SURVEILLANCE PROCEDURE

SP-412

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

ECCS AND CONTAINMENT SPRAY SYSTEM LEAK RATE TEST

REVIEWED BY: Plant Review Committee

Carl E. McGee

Date 2/15/79

Meeting No. 79-7

APPROVED BY: Nuclear Plant Manager

Guy P. Beatty

Date 2/20/79

1.0 SURVEILLANCE REQUIREMENTS

The Emergency Core Cooling and Containment Spray System piping and components shall be inspected while pressurized to ensure that any leakage is within acceptable limits. This inspection, and leakage measurement if necessary, shall be performed during the modes and at the frequencies indicated below.

1.1 Technical Specification Reference

Technical Specification	Surv. Req'd During Modes	Modes Notes	Surv. Freq.	Freq. Notes
4.5.2.e.5	3		R	30
4.6.2.1.c	3		R	30

Surveillance Frequency Designation:

R-Refueling (18 Months)

Modes Notes:

None

Frequency Notes:

30-Prior to Shutdown for Refueling

2.0 ACCEPTANCE CRITERIA

2.1 The following Recirculation Phase piping and components shall exhibit a combined total leak rate $\leq$ 6 gallons per hour when pressurized as indicated:

2.1.1 The piping and components from the containment emergency sump isolation valves (DHV-42, 43) to the suction valves of the Decay Heat Removal Pumps and the suction valves of the Reactor Building Spray Pumps at pressure $\geq$ 55 psig.

2.1.1.1 The Decay Heat System piping and components from the pump suction valves downstream to the Reactor Coolant System at pressure $\geq$ 150 psig.

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2.1.1.2 The Containment Spray System piping and components from the Reactor Building Spray Pumps suction valves downstream to the Reactor Building Isolation Valves (BSV-3, 4) at pressure $\geq$ 190 psig.

NOTE: If the Acceptance Criteria of 2.1 cannot be met refer immediately to the "Action Statements of 3.5.2 and 3.6.2.1, as applicable, of the Technical Specifications.

3.0 REFERENCES NEEDED TO DO PROCEDURE

3.1 Data Sheet I (ENCLOSURE I)

4.0 SPECIAL CONDITIONS OR REQUIREMENTS

4.1 The Building Spray System is filled (to the RB Spray Header Inlet Iso. valves, BSV-3 and 4) and vented.

4.2 Reactor plant cooldown is in progress per OP-209, Plant Cooldown, with a hold in effect at RC temperature between 280^0F and 300^0F and RC pressure at approximately 200 psig to place the Decay Heat Removal System in service in accordance with OP-404, Decay Heat Removal System.

4.3 The total leakage, if any, from the piping defined in Step 2.1 is to be measured with all the piping at the RCS pressure, namely between 190 and 200 psig. This pressure will satisfy the pressurization requirements of each of the individual sections defined in Step 2.1. If leakage exists, the piping sections must be kept pressurized during the entire 1 hour leakage collection period.

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5.0 EQUIPMENT REQUIRED

5.1 A watch to measure the 1 hour period of leakage collection, if applicable.

5.2 Suitable containers to collect leakage, if applicable.

5.3 A suitable container calibrated to 6 gallons for determining total leakage, if applicable.

6.0 PROCEDURE

6.1 After placing the Decay Heat Removal System in service but prior to decreasing RC temperature and pressure below 280^0F and 190 psig respectively, read and record the pressures specified in Data Sheet I.

NOTE: Pressure indicators DH-005-PI 1 and 2 display pressure of piping defined in Step 2.1.1.1; BS-002-PI 1 and 2 the piping defined in Step 2.1.1.2; and RCS pressure the piping defined in Step 2.1.1.

6.2 Inspect the piping and components for leakage. If any leakage is detected, collect the fluid from each leak for one hour, determine the total leakage flow rate, and record this value and another set of pressure readings on Data Sheet I.

6.3 No restoration is required.

6.4 Notify the Shift Supervisor of the completion and results of this Surveillance Procedure.

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DATA SHEET I

ECCS AND CONTAINMENT SPRAY SYSTEM LEAK RATES

PRESSURE INDICATION	PIPING SECTION	LEAKAGE	PRESSURE		
			ACTUAL		REQUIRED
			INITIAL	FINAL	
RCS	Common piping from the containment sump isolation valves to DHP and BSP suctions	gph.	psig	psig	≥ 55 psig
DH-005-PI 1	DHS piping from pump suctions to RCS	gph	psig	psig	≥ 150 psig
DH-005-PI 2		gph	psig	psig	≥ 150 psig
BS-002-PI 1	BS piping from pump suctions to spray isolation valves	gph	psig	psig	≥ 190 psig
BS-002-PI 2		gph	psig	psig	≥ 190 psig

TOTAL ACTUAL LEAKAGE	ghp
TOTAL ALLOWABLE LEAKAGE	≤ 6 ghp

COMMENTS: _____

_____

PERFORMED BY: _____ DATE: _____

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