

EOP: AP-CW.1	TITLE: LOSS OF A CIRC WATER PUMP	REV: 4 PAGE 1 of 6
-----------------	-------------------------------------	-----------------------

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

TECHNICAL REVIEW

PORC REVIEW DATE 2-7-90

Joseph A. Widay
PLANT SUPERINTENDENT

2-23-90
EFFECTIVE DATE

QA X NON-QA _____ CATEGORY 1.0
REVIEWED BY: _____

GINNA STATION	
START:	
DATE	_____
TIME	_____
COMPLETED:	
DATE	_____
TIME:	_____

9003080327 900227
PDR ADOCK 05000244
F PNU



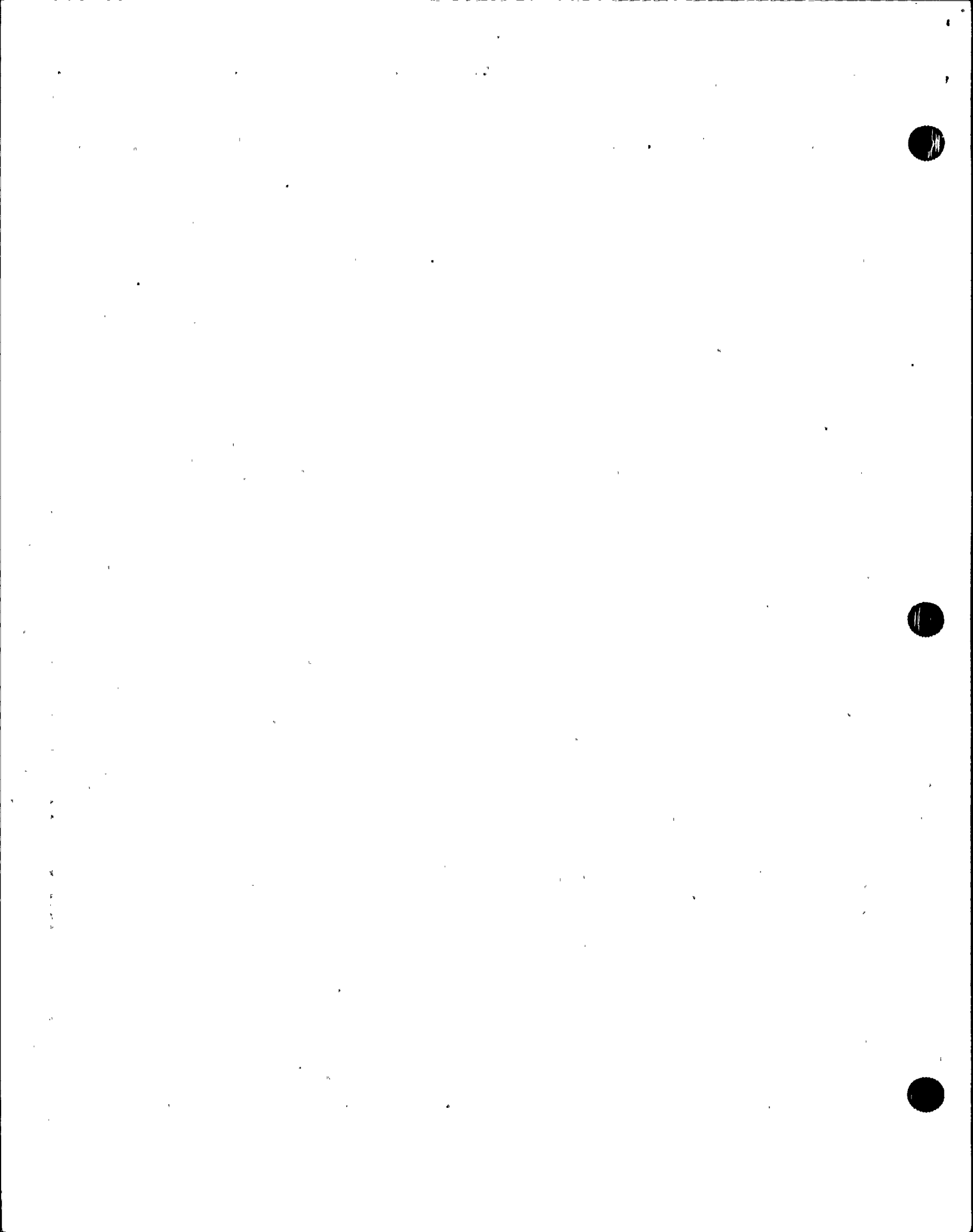
EOP: AP-CW.1	TITLE: LOSS OF A CIRC WATER PUMP	REV: 4 PAGE 2 of 6
-----------------	-------------------------------------	-----------------------

A. PURPOSE - This procedure provides the actions necessary to respond to a loss of a circ water pump while the plant is at power.

B. ENTRY CONDITIONS/SYMPTOMS

1. SYMPTOMS - The symptoms of LOSS OF A CIRC WATER PUMP are;

- a. Annunciator J-16 MOTOR OFF CW-EH, EMERG OIL, SEAL OIL BU alarm, or
- b. Annunciator G-8 4 KV MOTOR OVERLOAD alarm.



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
------	--------------------------	-----------------------

CAUTION

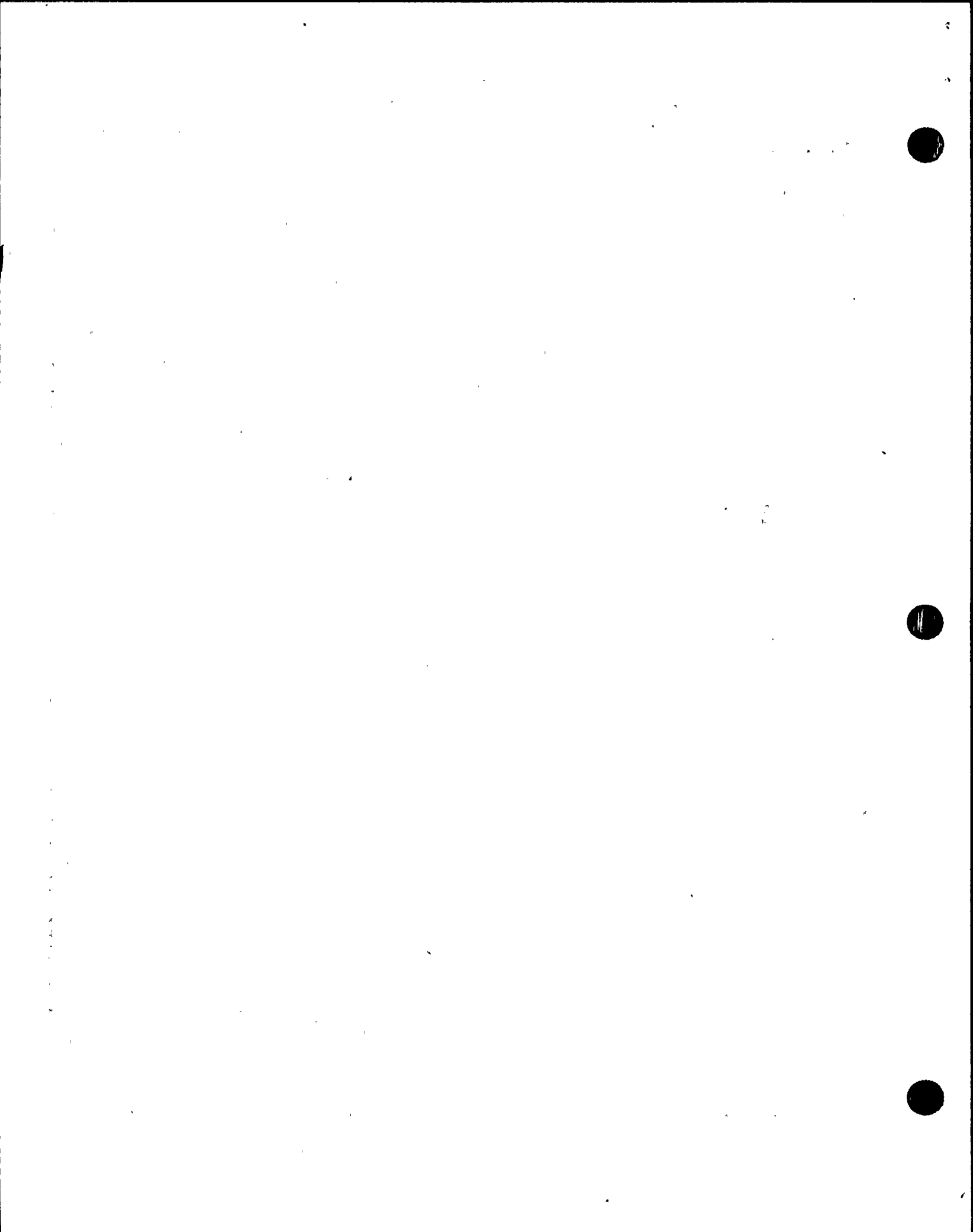
IF, AT ANY TIME DURING THIS PROCEDURE, A REACTOR TRIP OR SI OCCURS, E-0, REACTOR TRIP OR SAFETY INJECTION, SHALL BE PERFORMED.

NOTE: Step 1 is an Immediate Action Step.

① Verify One Circ Water Pump -
RUNNING

IF power greater than 8%, THEN verify Rx trip and go to E-0, REACTOR TRIP or SAFETY INJECTION.

IF power LESS THAN 8%, THEN verify turbine trip and go to AP-TURB.1, TURBINE TRIP WITHOUT RX TRIP REQUIRED.



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
------	--------------------------	-----------------------

CAUTION

TURBINE LOAD DECREASE SHOULD BE COMPLETED AS QUICKLY AS POSSIBLE CONSISTANT WITH MINIMIZING THE AMOUNT OF STEAM DUMP OPERATION.

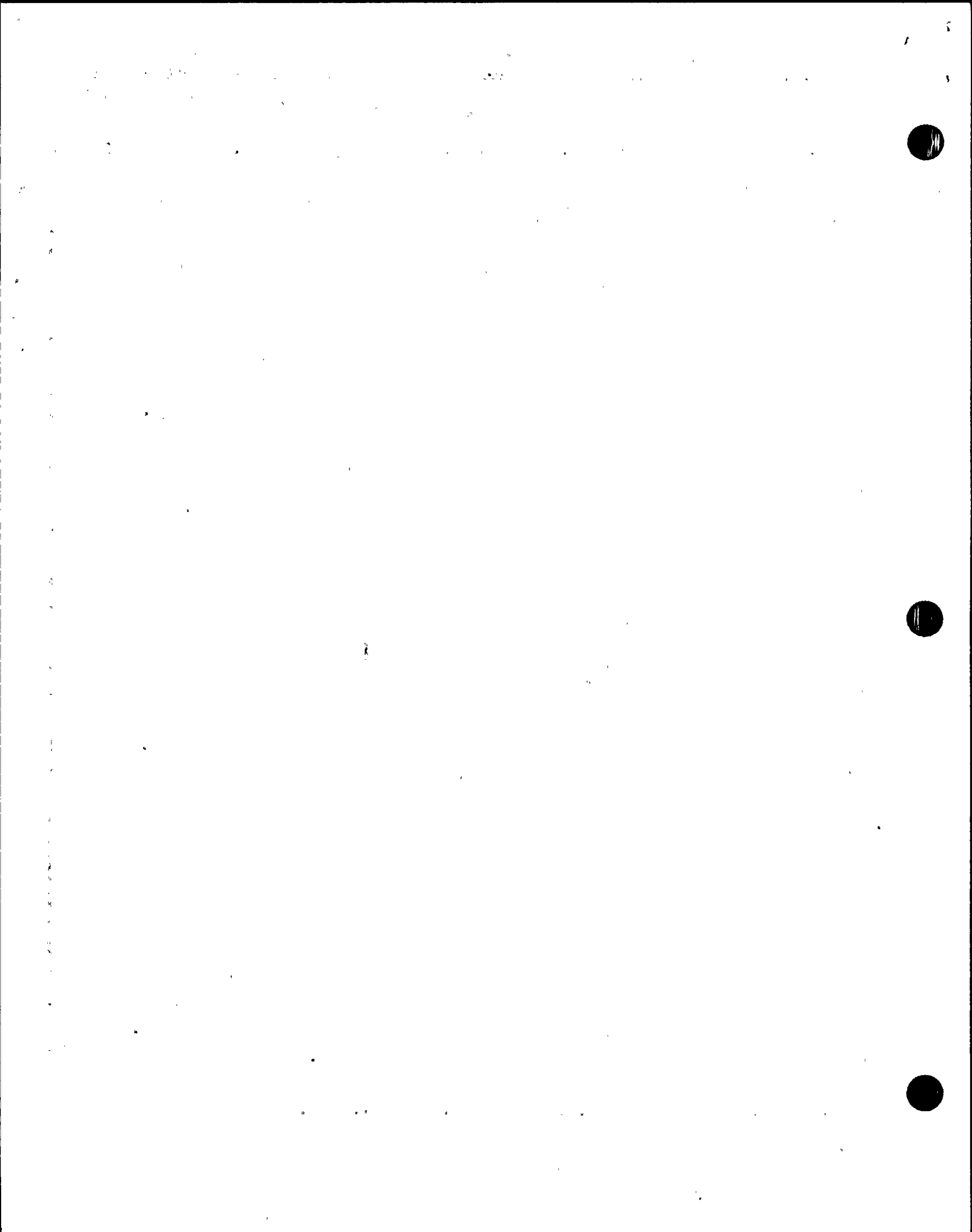
<p>2 Place - EH CONTROL IN MANUAL AND REDUCE TURBINE LOAD TO LESS THAN 50%</p>	<p><u>IF</u> turbine load can <u>NOT</u> be reduced to LESS THAN 50%, <u>THEN</u> trip the reactor and go to E-0, REACTOR TRIP or SAFETY INJECTION.</p>
--	---

<p>3 Check - ROD CONTROL IN AUTO AND STEPPING IN TO CONTROL TAVG</p>	<p>Manually insert control rods to control Tavg.</p>
--	--

<p>4 Check S/G Levels:</p> <p>a. S/G levels - GREATER THAN 30% AND STABLE OR INCREASING</p>	<p>a. Restore S/G Level</p> <p>1) Decrease turbine load and minimize steam dump as necessary.</p> <p>2) <u>IF</u> MFP suction press and flow are low, <u>THEN</u>:</p> <ul style="list-style-type: none"> o Verify standby condensate pump starts. o Verify condensate bypass valve opens. o Close trim valve to control pressure.
<p>b. S/G levels - LESS THAN 67% OR FEEDWATER ISOLATED</p>	<p>b. <u>IF</u> necessary, take manual control of the MFW regulation valves.</p>



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5	Verify Tav _g Trending To Tref: o Auto rod control - CONTROLLING TAVG	o Manually insert/withdraw control rods as necessary to control Tav _g .
6	Verify Condenser Vacuum - GREATER THAN 25 INCHES Hg AND STABLE OR INCREASING	<u>IF</u> condenser vacuum less than 25 inches Hg <u>OR</u> decreasing, <u>THEN</u> refer to AP-TURB.4, LOSS OF CONDENSER VACUUM.
7	Verify Proper Rod Control Bank Positioning: a. All bank insertion limit alarm - EXTINGUISHED b. ΔI within ± 5% of target value	a. Borate to clear insertion limit alarms. (Refer to AP-CVCS.2, IMMEDIATE BORATION.) b. Borate/dilute to restore ΔI to within limits.



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8	Establish Whether Tripped CW Pump Will Restart:	
	a. Have A0 check the CW pump and CW pump breaker for obvious damage prior to CW pump restart - NO PUMP OR BREAKER DAMAGE OBSERVED	a. <u>IF</u> damage is evident, <u>THEN</u> : 1) Do <u>NOT</u> restart CW pump. 2) Notify electricians. 3) Adjust waterbox outlet valves to balance condenser cooling. (Refer to T-8A, Step 5.6, <u>STARTUP AND SHUTDOWN "A" AND "B" CIRCULATING WATER PUMPS</u>). 4) Go to Step 9.
	b. Reset tripped CW pump start/stop switch	
	c. Restart tripped CW pump - CW PUMP RESTARTED	c. <u>IF</u> CW pump will <u>NOT</u> restart, <u>THEN</u> : 1) Notify electricians. 2) Adjust waterbox outlet valves to balance condenser cooling. (Refer to T-8A, Step 5.6, <u>STARTUP AND SHUTDOWN "A" AND "B" CIRCULATING WATER PUMPS</u> .)
9	Establish - APPROPRIATE OPERATING CONDITIONS (Refer to O-5.1, LOAD REDUCTION)	

-END-

