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*Office of the Dean of Engineering*

December 17, 1997

Mr. Thomas Dragoun  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406-1415

SUBJECT: Annual Report - Reactor License R-94

Dear Mr. Dragoun,

Enclosed is the Annual Reactor Operations Report for the Manhattan College Zero Power Reactor (License R-94) as required by our Technical Specifications.

If you have any questions, please feel free to call me at (718) 862-7281.

Very truly yours,

John D. Patterson, Ph.D.  
Dean

JDP:jm  
Encl.

CC: ☒ DIRECTOR, OFFICE OF NUCLEAR REACTOR REGULATION  
USNRC  
WASHINGTON, D.C. 20555



Chemical	Civil	Electrical	Environmental	Mechanical
<ul style="list-style-type: none"><li>Biochemical Engineering and Pre-Med</li><li>Environmental Management</li><li>Modern Separation Processes</li><li>Polymers and Advanced Materials</li></ul>	<ul style="list-style-type: none"><li>Structural Engineering</li><li>Environmental Engineering</li><li>Soils and Foundation Engineering</li><li>Water Resources</li></ul>	<ul style="list-style-type: none"><li>Analog and Digital Electronics</li><li>Automation</li><li>Biomedical Electronics</li><li>Communication Engineering</li><li>Computer Engineering</li><li>Control Systems Engineering</li><li>Electroscience</li><li>Power Engineering</li></ul>	<ul style="list-style-type: none"><li>Water Quality Analysis and Control</li><li>Air Quality Analysis and Control</li><li>Mathematical Modeling</li><li>Treatment Plant Design</li><li>Ecology and Risk Assessment</li><li>Environmental Chemistry</li><li>Hazardous and Solid Waste</li></ul>	<ul style="list-style-type: none"><li>Computer-Aided Design</li><li>Computer-Aided Manufacturing</li><li>Thermal/Energy Systems</li><li>Heating, Ventilating and Air Conditioning</li><li>Nuclear Engineering</li></ul>

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## MANHATTAN COLLEGE ZERO POWER REACTOR

### ANNUAL REACTOR OPERATIONS REPORT

Facility: Manhattan College Zero Power Reactor (MCZPR)  
Operator: Manhattan College  
License: R-94                      Docket Number: 50-199  
Period: September 1, 1996 - August 31, 1997

#### SUMMARY

The reactor was operated once during this period. Fuel was removed from the core and placed in storage in December 1996. A decision has been made to decommission the reactor and terminate the license. The Nuclear Regulatory Commission (NRC) was informed of this decision by letter dated April 24, 1997. License amendment applications and a Decommissioning Plan are being prepared for submittal to the NRC. Decommissioning will proceed after receipt of approval of the Decommissioning Plan. DOE representatives have been contacted to begin the process of transferring fuel and the startup source.

#### 1. REACTOR OPERATIONS

The reactor was operated once during this period to support an Approach to Criticality lab. Fuel was removed from the core and placed in secure storage in the original Sylcor shipping containers in the basement of the reactor lab as authorized in the Technical Specifications.

#### 2. UNSCHEDULED SHUTDOWNS

None.

#### 3. MAINTENANCE OPERATIONS

Routine maintenance was performed (e.g., resin replacement, chart recorders, etc.)

#### 4. FACILITY CHANGES

The facility changed from operational to storage status. All ongoing operational requirements are being observed pending submission to, and approval of, the Decommissioning Plan by the Nuclear Regulatory Commission.

#### 5. RADIATION SURVEY

Health physics surveys are carried out semiannually by

facility staff with Radiation Safety Officer review. This includes surveying with instruments, wipe tests, and checking the sealed sources. No contamination has been detected and the integrity of the sealed sources was verified prior to their being placed into storage.

#### 6. PERSONNEL RADIATION EXPOSURES

Radiation exposures are monitored with film badges which are analyzed monthly by Landauer. All exposures were below Investigational Level I (125 mrems per quarter).

#### 7. FACILITY STAFFING

Robert E. Berlin, D.P.H. retired in December 1996. William P. Duggan, Ph.D., Reactor Administrator, assumed the additional responsibility of Radiation Safety Officer as of that time. Dr. Duggan left Manhattan College in June 1997. Catherine C. Stanton, Chief Reactor Supervisor, is serving as acting Reactor Administrator until the license is amended to authorize possession only pending completion of decommissioning. Mrs. Stanton is preparing the Decommissioning Plan to be submitted to NRC.

Current staffing for the MCZPR is:  
Reactor Administrator (acting)  
(This includes RSO responsibility)  
Chief Reactor Supervisor  
Health Physicist

Catherine C. Stanton

Catherine C. Stanton  
Larry Lockett, CHP

Catherine C. Stanton  
Catherine C. Stanton,  
Chief Reactor Supervisor