DPR 016
document files

January 23, 1987

Dockets Nos. 50-269, 50-270
and 50-287

Mr. Hal B. Tucker
Vice President - Nuclear Production
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: INADEQUACY OF TECHNICAL SPECIFICATIONS FOR THE SAFE SHUTDOWN FACILITY

Re: Oconee Nuclear Station, Units 1, 2 and 3

By letter dated April 28, 1983, we concluded that the Oconee Units 1, 2 and 3 standby shutdown facility (SSF) met the appropriate licensing requirements and requested that Duke Power Company provide Technical Specifications (TSs) needed to ensure operability of SSF components in accordance with its design capability for assuring a safe hot shutdown following fires, flooding (such as a postulated seismically induced failure of the condenser circulating water lines), and sabotage. In response, by letter dated July 26, 1985, you proposed TSs 3.18 and 4.20, "Standby Shutdown Facility" and also proposed a revision to administrative TS 6.1 to assure that the manpower required to operate the SSF will be available onsite at all times. You proposed an allowable outage time of 60 days for an SSF component, but provided no basis for this proposal. We discussed this issue further with your representatives on December 4, 1986.

We have reviewed the proposed TSs and find that the proposed limiting condition for operation (LCO) of 60 days when an SSF component is declared inoperable to be unacceptable given the reliance placed on the SSF for mitigation of design basis events.

Because the SSF is the only assured means for hot shutdown through the steam generators for all three Oconee units following a seismic event, we believe the proposed TSs for the SSF should be revised to incorporate an LCO comparable to that in the Standard Technical Specifications (STS) for the emergency feedwater system and other safety-related systems. Therefore, as a minimum, SSF components should be allowed to remain inoperable for no more than seven (7) days; otherwise, the units should be shutdown in order to ensure adequate SSF availability for the purpose of shutdown following design basis events.

In addition to the above considerations, we reviewed the Oconee Probabilistic Risk Assessment (PRA) and it indicates that the availability of the SSF is very important to risk. Although each of the Oconee units has two electric motor driven and one turbine driven emergency feedwater pump trains, the Oconee PRA review also indicates that the SSF is the only viable safety system for plant shutdown to preclude a postulated core damage accident following a seismic event of low to moderate intensity since seismically induced flooding can disable all three emergency feedwater system trains in each unit normally relied on for emergency decay heat removal. From the Oconee PRA, the core damage frequency contribution involving SSF failures following seismically induced flooding is estimated to be 2E-5 per reactor year. The Oconee PRA has given a credit of 0.1 for the total failure probability of the SSF. We are not aware of the failure probability contribution assigned to the test and maintenance unavailability of the SSF at Oconee because the above details are not documented in any of your submittals. Considering the large uncertainty associated with the seismic frequency estimates and high conditional offsite consequences following the seismic sequences, it is reasonable and prudent to reduce the SSF unavailability contribution from test and maintenance activities and, therefore, reduce the resulting core damage frequency contribution. Therefore, in the absence of a supporting probabilistic justification, a seven day LCO appears to be reasonable.

Based on the above, we conclude that an allowable outage time of no longer than seven days per the STS rather than the 60-day period proposed by you is appropriate for the SSF given its importance to plant safety. However, your may propose an alternative LCO if adequate justification can be provided as to why a relaxed outage time is needed, and a supporting probabilistic argument can be based on the SSF contribution to risk. In the interim, we request that you revise the current SSF surveillance procedures to identify a seven day LCO when SSF components are inoperable. We request that you respond with 45 days of the date of this letter.

The contents of this letter affect fewer than 10 respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

/S/

John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B

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John F. Stolz, Director
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