

April 26, 2004

Dr. Richard H. Heist, Dean
School of Engineering
Manhattan College
Manhattan College Parkway
Riverdale, NY 10471-4098

SUBJECT: NRC INSPECTION REPORT NO. 50-199/2004-201

Dear Dr. Heist:

This letter refers to the inspection conducted on April 8 and 9, 2004, at the Manhattan College Zero Power Reactor. The inspection included a review of activities authorized under NRC License No. R-94. The enclosed report presents the results of that inspection.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations of activities in progress. Based on the results of this inspection, no safety concerns or noncompliance of NRC requirements were identified. No response to this letter is required.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at (the Public Electronic Reading Room) <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning this inspection, please contact Stephen Holmes at 301-415-8583.

Sincerely,

/RA/

Patrick M. Madden, Section Chief
Research and Test Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No: 50-199
License No: R-94

Enclosure: NRC Inspection Report No. 50-199/2004-201

cc w/encl.: Please see next page

Manhattan College

Docket No. 50-199

Municipal Reference and Research Center
31 Chambers Street
New York, NY 10007

Barbara Youngberg
Chief, Radiation Section
NYS Dept. of Environmental Conservation
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Albany, NY 12233-7255

Mr. John P. Spath
NYS Energy Research and
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17 Columbia Circle
Albany, NY 12203-7399

Mr. Bob Berlin
35 Sterling Pines Road
Tuxedo, NY 10987

Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Docket No: 50-199

Report No: 50-199/2004-201

License No: R-94

Licensee: Manhattan College

Facility: Manhattan College Zero Power Reactor

Location: Riverdale, New York

Dates: April 8-9, 2004

Inspector: Stephen W. Holmes, Reactor Inspector

Approved by: Patrick M. Madden, Section Chief
Research and Test Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

Manhattan College Nuclear Reactor Facility
Report No.: 50-199/2004-201

The primary focus of this routine, announced inspection was the onsite review of selected aspects of the Manhattan College Class III Zero Power Reactor safety programs including: organizational structure and staffing, review and audit functions, decommissioning, maintenance, surveillance, radiation safety, effluent and environmental monitoring, emergency preparedness, physical security, reporting requirements, transportation of radioactive material, fuel storage, and material control and accounting since the last NRC inspection of these areas. The licensee's programs were acceptably directed toward the protection of public health and safety, and in compliance with NRC requirements. A tour of the reactor facility was also conducted.

Organization and Staffing

- The organizational structure met Technical Specifications and Decommissioning Plan requirements.

Review and Audit Functions

- Radiation Safety Committee's meeting schedule and member qualifications met Technical Specifications requirements. Prior to shipping fuel or continuing decommissioning, the Radiation Safety Committee would meet and perform a full review of the Manhattan College Zero Power Reactor programs.

Decommissioning, Maintenance, and Surveillance

- Decommissioning activities were in conformance with the approved Decommissioning Plan.
- Maintenance was being completed as required.
- The licensee's program for surveillance and verifications satisfied Technical Specifications requirements.

Radiation Safety Program

- Postings met regulatory requirements.
- Surveys were being completed and documented as required by 10 CFR Part 20.1501(a), Technical Specifications, and licensee procedures to permit evaluation of the radiation hazards that might exist.
- The personnel dosimetry program was acceptably implemented and doses were in conformance with licensee and 10 CFR Part 20 limits.
- Portable survey meters, radiation monitoring, and counting instruments were being maintained and calibrated as required.
- The Radiation Safety Program being implemented by the licensee satisfied regulatory requirements.

Effluent and Environmental Monitoring

- There were no liquid or gaseous releases since the last NRC inspection. Manhattan College Zero Power Reactor environmental monitoring met Technical Specification Section 4.1.3.C and licensee procedure requirements.

Emergency Preparedness

- The emergency preparedness program was being implemented and conducted in accordance with the Emergency Plan.

Physical Security

- The physical protection system of the Manhattan College Zero Power Reactor, the related procedures, and Manhattan College Security Department support met Physical Security Plan requirements. Compensatory measures implementation was on schedule.

Reporting Requirements

- Special reports required by Technical Specifications Section 6.6.2 had been submitted as required.

Inspection of Transportation Activities

- No radioactive material was transferred to or from the reactor since the last inspection.

Fuel Storage and Material Control and Accounting

- The licensee's program for controlling, tracking and storing Special Nuclear Material satisfied Technical Specifications and 10 CFR Part 70 requirements.

REPORT DETAILS

Summary of Plant Status

The licensee's Zero Power Reactor (ZPR) remains in a shutdown status with its fuel in storage. The NRC issued Amendment No. 12 to ZPR License No. R-94 on March 23, 1999, removing the authority to operate the reactor and authorizing possession only. The amendment also approved the decommissioning plan and changes to the Technical Specifications (TS) applying to the possession only status and decommissioning of the reactor. During the inspection, the licensee continued to possess the reactor but not operate it as stipulated in Technical Specifications, the license and licensee procedures.

1. Organization and Staffing

a. Inspection Scope (Inspection Procedure (IP) 69002)

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of TS Section 6.1 and Figure 4 and DP Sections 2.4, 2.6, and Figure 1.4 were being met:

- TS for the Manhattan College (MC) ZPR, Amendment No. 12, dated March 23, 1999
- MCZPR Decommissioning Plan (DP), Revision 1, dated July 1998
- Letter from the Office of the Dean of Engineering, RE: Facility Operating License No. R-94, Docket No. 50-199, dated February 18, 2002
- administrative controls and management responsibilities specified in TS
- organization and staffing

b. Observations and Findings

The organization structure consisted of three levels. Level 1: Responsible for the facility license and site administration, consisting of the Chairman of the Board of Trustees, the College President, and Provost. Level 2: Responsible for safe accomplishment of the reactor decommissioning program, consisting of the Dean of the School of Engineering (Dean), the Health Physicist (HP), Quality Assurance Manager (QAM), and the Radiation Safety Committee (RSC). Level 3: Responsible for carrying out decommissioning actions, consisting of the Acting Reactor Administrator (ARA), maintenance staff and students.

Since the last inspection September 27, 1999, (refer to NRC Inspection No. 50-199/1999-201, ADAMS Accession Nos. ML993130247 and ML993130249) the Dean had changed, the HP had left, and the ARA had passed away. In February 2004, MC contracted with a retired professor from MC's nuclear program who had been a senior reactor operator and Reactor Administrator for the ZPR, to be the new ARA and Reactor Radiation Safety Officer. Additionally, the QAM, also a former professor from MC's nuclear program and senior reactor operator and Reactor Administrator for the ZPR, assumed the additional duties as the HP.

The inspector reviewed the new ARA's qualifications and verified they met, as required by TS Section 6.1.4, the minimum requirements set forth in ANSI/ANS 15.4, "Standard for Selection and Training of Personnel for Research Reactors."

The inspector also reviewed the QAM's qualifications and determined that he would be able to fulfil the additional duties of HP as described in the TS and DP.

c. Conclusions

The organizational structure met TS Section 6.1 and Figure 4 and DP Sections 2.4, 2.6, and Figure 1.4 requirements.

2. Review, Audit, and Design Change Functions

a. Inspection Scope (IP 69002)

The inspector reviewed the following to ensure that the requirements of TS Section 6.2, 6.3, DP Section 2.4, Appendix A, and MCZPR Radiation Safety Manual (RSM) Section 6.1 were being met:

- TS for the MCZPR, Amendment No. 12, dated March 23, 1999
- MCZPR DP, Revision 1, dated July 1998
- MCZPR RSM, dated July 19, 1998

b. Observations and Findings

As noted in TS Section 6.2 and DP Section 2.4, the campus RSC would provide the review, audit, and oversight of the ZPR during decommissioning. This change from the Reactor Operations Committee (ROC) reflected the change from operating to a possession and storage status of the reactor.

The members were appointed by the Provost as required by TS Section 6.2.1 and included the RSO as noted in DP Section 3.1.1 and Appendix A. The inspector reviewed the committee members' qualifications as outlined in DP Appendix A and verified they met TS Section 6.1.4 requirements. The RSC semester meeting schedule satisfied the TS Section 6.2.2.1 requirement to meet at least annually.

TS Sections 6.2.3, 6.2.5, 6.3, DP Section 2.4 and Appendix A, and RSM Section 6.1 delineate the RSC review, DP and facility change, and procedure approval authorities. Since the last inspection no changes were made to the TS, DP, facility or implementing procedures and no decommissioning activities were performed therefore, no actions were taken by the RSC.

In discussion with the inspector, the ARA, Dean, and RSO confirmed that prior to shipping the fuel and continuing decommissioning activities the RSC would meet and perform a full review, audit, and update of the ZPR's TS, DP, Emergency and Physical Security plans, and procedures.

c. Conclusions

RSC committee members' qualifications met TS Section 6.1.4 requirements. The RSC meeting schedule satisfied TS Section 6.2.2.1 requirements. Prior to shipping fuel or continuing decommissioning the RSC would meet and perform a full review of the ZPR programs.

3. Decommissioning, Maintenance, and Surveillance

a. Inspection Scope (IPs 69001 and 69002)

To verify that the licensee was meeting the requirements of TS Sections 2, 3, 4, 5, the DP, and licensee procedures, the inspector reviewed selected aspects of:

- TS for the MCZPR, Amendment No. 12, dated March 23, 1999
- MCZPR DP, Revision 1, dated July 1998
- quarterly door lock checks since September 1999
- semiannual survey instrument channel checks since September 1999
- semiannual fuel and source inventories since September 1999
- semiannual radiation area surveys since September 1999
- semiannual environmental film badge monitoring and smear surveys in fuel and source storage areas since September 1999
- annual portable radiation survey instrument calibrations since September 1999
- annual fire alarm operation tests since September 1999
- survey instrument maintenance since September 1999
- since September 1999
- Bicron MicroRem/MicroSevert Survey Meter Users Manual, dated November 8, 1993
- Ludlum 1000 Scalar Manuel, dated June 1989
- Ludlum 43-10 Alpha/Beta Sample Counter Manuel, dated October 1992

b. Observations and Findings

(1) Decommissioning

Since the last inspection the licensee completed the interim survey of the facility as noted in Step 2 of the DP Section 2.3.2 schedule. No other decommissioning has been performed or is contemplated until removal of the fuel from the facility. Decommissioning activities were in conformance with the approved DP.

(2) Maintenance

During decommissioning, general maintenance was focused on the support services and equipment and not on any reactor systems. All operations were directed on maintaining the integrity and security of the facility, performing required health physics operations, and fulfilling TS maintenance and monitoring requirements.

Based on the inspector's interviews and observations, general maintenance was performed as expected for a university research facility.

(3) Surveillance

The inspector reviewed selected records of TS required surveillances, limiting conditions for operation (LCO), and verifications performed since September 1999. All data reviewed showed that the periodic checks, tests, and verifications were completed in accordance with and at the intervals required by TS Sections 2, 3, 4, 5, and licensee procedures. The results also met facility procedure parameters.

c. Conclusions

Decommissioning and maintenance activities were in conformance with the approved DP and facility requirements.

4. Radiation Safety Program

a. Inspection Scope (IPs 69001 and 69002)

The inspector reviewed the following selected aspects of the radiation safety program (RSP) to verify compliance with 10 CFR Parts 19 and 20, TS, and licensee administrative requirements:

- TS for the MCZPR, Amendment No. 12, dated March 23, 1999
- MCZPR DP, Revision 1, dated July 1998
- MCZPR RSM, dated July 19, 1998
- Bicron MicroRem/MicroSevert Survey Meter Users Manual, dated November 8, 1993
- Ludlum 1000 Scalar Manual, dated June 1989
- Ludlum 43-10 Alpha/Beta Sample Counter Manual, dated October 1992
- MCZPR radiation safety training since September 1999
- MCZPR radiological signs and posting
- MCZPR facility and equipment during tours
- annual MCZPR portable radiation survey instrument calibrations since September 1999
- semiannual MCZPR radiation area surveys since September 1999
- semiannual MCZPR smear surveys in fuel and source storage areas since September 1999
- semiannual MCZPR environmental film badge monitoring in fuel and source storage areas since September 1999
- MCZPR personnel dosimetry records since September 1999

b. Observations and Findings

(1) Radiation Safety Program

The licensee's RSP and ALARA programs were established and described in the RSM. The program contained instructions concerning organization, training, monitoring, surveys, personnel responsibilities, material use, record keeping, emergencies, radiation safety, and maintaining doses ALARA. The ALARA program provided guidance for keeping doses as low as reasonably achievable which was consistent with the guidance in 10 CFR Part 20.

Although the portions of the RSM had been revised, the RSP had not appreciably changed since the last NRC inspection. The programs, as established, appeared to be acceptable.

The Institute's annual review of the RSP required by 10 CFR 20.1101 is performed by the RSO as required by RSM Section 6.2.2.1.

(2) Radiation Safety Postings

During tours, the inspector observed that caution signs, postings, and controls were acceptable for the hazards involving radiation and contaminated areas and were implemented as required by RSM Section 6.3.1 and 10 CFR 20, Subpart J. Through observations of and interviews with licensee staff the inspector confirmed that personnel complied with the signs, postings, and controls. No unmarked radioactive material was noted in the facility. The inspector confirmed that current copies of NRC Form-3, "Notice to Employees," were posted in the facility as required by 10 CFR Part 19.

(3) Radiation Safety Surveys

The inspector audited selected contamination, radiation, and other periodic surveys since September 1999. They were performed and documented as required by TS Section 4.1.3.C, 4.2.3.D, and RSM Section 6.6.2. Results were evaluated and corrective actions taken and as needed. The inspector's review of the survey records since September 1999 confirmed that contamination, if any, in the facility was indistinguishable from background. The inspector determined that the survey program satisfied 10 CFR 20.1501(a) requirements.

(4) Dosimetry

The dosimetry program requirements and procedures had not changed since the last inspection. A National Voluntary Laboratory Accreditation Program-accredited vendor was used to provide dosimetry for personnel, environmental, and area monitoring. The inspector confirmed that dosimetry was being issued to staff as required by 10 CFR 20.1502 and RSM Section 6.4.2. All occupational exposures were well within NRC limits specified in 10 CFR 20.1201 and RSM Section 6.2.6, Table 6-1 "Investigational Levels." Most records showed no exposure above background.

A documented program was available for limiting the dose to the embryo/fetus of a declared pregnant woman in RSM Section 6.2.5. The licensee did not require a respiratory protection or planned special exposure program.

(5) Radiation Monitoring Equipment

The calibration and periodic checks of the portable survey meters, radiation monitoring, and counting instruments were performed by certified contractors. The inspector confirmed that the contractors' calibration procedures and frequencies satisfied TS Sections 3.1.3.B, 4.1.3.A, RSM Section 6.6.6, and 10 CFR 20.1501(b) requirements, and the American National Standards

Institute N323 "Radiation Protection Instrumentation Test and Calibration" or the instrument manufacturers' recommendations.

The inspector reviewed selected calibrations performed since September 1999. The portable survey meters, radiation monitoring, and counting instruments were calibrated annually and records were maintained as required. The inspector reviewed the available procedures and calibration documentation and found them to be acceptable. All instruments checked had current calibrations appropriate for the types and energies of radiation they were used to detect and/or measure.

c. Conclusions

The inspector determined that, because: 1) surveys were being completed and documented as required by 10 CFR Part 20.1501(a), TS, and licensee procedures; 2) postings met regulatory requirements; 3) the personnel dosimetry program was acceptably implemented and doses were in conformance with licensee and 10 CFR Part 20 limits; and 4) portable survey meters, radiation monitoring, and counting instruments were being maintained and calibrated as required, the RSP being implemented by the licensee satisfied regulatory requirements.

5. Effluent and Environmental Monitoring

a. Inspection Scope (IP 69001)

The inspector reviewed selected aspects of the following to verify that the licensee was complying with the regulatory requirements concerning radioactive effluents:

- TS for the MCZPR, Amendment No. 12, dated March 23, 1999
- MCZPR DP, revision 1, dated July 1998
- MCZPR RSM, dated July 19, 1998
- New York Code, Rules, and Regulations, Part 380, "Rules, and Regulations for Protection and Control of Environmental Pollution by Radioactive Materials," dated March 24, 1994
- effluent release records since September 1999
- environmental dosimetry records since September 1999

b. Observations and Findings

The inspector verified that radioactive effluent releases were infrequent. Liquid releases, when performed, were analyzed to ensure they were below 10 CFR 20.2003 and 10 CFR Part 20, Appendix B limits. There were no liquid or gaseous releases since the last NRC inspection.

The Environmental Monitoring Program consisted of direct quarterly radiation measurements at selected locations in the MCZPR as noted in TS Section 4.1.3.C. These direct radiation measurements resulted in readings that verified the current area radiation posting.

c. Conclusions

There were no liquid or gaseous releases since the last NRC inspection. MCZPR environmental monitoring met TS Section 4.1.3.C. and licensee procedure requirements.

6. Emergency Preparedness

a. Inspection Scope (IPs 69001 and 69002)

To verify that the licensee was implementing and complying with the Emergency Plan (E-Plan) for the MCZPR, dated August 1983, as approved by the NRC, the inspector reviewed selected aspects of:

- E-Plan for the MCZPR, dated August 26, 1983
- MCZPR DP, Revision 1, dated July 1998
- emergency response facilities, supplies, equipment and instrumentation

b. Observations and Findings

The inspector reviewed the E-Plan and confirmed that it was the same as the version most recently approved by the NRC.

With the approval of the DP and related TS changes, review of the E-Plan went from annual, performed by the ROC as required by old TS Section 10.1 to biennially under the preview of the campus RSC as required by new TS Section 6.2.4.3.

As noted in E-Plan Section 3.0, the emergency response staff is drawn primarily from the ZPR organization with support from campus police, ambulance services, fire department, and hospitals. Through qualification reviews and interviews, the inspector verified that emergency responders were capable to respond to, and knowledgeable of the proper actions to take in case of, an emergency.

During tours of the facility the inspector verified that the emergency facilities and equipment were available, being maintained, and as described in E-Plan Section 8.0. The inspector also confirmed that the emergency organization chart and call out rosters were current and posted as required by E-Plan Section 10.2. Support agreements with off-site response organizations (i.e., County Fire and Sheriff Departments, local ambulance services, and medical services) were either on file at the MC Security Department (SD) or it was documented that none was needed to obtain their support.

c. Conclusions

The emergency preparedness program was being implemented and conducted in accordance with the Emergency Plan.

7. Physical Security

a. Inspection Scope (IP's 81401, 81402, and 81431)

To verify compliance with the licensee's NRC-approved Physical Security Plan (PSP) and to assure that changes, if any, to the plan had not reduced its overall effectiveness, the inspector reviewed:

- TS for the MCZPR, Amendment No. 12, dated March 23, 1999
- MCZPR PSP, dated September 27, 1994
- MCZPR Physical Security and Safeguards Procedures, dated September 27, 1994
- MCSD Compensatory Measures Implementation Plan, dated June 20, 2003
- Letter from David B. Matthews to Dr. Richard Heist, Subject: Confirmatory Action Letter - Manhattan College Zero Power Reactor - Site-specific Compensatory Measures (CMs) Implementation Plan, dated October 9, 2003
- MCSD Response Roster, dated June 20, 2003
- MCSD Entry Logbook entries for 2004
- MCZPR Entry Registry entries since September 1999
- quarterly door lock checks since September 1999
- MCZPR facility during tours

b. Observations and Findings

The PSP was the same as the latest submitted to the NRC. The inspector verified that the licensee was properly controlling and protecting the PSP and other proprietary and/or safeguards information as required by the regulations.

The inspector toured the facility and confirmed that the physical security systems (barriers and alarms), equipment, and instrumentation were as required by PSP Sections 1.1, 1.2, 2.0, and 2.2. Access and key controls were implemented in accordance with licensee security and safeguards procedures and as required by PSP Section 1.1, and TS Section 4.2.3.B. The inspector also confirmed that the security checks, tests, and verifications were performed and tracked as required TS Section 4.2.3.

The inspector interviewed the MCSD Director, a dispatcher, and two officers who perform security checks of MCZPR at the Leo Engineering Building. All were found to be knowledgeable of their duties and responsibilities and the proper response to security drills and alarms as outlined in PSP Section 3.4.1 thru 3.4.3. The inspector verified that routine surveillance procedures (patrols, checks, and electronic security) performed by MC security officers and observations made by the facility staff satisfied the requirements in PSP Section 3.4.

The inspector also reviewed the licensee's progress on their site-specific CMs as outlined in the final implementation plan. After review, the inspector determined that the licensee was on schedule implementing the requirements in Section 2.3 of the plan.

Through records reviews and interviews with licensee personnel, the inspector verified that there had been no safeguards events at the facility since the last inspection.

c. Conclusions

The physical protection system of the MCZPR, the related procedures, and MCSD support met PSP requirements. CMs implementation was on schedule.

8. Reporting Requirements

a. Inspection Scope (IP 69002)

The inspector reviewed the following to ensure that the requirements of TS Section 6.6.2 were being met:

- abnormal occurrences
- Letter from the Office of the Dean of Engineering, RE: Facility Operating License No. R-94, Docket No. 50-199, dated February 18, 2002
- significant changes in facility organization

b. Observations and Findings

The inspector confirmed that the licensee had notified the NRC by a written report of the permanent change in the ARA and Reactor RSO within thirty days as required by TS Section 6.6.2.2. The inspector verified that there had been no abnormal occurrences, as described in TS Sections 6.6.2.1.a or 6.6.2.1.b, that would have required a special report to the NRC pursuant to TS Section 6.6.2.1.

During the inspection the ARA notified the inspector of a licensee identified violation of TS. TS Section 6.6.1, Operating Reports, requires that a report summarizing operations be prepared and submitted to the NRC annually. The licensee erroneously believed, since no decommissioning activities had been performed and no changes made to the facility since the last report was submitted, that no new reports were required. While reviewing the TS in preparation to recommence decommissioning the ARA identified that annual operating reports should have been submitted for 2000, 2001 and 2002 nonetheless.

The ARA stated that the 2003 annual report, which was being prepared, would also include the information required by TS Sections 6.6.1.1 through 6.6.1.4 for 2000, 2001 and 2002. The ARA was informed that this licensee-identified and corrected violation is being treated as a Non-Cited Violation (NCV), consistent with Section VII.B.1 of the NRC Enforcement Policy (NCV 50-199/2004-201-01).

c. Conclusions

Special reports required by TS Section 6.6.2 had been submitted as required.

9. Inspection of Transportation Activities

a. Inspection Scope (IP 86740)

The inspector reviewed selected aspects of the following to ensure that transportation requirements of 10 CFR, 49 CFR, and licensee procedures were being met:

- MCZPR RSM, dated July 19, 1998
- radioactive material accountability and transfer records

b. Observations and Findings

No radioactive material was transferred to or from the reactor since the last inspection.

c. Conclusions

No radioactive material was transferred from or to the reactor since the last inspection.

10. Fuel Storage and Material Control and Accounting

a. Inspection Scope (IP 81431 and 85102)

To verify compliance with 10 CFR Part 70, TS Sections 2.1.3, 4.2.3.C, 5.2, and licensee procedures, the inspector reviewed:

- TS for the MCZPR, Amendment No. 12, dated March 23, 1999
- MCZPR PSP, dated September 27, 1994
- MCZPR Physical Security and Safeguards Procedures, dated September 27, 1994
- MCZPR program for tracking the quantity, identity, and location of Special Nuclear Material (SNM)
- SNM storage locations and inventory results since September 1999
- accountability forms, records, and reports since September 1999
- DOE/NRC Reports/Forms 741 and 742 since September 1999

b. Observations and Findings

The inspector determined that possession and use of SNM was limited to those purposes authorized by the license. The inspector verified that the licensee maintained an amount of SNM that was equal to or less than that authorized by the license. Fuel inventory forms were properly prepared and maintained. The records also showed that the licensee was maintaining control of SNM storage areas as required by TS Sections 2.1.3 and 5.2.

Physical inventories were conducted at least annually as required by 10 CFR 70.51(d) and TS Section 4.2.3.C. Nuclear Material Transaction Reports (DOE/NRC Form 741) and Material Status Reports (DOE/NRC Form 742) had been completed semiannually and submitted by the licensee to the appropriate regulatory agencies in a timely manner and as required by 10 CFR 74.13(1).

During the inspection, the inspector toured the facility, examined the SNM and fuel storage areas, and verified that the licensee was using and storing SNM in those areas designated for such use in the PSP and TS Section 5.2.

c. Conclusions

The licensee's program for controlling, tracking and storing SNM satisfied TS and 10 CFR Part 70 requirements.

11. Exit Interview

The inspection scope and results were summarized on April 8, 2004, with members of licensee management. The inspector described the areas inspected and discussed the inspection findings.

No dissenting comments were received from the licensee.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Uffer	Radiation Safety Officer
*R. Berlin	Acting Reactor Administrator and Reactor Radiation Safety Officer
*R. Heist	Dean, College of Engineering
W. Coleman	Director, Manhattan College Security Department
J. Cerexo	Assistant Director Manhattan College Security Department

* attended exit interview

INSPECTION PROCEDURE USED

IP 69001	Class II Non-Power Reactors
IP 69002	Class III Non-Power Reactors
IP 81401	Plans, Procedures, and Reviews
IP 81402	Reports of Safeguards Events
IP 81431	Fixed Site Physical Protection of Special Nuclear Material of Low Strategic Significance
IP 85102	Material Control and Accounting - Reactors
IP 86740	Transportation Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NCV 50-199/2004-201-01 Failure to submit an annual operating report to the NRC as required by TS Section 6.6.1, Operating Reports.

Closed

NCV 50-199/2004-201-01 Failure to submit an annual operating report to the NRC as required by TS Section 6.6.1, Operating Reports.

LIST OF ACRONYMS USED

ARA	Acting Reactor Administrator
CMS	Compensatory Measures
Dean	Dean of the School of Engineering
DP	Decommissioning Plan
E-Plan	Emergency Plan
HP	Health Physicist
IP	Inspection Procedure
MC	Manhattan College
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PSP	Physical Security Plan
QAM	Quality Assurance Manager
ROC	Reactor Operations Committee
RSC	Radiation Safety Committee
RSM	Radiation Safety Manual
RSO	Radiation Safety Officer
RSP	Radiation Safety Program
SD	Security Department
SNM	Special Nuclear Material
TS	Technical Specification
TSC	Technical and Safety Committee
ZPR	Zero Power Reactor