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Gus C. Lainas, Chief, Containment Systems Branch, DSS
THRU: John A. Kudrick, Section A Leader, Containment Systems Branch, DSS

TRIP REPORT - MONTICELLO NUCLEAR GENERATING PLANT RELIEF VALVE TESTS - JUNE 14 THRU 17, 1976

On June 16 a final checkout test series was run prior to initiating the entire relief valve test sequence. The initial test results appeared satisfactory with respect to the instrumentation problems. Specifically, peculiar measurements from strain gauges which were reported in my initial trip report dated June 11 had disappeared. As a result, the decision was made to proceed with the entire test series.

Based on a preliminary evaluation of the limited on-site test data, the following observations could be made. It should be noted, however, that these are preliminary in nature and may be subject to change upon detailed evaluation of the test data.

1. Subsequent valve actuation results in higher pressure than the single actuation. Maximum positive pressure as well as negative pressure for subsequent actuation increases by about 25 to 40 percent from the first actuation while the measured stress increased as high as 80 percent. The second actuation results in the highest pressures and stress among the three actuations in both test series for subsequent actuation.

2. After the blowdown was over, temperature sensors and water level probes along the safety/relief valve (SRV) line indicated that the water leg in the SRV line moved rapidly (~17 feet per second) and passed the highest water level probe which was located about 21 feet above the pool surface. It returned, however, to the normal water level within ten seconds and oscillated in a small amplitude for some period of time.

3. Stress increases with the number of SRV actuations. The stress for three adjacent S/R valves indicated approximately the same stress level as that from subsequent actuations for a single valve.

4. The tests for multiple valve actuations show no effect on the pressure field in the vicinity of the ramshead discharge. This result appears

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to verify the theory on combined loads from multiple-valve actuations, i.e., the combined pressure for any point in the pressure field cannot exceed the source pressure.

T. M. Su
Containment Systems Branch
Division of Systems Safety

cc: D. Eisenhut
V. Stello
L. Shao
R. Stuart
R. Tedesco
J. Guibert
C. Grimes
J. Kudrick
J. Shapaker
J. Glynn
N. Su
File: Monticello Plant