

JUL 20 1983

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Docket Nos.: STN 50-454  
and STN 50-455

Mr. Dennis L. Farrar  
Director of Licensing  
Commonwealth Edison Company  
Post Office Box 767  
Chicago, Illinois 60690

Dear Mr. Farrar:

Subject: Outage Times in Byron Technical Specifications

On May 18, 1983 members of your staff met with us to discuss the outage times in the Byron Technical Specifications. A summary of that meeting was sent to you on May 19, 1983. At the meeting, you presented a technique based on Probabilistic Risk Assessment (PRA) that may be able to justify an outage time of 7 days for redundant safety-related subsystems. The present Standard Technical Specifications (STS) require plant shutdown if an inoperable safety-related subsystem cannot be restored to operable status within 72 hours.

We believe at this time that a technique based on PRA may be used to justify small changes in the STS if there is no significant increase in risk to the public. The proposed change to 7 days from 72 hours in outage times is considered small, and, therefore, may be amenable to a PRA approach. However, your application of PRA will be closely reviewed by us before the change to 7 days is allowed. One of our initial concerns, which was expressed during the May 18 meeting, is the difficulty of using equipment unavailability data from other plants, considering that there may be differences in design, application, manufacturer, operating and maintenance staffs, etc.

In the case of the auxiliary feedwater system (AFWS), a reliability study based on a PRA type of analysis was used by the staff in accepting the design with two safety-related pumps. An outage time of 72 hours was used in the analysis. The results showed that the AFWS met the staff's reliability goal with a relatively small margin. Therefore, we recommend that efforts not be directed toward justifying increases in outage times for the AFWS.

In using PRA methodology for justifying changes to the STS, you should also consider the effects of integrated outage times and system-to-system relationships. A technical specification with a maximum accumulated outage rate may be appropriate. Similarly, if there are system-to-system vulnerabilities existing in the STS that you discover with the PRA methodology, technical specifications reducing these vulnerabilities may be appropriate.

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Mr. Dennis L. Farrar

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In conclusion, application of the PRA methodology appears to be a reasonable approach for justifying small changes from the Standard Technical Specifications, such as increasing the outage time of safety-related equipment from 72 hours to 7 days, if there is no significant increase in risk to the public.

Sincerely,



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

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