

GENERAL ELECTRIC

NUCLEAR ENERGY
PROJECTS DIVISION

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MFN-172-79

June 26, 1979

U. S. Nuclear Regulatory Commission
Division of Operating Reactors
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

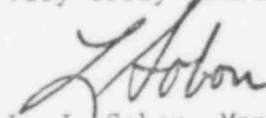
Attention: Mr. C. I. Grimes, Task Manager
Mark I Containment Long-Term Program

Gentlemen:

SUBJECT: MARK I CONTAINMENT ACTIVITY REVIEW, MAY 1979

The purpose of this letter is to forward ten (10) copies of a May 1979 Program Activity Review for your information. This review lists the meetings held and provides a brief activity summary for the month. This information is provided to you on behalf of the Mark I Owners Group. The document is comprised of information extracted from selected sections of a monthly report prepared by General Electric for the Mark I Owners Group. Sections on contract and billing status have been removed.

Very truly yours,



L. J. Sobon, Manager
BWR Containment Licensing
Containment Improvement Programs

LJS/d

Enclosures (10)

cc: L. J. Gifford (GE Bethesda)

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MARK I CONTAINMENT ACTIVITY REVIEW

MAY 1979

GENERAL ELECTRIC COMPANY

San Jose California

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I. MEETING SUMMARY

<u>Date</u>	<u>Attendees</u>	<u>Place</u>	<u>Meeting Concern</u>
5/1/79	GE/NUTECH	San Jose	Review of FSTF T-Quencher Test Objective and Status of Test Specification
5/3/79	GE/TES/NUTECH/Bechtel	Waltham, Mass	Plant Unique Application of Condensation Oscillation and Chugging Loads
5/4/79	NRC/GE	Bethesda	Working Group Pool Swell Meeting
5/7/79	GE/NUTECH/TES	San Jose	S/RV Frequency Tolerance Band
5/8/79	GE/NUTECH	San Jose	Resolution of TRAC Comments on Thermal Mixing Model Report - Task 7.5.2.3
5/11/79	GE/NUTECH	San Jose	Lateral Loads
5/11/79	GE/NUTECH/TES	San Jose	Program Overview
5/15/79	GE/NUTECH/TES/EDS	San Jose	Lateral Loads
5/15/79	GE/NUTECH	San Jose	FSTF T-Quencher Temperature Preliminary Test Specification Review
5/17/79	NRC/GE	Bethesda	Submerged Structures, C/O and Chugging and Lateral Loads
5/22/79	GE/NUTECH	San Jose	Water Clearing Thrust Loads on T-Quencher Arms
5/23/79	GE/NUTECH/EDS	San Jose	Lateral Loads
5/24/79	GE/NUTECH	San Jose	FSTF T-Quencher Preliminary Test Specification
5/30/79	NRC/TRAC/GE/NUTECH	Bethesda	LDR S/RV Working Group Meeting
5/31/79	TRAC/GE	Boston	Various Mark I Program Topics

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TASK SUMMARY
MAY 1979

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II. TASK SUMMARY

Task 7.5.2 - T-Quencher Thermal Mixing

The T-Quencher Thermal Mixing Test report - Task 7.5.2.2 (NEDE-24542-P) was transmitted to the Utilities and the NRC on May 23, 1979.

Task 8.2 - NRC Licensing Support - S/RV Questions

A final NRC/TRAC/GE meeting was held on this subject in Bethesda, Maryland on May 30, 1979. The two major topics of discussion were the LDR S/RV frequency tolerance band and the PECO 1/4-scale S/RV test/methodology for off-centerline T-Quenchers. It was agreed in this meeting that the tolerance to be added for first actuation analytical model predictions will be $\pm 25\%$, and that for second actuation predictions the tolerance will be $\pm 40\%$. The previous values were $\pm 15\%$ and $\pm 30\%$, respectively. The need for the reevaluation of the tolerance band had been identified in the previous working group meeting on this subject.

The NRC reacted favorably to the use of the PECO 1/4-scale test results and associated methodology for prediction of Peach Bottom S/RV loads for off-centerline T-Quencher loads. With the successful conclusion of the discussion on these two topics, it is anticipated that no additional S/RV working group meetings will be required with the NRC.

Task 9.2.3 - 1/4-Scale Off-Centerline T-Quencher Test

The test report (NEDE-24640-P) on this activity was transmitted to the Utilities and the NRC on May 31, 1979. The application of this data to off-centerline S/RV load definition was discussed in an LDR S/RV Working Group meeting with the NRC on May 30, 1979. The NRC provided tentative concurrence with the test results and load definition methodology in that meeting. herefore, no additional activities are envisioned for this task.

Task 9.2.4 - FSTF T-Quencher Temperature Test

The draft test specification for the proposed high temperature T-Quencher condensation tests in the FSTF was reviewed with TRAC in Boston on May 31, 1979. The Utility direction received following review of the draft specification requires a revision to the test specification. The PIC review of the proposed final test specification, test plan, cost and schedule is now eing planned for mid-July 1979 in San Jose.

Task 9.3.2 - Column Load Capacity Evaluation

The initial results of this activity were reviewed in the AE Seminar in Atlanta on April 4, 1979. The corclusion from this review was that there appears to be an advantage in properly classifying the induced moment (primary or secondary) on the top of the torus support columns. The draft report on this activity has been transmitted for TRAC review. Following this review, a code case will need to be initiated to take advantage of the results of this task. The other alternative is to utilize the existing ASME calculational procedures.

II. TASK SUMMARY (CONTINUED)

Task 9.4.2 - Drywell/Wetwell Vacuum Breaker Evaluation

As reported in the FSTF report NEDE-24539-P, Appendix C, Section C.3, the drywell/wetwell vacuum breakers operated during the chugging phase of most test blowdowns. The vacuum breaker operation consisted of partial opening then reclosure of the valve disk on a cyclic basis. The observed operation had no apparent effect on the wetwell free space pressure in any test. As a result of the test observations, an effort was initiated to evaluate the drywell/wetwell vacuum breaker duty cycle performance and reliability for all Mark I plants.

Efforts have been underway within General Electric to assess allowable bypass leakage for a range of assumed plant responses during a postulated LOCA. Also being evaluated are various plant operator actions to provide a more rapid RPV de-pressurization in event of high drywell pressure; this action would reduce the duration of chugging and thereby reduce the potential for vacuum breaker oscillations.

A bounding vacuum breaker duty cycle has been provided to each of the two vacuum breaker vendors for use in the preliminary functional evaluations to assess valve capability. A more realistic duty cycle is now being determined for use in final qualification of the vacuum breakers.