



Southern Nuclear Operating Company

the southern electric system

J. D. Woodard
Vice President
Farley Project

February 26, 1993

Docket Nos: 50-348
50-364

U. S. Nuclear Regulatory Commission
Attn: Document Control
Washington, D. C. 20555

Joseph M. Farley Nuclear Plant - Units 1 and 2
Unresolved Item 348, 364/92-17-07
Auxiliary Building Battery Voltage

Gentlemen:

The NRC Inspection Report Numbers 50-348/92-17 and 50-364/92-17 included Unresolved Item 348, 364/92-17-07, "Auxiliary Building Battery Voltage is Marginal for Present Load Requirements." A significant contributor to the NRC concern was described as follows:

"The TS and FSAR imply two hours of adequate battery voltage in the absence of other DC sources. The licensee's calculations demonstrated only a one minute capability. Licensee personnel stated that this was sufficient in that, within one minute of a loss of offsite power, EDGs would be in operation providing DC power through the chargers."

In response to this NRC concern SNC stated:

"It should be noted that although the batteries are only required to supply accident loads for one minute without charger support, they are actually capable of supplying adequate voltage to all accident loads for approximately one hour based on preliminary calculations performed during the EDSFI."

The preliminary calculations mentioned above have been formalized. The results of the calculations indicate that should the battery chargers fail to operate or sequence onto the emergency diesel generators subsequent to their start in response to an accident, the Unit 1 batteries are capable of supplying required accident loads for 2 hours and the Unit 2 batteries are capable of supplying required accident loads for 1 hour. The calculation documents that considerable time is available to manually load a battery charger should the load sequencer fail or to realign the swing battery charger should a charger fail. It should be noted that since the Class 1E chargers are automatically loaded onto the diesel generators in response to an accident, one emergency train will be available during the time the operator is restoring charger support to the opposite train.

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The decline in battery voltage in response to the loading described above is gradual such that most loads would continue to receive adequate voltage well past the 2 hour period mentioned for Unit 1 and the 1 hour period mentioned for Unit 2. In fact, calculations demonstrate that all required Unit 2 loads would receive adequate voltage for the 2 hour period with the exception of 2 breakers. Manual action could be taken to exercise these breakers in response to an accident if necessary.

In order to establish additional margin in the Unit 2 battery capability, SNC plans to modify the two breaker circuits that have been identified as the most limiting with regard to voltage drop. This modification is presently scheduled for the Unit 2 Fall 1993 refueling outage. Implementation of this modification will extend the time that the Unit 2 batteries can provide adequate voltage under the aforementioned scenario to at least 2 hours.

If there are any questions, please advise.

Sincerely,

SOUTHERN NUCLEAR OPERATING COMPANY



J. D. Woodard

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