



UNIVERSITY OF MISSOURI-COLUMBIA

Research Reactor Facility

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April 30, 1993

Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

REFERENCE: Docket 50-186  
University of Missouri Research Reactor  
License R-103

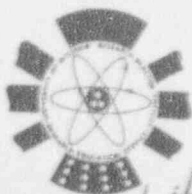
SUBJECT: Requested Change to University of Missouri Research Reactor Facility License  
No. R-103

The University of Missouri Research Reactor (MURR) requests approval of an amendment to make the following revision to Facility Operating License Number R-103:

2.B.(2) Pursuant to the Act, 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," and the Commission Order dated September 27, 1985, to receive, possess, and use up to 45 kilograms of contained uranium-235 of any enrichment, providing that no more than 5 kilograms of this amount be unirradiated; up to 80 grams of plutonium-beryllium neutron source; up to 20 grams of plutonium-239 in the form of sheets enclosed in aluminum for use in connection with operation of the reactor; up to 40 grams of plutonium enriched to 90% plutonium-242 in the form of a rod sealed in a stainless steel can for use in connection with operation of the reactor; and to possess, but not separate, such special nuclear material as may be produced by the operation of the facility subject to the following:

- (a) The limit for possession, receipt, and use of contained uranium-235 is temporarily increased until May 31, 1994, to 60 kilograms of which not more than 5 kilograms may be in an unirradiated state for the purpose of maintaining uninterrupted reactor operation pending the establishment of a capability for the off-site shipment of spent fuel and the actual shipment of the spent fuel accumulated prior to the establishment of that capability.
- (b) The licensee shall, as part of its annual reporting requirements, report the status of the establishment of the shipping capability and other activities relevant to the use of this temporary increase in the possession limit.

The reason for this request to increase the possession limit to 60 kg is that our scheduled spent fuel shipping plans have become less assured. Savannah River Plant (SRP) informed us in late March that they would not accept any shipments in May, and starting in April, only one shipment



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every two weeks would be accepted instead of the more usual one week cycle. There are two facilities scheduled to use the BMI-1 spent fuel cask before MURR. The change to a two week turnaround of the cask by SRP has extended the time required for these facilities' shipments. MURR has actively assisted all of the BMI-1 cask users scheduled ahead of us, and in one case we relinquished an earlier use because a facility which converted to LEU needed to ship HEU to meet NRC concerns.

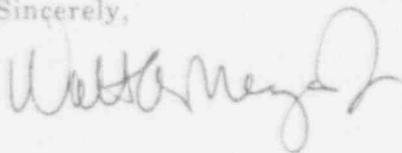
The attached graph shows that if MURR continues to receive new fuel at the usual rate of four elements per two months, and if spent fuel shipping is delayed, we will reach our current license possession limit of 45 kg U-235 in August 1993. If we curtail receipt of new fuel, our operating schedule will be seriously interrupted (more than one refuelling per week) in the fall of this year.

The graph also shows that if we continue receiving new elements, the 60 kg limit will not be reached until June 1994. We do expect to be able to ship spent fuel by then, and upon completion of shipments, will request return to the 45 kg limit.

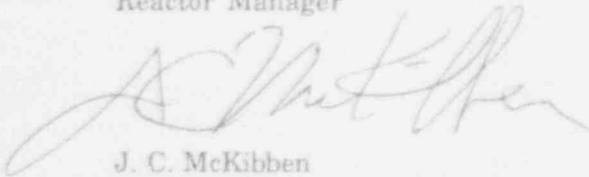
These changes to the license will not require changes in the Physical Security Plan for MURR. Criticality aspects of fuel storage at MURR are not changed by the requested amendment.

We respectfully request an expedient review of this application for relief from a situation not caused by MURR. If there are any questions, please call Roland Hultsch (314-882-5205) or me (314-882-5203).

Sincerely,




Walt A. Meyer, Jr.  
Reactor Manager



J. C. McKibben  
Associate Director

WAM:JCM:bjb

enclosures

  
CHRISTINE M. ERRANTE  
NOTARY PUBLIC STATE OF MISSOURI  
DOORE COUNTY  
MY COMMISSION EXP. APR. 14, 1995

# University of Missouri Research Reactor (MURR)

Notes:

1. The scheduled shipment for Feb., 1993 was cancelled by MURR because the alarm system was being changed.
2. An additional (4) element shipment is shown for Nov. 93 to compensate for the Feb. non-shipment.

