OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

**STATION:** SALEM

**SYSTEM:** Emergency Core Cooling System (ECCS)

**TASK:** Isolate the ECCS Accumulators IAW EOP-TRIP-6

**TASK NUMBER:** 1150070501

**JPM NUMBER:** 16-01 NRC Sim-c

**ALTERNATE PATH:** [X]

**K/A NUMBER:** 006 A1.13

**IMPORTANCE FACTOR:** 3.5 (RO) 3.7 (SRO)

**APPLICABILITY:**
EO [ ] RO [X] STA [ ] SRO [X]

**EVALUATION SETTING/METHOD:** Simulator / Perform

**REFERENCES:** 2-EOP-TRIP-6 Rev. 30 (checked 12-11-17)

**TOOLS AND EQUIPMENT:** None

**VALIDATED JPM COMPLETION TIME:** 8 Minutes

**TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS:** N/A

**Developed By:** R. Chan Instructor **Date:** 12-11-17

**Validated By:** SME or Instructor **Date:** 12-15-17

**Approved By:** Training Department **Date:** 12/15/17

**Approved By:** Operations Department **Date:** 12/15/17

**ACTUAL JPM COMPLETION TIME:**

**ACTUAL TIME CRITICAL COMPLETION TIME:**

**PERFORMED BY:**

**GRADE:** [ ] SAT [ ] UNSAT

**REASON, IF UNSATISFACTORY:**

**EVALUATOR'S SIGNATURE:** **DATE:**

## REVISION HISTORY

**JPM NUMBER: 16-01 NRC Sim-c**

| Rev # | Date | Description | Validation Required |
|---|---|---|---|
| 00 | 9-29-17 | Added revision history and simulator setup pages. Editorial comments from IP 71111.11 FASA. | Yes |
| 01 | 12-11-17 | Incorporated comments from NRC Prep week. Modified malfunction for 24SJ54 to fail at intermediate position. | Yes |
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## SIMULATOR SETUP INSTRUCTIONS

**SYSTEM:** Emergency Core Cooling System (ECCS)

**TASK:** Isolate the ECCS Accumulators IAW EOP-TRIP-6

**TASK NUMBER:** 1150070501

**SIMULATOR IC: IC-242**

**MALFUNCTIONS / REMOTES:**

1. Reset the simulator to IC-242 (IC-219 used as baseline)
2. Ensure **ET-1: KA303DCL** 24SJ54 close PB, will trigger malfunction **VL0018** (24SJ54 fail to position)to final value = 50 after 5 seconds (this will simulate the 24SJ54 failing at intermediate position when close PB is depressed)
3. **Note**: The following were used to setup plant conditions: MALFS RC0003A/B/C/D to trip all RCPs. Performed EOP's to TRIP-6, Step 12, SI ACCUM ISOLATION.

**OVERRIDES:**

None

**SPECIAL INSTRUCTIONS:**

1. **ENSURE** SPDS on Press/Temp Display
2. **ENSURE** RCS T-colds on trend on P250 on 2CC1.
3. **ENSURE** PZR level > 11% to prevent entry into CAS.
4. Marked up copy of 2-EOP-TRIP-6 on center console.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

**NAME:** _____

**DATE:** _____

**SYSTEM:** Emergency Core Cooling System (ECCS)

**TASK:** Isolate the ECCS Accumulators IAW EOP-TRIP-6

**TASK NUMBER:** 1150070501

**INITIAL CONDITIONS:**

- A reactor trip occurred when a 500 KV grid perturbation occurred, which also caused all RCPs to trip.
- The operating crew has progressed through the EOP's and is now in 2-EOP-TRIP-6, NATURAL CIRCULATION RAPID COOLDOWN WITH RVLIS.
- The RCPs will NOT be restarted.

**INITIATING CUE:**

- You are the Reactor Operator.
- The CRS directs you to isolate the SI Accumulators IAW Step 12 of 2-EOP-TRIP-6, NATURAL CIRCULATION RAPID COOLDOWN WITH RVLIS.
- Notify the CRS when Step 12 is completed.
- Your evaluator will take care of all alarms not related to your task.

Successful Completion Criteria:
1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.
4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.

**Task Standard for Successful Completion:**
1. **Closes 21, 22, and 23 SJ54's.**
2. **Vents 24 SI Accumulator to atmospheric pressure.**
3. **Closes vent valves to 24 SI Accumulator when venting is complete.**

OPERATOR TRAINING PROGRAM NAME: _____

JOB PERFORMANCE MEASURE DATE: _____

SYSTEM: **Emergency Core Cooling System (ECCS)**

TASK: **Isolate the ECCS Accumulators IAW EOP-TRIP-6**

| * # | STEP NO. | STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step) | STANDARD (Bolded area identifies Task Standard) | EVAL S/U | COMMENTS (Required for UNSAT evaluation) |
|---|---|---|---|---|---|
| | | 2-EOP-TRIP-6 is open and marked up on console. | Reviews conditions and the marked up EOP-TRIP-6 Natural Circ Cooldown With RVLIS | | |
| | CUE: | Fill in the JPM Start Time when the student acknowledges the Initiating Cue.<br>**START TIME:**_____ | | | |
| | 12 | IS RCS PRESSURE <1000 PSIG | YES. Operator verifies RCS pressure is <1000 psig. | | |
| * | 12.1 | REMOVE LOCKOUT FROM 21-24SJ54 ACCUMULATOR OUTLET VALVES | **At 2RP4 Panel, operator selects VALVE OPERABLE on 21-24 SJ54 ACCUMULATOR OUTLET VALVES LOCKOUT Switch** | | |
| * # | 12.1 Contd | CLOSE 21 Thru 24 SJ54 | **Operator depresses CLOSE pushbuttons for 21 thru 24 SJ54s, ACCUMULATOR OUTLET VALVES and verifies each CLOSE bezel illuminates.** | | |
| | | **ALTERNATE PATH STARTS HERE:** | | | |
| | 12.1 Contd | ARE 21 Thru 24 SJ54 CLOSED | NO. Operator determines 24SJ54, ACCUMULATOR OUTLET VALVE, is OPEN<br>**Note**: Operator observes valve stroking then stops (intermediate position). May re-check LOCKOUT Switch position or attempt to depress the Close PB again. | | |

NAME: _____

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|---|---|---|---|---|---|
| | 12.2 | IF an accumulator cannot be isolated or vented, then consult the TSC to determine contingency actions | **Cue:** CRS will consult with TSC if needed. | | |
| | 12.2 Contd | VENT ANY AFFECTED ACCUMULATORS:<br>• MAINTAIN RCS PRESSURE GREATER THAN ACCUMULATOR NITROGEN PRESSURE | Operator verifies RCS Pressure is > Accumulator pressure. | | |
| * | | • *OPEN 2NT35 (N2 HDR VALVE) | **Operator depresses OPEN PB for 2NT35 (N2 HDR VALVE) until OPEN bezel illuminates.** | | |
| * | | • *OPEN AFFECTED SJ93 (N2 SUPPLY VALVE) | Note: If 2NT35 is throtled opened, this may be acceptable so long as Accumulator pressure is sufficiently lowering in next step.<br><br>**Operator depresses OPEN PB for 24SJ93 N2 SUPPLY VALVE until OPEN bezel illuminates** and observes 24 Accumulator pressure lowering. | | |

OPERATOR TRAINING PROGRAM NAME: _____

JOB PERFORMANCE MEASURE DATE: _____

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|---|---|---|---|---|---|
| * * | 12.3 | WHEN ACCUMULATOR VENTING COMPLETE, THEN CLOSE:<br>• *2NT35<br>• *21-24SJ93 | When the operator checks that Accumulator pressure is lowering, **THEN,** provide the following cue:<br>**Cue:** 24 Accumulator pressure is now reading ZERO.<br>Note: These valves can be closed in any order.<br>**Operator depresses CLOSE PB for 2NT35 N2 HDR VALVE until bezel illuminates.**<br>**Operator depresses CLOSE PB for 24SJ93 N2 SUPPLY VALVE until bezel illuminates.**<br>**Terminate JPM.** | | |
| | CUE: | **JPM is Complete**<br>**RECORD** the STOP TIME.<br>**STOP TIME:**_____ | **Terminate the JPM when the step 12.3 is complete.** | | |

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

**JPM#: 16-01 NRC Sim-c**

**NOTE:** All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

JB 1. Task description and number, JPM description and number are identified.

JB 2. Knowledge and Abilities (K/A) references are included.

JB 3. Performance location specified. (in-plant, control room, or simulator)

JB 4. Initial setup conditions are identified.

JB 5. Initiating and terminating cues are properly identified.

JB 6. Task standards identified and verified by SME review.

JB 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

JB 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure: Procedure Rev. _____ Date _____

JB 9. Pilot test the JPM:
   a. verify cues both verbal and visual are free of conflict, and
   b. ensure performance time is accurate.

N/A 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

JB 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor: JK Brennan Date: 12/15/17

SME/Instructor: _____ Date: _____

SME/Instructor: _____ Date: _____

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