RGE
Always at Your Service

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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Emergency Operating Procedures
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

As requested, enclosed are Ginna Station Emergency Operating Procedures.

Very truly yours,

Joseph A. Widay

JAW/jdw

xc: U.S. Nuclear Regulatory Commission
Region I
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Ginna USNRC Senior Resident Inspector

Enclosure(s):

F Index
FR Index
F-0.2, Rev 5
FR-C.2, Rev 18

INPUT PARAMETERS: TYPE: PRF **STATUS VALUE(S):** EF, QU **5 YEARS ONLY:**

PRF CRITICAL SAFETY FUNCTION STATUS PROC

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
F-0.1	SUBCRITICALITY CSFST	001	07/21/1989	02/25/2004	02/25/2009	EF
F-0.2	CORE COOLING CSFST	005	04/20/2004	04/20/2004	04/20/2009	EF
F-0.3	HEAT SINK CSFST	003	06/03/1996	02/25/2004	02/25/2009	EF
F-0.4	INTEGRITY CSFST	002	03/31/2000	02/25/2004	02/25/2009	EF
F-0.5	CONTAINMENT CSFST	002	01/12/1990	02/25/2004	02/25/2009	EF
F-0.6	INVENTORY CSFST	004	05/01/1998	03/27/2003	03/27/2008	EF

PRF TOTAL: 6

GRAND TOTAL: 6

INPUT PARAMETERS: TYPE: PRFR **STATUS VALUE(S):** EF, QU **5 YEARS ONLY:**

PRFR FUNCTIONAL RESTORATION GUIDELINE PROC

PROCEDURE NUMBER	PROCEDURE TITLE	REV	EFFECT DATE	LAST REVIEW	NEXT REVIEW	ST
FR-C.1	RESPONSE TO INADEQUATE CORE COOLING	020	05/30/2003	03/24/2003	03/24/2008	EF
FR-C.2	RESPONSE TO DEGRADED CORE COOLING	018	04/20/2004	03/24/2003	03/24/2008	EF
FR-C.3	RESPONSE TO SATURATED CORE COOLING	009	05/30/2003	03/24/2003	03/24/2008	EF
FR-H.1	RESPONSE TO LOSS OF SECONDARY HEAT SINK	030	10/10/2003	03/24/2003	03/24/2008	EF
FR-H.2	RESPONSE TO STEAM GENERATOR OVERPRESSURE	006	10/10/2003	03/24/2003	03/24/2008	EF
FR-H.3	RESPONSE TO STEAM GENERATOR HIGH LEVEL	007	10/10/2003	03/24/2003	03/24/2008	EF
FR-H.4	RESPONSE TO LOSS OF NORMAL STEAM RELEASE CAPABILITIES	005	05/30/2003	03/24/2003	03/24/2008	EF
FR-H.5	RESPONSE TO STEAM GENERATOR LOW LEVEL	009	05/30/2003	03/24/2003	03/24/2008	EF
FR-I.1	RESPONSE TO HIGH PRESSURIZER LEVEL	017	01/07/2004	03/24/2003	03/24/2008	EF
FR-I.2	RESPONSE TO LOW PRESSURIZER LEVEL	011	05/30/2003	03/24/2003	03/24/2008	EF
FR-I.3	RESPONSE TO VOIDS IN REACTOR VESSEL	019	01/07/2004	03/24/2003	03/24/2008	EF
FR-P.1	RESPONSE TO IMMINENT PRESSURIZED THERMAL SHOCK CONDITION	028	01/07/2004	03/24/2003	03/24/2008	EF
FR-P.2	RESPONSE TO ANTICIPATED PRESSURIZED THERMAL SHOCK CONDITION	008	05/30/2003	03/24/2003	03/24/2008	EF
FR-S.1	RESPONSE TO REACTOR RESTART/ATWS	016	10/10/2003	03/24/2003	03/24/2008	EF
FR-S.2	RESPONSE TO LOSS OF CORE SHUTDOWN	009	05/30/2003	03/24/2003	03/24/2008	EF
FR-Z.1	RESPONSE TO HIGH CONTAINMENT PRESSURE	008	10/10/2003	03/24/2003	03/24/2008	EF
FR-Z.2	RESPONSE TO CONTAINMENT FLOODING	005	05/30/2003	03/24/2003	03/24/2008	EF
FR-Z.3	RESPONSE TO HIGH CONTAINMENT RADIATION LEVEL	005	05/30/2003	03/24/2003	03/24/2008	EF

PRFR TOTAL: 18

GRAND TOTAL: 18

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

RESPONSIBLE MANAGER

4-20-2004
EFFECTIVE DATE

CATEGORY 1.0

REVIEWED BY:_____

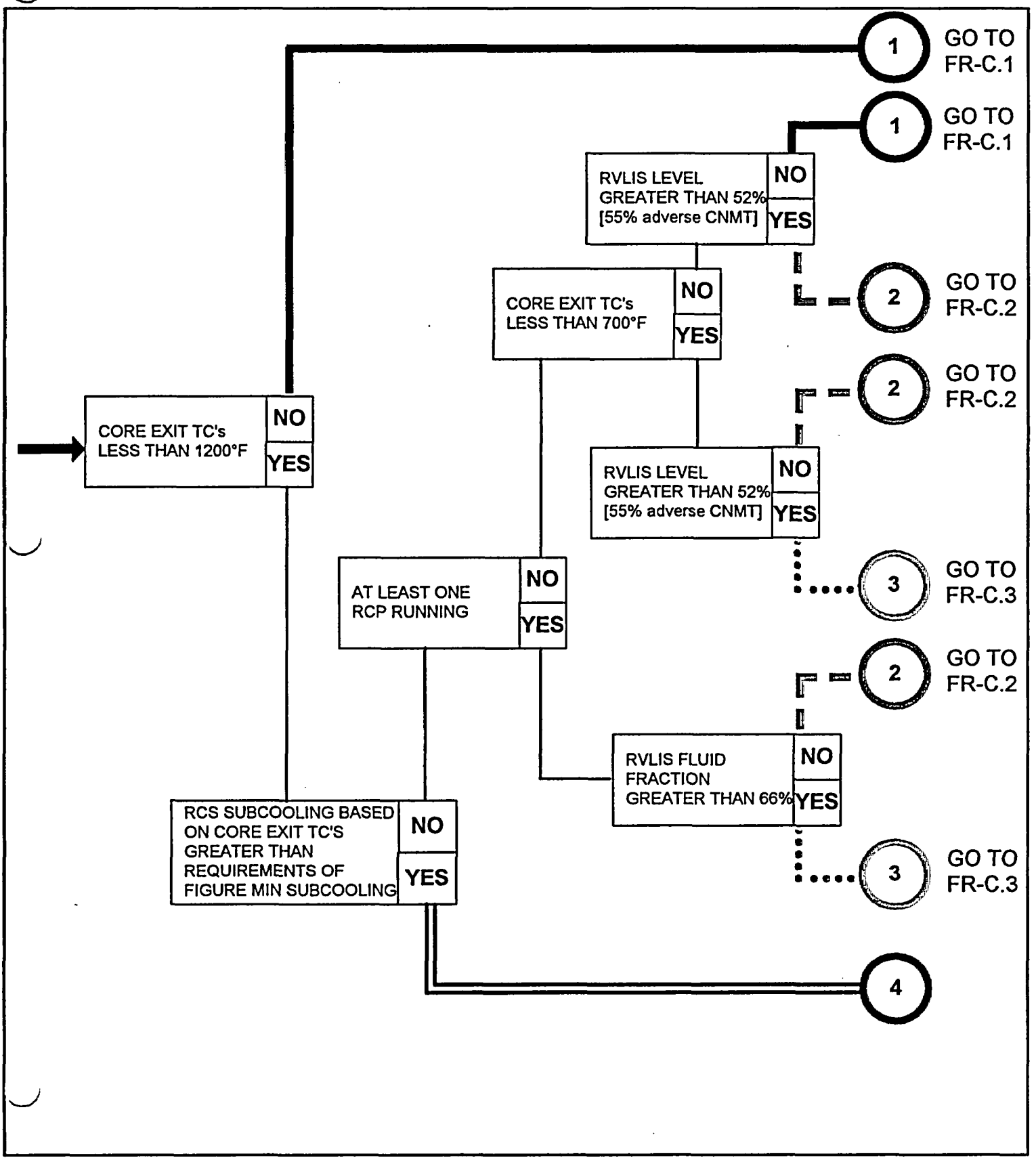
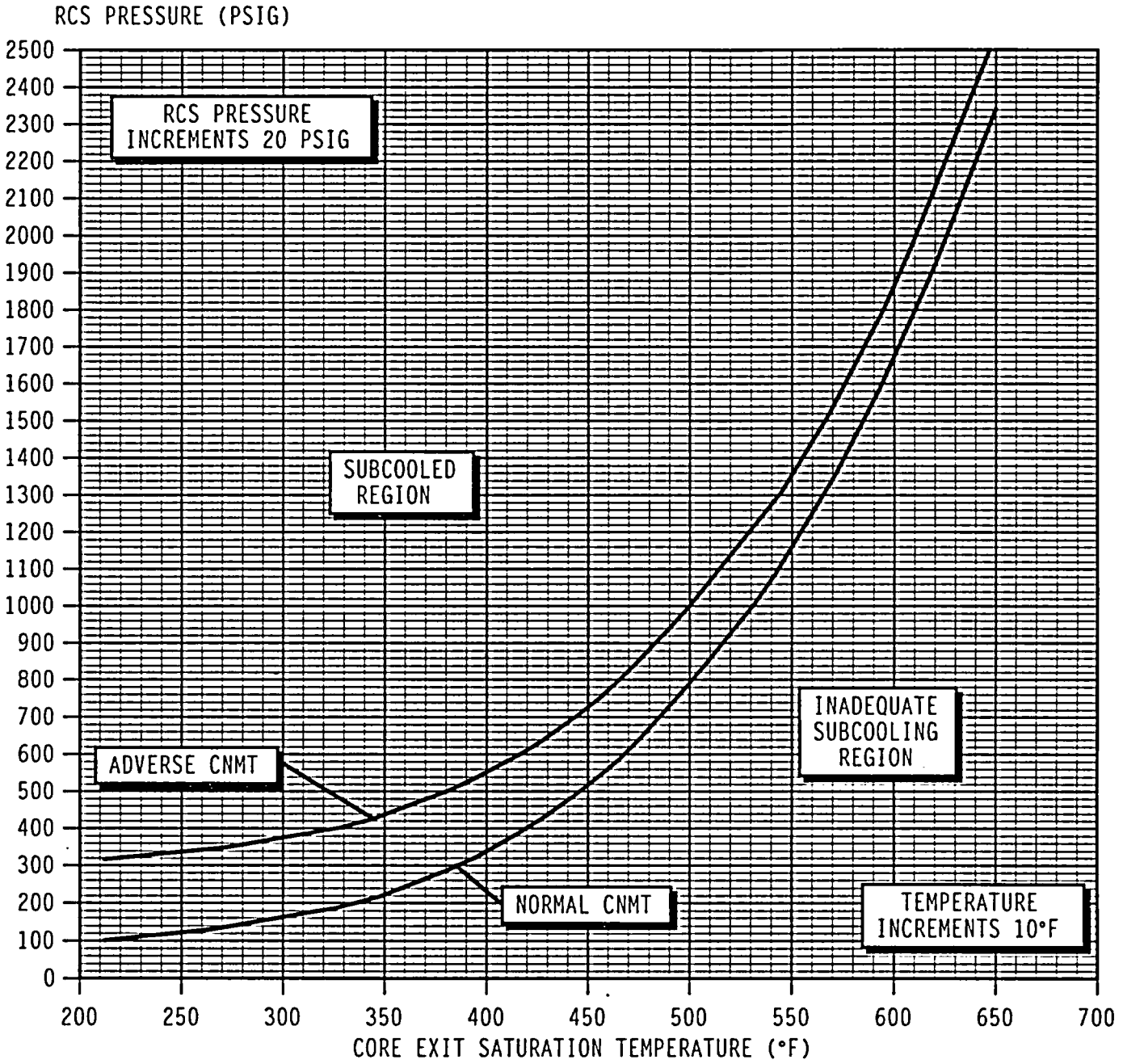

CORE EXIT TC's LESS THAN 1200°F
NO
YES
1
GO TO FR-C.1
RVLIS LEVEL GREATER THAN 52% [55% adverse CNMT]
NO
YES
1
GO TO FR-C.1
CORE EXIT TC's LESS THAN 700°F
NO
YES
2
GO TO FR-C.2
RVLIS LEVEL GREATER THAN 52% [55% adverse CNMT]
NO
YES
2
GO TO FR-C.2
AT LEAST ONE RCP RUNNING
NO
YES
3
GO TO FR-C.3
RVLIS FLUID FRACTION GREATER THAN 66%
NO
YES
2
GO TO FR-C.2
RCS SUBCOOLING BASED ON CORE EXIT TC'S GREATER THAN REQUIREMENTS OF FIGURE MIN SUBCOOLING
NO
YES
3
GO TO FR-C.3
4

FIGURE MIN SUBCOOLING

NOTE: Subcooling Margin = Saturation Temperature From Figure Below [-] Core Exit T/C Indication



ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

RESPONSIBLE MANAGER

4-20-2004
EFFECTIVE DATE

CATEGORY 1.0

REVIEWED BY:_____

A. PURPOSE - This procedure provides actions to restore adequate core cooling.

B. ENTRY CONDITIONS/SYMPTOMS

1. ENTRY CONDITIONS - This procedure is entered from:

a. F-0.2, CORE COOLING Critical Safety Function Status Tree, on any ORANGE condition.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: o Adverse CNMT values should be used whenever CNMT pressure is greater than 4 psig or CNMT radiation is greater than 10^{+05} R/hr.

o Normal conditions for running RCPs are desired, but RCPs should NOT be tripped if normal conditions cannot be established or maintained.

o Foldout Page should be open and monitored periodically.

* 1 Monitor RWST Level - GREATER THAN 28%	Perform the following: a. Ensure SI system aligned for cold leg recirculation using Steps 1 through 13 of ES-1.3, TRANSFER TO COLD LEG RECIRCULATION. b. Go to Step 4.
2 Verify SI Pump Suction Aligned To RWST:	
a. SI pump suction valves from RWST - OPEN • MOV-825A • MOV-825B	a. Ensure at least one SI pump suction valve from RWST open • MOV-825A • MOV-825B

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3	Verify SI Pump And RHR Pump Emergency Alignment:	
	a. RHR pump discharge to Rx vessel deluge - OPEN • MOV-852A • MOV-852B	a. Ensure at least one valve open.
	b. Verify SI pump C - RUNNING	b. Manually start pump on available bus.
	c. Verify SI pump A - RUNNING	c. Perform the following: 1) Ensure SI pumps B and C running. 2) Ensure SI pump C aligned to discharge line A: o MOV-871B closed o MOV-871A open 3) Go to Step 4.
	d. Verify SI pump B - RUNNING	d. Perform the following: 1) Ensure SI pumps A and C running. 2) Ensure SI pump C aligned to discharge line B: o MOV-871B open o MOV-871A closed 3) Go to Step 4.
	e. Verify both SI pump C discharge valves - OPEN • MOV-871A • MOV-871B	e. Manually open valves as necessary.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4	Verify SI Flow In Both Trains:	
	a. SI line loop A and B flow indicators - CHECK FOR FLOW	a. Perform the following: 1) Manually start SI pumps and align valves as necessary. 2) Establish maximum charging flow.
	b. RCS pressure - LESS THAN 250 psig [465 psig adverse CNMT]	b. Go to Step 5.
	c. RHR loop flow indicator - CHECK FOR FLOW	c. Manually start RHR pumps and align valves.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

IF ANY PRZR PORV OPENS BECAUSE OF HIGH PRZR PRESSURE, IT SHOULD BE CLOSED AFTER PRESSURE DECREASES TO LESS THAN 2335 PSIG (REFER TO STEP 5B).

5 Check RCS Vent Paths:

a. Power to PRZR PORV block valves - AVAILABLE	a. Restore power to block valves unless block valve was closed to isolate an open PORV: • MOV-515, MCC D position 6C • MOV-516, MCC C position 6C
b. PORVs - CLOSED	b. IF PRZR pressure less than 2335 psig, THEN manually close PORVs. IF any PORV can NOT be closed, THEN manually close its block valve.
c. Block valves - AT LEAST ONE OPEN	c. Open one block valve unless it was closed to isolate an open PORV.
d. Rx vessel head vent valves - CLOSED • SOV-590 • SOV-591 • SOV-592 • SOV-593	d. Manually close valves.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	Check RCP Status:	
	a. At least one RCP - RUNNING	a. Go to Step 9.
	b. Support conditions for the operating RCP(s) available (Refer to ATT-15.0. ATTACHMENT RCP START)	b. Try to establish support conditions for the operating RCP.
7	Check RVLIS Fluid Fraction	
	a. Fluid fraction (any RCP on) - GREATER THAN 66%	a. IF increasing, THEN return to Step 1. IF NOT, then go to Step 8.
	b. Return to procedure and step in effect.	
8	Check If One RCP Should Be Stopped:	
	a. Both RCPs - RUNNING	a. Go to Step 10.
	b. Stop one RCP	
	c. Go to Step 10	
9	Check Core Cooling:	
	a. RVLIS level (no RCPs) - GREATER THAN 52% [55% adverse CNMT]	a. IF increasing, THEN return to Step 1. IF NOT, THEN go to Step 10.
	b. Core exit T/Cs - LESS THAN 700°F	b. IF decreasing, THEN return to Step 1. IF NOT, THEN go to Step 10.
	c. Return to procedure and step in effect	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10	Check SI ACCUM Discharge Valves - OPEN • MOV-841 • MOV-865	IF SI ACCUM discharge valves closed after ACCUM discharge, THEN go to Step 11. IF NOT, THEN perform the following: a. Dispatch AO with locked valve key to locally close breakers for SI ACCUM discharge valves. • MOV-841, MCC C position 12F • MOV-865, MCC D position 12C b. Open SI ACCUM discharge valves. • ACCUM A, MOV-841 • ACCUM B, MOV-865

CAUTION

- IF CST LEVEL DECREASES TO LESS THAN 5 FEET, THEN ALTERNATE WATER SOURCES FOR AFW PUMPS WILL BE NECESSARY (REFER TO ER-AFW.1, ALTERNATE WATER SUPPLY TO AFW PUMPS).
- A FAULTED OR RUPTURED S/G SHOULD NOT BE USED IN SUBSEQUENT STEPS UNLESS NO INTACT S/G IS AVAILABLE.

NOTE: TDAFW pump flow control AOVs may drift open on loss of IA.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
*11	Monitor Intact S/G Levels: a. Narrow range level - GREATER THAN 5% [25% adverse CNMT] b. Control feed flow to maintain narrow range level between 17% [25% adverse CNMT] and 50%	a. Increase total feed flow to restore narrow range level greater than 5% [25% adverse CNMT] in at least one S/G.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12	Establish Condenser Steam Dump Manual Control	
	a. Verify condenser available: o Intact S/G MSIV - OPEN o Annunciator G-15, STEAM DUMP ARMED - LIT	a. Place intact S/G ARV controller in MANUAL and go to Step 13.
	b. Place steam dump mode selector switch in MANUAL	
	c. Place steam dump controller in MANUAL	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

THE FOLLOWING STEP WILL CAUSE SI ACCUMULATOR INJECTION WHICH MAY RESULT IN A RED PATH CONDITION IN F-0.4, INTEGRITY STATUS TREE. THIS PROCEDURE SHOULD BE COMPLETED BEFORE TRANSITION TO FR-P.1, RESPONSE TO IMMINENT PRESSURIZED THERMAL SHOCK.

13 Depressurize All Intact S/Gs To 200 PSIG:

a. Maintain cooldown rate in RCS cold legs - LESS THAN 100°F/HR

b. Dump steam to condenser

b. Manually or locally dump steam from intact S/Gs:

- o Use S/G ARVs.

-OR-

- o Open TDAFW pump steam supply valve(s) for affected S/G(s):
  - S/G A, MOV-3505A
  - S/G B, MOV-3504A

-OR-

- o Locally perform the following:
  - o Open intact S/G MSIV bypass valve.
  - o Open priming air ejector steam isolation valves.
    - V-3580
    - V-3581

c. Check S/G pressures - LESS THAN 200 PSIG

c. Return to Step 11.

d. Check RCS hot leg temperatures - BOTH LESS THAN 400°F

d. Return to Step 11.

e. Stop S/G depressurization

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

RHR PUMPS SHOULD NOT BE RUN LONGER THAN 1 HOUR WITHOUT CCW TO THE RHR HEAT EXCHANGERS.

14	Check RHR Pumps - RUNNING	Manually start pumps as necessary.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
15	Isolate Both SI ACCUMs	
	a. Dispatch AO with locked valve key to locally close breakers for SI ACCUM discharge valves if necessary • MOV-841, MCC C position 12F • MOV-865, MCC D position 12C	
	b. Reset SI	
	c. Close SI ACCUM discharge valves • MOV-841 • MOV-865	c. Perform the following to vent an unisolated accumulator: 1) Reset CI 2) Ensure adequate air compressor(s) running 3) Establish IA to CNMT 4) Open vent valves for unisolated SI ACCUMs. • ACCUM A, AOV-834A • ACCUM B, AOV-834B 5) Open HCV-945. IF an accumulator can NOT be isolated or vented, THEN consult TSC to determine contingency actions.
	d. Locally reopen breakers for MOV-841 and MOV-865	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

CAUTION

SYMPTOMS FOR FR-C.1, RESPONSE TO INADEQUATE CORE COOLING, SHOULD BE CLOSELY MONITORED DURING SUBSEQUENT STEPS.

16 Stop All RCPs

17 Depressurize All Intact S/Gs To Atmospheric Pressure:

a. Maintain cooldown rate in RCS cold legs - LESS THAN 100°F/HR

b. Dump steam to condenser

b. Manually or locally dump steam from intact S/Gs:

1) Use S/G ARVs.

2) Open TDAFW pump steam supply valve(s) for affected S/G(s):

- S/G A, MOV-3505A
- S/G B, MOV-3504A

3) Locally perform the following:

o Open intact S/G MSIV bypass valve.

o Open priming air ejector steam isolation valves.

- V-3580
- V-3581

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
18	Verify SI Flow: o SI line loop A and B flow indicators - CHECK FOR FLOW -OR- o RHR loop flow indicator - CHECK FOR FLOW	Perform the following: a. Continue efforts to establish SI or RHR flow. b. Try to establish maximum charging flow. c. Return to Step 17.
19	Check Core Cooling: o RVLIS level (no RCPs) - GREATER THAN 77% [82% adverse CNMT] o Both RCS hot leg temperatures - LESS THAN 320°F	Return to Step 17.
20	Go to Appropriate Plant Procedure a. Check RWST level - GREATER THAN 28% b. Go to E-1, LOSS OF REACTOR OR SECONDARY COOLANT, Step 17	a. Go to ES-1.3, TRANSFER TO COLD LEG RECIRCULATION, Step 1.

-END-

FR-C.2 APPENDIX LIST

TITLE

1) ATTACHMENT RCP START (ATT-15.0)

2) ATTACHMENT NO SW PUMPS (ATT-2.4)

3) FOLDOUT

FOLDOUT PAGE

NOTE: This Foldout Page applies to all FR-C series procedures.

1. LOSS OF SW CRITERIA

   IF no SW pumps are available, THEN perform the following:

   a. Pull stop any D/G that is NOT supplied by alternate cooling, AND immediately depress associated VOLTAGE SHUTDOWN pushbutton.

   b. Refer to ATT-2.4, ATTACHMENT NO SW PUMPS.