

March 30, 2004

Dr. Barry M. Klein
Vice Chancellor for Research
University of California, Davis
One Shields Avenue
Davis, CA 95616-8558

SUBJECT: REVISION TO SAFETY EVALUATION OF AMENDMENT NO. 7 TO AMENDED
FACILITY OPERATING LICENSE NO. R-130 - REGENTS OF THE
UNIVERSITY OF CALIFORNIA (TAC NO. MB5598)

Dear Dr. Klein:

The U.S. Nuclear Regulatory Commission has issued the enclosed revision to the
Safety

Evaluation of Amendment No. 7 to Facility Operating License No. R-130 for the McClellan
Nuclear Radiation Center (MNRC) TRIGA Research Reactor. Amendment No. 7 was issued
on December 30, 2003 and is available on the Commission's ADAMS system, Accession
Number ML033421339.

Sincerely,

/RA/

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

Docket No. 50-607

Enclosure: Revision to Amendment No. 7
Safety Evaluation Report

cc w/enclosure: Please see next page

University of California - Davis/McClellan MNRC

Docket No. 50-607

cc:

Mr. Jeff Ching
5335 Price Avenue, Bldg. 258
McClellan AFB, CA 95652-2504

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

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REVISION TO SAFETY EVALUATION REPORT
SUPPORTING AMENDMENT NO. 7 TO
AMENDED FACILITY OPERATING LICENSE NO. R-130
REGENTS OF THE UNIVERSITY OF CALIFORNIA AT
McCLELLAN NUCLEAR RADIATION CENTER
DOCKET NO. 50-607

1.0 INTRODUCTION

By letter dated October 21, 2003, the Regents of the University of California (the licensee) submitted a request for amendment of the Facility Operating License No. R-130 for the McClellan Nuclear Radiation Center (MNRC) TRIGA research reactor. The request provided for the allowance of radioactive materials not produced by the reactor to be received, possessed and used on the facility site. In particular, it was requested that Section 2.B of the Facility Operating License be amended to include an additional section 2.B.(4) as follows:

2.B.(4) In addition to those items specified in 2.B.(1), 2.B.(2) and 2.B.(3) the following radioactive materials may be received, possessed, and used at the facility.

Radioactive Material (element and mass number)	Chemical and/or Physical Form	Maximum Quantity Licensee May Possess at Any One Time
A. Any radioactive material between atomic number 1 through 83, inclusive	A. Any	A. 20 Curies (1 Curie each, except as provided below)
B. Any radioactive material with atomic numbers 84 and above	A. Any	A. 4 Curies (100 millicuries each, except as provided below) or up to 20 micrograms
C. Iodine-125	C. Iodide/Liquid	C. 40 Curies
D. Source material (but only trace amounts of Th-234)	D. Any	D. 4 grams per radionuclide, not to exceed 10 grams total
E. Special nuclear material	E. Any	E. 2 grams per radionuclide, not to exceed 5 grams total

This amendment request was approved and issued on December 30, 2003.

2.0 EVALUATION

The previous safety evaluation assumed that all of the radioactive materials to be received, possessed and handled in accordance with this amendment request would be located in the reactor room glove box. The significance of this assumption is related to the ability of the reactor room glove box and its associated exhaust system to mitigate the consequences associated with the complete volatilization of the maximum radioactive material inventory contained in the box, a total of 64.4 curies. (The total activity in categories A, B, and C in the above table is 64 curies. The maximum activity in category D is about 0.1 curie, while the maximum activity in category E is about 0.3 curie.). The staff concluded that the consequences of the complete volatilization of 64.4 curies are much less than the consequences of the bounding MHA, and the amendment request was approved.

Instead of locating all of the radioactive materials shown in above table in the reactor room glove box, some of the materials will be located in the restricted area of the McClellan Nuclear Radiation Center. Non-volatile material will be handled in accordance with approved procedures. Any unsealed volatile material, such as Iodine-125 (the majority of the radioactive materials), will continue to be handled in areas with filtered ventilation to mitigate the consequences of complete volatilization of the unsealed material (e.g., the reactor room glove box and reactor room fume hood), as previously analyzed.

The staff has reviewed the proposed change to the Facility Operating License and concluded that it does not impact the licensee's ability to continue to meet the relevant requirements of 10 CFR Part 50.36.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment does not involve changes in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes in inspection and surveillance requirements. The staff has determined that this amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released off site, and no significant increase in individual or cumulative occupational radiation exposure. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared with the issuance of this amendment.

4.0 CONCLUSION

The staff has concluded, on the basis of the considerations discussed above, that (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously evaluated, or create the possibility of a new or different kind of accident from any accident previously evaluated, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration; (2) there is reasonable assurance that the health and safety of the public will not be endangered by the

proposed changes; and (3) such changes are in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or the health and safety of the public.

Principal Contributor: Warren J. Eresian

Date: March 30, 2004