APR 29 1981

Docket No. 50-271

Mr. Robert L. Smith
Licensing Engineer
Vermont Yankee Nuclear Power
Corporation
1671 Worcester Road
Framingham, Massachusetts 01701

SUBJECT: IMPLEMENTATION OF THE MARK I CONTAINMENT LONG-TERM PROGRAM

Reference: Letter from R. L. Smith VYNPC to D. G. Eisenhut USNRC, dated February 23, 1981 Subject: TORUS Modification at Vermont Yankee

The purpose of this letter is to reiterate the purpose and scope of the Mark I program, to provide clarification of the NRC Order and forwarding letter of January 13, 1981, and to respond to your letter referenced above.

As you are aware, the purpose of the Mark I containment long-term program is to define the design basis loads that are appropriate for the anticipated life of each BWR Mark I facility and to restore the original intended design safety margins for each Mark I containment system. Extensive experimental and analytical programs conducted by the Mark I Owner's Group resulted in load definition and structural assessment techniques, as set forth in the "Mark I Containment Program Load Definition Report," NEDO-21888, dated December 1978, and the "Mark I Containment Program Structural Acceptance Criteria Plant Unique Analysis Application Guide," NEDO-24583-1, dated October 1979. The methodology in these reports as modified by the staff's Acceptance Criteria (described in NUREG-0661) provides a conservative and uniform basis for determining if any structural or other plant modifications are needed to restore the original intended margin of safety in the containment design.

Although the plant-unique analysis work has been underway for some time, the staff recognizes there are still analyses that must be completed before all of the plant modification designs can be confirmed. The current schedules for completion of the Mark I modifications already reflects revised commitments by most licensees in anticipation of additional modifications that are typically associated with supports for piping attached to the suppression chamber and the supports on internal structures. Most schedules included consideration of the amount of difficulty expected to be encountered in transferring the techniques developed in the Mark I long-term program to the plant unique analyses.

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With due regard to these uncertainties, the schedules reflected in the Mark I Orders were already "revised" schedules and were approved by the Commission in order to ensure a timely completion of this program and restoration of the margins of safety in the containment design. We do not believe that it is appropriate to modify such completion dates until schedular uncertainties have been quantified and until there is a justifiable basis for establishing a new revised schedule. Every reasonable effort should be made to achieve the completion dates established by the Order before the staff will consider extensions to those completion dates.

In addition, several licensees have requested staff review of plant-specific applications of the generic Mark I criteria. We do not believe that such reviews are necessary. It is our opinion that the generic Mark I criteria, as described in NUREG-0661, provides sufficient guidance to conduct the plant-unique analyses and that only our post-implementation audits of the plant-unique analyses are required. In the event that an exception to the generic criteria must be taken to achieve the completion schedule, you should advise the staff of any exceptions by letter as soon as practical, stating your sound engineering basis for that exception, and you should describe the exception in detail in the plant-unique analysis report. We intend to review such exceptions only in our post-implementation audit.

If you believe further consideration of your completion schedule is warranted after completion of the plant-unique analysis, you should formally submit a detailed schedule that includes the schedule for design, procurement, and installation of planned plant modifications, the schedule for plant outages and fuel burnup estimates, a description of the resources devoted to Mark I-related activities, and a qualitative estimate of the relative safety significance of the modifications that have not yet been installed.

Sincerely,

Original signed by
Darrell G. Eisenhut

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

cc: See next page

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