

NOV 23 1972

R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
Directorate of Licensing

OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

Plant Name: Oconee Nuclear Station
Licensing Stage: OL
Docket Numbers: 50-269/270/287
Responsible Branch and Project Manager: PWR #4, I. A. Peltier
Requested Completion Date: N/A
Applicants Response Date Necessary for Completion of Next
Action Planned on Project: N/A
Description of Response: Final Evaluation - Mechanical
Engineering Branch
Review Status: Partial

The Final Evaluation - Mechanical of the FSAR for the
subject plant, which was prepared by the MEB, Directorate
of Licensing, and dated September 8, 1970 and revised
September 25, 1972, has been further revised to reflect
our evaluation of four Babcock & Wilcox Reports submitted
after the recent failure which occurred during the hot
functional test of Oconee-1. It should be noted that
Oconee-1 cannot be qualified as the prototype plant until
valid vibration predictions are submitted.

Original signed by
D. F. Lange

R. R. Maccary, Assistant Director
for Engineering
Directorate of Licensing

cc: S. H. Hanauer
J. Hendrie
A. Giambusso
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PWR Branch Chiefs
D. Lange
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Distribution
Docket File (50-269/270/287)
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FINAL EVALUATION - MECHANICAL
OCONEE NUCLEAR STATION, UNITS 1, 2 & 3
DOCKET NOS. 50-269/270/287

The Final Evaluation from the Mechanical Engineering Branch, Directorate of Licensing dated September 8, 1970 and revised September 25, 1972, remains unchanged except for the revision to the specific section below:

VIBRATION CONTROL

The text of this section remains unchanged except for the following addition at the end of the section:

Subsequent to the failure which occurred during the hot functional test of Oconee-1, Babcock and Wilcox submitted the following Topical Reports:

- BAW-10037 - "Reactor Vessel Model Flow Tests"
- BAW-10038 - "Oconee Internals Vibration Test Program"
- BAW-10050 - "Evaluation of Oconee Reactor Component Failure"
- BAW-10051 - "Design of Internals for Flow Vibration"

In the process of reviewing the failure, we have evaluated the above reports. We concur with the conclusions set forth in BAW-10050 that the recommended design modifications on the internals have been based upon a conservative application of the response and failure data from Oconee-1. We concur with the conclusions set forth in BAW-10037 that the reactor vessel scale model flow test approach used will verify the core flow distribution. However, due to a lack of valid flow forcing functions, B&W has not yet demonstrated a dynamic analysis to predict the structural behavior of reactor internals when subjected to transient loadings. The redesigned internals are accepted for Oconee 1 pending satisfactory completion of the new hot functional preoperation tests. The results obtained from the preoperational test will be evaluated prior to licensing to confirm this acceptability.

However, the lack of valid vibration predictions precludes our acceptance of BAW-10038 and BAW 10051 and the designation of Oconee-1 as a prototype plant.