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SEP 26 1984

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Docket Nos.: 50-352
50-353

Subject: Limerick Generating Station, Units 1 & 2
Liquid Nitrogen Inerting System

References: 1) I.E. Bulletin No. 84-01, dated 2/3/84
2) GE Service Information Letter No. 402, dated 2/14/84
3) I.E. Information Notice No. 84-17, dated 3/5/84

File: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

The reference documents discuss concerns over the use of liquid nitrogen type inerting systems at BWR plants with Mark I and II containment designs. These concerns were generated by events at Georgia Power Company's Hatch Unit 2, when very cold nitrogen (either liquid or gaseous) was injected into the torus air space. The injection stream impinged directly upon the torus vent header, initiating brittle failure of the steel used in the header. The portions of the reference documents that are applicable to Limerick recommend evaluation of the liquid nitrogen vaporization system design and operation.

The Limerick design specifically included consideration of the potential hazards of handling liquid nitrogen as discussed in FSAR Section 9.4.5.1. The liquid nitrogen vaporization and containment inerting systems at Limerick are essentially identical to those in use at Peach Bottom Atomic Power Station. A detailed review of the Limerick design and relevant Peach Bottom operating experience has been completed. As a result of this review, the following modifications have been identified for completion prior to the inerting of the Limerick containment (6 months after initial criticality per Technical Specification 3.10.5):

- replace and relocate the existing low temperature switch to improve response time and eliminate the adverse impact of cold outdoor ambient temperatures

- remove existing manual bypass around low temperature shutoff valves

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- provide an automatic low temperature isolation signal to the inerting line containment isolation valves

- provide an ambient vaporizer and a topping heater to eliminate dependence on auxiliary steam for low flow operation

- provide control room indication of the temperature of the nitrogen gas being supplied to the containment.

The completion of these modifications will provide added assurance that liquid nitrogen related failures will not occur at Limerick.

Sincerely,

John S. Kemper

JHA/cmv/09248405

cc: See Attached Service List

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