

November 24, 2003

Dr. Anthony H. Francis, Director  
Phoenix Memorial Laboratory  
Ford Nuclear Reactor  
University of Michigan  
2301 Bonisteel Boulevard  
Ann Arbor, MI 48109-2100

SUBJECT: DECOMMISSIONING ACTIVITIES AT UNIVERSITY OF MICHIGAN FORD  
NUCLEAR REACTOR

Dear Dr. Francis:

This letter is in response to telephone conversations with Mr. Christopher Becker, of your staff, on your intention to permanently shut down your University of Michigan Ford Nuclear Reactor. This letter provides guidance on pre-decommissioning activities which can be performed at the Ford Nuclear Reactor and the process to decommission a research and test reactor.

Decommissioning is defined in 10 CFR 50.2. In accordance with that definition, any pre-decommissioning activities you perform must not permanently modify or dismantle structures, systems or components (such activities are not allowed until the decommissioning plan is approved). The proposed activities must also meet the requirements of 10 CFR 50.59, "Changes, tests, and experiments." The activities should not (1) foreclose release of the site for possible unrestricted use, (2) result in significant environmental impact beyond that previously analyzed and assumed for the Ford Reactor, or (3) result in there no longer being reasonable assurance that adequate funds will be available for decommissioning. Further, you must conduct the activities safely in accordance with all applicable requirements.

NRC generally issues a possession-only license amendment to an operating research reactor after the fuel is permanently removed from the core and shipped off-site. You may desire to amend the license to possession-only status prior to the start of decommissioning. Obtaining a possession-only license amendment provides regulatory relief from those requirements applicable only to operating research reactors. NRC handles possession-only license amendment applications in the same manner as other license application amendments.

Within two years following permanent cessation of operations, and in no case later than one year prior to expiration of the operating license, you must make an application for license termination. The application for termination of a license must be accompanied or preceded by a proposed decommissioning plan (10 CFR 50.82 (b)(1)). Decommissioning projects must be planned and executed in compliance with the dose based release criteria given in 10 CFR 20, Subpart E. The basic steps in the decommissioning of research reactors include:

- Permanent shut down

You must inform the NRC, in writing, of your decision to permanently cease reactor operations and decommission your reactor.

- Fuel removal

Fuel removal is not considered part of decommissioning and is conducted under your operating license.

- Possession-only License (POL) Amendment

POL removes the authority to operate the reactor and removes the authority to possess fuel. Upon the removal of all special nuclear material, you may request an amendment to reduce or eliminate certain provisions of the physical security plan of the license for the Ford Nuclear Reactor. You may also request to amend your technical specifications (TS) to remove those that are no longer applicable to a shutdown reactor.

- Submission of Decommissioning Plan (Supplement to SAR)

See NUREG 1537, Part 1 for guidance.

- NRC Review

Upon receipt of a proposed decommissioning plan, the NRC, in accordance with 10 CFR 20.1405 and 10 CFR 50.82 (b)(5), will publish a notice of proposed action regarding the decommissioning plan in the Federal Register. This notice informs the public of the proposed action, and for research reactors does not give an opportunity for a hearing. The NRC will review the proposed decommissioning plan in the same manner that a license amendment application is reviewed.

- Decommissioning License Amendment Issuance

The NRC will issue a license amendment approving the plan subject to such conditions and limitations that NRC deems appropriate and necessary. The approved decommissioning plan will be a supplement to the safety analysis report or equivalent. The NRC will notice the approval of the decommissioning plan.

- Decommissioning Activities

Decommissioning activities are carried out in accordance with the approved plan. The NRC will inspect activities to ensure compliance with the plan.

- Final Survey

The key to a successful decommissioning project is advance planning of all activities with full consideration of the applicable criteria. The surveys should be based on the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) methodology. They must be derived based on the 25 mrem/yr dose limit specified in 10 CFR 20.1402 for unrestricted release of the site.

- Confirmatory Survey

The NRC will independently assess whether the terminal radiation survey meets the release criteria.

- License Termination

The NRC will terminate the license when the decommissioning has been performed in accordance with the approved decommissioning plan and the terminal radiation survey and associated documentation demonstrates that the facility and site are suitable for release in accordance with the criteria for decommissioning in 10 CFR 20, Subpart E.

Also the requirements in 10 CFR 50.82 (b)(1)(ii) and (b)(1)(iii) state that decommissioning activities should be completed without significant delay unless prevented by factors beyond the licensee's control.

Should you have any questions concerning these matters, please do not hesitate to call me at 301-415-1019.

Sincerely,

**/RA/**

Patrick J. Isaac, Project Manager  
Research and Test Reactor Section  
New, Research and Test Reactors Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 50-02

cc: Please see next page

University of Michigan

Docket No. 50-02

cc:

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