April 15, 2011

Dr. John G. Williams, Director
Nuclear Reactor Laboratory
Engineering Building (20), Room 104
University of Arizona
P.O. Box 210020
1127 East James E. Rogers Way
Tucson, AZ 85721-0020

SUBJECT: UNIVERSITY OF ARIZONA - ISSUANCE OF AMENDMENT NO. 20 TO FACILITY LICENSE NO. R-52 FOR THE UNIVERSITY OF ARIZONA RESEARCH REACTOR REGARDING DECOMISSIONING PLAN APPROVAL (TAC NO. J00340)

Dear Dr. Williams:

The U.S. Nuclear Regulatory Commission (the Commission, NRC) has issued the enclosed License Amendment No. 20 to Facility License No. R-52 for the University of Arizona Research Reactor, Docket No. 50-113. The amendment approves the decommissioning plan (DP) for the University of Arizona Research Reactor. The amendment is in response to your letter dated May 21, 2009, as supplemented on March 26, 2010, in which you request approval of your decommissioning plan.

The amendment authorizes the inclusion of the approved DP as a supplement to the safety analysis report pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.82(b)(5). Also, in accordance with 10 CFR 50.82(b)(5), the NRC staff has added license conditions to Facility License No. R-52 deemed appropriate and necessary for approval of the DP.

A Notice of Issuance of this amendment is being sent to the Office of the *Federal Register* for publication.

The related safety evaluation supporting Amendment No. 20 is enclosed.

Sincerely,

/RA/

Linh N. Tran, Senior Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-113

Enclosures: 1. License Amendment No. 20
2. Safety Evaluation

cc: See next page

University of Arizona Docket No. 50-113

cc:

Office of the Mayor
P.O. Box 27210
Tucson, AZ 85726-7210

Director, Arizona Radiation Regulatory Agency
4814 South 40th Street
Phoenix, AZ 85040

Dr. Leslie Tolbert
Vice President for Research
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University of Arizona
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Tucson, AZ 85721-0020

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

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Research and Test Reactors Licensing Branch
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Office of Nuclear Reactor Regulation

Docket No. 50-113

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ACCESSION NO: Package: ML110470589 Letter: ML110470592, SE ML110470594 **NRR-058**

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UNIVERSITY OF ARIZONA

DOCKET NO. 50-113

AMENDMENT TO

FACILITY LICENSE

Amendment No. 20
License No. R-52

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for an amendment to Facility License No. R-52 filed by the University of Arizona (the licensee) on May 21, 2010, as supplemented on March 26, 2010, conforms to the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the regulations of the Commission as stated in Chapter I of Title 10 of the *Code of Federal Regulations* (10 CFR);

   B. The facility will be maintained in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance that (i) the activities authorized by this amendment can be conducted without endangering the health and safety of the public and (ii) such activities will be conducted in compliance with the regulations of the Commission;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;

   E. This amendment is issued in accordance with the regulations of the Commission as stated in 10 CFR Part 51, and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by adding a new paragraph 2.C.(4) to Facility License No. R-52 which hereby added to reads as follows:

2.C.(4) Decommissioning

a. The license is amended to approve the decommissioning plan described in the licensee's application dated May 21, 2009, as supplemented on March 26, 2010, and authorizes inclusion of the decommissioning plan as a supplement to the safety analysis report pursuant to 10 CFR 50.82(b)(5).

b. The licensee may make changes to the decommissioning plan without prior approval provided the proposed changes do not:

i. Require Commission approval pursuant to 10 CFR 50.59;

ii. Use a statistical test other than the Sign test or Wilcoxon Rank Sum test for evaluation of the final status survey;

iii. Increase the radioactivity level, relative to the applicable derived concentration guideline level, at which an investigation occurs;

iv. Reduce the coverage requirements for scan measurements;

v. Decrease an area classification (i.e., impacted to unimpacted; Class 1 to Class 2; Class 2 to Class 3; or Class 1 to Class 3);

vi. Increase the Type I decision error;

vii. Increase the derived concentration guideline levels and related minimum detectable concentrations (for both scan and fixed measurement methods); and

viii. Result in significant environmental impacts not previously reviewed.

c. The licensee shall provide the NRC with a Final Status Survey Plan prior to conduct of license termination surveys. The Plan will be developed in accordance with the requirements in NUREG-1575 (MARSSIM); NUREG-1537, Part 1, Appendix A; and NUREG-1757, Volume 2, Chapter 4.

d. The licensee shall use the release criteria specified in the Decommissioning Plan, as supplemented on March 26, 2010. If alternative release criteria are developed for release of the facility, the licensee shall submit the alternative release criteria for review and approval by the NRC.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Jessie F. Quichocho, Chief
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Date of Issuance: April 15, 2011

UNIVERSITY OF ARIZONA

ENCLOSURE TO LICENSE AMENDMENT NO. 20

FACILITY LICENSE NO. R-52

DOCKET NO. 50-113

Replace the following pages of the Facility License No. R-52. The revised pages are identified by amendment number and contain marginal line indicating the area of change.

Facility License

Remove	Insert
Page 3	Page 3 Page 4

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 20, are hereby incorporated in the license. The licensee shall maintain the facility in accordance with the Technical Specifications.

(3) Physical Security Plan

The licensee shall maintain in effect and fully implemented provisions of the Commission approved physical security plan, including all amendments and revisions made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p), which are part of the license. This plan, which contains information withheld from public disclosure under 10 CFR 2.390 is entitled, "Physical Security Plan for the University of Arizona Research Reactor," dated May 2009.

(4) Decommissioning

a. The license is amended to approve the decommissioning plan described in the licensee's application dated May 21, 2010, as supplemented on March 26, 2010, and authorizes inclusion of the decommissioning plan as a supplement to the safety analysis report pursuant to 10 CFR 50.82(b)(5).

b. The licensee may make changes to the decommissioning plan without prior approval provided the proposed changes do not:

i. Require Commission approval pursuant to 10 CFR 50.59;

ii. Use a statistical test other than the Sign test or Wilcoxon Rank Sum test for evaluation of the final status survey;

iii. Increase the radioactivity level, relative to the applicable derived concentration guideline level, at which an investigation occurs;

iv. Reduce the coverage requirements for scan measurements;

v. Decrease an area classification (i.e., impacted to unimpacted; Class 1 to Class 2; Class 2 to Class 3; or Class 1 to Class 3);

vi. Increase the Type I decision error;

vii. Increase the derived concentration guideline levels and related minimum detectable concentrations (for both scan and fixed measurement methods); and

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d. The licensee shall use the release criteria specified in the Decommissioning Plan, as supplemented on March 26, 2010. If alternative release criteria are developed for release of the facility, the licensee shall submit the alternative release criteria for review and approval by the NRC.

D. This license is effective as of the date of issuance and will be terminated when the decommissioning has been performed in accordance with the approved decommissioning plan and the terminal radiation survey and associated document demonstrate that the facility and site are suitable for release in accordance with the criteria for decommissioning in 10 CFR Part 20, Subpart E.

FOR THE NUCLEAR REGULATOR COMMISSION

/original signed by Gary M. Holahan/

Gary M. Holahan, Acting Director
Division of Reactor Projects – III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosure:
Appendix A Technical
Specifications

Date of Issuance: May 22, 1990