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

July 7, 1980

Docket Nos. 50-295
and 50-304

Mr. D. Louis Peoples
Director of Nuclear Licensing
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Peoples:

In your letter of May 9, 1980 you provided Offshore Power Systems Report No. 36A75, "An Evaluation of the Residual Risk from the Indian Point and Zion Nuclear Power Plants," dated February 1980.

Based on our review for Zion Station only, we need additional information shown in the enclosure. Thus, we request that you submit the additional information (provided to you by telecopy on June 27, 1980) shown in the enclosure no later than July 22, 1980.

Sincerely,

Thomas M. Novak, Assistant Director
for Operating Reactors
Division of Licensing

Enclosure:
Request for Additional
Information

cc: w/enclosure
See next page

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EVALUATION OF RESIDUAL RISK - ZION
REQUEST FOR INFORMATION

This request was generated as a result of our continuing review of "An Evaluation of the Residual Risk From the Indian Point and Zion Nuclear Power Plants," Offshore Power Systems, Report No. 36A75, February 1980.

1. Provide a compilation of data and analyses in support of all plant-specific probability estimates which differ from those used in WASH-1400. This includes the availability of offsite power, diesel generator failure, and the effect of the Shift Technical Advisor.

2. Regarding the deletion of sequence S_2C, provide a probabilistic estimate and basis for fan cooler failure due to blocking of the fan cooler filters by particulates in the containment atmosphere when the containment sprays are inoperable. Also, provide a probability estimate and basis for failures of both the containment spray heat sink and the fan cooler heat sink. Include common mode failures.

3. Evaluate the capability and sufficiency of the "feed and bleed" option for primary system heat removal specifically for Zion. Include in your evaluation the failure probability and basis resulting from reliance on equipment not qualified for the environments associated with this mode of plant operation.

4. In reference to the LPRS failure combinations shown on page 20, only " 1 and 3 " is indicated as leading to both CSRS and LPRS failures. Provide an evaluation to show whether a common mode mechanism exists to couple a " 1 and 4 " or a " 2 and 3 " with an additional failure further down the CSRS (not shown), which would also cause failure of both the LPRS and the CSRS.

5. Provide all minimum requirements for successful system operation (e.g., one out of four pumps, etc.). What is the effect of break location on the minimum requirements?

6. Provide more explicit references (i.e., page number/figure number/table number) for all referenced failure data, whether from WASH-1400 or from other sources.

7. In certain small break accident sequences, the reactor coolant system may repressurize, especially if there is a loss of all auxiliary feedwater. What high pressure pumps are available in this case? Are only the charging pumps and not the high head safety injection pumps available? (See FSAR, p. 6.2-8, where it is stated that the pumps develop a maximum discharge pressure of 1500 psig at shutoff). What are the safety grade qualifications of the available pumps?

8. There has been some concern (see proceeding of the Topical Meeting on Probabilistic Analysis of Nuclear Reactor Safety held in Newport Beach, California May 8-10, 1978, sponsored by ANS, p. XII.3-8) that the primary pump seals may be sufficiently damaged to produce the equivalent of a small Loss-of-Coolant Accident, given a total loss of electric supply exceeding one hour, since the primary pump seals would no longer be cooled; the fact that the pumps are tripped is not relevant. Provide information concerning this accident sequence.

General Comments

The following comments are provided for your information:

1. The calculation of P 9 on page 23 does not include any contribution from MOV failure. This comment pertains also to the calculation of P 4 on page 16.

2. The failure combinations presented on page 24 include some inaccuracies. For instance, element 6 in the last combination on that page is unnecessary in view of the combination " 6 and (1 or 2)", already specified. Also, certain triple-combinations, such as "(10 or 11) and (1 or 2) and 5" and "(3 or 4), and 6 and 9", have not been included.

3. Probabilities P 6 and P 7 on page 16 do not compute from the elements quantified on the accompanying diagram.