

June 6, 2006

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SUBJECT: ISSUANCE OF LICENSE AMENDMENT NO. 7 REMOVING AUTHORIZATION
TO POSSESS FUEL FOR WARD CENTER FOR NUCLEAR STUDIES AT
CORNELL UNIVERSITY ZERO POWER REACTOR (TAC NO. MC0212)

Dear Dr. Fay:

In accordance to your request of January 19, 2006, as supplemented March 27, 2006, the Commission has issued the enclosed Amendment No. 7 to Facility Operating License for the Zero Power Reactor (ZPR), Docket No. 50-97, License No. R-89.

The amendment removes authorization to possess special nuclear material, and makes changes to the Technical Specifications (TS) in order to structure the administrative TS's to support the future decommissioning of the Ward Center for Nuclear Studies (WCNS).

A copy of the related safety evaluation supporting Amendment No. 7 is also enclosed.

Sincerely,

/RA/

Daniel E. Hughes, Project Manager
Research and Test Reactor Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-97

Enclosures: 1. Amendment No. 7
2. Safety Evaluation

cc w/enclosures: Please see next page

Cornell University

Docket Nos. 50-157/97

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DATE	6/1/2006	4/25 /2006	6/1/2006	6/6/2006

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CORNELL UNIVERSITY ZERO POWER REACTOR

DOCKET NO. 50-97

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 7
License No. R-89

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for an amendment to Facility Operating License No. R-89 filed by the Cornell University (the licensee) on January 19, 2006, as supplemented March 27, 2006, 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 possessed, but not operated, 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; and
 - F. Prior notice of this amendment was not required by 10 CFR 2.105, and publication of notice for this amendment is not required by 10 CFR 2.106.

2. Accordingly, the license is amended by changes to the following paragraphs which are hereby amended to read as follows:
 - 1.B. The facility will be possessed, but not operated, in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - 1.H. The possession and disposal of byproduct material, as authorized by this license, will be in accordance with the Commission's regulations in 10 CFR 30.
 - 2.B.3 Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Licensing of Byproduct Material" at the Reactor Facility, to possess, but not separate, such byproduct materials as may have been produced by operation of the reactor prior to its permanent shutdown.
 - 2.C.2 Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 7, are hereby incorporated in the license. The licensee shall possess and decommission the facility in accordance with the Technical Specifications.
3. Accordingly, the license is amended by deleting paragraphs 2.B.2 and 2.B.4.
4. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Brian E. Thomas, Branch Chief
Research and Test Reactors Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Enclosures: Appendix A, Technical
Specifications Changes

Date of Issuance: June 1, 2006

ENCLOSURE TO LICENSE AMENDMENT NO. 7

FACILITY OPERATING LICENSE NO. R-89

DOCKET NO. 50-97

Replace the following pages of Appendix A, Technical Specifications, with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 7 TO

FACILITY OPERATING LICENSE NO. R-89

CORNELL UNIVERSITY

ZERO POWER REACTOR

DOCKET NO. 50-97

1.0 INTRODUCTION

By letter dated January 19, 2006, as supplemented March 27, 2006, Cornell University (the licensee) submitted a request for amendment of Facility Operating License No. R-89 for the Cornell University Ward Center for Nuclear Studies (WCNS) Zero Power Reactor (ZPR). The requested changes removes authorization from the license to possess special nuclear and source material, and modifies the Technical Specifications (TS) for support of the future decommissioning of WCNS.

2.0 EVALUATION

The ZPR ceased operations in 1996. With Amendment No. 4 to Facility Operating License No. R-89, the authorization to operate the ZPR was removed. Following the removal of the ZPR fuel, this reactor was partially disassembled. The ZPR fuel was returned to the U. S. Department of Energy (DOE) in April 28, 2000. Previously, on June 18, 1997, source material was shipped to DOE. A Decommissioning Plan (DP) for the WCNS (ref. 1), that includes the decommissioning of both the ZPR and the WCNS TRIGA Reactor, is currently being reviewed by the Commission. The licensee requested an amendment to withdraw authorization to receive and to possess Special Nuclear Material (SNM) and to possess source material, and to make TS changes to support the future decommissioning of WCNS. It is intended that this amendment be issued concurrently with:

- an amendment No. 8 to Facility Operating License No. R-89 approving the DP of the WCNS,
- an amendment No. 14 to Facility Operating License No. R-80 approving the decommissioning plan DP of the WCNS, and
- an amendment No. 13 to Facility Operating License No. R-80 removing the authorization to operate the WCNS TRIGA reactor and possess SNM.

Upon approval of the Decommissioning Plan by the Commission, the licensee stated that it intends to aggressively pursue the completion of decommissioning activities while experienced personnel are still available to facilitate its implementation.

Eliminate Possession of Special Nuclear and Source Material

The licensee has requested the elimination of license conditions 2.B.2 and 2.B.4 for the possession and use of uranium enriched in the isotope uranium 235 and to receive, possess, and store source material in the form of contained natural uranium in PWR fuel rods. All reactor fuel elements as special nuclear material and source material licensed under Facility Operating License No. R-89 have been returned to the DOE. The subject license conditions currently read:

- 2.B.2 Pursuant to the Act and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," to possess up to 40.0 kilograms of uranium 235 contained in uranium enriched in the isotope uranium 235.
- 2.B.4 Pursuant to the Act and Title 10 CFR Part 40, "Domestic Licensing of Source Material," to receive, possess and store 1365 kilograms of contained natural uranium in the form of 800 PWR fuel rods in accordance with procedures described in the application for amendment dated March 8, 1968.

In addition license condition 2.B.3 will be modified to remove reference to Part 70 and special nuclear material. It is modified to read:

- 2.B.3 Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Licensing of Byproduct Material" at the Reactor Facility, to possess, but not separate, such byproduct materials as may have been produced by operation of the reactor prior to its permanent shutdown.

The licensee provided certification that all special nuclear material and source material has been returned to the DOE, the staff finds these changes to license conditions acceptable. Current license conditions 2.B.2 and 2.B.4 are deleted from Facility Operating License No. R-89 and 2.B.3 is modified as stated.

Changes to Appendix A of Facility License No. R-89

In support of the WCNS DP, and the amendments approving that DP, the licensee, on January 19, 2006, submitted changes to Appendix A of Facility Operating License No. R-89. Those changes were requested to bring alignment between the Administrative Controls section of Appendix A of the license for the WCNS ZPR, R-89, Administrative Controls section of Appendix A of the license for the WCNS TRIGA reactor, R-80, and the administrative plans as stated in the WCNS DP.

Changes to the Organizational Structure:

The staff has reviewed the changes to the management and organizational structures that includes the makeup and the specific responsibilities of the Cornell Decommissioning and Decontamination (D and D) Oversight Committee. Before these changes, the management

organization and the Ward Center Safety Committee were structured to manage and provide oversight and audit for an operational reactor as opposed to the present permanently shutdown decommissioning reactor. The staff finds that with the changes the management and the Cornell D and D Oversight Committee will be better suited to oversee all decommissioning activities conducted by the decommissioning contractor, including the review and approval of changes to the facility and of decommissioning related plans and procedures, and in accordance with the WCNS DP and the regulations.

The specific changes and evaluation of those changes follow:

TS 6.0 Administrative Controls

TS 6.1 Organization and Responsibilities of Personnel

TSs 6.1 b), c), g), and h) and the Organizational Chart were modified by the licensee to specify the new organizational structure to be used during the D and D of the Cornell ZPR and the WCNS. This structure is delineated in the WCNS DP. The new administrative and oversight organizational structure is better suited to manage D and D activities as opposed to operating a reactor. The staff finds the changes acceptable.

TS 6.1 d) and e) were removed by the licensee to specify the new organizational structure to be used during the D and D of the Cornell ZPR and the WCNS. This structure is delineated in the WCNS DP. The positions that were described in the deleted sections are not required for a permanently shutdown and decommissioning reactor. The staff finds the changes acceptable.

TS 6.2 Review and Audit

TSs 6.2 a), c), and f) were modified by the licensee to specify the new organizational structure to be used during the D and D of the Cornell ZPR and the WCNS. This structure is delineated in the WCNS DP. With this change, members of the Cornell D and D Oversight Committee shall be selected for the skills and expertise needed for oversight and audit of Decommissioning activities as opposed to those that were needed for an operational reactor. The staff finds the changes acceptable.

TS 6.3 Procedures

TSs 6.3 a) and b) were modified by the licensee to specify the new organizational structure to be used during the Decommissioning and Decontamination of the Cornell ZPR and the WCNS. This structure is delineated in the WCNS DP. The staff finds the changes acceptable.

TS 6.4 Emergency Plan and Procedures

This TS was modified by the licensee to specify the new organizational structure to be used during the D and D of the Cornell ZPR and the WCNS. This structure is delineated in the WCNS DP. The changes are being made to reflect the new name of the Cornell D and D Oversight Committee. The staff finds the changes acceptable.

TS 6.6 Action To Be Taken In The Event A Reportable Occurrence

This TS was modified by the licensee to specify the new organizational structure to be used during the D and D of the Cornell ZPR and the WCNS. This structure is delineated in the WCNS

DP. The changes are being made to reflect the new name of the Cornell D and D Oversight Committee. The staff finds the changes acceptable.

Conclusions Concerning Appendix A of License No. R-89

The staff has reviewed and approved the above changes to the technical specifications contained in the referenced license.

- **Removal of Authority to Possess Fuel:** The licensee has requested that the authority to possess fuel be removed from R-89. As discussed in § 2.0 of this SE, the fuel assemblies that once supported reactor operations has been offloaded and removed from the site. In addition, the licensee stated in the supplement of March 27, 2006, that the source material in the form of contained PWR fuel rods was shipped to the DOE. Since the material was removed from the site the staff has reviewed and accepted the changes to the referenced license.
- **Changes to the Organizational Structure:** The staff has reviewed and accepted the changes to the management and organizational structures that includes specific responsibilities that will be administered by the Cornell D and D Oversight Committee. These changes reflect the change in the activities at the WCNS from reactor operations to possession and decommissioning. As such, the staff has determined that the project management structure for the decommissioning of the WCNS, which includes the ZPR, is consistent with the guidance on the role and composition of the facility safety committee provided in Appendix 17.1 of NUREG-1537.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the category of recordkeeping, reporting, and administrative procedures and requirements. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment is required to 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.

5.0 REFERENCES

4. Cornell University. Decommissioning Plan for the Ward Center for Nuclear Studies at Cornell University, Rev. 1, as supplemented, July 2003.

Principal Contributor: Daniel Hughes

Date: June 6, 2006