



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

September 9, 1976

DOCKETS NOS.: 50-219, 50-220, 50-237, 50-245, 50-249, 50-254, 50-259,
50-260, 50-263, 50-265, 50-271, 50-277, 50-278, 50-293,
50-296, 50-298, 50-321, 50-324, 50-325, ~~50-331~~, 50-333,
50-341, 50-354, 50-355, and 50-366.

LICENSEES: Boston Edison Company, Carolina Power & Light Company,
Commonwealth Edison Company, Detroit Edison Company, Georgia
Power Company, Iowa Electric Light & Power Company, Jersey
Central Power & Light Company, Nebraska Public Power
District, Niagara Mohawk Power Corporation, Northeast Nuclear
Energy Company, Northern States Power Company, Philadelphia
Electric Company, Power Authority of the State of New York,
Public Service Electric and Gas, Tennessee Valley Authority,
Vermont Yankee Nuclear Power Corporation.

FACILITIES: Oyster Creek Nuclear Generating Station, Nine Mile Point
Unit 1, Pilgrim 1, Dresden Units Nos. 2 and 3, Millstone
Unit No. 1, Quad Cities Units Nos. 1 and 2, Monticello, Peach
Bottom Units Nos. 2 and 3, Browns Ferry Units Nos. 1, 2 and
3, Vermont Yankee, Hatch Units Nos. 1 and 2, Brunswick Units
Nos. 1 and 2, Duane Arnold Energy Center, Cooper, Fitzpatrick,
Enrico Fermi Unit No. 2, and Hope Creek Units Nos. 1 and 2.

SUMMARY OF MEETING HELD ON AUGUST 19, 1976 WITH REPRESENTATIVES OF THE
MARK I OWNER'S GROUP

On August 19, 1976 a meeting was held in Bethesda with representatives
of the Mark I Owner's Group, General Electric Company (GE), and their
technical consultants. The purpose of this meeting was to discuss the
Mark I Containment Long Term Program (LTP). Enclosure 1 is a list of
the meeting attendees.

SUMMARY

D. Galle, Commonwealth Edison Company and Chairman of the Mark I Containment
Owner's Group, stated that the Owner's Group was prepared to discuss the
individual LTP activities and to describe their overall strategy for conducting
the LTP. He further stated that the Owner's Group was carrying on three
parallel efforts (identification of load mitigating devices, development
of structural fixes, and load definition through testing and analytical models)
simultaneously in order to ensure timely completion of the LTP.

B. Sobon, GE, reviewed the history of GE's Mark I Containment design efforts from the Bodega Bay testing program to the present time. He emphasized that, although more work is required prior to the final resolution of the current Mark I Containment design concerns, one should not lose perspective of the progress which has already taken place.

P. Ianni, GE, described the individual LTP activities and the overall LTP strategy. Enclosure 2 contains the slides used in his presentation. He stated that the LTP schedule would result in the completion of the LTP plant-unique analyses by December 1978. The NRC staff expressed the following concerns related to the LTP content and schedule:

1. The testing programs for definition of steam loads for the existing straight downcomer design (as opposed to a downcomer with load mitigation device) should be expedited to assure that structural fixes may be implemented at the earliest possible date on those facilities which will not require load mitigating devices.
2. The program for definition of steam loads for potential load mitigating devices should be expedited to assure that a device is chosen and is available for installation at the earliest possible date.
3. The effects of fluid-structural interaction on the torus shell due to safety-relief valve (SRV) actuation should be investigated for individual plant torus shell thicknesses and for plant-specific SRV locations.
4. Fluid-structural interaction effects on the torus shell due to LOCA loads should be investigated.
5. Post-LOCA operability of pumps and valves in piping which is attached to the torus should be evaluated in the LTP.

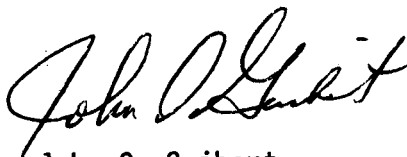
With respect to the first two NRC staff concerns mentioned above, D. Galle stated that the Owner's Group would (1) conduct small-scale, open-tank screening tests of potential load mitigating devices with steam in early 1977, (2) review the potential for accelerating the small-scale, closed-tank, steam testing program, and (3) would complete the design evaluation of a large-scale steam testing facility by October 1976.

B. Kiang, SRI, presented additional information about the 1/12 scale Three-Dimensional Testing Program to address the NRC staff's concerns related to (1) the selection of 1/12 scale for the testing facility, (2) the selection of a straight cylinder torus section for the testing facility, and (3) the adequacy of the instrumentation for the testing facility. Enclosure 3

contains the slides used in his presentation. The NRC staff expressed concern that the criteria utilized in the selection of the scale for the three-dimensional testing facility did not include an instrument error analysis. In addition, the NRC staff expressed concern that the straight cylinder torus section would not adequately represent the effects of the maldistribution of water mass or the discontinuity effects at the mitered joints in an actual torus design. The NRC staff stated that the abovementioned concerns would have to be accounted for in evaluating the test data and that conservative adjustments to the data would be required. Representatives of the Owner's Group acknowledged the NRC staff's position on this matter and stated that they realized that a more sophisticated, larger scale, test facility may be required in order to take full credit for the three dimensional load mitigating effects demonstrated by the 1/12 testing program. They further stated that their current intent is only to confirm the "20% value" for three-dimensional load reducing effects (i.e., further justify the use of a correction factor, "CF") which was utilized in the STP plant unique analyses.

W. Cooper, Teledyne, presented the proposed schedule for development of the LTP structural acceptance criteria. Enclosure 4 contains the slides used in his presentation. The NRC staff stated that a close working relationship between the NRC and the Owner's Group would be essential to assure that the proposed schedule is met.

The Owner's Group presented additional information on specific aspects of the LTP in response to the NRC's request by letters to each Mark I licensee dated August 11-13, 1976. Enclosure 5 contains the information presented. With respect to the response to concern #10, the Owner's Group stated that the potential for combination of SRV loads with LOCA loads should be considered "mechanistically". The NRC staff stated that we would inform the Owner's Group of our position on this matter within the next two or three weeks.



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*NRC PDR
*Local PDR
*Docket Files *50-351*
NRR Rdg
ORB#3 Rdg
*B. C. Rusche
*E. G. Case
*V. Stello
*K. R. Goller
D. Eisenhut
T. J. Carter
*J. Reece
*D. L. Ziemann
*G. E. Lear
*R. W. Reid

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*OI&E (3)
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NRC Participants
*ACRS (16)
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J. R. Buchanan
D. Thompson
*W. Paulson

*with enclosure

9/9/76
MEMO