ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

TECHNICAL REVIEW

PORC REVIEW DATE 4-21-93

Thomas A. Marlow
PLANT SUPERINTENDENT

4-23-93
EFFECTIVE DATE

CATEGORY 1.0

REVIEWED BY: _____

A. PURPOSE - This procedure provides the steps necessary to respond to a loss of CCW while the plant is at power.

B. ENTRY CONDITIONS/SYMPTOMS

1. ENTRY CONDITIONS - This procedure may be entered from:

   a. AP-CCW.1, LEAKAGE INTO THE COMPONENT COOLING SYSTEM, when CCW surge tank level decrease indicated at power.

2. SYMPTOMS - The symptoms of LOSS OF CCW DURING POWER OPERATION are;

   a. Annunciator A-13 COMP COOLING SURGE TANK LO LEVEL 41.2%, lit, or

   b. Annunciator A-22 CCW PUMP DISCHARGE LO PRESS 60 PSI, lit, or

   c. Annunciator A-17, MOTOR OFF RCP CCWP, lit, or

   d. Annunciator A-9, RHR PUMP COOLING WATER OUTLET LO FLOW 15 GPM, lit or

   e. Annunciator A-6, CONT SPRAY PUMP COOLING WATER OUT LOW FLOW 15 GPM, lit or

   f. Annunciator A-14, SAFETY INJ PUMPS COOLING WATER OUT LO FLOW 25 GPM, lit or

   g. Annunciator A-7 (A-15), RCP A (B) CCW RETURN HI TEMP OR LO FLOW 165 GPM 125°F, lit or

   h. Annunciator A-24 (A-32), RCP A (B) OIL LEVEL + 1.25, lit.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

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CAUTION

- IF CCW FLOW TO A RCP IS INTERRUPTED FOR GREATER THAN 2 MINUTES OR IF EITHER RCP MOTOR BEARING TEMPERATURE EXCEEDS 200°F, THEN TRIP THE AFFECTED RCP.
- IF CCW IS LOST, THEN SEAL INJECTION SHOULD BE MAINTAINED TO THE RCP(S) UNTIL RCS TEMPERATURE IS LESS THAN 200°F, OR UNTIL CCW IS RESTORED.

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NOTE: If leakage from the CCW system is indicated, then refer to SC-6, HAZARDOUS AND MIXED WASTE MANAGEMENT AND CONTROL, for guidance.

1	Check CCW Pump Status:	Perform the following:
	o Both CCW pump breaker white disagreement lights - EXTINGUISHED	a. Ensure standby CCW pump running.
	o Annunciator A-17, Motor Off RCP CCP - EXTINGUISHED	b. IF annunciator A-22, CCW PUMP DISCHARGE LO PRESS 60 PSI, lit, THEN check closed CCW to RHR HXs (MOV-738A and MOV-738B).

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	NOTE: CCW surge tank level should be verified locally in the AUX BLDG, if possible.	
2	Verify CCW Surge Tank Level - APPROXIMATELY 50% AND STABLE	Perform the following: a. Open RMW to CCW surge tank, MOV-823. b. Start RMW pump(s). c. IF surge tank level stable or increasing, THEN go to Step 3. IF CCW surge tank level can NOT be maintained greater than 10%, THEN perform the following: 1) Trip the reactor. 2) Trip the RCPs. 3) Place both CCW pumps in pull stop. 4) Go to E-0, REACTOR TRIP OR SAFETY INJECTION.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

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CAUTION

IF ANY RCP IS TRIPPED, THEN SHUTDOWN MARGIN REQUIREMENTS SHOULD BE VERIFIED (REFER TO O-3.1, BORON CONCENTRATION FOR XENON FREE ALL RODS IN MOST REACTIVE ROD STUCK OUT SHUTDOWN MARGIN).

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3	Check CCW To Both RCPs: o Annunciator A-7 (A-15), RCP 1A (1B) CCW return Hi temp or low flow 165 gpm 125°F alarm - EXTINGUISHED o RCP motor bearings temperature (PPCS address GD-RCPS OR RCP temperature monitor RK-30A recorder) - ≤ 200°F	IF CCW lost to RCP(s), THEN perform the following: a. Trip the Rx. b. Trip affected RCP(s). c. Go to E-0, REACTOR TRIP OR SAFETY INJECTION.
4	Check CCW Valve Alignment - NORMAL (Refer to Attachment AT POWER CCW ALIGNMENT)	Align CCW valves as necessary.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: o An evaluation must be made to determine if operation may continue while investigating a CCW leak in containment.

o Operation may continue with the reactor support coolers isolated. If this occurs, notify higher supervision.

5 Check For CCW Leakage In CNMT:

a. Check CNMT sump A level:

- o Level - STABLE
- o Sump A pumps - OFF

a. IF abnormal increase in CNMT sump level, THEN perform the following:

1) Direct HP Tech to sample sump A for chromates.

2) Prepare to make CNMT entry to check for CCW leak.

b. RCP oil levels - STABLE

b. IF any RCP oil level increasing uncontrollably, THEN perform the following:

1) Trip Reactor.

2) Trip affected RCP(s).

3) Close CCW supply and return for affected RCP(s).

- RCP A, MOV-749A and MOV-759A
- RCP B, MOV-749B and MOV-759B

4) Go to E-0, REACTOR TRIP OR SAFETY INJECTION.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	Check for CCW Leakage In AUX BLDG: o Start frequency of AUX BLDG sump pump(s) - NORMAL (Refer to RCS daily leakage log) o Waste holdup tank level - STABLE OR INCREASING AS EXPECTED	Dispatch AO to investigate AUX BLDG for CCW leakage.
7	Verify CCW System Leak - IDENTIFIED AND ISOLATED	Perform the following: a. Direct HP Tech to sample CCW HX SW outlet for chromates. b. Return to Step 2.
8	Verify CCW Surge Tank Level - APPROXIMATELY 50% AND STABLE	Perform the following: a. Open RMW to CCW surge tank, MOV-823. b. Start RMW pump(s). c. Restore CCW surge tank level to 50%. d. Stop RMW pump and close MOV-823.
9	Direct HP To Sample CCW System For Chromates	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10	Evaluate Plant Conditions:	
	a. CCW system malfunction - IDENTIFIED AND CORRECTED	a. Return to Step 1.
	b. CCW system status adequate for power operation (Refer to Tech Spec Section 3.3.3).	b. IF shutdown required, THEN refer to 0-2.1, NORMAL SHUTDOWN TO HOT SHUTDOWN.
	NOTE: Refer to 0-9.3, NRC IMMEDIATE NOTIFICATION, for reporting requirements.	
11	Notify Higher Supervision	
12	Return To Procedure Or Guidance In Effect	

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AP-CCW.2 APPENDIX LIST