



Nuclear Reactor Facility

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January 11, 1994

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

Re: Docket No. 50-134
License R-61
Annual Report for 1993

Dear Sir:

The operation of the WPI Reactor was routine during all of 1993. The reactor control panel was replaced under a grant from the Department of Energy. The replacement was done under 10 CFR 50.59. No changes in the technical specifications were required. A complete report of the 10 CFR 50.59 analysis and operational testing results are maintained on file. The NRC conducted an inspection of this analysis and testing in June of 1993. No safety concerns or violations were noted.

The total power produced by the reactor as of January 1994 was 7677 kW-hrs. The total power produced by the present fuel is 263 kW-hrs.

Annual maintenance and inspections were completed as of September 1993. There were no unusual findings and measurements from all annually checked parameters were within normal ranges.

There were 16 unscheduled scrams during the year. Of these, 6 were due to the inadvertant disturbance of signal cables, 1 was from electronic noise in a neutron measuring channel; 1 resulted from moving the start-up source in proximity of a neutron detector while sub-critical, 1 resulted from a loss of neutron detector high voltage, 7 were due to operator and trainee range errors on the linear power channels. None of the scrams had any safety significance given the scope of the facility and the majority were due to its the teaching and training mission.

As of December 1993, there are 2 SROs and 3 ROs at the facility. In April 1993, Mr. E. Billingsly and Mr. P. Miraglia received RO licenses. Mr. J. Mayer passed the NRC administered SRO requalification examination. In September of 1993, Ms. K. Beagle

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and Mr. P. Carpenter received RO licenses. There are 3 students in training for an RO exam and 2 students training for the SRO exam scheduled in April 1994.

Effluent releases have been well within 10CFR 20 limits. Gaseous Ar-41 has been released in trace amounts, measurable only when in operation above 1 kW.

The WPI Reactor continues to be used primarily for academic instruction, student projects, and occasional research.

Please contact me if further information is required.

Sincerely,



Leo M. Bobek,
Director