

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

STATION:	SALEM 1 & 2		
SYSTEM:	Generic Administrative – Conduct of Operations		
TASK:	Perform Borated Water Source surveillance IAW S2.OP-ST.CVC-0010		
TASK NUMBER:	N0040420201		
JPM NUMBER:	17-01 NRC RO-A2		
ALTERNATE PATH:	<input type="checkbox"/>	K/A NUMBER:	2.2.37
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 / Perform		
REFERENCES:	S2.OP-ST.CVC-0010, Rev. 10 (checked 9-14-18) Salem Tech Specs 3.1.2.6 & Figure 3.1-2		
TOOLS AND EQUIPMENT:	None		
VALIDATED JPM COMPLETION TIME:	<u>10 minutes</u>		
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS:	<u>N/A</u>		
Developed By:	R. Chan <i>Rudolph Chan</i> Instructor	Date:	9-14-18
Validated By:	<i>D. J. Raymond</i> <i>L. Williams</i> <small>Div. 0 SCL</small> SME or Instructor	Date:	9-14-18
Approved By:	<i>Jim McHugh</i> Training Department	Date:	10/30/18
Approved By:	<i>J. Myers</i> Operations Department	Date:	10-23-18
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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SYSTEM: Generic Administrative – Conduct of Operations

TASK: Perform Borated Water Source surveillance IAW S2.OP-ST.CVC-0010

TASK NUMBER: N0040420201

SIMULATOR SETUP: N/A

INITIAL CONDITIONS:

- Salem Unit 2 is at 100% power.
- 21 BAT pump developed a leak that went unnoticed until the cross-connected BAST's reached their low level alarm setpoint.
- 21 BAT pump and the leak are isolated. BAST levels are stable.
- 21 BAST level – 48.0%
- 22 BAST level – 48.0%
- 21 BAST temp – 100 °F
- 22 BAST temp – 98.1°F
- RWST temperature – 70°F
- RWST levels are:

CH I	CH II	CH III	CH IV
41.4	41.4	41.4	41.4

- Chemistry reports current RWST and BAST boron concentrations are:
 - 21 BAST – 6650 ppm
 - 22 BAST – 6650 ppm
 - RWST – 2350 ppm

INITIATING CUE:

- You are the Reactor Operator.
- Perform S2.OP-ST.CVC-0010, Borated Water Sources.
- All Prerequisites are completed SAT.
- Based on the Test Results is the surveillance SAT or UNSAT? (circle one)

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. **Correctly completes Attachment 2 of S2.OP-ST.CVC-0010 and determines Test Results for combined BAST Volume is UNSAT**

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*	STEP NO.	STEP (* Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	CUE	Provide the following: <ul style="list-style-type: none"> ▪ marked up copy of S2.OP-ST.CVC-0010, Borated Water Sources, and ▪ Tech Spec 3.1.2.6 (2 pages) 			
	3.0	Precautions and Limitations	Operator reads and initials steps.		
*	5.1.1	COMPLETE Attachment 2 per the following: <ul style="list-style-type: none"> • RECORD Data. • RECORD Test Results by initialing SAT or UNSAT column using the stated Acceptance Criteria. 	Completes Attachment 2 with the below data. Operator determines Test Results are UNSAT for BAST levels and boron concentration.		
		ATTACHMENT 2 BORATED WATER SOURCE DATA MODES 1-4	Evaluator's Note: The following steps are from Attachment 2 of S2.OP-ST.CVC-0010. <u>Also see attached Answer Key.</u>		
*	Att. 2	RWST Level	Operator records the RWST level from the initial cue sheet and determines that the Test Results is SAT.		

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*	STEP NO.	STEP (* Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	Att. 2	RWST Temp	Operator records the RWST temperature from the initial cue sheet <u>and</u> determines that the Test Results is SAT.		
*	Att. 2	RWST Conc	Operator records the RWST concentration from the initial cue sheet <u>and</u> determines that the Test Results is SAT.		
*	Att. 2	21 BAST Vol <u>AND/OR</u> 22 BAST Vol	<p>Operator records the BAST levels from the initial cue sheet <u>and</u> determines that the Test Results is <u>UNSAT</u>.</p> <p>Evaluator's Note: The Operator calculates the combined BAST level of 96% and using Figure 3.1-2 determines that the required BAST level is > 96.5%.</p>		
*	Att. 2	21 BAST Temp <u>AND/OR</u> 22 BAST Temp	Operator records the BAST temperature from the initial cue sheet <u>and</u> determines that the Test Results is SAT.		

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*	STEP NO.	STEP (* Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	Att. 2	21 BAST Conc <u>AND/OR</u> 22 BAST Conc	<p>Operator records the BAST concentration from the initial cue sheet <u>and</u> determines that the Test Results is <u>UNSAT</u>.</p> <p>Evaluator's Note: The Operator uses current BAST level of 96% and determines using Figure 3.1-2 that the required BAST concentration is > 6650 ppm (≈6675 ppm)</p>		
	5.3	ACCEPTANCE CRITERIA			
	5.3.1 §	This surveillance is considered satisfactory when Attachments 2 and 3 (as applicable) are complete with components listed meeting Acceptance Criteria stated in each Attachment.	Operator marks as N/A		

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*	STEP NO.	STEP (* Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	5.3.2	This surveillance is unsatisfactory. ___ A. IF the cause of the UNSAT surveillance is due to BAST level being out of specification for expected conditions (e.g. outage preparations) AND this condition is being tracked in the Tech Spec Tracking Log THEN a notification is not required AND GO TO Section 5.4. ___ B. INITIATE Notification(s) to correct the unsatisfactory condition(s). ___ C. RECORD Notification number(s) and reason for unsatisfactory completion on Attachment 4 in the Comments Section.	Operator determines this surveillance is UNSAT. JPM is complete Evaluator's Note: The operator does not have to complete the actions in these steps, just required to make a determination if the surveillance is UNSAT or SAT based on the results from completing Attachment 2.		
	CUE:	WHEN operator informs you the task is complete, OR the JPM has been terminated for other reasons, THEN RECORD the STOP TIME. STOP TIME: _____	Terminate JPM after the operator determines that Step 5.3.2 for UNSAT surveillance is met.		

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.

- R 1. Task description and number, JPM description and number are identified.
- R 2. Knowledge and Abilities (K/A) references are included.
- R 3. Performance location specified. (in-plant, control room, or simulator)
- R 4. Initial setup conditions are identified.
- R 5. Initiating and terminating Cues are properly identified.
- R 6. Task standards identified and verified by SME review.
- R 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- R 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure: Procedure Rev. 10 Date 9-14-18
- R 9. Pilot test the JPM:
a. verify Cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.
- NA 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- NA 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor: R. Chan Rudolph Chu

Date: 9-14-18

SME/Instructor: DAVID BEIL

Date: 9/14/18

SME/Instructor: David Raymond Danly

Date: 9/14/18

INITIAL CONDITIONS:

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INITIATING CUE:

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ANSWER KEY

S2.OP-ST.CVC-0010(Q)

ATTACHMENT 2 (Page 1 of 1)

BORATED WATER SOURCES DATA MODES 1-4

Parameter	Data	Acceptance Criteria	Test Results		Date
			SAT	UNSAT	
RWST Level 2LT960 ___ 2LT961 ___ 2LT962 ___ 2LT963 ___	<u>41.4</u> ft	364,500 to 400,000 gals (≥40.5 ft ≤41.9 ft) (Note 2)	✓		Today
RWST Temp	<u>70</u> °F T0650A	≥35°F	✓		Today
RWST Conc	<u>2350</u> ppm	≥2,300 and ≤2,500 ppm	✓		Today
21 BAST Vol <u>AND/OR</u> 22 BAST Vol	<u>48.0</u> % (2LI106) <u>48.0</u> % (2LI102)	IAW Tech Spec 3.1.2.6.a and 3.1.2.6.b Figure 3.1-2 (Note 1)		✓	Today
21 BAST Temp <u>AND/OR</u> 22 BAST Temp	<u>100</u> °F (2TI107) <u>98.1</u> °F (2TI103)	≥63°F	✓		Today
21 BAST Conc <u>AND/OR</u> 22 BAST Conc	<u>6650</u> ppm (21 BAST) <u>6650</u> ppm (22 BAST)	Tech Spec 3.1.2.6.a and 3.1.2.6.b Figure 3.1-2 (Note 1)		✓	Today

- (1) If one BAST is the borated water source, then level and concentration requirements must be maintained in acceptable operation region of figure 3.1-2.
If two BASTs are the borated water source, then combine volumes are used to satisfy Tech Spec 3.1.2.6.a.
- (2) Refer to S2.OP-TM.ZZ-0002(Q), Tank Capacity Data.