

RESPOND TO LOSS OF CONTAINMENT SUMP
RECIRCULATION CAPABILITY

K/A REFERENCE: E11 EK1.2 (3.6/4.1)
(NUREG-1122) E11 EK3.3 (3.8/3.8)
E11 EA2.2 (3.4/4.2)

ALTERNATE PATH JPM _____ YES X NO

PERFORMANCE CHECKLIST:

SATISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)

UNSATISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

X Procedure adequately addresses task elements.
Enter identifier here: ECA-1.1, Rev. 23

_____ Other document adequately describes necessary task elements.
Enter identifier here: _____

X Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH X DISCUSSION _____ PERFORM X IN-PLANT _____ CONTROL ROOM X

VALIDATED TIME FOR COMPLETION: 15 MINUTES

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EXAMINEE _____ EVALUATOR _____

START TIME _____ FINISH TIME _____

PERFORMANCE SAT UNSAT

JOB TITLE: AOT COT SRO STA

TOOLS/EQUIPMENT/REFERENCES:

ECA-1.1, Rev. 23, "Loss of Containment Sump Recirculation"

TASK STANDARDS:

1. Delay depletion of the RWST, during loss of Containment Sump Recirculation Capability using ECA 1.1, "Loss of Containment Recirculation".

SIMULATOR INFORMATION:

TIME	FAIL	COMPONENT	OPTION	VALUE	RAMP	DELAY	ACT	COND
--:--:--	IC-1	100%	Steady State					
	VLV	RHR14(850A)	6	0		---	D	---
OVR	SCS	RHR1	1		850A Green On			
	VLV	RHR15(850B)	6	0		---	D	---
OVR	SCS	RHR7	1		850B Green ON			
	MAL	RCS1	---	---	---	---	D	---

NOTE: Instructor must perform immediate actions of EOP-0, transition to EOP-1, transition to ECA-1.1 when RWST < 60%, complete Steps 1-15 of ECA-1.1, then freeze simulation.

NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

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READ AND PROVIDE TO THE EXAMINEE

THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are the Unit 1 Control Operator.
Unit 1 has tripped due to a large break LOCA.
The crew had transitioned to EOP-1.3, "Transfer to Containment Sump Recirculation".
The crew then transitioned to ECA-1.1, "Loss of Containment Sump Recirculation," when it was discovered that SI-850A and SI-850B would not open.
Steps 1-15 of ECA-1.1 have been completed.
Both SI and RHR pumps are running.

INITIATING CUE(S) / TASK TO BE PERFORMED (SIMULATED):

The DOS directs you to delay depletion of the RWST by continuing with ECA-1.1, "Loss of Containment Sump Recirculation," starting at Step 16 of the procedure.

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NOTE: *CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.*

START TIME _____	STEP/SEQUENCE/CRITICAL	SAT _____
	1 1 Y	UNSAT _____

- ELEMENT:** Establish one train of SI flow:
- 1) Only one SI pump running (1P-15A or 1P-15B)
 - 2) RCS pressure < [425 psig] 200 psig.
 - 3) Only one RHR pump running (1P-10A or 1P-10B).

STANDARD: One train of SI flow established. P-15A or P-15B and P-10A or 10B taken to stop.

- CUE:**
- 1) One SI pump red light on, green lights off (or as indicated on simulator).
One SI pump green light on, red light off (or as indicated on simulator).
 - 2) PT-420 reads 10 psig (or as indicated on simulator).
 - 3) One RHR pump red light on, green light off (or as indicated on simulator).
One RHR pump green light on, red light off (or as shown on simulator).

COMMENTS:

	STEP/SEQUENCE/CRITICAL	SAT _____
	2 2 Y	UNSAT _____

- ELEMENT:** Verify No Backflow From RWST To Sump.
- 1) Check Train A RHR pump suction from containment sump "B" MOVs at least one SHUT 1SI-850A or 1SI-851A.
 - 2) Check Train B RHR pump suction from containment sump "B" MOVs at least one SHUT 1SI-850B or 1SI-851B.

STANDARD: 1SI-850A&B are shut.

CUE: 1SI-850A&B green lights are on, red lights are off (or as indicated on simulator).

COMMENTS:

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STEP/SEQUENCE/CRITICAL
 3 3 N

SAT _____
 UNSAT _____

ELEMENT: Check if an RCP should be started.
 1) Check RCPs both Stopped.
 2) RCS subcooling > [80 °F] 35 °F based on core exit thermocouples, if not go to Step 21.

STANDARD: RCS Subcooling < 35 F, proceed to Step 21.

CUE: 1) TI-970 reads 5.5 °F, TI-971 reads 5.7 °F on ASIP (or as indicated on simulator).

COMMENTS:

STEP/SEQUENCE/CRITICAL
 4 4 N

SAT _____
 UNSAT _____

ELEMENT: Check if SI should be terminated.
 1) Check Reactor Vessel Level from table below satisfied:

RCPS RUNNING	REQUIRED REACTOR VESSEL LEVEL
1	Narrow Range > [100] 95 feet.
0	Wide Range > [30] 27 feet.

2) Check RCS Subcooling based on CET > [130] 85 °F.

STANDARD: SI Termination Criteria Check. Termination conditions not met due to subcooling and RNO is referenced.

CUE: TI-970 reads 5.5 °F and TI-971 reads 5.7 °F on ASIP (or as indicated on simulator).

NOTE: *This is a Continuous Action Step.*

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STEP/SEQUENCE/CRITICAL

5 5 Y

SAT

UNSAT

ELEMENT: Establish minimum injection flow to remove decay heat.

- 1) Determine minimum injection flow required for decay heat removal from Figure 1.
- 2) Establish minimum injection flow using charging flow 1HC-142
- 3) If minimum required injection flow can not be established using charging flow, then reduce SI flow to establish 225 gpm on desired pump. (1SI-866A for pump A or 1SI-866B for pump B)
- 4) If 225 gpm SI flow can not be established, then establish 525 gpm on desired RHR pump. (1RH-624 for pump A or 1RH-625 for pump B)
- 5) Stop SI and RHR pumps not required to maintain minimum required injection flow.
- 6) Go to Step 25.

if the applicant stated RHR was needed for piggy-back function, then not stopping the RHR pump was appropriate.

STANDARD:

Determine based on plant conditions and elapsed time (cued) that 150 gpm is required per Figure 1 and reduce total flow to not less than 150 gpm. Examinee in addition to adjusting CH-142, may adjust charging pump speed and/or start a third charging pump, but will recognize that 150 gpm cannot be established with charging alone. He will lower SI flow on the running SI pump using the associated SI-866 valve observing indication on the flow-meter until 225 gpm is established. The running RHR pump will be secured.

CUE: One Half (1/2) hour has elapsed since reactor trip.

NOTE: Based on time being 1/2 hour after the reactor trip and using Figure 1, the trainee should determine that 150 gpm injection flow is required for decay heat removal and reduce flow to not less than 150 gpm for this step to be considered SAT.

COMMENTS:

STEP/SEQUENCE/CRITICAL

6 6 N

SAT

UNSAT

ELEMENT: Verify adequate injection flow:

- 1) Check reactor vessel level indication:

RCPS RUNNING	REQUIRED REACTOR VESSEL LEVEL
1	Narrow Range > [100] 95 feet.
0	Wide Range > [30] 27 feet.

- 2) Core exit thermocouples stable or trending lower.

STANDARD: Adequate injection flow verified. If trending higher, than raise injection flow as necessary to lower CETs.

- CUE:**
- 1) LI-496 (LI-497) reads approximately 33 ft (or as indicated on simulator).
 - 2) Core exit thermocouples are stable or may be trending slightly higher.(or as indicated on simulator).

COMMENTS:

NUCLEAR POWER BUSINESS UNIT
TRAINING JOB PERFORMANCE MEASURES

JPM P000.023COT
Revision 0 DRAFT
October 3, 2000
TOTAL REWRITE

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NOTE: *CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS
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TERMINATION This completes this JPM.
CUE

COMPLETION TIME: _____