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January 14, 1986

Director of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Re: Docket No. 50-134  
License R61  
Annual Report for 1985

Dear Sir:

Operation of the WPI Open Pool Reactor was routine during 1985, with no significant problems encountered. The renovation of Washburn Laboratory is now complete and the alarm system for use on the upper levels of the building above the reactor, required for greater than 10 kw operation, is installed and fully functional.

We have now completed a log N chart for the period February 1983-May 1985 and analysis shows the total kilowatt hours for that period to be 117.5. The total power produced over the life of the reactor now stands at 7060 kw hr (thermal) as of May 1985. Annual maintenance and inspection was completed on June 4, 1985 with no unusual findings. All parameters checked annually measured in their normal range. In November 1985 a new picoameter was installed in Safety Channel #1.

During 1985 there were sixteen unscheduled scrams. Six of these occurred during fuel handling with a partially unloaded core, and were caused by transients in the temporary extra detector used during such operations. One scram occurred because of a power loss, one was caused by an operator upscaling error, and the remainder were caused by electronic transients.

Mr. T. Newton received his SRO license effective November 8, 1985, and Mr. J. Lopez was granted an RO license on April 4, 1985. Four students are currently in training for a RO license and hope to be examined in March 1986. At present we have 3 SRO's and 1 RO.

The WPI Reactor is used exclusively for academic instruction and student project or MS thesis work. Utilization during 1985 was about normal. The Reactor was used on a number of occasions for neutron activation analysis required by graduate students in chemical engineering. Undergraduates from ME, EE and Physics participated in reactor based studies.

If further information is desired, please contact me.

Very truly yours,

L. C. Wilbur, Professor of  
Mechanical Engineering  
and  
Director, Nuclear Reactor  
Facility

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