

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-62

License No.: R-66

Report No.: 50-62/96-02

Licensee: University of Virginia

Facility: University of Virginia Reactor

Location: Charlottesville, Virginia

Dates: November 5-6, 1996

Inspectors: W. J. Tobin, Senior Safeguards Inspector
C. A. Hughey, Senior Resident Inspector

Approved by: E. J. McAlpine, Chief
Fuel Facilities Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

University of Virginia
50-62/96-02

Safeguards

The licensee's program for control of the licensed nuclear material, as evidenced by accountability, inventory, and associated records, was found to be meeting the regulations for a facility of "moderate" strategic significance.

The security of the facility was satisfied through such elements as barriers, alarms, access controls, routine testing, and random patrols conducted by armed police officers.

Attachments:

Persons Contacted

Inspection Procedures Used

REPORT DETAILS

II. SAFEGUARDS

S1 Material Control and Accountability (IP 85102)

a. Inspection Scope

In accordance with 10 CFR Part 70, the licensee is required to have a process for the control and accountability of the low and high enriched uranium, (LEU) and (HEU), possessed under NRC License Number R-66.

b. Observations and Findings

The Reactor Facility Administrator performs the duties of the custodian of the Special Nuclear Material (SNM) possessed by the licensee at the University of Virginia Reactor (UVR). This Administrator prepares such documentation as the "Core Loading Diagram," "Fuel Element Storage Grid," and the "Nuclear Material Transaction Report" (NRC Form #742). Based upon the information contained in such records, the inspector randomly verified the location and identity of several fuel elements in storage. The licensee has prepared an Instruction titled, "Technique for Completing DOE/NRC Forms 741 and 742" which was originally used for the shipment of HEU to the Savannah River facility in 1994. The inspector reviewed Form #742 dated October 1, 1996, which accounted for the period of April 1 through September 30, 1996. Transfers, burn-up calculations and inventory were summarized as required. Currently the licensee possesses approximately 8 kgs of LEU (33 elements) located either in the UVR or in the Fuel Storage Room, additionally there are slightly less than 500 grams of HEU in various forms throughout the secured areas of the facility.

c. Conclusion

Based upon interview, independent verification, and review of pertinent documents, the inspector concluded that the licensee controlled, stored, and accounted for the SNM in accordance with its license to possess such material. Records were verified to be accurate. Personnel were knowledgeable of their responsibilities. Facilities were provided to adequately maintain control of the SNM material.

S2 Physical Protection (IP 81401, 81402 and 81421)

a. Inspection Scope

In accordance with 10 CFR Part 73.67, Physical Protection of SNM of Moderate Strategic Significance, the licensee safeguards its licensed material through a combination of barriers, alarms, access controls, and responses.

b. Findings and Observations

By letter dated August 25, 1981, the NRC approved the licensee's Physical Security Plan (PSP) as revised on July 29 of that same year. Implementing security procedures are found in both the Emergency Plan as well as in the PSP relative to intrusion, bomb threat, civil disorder, loss of systems and theft.

The PSP requires the use of a Controlled Access Area (CAA) barrier encompassing the UVAR and Fuel Storage Area, alarms to detect unauthorized intrusion, radios/telephones to provide for multi-communication capabilities, and armed response by the University Police Department. The inspector verified the audio-visual annunciation of an alarm at the Dispatch Office of the Police Department. Barriers were also found to be intact, alarms were noted to be performing their intended function and the various means of communication were witnessed. Random records (Off-Hour Police Checks, and the Weekly Alarm Checks) were reviewed for the period from October 6 to November 2, 1996.

Visitors logs reflect the use of badges and the need for escorts, which the inspector personally experienced.

Internal locks and keys further protect the UVAR and Fuel Storage Area as well as manipulating equipment.

Staff, professors and students have been authorized different levels of access throughout the facility based upon need, training and experience.

Discussions with the licensee revealed their awareness to notify the NRC of any Safeguards Event, and the correct manner for making such reports.

c. Conclusion

Through independent verification, records review, interview of personnel at various levels within the organization and observation, the inspector concluded that the licensee has an effective Safeguards program for the protection of its licensed SNM. Barriers, alarms, communications capabilities, access controls, procedures, records of periodic testing and armed officer patrols are the elements that constitute this effective program.

VI. MANAGEMENT MEETING

M1 EXIT MEETING

The Exit Meeting was held onsite on November 6, 1996, with those so noted in the Attachment as being present. The inspector summarized the Findings of the inspection. No dissenting comments were voiced. The inspector advised the licensee that the Inspection Report would be placed in the Public Document Room, and that no proprietary nor Safeguard Information would be contained in the Report.

A brief discussion was held relative to the pending PSP revision currently being reviewed at NRC Headquarters.

ATTACHMENT

PERSONS CONTACTED

Licensee Personnel

- *P. Bennecke, Reactor Supervisor
- T. Doyle, Reactor Operator
- J. Farrar, Reactor Administrator
- *R. Flack, Dean of the Engineering Department
- *R. Mulder, Reactor Facility Director
- W. Newton, Sergeant, Campus Police Department

NRC Personnel

- *C. Hughey, Fuel Facility Resident Inspector
- *W. Tobin, Senior Safeguards Inspector

INSPECTION PROCEDURES USED

IP 81401	Security Plan and Procedures
IP 81402	Reporting Safeguards Events
IP 81421	Safeguarding Moderate SNM Significance
IP 85102	Material Control and Accountability