

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

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USNRC

September 30, 1982

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Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Attention: Docketing and Service Branch

DOCKET NUMBER

PROPOSED RULE

19
PR-50
(47 FR 38135)

Dear Sir:

TVA is pleased to provide comments on the proposed amendments to 10 CFR Part 50 concerning licensed operator staffing at nuclear power plants as noticed in the August 30, 1982 Federal Register notice (47 FR 38135-38137).

In December of 1981, NRC's Division of Facility Operations began a task analysis of the operating crew. The objectives of this task analysis were to obtain detailed information on crew operations during transient and accident conditions, provide data for evaluating human engineering design of control rooms, number and type of operators, training requirements, personnel qualifications, procedures, job performance aids and communications, provide a data base for management, and support employee performance requirements and standards. This integrated approach was considered by the industry to be a positive step in resolving the outstanding concerns in this area.

We believe that shift staffing requirements should remain an integral part of this study and not be separated and finalized by rulemaking at this time. The number of required shift employees is a direct function of most of the variables being analyzed in the NRC study and in many cases could have the greatest impact on operating plants.

We suggest that shift staffing remain under study pending the completion of the NRC task analysis to ensure that all factors are considered in the final determination of shift staffing requirements. In addition, we believe that this rule can ultimately be contradictory to the policy on control of overtime. Additional overtime appears to be the only short-term solution to meeting these staffing requirements in times of manpower shortages.

Enclosed are our specific comments. We appreciate the opportunity to comment.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills
L. M. Mills, Manager
Nuclear Licensing

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Enclosure
cc: See page 2

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Acknowledged by card. 10/7/82 emp

Secretary of the Commission

September 30, 1982

cc (Enclosure):

Executive Secretary
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Tom Tipton
AIF, Inc.
7101 Wisconsin Avenue
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ENCLOSURE

1. The proposed amendment makes no mention of the Shift Technical Advisor (STA) in the shift staffing requirements. Since the STA concept was initiated in NUREG-0588, utilities have dedicated manpower and resources to provide trained employees qualified to fulfill this requirement. One of the NRC's major concerns was to ensure that technical expertise is continuously available in the main control room to respond to accident conditions. We suggest that the proposed amendment be revised to allow licensees the flexibility to use the STA to satisfy the requirement for competent technical employees in the main control room at all times and reduce the required number of senior reactor operators (SROs) on shift.
2. In the supplementary information under (a) of Proposed Action, an SRO is required to be present at all times to direct the overall operation of the plant. This is in addition to the SRO required in the control room at all times during unit operation. The proposed amendment to 10 CFR Part 50 does not make this clear. We believe it should be stated in the proposed amendments, therefore, that an SRO with responsibility for overall plant operation is to be present at all times.
3. The table in section (2) (i) requires five reactor operators (ROs) for a three-unit plant utilizing two control rooms. This staffing requires an extra (relief) RO for each control room. TVA has successfully operated Browns Ferry Nuclear Plant with this control room configuration utilizing one relief RO for both control rooms. The control rooms are next to each other and require an insignificant amount of time to get from one to the other. We suggest the RO staffing requirements for multiple control room plants be reduced to require one RO for each operating unit plus one relief RO.



**Consumers
Power
Company**

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USNRC

David J. Vandewalle
Nuclear Licensing Administrator

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OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

September 27, 1982

Samuel J. Chilk
Secretary of the Commission
US Nuclear Regulatory Commission
Washington, DC 20555

(20)
PR-50
(47 FR 38135)

ATTN: DOCKETING AND SERVICE BRANCH

Consumers Power Company appreciates the opportunity to comment on the proposed rule regarding licensed operator staffing at nuclear power units (47FR38135 8/30/82). After careful review and evaluation by various Consumers Power Company personnel, our comments on the proposed rule are:

1. While we share the concern that there needs to be adequate manpower available during emergencies to permit effective management of the situation, we believe that some type of shift staffing performance goal may be more appropriate than the staffing levels of the proposed rule. It is generally acknowledged that significant differences exist between nuclear power plants in terms of design complexity and, therefore, the number of operator actions required to respond to an accident or anticipated transient. These differences in plants are due to age as well as design concept. (Our Big Rock Point Plant for example, has no variable speed coolant pumps, does not have a suppression pool, has no turbine-driven safeguards pumps, and consequently is much simpler to operate than newer power reactors.) Certainly one can imagine a chain of events which would overwhelm the operations staff at any nuclear plant. However, we feel that the likelihood or probability of that occurring would vary substantially from plant-to-plant regardless of the staffing levels.

For our Big Rock Point Plant we developed a "performance goal" or procedure for determining the necessary shift staffing level (CPCo letter dated 4/1/82). This procedure was based on the Big Rock Point Probabilistic Risk Assessment (PRA). Simply stated, it involved identifying operator and maintenance activities which would potentially be required to respond to and mitigate each of the more than eighty dominant accident sequences identified in the PRA. (These sequences were those which were identified as having a probability of occurrence of greater than 10^{-7} per year.) An evaluation was then performed to determine: 1) The time frame in which these actions would be

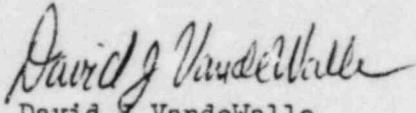
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required; 2) The time required to perform the action; 3) Skills required to perform the action; and, 4) The environmental conditions under which the action must be performed. Having determined the skills required as a function of time for each dominant sequence, an evaluation of on-shift staffing needs was performed. We feel that this type of procedure is essential in order to provide technical justification for shift staffing levels at nuclear power plants.

2. The proposed rule does not consider the presence of the Shift Technical Advisor. At our Palisades and Midland Plants, we have chosen to license our STAs and thereby combine the duties of the STA with those of the second senior reactor operator on shift. This alternate staffing arrangement is consistent with the guidance provided in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated January, 1980.
3. In order to avoid possible confusion and minimize the number of action points that the operating staff must memorize, it is recommended that the transition point between a "not operating" unit and an "operating" unit be defined in terms of plant status MODE as employed in standardized technical specifications.
4. Since each licensed reactor operator must demonstrate complete understanding of the symptoms, automatic actions and immediate action steps specified by off-normal and emergency operating procedures in order to obtain his/her license, there seems to be little basis for the requirement that a senior reactor operator be present in the control room at all times. The stated need to have supervising and technical experts continuously available in the control room to respond to accident situations is not supported by historical evidence. In fact, history (as well as completed probabilistic risk assessments) has shown that the operations staff will have considerable time (minutes) to respond to any emergency that has a reasonable likelihood of occurrence. If the second senior operator becomes a requirement, it is our belief that public health and safety would be better served by allowing him/her to move freely about the plant to observe plant status and initiate corrective actions as necessary.
5. Consumers Power Company has and will continue to devote extraordinary effort to the training of new licensed operating personnel for its nuclear plant. However, the requirement to add a second senior reactor operator to the shift by January 1, 1983 is impractical due to 1) a severe shortage of qualified personnel, and 2) the difficulties currently being experienced throughout the industry in licensing new candidates. It is our opinion based on the status of training of our new senior reactor operators that a July 1, 1983 date is more realistic, and that even this date may be unattainable for smaller or less experienced licensees.

In conclusion, Consumers Power Company shares the NRC's concern that sufficient manpower should be available on-shift to cope with emergencies. However, we believe that the required staffing levels should consider credible accidents and that task analysis needs to be performed to establish the required levels.



David J. VandeWalle
Nuclear Licensing Administrator

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