

EOP: AP-CCW.2	TITLE: LOSS OF CCW DURING POWER OPERATION	REV: 9 PAGE 1 of 8
------------------	----------------------------------------------	-----------------------

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

TECHNICAL REVIEW

PORC REVIEW DATE 5/6/92

Thomas A. Marlow
PLANT SUPERINTENDENT

5/8/92
EFFECTIVE DATE

CATEGORY 1.0

REVIEWED BY: _____

9206160409 920605
PDR ADDCK 05000244
P PDR

10

11

12

13

14

15

16

17

18

19

20

21

22



EOP:	TITLE:	REV: 9
AP-CCW.2	LOSS OF CCW DURING POWER OPERATION	PAGE 2 of 8

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. 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, CCP, 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 1A (1B) CCW RETURN HI TEMP OR LO FLOW 165 GPM 125°F, lit or
- h. Annunciator A-24 (A-32), RCP 1A (1B) OIL LEVEL + 1.25, lit.

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29



EOP: -	TITLE:	REV: 9
AP-CCW.2	LOSS OF CCW DURING POWER OPERATION	PAGE 3 of 8

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
***** 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 CCW SHOULD BE CONSIDERED LOST TO THAT RCP, REFER TO STEP 3.		

1 Check CCW Pump Status:	Perform the following:	
o Annunciator A-17, Motor Off RCP CCP - EXTINGUISHED	a. Verify auto start of standby CCW pump or start manually.	
o Both CCW pump breaker white disagreement lights - 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).	

22

23

24

25

26

27

28

29

30

31

EOP:	TITLE:	REV: 9
AP-CCW.2	LOSS OF CCW DURING POWER OPERATION	PAGE 4 of 8

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p><u>NOTE:</u> CCW surge tank level should be verified locally in the Aux Bldg, if possible.</p>	
2	Verify CCW Surge Tank Level Normal:	
a.	CCW surge tank level - APPROXIMATELY 50% AND STABLE	<p>a. Open RMW to CCW surge tank (MOV-823) and start a RMW pump and perform the following:</p> <p><u>IF</u> surge tank level is stable or increasing, <u>THEN</u> go to Step 3.</p> <p><u>IF</u> surge tank level can <u>NOT</u> be maintained greater than 10%, <u>THEN</u>:</p> <ol style="list-style-type: none"> 1) Trip the Rx. 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

CAUTION

IF AN RCP(S) IS TRIPPED DUE TO A LOSS OF CCW, SEAL INJECTION SHOULD BE MAINTAINED TO THE IDLE RCP(S) UNTIL RCS TEMPERATURE IS LESS THAN 200°F, OR UNTIL CCW IS RESTORED.

3 Check CCW To Both RCPs:

IF CCW lost to RCP(s), THEN:

- 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) - $\leq 200^{\circ}\text{F}$

- 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 CONTROL ROOM CCW ALIGNMENT DURING POWER OPERATION)

Align CCW valves as necessary.

9. 2000

27

11

428

18

5

7

EOP: AP-CCW.2	TITLE: LOSS OF CCW DURING POWER OPERATION	REV: 9 PAGE 6 of 8
------------------	----------------------------------------------	-----------------------

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. CNMT sump A levels - NOT INCREASING NOTICEABLY

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

- 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 - NOT INCREASING

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

- 1) Close CCW to and from affected RCP(s), (MOV's 749A and 759A for "A" RCP; MOV's 749B and 759B for "B" RCP).
- 2) Trip Rx.
- 3) Trip affected RCP(s).
- 4) Go to E-0, REACTOR TRIP or SAFETY INJECTION.



EOP:	TITLE:	REV: 9
AP-CCW.2	LOSS OF CCW DURING POWER OPERATION	PAGE 7 of 8

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	<p>Check For CCW Leakage In AUX BLDG:</p> <ul style="list-style-type: none"> o Aux Bldg sump pump - INCREASED START FREQUENCY -OR- o Waste holdup tank level - UNEXPLAINED INCREASE -OR- o Aux Bldg - VISUAL LEAKAGE IDENTIFIED 	<p><u>IF</u> no leakage indicated in AUX BLDG, <u>THEN</u>:</p> <ul style="list-style-type: none"> a. Direct HP Tech to sample CCW Hx SW outlet for chromates. b. Go to step 10.
7	Establish - THE SOURCE OF THE CCW LEAKAGE AND ISOLATE	
8	<p>Verify CCW Surge Tank Level Normal:</p> <ul style="list-style-type: none"> o CCW surge tank level APPROXIMATELY 50% 	<p><u>IF</u> CCW surge tank level <u>NOT</u> approximately 50%, <u>THEN</u> open RMW to CCW surge tank, MOV-823, and start a RMW pump to fill CCW surge tank to approximately 50%.</p>
9	Direct HP To Sample For Chromates	
10	<p>Verify - CONDITIONS PERMIT CONTINUED POWER OPERATION, (Refer to Technical Specification Section 3.3.3).</p>	<p><u>IF</u> shutdown required, <u>THEN</u> refer to 0-2.1, NORMAL SHUTDOWN TO HOT SHUTDOWN.</p>

1

2

3

4

5

6

7

8

9

10

11

12

EOP: AP-CCW.2	TITLE: LOSS OF CCW DURING POWER OPERATION	REV: 9 PAGE 8 of 8
------------------	----------------------------------------------	-----------------------

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p><u>NOTE:</u> Refer to 0-9.3, NRC STATE AND COUNTIES IMMEDIATE NOTIFICATION, for reporting requirements.</p>		
11	Complete - NOTIFICATION TO HIGHER SUPERVISION	
12	Establish Further Guidance:	
	a. Problem or leakage - CORRECTED	a. <u>IF</u> problem <u>NOT</u> corrected or leakage <u>NOT</u> found or isolated, <u>THEN</u> return to Step 4.
	b. Return to - APPROPRIATE OPERATING PROCEDURE	
-END-		



EOP:	TITLE:	REV: 9
AP-CCW.2	LOSS OF CCW DURING POWER OPERATION	PAGE 1 of 1

ATTACHMENT CONTROL ROOM CCW ALIGNMENT DURING POWER OPERATION

- | | |
|--------------------------------------|-----------------|
| o CCW to RHR Hx A | MOV-738A Closed |
| o CCW to RHR Hx B | MOV-738B Closed |
| o CCW from RCP 1A Thermal Barrier | AOV-754A Open |
| o CCW from RCP 1B Thermal Barrier | AOV-754B Open |
| o CCW from Ex Ltdn Hx Isol Vlv | AOV-745 Closed |
| o CCW Surge Tk Vent | RCV-017 Open |
| o CCW to CNMT Isol Vlv | MOV-817 Open |
| o CCW to Rx Supp Clrs Isol Vlv | MOV-813 Open |
| o CCW from Rx Supp Clrs Isol Vlv | MOV-814 Open |
| o CCW to RCP 1A Isol Vlv | MOV-749A Open |
| o CCW to RCP 1B Isol Vlv | MOV-749B Open |
| o CCW from RCP 1A Isol Vlv | MOV-759A Open |
| o CCW from RCP 1B Isol Vlv | MOV-759B Open |
| o NRHX Ltdn Outlet Temp (Controller) | TCV-130 Auto |

