UNITED STATES
NUCLEAR REGULATORY COMMISSION
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MEMORANDUM FOR: Gary M. Holahan, Director
Division of Safety Programs
Office for Analysis and Evaluation of Operational Data

FROM: M. Wayne Hodges, Director
Division of Systems Research
Office of Nuclear Regulatory Research

SUBJECT: REQUEST FOR REVIEW AND COMMENTS - PRELIMINARY CASE STUDY REPORT ON HUMAN PERFORMANCE ASPECTS OF OPERATING EVENTS WITH BYPASS OR DEFEAT OF ENGINEERED SAFETY FEATURES

The request in your memorandum on this subject dated April 15, 1994, was to review the accuracy and completeness of the preliminary case study report on human performance aspects of operating events with bypass or defeat of ESFs. Herein is a summary of our review.

Accuracy

We suggest that the alleged failure of the licensees to report events be verified before inclusion on Page 2 in the 3rd paragraph.

It is not clear whether the problem described on Page 6 in the 1st paragraph is an incomplete procedure or a failure of the crew to act expeditiously.

Completeness

After reading the report, we were left with a sense of incompleteness in three important features:

1. The context for the events in this study appears to be missing despite the assertion on page 1 about "suggestions" from operating experience. The report does not describe the degree to which the events represent the total experience with bypass of ESFs. In other words, what fraction of the total opportunities to bypass ESFs do these events represent?

2. On Page 9, the study states that "Because many ESFs lack automatic level or flow controls after initiation, many of these 'overdesigned' ESFs may have adverse consequences . . . without operator intervention during these less significant events." However, there is no discussion of alternative criteria that could be used to preclude "overdesigned" ESF.

3. A comparison appears to be missing of this case study with what the agency has already published concerning Bypassing Safety Systems in the Chernobyl followup, Item 1.3A.

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X-RD-7
X-O+M-93-Human Factors

Generally, the report is interesting and informative. It provides further evidence of the many circumstances that influence human performance in nuclear power plants and underscores the need to continue such monitoring activities.

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