



# MANHATTAN COLLEGE

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*Office of the Dean of Engineering*

June 17, 2004

U.S. Nuclear Regulatory Commission  
Washington, DC 20555  
Attn: Document Control Desk

Subject: Facility Operations Report (September 1, 1999 – August 31, 2003); MCZPR , License  
No. R-94

Enclosed is the MCZPR Facility Operations Report covering the period from September 1,  
1999 to August 31, 2003. The report covering the period from September 1, 2003 to August  
31, 2004 will be filed in September 2004.

Sincerely,

*R. Berlin/MB*

Robert Berlin, DPH  
Acting Reactor Administrator

Cc: Steven Holmes, USNRC

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**MANHATTAN COLLEGE ZERO POWER REACTOR  
ANNUAL FACILITY OPERATIONS REPORT**

**FACILITY:** Manhattan College Zero Power Reactor (MCZPR)  
**OPERATOR:** Manhattan College  
**LICENSE:** R-94 Docket 50-199  
**PERIOD:** September 1, 1999 – August 31, 2003

**SUMMARY**

As stipulated in NRC Amendment No. 12 to License No. R-94 (March 23, 1999) authorizing "possession only" status, the MCZPR was in a shutdown status with the fuel in storage during the entire reporting period. Facility operations were conducted in accordance with the revised technical specifications (TS) incorporated into amendment no. 12.

Catherine Stanton, the Acting Reactor Administrator (ARA), passed away in December 2001. In February 2002, the Provost of the College appointed Dr. Robert Berlin as the new ARA and Reactor Radiation Safety Officer (RSO), and notified the NRC of this appointment.

**1. FACILITY EXPERIENCE**

The MCZPR fuel and sources remained in storage during this period pending return to the Department of Energy. Contacts were made in an attempt to accelerate this process, particularly during 2002-2003. The College was informed in 2003 that the Pu-Be sources would be removed by the Off-site Source Recovery personnel from the Los Alamos National Laboratory (LANL) and the necessary arrangements were made to accomplish this. The 3 sources were removed from their storage containers on August 21, 2003 and placed in shipping containers (shipment occurred on December 5, 2003). The NRC had

previously, on May 15, 2002, transferred license no. SNM-1892, covering the 2-5 Ci sources, to the Bureau of Radiological Health of the New York City Department of Health since the SNM on the license was no longer sufficient to form a critical mass.

There were no significant facility maintenance activities conducted during the reporting period. The security system was maintained and kept in working order.

Semi-annual inventories of the fuel and sources in storage were conducted during the reporting period (see section 4.2.3c of the TS) and documented.

Semi-annual smear surveys were conducted in the fuel and source storage area and the results documented. Measurements were consistent and essentially at background levels (Section 4.1.3 of TS)

The film badge program was performed with badges being changed on a quarterly basis (Section 4.1.3 of TS). The portable survey and counting instruments were calibrated annually (Section 4.1.3 B of TS) during the reporting period.

Considerable activity was devoted in 2003 to the preparation of a Site-Specific CM Implementation Plan for the MCZPR facility. A Preliminary Plan was submitted to the NRC on June 20, 2003. Response measure planning was coordinated with the FDNY (including Hazmat and EMS personal) and the NYPD. Some rearrangement of the storage facility was made to improve emergency access.

## 2.0 ACTIVITIES PERFORMED UNDER DECOMMISSIONING PLAN

The interim survey of the facility (item 2 of section 2.31 of the Decommissioning Plan) was performed. The only item identified as exceeding the release criteria was a small lead box of fragments of rods which appear to be graphite embedded with uranium. The box will be disposed of as radioactive waste. No other decommissioning activities were conducted during the reporting period.

## 3.0 RADIATION SURVEYS

No facility personnel or visitors received exposure exceeding 25% of the allowable limits.