J. Riesland

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 5 1972

R. R. Maccary, Assistant Director
for Engineering
Directorate of Licensing

TRIP REPORT-QUAD-CITIES NUCLEAR POWER STATION UNIT 2

On October 19, 1972 a trip was made with J. I. Riesland of Operating Reactors Branch to the subject plant to investigate the ring header problem and to observe GE's blowdown tests. The following personnel have been contacted:

B. Stephenson, Assistant Plant Supt., Commonwealth Edison
E. Strickland, Test Coordinator, General Electric
A. Levine, Licensing Engineer, General Electric

Questions have been raised in the following areas:

1. Dynamic analysis of the torus-ring header system subjected to blowdown forces.

2. Tests for pressure distribution and wave propagation conducted by GE at plant site, including procedure, instrumentation, data reduction and input for structural analysis of the torus-ring header system.

3. State of stress and strain under various conditions such as dead weight, hydraulic force, thermal variations, earthquake, etc.

4. Fatigue problem of the torus-ring header system.

Since the GE test team at plant site could not provide answers to analytical questions, a meeting will be arranged at a later date with GE engineers and concerned parties.

During one test involving discharge of two relief valves, very vigorous dynamic response of the torus-ring header system has been observed. The hanger which links the ring header to the torus wall tends to push and pull the torus wall violently through a thick

circular pad, thus causing high repetitive and reversed bending stress on the torus at the edge of pads and at its welds. It is my opinion that the ring header should be supported by ground foundation instead of hangers attached to the torus.

Sai P. Chan
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cc: D. F. Lange, L
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