



UNITED STATES
ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20545

OCT 11 1972

Project No. 465

Roger S. Boyd, Assistant Director for Boiling Water Reactors, L

ACCEPTANCE REVIEW--GRAND GULF STATION, UNITS 1 AND 2

Plant Name: Grand Gulf Station, Units 1 and 2

Licensing Stage: Acceptance Review

Project Number: 465

Responsible Branch & Project Leader: BWR-1:G.Owsley

Requested Completion Date: October 11, 1972

Applicants response date necessary for completion
of next action planned on project: N/A

Description of response: N/A

Review Status: Complete

We have completed our acceptance review of the Containment System (Section 6.2) of the proposed application for the Grand Gulf Nuclear Station, Units 1 and 2. The applicant proposes the GE Mark III containment system reviewed by us. Many aspects for which we considered needed further information, remain the same in the application.

The Grand Gulf containment design does not have provisions to maintain hydrogen concentrations below the guidelines of Safety Guide 7 using the Guide's assumptions of a 5% metal-water reaction. Based on our review of Mark III, we have concluded we cannot at this time find this approach acceptable.

Our review of the remaining information contained in the application indicated that the applicant has not completed his analysis of the subcompartment pressure capability or selected a combustible gas control system, both of which are indicated in the application to be provided in February 1973. In addition, the applicant has not presented any additional testing information to further demonstrate the new pressure suppression concept or provided a description of the drywell/containment vacuum breaker system with supporting analysis. Because of the above, we believe that a timely review of the containment system for this application cannot be started at this time. Enclosed you will find these and other comments on the application; however, until the containment system is to include provisions to accommodate the

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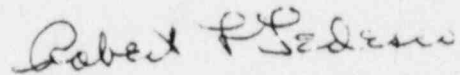
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design parameters given in Safety Guide 7, comments in general are only to indicate the status of the preliminary application review.

We have expended two man-days of effort on this review.



Robert L. Tedesco, Assistant
Director for Containment Safety
Directorate of Licensing


Enclosure:
As stated

cc: w/o encl.
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w/encl.
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ACCEPTANCE REVIEW
GRAND GULF NUCLEAR STATION
UNITS 1 AND 2

6.2 Containment Systems

- 6.2.1.1 The ventilation, combustible gas control and containment isolation system's P&Id's should be completed to indicate pipe and valve sizes. Design specifications for the seats of containment valves using resilient seat material should also be provided.
- 6.2.1.2 The analysis of subcompartment differential pressure considerations has not been completed.
- 6.2.1.3 (1) The net free drywell and containment volumes, vent configuration and RHR heat removal characteristics should be provided.
- (2) The containment/auxiliary building vacuum breaker systems should be described with supporting analysis for sizing the system.
- (3) Additional supporting analysis should be provided to establish that the rupture of a main steam line results in the most severe loading of the drywell and containment. The analysis and assumptions of a recirculation line break should also be provided to confirm the foregoing claim.
- (4) A discussion should be provided describing the flooding of the drywell floor following an accident. Suppression pool level changes should be described.
- (5) A description of the drywell/containment vacuum breaker system should be provided including (a) system diagram, (b) valve details, (c) analyses of reactor coolant break size vs.
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allowable bypass area, and (d) a discussion of the considerations given to bypass paths due to drywell cracking and valve failures. Postoperational drywell leak tests should be considered and described by the applicant.

6.2.2 Containment Heat Removal System

- (1) The suppression pool is the only heat sink for heat removal following a loss-of-offsite power (without a loss-of-coolant accident). The design features and evaluations provided for this condition should be described
- (2) Safety Guide 1 should be addressed.
- (3) The sensitivity of requiring starting of the RHR system in 10 minutes should be discussed.

6.2.4 Containment Isolation System

- (1) Safety Guide 11 should be addressed.

6.2.5 Combustible Gas Control

- (1) The selection of the type of system has not been completed. We will require a non-purge system.
- (2) Head and capacity parameters and environmental capabilities should be provided for the fans.