

50-285



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 9, 1996

Mr. Terry L. Patterson  
Division Manager - Nuclear Operations  
Omaha Public Power District  
Fort Calhoun Station FC-2-4 Adm.  
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Hwy. 75 - North of Fort Calhoun  
Fort Calhoun, Nebraska 68023-0399

SUBJECT: FORT CALHOUN STATION, UNIT NO. 1 - REVIEW OF INDIVIDUAL PLANT  
EXAMINATION (IPE) SUBMITTAL - INTERNAL EVENTS (TAC NO. M74412)

Dear Mr. Patterson:

Enclosed is the Nuclear Staff Evaluation Report (SER) for the Fort Calhoun Station (FCS) Individual Plant Examination (IPE) submittal internal events and internal flood. Also included with the SER are the contractors' (Science & Engineering Associates, Inc., Concord Associates, and Sciencetech Inc.) Technical Evaluation Reports (TERs).

During the review, the staff identified certain limitations in the Human Reliability Analysis (HRA). For example, there are some characteristics associated with the modeling of mistakes that can lead to seemingly inconsistent results. The model uses different time/reliability correlations depending on whether actions are verification, rule-based, or "other" actions, whether they occur inside or outside the control room, and whether the operators are burdened. It appears that differences in quantification results based on these correlations may be significant. In addition, there appears to be no specific guidance as to which actions should be assigned to include burden. This factor, also, can affect the estimated failure probability.

Based on the findings discussed in the enclosed reports, the staff concludes that your IPE is complete with regard to the information requested by Generic Letter 88-20 and the associated guidance in NUREG-1335; and the IPE results are reasonable given the Fort Calhoun design, operation, and history. As a result, the staff concludes that the IPE process is capable of identifying the most likely severe accidents and severe accident vulnerabilities, and therefore, the Fort Calhoun IPE has met the intent of Generic Letter 88-20.

It should be noted that the staff's review primarily focused on Omaha Public Power District's (the licensee) ability to examine Fort Calhoun for severe accident vulnerabilities. Although certain aspects of the IPE were explored in more detail than others, the review is not intended to validate the accuracy of the licensee's detailed findings (or quantification estimates) that stemmed from the examination. Therefore, this SER does not constitute NRC approval or endorsement of any IPE material for purposes other than those associated with meeting the intent of Generic Letter 88-20. The staff has identified a weakness in the HRA portion of the IPE and believes that

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application of the IPE in support of risk-based regulatory applications, beyond those associated with Generic Letter 88-20, require additional treatment in that area.

If you have any questions, please contact me at (301) 415-1396.

Sincerely,

Original Signed By  
L. Raynard Wharton, Project Manager  
Project Directorate IV-2  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket No. 50-285

Enclosures: 1. Safety Evaluation  
2. Technical Evaluation Report

cc w/encls: See next page

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DATE	12/9/96	12/6/96	

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Mr. Terry L. Patterson

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cc:

Winston & Strawn

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