

October 29, 2008

Mr. Timothy DeBey
Reactor Director
U.S. Geological Survey
Box 25046 - Mail Stop 424
Denver Federal Center
Denver, CO 80225

SUBJECT: RENEWAL OF OPERATING LICENSE NO. R-113

Dear Mr. DeBay:

This letter is to remind you that License No. R-113 for the U.S. Geological Survey Research Reactor (USGSRR) is scheduled to expire on February 24, 2009, and to provide you guidance for preparing your application for a renewal of the license. Title 10 of the *Code of Federal Regulations* (10 CFR 2.109) allows continued operation under your current license until the Nuclear Regulatory Commission (NRC) acts upon an application for renewal provided the application is received at least 30 days prior to the expiration date of your current license.

Because your current license will reach the end of its forty-year term, which is the term limit in the regulations for a license, your license renewal will involve the reissuance of a new license. Therefore, renewal is not merely a routine administrative step, but involves in-depth reviews of all documentation related to the facility, an onsite review, and publication in the Federal Register of a notice of your request that provides the opportunity for public participation, as well as a notice of the results of our review of your application.

Your renewal application should address the requirements in applicable sections of Title 10 of the *Code of Federal Regulations*, and should demonstrate that the reactor can continue to be operated safely and without adverse impact on the environment or the public. For the review of your renewal application, the NRC staff will consider the guidance contained in the NRC Division 2 Regulatory Guides for Research Reactors, NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors," and the industry standards in the American Nuclear Society ANS-15 Series for research reactors. The U.S. Nuclear Regulatory Commission (NRC) maintains the Agencywide Documents Access and Management System (ADAMS), which provides text and image files of the NRC's public documents. NUREG-1537 can be found in ADAMS under accession numbers ML042430055 and ML042430048.

In order for us to perform an adequate review, you are requested to include, as part of your application, all of the following documentation, in accordance with 10 CFR 50.33 and 50.34:

1. Updated Safety Analysis Report (SAR)

A complete updated edition of your Safety Analysis Report (SAR) is required to be submitted with your renewal application. The SAR should include information that describes the facility and all changes made during the license period; the design bases and limits on its operation; and a safety analysis of the structures, components and systems to ensure that they will be able to continue to perform their intended functions. Potential and

reasonable accident scenarios and their consequences should be analyzed using the best current input data and computational techniques. Information should be compared, wherever possible, with facility operating experience.

Furthermore, the SAR should include, if applicable, updated information and analyses on demography, meteorology, geology, seismology, and other natural and man-made phenomena.

2. Financial Qualifications (10 CFR 50.33(f))

This information must show that there is reasonable assurance that you will be able to obtain the funds necessary to cover estimated operating costs for the period of the requested license renewal plus the estimated costs of decommissioning the facility. To facilitate our review, we request that the following information be provided, appropriately certified:

- a. The most recently published annual financial statement of the Department of the Interior. Indicate the source of funds utilized to cover costs of operation of the USGSRR.
- b. The estimated annual cost to operate the reactor facility for the first 5 years of the requested period of renewal, the underlying assumptions and bases of the estimate, and the sources of funds to cover these costs, and
- c. The estimated costs of eventually shutting down the reactor and safely disposing of it, a listing of what is included in these costs, the assumptions underlying these estimated costs, the type of shutdown contemplated, and the source of funds to cover these costs.

3. Environmental Report (10 CFR Part 51)

Your Environmental Report should include sufficient operational data, analyses, and discussions to provide a substantial basis for NRC to develop its environmental assessment.

4. Technical Specifications

The content and format of Technical Specifications should be developed considering the guidance in ANSI/ANS 15.1-2007, "The Development of Technical Specification for Research Reactors" and NUREG-1537. Any changes to the current Technical Specifications should be proposed and justified at the time of the license renewal application so they can be evaluated during the review.

5. Operator Requalification Program (10 CFR 50.54 (i-1) and 10 CFR Part 55)

A copy of your current and implemented operator requalification program will be reviewed with your renewal application to ensure it meets current NRC requirements for research reactors. Please submit any changes you wish to make as part of the renewal application.

6. Emergency Plan (10 CFR 50.54(q) and (r) and 10 CFR 50, Appendix E)

We will review your approved emergency plan to ensure compliance with current NRC requirements. If you have no changes you wish to make as part of the license renewal, you need only reference those respective USGS documents. However, if you wish to modify your emergency plan, any changes should be submitted for NRC review in accordance with the above-cited regulations.

7. Physical Security Plan (10 CFR 73.67)

You have an approved physical security plan on file with NRC which we shall review. Accordingly, you need only reference the existing security plan. However, if you wish to modify your physical security plan, changes should be submitted as part of the renewal application.

8. Filing of Application

The requirements for submitting your renewal application and all other formal documentation relating to your license with respect to addressee, notarization, signatory and number of copies are given in 10 CFR 50.4 and 10 CFR 50.30.

9. Staff Visit

As a part of our review of your facility, members of the NRC licensing staff may visit your facility. This visit will be coordinated with you following receipt of your application for renewal.

For your further guidance in preparing the proper information to be included in your license renewal application, please see the license renewal package for Oregon State University. It can be found under ADAMS accession numbers ML082520047, ML082530509, ML082540012, ML082540035, and ML061650197. This includes the staff's safety evaluation report and environmental assessment, and the technical specifications and license. Upon completion of our review and a favorable evaluation of your facility, similar documents will be issued in conjunction with renewal of your reactor operating license. The safety evaluation report is provided as an example of the type of findings we must make. Your documentation must provide the technical and descriptive information that will support our issuance of a similar evaluation for your facility.

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

Sincerely,

/RA/

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

Docket No. 50-274
cc: See next page

U.S. Geological Survey

Docket No. 50-274

cc:

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

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