

March 8, 1999

Dr. Robert U. Mulder  
Director, University of Virginia Reactor Facility  
Department of Mechanical, Aerospace  
and Nuclear Engineering  
University of Virginia  
Charlottesville, VA 22903-2442

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (TAC NO. MA3737)

Dear Dr. Mulder:

We are continuing our review of your amendment request for Amended Facility Operating License No. R-66 for the University of Virginia Research Reactor which you submitted on September 29, 1998, as supplemented. During our review of your amendment request, questions have arisen for which we require additional information and clarification. Please provide responses to the enclosed request for additional information within 30 days of the date of this letter. In accordance with 10 CFR 50.30(b), your response must be executed in a signed original under oath or affirmation. Following receipt of the additional information, we will continue our evaluation of your amendment request.

If you have any questions regarding this review, please contact me at (301) 415-1127.

Sincerely,  
Original Signed By:  
Alexander Adams, Jr., Senior Project Manager  
Non-Power Reactors and Decommissioning  
Project Directorate  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 50-62

Enclosure: As stated

cc w/enclosure:  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script, reading "Alexander Adams, Jr.", is positioned above the typed name.

Alexander Adams, Jr., Senior Project Manager  
Non-Power Reactors and Decommissioning  
Project Directorate  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

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University of Virginia

Docket Nos. 50-62/396

cc:

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Charlottesville, VA 22903

REQUEST FOR ADDITIONAL INFORMATION  
UNIVERSITY OF VIRGINIA RESEARCH REACTOR  
DOCKET NO. 50-62

1. Your proposed changes to license condition II.B.(4) results in wording that is similar to that in license condition II.B.(2). To reduce the possibility for confusion as to special nuclear material (SNM) possession limits, please consolidate possession for any SNM that remains under license condition II.B.(4) to license condition II.B.(2). If the possession limit of one kilogram of uranium-235 of any enrichment needs to be modified to accommodate the consolidated material, please propose and justify increased possession limits. There are differences in wording between the proposed license conditions given in your answers to our request for additional information and in the proposed license included in your submission. Please address.
2. While fuel and cobalt are stored in the reactor pool, a potential radiation hazard exists from the loss of pool water. Please propose a TS for maintaining a system to provide warning of loss of pool water. Please propose associated operability and surveillance requirements, if appropriate.
3. Your answer dated January 20, 1999, to our question 5.B. states that procedures will require the air monitor in the reactor room to be turned on during fuel shipments. While irradiated fuel remains on site, a potential exists for a cladding failure and release of fission products. How would this be detected during fuel storage? Please propose a TS to ensure operation of the air monitor during fuel movement and, if needed, during fuel storage. Please propose associated operability and surveillance requirements, if appropriate. Your answer to question 8 has proposed wording to calibrate the bridge radiation monitor until the fuel and cobalt-60 pins are removed from the reactor pool, but there does not appear to be a requirement to have the monitor in operation. Likewise, there does not appear to be a specification similar to 4.4.1 for required radiation monitoring equipment.
4. Your proposed changes to TS 4.5 would eliminate the TS. Please propose a TS requirement (or modifications to this TS) that would insure that operation of the radiation monitors is verified after maintenance or modification.
5. Your proposed changes to TSs 4.6 and 5.2 would eliminate requirements on the confinement and ventilation system. Please propose wording that would require operability and surveillance of these systems until fuel is permanently removed from the facility or justify not operating these systems.
6. TS 5.3.1 refers to use of contained uranium-235. However, your proposed license condition II B.(2) does not allow use of uranium-235. Please make the license condition and TS consistent. Your proposed TS 5.3.2 refers to use of plutonium. However, your proposed license condition II B.(2) does not allow use of plutonium. Please make the license condition and TS consistent. If you choose to continue to authorize use of these materials, please give some examples of your intended uses.
7. Please define on your proposed organizational charts the meaning of solid and dashed lines similar to that on your current organizational chart.

8. One of the attributes of the review and audit committee discussed in ANSI/ANS-15.1 is that members of the operating staff do not constitute the majority of a quorum. While with the permanent shutdown of the reactor, an "operating staff" will not exist after removal of the fuel, this concept is still valid for members of the Reactor Decommissioning Committee (RDC). Please propose a technical specification that prohibits persons (e.g., reactor staff, reactor decommissioning subcontractors, or health physics staff directly supporting decommissioning) who will be directly affected by decisions of the committee from making up a majority of a quorum.
9. Please propose a TS that requires timely dissemination, review, and approval of Reactor Safety Committee, Radiation Safety Committee and RDC minutes.
10. Please propose review functions for the Reactor Safety Committee and the RDC similar to those in ANS-15.1, considering the permanent shutdown status of the facility, or justify the differences in your proposed TSs. For example, the Reactor Safety Committee does not have review responsibility for 10 CFR 50.59 changes and violations of TSs and license or internal procedures having safety significance. While the list of responsibilities for the RDC includes reference to 10 CFR 50.59(a), the committee responsibilities do not match the requirements of 10 CFR 50.59(a). The RDC does not have review responsibility for violations of TSs, license or internal procedures having safety significance.
11. Please propose audit functions for the Reactor Safety Committee and the RDC similar to those in ANS-15.1, considering the permanent shutdown status of the facility, or justify the differences in your proposed TSs. For example, the Reactor Safety Committee does not appear to have an audit function for the operator requalification program, corrective actions, or the emergency plan and implementing procedures. The RDC does not appear to have an audit function for the corrective actions, or the emergency plan and implementing procedures. Audit functions that are an internal requirement of individual plans or programs are acceptable and need not be repeated in the TSs.
12. In your two proposed organizational charts the title of Provost appears to have been changed to Vice President and Provost. Also, the position of Provost on the organizational chart has changed with the change in title. Please justify these proposed changes.
13. Your current TS 6.3.2 discusses changes to procedures that do not change the original intent and minor changes. Your proposed TS do not appear to have an equivalent concept. Please explain.
14. Question 23 in our request for additional information dated November 23, 1998, asked about elimination of reporting violations of TS. Your answer focused on the permanent shut down status of the facility. However, NRC still considers violation of the remaining TS that are applicable to the permanently shut down reactor important enough to report. Please propose a TS that accomplishes this or justify not reporting violation of these remaining TS.



15. TSs 6.7.1.(2)(b) and 6.7.1.(3)(b) refer to TS 6.6.2. However, your proposed revisions to the TSs eliminated TS 6.6.2. Please address.
16. Your proposed wording of TSs 6.7.1.(3)(a) and (b) is the same as TSs 6.7.1.(4)(a) and (b). Please justify the elimination of TS 6.7.1.(4)(a) and (b), considering the fact that fuel remains on site.
17. Your current TS 6.7.2 contains a requirement to report 50.59 changes as part of the annual report. Your proposed TS 6.7.2 does not contain a similar requirement. Please explain.
18. Do any of the changes to the license and TSs for the UVAR need to be made to the CAVALIER TSs and license or will the CAVALIER decommissioning proceed under the existing Order and TSs?