



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 22 TO
AMENDED FACILITY LICENSE NO. R-103
THE UNIVERSITY OF MISSOURI-COLUMBIA
DOCKET NO. 50-186

1.0 INTRODUCTION

By letter dated July 2, 1992, as supplemented on July 28, 1992, the University of Missouri-Columbia (UMC or the licensee) requested changes in Amended Facility License No. R-103 for the University of Missouri-Columbia Research Reactor (MURR). The amendment rescinds the temporary possession limit increases in special nuclear material granted by Amendment Nos. 19 and 21 to the Amended Facility License and clarifies the special nuclear material and byproduct possession clauses of the Amended Facility License.

2.0 EVALUATION

On December 26, 1989, UMC requested a temporary increase from 45 kilograms to 60 kilograms in the amount of uranium-235 authorized by Amended Facility License No. R-103. This request was made because no shipping cask was available to return spent fuel to the Department of Energy (DOE). To allow continued operation of the MURR, the licensee requested authorization to store fuel onsite. This request was authorized by Amendment No. 19 to the Amended Facility License issued on June 6, 1990. Because the lack of a shipping cask was temporary in nature, this increased possession limit was authorized until May 31, 1991.

On March 8, 1991, the licensee requested a temporary increase from 60 kilograms to 75 kilograms in the amount of uranium-235 authorized by Amended Facility License No. R-103. The reason for the request continued to be unavailability of a shipping cask to return spent fuel to DOE. This request was authorized by Amendment No. 21 to the Amended Facility License issued on May 8, 1991. This increased possession was authorized until December 31, 1992.

Since the issuance of Amendment No. 21, a shipping cask for research reactor fuel has become available and was acquired by DOE. MURR has shipped the spent fuel whose possession was authorized by Amendment Nos. 19 and 21 offsite. Because this shipping cask will be available for use by research reactors for the foreseeable future, the licensee has requested that the temporary possession limit be removed from the Amended Facility License.

Because this request rescinds temporary changes to the license and the license conditions are returned to those authorized before the temporary changes were approved, the staff finds this change acceptable.

The licensee has requested two changes to license paragraph 2.B.(2) to clarify the license condition for the possession of special nuclear material and to bring the paragraph wording into agreement with the current format used for non-power reactors (NPRs). The first change makes it clear that the licensee is allowed to possess 45 kilograms of uranium-235 of any enrichment. Uranium enrichment was previously not stated in the license. With conversions to low enriched uranium fuel occurring, current practice is to state the enrichment of the uranium-235 authorized by the license in the license. The other change allows the licensee to possess, but not separate, such special nuclear material made by operation of the reactor. This license condition has been unstated but assumed. The license now clearly allows possession and forbids separation of special nuclear material made by the reactor.

The licensee has also requested a change to license paragraph 2.B.(3) to clarify the license condition for the possession of byproduct material and to bring the paragraph wording into agreement with the current format used for NPRs. The change makes it clear that the licensee can separate byproduct material made by operation of the facility in experiments. This license condition has been unstated but assumed. This change in the paragraph does not authorize the licensee to separate byproduct material from special nuclear material.

These changes are acceptable to the staff because they clarify the special nuclear material and byproduct material authorization limits.

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: August 17, 1992