



MEMPHIS STATE UNIVERSITY  
MEMPHIS, TENNESSEE 38152

December 14, 1981

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Center for Nuclear Studies  
Office of the Director  
(901) 454-2687

U. S. Nuclear Regulatory Commission  
Region II  
Attn: Mr. R. C. Lewis, Director  
Division of Resident and Reactor Inspection  
101 Marietta Street, N.W., Suite 3100  
Atlanta, GA 30303

Dear Mr. Lewis,

SUBJECT: Inspection Report No. 50-538/81-02 and  
Notice of Violation (11-4-81)

This refers to the Notice of Violation (11-04-81) and the report of a safety inspection conducted on October 19-21, 1981 by Mr. C. Julian of your staff which were forwarded by your letter of November 4, 1981. Technical specifications noted in the following explanations are contained in the Memphis State University (MSU) Facility Operating License No. R-127 which was issued on December 10, 1976.

- A. The Reactor Safety Committee (RSC) did not meet during every calendar quarter as required by Technical Specification 6.4.1 in that meetings were not held for seven of the eleven quarterly intervals between December, 1978 and October, 1981.

During the intervals cited in the Notice of Violation, activities that would have required RSC action were not conducted. Subsequently, a quorum of members was not assembled due to other duties and responsibilities that individual members were committed to as part of their full-time faculty positions. It should be noted that experiments have not been conducted with the reactor since June, 1978, and that the majority of reactor operating time is comprised by operator training programs.

The Center for Nuclear Studies (CNS) recognizes the importance of an active safety committee and is also aware of the difficulty of routinely satisfying a frequent (quarterly) meeting requirement when the committee is composed entirely of faculty members whose full-time research and teaching commitments lie in areas other than the reactor facility. Accordingly, the following actions have been taken:

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- (1) New committee members have been appointed. The RSC currently consists of qualified senior staff members from the Center for Nuclear Studies as well as selected members of the MSU Faculty.
- (2) The committee currently includes a sufficient number of qualified members to ensure that a quorum can be achieved at least once during each calendar quarter regardless of the amount of business that may or may not require committee action.

The RSC is scheduled to meet during December, 1981. Your letter and Notice of Violation, this response, previous inspection reports, and the requirements contained in the Facility Technical Specifications will be thoroughly reviewed and emphasized to ensure that each member is fully aware of committee responsibilities and to ensure that further violations will be avoided. Full compliance with Technical Specification 6.4.1 will be achieved by December 31, 1981.

- B. The Reactor Safety Committee did not conduct audits in all specified areas of reactor operation at the frequencies prescribed by Technical Specification 6.4.4. It should be noted, however, that Inspection Report 50-538/81-02 did not list the RSC audit of the Facility Emergency Plan and Procedures that was performed on February 6, 1981, and that the date listed for the most recent RSC audit of Staff Performance, Training, and Qualifications should be 09/18/80 rather than 09/23/81.

That the RSC did not perform all required audits of facility operations at the prescribed frequencies is considered to be a result of the committee having been structured entirely from full-time university faculty who were only associated with facility operations through committee membership.

The corrective steps which have been taken and those that will be taken to avoid further violations are specified in Item A, preceding.

The CNS considers that compliance was achieved on the dates indicated for audits in the area of Technical Specification Conformance (02/12/81), Emergency Plan and Procedures (02/06/81), and Security Plan and Procedures (03/10/81). Allowing for restructuring the RSC, assigning audit tasks, and time for performance of delinquent audits, full compliance with Technical Specification 6.4.4 will be achieved by January 31, 1982.

- C. The Reactor Safety Committee has not reviewed all events that have been reported in writing within 24 hours to the NRC as required by Technical Specification 6.4.3.

Each report has not been individually documented as having been reviewed in the minutes of RSC meetings. However, it should be noted that copies of all events reported to the NRC were distributed to the RSC Chairman at the time that such reports were published. In addition, Event Reports 79-1 and 79-2 are contained in the 1979 Annual Report of Nuclear Reactor Operations which is documented as having been reviewed in the minutes of the RSC meeting conducted on July 15, 1980.

The corrective steps that have been taken and those that will be taken to avoid further violations are specified in Item A, preceding. In addition, it will be stressed that formal review of reportable events and documentation of such reviews is required to meet the spirit of intent of this technical specification. Full compliance with technical specification 6.4.3 will be achieved by December 31, 1981.

- D. In Appendix A, Notice of Violation, it was stated that a monthly channel test of the Shield Water Temperature, Shield Water Level, and Seismic Displacement Safety channels was not performed during the interval October 13, 1980 to December 5, 1980, as required by Technical Specification 4.2.d.

During the stated interval, the Shield Tank Temperature interlock set-point and Seismic Displacement channel test was not performed. The Shield Water Level channel test was conducted, however, a total of 14 times during this 7 week interval as part of the normal Pre-startup Checkoff Procedure (OP-2). Although the reliability of the temperature and seismic instruments have been well established (no required adjustments or failures to operate in more than 44 previously documented channel tests) and in spite of the fact that it is impossible to cool the Shield tank water below ambient, the Reactor Supervisor exercised poor judgment in permitting the reactor to be operated during the 3 week period that these tests were overdue.

The Reactor Supervisor has been counselled regarding the significance of this technical specification. The CNS does not consider that additional action is required to avoid further violations since this is the only discrepancy that has been found during a detailed review of more than 4 years of Surveillance procedure records. Full compliance was achieved with Technical Specification 4.2.d on December 5, 1980.

It was requested that the CNS address plans to resolve the issue of certain design features that do not exist at our facility and to provide the date when resolution will be complete. The issue is a result of not having begun power upgrade modifications that were authorized by NRC at our request.

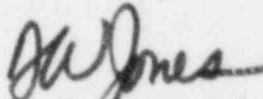
Due to budgetary constraints and fluctuations in CNS manpower commitments that were not anticipated when license revisions were requested (March 23, 1979 and supplements dated August 3rd and 28th, 1979), the modifications authorized March 28, 1980, by Amendment No. 1 to Operating License R-127 could not be completed within the time frame originally planned. In addition, facility training contract commitments that had been scheduled to be met subsequent to the planned shutdown would provide for only a minimum of reactor down time. Thus, the CNS has not begun to incorporate the authorized alterations and has not operated the reactor in any manner that deviated from the license issued December 10, 1976, which permits a maximum steady state power level not in excess of 100 milliwatts (thermal). It should be noted that the Technical Specification requirements referred to by NRC Inspection Report 50-538/81-02 as representing an apparent conflict with facility design are features that are necessary to permit reactor operation at power levels greater than 100 milliwatts.

The CNS intends to incorporate the design features authorized by NRC to permit power upgrade of the AGN-201 Reactor. However, as a result of the previous delays and attrition of licensed personnel, training and licensing of additional operators and/or senior operators has become necessary in order to commence the required facility alterations. A training class that will satisfy this need is scheduled to convene in January, 1982. Based upon the projected 1982 budget and the time required for successful completion of the operator training program, December 31, 1982, appears to be the earliest date when resolution of this matter will be complete.

NRC Inspection Report No. 50-538/81-02 and this letter do not contain information that the CNS believes to be exempt from disclosure under 10 CFR 9.5 (a)(4).

Thank you for your efforts in calling these deficiencies and issues to my attention. I hope that the provisions outlined above will adequately serve to resolve these items. If additional information is needed, please advise.

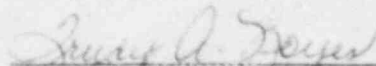
Sincerely,

  
D. W. Jones  
Director

RLD/mm

cc: MR. R. E. Carter, NRC  
Mr. R. L. Dietz, MSU  
Mr. C. Julian, NRC Region II

STATE OF TENNESSEE, SHELBY COUNTY  
Subscribed and sworn to before me this  
the 14th of December, 1981.

  
Notary Public