

September 27, 2010

Mr. Stephen Frantz, Director
The Reed Research Reactor
Reed College
3203 SE Woodstock Blvd.
Portland, OR 97202-8199

SUBJECT: REED COLLEGE — REQUEST FOR ADDITIONAL INFORMATION, RE:
LICENSE AMENDMENT, SPECIAL NUCLEAR MATERIAL POSSESSION LIMIT
(TAC NO. ME4086)

Dear Mr. Frantz:

We are continuing our review of your amendment request dated May 28, 2010, for Facility Operating License No. R-112 for the Reed Research Reactor. 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 45 days of the date of this letter. In accordance with Title 10 of the *Code of Federal Regulations* Section 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,

/RA/

Alexander Adams, Jr., Senior Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-288

Enclosure:
As stated

cc w/encl:
See next page

Reed College

Docket No. 50-288

cc:

Mayor of the City of Portland
1220 Southwest 5th Avenue
Portland, OR 97204

Reed College
ATTN: Dr. Ellen Stauder
Dean of Faculty
3203 S.E. Woodstock Boulevard
Portland, OR 97202-8199

Reed College
ATTN: Dr. Colin Diver, President
3203 S.E. Woodstock Boulevard
Portland, OR 97202-8199

Ken Niles, Assistant Director
Oregon Department of Energy
625 Marion Street NE
Salem, OR 97301-3737

Terry D. Lindsey, Program Director
Radiation Control Program
Oregon Health Services
Department of Human Services
800 NE Oregon Street, Suite 640
Portland, OR 97232-2162

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

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OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE AMENDMENT REQUEST FOR
THE REED RESEARCH REACTOR
LICENSE NO. R-112; DOCKET NO. 50-288

1. Your proposed changes to license condition 2.B. would restrict special nuclear material (SNM) to low-enriched uranium (LEU) and only allow SNM in the form of TRIGA fuel. Do you possess any SNM of other forms or enrichments such as fission chambers or flux foils? If so, please revise your proposed license condition to specify the amount, enrichment and form of the material.
2. During its review, the U. S. Nuclear Regulatory Commission staff has noted some corrections and updates that need to be made to license condition 2.B. The reference to "Chapter 1" in the license condition should be "Chapter I." The title of "Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70" has been revised since license condition 2.B. was originally written. The title of 10 CFR Part 70 is now "Domestic Licensing of Special Nuclear Material." The license condition does not contain authority for SNM produced during operation of the reactor which was common for license conditions written during the 1960s. License condition 2.B. should contain authority to receive, possess, use, but not separate, such special nuclear material as may be produced by operation of the reactor. Please address these issues or explain why these revisions to the license condition are not needed.
3. The fuel you are to receive from the University of Arizona (UA) contains SNM and byproduct material produced by operation with the fuel in the UA reactor. Please propose changes to your license condition to receive and possess, but not use this material.
4. Please discuss the similarities and differences between the UA fuel and the current Reed Research Reactor fuel. Discuss dimensions, uranium content and density, burnup, built-in poisons if any, materials of construction, etc.
5. Your application states that storage of the UA fuel in fuel storage racks will meet the technical specification (TS) requirements for fuel storage. Please provide your basis for reaching this conclusion (please show compliance with TS H.1. and H.2.).