

December 21, 1994

APPLICANT: GE Nuclear Energy (GE)

PROJECT: Simplified Boiling Water Reactor (SBWR)

SUBJECT: SUMMARY OF THE VISIT ON OCTOBER 16, 1994, AT THE SOCIETA INFORMAZIONI ESPERIENZE TERMOIDRAULICHE (SIET) PERFORMANCE ANALYSIS AND TESTING OF HEAT REMOVAL SYSTEM (PANTHERS) TEST FACILITY FOR THE SBWR DESIGN

On October 16, 1994, the U.S. Nuclear Regulatory Commission staff visited the SIET facility in Piacenza, Italy to informally observe testing in the PANTHERS passive containment cooling system (PCCS) for GE's SBWR design.

Major observations from the visit are as follows:

Testing in PANTHERS is well under way, and considerable data has been acquired on PCCS heat exchanger performance. The testing is under the supervision of both GE and European Nuclear Energy Association (which is a partner in ownership of SIET Laboratories), and is being performed by a SIET team different from that operating the SPES-2 facility. It is difficult to generalize on the basis of observation of a single test; however, the test operations crew demonstrated the same sort of competence and professionalism in PANTHERS testing as has been noted previously for the operation of SPES-2. The specific test observed involved measurement of heat transfer capability of PCCS unit with a steam-air mixture. In addition to degradation of heat transfer by the non-condensable gas, the water level in the PCCS surrounding the heat exchanger was lowered very gradually to determine the effect of that parameter on heat transfer performance. Very little effect of the lowered water level was observed until a significant fraction (>50 percent) of the tube surface was uncovered. Observation of these activities was very valuable in providing preparation for future test observation when isolation condenser testing is in progress.

This summary was prepared based on input from Dr. Alan Levin.

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Docket No. 52-004

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