building and the storage array (by technical specification 5.2) is such that Keff is no greater than 0.8 for all conditions of moderation and reflection. As of July 1987, radiation levels at the surface of the fuel storage container were less than 2 mr/hr and less than 0.5 mr/hr at one meter from the fuel. The licensee is in the process of transferring the fuel back to the Department of Energy and expects that this process will be completed by the end of May 1988.

The Technical Specifications have been modified extensively to reflect the "possession-only" status requested by UO. In general, those Technical Specifications relating to reactor operation, performance, safety surveillance, and related reporting were deleted. Those relating to staff and population safety, surveillance, monitoring, organization, and related reporting requirements have been retained. All specifications relating to in-core fuel, coolant, and moderator systems; reactor control and safety systems; and in-core experiments have been deleted. Since the reactor cannot be fueled or operated, these items are no longer relevant and technical specifications that address them are not meaningful. Those technical specifications that pertain to the possession-only status of the facility were retained. They include the radiation monitoring system and administrative functions. The amended technical specifications will continue to ensure 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.

The licensee has requested an exemption from the requirements of an emergency plan required by 10 CFR 50.54(r). A criticality accident cannot occur since the fuel has been removed from the reactor and will be maintained with a keff less than 0.8 for any combinations of fuel or moderator. Under these circumstances, an emergency plan would not serve the underlying purpose of 10 CFR 50.54(r) and, therefore, the staff finds that a specific exemption under 10 CFR 50.12(a)(2)(ii) is appropriate, and is granted.

The revised physical security plan has been reviewed and has been found to be 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 hazards consideration (as discussed below), there is no significant change in the types or significant increase in the amounts 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 concludes that amending this license to a possession-only status is appropriate. The staff has further 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 create the possibility of a new or different kind of accident from any accident previously evaluated, or 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: March 8, 1988