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 FACIL: 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co. 05000269
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 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co. 05000287

AUTH. NAME AUTHOR AFFILIATION
 TUCKER, H. B. Duke Power Co.
 RECIPIENT NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation, Director
 STOLZ, J. F. Operating Reactors Branch 4

SUBJECT: Provides addl info re availability of steam generator cooling water in event of tornado strike, per NRC 820408 safety evaluation. Configuration, as modified by standby shutdown facility, acceptable.

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DUKE POWER COMPANY

P. O. BOX 33189

GENERAL OFFICES

422 SOUTH CHURCH STREET

CHARLOTTE, N. C. 28242

TELEPHONE: AREA 704
373-4011

August 6, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

This letter provides additional information relating to the availability of steam generator cooling water in the event of a tornado strike at the Oconee Nuclear Station, as agreed previously and as noted in the Safety Evaluation Report transmitted by Mr. P. C. Wagner's letter of April 8, 1982.

Steam generator cooling water can be provided from five sources for shutdown-cooling purposes: the main feedwater system or emergency feedwater system for a particular unit, the emergency feedwater system from either of the other two units, the low-head auxiliary service water system (specifically designed for tornado protection), and, when completed, the standby shutdown facility (SSF) high-head auxiliary service water system.

The Staff has expressed some concerns relative to the ability of the existing low-head auxiliary service water system to function; these concerns stem primarily from the low shutoff head of the auxiliary service water pump necessitating blowdown of the steam generators. We continue to believe that there is no new information that indicates that the auxiliary service water system is incapable of fulfilling its design function. In particular, it should be noted that blowdown of the steam generators would not be necessary under the conditions of interest. In the event of tornado induced loss of both the main and the emergency feedwater system, the steam generator inventory would be expected to be boiled off within a few minutes. Ample time would be available for opening the manual dump valves on at least one steam generator to maintain a low back pressure for the auxiliary service water pump; using the manual dump valves to blow down the steam generators would not be necessary.

Aoo!

In order to determine the degree of reliance placed on the auxiliary service water system, a bounding evaluation of the frequency at which a tornado might be expected to damage the emergency feedwater system and the SSF auxiliary service water piping and controls, where they enter the reactor building through the west penetration room, was performed. The evaluation indicated that the frequency of such an occurrence is no higher than approximately 7.5×10^{-5} /yr for any particular Oconee unit. The evaluation included some potentially significant conservatisms, including essentially no credit for ability of emergency


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feedwater equipment in the turbine building to survive, although most of this equipment is located at the basement level and would reasonably be expected to escape damage.

Therefore, we consider that the configuration, as modified by the addition of the SSF, provides adequate assurance of the availability of a source of steam generators cooling water.

Very truly yours,



H. B. Tucker, Vice President
Nuclear Production Department

RLG/php

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Mr. Philip C. Wagner
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. W. T. Orders
NRC Resident Inspector
Oconee Nuclear Station