



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

Report No.: 50-241/85-01

NOV 13 1985

Licensee: Mississippi State University  
Mississippi State, MS 39762

Docket No.: 50-241

License No.: CPRR-91

Facility Name: Mississippi State University

Inspection Conducted: October 28 - 29, 1985

Inspector: *[Signature]*  
B. K. Revsin

11/8/85  
Date Signed

Approved by: *[Signature]*  
C. M. Hosey, Section Chief  
Division of Radiation Safety and Safeguards

11/8/85  
Date Signed

SUMMARY

Scope: This routine, announced inspection entailed six inspector-hours on site in the areas of disposition of radioactive material, confirmatory radiation and contamination surveys and review of records associated with the termination of the construction permit.

Results: No violations or deviations were identified.

## REPORT DETAILS

## 1. Persons Contacted

Licensee Employees

M. J. Hibbard, Radiological Safety Officer

## 2. Exit Interview

The inspection scope and findings were summarized on October 29, 1985, with those persons indicated in paragraph 1 above. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

## 3. Licensee Action on Previous Enforcement Matters

Not inspected.

## 4. Closeout Inspection and Survey (83890)

## a. Disposition of Special Nuclear Material

Mississippi State University (MSU) acquired possession of the 100 watt homogeneous research reactor from North Carolina State University in 1966 under Provisional Construction Permit No. CPRR-91. This permit authorized MSU to receive, possess and store, but not to assemble, the reactor components. The permit also authorized possession of up to 10 grams of U-235 and the byproduct material as contained (radioactive contamination) in some of the reactor components. No other radioactive materials were associated with CPRR-91.

A licensee representative informed the inspector that the reactor components had been surveyed and all components with radiation levels in excess of background levels had been shipped offsite for burial. The inspector reviewed shipping records for shipment No. 84-10, October 10, 1984 and confirmed that the reactor components and equipment had been shipped to an authorized burial site.

Tours of the reactor building and the storage vault located in the basement of Carpenter Engineering Building confirmed that all reactor components and equipment had been shipped except for the control panel which was still in the reactor building and was to be dismantled for parts, and 22 beam port plugs still stored in the vault of Carpenter Hall.

Since the licensee had never possessed quantities of fuel, submittals of Form NRC-314, Certification of Disposition of Materials, was unnecessary.

b. Confirmatory Surveys

The inspector performed direct gamma, beta and alpha radiation surveys in the reactor facility which included surveys of the reactor control panel and beam port plugs. The inspector also performed beta and alpha loose surface contamination surveys on the above items. The contamination smears were returned to the Region II laboratory for counting. No radiation above natural background levels or contamination levels above the decommissioning criteria were found.

Since the reactor had never been assembled or operated at MSU, environmental measurements were not performed.

c. Reports and Records

No radiation exposure was received by MSU personnel attributable to activities associated with this reactor. Consequently, the submittal of reports required by 10 CFR 20.407 and 20.408 were not necessary.

5. Conclusion

Based on discussions with a MSU representative and review of records, the inspector determined that all reactor components excepting the control panel and 22 beam port plugs had been shipped offsite for burial. The inspector verified by independent survey that there was no residual radioactivity associated with these components or with the reactor facility.