

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Order 50-263
PDR

SEP 26 1975

K. R. Goller, Assistant Director
for Operating Reactors
Division of Reactor Licensing

REVIEW GE TECHNICAL JUSTIFICATION OF HYDRODYNAMIC LOADS FOR MARK I
CONTAINMENTS (TAR-1843 - ORB-3-90)

Plant Names: Oyster Creek Nuclear Generating Station, Nine Mile Point Unit 1,
Pilgrim 1, Dresden Units 2 and 3, Millstone Unit 1, Quad Cities
Units 1 and 2, Monticello, Peach Bottom Units 2 and 3, Browns
Ferry Units 1 and 2, Vermont Yankee, Hatch Unit 1, Brunswick
Unit 2, Duane Arnold Energy Center, Cooper and Fitzpatrick.

Docket No.s: 50-219, 50-220, 50-237, 50-245 & 249, 50-254, 50-259 & 260,
50-263, 50-265 & 271, 50-277 & 278, 50-293, 50-298, 50-325,
50-331, 50-321, and 50-333.

Responsible Branch: Operating Reactors Branch #3 (ORB3)

Contact: Walter A. Paulson

Technical Review Branches: Containment Systems Branch, Structural Engineering
Branch, and Mechanical Engineering Branch

Target Completion Date: September 30, 1975

Status of Review: Awaiting Information

In accordance with your request, the Mechanical Engineering Branch, Division of Technical Review, has reviewed background information submitted by General Electric (GE) up to and including the letter to A. Giambusso, dated July 31, 1975, from I. F. Stuart regarding the Mark I containment pool swell phenomenon. It appears that, in the short term program, the owners and their collective agent, namely GE, are mainly concerned with the integrity of Mark I containment structural elements subjected to loads associated with LOCA-initiated pool swell and subsequent events. Piping and other mechanical components have not been thoroughly investigated for the same types of loading considered. Hence, there is not sufficient information to indicate that the functional operability of piping and mechanical components required for emergency core cooling will not be impaired.

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Attached is a list of additional information required before the MEB Staff can complete its review of the integrity and functional operability of piping and mechanical components which could be affected by pool swell dynamic loads. We anticipate that these questions will be addressed prior to the initiation of the long term program.

M. Kehnemuyi for.

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for Engineering
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cc w/encl:

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REQUEST FOR INFORMATION

MECHANICAL ENGINEERING BRANCH

1. Provide a list of piping and mechanical components which could be subjected to suppression pool hydrodynamic loadings or loadings from operation of the primary system pressure relief valves, including detailed drawings and functional description of such piping and components.
2. Provide a description of methods and procedures used to define the pool dynamic loads and relief valve actuation loads acting on the listed piping and components.
3. Provide a description of methods and procedures, either by analysis or by testing, being used to ensure design adequacy of the listed piping and components under pool dynamic loads or relief valve actuation loads.
4. Provide a description regarding how the pool dynamic loads or valve actuation loads being concurrently considered and combined with other operation or accident loads acting on the listed piping and components.
5. Identify design limits used for the listed piping and components under pool dynamic or relief valve actuation loads. If analysis or testing has been done, a summary of analysis or testing results and their comparison with design limits should be provided. If analysis or testing has not yet been done, a description of the future program to perform such testing or analysis should be provided.