

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
UNIVERSITY OF VIRGINIA  
Charlottesville, VA

Docket No. 50-62  
License No. R-66  
EA 87-155

ORDER IMPOSING CIVIL MONETARY PENALTY

I

The University of Virginia (licensee) is the holder of Operating License No. R-66 issued by the Nuclear Regulatory Commission (NRC/Commission) on June 24, 1960, and renewed on September 30, 1982. The license authorizes the licensee to possess and operate the reactor as a utilization facility in accordance with the conditions specified therein.

II

A special inspection of the licensee's activities pertaining to the events associated with a significant potential for overexposure of personnel in the neutron radiography facility was conducted on July 6-8, and 15-17, 1987. The results of this inspection indicated that the licensee had not conducted its activities in full compliance with NRC requirements. A written Notice of Violation and Proposed Imposition of Civil Penalty was served upon the licensee by letter dated October 26, 1987. The Notice stated the nature of the violations, the provisions of the NRC's requirements that the licensee had violated, and the amount of the civil penalty proposed for the violations. The licensee responded to the Notice of Violation and Proposed Imposition of Civil Penalty by letter dated November 18, 1987. In its response, the licensee denied Violations I.B.2 and I.B.4, admitted the remaining violations, and requested mitigation of the proposed civil penalty.

III

After consideration of the licensee's response and the statements of fact, explanation, and argument for mitigation contained therein, the Deputy Executive Director for Regional Operations has determined as set forth in the Appendix to this Order that violation I.B.2 should be withdrawn, that the remaining violations occurred as stated in the Notice of Violation, and that a portion of the penalty proposed for the violations designated in the Notice of Violation and Proposed Imposition of Civil Penalty should be mitigated for the reasons stated in the Appendix to the Order.

IV

In view of the foregoing and pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205, IT IS HEREBY ORDERED THAT:

The licensee pay a civil penalty in the amount of One Thousand Two Hundred Fifty Dollars (\$1,250) within 30 days of the date of this Order, by check, draft, or money order, payable to the Treasurer of the United States and mailed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555.

The licensee may request a hearing within 30 days of the date of this Order. A request for a hearing should be clearly marked as a "Request for an Enforcement Hearing" and shall be addressed to the Director, Office of Enforcement,

U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region II.

If a hearing is requested, the Commission will issue an Order designating the time and place of the hearing. If the licensee fails to request a hearing within 30 days of the date of this Order, the provisions of this Order shall be effective without further proceedings. If payment has not been made by that time, the matter may be referred to the Attorney General for collection.

In the event the licensee requests a hearing as provided above, the issues to be considered at such hearing shall be:

- (a) whether the licensee was in violation of the Commission's requirements as set forth in the Notice of Violation and Proposed Imposition of Civil Penalty as amended in the attached Appendix, and
- (b) whether, on the basis of such violation, this Order should be sustained.

FOR THE NUCLEAR REGULATORY COMMISSION

  
James M. Taylor, Deputy Executive  
Director for Regional Operation

Dated at Bethesda, Maryland  
this 8th day of March 1988

## APPENDIX

### EVALUATIONS AND CONCLUSIONS

On October 26, 1987, a Notice of Violation and Proposed Imposition of Civil Penalty (NOV) was issued for violations identified during a routine NRC inspection. The University of Virginia responded to the Notice on November 18, 1987. The licensee denied the occurrence of Violations I.B.2 and I.B.4 and admitted the occurrence of the remaining violations. The licensee also requested full remission or mitigation of the proposed civil penalty amount. The NRC's evaluations and conclusions regarding the licensee's arguments are as follows:

#### I. Restatement of Violations I.B.2 and I.B.4

Technical Specification 6.3 requires, in part, that written procedures, reviewed and approved by the Reactor Safety Committee, shall be in effect and followed for: (1) startup, operation, and shutdown of the reactor; (2) installation and removal of experiments and experimental facilities; (3) periodic surveillance (including test and calibration) of reactor instrumentation and safety systems; and (4) preventive and corrective maintenance operations that could have an effect on reactor safety.

Contrary to the above,

...

2. Procedures were not adequate, in that, between 1983 and June 1987, the neutron radiography facility was operated without written procedures.

...

4. Prior to July 2, 1987, written procedures were not in effect for surveillance testing of the neutron detector in the neutron radiography block house access control system.

#### Summary of Licensee's Response to Violation I.B.2

The licensee admitted to not having written procedures to operate the neutron radiography facility; however, the licensee denied the violation. The licensee contends that the lack of experimental operating procedures for the neutron radiography facility is not a violation of Technical Specification 6.3, in that Technical Specification 6.3 addresses the safe operation of the reactor and does not cover other aspects of the operation of ancillary experimental facilities such as radiological safety.

#### NRC Evaluation of Licensee Response to Violation I.B.2

NRC agrees that Technical Specification 6.3(2) does not require written operating procedures for experimental facilities. Consequently, this violation has been withdrawn and NRC records will be adjusted accordingly.

Summary of Licensee's Response to Violation I.B.4

The licensee contends that Technical Specification 6.3 does not apply to the instrumentation utilized in experimental facilities, but to reactor instrumentation and safety systems. The licensee states that the boron trifluoride ( $\text{BF}_3$ ) neutron counter is not intended to be part of the access control system and its function is that of a redundant monitor along with the fluid level indicator to indicate beamport draining. The licensee is of the opinion that written surveillance procedures for the counter are not needed, since its operability is automatically checked with each use of the neutron radiography facility. The licensee also stated that it would strongly consider withdrawing the counter from operation to avoid legal entanglements in the future if the Commission requires surveillance in accordance with written procedures. The licensee stated that an agreement between the licensee and the inspector had been made not to require calibration of the neutron counter.

NRC Evaluation of Licensee Response to Violation I.B.4

Technical Specification 6.3 requires radiation control procedures to be maintained and made available to all operational personnel. The licensee response states that the  $\text{BF}_3$  neutron counter was not part of an access control system. The NRC maintains that the licensee was in fact utilizing the  $\text{BF}_3$  counter and the light emitting diode (LED) sensor for blockhouse access control. In 1982 modifications were made by the licensee to the reactor shielding in such a manner as to increase the radiation hazard associated with operation of the facility. The licensee installed the two diverse access control instrumentation systems (one of which is the  $\text{BF}_3$  neutron counter) thereby restoring the original margin of safety. These systems are required to be periodically tested (although not necessarily "calibrated") for radiation control purposes. Without approved written procedures to ensure operability of these systems, operation of the reactor in its modified configuration is a violation of Technical Specification 6.3.

Additionally, the licensee response implies that an agreement had been made between the inspector and licensee representatives to consider the  $\text{BF}_3$  counter as a redundant monitor not requiring calibration. The licensee was told by the inspector that calibration of the neutron counter to read dose rates would not be required; however, periodic surveillances described in licensee procedures would be required to ensure that the monitor was functioning properly.

II. Summary of Licensee's Request for Mitigation

In its response the licensee agrees with the assignment of a Severity Level III for the violations. However, the licensee believes that in view of the opportune discovery of the violations, the immediate reporting of the event to the NRC, the verification of no personnel exposures above NRC limits, and the extensive corrective actions, consideration of mitigation of the proposed fine is justified.

NRC Evaluation of Licensee's Request for Mitigation

The NRC recognizes that the licensee promptly identified and reported the event, but does not consider mitigation warranted in view of the fact that the discovery of the event was fortuitous. However, in consideration of the additional broad scope corrective actions reported in the licensee's November 18, 1987, response and the withdrawal of Violation I.B.2, a sufficient basis is provided for mitigation of the civil penalty by 50 percent to \$1,250.

III. NRC Conclusion

The NRC has concluded that violation I.B.2 should be withdrawn and that the remaining violations occurred as stated. In addition, in consideration of the licensee's extensive corrective actions, the civil penalty has been mitigated by 50 percent to \$1,250.

University of Virginia

Distribution

PDR

SECY

CA

JTaylor, DEDRO

JNGrace, RII

JLieberman, OE

EFlack, OE

LChandler, OGC

Enforcement Coordinators

RI, RII, RIII, RIV, RV

BHayes, OI

SConnelly, OIA

Fingram, PA

GJohnson, RM

VMiller, NMSS

DNussbaumer, OGPA

GSjoblom, NMSS

OE File

EA File

DCS

Commonwealth of Virginia

OE <del>for</del>	W. Balen	S. Insane	HSW
EFlack	OGC <del>for</del>	RII <del>for</del>	OE: D for
3/2/88	LChandler	JNGrace	JLieberman
	3/2/88	3/2/88	3/3/88

DEDRO  
JTaylor  
3/2/88