



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

Report No. 50-260/82-25, 50-259/82-25, 50-296/82-25

Licensee: Tennessee Valley Authority
 400A Chestnut Street
 Chattanooga, TN 37401

Facility Name: Browns Ferry

Docket No. 50-260, 50-259, 50-296

License No. DPR-52, DPR-33, DPR-68

Inspection at Browns Ferry site near Athens, Alabama

Inspector: Frank Jape
 for E. H. Brooks

8/27/82
 Date Signed

Approved by: Frank Jape
 F. Jape, Section Chief
 Technical Inspection Branch
 Division of Engineering and Technical Programs

8/27/82
 Date Signed

SUMMARY

Inspection on August 10-11, 1982

Areas Inspected

This special unannounced inspection involved 14 inspector-hours on site in the areas of reviewing the reactor secondary containment integrity problem and main steam isolation valves testing.

Results

Of the two areas inspected, no violations or deviations were identified. However, a violation related to secondary containment integrity was identified by the resident inspector and is reported in inspection report numbers 50-259/82-23, 50-260/82-23, and 50-296/82-23.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*G. Jones, Plant Manager
K. Clark, Supervisor, Containment Test Section

NRC Resident Inspector

*J. Chase
G. Paulk

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 11, 1982, with those persons indicated in paragraph 1 above. Licensee acknowledged the inspection findings without significant comment.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Surveillance - Containment Leak Rate Testing - Type B&C Tests (61720) - Unit 2

Secondary Containment Testing -

While performing Surveillance Instruction 4.7.c Secondary Containment Units 1, 2, or 3 prior to refueling, secondary containment integrity could not be confirmed on Unit 2. Secondary containment results did not meet technical specification requirements. Therefore, as required by technical specifications, subsequent tests were performed on Units 1 and 3 and yielded results similar to those found on Unit 2.

Technical specifications require the licensee to demonstrate during each refueling outage the capability of the secondary containment to maintain 0.25 inches of water negative pressure with a system in-leakage of not more than 12,000 CFM under calm wind conditions. The specifications also require that any time the integrity of one zone has been violated, the affected zone shall be isolated from the other zones and secondary containment capability

to maintain 0.25 inches of water negative pressure under calm wind conditions using the standby gas treatment system shall be demonstrated. The reactor building is composed of four zones. These zones are the Unit 1 reactor zone, Unit 2 reactor zone, Unit 3 reactor zone, and the refueling zone which is common to all three units.

The licensee's surveillance instruction allows operation of Units 1 and 3 normal ventilation systems during the Unit 2 secondary containment testing. During the Unit 2 testing, the standby gas treatment system fans pull only a small volume flow from Unit 2 while Units 1 and 3 and the refueling zone are subjected to large volume flows via the normal ventilation system. Accordingly, excessive leakage into zone 2 can be masked by cross leakage to the other zones due to the large volumetric flow rates of the normal ventilation system. The secondary containment test conducted on Unit 2 failed apparently because the normal negative internal pressure maintained in Unit 3 during the test was not present since the static pressure controllers were not properly working. Unit 3 was at 0 psid.

The primary cause of secondary containment test failure was due to a dislodged pressure relief panel in the Unit 1 steam vault. Many secondary causes contributing to interzone leakage were identified by the licensee.

The above test results and findings were witnessed by the NRC resident inspector. The resident inspector and the licensee noted that the procedure did not adequately determine secondary containment integrity by zone if the normal ventilation in adjacent zones was operating during the test. The resident inspector informed the Plant Superintendent at a meeting on August 6, 1982, that failure to have an adequate procedure to determine secondary containment integrity was a violation of Technical Specification 6.3.A.

Details of the above are documented in inspection report 259/260/296/82-23.

Main Steam Isolation Valve Testing -

Testing of main steam isolation valves (MSIV) on Unit 2. As part of the licensee's program to correct MSIV leakage, the isolation valves on main steam lines A, B, and D were closed while the reactor was at 400 psig, thereby applying additional seating force. The valve accumulator pressure was also increased by 25 psi to assist valve seating. Steam line pressure was then reduced to 0 psig. Steam line C was closed affecting a 5 inch Hg. vacuum on the upstream side of the inboard isolation valve.

The technical specification acceptance criteria for BWR main steam line leakage is 11.5 SCFH. The results of the leakage tests performed while applying pressure between the inboard and outboard isolation valve are as follows:

<u>STEAMLINE</u>	<u>ATTAINED, PSIG</u>	<u>LEAKAGE, SCFH</u>
A	1.0	3144
B	25.5	1207
C	25.5	695
D	25.5	821

Valve packing leakage was observed on outboard valves C and D.

The results of these tests were discussed with the Plant Manager at the exit meeting on August 11, 1982. The results are herewith documented as part of the ongoing evaluation of the licensee's program to correct MSIV leakage.

Within these areas inspected no deviations or violations were identified.