

April 8, 2010

Dr. Tatjana Jevremovic
Director, Utah Nuclear Engineering Program
Joseph Merrill Engineering Building
50 Central Campus Drive, Room 2298
University of Utah
Salt Lake City, UT 84112

SUBJECT: UNIVERSITY OF UTAH—REQUEST FOR ADDITIONAL INFORMATION
REGARDING RENEWAL OF FACILITY OPERATING LICENSE AND POWER
UPRATE APPLICATION (TAC NO. ME1599)

Dear Dr. Jevremovic:

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of your application for the license renewal and power uprate of Facility Operating License No. R-126 for the University of Utah TRIGA reactor, dated March 25, 2005, and superseded in its entirety by an updated safety analysis report, dated June 1, 2009 (a redacted version of the safety analysis report is available on the NRC's public Web site at www.nrc.gov under Agencywide Documents Access and Management System Accession No. ML092090027).

We require additional information and clarification on questions that have arisen during our review. Please provide responses to the enclosed request for additional information within 60 days after the date of this letter. In accordance with Title 10 of the *Code of Federal Regulations* Section 50.30(b), you must execute your response in a signed original document under oath or affirmation.

If you have any questions about this review, or if you need additional time to respond to this request, please contact me by telephone at 301-415-0893 or by e-mail at geoffrey.wertz@nrc.gov.

Sincerely,

/RA by Kathryn M. Brock/
Geoffrey Wertz, Project Manager
Research and Test Reactors Branch A
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-407

Enclosure:
As stated

cc: w/encl: See next page

University of Utah TRIGA Reactor

Docket No. 50-407

cc:

Mayor of Salt Lake City
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Room 306
Salt Lake City, UT 84111

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Vice President for Research
201 S. Presidents Circle, Room 210
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201 President's Circle, Room 210
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Test, Research, and Training
Reactor Newsletter
Universities of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

Director, Division of Radiation Control
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Salt Lake City, UT 84114-4850

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Research and Test Reactors Branch A
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Enclosure:
As stated

cc: w/encl: See next page

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ADAMS Accession No.: ML100950497 *concurrence via e-mail NRR-088

OFFICE	NRR/DPR/PRLB/PM*	NRR/DPR/PRPB/LA	NSIR/DPR/ORLOB/BC	NRR/DPR/PRLB/BC	NRR/DPR/PRLB/PM*
NAME	GWertz	GLappert	JAnderson (MNorris Acting For)	KBrock	GWertz (KBrock for)
DATE	4/6/2010	4/8/2010	4/8/2010	4/8/2010	4/8/2010

OFFICIAL RECORD COPY

OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION REGARDING
THE EMERGENCY PLAN FOR THE LICENSE RENEWAL AND
POWER UPRATE APPLICATION FOR
THE UNIVERSITY OF UTAH TRIGA REACTOR
LICENSE NO. R-126; DOCKET NO. 50-407

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of the application for the license renewal and power uprate of Facility Operating License No. R-126 for the University of Utah TRIGA reactor (UUTR) as documented in the UUTR safety analysis report, dated June 1, 2009 (a redacted version of the safety analysis report is available on the NRC's public Web site at www.nrc.gov under Agencywide Documents Access and Management System (ADAMS) Accession No. ML092090027).

The NRC staff performed its review of the UUTR emergency plan (EP) in accordance with the guidance provided in NUREG-0849, "Standard Review Plan for the Review and Evaluation of Emergency Plans for Research and Test Reactors," issued October 1983, and American National Standards Institute/American Nuclear Society (ANSI/ANS)-15.16-2008, "Emergency Planning for Research Reactors." During this review, the NRC staff identified areas for which it needs additional information. Please provide responses to the following request for additional information:

1. In accordance with Section 3.2 of ANSI/ANS-15.16-2008, the definition of "site boundary" is unique to each reactor facility. The description of the site boundary provided in Section 2.0 of the UUTR EP lacks a physical description. Please provide the physical description of the site boundary.
2. Section 3.5 of ANSI/ANS-15.16-2008 states, "Action levels should be established in terms of effluent monitors or other plant parameters from which the dose rates and radiological effluent releases at the site boundary can be projected." In Section 4.2 of the UUTR EP, Emergency Action Level 1 states, "Radiological effluents from the Reactor Laboratory (1205E, 1205F, 1205G Merrill Engineering Building) exceed 10 MPC when averaged over 24 hours or 15 mrem whole-body dose equivalent accumulated in 24 hours."
 - 2.1 How and where are these values measured, calculated, and displayed?
 - 2.2 Are any alarms associated with these measures, and how do they relate to the emergency action levels?
 - 2.3 What is the timeliness for the assessment of this action level with respect to emergency class declaration?

ENCLOSURE

3. Table 1, "Emergency Action Levels for Classification of a Notification of Unusual Event," of ANSI/ANS-15.16-2008 describes the following action level characteristics that are not in Section 4.2 of the UUTR EP:
- The UUTR EP has no action level for severe natural phenomena.
 - The UUTR EP's action level response with respect to bomb threats is narrower than that described in Table 1.
 - The UUTR EP has no action level for a credible security threat.
 - The UUTR EP action level response with respect to a fire does not reflect the guidance in Table 1.

Please justify the differences or revise accordingly.

4. The "Alert" section of Table 1 of ANSI/ANS-15.16-2008 indicates that offsite authorities are provided with status information. Section 7.4 of the UUTR EP does not indicate any timeframe for notifications to the NRC and other offsite authorities in order to provide current status information. Please provide the timeframe for notifications to the NRC and offsite authorities.
5. The "Alert" section of Table 1 of ANSI/ANS-15.16-2008 indicates that offsite authorities are provided with status information. Section 7.4 of the UUTR EP does not indicate whether a procedure controls the transmission of offsite information. Does the UUTR have a procedure that provides current status information to the NRC? Additionally, does it describe the contents of initial and follow-up messages to the NRC, including the emergency class, description of the event, and characterization of the release?
6. Section 3.7.4(1) of ANSI/ANS-15.16-2008 indicates that the EP shall include an alternate assembly area. Section 7.6.3 of the UUTR EP did not indicate an alternate assembly area. Has an alternate assembly area been identified? If so, where is this information provided?
7. Section 3.10.3 of ANSI/ANS-15.16-2008 indicates that the EP shall describe the provisions to ensure the operational readiness of emergency equipment and supplies. The "Emergency Equipment" appendix to the UUTR EP does not list the frequency for any functional checks performed on the emergency equipment listed in the appendix. Please provide the frequency for functional checks on emergency equipment.
8. Please ensure that the recommendations previously agreed upon with the NRC staff and documented in the NRC letter to UUTR, dated February 17, 2005 (ADAMS Accession No. ML050470227) are implemented into the UUTR EP.
9. Provide a copy of the UUTR EP revision to the NRC following the resolution of this request for additional information.