V.C. SUMMER NUCLEAR STATION

NRC JOB PERFORMANCE MEASURE

JPS-006

Pressurizer Level Malfunction (NRC)

-

Revision No. 3



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Pressurizer Level Malfunction (NRC)

TRAINEE	EVALUATOR
EVALUATOR SIGNATURE	DATE
EVALUATION METHOD: EVALUATION LOCATION:	PERFORM SIMULATOR
ESTIMATED TIME:	15.0 MINUTES TIME STARTED:
10CFR55.45(a)4 IDEN THE READ	TIFY THE INSTRUMENTATION SYSTEMS AND SIGNIFICANCE OF FACILITY INSTRUMENT INGS
TIME CRITICAL: NO	FAULTED JPM: No
TRAINEE PERFORMANCE:	SATISFACTORY UNSATISFACTORY

READ TO OPERATOR: WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITIONS:

1. Plant is operating at 100% power with all conditions stable.

TOOLS AND EQUIPMENT NEEDED:

NONE

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REFERENCED DOCUMENTS:

REV DATE

1	AOP*401.6	PRESSURIZER LEVEL CONTROL AND	08/22/95
	••••	PROTECTION CHANNEL FAILURE	
2	SOP*102	CHEMICAL AND VOLUME CONTROL SYSTEM	10/22/97

TASK STANDARDS:

- 1. PZR HTRS and letdown re-established.
- 2. Letdown relief is not lifted.

Pressurizer Level Malfunction (NRC)

INITIATING CUES:

1. Respond to pressurizer annunciators.

TERMINATING CUES:

- 1. Operable channel selected.
- 2. Bistable tripped.
- 3. Letdown restored.

SAFETY CONSIDERATIONS:

NONE

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- (S) DENOTES SEQUENCED ELEMENT
- (*) DENOTES CRITICAL ELEMENT

PERFORMANCE CHECKLIST:

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NOTE 1: Steps 1 and 2 are immediate operator actions.

STEP

S 1. Verify instrument failure by comparing suspect channel level indication and level recorder to other two channels.

STANDARD

STANDARD

Compares LI-459 to LI-460 and LI-461 and recognizes that LI-459 has failed to 0% level.

STEP

S*2. On pressurizer level control switch, select the position which has two operable channels. Positions the PZR level control switch to the 460 - 461 position.

COMMENTS:

<u>STEP</u>

 Select operable channel on the pressurizer level recorder. Verifies the pressurizer level recorder position switch channel 460.

STANDARD

NOTE 4: Critical if FCV-122 not full closed.

STEP

STANDARD

*4. Ensure FCV-122 is in manual and closed. (SOP-102, IV L) Positions FCV-122 in MANUAL and reduces the demand signal to zero. Observes FI-122 charging flow goes to zero.

COMMENTS:

(S) DENOTES SEQUENCED ELEMENT

(*) DENOTES CRITICAL ELEMENT

PERFORMANCE CHECKLIST:

STEP

STANDARD

Ensure PZR level is greater 5. than 18%.

Checks LI-460 & LI-461 to verify PZR level is greater than 18%.

NOTE 6: Only critical if valve is not opened enough to prevent letdown relief from lifting.

STEP

STANDARD

Positions PCV-145, controller to MANUAL

and increases the demand signal to 70%.

Place PCV-145 in manual and *6 open to 70%.

COMMENTS:

STEP

7. Open TCV-144 for maximum CCW flow to Letdown HX.

STEP

8. Align letdown flow to the VCT.

STEP

Open PVT-8152 letdown line 9 isolation

STANDARD

Places TCV-144, CC TO LTDN HX, in MAN and adjusts to 100% demand.

STANDARD

Positions TCV-143, LTDN TO VCT OR DEMIN, to the VCT position.

STANDARD

Verifies PVT-8152, LETDOWN LINE ISOL, indicates red light ON green light OFF.

NOTE 10: LCV-460 should already be open.

STEP

*10. Open LCV-459 and LCV-460 letdown line isolation valve

STANDARD

LCV-459 and LCV-460 indicate red light ON, green light OFF.

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(S) DENOTES SEQUENCED ELEMENT(*) DENOTES CRITICAL ELEMENT

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PERFORMANCE CHECKLIST:

COMMENTS:

STEP

STANDARD

 Ensure Charging Line Isolation Valves are open. MVG-8107 and MVG-8108 indicate red light ON, green light OFF.

NOTE 12: Cue examinee to establish 105 gpm letdown flow.

STEP

STANDARD

S*12. Establishes 60 gpm charging flow

Slowly opens FCV-122, CHG FLOW, establish 60 gpm flow on FI-122A

COMMENTS :

STEP

STANDARD

*13. Open PVT-8149A and one of the following PVT-8149B or PVT-8149C.

PVT-8149A and PVT-8149B or C indicate red light ON green light OFF.

COMMENTS:

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(S) DENOTES SEQUENCED ELEMENT(*) DENOTES CRITICAL ELEMENT

PERFORMANCE CHECKLIST:

STEP

*14. Open FCV-122 charging flow, as needed to maintain Regenerative Hx outlet between 250°F and 350°F and maintain Pzr level.

Increases or decreases the demand signal on the FCV-122 controller to maintain Regenerative Hx outlet between 250°F and 350°F and Pzr level at program without lifting letdown line relief.

STANDARD

COMMENTS:

STEP

*15. Close PCV-145 to maintain letdown pressure between 300 and 400 psig.

STANDARD

Decreases the demand signal on the PCV-145 controller to close PCV-145 and observes pressure indication to maintain letdown pressure between 300 and 400 psig without lifting letdown line relief.

COMMENTS:

STEP

STANDARD

pushbutton lit.

pushbutton lit.

16 Places PCV-145, LO PRESSURE LETDOWN in AUTO.

17. Places TCV-144, CC TO LTDN HX,

STEP

in AUTO.

STANDARD TCV-144,CC TO LTDN HX controller, AUTO

PCV-145, LO PRESS LTDN controller, AUTO

NOTE 18: Operator may delay returning FCV-122 to Auto if PZR level is above program to prevent excessive reduction of charging by PZR LCS.

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(S) DENOTES SEQUENCED ELEMENT (*) DENOTES CRITICAL ELEMENT

PERFORMANCE CHECKLIST:

STEP

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STANDARD

18. Places FCV-122, charging flow in AUTO when pressurizer level matches reference level.

<u>STEP</u>

19. Places TCV-143, LTDN to VCT or DEMIN, in DEMIN/AUTO.

STEP

20. Ensure that pressurizer level master controller is responding correctly.

STEP

*21. Align the pressurizer heaters for existing plant conditions.

matched per Section III.E of SOP-102.

Places FCV-122 controlled in AUTO by

depressing AUTO pushbutton when levels

Momentarily positions TCV-143 to the DEMIN/AUTO position after letdown temperatures have stabilized.

STANDARD

Observes that the Pressurizer Level Master Controller is responding properly.

STANDARD

Momentarily places CNTRL GRP heater switch to CLOSE with RED flag indication Clears amber trip light on BU GRP1 heaters.

COMMENTS:

NOTE 22: RO ONLY: Protection bistables are tripped by I&C. Examiner hands operator Attachment 1 of AOP-401.6 and directs him to ensure appropriate bistables are tripped. Ask him to identify correct bistable.

STEP

22. Ensure bistables tripped per Attachment 1.

STANDARD

Verifies proper bistable tripped per Attachment 1. PAGE 6

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TMDODWANCE FACTOR

(S) DENOTES SEQUENCED ELEMENT(*) DENOTES CRITICAL ELEMENT

PERFORMANCE CHECKLIST:

NOTE 23: SRO ONLY: Examiner hands operator Attachment II of SOP-401 and asks him to explain how it is filled out.

STEP

STANDARD

used and verifies proper bistable

tripped per Attachment I of SOP-401.

Explains how Attachment II of SOP-401 1s

23. Directs I&C to trip appropriate bistables and ensure bistables tripped per Attachment 1.

Examiner Stops JPM At This Point

TIME STOPPED:

GENERAL COMMENTS:

NRC KA REFERENCES:

KA NUMBER		RO	SRO
011000.A1.01	Ability to stay predict and/or monitor changes in PZR level and pressure when operating	3.5	3.6
011000.A2.03	PZR LCS controls. Ability to predict and mitigate the consequences of loss of PZR level.	3.8	3.9

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