

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

500C Chestnut Street Tower II

MAR 14 1979

Mr. James P. O'Reilly, Director
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BROWNS FERRY NUCLEAR PLANT UNIT 3 - SECONDARY CONTAINMENT LEAK RATE
TEST - 90-DAY REPORT

In accordance with Browns Ferry Technical Specifications 6.7.3.C, we
are submitting our summary technical report on secondary containment
leak rate testing for unit 3 at Browns Ferry performed on September 9,
1978.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. E. Gilleland
Assistant Manager of Power

Enclosure

cc (Enclosure):

Director (15)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Director (2)
Office of Management Information and Program Control
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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1.0 Browns Ferry Nuclear Plant Unit 3 Secondary Containment Leak Rate
Test Report

2.0 Purpose

This report describes the results and analysis of the test data taken during leak rate testing of the Browns Ferry Nuclear Plant unit 3 secondary containment pursuant to Technical Specification 4.7.C.1.c before the first refueling outage.

3.0 Procedure

The attached surveillance instruction (SI), SI 4.7.C-1, outlines the procedures followed during secondary containment leak rate testing.

4.0 Data

The attached surveillance instruction data sheets list the following test data:

(1) Standby gas treatment system flow rate: 9,000 scfm

(2) Reactor building differential pressures:

Unit 1 reactor zone: $-0.32'' \text{H}_2\text{O}$

Unit 2 reactor zone: $-0.27'' \text{H}_2\text{O}$

Unit 3 reactor zone: $-0.35'' \text{H}_2\text{O}$

Refueling zone average: $-0.34'' \text{H}_2\text{O}$

(3) Wind Speed: 2.7 mph

(4) Wind direction: north

5.0 Analysis and Interpretation

Technical Specification 4.7.C.1.c requires that secondary containment capability to maintain 1/4-inch water vacuum under calm (<5 mph) wind

SI 4.7.C-1 - Secondary Containment Capability

3. PREREQUISITES (Continued)

3.10 Verify that a drywell or suppression chamber purge is not in process or planned during this test.

3.11 Verify on Data Sheet SI 4.7.C-1 that each of the doors are closed for the respective zones to be tested or the doors indicated by number (See Table 3.11 of Data Sheet SI 4.7.C-1) for all four zones.

4. PRECAUTIONS

4.1 Do not allow the main steam line tunnel temperature on any unit in operation to exceed 160^o F. If this temperature is approached to within 10^o F, stop the test and reestablish normal ventilation per OI 30 or provide another means for ventilating the main steam line tunnel to prevent a unit trip (trip point is 186^o F).

4.2 Attempt to restrict testing time to 30 minutes.

5. LIMITATIONS AND ACTIONS

5.1 None

6. PROCEDURE

6.1 Initial and perform the indicated sections on the configuration to be tested on Data Sheet SI 4.7.C-1 and perform steps indicated below.

6.1.1 U1RZ - Perform section 6.2 and section 6.4.

6.1.2 U2RZ - Perform section 6.2 and section 6.4.

6.1.3 U3RZ - Perform section 6.2 and section 6.4.

6.1.4 RFZ - Perform section 6.3 and section 6.4.

6.1.5 U1RZ and RFZ - Perform sections 6.2, 6.3 and section 6.4.

SI 4.7.C-1 - Secondary Containment Capabilities

6. PROCEDURE (Continued)

6.1.6 U2RZ and RFZ - Perform sections 6.2, 6.3 and section 6.4.

6.1.7 U3RZ and RFZ - Perform sections 6.2, 6.3 and section 6.4.

6.1.8 Reactor Building - Perform section 6.2 for each RZ, and section 6.3 for the RFZ and section 6.4.

6.2 Manual Isolation of a Reactor Zone

NOTE: HS-64-117, HS-64-120, HS-64-119, & HS-64-122 are spring return to normal.

6.2.1 Place HS-64-117 (Panel 9-25) in the TEST position for the reactor zone to be isolated. (Inboard and common valves)

6.2.2 Place HS-64-120 (Panel 9-25) in the TEST position for the reactor zone to be isolated. (Outboard valves)

6.2.3 Start SGTS trains A and B in accordance with OI 65 and verify actions and/or take data as indicated on Data Sheet SI 4.7.C-1 for the reactor zone that is being isolated.

NOTE: If a reactor zone is the only zone to be isolated, go to Section 6.4 and if the refuel zone is to be isolated complete Section 6.3 before going to Section 6.4.

6.3 Manual Isolation of the Plant Refueling Zone

6.3.1 Place HS-64-119 (Panel 9-25-1) in the TEST position. (Inboard and common valves)

6.3.2 Place HS-64-122 (Panel 9-25-1) in the TEST position. (Outboard valves)

6.3.3 Start SGTS trains A and B, if not already running, in accordance with OI 65 and verify actions and/or take data as indicated on Data Sheet SI 4.7.C-1 for the refueling zone.

<u>Step</u>	<u>Component/Process Variable</u>	<u>Verify and/or Record</u>	<u>Initials/Date</u>
6.1.1	U1RZ Configuration		NA
6.1.2	U2RZ Configuration		NA
6.1.3	U3RZ Configuration		AD
6.1.4	RFZ Configuration		AD
6.1.5	U1RZ and RFZ Configuration		NA
6.1.6	U2RZ and RFZ Configuration		NA
6.1.7	U3RZ and RFZ Configuration		AD
6.1.8	Reactor Building Configuration		AD
6.2.1	1-HS-64-117.	TEST Position	NA
	2-HS-64-117	TEST Position	NA
	3-HS-64-117	TEST Position	AD
6.2.2	1-HS-64-120	TEST Position	NA
	2-HS-64-120	TEST Position	NA
	3-HS-64-120	TEST Position	AD
6.2.3	SGTS Train A	START	AD
	or SGTS Train B	START	AD/NA
	or SGTS Train C	START	AD/NA
<u>Unit 1 Reactor Zone</u>			
	U-1 Reactor Zone Ventilation Sys.	Shutdown	NA
	1-FCO-64-13	Closed	
	1-FCO-64-14	Closed	
	1-FCO-64-42	Closed	
	1-FCO-64-43	Closed	