WPI

Leslie C. Wilbur Nuclear Reactor Facility
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March 28, 2003

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-5 C12
Washington, DC 20555-0001

Re: Docket No. 50-134
License R-61
Annual Report for 2002

In accordance with the Technical Specifications for the WPI Leslie C. Wilbur Nuclear Reactor Facility (License R-61), I am submitting the Annual Operating Report for 2002.

The WPI reactor is a non-power, university-based, teaching reactor. It continues to be used primarily in the academic mission of Worcester Polytechnic Institute, for the instruction of students, and in occasional scholarly research.

Please contact me if further information is required.

Sincerely,

Stephen J. LaFlamme,
Director, Nuclear Reactor Facility

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2002 Annual Operating Report

Worcester Polytechnic Institute
Leslie C. Wilbur Nuclear Reactor Facility

License R-61
Docket No. 50-134

I. Operations Summary

(a) changes in facility design

There were no changes in facility design during 2002.

(b) performance characteristics

The operation of all reactor safety system components was normal during 2002, with the only exception being a sluggish period channel response during start-up surveillance testing in September of 2002. The sluggish indication delayed reactor core loading. Maintenance of the detector, and normal calibration of the instrument channel, were required to improve the response of the indication.

Performance of the fuel was normal.

(c) changes in operating procedures

There were no changes made to operating procedures during 2002.

(d) abnormal results of surveillance tests and inspections

There were no unusual findings from the performance of surveillance tests and inspections.

(e) personnel changes in reactor facility director, health physicist, or radiation, health, and safety committee members

There were no personnel changes in 2002.

II. Power Generation (kilowatt-hours)

2002 Output:	360.9
Total LEU-Fuel:	2461.1
Total Reactor:	9875.1

III. Unscheduled Shutdowns

There were three unscheduled shutdowns during 2002. Of these, one was due to an electrical transient caused by inadvertent disturbance of signal cables above the reactor during fuel movement. Two of the trips were due to inadvertent manual scram activations when the blade disengaged alarm actuated during withdrawal of the second control blade prior to criticality. None of the scrams had any safety significance given the scope of the facility, and all were related to activities involving its teaching and training mission.

IV. Maintenance

The high voltage electrical connections on the log-N period channel compensated ion chamber were cleaned and reattached to the cables due to sluggish period response during start-up testing in September of 2002. Aluminum oxide apparently affected the resistance of the connections, and the cleaning greatly improved the response of the channel at low signal levels.

V. Changes, Tests, and Experiments Pursuant to 10CFR 50.59

There have been no changes to facility design, or new tests and experiments, requiring evaluations pursuant to 10CFR 50.59.

VI. Radioactive Effluents Release

Liquid effluent releases have been near background and well within 10CFR20 release limits. Gaseous Ar-41 has been released in trace amounts that are conservatively calculated to be well within 10CFR20 release limits, and we have verified level 1 compliance using the EPA COMPLY Code.

End