

# University of Maryland

Department of Chemical and Nuclear Engineering  
COLLEGE PARK, MARYLAND 20742

July 28, 1983

50-166

Dr. Robert L. Tedesco  
Assistant Director for  
Reactor Operations  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Dr. Tedesco:

This report is submitted in accordance with the requirements set forth in our Technical Specifications for the Maryland University Training Reactor. This report covers the time period from June 30, 1982 through June 30, 1983.

## A. Summary of Operation Experience

No major difficulties were encountered with the reactor during this reporting procedure. We continued to provide reactor service to the Nuclear Engineering courses, primarily, ENNU 320 - Nuclear Engineering Technology. This service utilized the reactor five afternoons a week and two (2) hours on Saturday morning.

The DOE "Reactor Sharing Program" was renewed at the same level of effort, for this period. This enabled us to use about 5 students, on a part-time basis, to support the reactor operation.

Effort was directed toward:

- a) Revision of Procedures
- b) Refining of power calibration and rod worth procedures.
- c) Development of new Reactor experiments relating to the Reactor Sharing Program.

Our Reactor Operator's Training program was a disappointment in that we did not produce any new operations. This resulted because we were unable to set an examination time with NRC that

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Nuclear Engineering Program  
Tel. 301-454-2430/6

was compatible with the student's schedule. In our current class we have 4 SRO's and 4 RO's scheduled for examination during the week of October 25.

No major changes were made to the reactor during this reporting period.

#### B. Reactor Operations

During the period 30 June 1982 through 30 June 1983 the reactor was operated 136 times and produced a total of 13 megawatt-hours of energy.

#### C. Equipment Surveillance and Tests

The Control Rod inspection performed during this period revealed that there was no change in rod length or diameter since the previous examination. However, at the bottom (6 inches up) of the Shim I, there was one pit about 0.1" in diameter. This rod will be removed before the next inspection period for further examination.

Control rod calibration and drop time were performed. No significant changes from previous measurements were observed.

Four fuel clusters (16 rods) were removed and visually inspected. No deterioration was observed.

All area monitors were calibrated on a monthly basis or when operation indicates the need. The reactor power was determined by a calorimetric method described in our procedure manual. No significant calibration change was required.

#### D. Emergency Shut-down and Scrams

No emergency shut-down or scram occurred during this operating period.

#### E. Maintenance Items

The "up", "down", and "contact" microswitches were replaced on each of the three (3) rod drives.

All fifteen (15) relays in console on the main door were replaced.

No major maintenance was performed during this reporting period.

- F. A summary of the nature and amount of radioactive effluents released or discharged to the environment and or radioactive waste shipped off site for disposal.

During this reporting period no waste water containing any measurable radioisotope was discharged to the sewage system. In addition, monthly air samples were taken in the reactor area. The samples contained no activity greater than background.

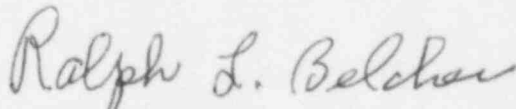
- G. Radiation Exposures

In the period June 30, 1982 through June 30, 1983, approximately 564 people visited the reactor facility. This is in addition to the badged personnel taking reactor courses and operating personnel. In all cases the radiation received was negligible. Floor and area wipes have been routinely carried out with the results that any contamination was far below the maximum permissible level.

- H. Changes to the Facility on Procedures, Tests, and Experiments

All procedures have been reviewed, modified and revised.

Sincerely,



Ralph L. Belcher  
Nuclear Reactor Director

RLB/elr