SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

JPM A.1.a

Evaluate Overtime Requirements

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0	Modified JPM	Y		All	

V - Specify if the JPM change will require another validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:

Evaluate Overtime Requirements

JA/TA task:

3430050302 (SRO)
0001650302 (SRO)
1190030301 (RO)

K/A Ratings:

2.1.5 Ability to use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc. 2.9* / 3.9

Task Standard:

1) The candidate identifies the need for on 2 occasions:
   On 01/30/09 to allow exceeding 24hours in a 48 hour period
   On 02/04/09 to allow exceeding 72 hours in 7 days

Evaluation Method : Classroom ___X_____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. JPM can be administered in any setting

Validation Time: CR. 13 min **Local** _____

Tools/Equipment/Procedures Needed:

References:

	Reference	Title	Rev No.
1.	SPP-1.5	Overtime Restrictions (Regulatory)	0005
2.	0-PI-OPS-000-027.0	Shift Manager Clerk Duty Station Shift Relief and Office Round Sheets.	0034

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

Initial Conditions:

You are a Licensed Operator that has worked the following schedule:

Date	Hours	Status	Notes
01/26/09	OFF		
01/27/09	OFF		
01/28/09	OFF		
01/29/09	0630 -2230	Normal Off Day	Worked on an Off day and stayed over 4 hours until relief arrived
01/30/09	1830-0645	Normal Work Day	15 minute turnover
01/31/01	1830-0645	Normal Work Day	15 minute turnover
02/01/09	1830-0645	Normal Work Day	15 minute turnover
02/02/09	1830-0645	Normal Work Day	15 minute turnover
02/03/09	OFF	Normal Off Day	
02/04/09	0630-1845	Normal Off Day	Called in to cover shift(15 minute turnover)
02/05/09	1300-1845	Normal Off Day	Called in to cover shift to relieve a sick operator. (15 minute turnover)
02/06/09	A/L	Normal Work Day	Took Annual Leave for the shift
02/07/09	0630-1845	Normal Work Day	15 minute turnover
02/08/09	0630-1845	Normal Work Day	15 minute turnover
02/09/09	OFF	Normal Off Day	

INITIATING CUES:

Determine the date(s) that would require an Overtime Limitation Exception Report to be completed prior to you completing the identified working hours and the reason(s) for the report(s) being required.

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
STEP 1.: Evaluate the hours worked against the requirements. STANDARD: Candidate identifies an Overtime Limitation Exception Report is required prior to completing the 01/30/09 shift to allow exceeding 24 hours in a 48 hour period	Start Time____ ___ SAT ___ UNSAT **Critical Step**
STEP 2.: Evaluate the hours worked against the requirements. STANDARD: Candidate identifies an Overtime Limitation Exception Report is required prior to completing the 02/04/09 shift to allow exceeding 72 hours in a 7 day period COMMENTS:	___ SAT ___ UNSAT **Critical Step**

End of JPM

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

DIRECTION TO TRAINEE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

Initial Conditions:

You are a Licensed Operator that has worked the following schedule:

Date	Hours	Status	Notes
01/26/09	OFF		
01/27/09	OFF		
01/28/09	OFF		
01/29/09	0630 -2230	Normal Off Day	Worked on an Off day and stayed over 4 hours until relief arrived
01/30/09	1830-0645	Normal Work Day	15 minute turnover
01/31/01	1830-0645	Normal Work Day	15 minute turnover
02/01/09	1830-0645	Normal Work Day	15 minute turnover
02/02/09	1830-0645	Normal Work Day	15 minute turnover
02/03/09	OFF	Normal Off Day	
02/04/09	0630-1845	Normal Off Day	Called in to cover shift(15 minute turnover)
02/05/09	1300-1845	Normal Off Day	Called in to cover shift to relieve a sick operator. (15 minute turnover)
02/06/09	A/L	Normal Work Day	Took Annual Leave for the shift
02/07/09	0630-1845	Normal Work Day	15 minute turnover
02/08/09	0630-1845	Normal Work Day	15 minute turnover
02/09/09	OFF	Normal Off Day	

INITIATING CUES:

Determine the date(s) that would require an Overtime Limitation Exception Report to be completed prior to you completing the identified working hours and the reason(s) for the report(s) being required.

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

A.1.b

Calculate Manual Makeup to the Volume Control Tank

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:

V - Specify if the JPM change will require another validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:

Calculate Manual Makeup to the Volume Control Tank

JA/TA task # : 0040250101 (**RO**)

K/A Ratings:

004A1.06 (3.0/3.2) 004A4.07 (3.9/3.7)
004A4.13 (3.3/2.9) 004A4.15 (3.6/3.7)

Task Standard:

Manual make up to the VCT to bring level up 10% is determined to be 168±2 gallons water and 32±2 gallons of boric acid.

Evaluation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Sequenced steps identified by an "s"
2. Any UNSAT requires comments
3. Initialize the simulator in IC-176. **Ensure VCT level is approximately 24%** prior to start of JPM.
4. Ensure operator performs the following required actions for **SELF-CHECKING;**
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: CR. 22 mins **Local** _____

Tools/Equipment/Procedures Needed:

1. 0-SO-62-7, "Boron Concentration Control", Section 6.5, Appendix C
2. TI-44, Boron Tables.

References:

	Reference	Title	Rev No.
1.	0-SO-62-7	Boron Concentration Control	51
2.	TI-44	Boron Tables	12

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. Unit is at 100% full power, steady state.
2. Reactor coolant system boron concentration is 1117 ppm and BAT boron concentration is 6820 ppm.
3. B-10 depletion value is 15 ppm
4. REACTF software is not available for boron calculations.

INITIATING CUES:

1. You are the Unit 1 OATC and are to perform a calculation for a manual blended makeup to the Chemical Volume Control System to increase Volume Control Tank level from 41% to 51%.
2. Notify the SRO when the calculation is completed.

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 1.:	Operator obtains appropriate copy of procedure and determines the appropriate section to perform.	___ SAT ___ UNSAT
STANDARD:	Operator obtains copy of 0-SO-62-7 and determines that section 6.5 is the appropriate section.	Start Time____
STEP 2.:	[2] PERFORM Appendix C Calculation of Boric Acid and Primary Water Integrator setting for manual makeup.	___ SAT ___ UNSAT
STANDARD:	Operator goes to Appendix C	
NOTE:	**Following steps are contained in 0-SO-62-7, Appendix C CALCULATION OF BORIC ACID AND PRIMARY WATER INTEGRATOR SETTING FOR MANUAL MAKEUP TO VCT (RCS).**	
STEP 3.:	[1] OBTAIN Current RCS Boric Acid Concentration	___ SAT ___ UNSAT
STANDARD:	Operator obtains current RCS boron concentration or uses initial conditions. RCS Boric acid concentration 1117 ppm	
STEP 4.:	[2] OBTAIN Current BAT Boric Acid Concentration	___ SAT ___ UNSAT
STANDARD:	Operator obtains current BAT boron concentration from Chem Lab or uses initial conditions. BAT Boric acid concentration 6820 ppm	
STEP 5.:	[3] OBTAIN B-10 depletion value from Rx Eng Information page _____PPM	___ SAT ___ UNSAT
Cue:	***Current depletion value is 15 ppm, after operators asks for information page.***	
STANDARD:	Operator obtains current boron depletion value and records 15 ppm.	
NOTE	**Result in Step [4] should be rounded to the second decimal place.**	
STEP 6.:	[4] CALCULATE BAT Boric Acid Concentration Ratio (BACR):	___ SAT
NOTE:	**6820 ppm ÷ 6820 ppm (from step 2) = 1.0**	___ UNSAT
STANDARD:	Operator observes that BACR is one (1.0).	**Critical Step**

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 7.: [5] CALCULATE B-10 corrected boron concentration: _____ (STEP [1]) – _____ (STEP [3]) = _____ (**B-10 corrected boron**) **NOTE:** **1117 ppm – 15 ppm (from step 2) = 1102 ppm** STANDARD: Operator calculates corrected B-10 concentration	___ SAT ___ UNSAT
STEP 8.: [6] DETERMINE Corrected Boric Acid Flow Rate and Controller Setting using appropriate table from TI-44 Appendix C. [a] RECORD Corrected Boric Acid Flow Rate from TI-44 Appendix C Table 1. **NOTE:** **TI-44, Appendix C, Table 1, BA flow for 1100 ppm is 13.32 gpm; BA flow rate for 1110 ppm is 13.46 gpm. Interpolating for 1102 ppm. BA flow rate is 13.35 gpm** STANDARD: Operator calculates the Corrected Boric Acid Flow rate from TI-44 Appendix C Table 1. 13.35 gpm	___ SAT ___ UNSAT **Critical Step**
STEP 9.: [b] RECORD Correct Boric Acid Controller Setting from TI-44 Appendix C Table 2 **NOTE:** **TI-44, Appendix C, Table 2, BA controller setting for 1100ppm is 26.6%; BA controller setting for 1110 ppm is 26.9%. Interpolating for 1102 ppm, BA controller setting for is 26.66% (26.7%).** STANDARD: Operator calculates the Corrected Boric Acid Controller Setting from TI-44 Appendix C Table 2 for a value of 26.77% (26.7%)	___ SAT ___ UNSAT **Critical Step**
STEP 10.: [7] Calculate Boric Acid Controller Setting [Corrected BA Controller Setting] x [BACR] = [Boric Acid Controller Setting] **NOTE:** **26.66% (26.7%) x 1.0 = 26.66% (26.7%)** STANDARD: Operator calculates the Boric Acid Controller Setting.	___ SAT ___ UNSAT **Critical Step**
STEP 11.: [8] Desired VCT level - Actual VCT level X 20 gal = _____ **NOTE:** (51% - 41) X 20 gal = **200 gal** STANDARD: Operator calculates total volume of water to raise VCT level 10% to be 200 gallons.	___ SAT ___ UNSAT **Critical Step**

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 12.:	[9] [Corrected BA Flow Rate] x [BACR] + 70 gpm = [Total Flow Rate]	___ SAT ___ UNSAT **Critical Step**
NOTE:	**13.35 gpm x 1.0 + 70 gpm = 83.35 gpm (~ 83.4 gpm)**	
STANDARD:	Operator determines total flow rate of ~ 83.4 gpm ± 1% (82.52-84.18)	
STEP 13.:	[Corrected BA Flow Rate) X BACR] ÷ Total Flow Rate X Total Volume Change = BORIC ACID INTEGRATOR SETTING	___ SAT ___ UNSAT **Critical Step**
NOTE:	**((13.35 x 1.0) / (83.35)) x 200 = 32.03 gal. Note tolerance in previous step's calculation.**	
STANDARD:	Operator establishes correct integrator setting as below [13.4 gpm X 1(BACR) ÷ 83.4 gpm] X 200 gal = ~ **32.1 gal**	
STEP 14.:	70 GPM (PW) ÷ Total Flow Rate X Total Volume = PRIMARY WATER INTEGRATOR SETTING	___ SAT ___ UNSAT **Critical Step** Stop Time____
NOTE:	**The total of this step and the previous step should be ~ the same as the total volume needed to raise level 10% in the VCT. (32.1 gal +167.9 gal. = 200 gal)**	
NOTE:	**Operator may CHECK calculation using INFORMATION ONLY SPREADSHEET.**	
STANDARD:	Operator establishes correct integrator setting as below [70 gpm ÷ 84.1gpm] X 200 gal = ~ 167.9gal (167.97 using 83.35)	

End of JPM

READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. Unit is at 100% full power, steady state.
2. Reactor coolant system boron concentration is 1117 ppm and BAT boron concentration is 6820 ppm.
3. B-10 depletion value is 15 ppm.
4. REACTF software is not available for boron calculations.

INITIATING CUES:

1. You are the Unit 1 OATC and are to perform a calculation for a manual blended makeup to the Chemical Volume Control System to increase Volume Control Tank level from 41% to 51%.
2. Notify the SRO when the calculation is completed.

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

RO ADMIN A.2
JPM

Perform Monthly Shift Log
0-SI-OPS-000-003.M

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0		Y		All	

V - Specify if the JPM change will require another validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:

Perform Monthly Shift Log 0-SI-OPS-000-003.M

JA/TA task:

1190090301 (RO)

K/A Ratings:

2.2.12 **Knowledge of surveillance procedures.** 3.7 / 4.1
(CFR: 41.10 / 45.13) |

Task Standard:

Candidate performs the identified portion of 0-SI-OPS-000-003.M and identifies instruments that do do meet the acceptable range indentified in the instruction.

Evaluation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Sequenced steps identified by an "s"
2. Any UNSAT requires comments
3. **Place MODE 1 sign on the simulator.**
4. This task is to be performed using the simulator in **IC 178. If not available then reset to 1C-16. perform step 5 below.**
5. Insert overrides: ZAOPI18C to 845
   ZAOPI126C to 830
   ZAOPI119C to 805
   ZAOFI3163C to 36
   ZAOFI3147C to 10
6. Ensure operator performs the following required actions for **SELF-CHECKING;**
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: CR. 20 min **Local** _____

Tools/Equipment/Procedures Needed:
1-SI-OPS-000-003.M

References:

	Reference	Title	Rev No.
1.	1-SI-OPS-000-003.M	Monthly Shift Log	0038

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READ TO OPERATOR

Directions to Trainee:

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INITIAL CONDITIONS:

1. Unit 1 is in service at 100% rated power.

INITIATING CUES:

1. You are an RO on shift.

2. You are to perform 1-SI-OPS-000-003.M, “Monthly Shift Log’”, Appendix A pages 1 through 4 in accordance with the requirement of the Surveillance Instruction.

3. After completing pages 1 through 4 and complying with the requirements of the instruction, return the surveillance instruction to the Unit Supervisor.

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
STEP 1.: Obtain the appropriate procedure. STANDARD: Operator obtains 1-SI-OPS-000-003.M, "Monthly Shift Log'", Appendix A.	Start Time____ ___ SAT ___ UNSAT
STEP 2.: Turbine Driven AFW Pump Speed Control Light Green STANDARD: Candidate determines green light lit on 1-HC-46-57-S on 1-M-3. COMMENTS:	___ SAT ___ UNSAT
STEP 3.: Auxiliary Feedwater Valve Mode Indicator Light Blue STANDARD: Candidate determines blue lights lit on 1-XX-148 for each of the 8 valves listed. The blue lights are on the top 2 rows. COMMENTS:	___ SAT ___ UNSAT

	SR Reference	Mode	Note	TS Limits	Instrument No.	Units	Data	REMARKS
Turb. Driven AFW Pump Speed Control Light Green	N/A	1,2,3	1,2	N/A	1-HC-46-57	(√)		

Auxiliary Feedwater Valve Mode Indicator Light Blue	N/A	1,2,3	1,3	N/A	1-LCV-3-164	(√)		
					1-LCV-3-174	(√)		
					1-LCV-3-156	(√)		
					1-LCV-3-173	(√)		
					1-LCV-3-148	(√)		
					1-LCV-3-172	(√)		
					1-LCV-3-171	(√)		
					1-LCV-3-175	(√)		
						Operator's Initials:		

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT

STEP 4.: Auxiliary Feedwater Valve Position Indication

	SR Reference	Mode	Note	TS Limits	Instrument No.	Units	Data	REMARKS
Auxiliary Feedwater Valve Position Indication	4.3.3.7.a.11.b (PAM Instrumentation)	1,2,3	4	OPERABLE	1-LCV-3-156A (1-XX-55-6K)	Lit		
					1-LCV-3-164A (1-XX-55-6K)	Lit		
					1-LCV-3-172 (1-XX-55-6K)	Lit		
					1-LCV-3-175 (1-XX-55-6K)	Lit		
					1-LCV-3-156 (1-XX-55-6K)	Lit		
					1-LCV-3-164 (1-XX-55-6K)	Lit		
					1-LCV-3-148A (1-XX-55-6L)	Lit		
					1-LCV-3-171A (1-XX-55-6L)	Lit		
					1-LCV-3-173 (1-XX-55-6L)	Lit		
					1-LCV-3-174 (1-XX-55-6L)	Lit		
					1-LCV-3-148 (1-XX-55-6L)	Lit		
					1-LCV-3-171 (1-XX-55-6L)	Lit		

STANDARD: Candidate determines green lights lit on 1-XX-55-6K and 1-XX-55-6L for each of the 12 valves listed. The green lights are in the MANUAL sections of Panels K and L. Panel K windows 75, 88, 114-117and Panel L Windows 62, 75, 114-117

COMMENTS:

___ SAT

___ UNSAT

STEP 5.: Motor Driven AFW Flowrate

Motor Driven AFW Flowrate	4.3.3.5.A.11 4.3.3.7.a.11.a	1,2,3	5	OPERABLE	1-FI-3-163A (PAM Instrument)	gpm		
					1-FI-3-163C	gpm		
					1-FI-3-155A (PAM Instrument)	gpm		
					1-FI-3-155C	gpm		
					1-FI-3-147A (PAM Instrument)	gpm		
					1-FI-3-147C	gpm		
					1-FI-3-170A (PAM Instrument)	gpm		
					1-FI-3-170C	gpm		
						Operator's Initials:		

5 COMPARE Auxiliary Control Room indication to Main Control Room indication for each loop. Acceptable deviation between channels is equal to or less than 25 gpm. With no AFW pumps running, indicated flow should be less than or equal to 30 gpm.

STANDARD: Using note 5 at the bottom of page the candidate determines 1-FI-3-163C does not meet acceptance criteria.
Candidate determines the reading from the identified flow instruments. All are '0' to '5' except for 1-FI-3-163C which reads between slightly over 30 gpm and 1-FI-3-147C which reads approximately 15 gpm.

COMMENTS:

___ SAT

___ UNSAT

Critical Step

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT

STEP 6.: ERCW to AFW Valve Position Indication

	SR Reference	Mode	Note	TS Limits	Instrument No.	Units	Data	REMARKS
ERCW to AFW Valve Position Indication	4.3.3.7.a.18.a	1,2,3	6	OPERABLE	1-HS-3-116B/A	Lit		
					1-HS-3-116A/A	Lit		
					1-HS-3-126B/A	Lit		
					1-HS-3-126A/A	Lit		
	4.3.3.7.a.18.b	1,2,3	6	OPERABLE	1-HS-3-136B/A	Lit		
					1-HS-3-136A/A	Lit		
					1-HS-3-179B/A	Lit		
					1-HS-3-179A/A	Lit		

STANDARD: Candidate verifies green lights lit above each of the listed handswitches located on 1-M-3.

COMMENTS:

___ SAT

___ UNSAT

STEP 7.: Containment Isolation Valve Position Indication

					1-HS-3-179A/A	Lit		
Containment Isolation Valve Position Indication	4.3.3.7.a.19	1,2,3	7	OPERABLE	XX-55-6K (Cnmt vent, Phase A, Phase B, Manual) TRAIN A	(√)		
		1,2,3	7	OPERABLE	XX-55-6L (Cnmt vent, Phase A, Phase B, Manual) TRAIN B	(√)		
						Operator's Initials		

[7] **VERIFY** Containment Isolation Valve Position Indicators are operable by performing a Lamp Test of panels XX-55-6K and 6L. Both bulbs for each position indicator should illuminate when tested.

STANDARD: Candidate pushes TEST pushbuttons on both 1-XX-55-6K (white push button) and 1-XX-55-6L 6K (red push button) control panels and verifies both bulbs(red and green) for each position indicator illuminate in accordance with note 7 at bottom of page.

COMMENTS:

___ SAT

___ UNSAT

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT

STEP 8.: Main Steam Line Pressure

	SR Reference	Mode	Note	TS Limits	Instrument No.	Units	Data	REMARKS
Main Steam Line Pressure	4.3.3.5.A.6 4.3.3.7.a.8	1,2,3	8	OPERABLE	1-PI-1-1C	PSIG		
					1-PI-1-2A (PAM Instrument)	PISG		
					1-PI-1-2B (PAM Instrument)	PSIG		
				OPERABLE	1-PI-1-8C	PSIG		
					1-PI-1-9A (PAM Instrument)	PSIG		
					1-PI-1-9B (PAM Instrument)	PSIG		
				OPERABLE	1-PI-1-19C	PSIG		
					1-PI-1-20A (PAM Instrument)	PSIG		
					1-PI-1-20B (PAM Instrument)	PSIG		
				OPERABLE	1-PI-1-26C	PSIG		
					1-PI-1-27A (PAM Instrument)	PSIG		
					1-PI-1-27B (PAM Instrument)	PSIG		
						Operator's Initials:		

[8] **VERIFY** main steam line pressure channels are operable. Mode 1 normal range pressure 1005 psig to 807 psig. **COMPARE** three indicators in each group listed below to each other. Acceptable deviation between channels is equal to or less than 53 psig.

Group 1	Group 2	Group 3	Group 4
1-PI-1-1C	1-PI-1-8C	1-PI-1-19C	1-PI-1-26C
1-PI-1-2A	1-PI-1-9A	1-PI-1-20A	1-PI-1-27A
1-PI-1-2B	1-PI-1-9B	1-PI-1-20B	1-PI-1-27B

STANDARD: Using note 8 at the bottom of page the candidate determines 1-PI-1-19C does not meet acceptance criteria.
Candidate determines the reading from the identified flow instruments. Aux Control Room instrument 1-PI-1-19C reads 810 psig and the MCR instruments (1-PI-1-20A & 1-PI-20B) read 880 psig for a 70 psig difference (only 53 psig is allowed for acceptance criteria.)

COMMENTS:

___ SAT

___ UNSAT

Critical Step

STEP 9.: **PLACE** initials in the lower block of the column in appendix A to signify that all data listed in the column is complete, satisfies specified NOTES, and complies with acceptance criteria or has a DN assigned. (mark non - applicable steps **N/A**).

STANDARD: Candidate identifies the Motor Driven AFW Flow Rate and the the Main Steam Line Pressure instruments that are outside the acceptable deviation ranges.

COMMENTS:

___ SAT

___ UNSAT

Critical Step

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
STEP 10.: **DELIVER**S package to Unit SRO for review and approval. ***Cue: state ' We will stop here"*** STANDARD: COMMENTS:	___ SAT ___ UNSAT Stop Time____

END of JPM

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

DIRECTION TO TRAINEE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. Unit 1 is in service at 100% rated power.

INITIATING CUES:

1. You are an RO on shift.

2. You are to perform 1-SI-OPS-000-003.M, “Monthly Shift Log’”, Appendix A pages 1 through 4 in accordance with the requirement of the Surveillance Instruction.

3. After completing pages 1 through 4 and complying with the requirements of the instruction, return the surveillance instruction to the Unit Supervisor.

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

ADMIN
RO A-3
JPM

(#180)

2A RHR Heat Exchanger
Radiological Work Permit and
Survey Map Usage

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0					

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:
2A RHR Heat Exchanger Radiological Work Permit and Survey Map Usage

Task Number	Task Title	Cont TRN
1190100301	Apply radiation and contamination safety procedures	N
3430290302	Knowledge of 10CFR20 and related facility radiation control requirements	N

K/A Rating:
2.3.7 Ability to comply with radiation work permit requirements during normal or abnormal conditions. 3.5 / 3.6

Task Standard: Using the RWP and Survey Map provided: the trainee will determine the anti-contamination clothing and dosimetry requirements also dose and dose rate alarm limits.

Evaluation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish time _____

Evaluator: _____/_____
SIGNATURE DATE

==========

COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. A **Critical step** is identified bold type in the SAT/UNSAT column.
2. Sequenced steps identified by an "s".
3. Any UNSAT requires comments.
4. Task should begin at the Plant, Classroom, or Simulator.
5. Insure operator performs the following required actions for **SELF-CHECKING**;
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: CR 16 min **Local** _____

Tools/Equipment/Procedures Needed:

RWP 08000003 & Survey #051508-10

REFERENCES:

	Reference	Title	Rev No.
1	Permit Number 08000003	Radiological Work Permit	0
2	Survey #051508-10	Map: A414 RHR & Containment Spray Heat Exchanger 2A-A	5/15/08

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. All steps shall be simulated for this task. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. Both Units are operating at 100% power.
2. System alignment and inspection will result in you being in the 2A-A RHR and Containment Spray Heat Exchanger Room for 3 hours.

INITIATING CUES:

You are to use the supplied RWP and survey Map to determine the following:

1. Anti-contamination clothing requirements to enter the Contamination Area between the heat exchangers on the top elevation.
2. Which of the electronic dosimeter alarms would alarm if an individual was exposed to the General Area Dose Rate near the lead shielded line on the lower elevation for the entire time spent in the room.
3. How often an individual is required to be briefed on the requirements of the RWP.

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 1: Anti-contamination clothing requirements to enter the Contamination Area between the heat exchangers on the top elevation. STANDARD: On the RWP in the Anti-Contamination Clothing Requirements Matrix list every item that has a 2 in its block. The list will include: Rubber, One Pair; Lab Coat; Surgeon's Cap; Secure Gloves/Booties; Cloth Inserts; Booties, Cloth, One Pair; Shoe Covers, One Pair;	___ SAT ___ UNSAT **Critical Step**
STEP 2: Which of the electronic dosimeter alarms would alarm if an individual was exposed to the General Area Dose Rate near the lead shielded line on the lower elevation for the entire time spent in the room. STANDARD: Candidate identifies that the "Dose Alarm" would alarm. 20mr/hr X 3hr = 60mr which is greater than the dose alarm setpoint of 50mr.	___ SAT ___ UNSAT **Critical Step**
STEP 3: How often an individual is required to be briefed on the requirements of the RWP. STANDARD: Candidate identifies a briefing is required quarterly.	___ SAT ___ UNSAT **Critical Step**

End Of JPM

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. All steps shall be simulated for this task. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. Both Units are operating at 100% power.

2. System alignment and inspection will result in you being in the 2A-A RHR and Containment Spray Heat Exchanger Room for 3 hours.

INITIATING CUES:

You are to use the supplied RWP and survey Map to determine the following:

1. Anti-contamination clothing requirements to enter the Contamination Area between the heat exchangers on the top elevation.

2. Which of the electronic dosimeter alarms would alarm if an individual was exposed to the General Area Dose Rate near the lead shielded line on the lower elevation for the entire time spent in the room..

3. How often an individual is required to be briefed on the requirements of the RWP.

	APPENDIX E - REGION II OPERATING TEST JOB PERFORMANCE MEASURE QUALITY REVIEW MATRIX											
Admin	1. Safety function	2. Dyn (D/S)	3. LOD (1-5)	4. Attributes					5. Job Content Errors		6. U/E/S	7. Explanation (See below for instructions)
				IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
COO 1 RO/SRO												No Comments.
COO 2 RO/SRO												Step #12 – ±1% acceptable range is too wide. This would allow applicants that incorrectly applied the B-10 Depletion correction to achieve satisfactory results (i.e. 13.58 gpm + 70 gpm = 83.58 gpm). For this critical step, suggest ± 0.1 gpm range. Carry adjusted acceptable range forward throughout the calculations.
EC 3 RO Only												Step #8 – Revise the standard from "…the identified **flow** instruments." to "…the identified **pressure** instruments."
EC 3 SRO Only												Initiating Cue – Reword second paragraph from current run-on sentence. See below You are to determine the adequacy of the SDM calculation performed by Reactor Engineering based on the following assumptions: • A low Tavg of 530ºF over the next 24 hours • No change in boron concentration
RC 4 RO Only												No comments.
RC 4 SRO Only												General Comments – 1) Other than step 1, I couldn't find in the references supplied to the applicant the information that would lead to the determinations expected in the standards for steps 2 and 3 of this JPM. 2) The initial conditions state that 0-RM-90-118**A** is inoperable. However, the supplied references only address the operability of 0-RM-90-118. Are these the same instruments or is it a typo in the initial conditions?
E Plan 5 SRO Only												No comments.

Instructions for Completing Matrix
This form is not contained in or required by NUREG-1021. Utilities are not required or encouraged to use it. The purpose of this form is to enhance regional consistency in reviewing operating tests. Check or mark any item(s) requiring comment and explain the issue in the space provided.

1. Safety function characteristics: RO & SRO-I JPMs should evaluate different safety functions for the simulator/control room, and spearately for the in-plant JPMs. SRO-Us should evaluate 5 different safety functions. One SRO-U should evaluate an engineered safety feature. At least one should be shutdown or low power, 4-6 should be alternate path for the RO/SRO-I and 2-5 for the SRO-Us.
2. Determine whether the task is dynamic (D) or static (S). A dynamic task is one that involves continuous monitoring and response to varying parameters. A static task is basically an system reconfiguration or realignmen
3. Determine level of difficulty (LOD) using established 1-5 rating scale. Levels 1 and 5 represent inappropriate (low or high) discriminatory level for the license being tested.
4. Check the appropriate box when an attribute weakness is identified:

- The initiating cue is not sufficiently clear to ensure the operator understands the task and how to begin.
- The JPM does not contain sufficient cues that are objective (not leading).
- All critical steps (elements) have not been properly identified.
- Scope of the task is either too narrow (N) or too broad (B).
- Excessive overlap with other part of operating test or written examination.

5. . Check the appropriate box when a job content error is identified:
   - Topics not linked to job content (e.g., disguised task, not required in real job).
   - Task is trivial and without safety significance.
6. Based on the reviewer's judgment, is the JPM as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)satisfactory?
7. Provide a brief description of problem in the explanation column. Provide conclusion on whether JPM SET criteria satisfied (i.e., number/distribution of safety functions, A.3 and A.4 integrated with parts B/C, Admin topics per section meet ES).

1. Should attempt to have 5 ALT PATH JPMs to add flexibility to prep week and the exam.

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

ADMIN
SRO A-2
JPM

JPM 175-AP

Review SDM Calculation - Incorrect Tavg

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0		Y			

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task	**JA/TA task #**
Review shutdown margin calculations	0010040101 (RO)
Perform/Verify shutdown margin calculations using REACTINF	0010040102 (SRO)

K/A Ratings:
001A4.11 (3.5/4.1)

Task Standard:

Review Shutdown Margin Calculation and Identify Incorrect Tavg Parameter Entry.

Evaluation Method : Simulator ___X____ In-Plant _____

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Performer: _____
NAME Start time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish time _____

Evaluator: _____/_____
SIGNATURE DATE

==========

COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. A **Critical step** is identified in bold type in the SAT/UNSAT column.
2. Sequenced steps identified by an "s"
3. Any UNSAT requires comments
4. Task should begin at the at any location.
5. Insure operator performs the following required actions for **SELF-CHECKING**;
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: CR 16

Tools/Equipment/Procedures Needed:

Appendix A of this JPM. **NOTE: ENSURE JPM NUMBER IS NOT LEGIBLE ON COPY PROVIDED TO PERFORMER.**

REFERENCES:

	Reference	Title	Rev No.
A.	0-SI-NUC-000-038.0	Shutdown Margin	54

Task Number	Task Title	Cont TRN
0010040101	Review shutdown margin calculations	Y
0010040102	Perform/Verify shutdown margin calculations using REACTINF	Y

==========

READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. All steps shall be **Performed** for this task When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

Unit 1 Tripped 48 Hours ago on 01-20-09 at 0700 after a 60 day continuous run at 100% steady state power. All shutdown and control rods fully inserted on the trip.

The unit is being maintained in mode 3 at Approx. 547°F Tavg until repairs are completed when the Unit will be started back up.

The Duty Reactor Engineer has performed a Shutdown Margin (SDM) Calculation using the QA Certified Software program ReactINF.

Current Conditions are:
UNIT 1 Cycle 16
Burnup: 5750 MWD/MTU
Current Boron Concentration: 1250 ppm
Current M-P Factor: 0 ppm
Date/Time: 01/22/09 / 0700

INITIATING CUES:

You are the Unit 1 Unit Supervisor.

You to Review the SDM Calculation performed by Reactor Engineering to ensure that SDM is adequate assuming a conservatively low Tavg of 530°F anytime during the next 24 hours and no boron concentration changes.

After you have reviewed the SDM calculation, determine if the SDM calculation by the Reactor Engineer is correct and meets the requirements for the conditions established for the calculation.

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP :	Obtains Copy of SDM Calculation. **NOTE: ENSURE JPM NUMBER IS NOT LEGIBLE ON COPY PROVIDED TO PERFORMER.** STANDARD: Operator obtains Copy of Appendix A SDM Calculation from Evaluator.	___ SAT ___ UNSAT Start Time____
STEP :	Operator Reviews the following Parameters on the SDM calculation in any order: Correct Unit and Cycle: **Sequoyah Unit 1 Cycle 16** Previous Conditions: **Xenon Conc 100% FP EQ** Date and Time Unit Was Shutdown: **01/20/09 / 0700** Current Date and Time: **01/22/09 / 0700** Mode for SDM: **3** Minimum Expected Core Avg Temp (Tavg): **547°F** ***(Critical - Should be 530°F)*** Time Since Shutdown: **48 Hours** Reactor Power Prior to Shutdown: **100%** Core Avg Burnup: **5750 MWD/MTU** Current/Projected Boron Conc: **1250 ppm** Correction to Boron Conc (M-P): **0 ppm** Rx Conditions Prior to Shutdown: **Steady State** Surveillance Interval: **24 Hours** Number of Immovable or Untrippable Rods: **0** STANDARD: Operator Reviews all parameters and notes that **Min Expected Tavg (547°F) is not consistent with the Unit Supervisors SDM requirements of 530°F.**	___ SAT ___ UNSAT **Critical Step** Stop Time____

End Of JPM

READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. All steps shall be **Performed** for this task When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

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The Duty Reactor Engineer has performed a Shutdown Margin (SDM) Calculation using the QA Certified Software program ReactINF.

Current Conditions are:
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Burnup: 5750 MWD/MTU
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INITIATING CUES:

You are the Unit 1 Unit Supervisor.

You to Review the SDM Calculation performed by Reactor Engineering to ensure that SDM is adequate assuming a conservatively low Tavg of 530°F anytime during the next 24 hours and no boron concentration changes.

After you have reviewed the SDM calculation, determine if the SDM calculation by the Reactor Engineer is correct and meets the requirements for the conditions established for the calculation.

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

ADMIN
SRO A.3
JPM

Approval of a
Waste Gas Tank Release

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0	New	Y		All	

V - Specify if the JPM change will require another validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:

Approval of a Waste Gas Tank Release

JA/TA task:

5030010102 (SRO)
0690150102 (SRO)

K/A Ratings:

2.3.11 Ability to Approve Release Permits. (CFR: 41.13 / 45.4 / 45.10) 2.0 / 3.8

Task Standard:

Candidate identifies …
(1) the US/SRO must approve the release if the tank if the release is to be made at 2300.
(2) the required actions to allow a release with 0-RM-90-118A out of service as identified in ODCM 1/21.2.
(3) the required action if it takes 40 days to get parts to restore the monitor to Operable status.

valuation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Any UNSAT requires comments
2. This task can be performed in a classroom setting.

Validation Time: CR. 24 min **Local** _____

Tools/Equipment/Procedures Needed:

OPDP-1, Conduct of Operations

References:

	Reference	Title	Rev No.
1.	SQN ODCM	Offsite Dose Calculation Manual	53
2.	0-SI-CEM-077-410.4	Waste Gas Decay Tank Release	0014
3.	0-SI-77-15	Waste Gas Decay Tank Release	15

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- The operating crew is preparing to release the Waste Gas Tank 'D'.
- 0-RM-90-118A, Waste Gas Radiation Monitor, is inoperable.
- The monthly projected offsite dose limits have not been exceeded.

INITIATING CUES:

You are to identify…

(1) Who must approve the release if the tank is to be released on the night shift at 2300.

(2) The required actions to allow a release with 0-RM-90-118A out of service.

(3) The required action if it takes 40 days to get parts to restore the monitor to Operable status.

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
STEP 1.: Identify who must approve the release if the tank is to be released on the night shift at 2300. STANDARD: Candidate identifies the approval of the US/SRO is required. COMMENTS:	Start Time____ ___ SAT ___ UNSAT **Critical Step**
STEP 2.: The required actions to allow a release with 0-RM-90-118A out of service. STANDARD: Candidate identifies the ODCM 1/2/1/2 required Action 40 With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment provided that prior to initiating the release: a. At least two independent samples of the tank's contents obtained by two technically qualified members of the facility staff are analyzed, and b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and; c. At least two technically qualified members of the Facility Staff independently verify the discharge valve lineup. Otherwise, suspend release of radioactive effluents via this pathway. COMMENTS:	___ SAT ___ UNSAT **Critical Step**
STEP 3.: The required action if it takes 40 days to get parts to restore the monitor to Operable status. STANDARD: Candidate identifes that if the inoperable instruments cannot be restored to OPERABLE status within 30 days, the next Annual Radioactive Effluent Report, pursuant to ODCM Administrative Control 5.2, is to explain why the inoperability could not be corrected within 30 days. COMMENTS:	___ SAT ___ UNSAT **Critical Step** Stop Time____

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- The operating crew is preparing to release the Waste Gas Tank 'D'.
- 0-RM-90-118A, Waste Gas Radiation Monitor, is inoperable.
- The monthly projected offsite dose limits have not been exceeded.

INITIATING CUES:

You are to identify…

(1) Who must approve the release if the tank is to be released on the night shift at 2300.

(2) The required actions to allow a release with 0-RM-90-118A out of service.

(3) The required action if it takes 40 days to get parts to restore the monitor to Operable status.

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

ADMIN
SRO –A-4
JPM18

Classify the Event per the REP
(Primary System Leakage with Potential Loss of Cntmt)

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
7	Changed JPM steps 12 and 13 to not be a critical steps. They do not meet the definition of critical step in TRN-11.12.	N	11/23/99	All	SR Taylor
pen/ink	EPIP-1 Rev Change only	N	3/21/00	4	SR Taylor
8	EPIP-4 revision	Y	9/5/00	All	J P Kearney
pen/ink	EPIP-1 and 4 Rev Change only	N	12/21/00	4	W. R. Ramsey
pen/ink	EPIP-1 and 4 Rev Change only	N	07/31/01	4	W. R. Ramsey
pen/ink	Minor clarifications for to be consistent with other REP JPMs.	N	12/27/01	All	L. Pauley
9	Incorporated pen/ink changes; revised to recent EPIP changes; no impact on JPM flow	N	8/16/02	4,7,8,9	J P Kearney
10	Incorporated changes to EPIP-1 and 4	Y	9/9/03	All	G S Poteet
12	Incorporated changes in EPIP-1 and 4.	Y	10/07/05	All	JJ Tricoglou
13	Incorporated changes in EPIP-1 and 4. Add EAL 1.3.2 L as possible barrier loss. Several minor chgs based on proced chgs. Add non action step at ODS notification step to address EPS failure. Split NRC notification step into 2 steps. Added “should be made in 5 min” to ODS std	N	8/18/08	All	H J Birch

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
SRO
JOB PERFORMANCE MEASURE

Task:
Classify the Event per the REP (Primary System Leakage with Leakage Outside Cntmt)

JA/TA task # : 3440030302 (**SRO**)
3440190302 (**SRO**)

K/A Ratings:

2.4.29 (2.6/4.0)	2.4.38 (2.2/4.0)
2.4.30 (2.2/3.6)	2.4.40 (2.3/4.0)
2.4.37 (2.0/3.5)	2.4.41 (2.3/4.1)

Task Standard:
The event is classified as an SAE based on Primary System Leakage exceeding capacity of one charging pump with Leakage Outside Cntmt. All notifications are made per the EPIP.

Evaluation Method : Simulator ___X_____ In-Plant _____
* This JPM will be simulated

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Performer: _____
NAME Start Time _____

Performance Rating: SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

==========

COMMENTS

SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Sequenced steps identified by an "s"
2. Any UNSAT requires comments
3. Initialize the simulator in IC-10 and leave in FREEZE.
4. Insure operator performs the following required actions for **SELF-CHECKING;**
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.
5. **Caution: DO NOT LET THE EXAMINEE FAX THE NOTIFICATION FORM**

Validation Time: CR. 19 mins **Local** _____

Tools/Equipment/Procedures Needed:

EPIP-1 and EPIP-4

References:

	Reference	Title	Rev No.
A.	EPIP-1	Emergency Plan Initiating Conditions Matrix	40
B.	EPIP-4	Site Area Emergency	30

READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All steps of this JPM shall be simulated. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.
The simulator is NOT representative of the scenario you are about to address.

INITIAL CONDITIONS:

1. Unit 1 was operating at 100% (BOL) when indications of a primary system leak developed.
2. AOP-R.05, “RCS Leak and Source Identification” has been implemented; a second CCP was started due to decreasing Pressurizer level.
3. The operators are attempting to identify the source of the leak.
4. Unit 2 is in MODE 6 with refueling operations in progress (core being unloaded).

INITIATING CUES:

1. The US has informed you, the SED, of the leak.
2. The operators have not identified the leak source but, AOP-R.05 is in progress at this time.
3. Using the following parameters provided to you by the control room operating crew, classify the event according to the EPIPs and perform any required actions.
   - PZR level is 58% and stable.
   - Charging flow is 140 gpm.
   - Letdown flow is 0 gpm.
   - Cntmt. pressure is +0.2 psid and steady.
   - Cntmt. radiation (RM-90-106 & 112) has not changed since the event began.
   - RHR Pipe Break White Lights have just illuminated.
   - RM-90-101B is increasing.
   - Several Area Rad Monitors on El 669 and 690 are in Hi Rad.

Elements of this JPM are time critical

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 1.:	Refers to EPIP-1 to determine level of event.	___ SAT ___ UNSAT
NOTE:	**The leak rate is ~128 gpm (140 - 12 gpm RCP seal leakoff).**	
NOTE:	**If the Operator declares an NOUE and enters EPIP-2 based on 2.5 "RCS leakage greater than 10 gpm" then the critical step is not satisfied.**	**Critical Step**
STANDARD:	Operator refers to EPIP-1, Section 1, Fission Product Barrier Matrix. Operator determines that they have met the conditions for SITE AREA EMERGENCY based on EAL 1.2.2 Potential LOSS (RCS Leakage/LOCA) AND EAL 1.3.4 Potential LOSS (Containment Bypass) [OR EAL 1.3.2 LOSS (Cntmt Normal w/ LOCA.)]	**Task Start Time** _____
STEP 2.:	Implements EPIP-4 SITE AREA EMERGENCY. **Enter time Declaration made**_____ **Time from Task Start Time to Declaration:**_____	___ SAT ___ UNSAT
STANDARD:	Operator implements an SITE AREA EMERGENCY utilizing EPIP-4, Section 3.1. Operator should classify the event **within 15 minutes** of the time the task was accepted. Declaration Time should be consistent with the time the examinee transitions from EPIP-1 to EPIP-4.	
STEP 3.:	IF TSC is OPERATIONAL, (SED ttransferred to TSC), THEN. . .	____ SAT ____ UNSAT
CUE:	***TSC is not manned at this time. You are the SED.***	
STANDARD:	Operator N/As the step and continues with the procedure	
STEP 4.:	RECORD time of Declaration.	___ SAT ___ UNSAT
STANDARD:	Operator writes time of Declaration and continues..	

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 5.:	Activate Emergency Paging System (EPS).	___ SAT
Cue:	**If operator asks if EPS has already been activated, respond that the "EPS has not been activated."**	___ UNSAT
	If Operator asks if Security Events are in progress, respond that "There are no security events in progress."	**Critical Step**
	If Operator asks if any ongoing events make site access dangerous to the life and health of emergency responders, respond that "There are no ongoing events that make site access dangerous to the life and health of emergency responders.	
STANDARD:	Operator utilizes "Touch Screen" to activate the EPS.	
STEP 6.:	Complete Appendix B, TVAN Initial Notification for Site Area Emergency.	___ SAT ___ UNSAT
STANDARD:	Operator completes the Appendix using information from turnover sheet and EPIP-1.	
STEP 7.	IF EPS failed to activate from SQN THEN DIRECT ODS to activate SQN EPS	____ SAT ____ UNSAT
STANDARD:	Operator will N/A this step and the next step since EPS did not fail	

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 8.	READ completed Appendix B to ODS. **Enter time call is made to the ODS**_____ **Time from Declaration (step 2) to ODS Notification:**_____ a. This is a Drill b. Their name, Shift Manager at SQN Plant. c. SAE declared on UNIT 1 d. EAL No. **Potential LOSS 1.2.2 and Potential LOSS 1.3.4 [Also accept LOSS 1.3.2]** e. Brief description of incident: **[Leak exceeding one CCP capacity AND Unexpected VALID increase in Area or Vent Rad Monitors OR Cntmt Normal w/ LOCA]** f. Radiological Conditions **[Minor releases within federally approved limits** g. Event Declared: **[Time and Date]** h. Protective Action Recommendation: **[NONE]** i. Ask the ODS to repeat the information he has received to ensure accuracy. j. Fax information to ODS ***Cue:*** ***Role play as the ODS and acknowledge report.*** STANDARD: Operator should notify the ODS within 5 minutes after declaration is made giving the above information from Appendix B. **ODS Shall be notified in 10 minutes.**	___ SAT ___ UNSAT **Critical Step**
STEP 9.:	FAX Notification Form to the ODS. ***Cue:*** ***The support AUO will send the FAX for you.*** ***Caution: DO NOT LET THE EXAMINEE FAX THE FORM*** STANDARD: Operator addresses Faxing the Notification Form to the ODS.	___ SAT ___ UNSAT
STEP 10.:	Monitor for confirmation call from ODS that State/Local notifications are complete. ***Cue:*** ***The support AUO will monitor for confirmation call.*** STANDARD: Operator addresses monitoring for the call.	___ SAT ___ UNSAT

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 11.: IF ODS CANNOT be contacted within 10 minutes of declaration.... STANDARD: Operator N/As this step and continues.	___ SAT ___ UNSAT
STEP 12.: ENSURE MSS/WWM in the OSC (X6428) is monitoring Emergnecy Response Organization (ERO) responses. ***Cue:*** ***Role play as person directed and report all positions responded.*** STANDARD: Operator monitors responses by using touch screen or directs another person to do this task.	___ SAT ___ UNSAT
STEP 13.: PERFORM Appendix A, Notifiations and Announcements. ***CUE:*** **If Operator attempts to delegate the assignment, inform them that no one is available to delegate this function.**	
The following steps are from Appendix A of EPIP-4.	
STEP 14.: IF there has been a security threat THEN, NOTIFY Security Shift Supervisor to IMPLEMENT SSI-1. ***Cue:*** ***There have been no reports of a security threat.*** STANDARD: Operator should N/A this step.	___ SAT ___ UNSAT
STEP 15.: NOTIFY Radiation Protection: STATE: "A SITE AREA EMERGENCY HAS BEEN DECLARED BASED ON **LEAK EXCEEDING ONE CCP CAPACITY AND UNEXPECTED VALID INCREASE IN AREA OR VENT RAD MONITORS [OR Cntmt Normal w/ LOCA],** AFFECTING UNIT 1". ***Cue:*** ***Acknowledge the report.*** STANDARD: Operator makes the notification and directs Radcon to implement EPIP-14 **AND** CECC EPIP-9.	___ SAT ___ UNSAT

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 16.:	NOTIFY personnel in the Chemistry Lab: STATE "A SITE AREA EMERGENCY HAS BEEN DECLARED BASED ON **LEAK EXCEEDING ONE CCP CAPACITY AND UNEXPECTED VALID INCREASE IN AREA OR VENT RAD MONITORS [OR Cntmt Normal w/ LOCA],** AFFECTING UNIT 1". ***Cue:*** ***Acknowledge the report.*** STANDARD: Operator makes the notification and directs Chemistry to implement EPIP-14.	___ SAT ___ UNSAT
STEP 17.:	Announce to plant personnel on the old Plant PA and x4800: "ATTENTION PLANT PERSONNEL. ATTENTION PLANT PERSONNEL. A SITE AREA EMERGENCY HAS BEEN DECLARED BASED ON **Potential LOSS (RCS LEAKAGE/LOCA) AND POTENTIAL LOSS (CONTAINMENT BYPASS) [OR Cntmt Normal w/ LOCA].** AFFECTING UNIT 1. ALL TSC AND OSC PERSONNEL REPORT TO THE EMERGENCY FACILITIES IMMEDIATELY." Repeat the announcement. STANDARD: Operator makes the PA announcements.	___ SAT ___ UNSAT
STEP 18.:	Notify the Plant Management in accordance with SPP-3.5. **NOTE: Activation of the EPS will make the Plant Management aware of the REP actuation, however administrative procedures require notification.** ***Cue:*** ***Acknowledge the report as:*** ▪ ***Plant Manager*** • ***Senior Vice President (SVP), Nuclear Operations*** • ***Duty Plant Manager*** STANDARD: Operator contacts Plant Management and informs him of the REP classification and provides SAE information (Appendix B)	___ SAT ___ UNSAT
STEP 19.:	Notify the "On Call" resident inspector and NRC via ENS in accordance with SPP-3.5. ***Cue:*** ***As the NRC, acknowledge the report.*** STANDARD: Operator should notify the NRC (headquarters) as soon as practicable, but within 1 Hr. of declaration of the event. Operator provides SAE information (Appendix B)	___ SAT ___ UNSAT **Critical Step**

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 20.: Notify the NRC of plan activation via ENS phone. ***Cue:*** ***As the NRC, acknowledge the report.*** STANDARD: Operator should notify the NRC (headquarters) as soon as practicable, but within 1 Hr. of declaration of the event. Operator provides SAE information (Appendix B).	____ SAT ____ UNSAT **Time Critical Step** **Time of Notification:** _____
The following steps are from Section 3.3, MONITOR CONDITIONS OF EPIP-4.	
STEP 21.: MONITOR radiation monitors. When indication of an unplanned radiological release, Then ENSURE Dose Assessment is performed. ***Cue:*** ***Per initiating cues, RM 101B is increasing.*** ***When examinee uses ICS or RM indication to determine effluent radiation levels per Tables 7-1and 7-2 of EPIP-1, cue the operator:*** ***0-RM-90-101B: ~ 7.9E+4 cpm*** ***1-RM-90-400: ~ 4E+4 µCi/s*** ***0-RM-90-400: ~ 1E+3 mr/hr*** ***All other RM reading ~ normal*** ***Field Surveys are in progress*** STANDARD: Operator directs Radiation Protection to perform a dose assessment per EPIP-13, provides type of event, release path, and expected duration. The event type is a LOCA outside containment, release path through the AB stack.	___ SAT ___ UNSAT **Critical Step**
STEP 22.: If personnel accountability has not been previously initiated, THEN Activate assembly & accountability using EPIP-8, Appendix C. ***Cue:*** ***The U2 CRO will perform EPIP-8 Appendix C or Role play as Security Shift Supervisor and acknowledge.*** STANDARD: 1. Operator addresses EPIP-8, Appendix C.	___ SAT ___ UNSAT **Critical Step**
STEP 23.: MONITOR plant conditions AND EVALUATE using EPIP-1..... ***Cue:*** ***If operator begins Monitoring plant conditions, THEN tell him "The TSC is staffed and will COMPLETE SAE follow-up Form".*** STANDARD: Operator addresses completing SAE follow-up Form.	___ SAT ___ UNSAT Stop Time____

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
End of JPM	

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All steps of this JPM shall be simulated. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.
The simulator is NOT representative of the scenario you are about to address.

INITIAL CONDITIONS:

1. Unit 1 was operating at 100% (BOL) when indications of a primary system leak developed.
2. AOP-R.05, "RCS Leak and Source Identification" has been implemented; a second CCP was started due to decreasing Pressurizer level.
3. The operators are attempting to identify the source of the leak.
4. Unit 2 is in MODE 6 with refueling operations in progress (core being unloaded).

INITIATING CUES:

1. The US has informed you, the SED, of the leak.
2. The operators have not identified the leak source but, AOP-R.05 is in progress at this time.
3. Using the following parameters provided to you by the control room operating crew, classify the event according to the EPIPs and perform any required actions.
   - PZR level is 58% and stable.
   - Charging flow is 140 gpm.
   - Letdown flow is 0 gpm.
   - Cntmt. pressure is +0.2 psid and steady.
   - Cntmt. radiation (RM-90-106 & 112) has not changed since the event began.
   - RHR Pipe Break White Lights have just illuminated.
   - RM-90-101B is increasing.
   - Several Area Rad Monitors on El 669 and 690 are in Hi Rad.

Elements of this JPM are time critical