

V.C. SUMMER NUCLEAR STATION

NRC JOB PERFORMANCE MEASURE

JPS-010

Respond to Trip of a Main Feedwater Pump (NRC)

Revision No. 1

A/13

Respond to Trip of a Main Feedwater Pump (NRC)

TRAINEE _____ EVALUATOR _____

EVALUATOR SIGNATURE _____ DATE _____

EVALUATION METHOD: PERFORM
EVALUATION LOCATION: SIMULATOR

ESTIMATED TIME: 15.0 MINUTES TIME STARTED: _____

10CFR55.45(a)3 IDENTIFY ANNUNCIATORS AND
CONDITION-INDICATING SIGNALS AND PERFORM
APPROPRIATE REMEDIAL ACTIONS WHERE
APPROPRIATE

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 controls in automatic.

TOOLS AND EQUIPMENT NEEDED:

NONE

REFERENCED DOCUMENTS:

REV DATE

- | | | | |
|----|-----------|----------------------------|----------|
| 1. | AOP*210.3 | FEEDWATER PUMP MALFUNCTION | 05/14/96 |
| 2. | SOP*210 | FEEDWATER SYSTEM | 10/10/97 |

Respond to Trip of a Main Feedwater Pump (NRC)
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TASK STANDARDS:

1. Plant is stabilized at programmed S/G level (55-65%) with feed flow and steam flow matched.
2. 'B' MFP placed in service with speed control in AUTO.
3. Plant does not trip due to S/G level problems.

INITIATING CUES:

1. Respond to secondary events as BOP operator.

TERMINATING CUES:

1. 'B' MFP speed control in AUTO.

SAFETY CONSIDERATIONS:

1. NONE

JOB PERFORMANCE MEASURE CHECKLIST

(S) DENOTES SEQUENCED ELEMENT

(*) DENOTES CRITICAL ELEMENT

PERFORMANCE CHECKLIST:

SAT. UNSAT.

STEP

STANDARD

1. Verifies Feedwater Pump trip.

Acknowledges FWP A/B/C TRIP annunciator.
Determines 'B' MWP tripped from TRIP
indication on pump reset switch.

STEP

STANDARD

2. Checks operating FW pump speed control.

Verifies operating pump speed increasing
or full demand on master speed
controller

NOTE 3: Examiner (as CRS) directs operator to reduce load to 90% after student determines power must be reduced to 86%-91%. To expedite the JPM, the examiner may direct the operator to increase power decrease to 3%/minute once a 1%/minute rate is established.

STEP

STANDARD

*3. Reduces load to 90%.

Reduces turbine load using DECREASE on
LOAD SELECTOR at 1%/minute. Reactor
power indicates = 90% and/or GEN GROSS
MW (on IPCS) indicates = 900 MW.

COMMENTS: _____

NOTE 4: As TBAO, cue operator that HP and LP stop vlvs. for "B" FWP turbine are closed.

STEP

STANDARD

4 Verifies "B" HP and LP stop valves closed.

Directs TBAO to check stop valves

STEP

STANDARD

5. Verifies turning gear engagement.

TURN GEAR indication for 'B' MFP
indicates red light ON.

JOB PERFORMANCE MEASURE CHECKLIST

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

PERFORMANCE CHECKLIST:

SAT. UNSAT.

NOTE 6: A. Simulator operator (as TBO) informs operator that MFP "B" turbine trip was due to janitor cleaning B. CRS directs BOP to place tripped MFP EAP controller in MANUAL with 0% demand and restart the tripped MFP. C. Examiner directs operator to simulate MFP trip test and continue with MFP startup (for the sake of time).

STEP

STANDARD

S*6. Resets MFP turbine.

Momentarily places 'B' MFP TRIP/RESET switch to RESET. Green TRIP light OFF, amber RESET light ON "FWP A/B/C TRIP" annunciator clears.

COMMENTS: _____

STEP

STANDARD

S*7. Raises 'B' MFW speed.

Places Pump B SPEED CHNG in the SLOW RAISE position until Pump B RPM (SI-3348) no longer increases

COMMENTS: _____

STEP

STANDARD

S*8. Shifts speed control to the EAP.

Places Pump B SPEED CHNG in the FAST RAISE position until 'B' MFP high speed stop is reached indicated by red light ON

JOB PERFORMANCE MEASURE CHECKLIST

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

PERFORMANCE CHECKLIST:

SAT. UNSAT.

COMMENTS: _____

STEP

STANDARD

9. Place 'B' MFP in service

Balances FW flows and places Pump B
SPEED CNTRL in AUTO per SOP-210, step
III.D 2.6.

STEP

STANDARD

10. Close MFPT steam drains

MOV-1-5B, TURB DRN VLV indicates green
light ON, red light OFF.

STEP

STANDARD

11. Stop aux oil pump

AUX VLV PP (for B) indicates green light
ON, red light OFF

Examiner Stops JPM At This Point

TIME STOPPED _____

GENERAL COMMENTS:

Respond to Trip of a Main Feedwater Pump (NRC)

NRC KA REFERENCES:

KA NUMBER

000054.EA2.02

Ability to determine the difference between a loss of all MFW and a trip of one MFW pump.

IMPORTANCE FACTOR

RO
4.1

SRO
4.4