

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401



October 4, 1974



Mr. Edson 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-50-260/7416W

The enclosed report is to provide details concerning the HPCI system which became inoperable due to a blown gasket on the gland steam condenser and which caused flooding of the HPCI turbine sump and inundated the gland steam condenser hotwell pump 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 on September 24, 1974.

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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ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-50-260/7416W
Report Date: October 4, 1974
Occurrence Date: September 24, 1974
Facility: Browns Ferry Nuclear Plant unit 2

Identification of Occurrence

The HPCI system became inoperable due to a blown gasket on the gland steam condenser which caused flooding of the HPCI turbine sump and inundated the gland steam condenser hotwell pump.

Conditions Prior to Occurrence

The unit was in hot shutdown condition following a reactor scram from 620 MWe.

Description of Occurrence

The HPCI was automatically initiated following a reactor scram at 1859 hours on September 24, 1974. The HPCI and RCIC restored reactor water level as intended with no indication of trouble. A routine inspection of the area was in progress following the operation of the HPCI turbine when the operator discovered the upper gasket on the gland steam condenser leaking. This had caused flooding of the sump surrounding the HPCI turbine and consequently flooded the gland steam condenser hotwell pump and solenoid valve 2-FSV-73-8.

Designation of Apparent Cause of Occurrence

The single apparent cause of the occurrence was failure of the upper head gasket on the gland steam condenser. Failure of this gasket caused flooding of the sump which, in turn, caused failure of the gland steam condenser hotwell pump and the exhaust line drain pot drain valve 2-FSV-73-8. Failure of the hotwell pump contributed to flooding of the turbine exhaust line drain pot. Subsequent investigation found the exhaust line drain pot level switch to be hanging mechanically which contributed to exhaust line flooding and failure of the level alarm.

Analysis of Occurrence

Failure of the upper head gasket on the gland steam condenser which caused HPCI to become inoperable did not jeopardize unit operation or create a hazard to the public. Other core cooling systems proved to be operable.

Corrective Action

1. The upper head gasket on the gland steam condenser was replaced. Mechanical hanging of the drain pot level switch was freed. Gland steam condenser hotwell pump motor was dried out and meggered satisfactorily.
2. The Division of Engineering Design is being asked to explore possibility of a level alarm for the HPCI turbine sump. HPCI was tested and returned to operable condition.

Failure Data

There have been no previous failures of this type.