

September 11, 2007

Mr. Michael Whaley, Manager
Nuclear Reactor Facility
Department of Mechanical and Nuclear Engineering
112 Ward Hall
Kansas State University
Manhattan, KS 66506-5204

SUBJECT: KANSAS STATE UNIVERSITY - REQUEST FOR ADDITIONAL INFORMATION
AND ASSURANCE OF DECOMMISSIONING FUNDING RE: LICENSE R-88
RENEWAL (TAC NO. MC9031)

Dear Mr. Whaley:

We are continuing our review of your September 12, 2002, request for license renewal for the Kansas State University research reactor and associated supplements. During our review of your license renewal request, questions have arisen for which we require additional information and clarification. Please provide responses to the enclosed request for additional information (RAI) within 30 days of the date of this letter.

In accordance with 10 CFR 50.30(b), your responses and the statement of intent must be executed in a signed original under oath or affirmation.

If you have any questions regarding this review, please contact me at 301-415-1631.

Sincerely,

/RA/

Daniel E. Hughes, Project Manager
Research and Test Reactors Branch A
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-188

Enclosure: As stated

cc w/ enclosure: Please see next page

Kansas State University

Docket No. 50-188

cc:

Office of the Governor
State of Kansas
Topeka, KS 66612

Mayor of Manhattan
P.O. Box 748
Manhattan, KS 66502

Thomas A. Conley, RRPJ, CHP,
Section Chief Radiation and Asbestos Control
KS Dept of Health & Environment
1000 SW Jackson, Suite 320
Topeka, KS 66612-1366

Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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ADAMS ACCESSION NO: ML072390006

TEMPLATE #: NRR-088

*See previous concurrence

OFFICE	PRTA:PM		PRTA:LA		PRTA:BC		PRTA:PM	
NAME	DHughes deh		EHylton egh		DCollins dsc		DHughes deh	
DATE	8/27/2007		8/27/2007		9/11/2007		9/11/2007	

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REQUEST FOR ADDITIONAL INFORMATION
KANSAS STATE UNIVERSITY RESEARCH REACTOR
DOCKET NO. 50-188

1. TS 2.2.3 - Your safety analyses has shown that under the proposed Technical Specifications (TSs) the request of a licensed power of 1250 kW thermal (kW(t)) is appropriate. In addition, the accident analyses would allow a Limiting Safety System Setting (LSSS) of 1250 kW(t) and it would meet the requirements of 10 CFR 50.36. It is appropriate that the TSs provide the limits of operation and allow the licensee to administratively determine the actual setpoint and operation power, based on the accuracy and precision of the instrumentation, to assure that the limits are not exceeded. TS 2.2.3, as written, establishes a "no operation zone" between the licensed power and the LSSS and causes unnecessary confusion. Please propose a change in this TS to remove this confusion.
2. TS 5.1.3 (3) - In a previous RAI most TSs related to the use of aluminum clad TRIGA fuel were eliminated. TS 5.1.3 (3) is not adequately supported in the SAR and TSs. Please remove this TS if that was the intention, otherwise provide proper bases in the SAR and supporting TSs.

The next eight RAIs correct typos or improve clarity of the specification.

3. TS 3.4.3 - The description of the (standard) control rod interlock in the basis does not match the function as described in Table 2. Clarify the TS.
4. TS 3.8.4 - Action C uses "ASAP" as a completion time. This is not defined. Define the term or change it to a defined term.
5. TS 3.5.4 - Operable is misspelled in Required Action A.2.d. Please correct.
6. TS 6.2 - This TS contains 2 subsections listed as "e." Please correct.
7. TS 6.8 - This TS contains the title "Director, Division of Reactor Licensing, NRC." The use of "NRC" would be more generic and appropriate.
8. TS 6.11.a) - Add Region IV to this 24 hr notification TS to meet the requirements of 10 CFR 50.36(c)(7)(ii).
9. TS 6.11.b) - Remove "to the NRC Operations Center." The first sentence in the TS 6.11 already provides the appropriate addressee for written reports.
10. TS 6.11.c) - Remove "to the USNRC, Region IV, 611 Ryan Drive, Suite 400, Arlington, TX 76011-4005." The first sentence in the TS 6.11 already provides the appropriate addressee for written reports.

The next six RAls concern clarification of your TSs as derived from the SAR according to 10 CFR 50.36(b).

11. SAR Section 7.3.1 - First Channel In a previous version of the SAR the power level setting of the described interlock was 1 kW and not 10 kW? Discuss the reason for this change. Propose a TS for this interlock, otherwise provide justification for not making this interlock a TS.
12. SAR Section 7.3.1 - Third Channel The description in this section of the scrams that are bypassed or not when in pulse mode is not clear. In particular if this instrument is being used during pulse mode, is the high voltage scram bypassed? Please discuss.
13. Propose a safety channel specification in section 3 of the TSs and an appropriate surveillance specification in section 4 of the TSs for the high voltage scrams on the power level instruments, or provide justification for not doing so.
14. SAR Section 7.3.4.b - This section describes the pulse preset timer scram. Justify why including this scram as a TS is not necessary, otherwise propose a TS.
15. SAR Section 7.3.4.c - The interlocks described in this section are in the surveillance section TS 4.4.2 but they are not specified in section 3 of the TSs. Specify the interlocks in section 3 of the TSs so it is clear what functionality is surveilled in TS 4.4.2.
16. SAR Section 12.5.3 and TS 6.11.c) - This section of the SAR states that a 30 day notification shall be made of any permanent changes in Facility Manager or head of the Department of Mechanical and Nuclear Engineering. This is consistent with ANS/ANSI 15.1. Propose an addition to TS 6.11.c) to require this report, or justify not doing so.