

EOP: AP-PRZR.1	TITLE: ABNORMAL PRESSURIZER PRESSURE	REV: 4 PAGE 1 of 9
-------------------	---	-----------------------

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

TECHNICAL REVIEW

PORC REVIEW DATE 2-7-90

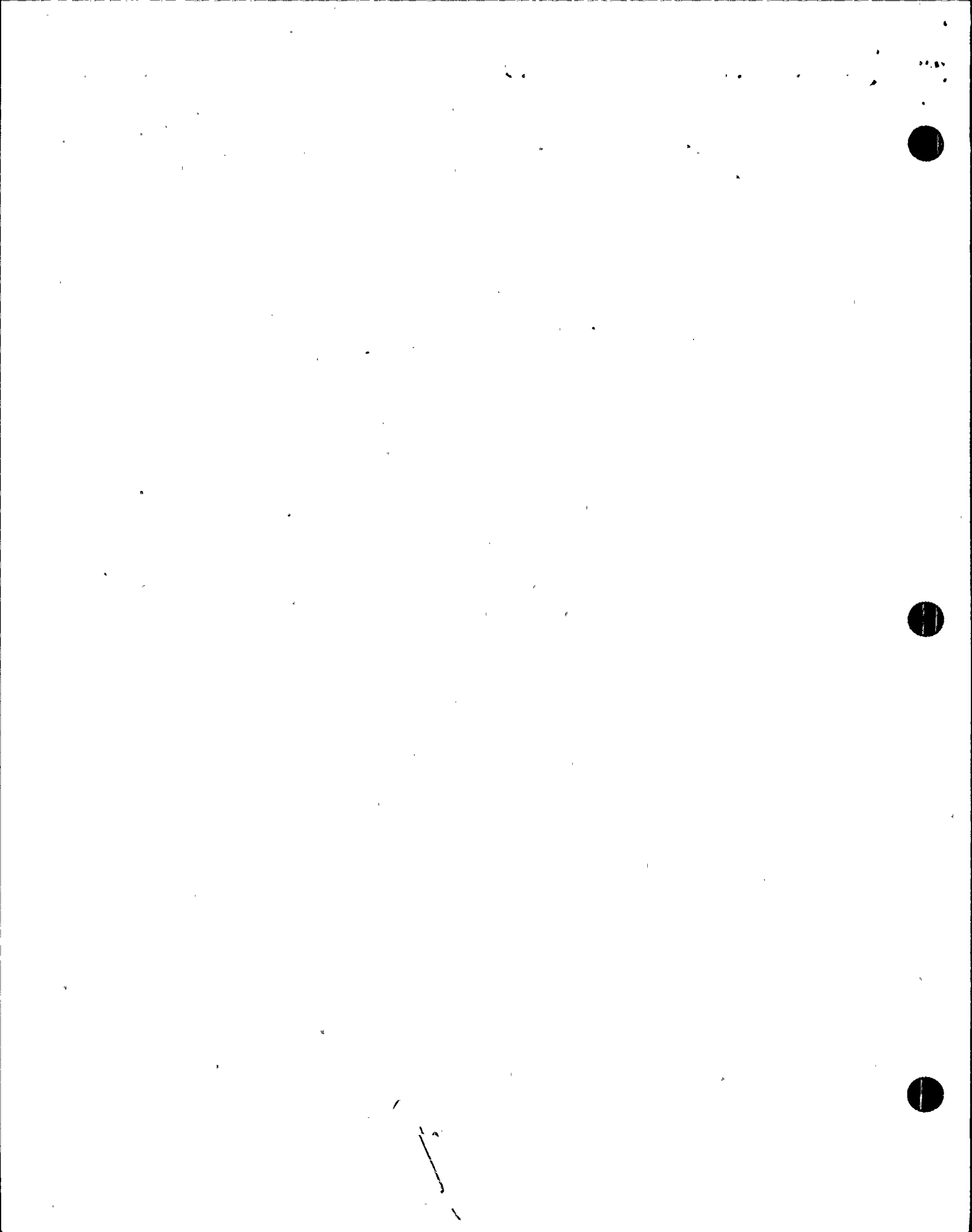
Joseph A. Widay
PLANT SUPERINTENDENT

2-23-90
EFFECTIVE DATE

QA NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

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



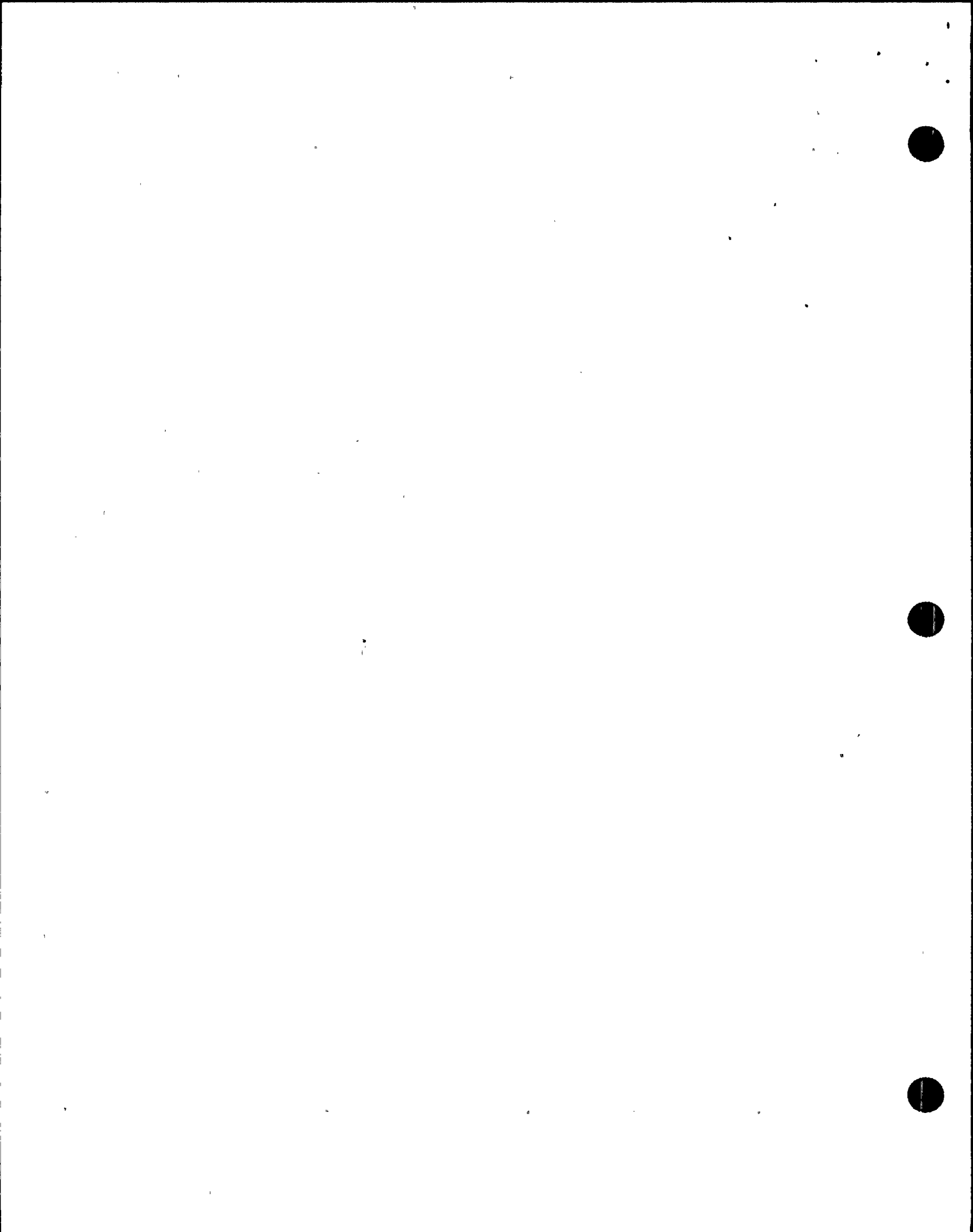
EOP: AP-PRZR.1	TITLE: ABNORMAL PRESSURIZER PRESSURE	REV: 4 PAGE 2 of 9
-------------------	---	-----------------------

A. PURPOSE - This procedure provides the actions necessary to mitigate the consequences of abnormal PRZR pressure.

B. ENTRY CONDITIONS/SYMPTOMS

1. SYMPTOMS - The symptoms of ABNORMAL PRZR PRESSURE are;

- a. Annunciator F-19, PRZR PORV OUTLET HI TEMP 145°F, or
- b. Annunciator F-18, PRZR SAFETY VLV OUTLET HI TEMP 145°F, or
- c. Annunciator AA-13, PRESSURIZER SAFETY VALVE POSITION, or
- d. Annunciator F-1, PRT LIQUID HI TEMP 220°F, or
- e. Annunciator F-9, PRT HI PRESS 5 PSI, or
- f. Annunciator F-17, PRT LEVEL 60.8% 84.5%, or
- g. Annunciator F-2, PRESSURIZER HI PRESS 2310 PSI alarm, or
- h. Annunciator F-10, PRESSURIZER LO PRESS 2185 PSI alarm, or
- i. Annunciator F-6, PRESSURIZER HEATER BREAKER TRIP alarm.



EOP:
AP-PRZR.1

TITLE:
ABNORMAL PRESSURIZER PRESSURE

REV: 4
PAGE 3 of 9

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: Actual PRZR pressure should be verified by more than 1 indicator.

1 Verify PRZR Pressure:

- o PRZR pressure - GREATER THAN 1873 PSIG
- o PRZR pressure - LESS THAN 2377 PSIG

IF PRZR pressure is less than 1873 psig OR greater than 2377 psig, THEN ensure reactor trip AND go to E-0, REACTOR TRIP or SAFETY INJECTION.

2 Check Reactor Power - STABLE

IF a power transient is occurring, AND PRZR pressure is NOT changing as expected, THEN go to Step 3.

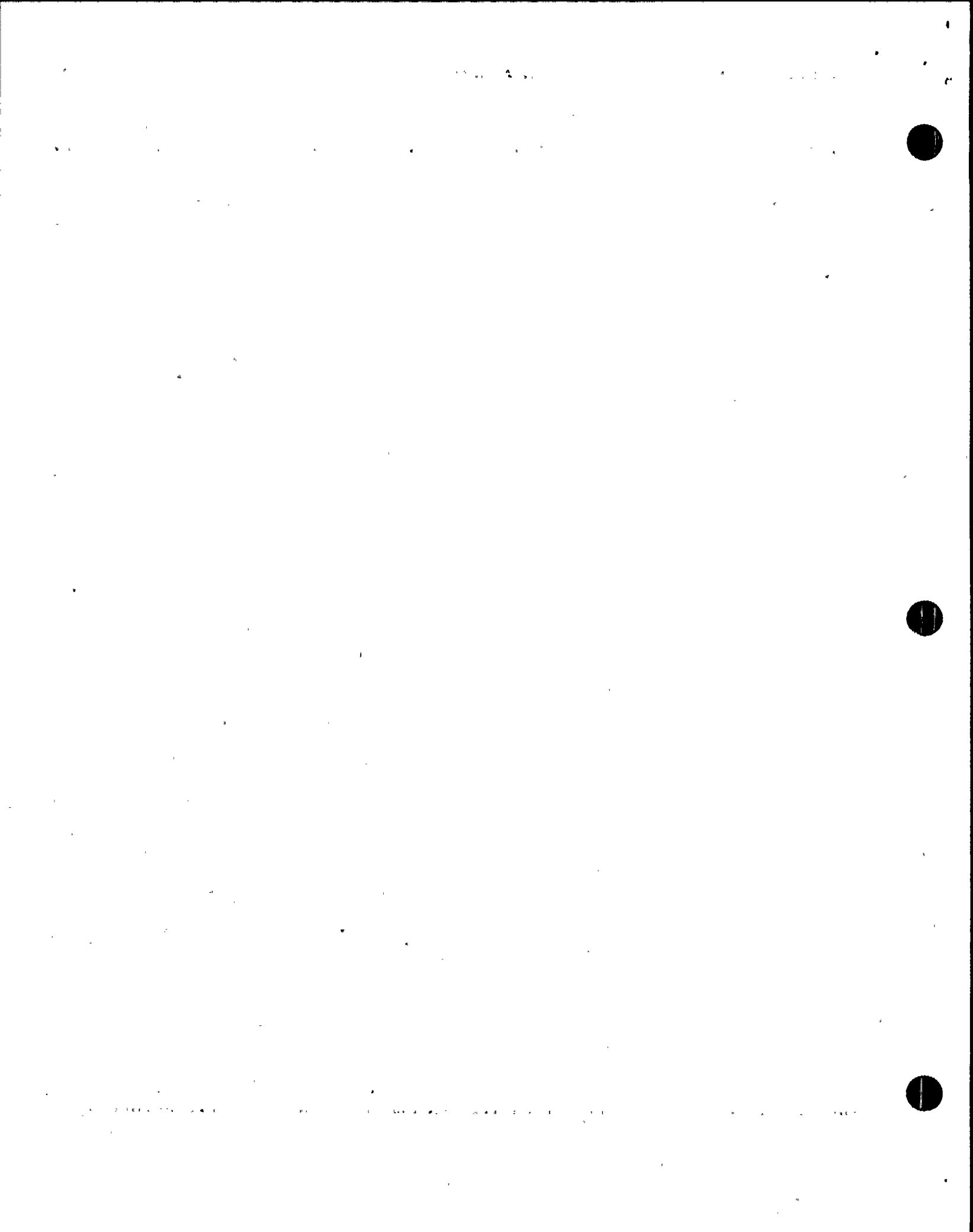
IF a power transient is occurring, AND PRZR pressure is changing as expected, THEN determine the cause for the power transient, and exit this procedure.

3 Check PRZR Pressure:

- a. PRZR pressure - GREATER THAN 2185 PSIG
- b. PRZR pressure - LESS THAN 2260 PSIG
- c. Go to Step 15

a. IF PRZR pressure less than 2185 psig, THEN go to Step 4.

b. IF PRZR pressure greater than 2260 psig, THEN go to Step 11.



STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4 Check PRZR Heater Status:

a. PRZR heater control group - ON

a. Restore PRZR proportional heaters:

1) Place PRZR heater control group switch to TRIP to reset, then place switch to close and let return to AUTO.

2) Verify increase of approximately 400 KW on bus 14 with PRZR pressure less than 2220 psig.

b. PRZR heater backup group - ON

b. Restore PRZR backup heaters:

1) Place PRZR heater backup group switch to ON.

2) Verify increase of approximately 400 KW on bus 16.

5 Check PRZR Spray Valves Closed:

o PCV-431A controller output - ZERO

o PCV-431B controller output - ZERO

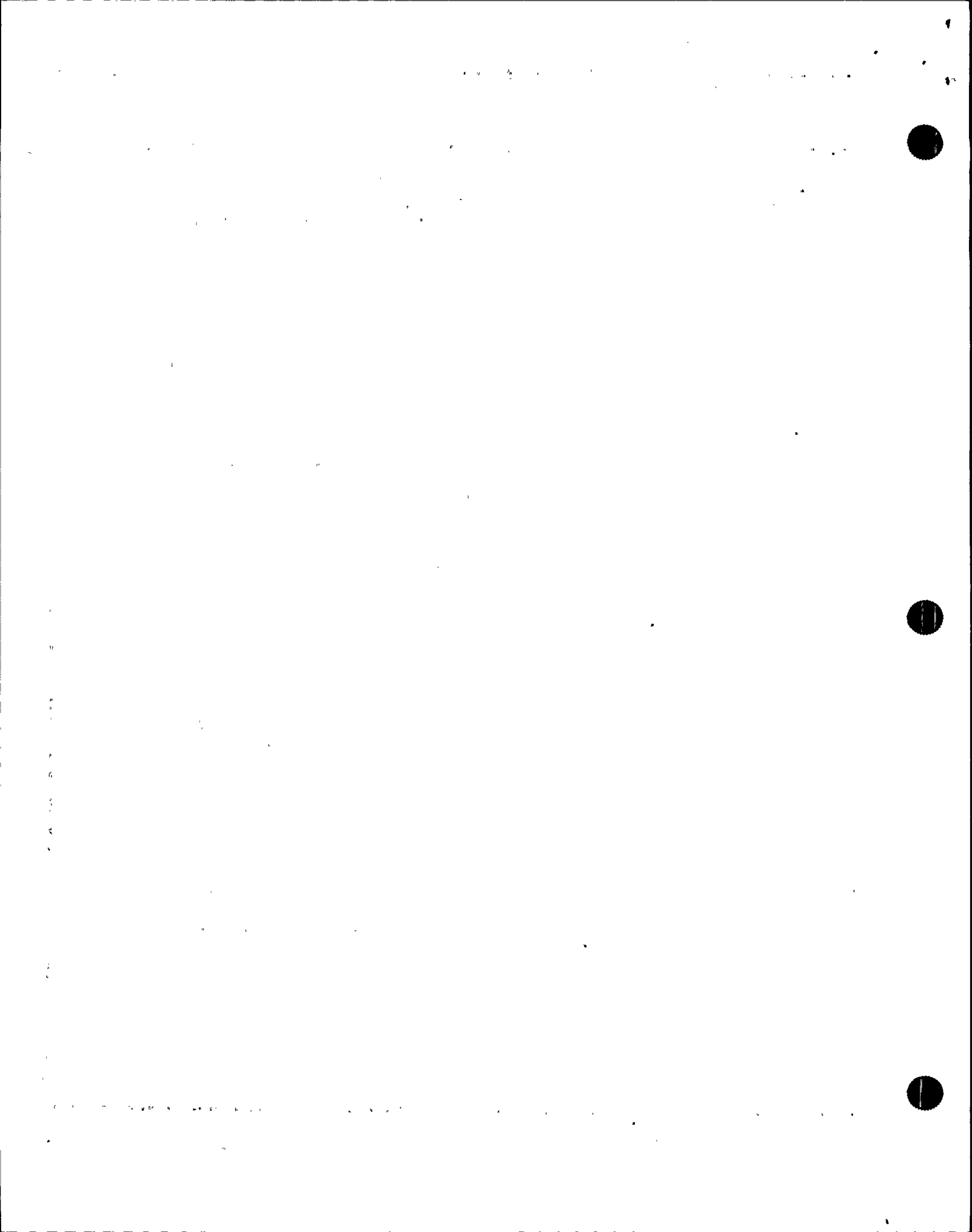
IF RCS pressure is decreasing, THEN place malfunctioning spray valve in MANUAL and close valve.

IF spray valve can NOT be closed, THEN perform the following:

a. Trip the reactor.

b. Trip the associated RCP.

c. Go to E-0, REACTOR TRIP or SAFETY INJECTION.



EOP:
AP-PRZR.1

TITLE:
ABNORMAL PRESSURIZER PRESSURE

REV: 4

PAGE 5 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6 Check PRZR PORVs:

a. Both PRZR PORVs - CLOSED

a. IF either PRZR PORV indicates open, THEN close the PORV, OR close the associated block valve.

b. Annunciator F-19 PRZR PORV outlet hi temp 145°F alarm - EXTINGUISHED

b. IF PRZR PORV leakage is indicated, THEN:

1) Close PRZR PORV block valves MOV-515, MOV-516 one at a time, AND check if relief line temperature decreases.

2) WHEN leaking PRZR PORV is identified, THEN go to Step 7.

c. Go to Step 8

7 Check If Leaking PRZR PORV Can Be Reseated:

a. Check the associated PRZR PORV block valve - CLOSED

a. Close the associated PRZR PORV block valve.

b. Cycle the leaking PRZR PORV - OPEN THEN CLOSED

c. Reopen - ASSOCIATED PRZR PORV BLOCK VALVE

d. Verify leakage - HAS STOPPED

d. IF leakage continues, THEN:

1) Close associated PRZR PORV block valve.

2) Refer to Tech Spec section 3.1.1.4 to determine operating limitations.

e. Go to Step 16



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

CAUTION

- o IF PRZR PRESSURE IS TO BE REDUCED WHILE AT POWER, IT SHOULD BE DONE SLOWLY SINCE THE PRZR LOW PRESSURE TRIP IS RATE SENSITIVE.
- o WHEN REDUCING PRZR PRESSURE, OTAT SETPOINT WILL DECREASE.

8 Check PRZR Safety Valves:

- o Position indicator - LESS THAN 0.1 INCH
- o Annunciator F-18, PRZR SAFETY VLV OUTLET HI TEMP 145°F - EXTINGUISHED
- o Annunciator AA-13, PRESSURIZER SAFETY VALVE POSITION - EXTINGUISHED

IF safety valve leakage is indicated, THEN attempt to reset the safety valve by:

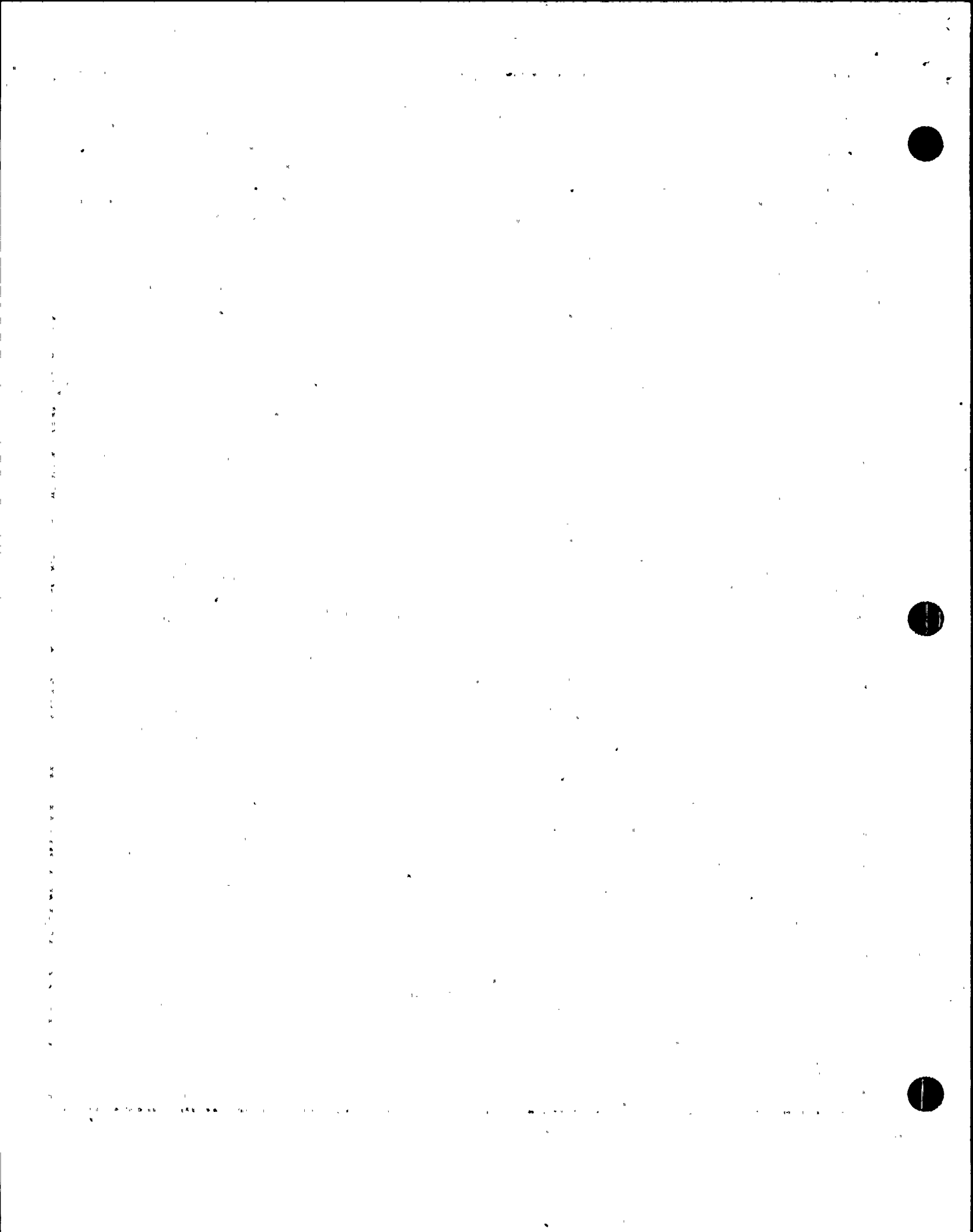
- a. SLOWLY reduce PRZR pressure (remain above 2000 psig).
- b. IF symptoms indicate leakage has stopped, THEN restore pressure to normal.
- c. IF leakage recurs or can NOT be stopped, THEN:
 - 1) Verify leakage within limits of Tech Spec section 3.1.5.2.
 - 2) Go to Step 18.

NOTE: With PCV-431K in manual, PORV-431C is inoperable. Check Tech Spec Section 3.1.1.4 to determine operating limitations.

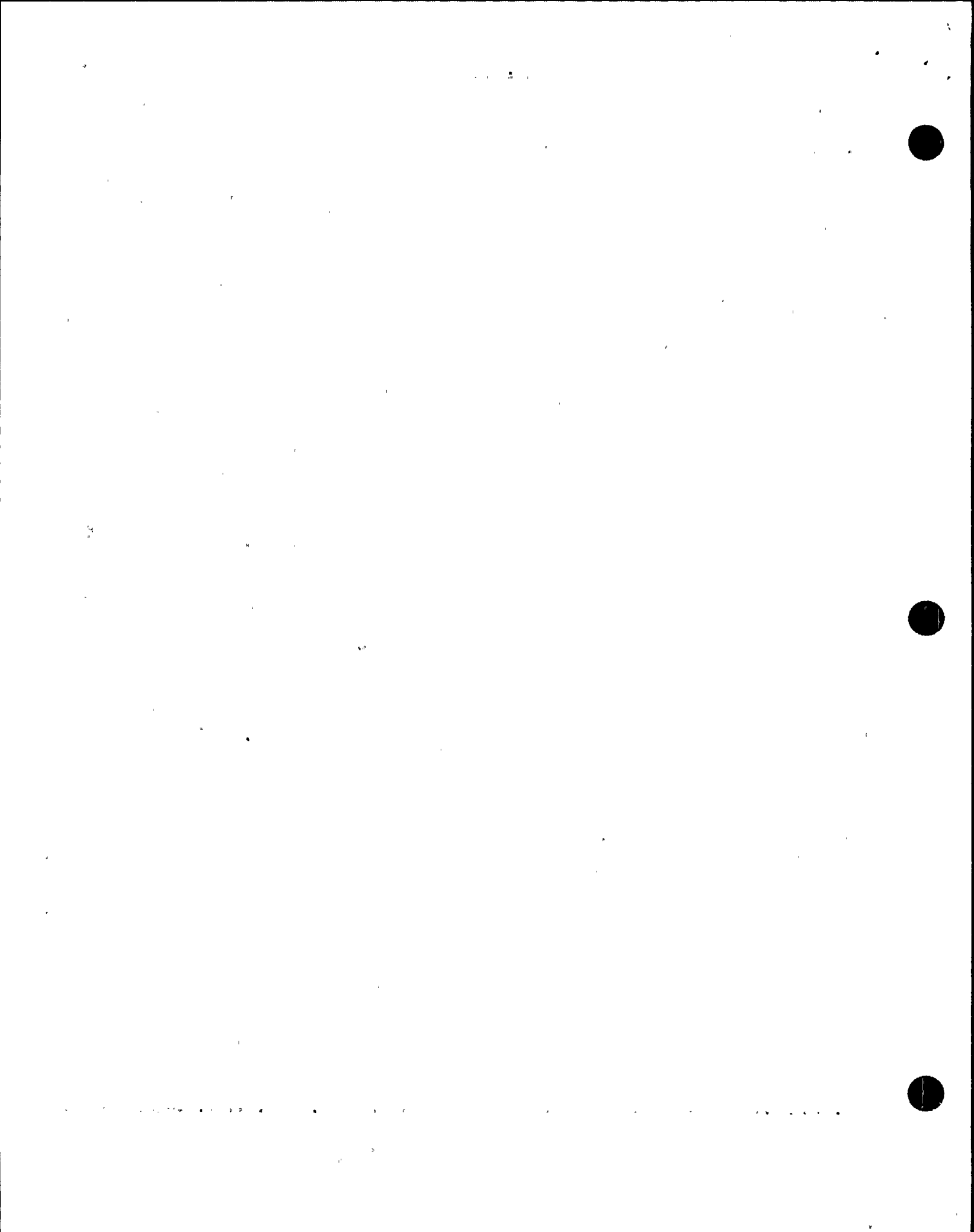
9 Check PRZR Pressure Controller PC-431K:

- o Controller output - LESS THAN 50%

IF PRZR pressure controller NOT less than 50%, THEN place PC-431K in manual and decrease output to energize PRZR heaters.

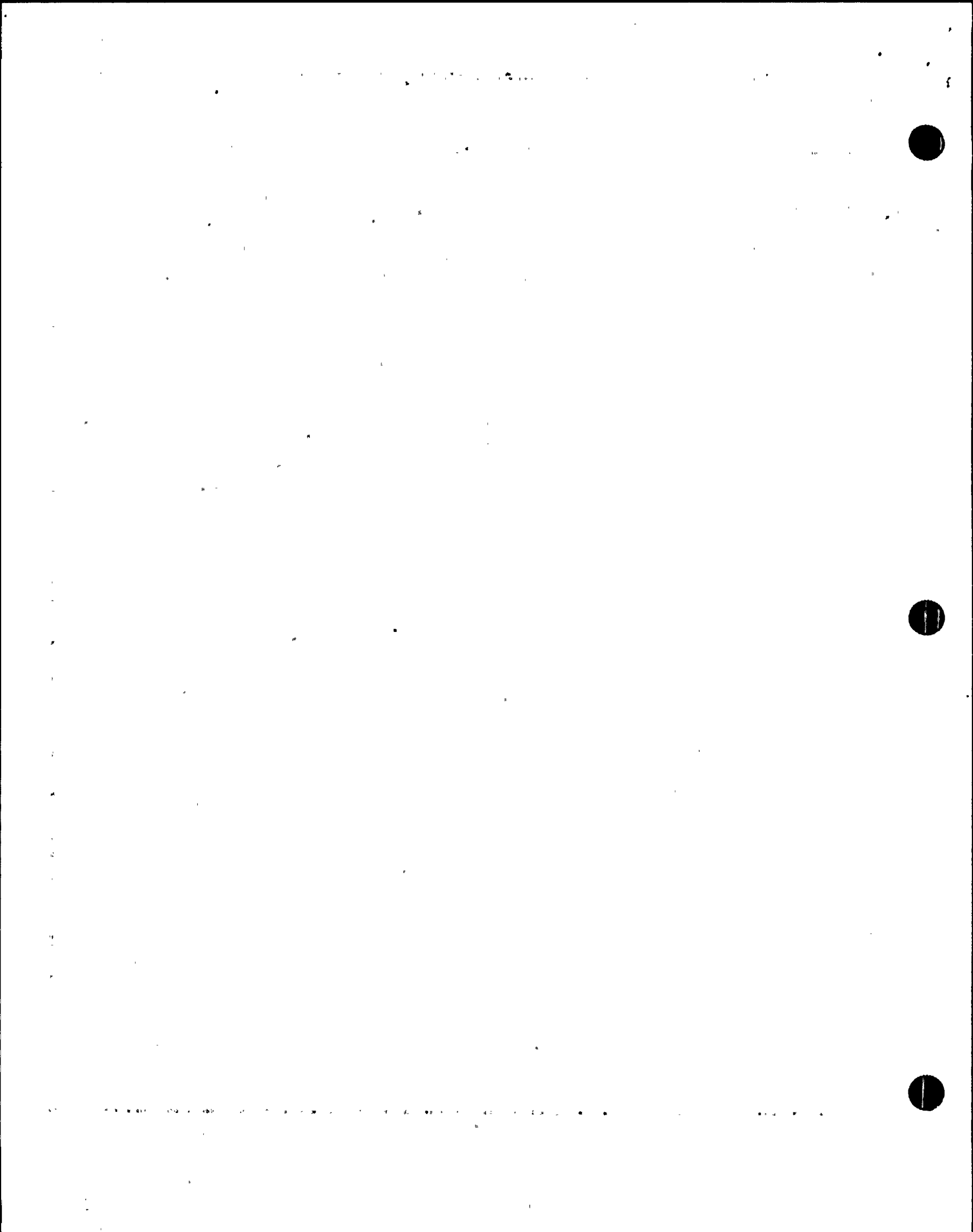


STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10	Check PRZR Pressure: a. Pressure - TRENDING TO 2235 PSIG b. Go to Step 15	<u>IF</u> PRZR pressure continues to decrease uncontrollably, <u>THEN</u> trip the reactor and go to E-0, REACTOR TRIP or SAFETY INJECTION.
11	Check PRZR Backup Heaters - OFF	Place backup heater switch to OFF.
<u>NOTE:</u> With PCV-431K in manual, PORV-431C is inoperable. Check Tech Spec Section 3.1.1.4 to determine operating limitations.		
12	Check PRZR Pressure Controller PC-431K: o Controller output - GREATER THAN 60%	<u>IF</u> PRZR pressure controller <u>NOT</u> greater than 60%, <u>THEN</u> place PC-431K in manual and increase output to open PRZR spray valves.
13	Check PRZR Spray Valves: o PCV-431A controller output - GREATER THAN ZERO o PCV-431B controller output - GREATER THAN ZERO	<u>IF</u> PRZR spray valve controller outputs are <u>NOT</u> greater than zero, <u>THEN</u> place PRZR spray valve controllers in manual and open as required to control pressure.
14	Check PRZR Pressure: o Pressure - TRENDING TO 2235 PSIG	<u>IF</u> PRZR pressure continues to increase uncontrollably, <u>THEN</u> trip the reactor and go to E-0, REACTOR TRIP or SAFETY INJECTION.



EOP: AP-PRZR.1	TITLE: ABNORMAL PRESSURIZER PRESSURE	REV: 4 PAGE 8 of 9
-------------------	---	-----------------------

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<u>NOTE:</u>	If PT-429 fails low, PCV-430 will not open on PRZR high pressure AND if PT-431 fails low, PCV-431C will not open on PRZR high pressure; also, when PC-431K is in manual, PC-431C will not lift on PRZR high pressure.	
15	Check For Failed PRZR Pressure Channel:	
a.	All 4 narrow range PRZR pressure channels - INDICATE APPROXIMATELY THE SAME PRESSURE	<p>a. <u>IF</u> one narrow range pressure channel deviates significantly from the others, <u>THEN</u>:</p> <ol style="list-style-type: none"> 1) Ensure PC-431K in MANUAL. 2) Place switch P-429A in the PLP rack to an operable pressure channel. 3) Restore PC-431K to AUTO. 4) Verify proper operation of PC-431K. 5) For bistable defeat, refer to ER-INST.1, REACTOR PROTECTION BISTABLE DEFEAT AFTER INSTRUMENTATION LOOP FAILURE.
<u>NOTE:</u>	Refer to 0-9.3, IMMEDIATE NOTIFICATION, for reporting requirements.	
16	Complete - NOTIFICATION TO I&C AND HIGHER SUPERVISION	



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
17	Check PRT Conditions: <ul style="list-style-type: none"> o PRT level - APPROXIMATELY 72% o PRT pressure - APPROXIMATELY 1.5 PSIG o PRT temperature - LESS THAN 200°F 	IF PRT level is high, THEN drain PRT using PRZR relief tk drn vlv AOV-526. IF PRT temperature or pressure is high due to inleakage, THEN: <ul style="list-style-type: none"> o Open RMW to CNMT isol vlv (AOV-508). o Feed and bleed the PRT using fill valve RMW to PRZR relief tank AOV-548 AND drain valve PRZR relief tk drn vlv AOV-526.
18	Verify - CONDITIONS PERMIT CONTINUED POWER OPERATION	IF shutdown is required, THEN refer to 0-2.1, NORMAL SHUTDOWN TO HOT SHUTDOWN.

-END-

