



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

DETAILED CONTROL ROOM DESIGN REVIEW REASSESSMENT

FOR

SURRY POWER STATION UNITS 1 AND 2

1.0 INTRODUCTION

By letter dated February 28, 1990, the NRC approved the process by which the Surry Power Station, Units 1 & 2, Detailed Control Room Design Review (DCRDR) program would be implemented. By letter dated July 28, 1992, the licensee requested the approval of a reassessment that they had conducted for a number of Human Engineering Discrepancies (HEDs). During the Corrective Action Evaluation of 39E, HED Number 20A01216, Lamp Bulb Test, the licensee determined that, given the equipment and the design of the circuitry of the control boards, a lamp test function could not be implemented as originally planned.

Our Safety Evaluation letter dated April 21, 1993, responded to the licensee's reassessment of July 28, 1992. Based upon our review, we identified a concern with respect to the use of single filament bulbs, that are normally not lit, for safety-related equipment. If a bulb should fail to light, an operator would have no way of knowing whether a bulb was burned out, or a piece of equipment had not responded as anticipated. In order to continue our review, we requested that the licensee identify what corrective actions would be taken in order to provide positive indications to the operators. In subsequent conversations, the licensee was asked to perform a comprehensive review to identify dual filament replacements for the 27 safety-related single filament bulbs. The search identified that there were no compatible dual filament replacements commercially available.

2.0 EVALUATION

During a teleconference with the licensee on March 14, 1994, it was determined that the licensee should perform an evaluation of the secondary indications available to the operator for each of the single filament bulbs.

By letter dated May 24, 1994, an evaluation for each of the bulbs was received. The staff determined that the evaluation was not complete enough to be considered acceptable. Another phone conversation was held on June 16, 1994 to discuss the submittal with the licensee.

By letter dated July 28, 1994, a second submittal was received. It identified the secondary indications, the equipment numbers, and the related procedures that would support the operator in the event of a bulb failure. The staff finds that this analysis adequately supports the position that an operator would have sufficient alternate indications of the status of the equipment for

each of the single filament light bulbs in the event of a bulb failure and that these alternate indications are identified in the appropriate operating procedures.

### 3.0 CONCLUSION

The staff finds the July 28, 1994 submittal, identifying alternate indications and appropriate procedures, by the licensee acceptable. This closes out the last remaining DCRDR safety significant implementation item from the licensee's reassessment.

Principal Contributor: D. Smith

Date: October 21, 1994