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54-424,425

Georgia Power Company
✓ ATTN: Mr. R. J. Kelly,
Executive Vice President
P. O. Box 4545
Atlanta, Georgia 30302

Gentlemen:

SUBJECT: VOGTLE READINESS REVIEW - INTERIM REVIEW QUESTIONS - MODULE
NO. 4 "MECHANICAL EQUIPMENT, PIPING, AND OTHER COMPONENTS"

We have completed an initial review of the subject module which you submitted to us on June 25, 1985 for evaluation. As a result of this initial review, three Branches of the Office of Nuclear Reactor Regulation have generated questions and comments which need clarification and a written response. These questions and comments are as follows:

Mechanical Engineering Branch (MEB)

MEB has completed an initial review of the Vogtle Readiness Review Module No. 4 "Mechanical Equipment, Piping and Other Components," with emphasis on the Commitments matrix in Section 3.4 of the module for which NRR has the primary review responsibility. The MEB staff has determined that several commitments made by the applicant during the process of the FSAR review are not included in the commitments matrix. These missing commitments are listed below. The applicant is requested to include these commitments in Module No. 4 unless their exclusion can be specifically justified. Some of the items included in the enclosed list of missing commitments may be covered in forthcoming modules for Pipe Supports and NSSS. MEB assumes that commitments relating to the Control Rod Drive Systems, and the Reactor Internals will be covered in the forthcoming Module No. 16.

(A) COMMITMENTS IDENTIFIED IN THE FSAR AND SER AND NOT FOUND IN THE
COMMITMENTS MATRIX

- 1.** Dynamic analysis of Reactor Internals under faulted conditions (including asymmetric LOCA loads).
2. Seismic subsystem analysis of equipment.
3. Methods of analysis for pipe whip and jet impingement effects for non-RCL piping. (FSAR 3.6.2.2 and FSAR 3.6.2.1).
4. Analytical methods and design criteria for pipe whip restraints (FSAR 3.6.2.3.3).
- 5.** List of transients used in the design and fatigue analysis of all Class 1 and CS components, supports and reactor internals (FSAR 3.9.1).

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6. Description and verification of all computer programs used in analysis of seismic Category I Code and non-Code items (FSAR 3.9.1).
7. Loading Combinations, system operating transients, and design stress limits for Class 1, 2, & 3 components, components supports and Core Support structures (FSAR 3.9.3).
- 8.** Design and installation criteria applicable to the mounting of pressure relief devices for NSSS components.
9. Commitment to respond to TMI-2 Action Plan Item II.D.1, "Performance Testing of Pressure Relief Devices" in accordance with the schedule of NUREG-0737.

(B) COMMITMENTS MADE IN RESPONSE TO THE FOLLOWING NRR QUESTIONS:

1. Q210.1 High energy pipe break analysis results (as built condition) to be provided.
2. Q210.2 High energy pipe break effect analysis results (pipe whip and jet impingement) to be submitted.
3. Q210.3 Primary and secondary stress intensity ranges and cumulative usage factors, at design break locations in RCL to be provided.
4. Q210.27 Dynamic increase factor for steel in the design of pipe whip restraints.
5. Q210.28 Break propagation and rise times for jet thrust considered in postulated pipe breaks.
6. Q210.29 Limited area circumferential and longitudinal breaks.
7. Q210.31 Postulation of breaks in nonnuclear high energy piping that is not seismically qualified at those locations that provide the greatest effect on an essential component or structure.
8. Q210.32 One hundred percent volumetric inservice examination of all pipe welds in the break exclusion regions.
9. Q210.35 Design Considerations used to assure that dynamic effects
& Q210.36 associated with water/steam hammer in feedwater and main steam lines have been minimized.

- 10.* Q210.40 Maximum alternating stress intensities induced by steady
 &Q210.41 state and dynamic effect testing (during preoperational or
 start up testing).
- 11.**Q210.42 Methodology used to assure that ASME Code Class 1, 2, and 3
 piping systems in the NSSS scope are capable of performing
 their safety function under all plant conditions.
- 12. Q210.43 Consideration of dynamic effects of LOCA in the design of
 ASME Class 2 and 3 components and supports.
- 13. Q210.44 Design Considerations used for safety and relief valve loads
 and piping reactions.
- 14. Q210.45 Design criteria for component supports.
- 15. Q210.46 The Document/Feature column in the CM does not completely
 conform to the response to this question.
- 16. Q210.47 Preservice inspection and preoperational testing of snubbers.
- 17. Q210.48 Periodic leak testing of pressure isolation valves.
- 18. Q210.49 Inservice testing (IST) of pumps and valves.

* The commitment to the responses to Q210.40 and 210.41 may be applicable to Module 3, "Initial Test Program".

** The commitment to the responses to Items A.1, A.5, A.8 and Question 210.42 may be applicable to Module 16, "NSSS".

Containment Systems Branch

On page 32, Commitment Item Nos. 4188 and 4189, identify the commitment source as NRC questions Q 480.14, and Q 480.24, and the commitment subject as NSCW system design and construction. Q 480.14 and Q 480.24 relate to force and moments acting on the reactor vessel, and containment isolation valves that will not be type C tested. These two questions have nothing to do with the NSCW system. Please provides clarification of this issue.

Auxiliary Systems Branch

As a result of our review, we have identified the following systems which the applicant has ommitted:

- 1. Auxiliary component cooling water system (FSAR Section 9.2.8)
- 2. Essential chilled water system (FSAR Section 9.2.9)

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3. Compressed air system (FSAR Section 9.3.1)
4. Equipment and floor drainage system (FSAR Section 9.3.3)

The applicant has made certain commitments in the FSAR for these systems related to seismic classification, power supplies and cleanliness of air. We feel the above systems should be included in this module and the FSAR commitments for each system should be identified, unless such commitments will be included in other modules, or an appropriate justification for their not being included is provided.

Power Systems Branch

The Power Systems Branch has the following comment on item number 4822, commitment Section FSAR 8.3.1.1: The remark for this item should state, "Except for valves provided by NSSS Supplier, which are specified for 80 percent of the nameplate rating". This will clarify that the NSSS supplied valves are capable of starting at 80% voltage as opposed to non-NSSS supplied valves which are capable of starting at 75% voltage.

Please review these comments and questions and provide a written response. Your input is requested to be received on or before September 9, 1985. In view of NRC review schedule requirements, we also request a telecon for clarification and explanation of these questions as soon as you are able to respond. Please coordinate this telecon with W. H. Rankin (404-221-4197) of my staff.

Your assistance in responding to this request for additional information is appreciated.

ORIGINAL SIGNED BY
VIRGIL L. BROWNLEE

Roger D. Walker, Director
Division of Reactor Projects

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and General Manager Vogtle Project
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cc: (Continued on page 5)

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