TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401

October 17, 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-50-260/7417W

The enclosed report is to provide details concerning the HPCI system which became inoperable due to head gaskets leaking on the gland steam condenser, and this caused flooding of the HPCI turbine sump and 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 October 7, 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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incident

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ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-50-260/7417W
Report Date: October 17, 1974
Occurrence Date: October 7, 1974
Facility: Browns Ferry Nuclear Plant unit 2

Identification of Occurrence

The HPCI system became inoperable due to head gaskets leaking on the gland steam condenser which caused flooding of the HPCI turbine sump and the gland steam condenser hotwell pump.

Conditions Prior to Occurrence

The unit was in hot shutdown condition.

Description of Occurrence

The HPCI was manually initiated following a reactor scram at 1456 hours on October 7, 1974. Reactor water level was restored as intended with no indication of trouble. A routine inspection of the area was in progress following the operation of the HPCI when the upper and lower gaskets on the gland steam condenser were found to be leaking. Some flooding at the sump surrounding the HPCI turbine had occurred with consequent flooding of the gland steam condenser hotwell pump motor.

Designation of Apparent Cause of Occurrence

The apparent cause of the failure of the upper and lower head gaskets on the gland steam condenser was the high pressure created on the condenser when the unit started due to the location of the cooling water flow control orifice. This orifice is located downstream of the condenser, and thus the exchanger is subjected to high pressure when the HPCI pump starts.

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 were operable.

Corrective Action

1. The upper and lower head gaskets to the gland steam condenser were replaced. The gland steam condenser hotwell pump motor was dried out and meggered satisfactorily.

2. A modification which relocates the flow control orifice upstream in the cooling water supply line and reduces the pressure that the gland condenser experiences has been approved and implemented.

Corrective Action (continued)

3. HPCI was tested and returned to operable condition.

Failure Data

A similar failure occurred September 24, 1974, reported on Abnormal Occurrence Report No. BFAO-50-260/7416W.