ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-50-259/753W
Report Date: March 7, 1975
Occurrence Date: February 26, 1975
Facility: Browns Ferry Nuclear Plant unit 1

Identification of Occurrence

Premature lift of main steam relief valve PCV-1-4.

Conditions Prior to Occurrence

The unit was starting up following a trip.

Description of Occurrence

During startup of the unit following a trip, PCV-1-4 lifted prematurely at approximately 800 psig and did not reseat until the reactor pressure reached 480 psig. Upon identification of the valve malfunction, the reactor was shut down to replace this valve and another valve, PCV-1-5, which showed erratic discharge tailpipe temperatures. During startup of the unit after replacement of PCV-1-4 and PCV-1-5 and following a satisfactory leak test at 1,000 psi, PCV-1-22 and PCV-1-23 lifted prematurely. The reactor was shut down to replace PCV-1-22 and PCV-1-23 and to check the pilot stage leakage of the remaining seven relief valves.

Designation of Apparent Cause of Occurrence

PCV-1-4 was manually actuated immediately following a unit trip from full power earlier in the day. The exact cause of the valve to prematurely open during the restart is not known at this time; however, pilot valve leakage is suspected. The valve will be disassembled and inspected to determine the cause of the malfunction. Valves PCV-1-22 and PCV-1-23 will also be inspected to determine the cause of premature opening.

Analysis of Occurrence

No damage to systems, components, or structures was experienced; no personnel injuries or exposures were involved; no radioactive materials were released; and there were no adverse effects to the public health and safety as a result of this occurrence.

Corrective Action

PCV-1-4, PCV-1-22, and PCV-1-23 were replaced with spare relief valves because of their premature lifting. PCV-1-5 was replaced with a spare valve because tailpipe temperatures indicated that the valve was leaking through. A nitrogen bubble check was performed on the pilot stage of the remaining seven relief valves in place. The results indicated excessive pilot-stage leakage. These

Corrective Action (continued)

seven relief valves (PCV-1-18, -1-19, -1-30, -1-31, -1-34, -1-41, and -1-42) were replaced with spares to improve unit reliability. Disassembly of the removed valves will supply information for use in determining corrective and preventive measures if needed. A supplemental report will be issued when the results are available.

Failure Data

Previous failures are reported on Abnormal Occurrence Reports BFAO-50-260/7430W; BFAO-50-260/7429W; BFAO-7426W, unit 1; BFAO-749W, unit 1; BFAO-7349W, unit 1; and BFAO-7314W, unit 1.

Target Rock Corporation - Model 67F - Safety/Relief Valve - Size 6" inlet; 10" outlet

1,200 psi design pressure

Capacity 800,000 lb/hr saturated steam

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

March 7, 1975

Mr. Edson G. Case
Acting Director of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20545

Dear Mr. Case:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL OCCURRENCE REPORT BFAO-50-259/753W

The enclosed report is to provide details concerning a premature lift of the main steam relief valve PCV-1-4 and is submitted in accordance with Appendix A to Regulatory Guide 1.16, Revision 1, October 1973. This event occurred on Browns Ferry Nuclear Plant unit 1 on February 26, 1975.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

for E. F. Thomas
Director of Power Production

Enclosure
CC (Enclosure):
Mr. Norman C. Moseley, Director
U.S. Nuclear Regulatory Commission
Regional Office
230 Peachtree Street, NW., Suite 818
Atlanta, Georgia 30303

50-259 inquiry

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