

# GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, 175 CURTNER AVENUE, SAN JOSE, CALIFORNIA 95125  
Mail Code 682 Phone (408) 297-3000, TWX NO. 910-338-0116

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NUCLEAR ENERGY  
DIVISION

BWR PROJECTS DEPARTMENT

May 1, 1975

Mr. R. L. Tedesco  
Assistant Director for  
Containment Safety  
Directorate of Licensing  
Office of Regulation  
U. S. Nuclear Regulatory  
Commission  
Washington, D. C. 20555



Dear Mr. Tedesco:

Subject: SMALL-SCALE SAFETY/RELIEF VALVE LOADS TEST AT MOSS LANDING

The purpose of this letter is to advise you of additional testing that has been undertaken in an effort to obtain information relative to the phenomena associated with what you have called the vent clearing aspect of S/R Valve discharge. This program is a scoping study and the value and potential use of the information obtained will determine the need and schedule for documenting the results from this effort in the form of a topical report.

A 1/8-scale (linear) test facility has been constructed at the General Electric Moss Landing Test Facility located at the Pacific Gas & Electric Company power plant in Moss Landing, California, to study safety/relief valve air clearing loads on the surrounding walls using different devices and concepts for discharge of S/R valves into the containment pool. The objectives of the program, the description of the test facility and test equipment, and progress are outlined in this letter.

## Objectives

The purpose of the test program is to evaluate the extent of S/R valve air clearing load reduction that can be obtained by:

1. Modifying the "rams head" devices used by GE.
2. Modifying the "quencher" devices developed by a European utility.
3. Using continuous steam purge in the downcomer pipe to keep it clear of air.

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Mr. R. L. Tedesco

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May 1, 1975

It is expected that the results of the tests will be useful for screening the effectiveness of various modifications for making qualitative comparisons of various improvements, and for evaluating the feasibility and attractiveness of the steam purge concept.

#### Description of Facility

The facility has been constructed to approximately model reactor S/R valve downcomer pipe system at about 1/8 linear scale. It consists of a constant-pressure saturated steam supply (which can be operated at up to 1100 psi), a quick-opening valve, a 1-1/4-inch downcomer pipe which can be preheated, and a 5-ft. diameter, 15-ft. high discharge tank which can be equipped with area-reduction sleeves. Piping and controls to evaluate the continuous steam purge system are also provided. Instrumentation is provided to measure steam flow rates, and temperatures and pressures in both the downcomer pipe and the discharge tank.

#### Description of Test Program

It is planned to carry out the test program in three stages:

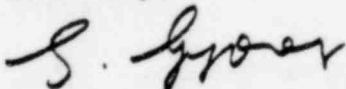
1. Test the GE "rams head" for the reference case; then test proposed modifications to the "rams head" and compare their performance to the reference case.
2. Test a scale model of the "quencher" developed by a European utility for the reference case; then test proposed modifications to this "quencher" and compare them to the reference case.
3. Evaluate the continuous steam purge system (where downcomer pipe is kept clear of air by continuous steam purge) by testing it with a "rams head" and a "quencher" reference design, and comparing its performance to equivalent tests with air clearing from downcomer pipe.

#### Progress of Test Program

The test facility has been completed, and shakedown tests are underway.

You have requested another periodic meeting on the status of GE's Mark III Verification Program during the week of May 12, 1975 in San Jose. If you wish, we would be available to discuss this program further at that time. Please contact me or Mr. Bert Sobon (Ext. 3495) if you have any questions or comments on this material.

Sincerely,



Geza L. Gyorey, Manager  
BWR Licensing  
Mail Code 682, Ext. 2245

cc: L. S. Gifford

cb

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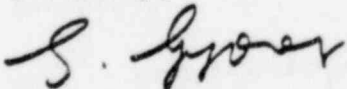
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