

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

| | | | |
|--|---|--------------------------------|------------------------------|
| STATION: | SALEM | | |
| SYSTEM: | Conduct of Operations - Administrative | | |
| TASK: | Perform a Channel Check of Reactor Coolant Temperatures IAW S2.OP-DL.ZZ-0003 | | |
| TASK NUMBER: | S302000115 | | |
| JPM NUMBER: | 16-01 NRC RO-A2 | | |
| ALTERNATE PATH: | <input type="checkbox"/> | K/A NUMBER: | G 2.1.18 |
| APPLICABILITY: | | IMPORTANCE FACTOR: | 3.6 |
| EO <input type="checkbox"/> | RO <input checked="" type="checkbox"/> | STA <input type="checkbox"/> | SRO <input type="checkbox"/> |
| EVALUATION SETTING/METHOD: | Classroom | | |
| REFERENCES: | S2.OP-DL.ZZ-0003, Rev. 109 Salem 2 Cycle 23 REM, Rev 17 (checked 10-11-17) | | |
| TOOLS AND EQUIPMENT: | None | | |
| VALIDATED JPM COMPLETION TIME: | <u>5 min</u> | | |
| TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: | <u>N/A</u> | | |
| Developed By: | R. Chan <i>Rudolph Chan</i> Instructor | Date: 10-11-17 | |
| Validated By: | <i>[Signature]</i> BARNIK SME or Instructor | Date: 10/11/2017 | |
| Approved By: | <i>[Signature]</i> Training Department | Date: 11/13/17 | |
| Approved By: | <i>[Signature]</i> Operations Department | Date: 11/13/17 | |
| ACTUAL JPM COMPLETION TIME: | | | |
| ACTUAL TIME CRITICAL COMPLETION TIME: | | | |
| PERFORMED BY: | | | |
| GRADE: | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | |
| REASON, IF UNSATISFACTORY: | | | |
| EVALUATOR'S SIGNATURE: | DATE: | | |

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JPM NUMBER: 16-01 NRC RO-A2

| Rev # | Date | Description | Validation Required |
|-------|----------|---|---------------------|
| 00 | 10-11-17 | New JPM. Added revision history and simulator setup pages. Editorial comments from IP 71111.11 FASA. | Yes |
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SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Conduct of Operations - Administrative

TASK: Perform a Channel Check of Reactor Coolant Temperatures IAW S2.OP-DL.ZZ-0003

TASK NUMBER: S302000115

SIMULATOR IC: N/A

MALFUNCTIONS / REMOTES: N/A

OVERRIDES: N/A

SPECIAL INSTRUCTIONS: None

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NAME: _____

DATE: _____

SYSTEM: Conduct of Operations - Administrative

TASK: Perform a Channel Check of Reactor Coolant Temperatures IAW S2.OP-DL.ZZ-0003

TASK NUMBER: S302000115

INITIAL CONDITIONS:

- Salem Unit 2 is at 100% reactor power.
- Control room log readings IAW S2.OP-DL.ZZ-0003, Control Room Log (Modes 1-4), is in progress.

INITIATING CUE:

- You are the Reactor Operator.
- **PERFORM** the 1830 log readings using the control room log sheet provided.
- 2CC1 Console Readings for OTDT Setpoint are:

| RC Loop | OTDT (deg F) |
|-------------|--------------|
| 21 (TI411C) | 74 |
| 22 (TI421C) | 78 |
| 23 (TI431C) | 75 |
| 24 (TI441C) | 72 |

- **NOTIFY** the CRS when log readings are complete.

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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. **Completes the 1830 log readings for 21 thru 24 OTDT Setpoints and Tavg Channel Checks.**
2. **Determines 24 Loop OTDT Setpoint is UNSAT.**

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NAME: _____

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System: Conduct of Operations - Administrative

Task: Perform a Channel Check of Reactor Coolant Temperatures IAW S2.OP-DL.ZZ-0003

| * # | 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) |
|--------|-------------|---|---|-------------|--|
| | | Provide the following materials: <ul style="list-style-type: none"> ▪ S2.OP-DL.ZZ-0003, Control Room Log (Modes 1-4), and ▪ S2.RE-RA.ZZ-0011 (Salem 2 Cycle 23 REM, Rev 17, DATE TAKEN: 07-31-17) | <p><u>Note:</u> The data tables from S2.RE-RA.ZZ-0011(Q), TABLES have been removed. The data tables from this procedure are now on Sharepoint and are located as follows:</p> <p><u>Note:</u> Tavq readings for each RC loop must be provided on the log sheet.</p> <p>Main Nuclear Webpage→Quick Links→Operations–Salem→Reactor Engineering Manual→Salem Unit 2→REM Data Salem Unit 2 Cycle ## Rev #.pdf</p> | | |
| | CUE | Fill in the JPM Start Time when the student acknowledges the Initiating Cue. START TIME: _____ | | | |
| | | REACTOR COOLANT TEMPERATURES (Page 35 of 87 from S2.OP-DL.ZZ-0003) | | | |

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| * # | 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) |
|--------|-------------|--|--|-------------|--|
| | CUE | RC LOOP AVERAGE TEMP | Cue: The following Tavg Temps should be provided on the log sheet: Loop 21 = 573.2 F Loop 22 = 575.2 F Loop 23 = 574.5 F Loop 24 – 574.8 F | | |
| | | 21 – 24 AVE TEMP CHANNEL CHECK *S/R 4.3.2.1.1 is applicable in Modes 1, 2, & 3. IF all 4 loop avg temperatures are within 3 degrees F, TEHN RECORD "SAT". | Operator determines all Tavg temps within 3 degrees F and records "SAT". | | |
| * | | 21 LOOP OTDT STPT CHAN CHECK *RECORD Console OTDT indication. Must be within REM (Reactor Engineering Manual) OTDT Sepoint Band. | Operator records the OTDT sepoint on the log sheet. Operator evaluates OTDT setpoint using REM FIGURE 5A and determines 21 Loop OTDT sepoint is within the OTDT setpoint band. | | |

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| * # | 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) |
|--------|-------------|--|---|-------------|--|
| * | | 22 LOOP OTDT STPT CHAN CHECK *RECORD Console OTDT indication. Must be within REM (Reactor Engineering Manual) OTDT Sepoint Band. | Operator records the OTDT sepoint on the log sheet. Operator evaluates OTDT setpoint using REM FIGURE 5B and determines 22 Loop OTDT sepoint is within the OTDT setpoint band. | | |
| * | | 23 LOOP OTDT STPT CHAN CHECK *RECORD Console OTDT indication. Must be within REM (Reactor Engineering Manual) OTDT Sepoint Band. | Operator records the OTDT sepoint on the log sheet. Operator evaluates OTDT setpoint using REM FIGURE 5C and determines 23 Loop OTDT sepoint is within the OTDT setpoint band. | | |

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| * # | 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) |
|--------|-------------|--|---|-------------|--|
| * | | 24 LOOP OTDT STPT CHAN CHECK *RECORD Console OTDT indication. Must be within REM (Reactor Engineering Manual) OTDT Sepoint Band. | Operator records the OTDT setpoint on the log sheet and may indicate a red- circled reading is required to denote OTDT setpoint is UNSAT <u>OR</u> notification to the CRS (either method is acceptable). Operator evaluates OTDT setpoint using REM FIGURE 5D and determines 24 Loop OTDT sepoint is <u>NOT</u> within the OTDT setpoint band. Operator informs CRS that Loop 24 OTDT setpoint is outside the REM setpoint band. | | |
| | CUE: | JPM is Complete. RECORD the STOP TIME. STOP TIME: _____ | Terminate JPM when operator identifies 24 Loop OTDT sepoint is <u>NOT</u> within the REM sepoint band <u>OR</u> when the operator provides the results of the Channel Check of 21 - 24 Loops OTDT. | | |

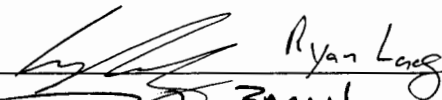
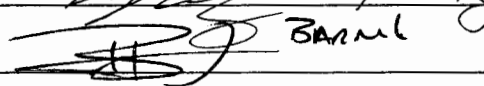
OPERATOR TRAINING PROGRAM
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JPM #: 16-01 NRC RO-A2

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

- NL 1. Task description and number, JPM description and number are identified.
- NL 2. Knowledge and Abilities (K/A) references are included.
- NL 3. Performance location specified. (in-plant, control room, or simulator)
- NL 4. Initial setup conditions are identified.
- NL 5. Initiating and terminating Cues are properly identified.
- NL 6. Task standards identified and verified by SME review.
- NL 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- NL 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure: Procedure Rev. 109 Date 10-11-17
- NL 9. Pilot test the JPM:
 - a. verify Cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- ~IA 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- ~IA 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor:  Ryan Long Date: 10-11-17
SME/Instructor:  [unclear] Date: 10/11/2017
SME/Instructor: _____ Date: _____

INITIAL CONDITIONS:

- Salem Unit 2 is at 100% reactor power.
- Control room log readings IAW S2.OP-DL.ZZ-0003, Control Room Log (Modes 1-4), is in progress.

INITIATING CUE:

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