



UNIVERSITY OF MISSOURI-ROLLA

Nuclear Reactor Facility

Nuclear Reactor
Rolla, MO 65401-0249
Telephone (314) 341-4236

September 17, 1992

Document Control Room
U.S. Nuclear Regulatory Commission
MS 10-D-21
Washington, D.C. 20555

SUBJECT: Request for Technical Specification Change for the
University of Missouri-Rolla Reactor (License R-79,
Docket Number 50-123)

Dear Sir:

We respectfully request four revisions to our Technical Specifications.

The first proposed change is the deletion of references to the Reactor Maintenance Engineer. Due to a recent staff cut at the University, our Reactor Maintenance Engineer position has been eliminated (effective 9/1/92). Rather than designate another staff member as "acting" Reactor Maintenance Engineer, we request that our Technical Specifications be revised as follows:

1. Delete paragraph 5 of Section 6.1.2, "Responsibility" which addresses the qualifications of the Reactor Maintenance Engineer.
2. Delete the reference to the Maintenance Engineer obtaining an NRC Senior Operator license in paragraph 6 of Section 6.1.2.

The proposed change will not affect our ability to operate the facility safely and within compliance of all applicable regulations. The Organization Structure Chart provided as Figure 6.1 of the Technical Specifications will not be affected.

220025

9209240410 920917
PDR ADOCK 05000123
PDR

an equal opportunity institution

cert #
P1093-9291

AD20

The second proposed change addresses fuel movement. Technical Specifications Section 6.1.3, "Staffing", paragraph 2, now reads:

"When fuel or control rods are being installed in or being unloaded from the core the following conditions shall be met:

- (1) All rearrangement of the core or other nonroutine actions shall be under direct supervision of a licensed Senior Operator.
- (2) The Health Physicist or his/her designated representative shall be present to monitor radiation levels."

We propose to revise this paragraph to read:

"All rearrangements of the core, fuel movement, and associated Health Physics monitoring or other nonroutine actions shall be supervised by a licensed Senior Operator."

The existing requirement that the Health Physicist be present is not necessary. The origin of this requirement most likely originated over dose rate concerns associated with moving fuel elements over the "bulkhead" wall which separates the core side of the pool from the fuel storage rack side of the pool. When fuel elements are moved back and forth between the fuel storage rack and the core side of the pool they must be raised high enough to clear the bulkhead. This brings the fuel element within about five feet of the pool surface. Experience has shown that the dose rates encountered at the pool surface when fuel elements are being moved over the bulkhead are typically less than 1 mr/hr.

Monitoring dose rates during such evolutions should come under the direction of the supervising SRO who may, at his option, request HP presence.

The third proposed change also addresses Section 6.1.3, "Staffing". The third paragraph of Section 6.1.3 states:

"When the reactor is being used for training purposes the following conditions shall be met:

- (1) Students shall be under the direct supervision of a licensed Reactor Operator and shall not be permitted to operate the reactor when the excess reactivity is greater than 0.7% $\Delta k/k$.
- (2) Trainees, who are preparing to become licensed at the facility or for a utility, shall be under the direct supervision of a Senior Operator and shall not be permitted to operate the reactor when the excess reactivity is greater than 1.5% $\Delta k/k$."

We propose to restate the requirements as follows:

- "(1) Students and Trainees may operate the reactor under the direct supervision of a licensed Reactor Operator provided the excess reactivity is less than 0.7% delta k/k.
- (2) Trainees may operate the reactor under the direct supervision of a Senior Operator when the excess reactivity is greater than 0.7% delta k/k and less than 1.5% delta k/k."

Additionally, we have moved the definition of trainee to Tech Spec Section 1.3, "Definitions".

The purpose of the revision is to clearly state that both students and trainees may operate under the supervision of either a Reactor Operator or Senior Reactor Operator when excess reactivity is below 0.7% $\Delta k/k$; and that only trainees may operate when excess reactivity is greater than 0.7% $\Delta k/k$ provided they are supervised by a Senior Operator. We feel this must have been the original intent of this requirement, however the present wording allows students to operate under the supervision of a Reactor Operator but requires Senior Operator supervision for trainees. As we plan to be training several candidates to become licensed operators over the next few years, the proposed revision will be especially helpful.

The fourth proposed change involves a relaxation of the pool resistivity requirement. Technical Specifications Section 3.3, "Coolant Systems" requires that "The resistivity of the pool water shall be greater than 0.5 megaohm-cm as long as there are fuel elements in the pool."

We request this sentence be changed to "The resistivity of the pool water shall be greater than 0.2 megaohm-cm as long as there are fuel elements in the pool."

A telephone survey of other university pool-type reactors shows that other similar facilities (e.g. University of Virginia and Cornell University) have operated under Tech Spec resistivity limits of 0.2 megaohm-cm (or conductivity 5 micro-mho/cm) for many years and have proven, through experience, that this limit provides for the adequate safeguard against corrosion and pool water activation.

By adopting the new limit, we hope to reduce the frequency of our regenerations and thus reduce water releases and manpower associated with regeneration.

The proposed revisions, in the form of change pages, are provided in Attachment A.

Sincerely,

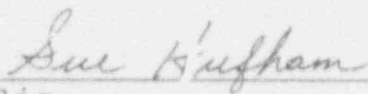


David W. Freeman
Reactor Manager

DWF/lp

Attachments

Signed before me this 18th day of September, 1992



Notary Public

SUE HUFHAM
NOTARY PUBLIC STATE OF MISSOURI
PHELPS COUNTY
MY COMMISSION EXP. AUG. 30, 1996