



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

October 16, 1978

NRC POR

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Docket No. 50-62

University of Virginia  
School of Engineering and Applied Science  
Department of Nuclear Engineering  
ATTN: Mr. J. L. Meem  
Director, Reactor Facility  
Charlottesville, Virginia 22901

Gentlemen:

After conducting a review of your March 9, 1977, application for renewal of Facility Operating License No. R-66 for your University of Virginia Research Reactor (UVA), we have concluded that additional information is needed pursuant to Title 10 of the code of Federal Regulations. We request that you review the enclosed list of items to be reviewed and submit the required information to complete your application within 60 days of receipt of this letter. You are reminded that you may incorporate by reference, any information contained in previous applications, statements or reports filed with the Commission.

If you have any questions, please do not hesitate to contact Mr. Steve Ramos (301 492-7435) who has been assigned project manager for your facility.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert W. Reid".

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosure: Request for  
Additional Information

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## LICENSE RENEWAL REVIEW ITEMS

### A. Contents of Application

#### 1. General Information (10 CFR 50.33)

Provide applicable information delineated in the referent regulation. The following 10 CFR 50.33 paragraphs obtain:

(c) thru (d) Staff explanatory

(e) Provide a list of all licenses issued for use at the critical experiment Facility, at Lynchburg, Virginia. This includes byproduct and any possession only licenses.

#### (f) Financial Considerations

Information is needed that will show the funds necessary to cover estimated operating costs or that there is reasonable assurance of obtaining the funds for the period of the license renewal plus the estimated costs of permanently shutting down the facility and maintaining it in a safe condition. To facilitate reviewing the financial aspects, it is requested that the following information be provided in three signed originals and six additional copies:

- (1) The most recent published annual statement of operations of the University. Indicate, or provide separately, that portion of the budget which clearly delineates the sources of funds to be utilized to cover costs of operation of your reactor facility.
- (2) The estimated annual costs to operate the reactor for the additional license renewal period and a certification that amounts designated in your application for renewal of the facility will be included in future budgets.
- (3) The estimated costs of permanently shutting down the reactor, a listing of what is included in these costs, the assumptions made in estimating the costs, the type of shutdown contemplated, and the source of funds to cover these costs.
- (4) An estimate of the annual cost to maintain the shutdown facilities in a safe condition. Indicate what is included in this estimate, assumptions made in determining the cost, any interest rates assumed and the source of funds to cover this in perpetuity.

2. Filing of Applications (10 CFR 50.30)

(c)(1)(ii), (d) Self explanatory

(f) Environmental Considerations

An environmental impact statement (EIS) is, in general, not required. When an EIS is not required, an Environmental Impact Appraisal (EIA) and a Negative Declaration (ND) are required in accordance with 10 CFR 51.5(c)(1) and 10 CFR 51.7. To prepare the EIA and ND, additional information is needed as follows:

- (1) What is the pressure differential between the reactor coolant system and the secondary cooling system: Is the pressure higher in the secondary system: Where does the secondary system discharge to?
- (2) What are the direct radiation levels of effluents? How much and what levels of effluents are released annually to sanitary or other disposal systems?
- (3) How are samples disposed of?
- (4) What is the concentration of radioactivity released to unrestricted areas from disposal of spent activated samples? How much is the annual radioactivity release due to sample disposal and Argon-41 respectively?

3. Technical Information (10 CFR 50.34)

(a) FSAR - (Applicable Portions) of 10 CFR 50.34(b)

- (1) A review of the Safety Hazards Evaluation Reports submitted reveals this should be updated to reflect current conditions of the facility and current accident consequence analysis techniques and information. A description and analysis of the structures, systems and components of the facility as to their present condition and on their ability to function properly and safety for the term of the requested period. This is particularly important, because the original safety evaluation and subsequent safety evaluations for the power level increase was based on a specific license term. As some parts have obviously worn and there is some deterioration after 20 years of operation, the ability of the facility to operate safely for the requested period is a safety question.

(2) Provide any known projected changes planned during the requested renewal period.

(b) 10 CFR 50.34 (b)(6) - Applicable Portions

The following pertains to specific items:

(v) Emergency Planning

Provide your emergency plan. The plan should contain, but not be limited to, the elements listed in Section IV of Appendix E to 10 CFR Part 50. Attached are draft copies of ANS 15.16 "Standard for Emergency Planning for Research Reactors," and Regulatory Guide 2.XX, "Emergency Planning for Research Reactors." Both of these are used by the staff in our review; therefore, they should provide you guidance in developing your plan.

(vi) Technical Specifications (TS) (10 CFR 50.36)

Attached to assist you in your application preparation is a copy of NRC guidance for TS Section 6.0 "Administrative Controls," a copy of Draft ASN 15.18, "Standard for Administrative Controls for Research Reactors", and a copy of the University of Michigan (UM) TS for their pool reactor facility. UM's TS were updated in late 1976 and represent the latest approved by the NRC for a type reactor similar to yours. Further, these TS contain those items such as ALARA (10 CFR 50.36a) guidance on explosives previously provided to all licenses and deletion of abnormal occurrences. In the course of license renewal it is appropriate to upgrade the various documents associated with a license.

(c) Attached is one set of Regulatory Guides (2.1-2.5) that pertain to research reactors that should also be used in revising your TS.

Attachments:

1. Draft Copy ANS 15.16 - Standard Emergency Planning
2. Draft Copy Reg. Guide 2.XX - Emergency Planning
3. University of Michigan Pool Reactor TS
4. Guidance for Non-Power Reactors Section 6.0 "Administrative Controls"
5. Regulatory Guides 2.1-2.5
6. Draft Copy ANS 15.18 - "Standard for Administrative Controls"