

## ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-50-260/7430W  
Report Date: December 13, 1974  
Occurrence Date: December 3, 1974  
Facility: Browns Ferry Nuclear Plant unit 2

### Identification of Occurrence

On December 3, 1974, at 1356 hours, main steam relief valve PCV-1-4 experienced extended blowdown.

### Conditions Prior to Occurrence

The unit had just tripped due to steamline isolation which occurred inadvertently during performance of a routine surveillance test.

### Description of Occurrence

Relief valve PCV-1-4 was manually opened following the isolation to assist in controlling the reactor pressure rise and did not reseal until the reactor blew down to approximately 450 psig.

### Designation of Apparent Cause of Occurrence

The pilot stage on PCV-1-4 was disassembled and inspected. This inspection showed that the pilot stage disc seat surface and the pilot steam seat surface were wiredrawn. The wire drawing indicated pilot leakage as the cause of the valve not reseating properly.

### Analysis of Occurrence

The vessel pressure dropped from 930 psig to 450 psig in approximately 34 minutes. Data showed that the coolant temperature at the recirculation pump discharge changed a maximum of approximately 170° F. in one hour. All the required safeguard equipment except HPCI (see BFAO-50-260/7431W) was available. A study is being made of the transient in conjunction with vessel usage factors. There were no adverse effects to the public health and safety or damage to systems, components, or structures.

### Corrective Action

The relief valve was replaced. A leak test with nitrogen was performed on the pilot stages of all main steam relief valves on unit 2. This test showed three other valves to have questionable pilot stage leakage. These three valves were replaced with new valves. Post-maintenance functional tests were satisfactorily performed on all replaced valves at 0 and 250 psig pressure.

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Failure Data

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

Valve Data

Manufacturer--Target Rock Corporation  
Model--67F  
Design pressure--1,200 psi  
Setpoint--1,080 psig  
Capacity--800,000 lb/hr saturated steam  
Serial No.--64

MISSISSIPPI VALLEY AUTHORITY  
CHATTANOOGA, TENNESSEE 37403

December 13, 1974

Mr. Edison G. Case  
Acting Director of Licensing  
Office of Regulation  
U.S. Atomic Energy Commission  
Washington, DC 20545

Dear Mr. Case:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 2 -  
DOCKET NO. 50-260 - FACILITY OPERATING LICENSE DPR-52 - ABNORMAL  
OCCURRENCE REPORT BFAO-50-260/7430W

The enclosed report is to provide details concerning main steam relief valve PCV-1-4 which experienced extended blowdown on December 3, 1974, at 1356 hours 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 2.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. F. Thomas  
Director of Power Production

Enclosure

CC (Enclosure):

Mr. Norman C. Moseley, Director  
Region II Regulatory Operations Office, USAEC  
230 Peachtree Street, NW., Suite 818  
Atlanta, Georgia 30303

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