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May 13, 2020

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

REFERENCE: Docket No. 50-186
University of Missouri-Columbia Research Reactor
Renewed Facility Operating License No. R-103

SUBJECT: Written communication as specified by 10 CFR § 50.4 regarding withdrawal of the proposed change to Technical Specification 6.4.c and a revision to Technical Specification 1.26

By letter dated December 12, 2019 (ML19350A57), the University of Missouri Research Reactor (MURR) requested a license amendment and changes to the facility Technical Specification (TS) 1.26, "Reactor Secured;" TS 3.4, "Reactor Containment Building;" TS 4.4, "Reactor Containment Building;" and TS 6.4, "Procedures," pursuant to 10 CFR § 50.90.

By letter dated March 10, 2020 (ML20072H337), MURR withdrew its request to revise TS 3.4, "Reactor Containment Building." No other changes to the license amendment request were affected by this withdrawal.

Based on recent discussions, MURR is also withdrawing its request to revise TS 6.4, "Procedures." No other changes to the license amendment request are affected by this withdrawal with the exception of removing the word "installed" in proposed, revised TS 1.26, as described in Enclosures 1, 2, and 3. Removal of the word "installed" in TS 1.26 b(4), which was initially added to the definition by the December 12, 2019, submittal, will add clarity to the TS while also making the definition consistent with the wording in ANSI/ANS-15.1, "The Development of Technical Specifications for Research Reactors."

A020
NRR

If there are any questions or if you require additional information, please contact me at (573) 882-5118 or MeffertB@missouri.edu. I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Bruce A. Meffert
Reactor Manager

ENDORSEMENT:
Reviewed and Approved,

FOR DAVID ROBERTSON

J. David Robertson
Reactor Facility Director

State of Missouri
County of Boone
Subscribed and sworn to before me this 13 day of May, 2020

Jacqueline L Matyas
JACQUELINE L. MATYAS, Notary Public
My Commission Expires: March 26, 2023

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

JACQUELINE L. MATYAS
My Commission Expires
March 26, 2023
Howard County
Commission #15634308

cc: Reactor Advisory Committee
Reactor Safety Subcommittee
Isotope Use Subcommittee
Dr. Mark McIntosh, Vice Chancellor for Research, Graduate Studies and Economic Development
Mr. Geoffrey Wertz, U.S. Nuclear Regulatory Commission
Mr. Craig Bassett, U.S. Nuclear Regulatory Commission

Enclosures:

1. Requested Change to Technical Specification 1.26
2. Proposed, revised Technical Specification page – A-4 (with track changes)
3. Proposed, revised Technical Specification page – A-4 (with accepted changes, revision bars)

Enclosure 1 – Requested Change to Technical Specification 1.26

The existing TS definition of "Reactor Secured" became effective with the issuance of Renewed Facility Operating License No. R-103 on January 4, 2017.

Specification 1.26, "Reactor Secured," currently states:

"The reactor shall be considered secured when:

a. There is insufficient fuel in the reactor core to attain criticality with optimum available conditions of moderation and reflection with all four (4) shim blades (rods) removed,

OR

b. Whenever all of the following conditions are met:

(1) All four shim blades (rods) are fully inserted;

(2) One of the two following conditions exists:

i. The Master Control Switch is in the "OFF" position with the key locked in the key box or in custody of a licensed operator,

OR

ii. The dummy load test connectors are installed on the shim rod drive mechanisms and a licensed operator is present in the reactor control room;

(3) No work is in progress involving the transfer of fuel in or out of the reactor core;

(4) No work is in progress involving the shim blades (rods) or shim rod drive mechanisms with the exception of installing or removing the dummy load test connectors; and

(5) The reactor pressure vessel cover is secured in position and no work is in progress on the reactor core assembly support structure."

Specification 1.26 will be revised as follows:

"The reactor shall be considered secured when:

a. There is insufficient fuel in the reactor core to attain criticality with optimum available conditions of moderation and reflection with all four (4) shim blades (rods) removed,

OR

b. Whenever all of the following conditions are met:

(1) All four shim blades (rods) are fully inserted;

(2) One of the two following conditions exists:

i. The Master Control Switch is in the "OFF" position with the key locked in the key box or in custody of a licensed operator,

OR

ii. The dummy load test connectors are installed on the shim rod drive mechanisms and a licensed operator is present in the reactor control room;

(3) No work is in progress involving the transfer of fuel in or out of the reactor core;

(4) No work is in progress involving the shim blades (rods) or shim rod drive mechanisms unless the shim rod drive mechanisms are physically decoupled from the shim blades (rods), with the exception of installing or removing the dummy load test connectors; and

(5) The reactor pressure vessel cover is secured in position and no work is in progress on the reactor core assembly support structure."

1 **DEFINITIONS** - Continued

1.23 **Reactor in Operation** - The reactor shall be considered in operation unless it is either shutdown or secured.

1.24 **Reactor Safety System** - The reactor safety system is that combination of sensing devices, electronic circuits and equipment, signal conditioning equipment, and electro-mechanical devices that serves to either effect a reactor scram, or activates the engineered safety features.

1.25 **Reactor Scram** - A reactor scram is the insertion of all four (4) shim blades (rods) by gravitational force as a result of removing the holding current from the shim rod drive mechanism electromagnets.

1.26 **Reactor Secured** - The reactor shall be considered secured when:

a. There is insufficient fuel in the reactor core to attain criticality with optimum available conditions of moderation and reflection with all four (4) shim blades (rods) removed,

OR

b. Whenever all of the following conditions are met:

(1) All four shim blades (rods) are fully inserted;

(2) One of the two following conditions exists:

i. The Master Control Switch is in the "OFF" position with the key locked in the key box or in custody of a licensed operator,

OR

ii. The dummy load test connectors are installed on the shim rod drive mechanisms and a licensed operator is present in the reactor control room;

(3) No work is in progress involving the transfer of fuel in or out of the reactor core;

(4) No work is in progress involving the shim blades (rods) or shim rod drive mechanisms unless the shim rod drive mechanisms are physically decoupled from the shim blades (rods), with the exception of installing or removing the dummy load test connectors; and

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OR

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(1) All four shim blades (rods) are fully inserted;

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i. The Master Control Switch is in the "OFF" position with the key locked in the key box or in custody of a licensed operator,

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ii. The dummy load test connectors are installed on the shim rod drive mechanisms and a licensed operator is present in the reactor control room;

(3) No work is in progress involving the transfer of fuel in or out of the reactor core;

(4) No work is in progress involving the shim blades (rods) or shim rod drive mechanisms unless the shim rod drive mechanisms are physically decoupled from the shim blades (rods), with the exception of installing or removing the dummy load test connectors; and

(5) The reactor pressure vessel cover is secured in position and no work is in progress on the reactor core assembly support structure.