UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATING TO SHIFT STAFFING AT THE

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

Docket No. 50-346

Introduction

Effective January 1, 1984, NRC regulation 10 CFR 50.54(m)(1) specifies the minimum shift staffing requirements for licensed operators at nuclear power units. At a single unit nuclear station, such as the Davis Besse Nuclear Power Station, two senior reactor operators (SROs) and two reactor operators (ROs) are required to be on each shift whenever the unit is not in the cold shutdown or refueling mode. NRC regulation 10 CFR 50.54(m)(2)(iii) also requires, in part, that:

When a nuclear power plant is in an operational mode other than cold shutdown or refueling, as defined by the unit's technical specifications, each licensee shall have a person holding a senior operator license for the nuclear power unit in the control room at all times.

By letter dated December 2, 1983, Toledo Edison Company informed us that the Davis-Besse 1 manning includes two SROs, the Shift Supervisor and the Assistant Shift Supervisor, on shift at all times. However, pursuant to 10 CFR 50.12, the licensee requested exemption from the requirement that an SRO be stationed in the control room at all times the plant is operating.

Discussion

In the letter requesting the exemption, the licensee explained that the majority of the Shift Supervisor's time is spent coordinating maintenance and operational activities, and that one of the most important aids utilized for this activity is the Davis-Besse Maintenance Management System (DBMMS), which is a computerized activity tracking system. The DBMMS terminal is located in the Shift Supervisor's office. The licensee also explained that the control room panel area is not large enough to accommodate the DBMMS terminal and the associated personnel traffic that would result from moving the Shift Supervisor's base of operations from his office to the control room panel area.

The Assistant Shift Supervisor assists the Shift Supervisor in coordinating plant activities and in providing direction to the rest of the operating shift. This duty includes the direction of both the control room operators and the plant operators and requires that the Assistant Shift Supervisor be outside the control room panel area about 50% of the time.

The Shift Supervisor's office at the Davis-Besse plant is located within the secure area associated with the control room panels. However, there is a door to the office and another door to the control room panel area. The

control console is about 50 feet from the office. Our view is that the Shift Supervisor's office is within the control room area, although out of audible and visual contact with the control panel operator.

The licensee proposes to (1) modify the Station Operating Procedure (AD1839.00) to require that at least one of the SROs be within the secure area at all times, (2) install a direct intercom between the Shift Supervisor's office and the control room panel area, (3) establish guidelines to require that one SRO remain in the control room panel area when not required in the Shift Supervisor's office or elsewhere in the plant, and (4) whenever possible during high activity periods, provide an additional SRO on shift to supplement the two SROs normally assigned.

Evaluation

The Statement of Considerations that accompanied publication of the changes to 10 CFR 50.54(m) (Federal Register, Vol. 48, No. 133, July 11, 1983) acknowledged that variations from plant to plant in the definition of the control room mandated clarification as to what is meant in the rule. As pointed out there, the SRO is expected to spend most of his time where there is direct and prompt access to information on plant conditions and where the operator at the controls can be supervised. However, it was recognized that the SRO may move to other portions of the control room as duties may necessitate. In such cases, the SRO must be either in sight of or in audible range of the operator at the controls, or in the audible range of the control room annunciators, and must be able to provide prompt assistance to the ROs when requested.

Our evaluation of the licensee's request for exemption as submitted December 2, 1983, in light of the clarifying information provided at the time the rule was published, indicated that the licensee's proposed method of operations would not satisfy the rule since it did not assure that an SRO would be present in the control panel area more than half the time. We discussed this matter with the licensee's representatives on March 13, 1984. On March 23, 1984, the licensee submitted a clarifying letter regarding the request for exemption.

The March 23, 1984 letter commits that the Davis-Besse Station Superintendent will issue a Standing Order directing SRO coverage of the control room panel area for more than half of any shift. The SRO also will be directed to be present in the control room panel area whenever he is not required to be in the Shift Supervisor's office or in the plant to perform his duties.

Conclusion

With the commitments contained in the December 2, 1983 request for exemption as modified by the letter of March 23, 1984 our evaluation is that the licensee will be in conformance with 10 CFR 50.54(m)(2)(iii). That is, there will be a continuous presence of an SRO in the control room area within audible range of the operator at the controls and most of the time an SRO will be in the control panel area where he has direct and prompt access to information on plant conditions and where he can supervise directly the

operator at the controls. We conclude, therefore, that when the direct intercom has been installed and when the Standing Order has become effective directing the SRO coverage of the control room panel area more than half of any shift, the licensee will be in full conformance with the rule and that no exemption is required.

This evaluation was prepared by Larry Crocker, Division of Human Factors Safety, Office of Nuclear Reactor Regulation