

FINAL

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: <u>Sequoyah 1 & 2</u>		Date of Examination: <u>1/2009</u>
Examination Level: RO <input checked="" type="checkbox"/> SRO <input type="checkbox"/>		Operating Test Number: <u>NRC</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, R	2.1.5 Ability to use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc. 2.9* / 3.9 JPM: Evaluate Overtime Requirements
Conduct of Operations	D, R	2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. 4.3 / 4.4 JPM: Calculate Manual Makeup to the Volume Control Tank (JPM 005)
Equipment Control	N, S	2.2.12 Knowledge of surveillance procedures. 3.7 / 4.1 JPM: Perform Monthly Shift Log 0-SI-OPS-000-003.M
Radiation Control	M, R	2.3.7 Ability to comply with radiation work permit requirements during normal or abnormal conditions. 3.5 / 3.6 JPM: 2A RHR Heat Exchanger Radiological Work Permit and Survey Map Usage (JPM 180)
Emergency Procedures/Plan		N/A
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)		

RO Admin JPM Summary

- A1a Determine when conditions exist that requires approval to exceed work hour restrictions.
Modified JPM
- A1b Perform calculation of the correct amount of water and boric acid required to manually raise the level in the VCT. Bank JPM
- A2 Perform a portion of Monthly Shift Log surveillance instruction 1-SI-OPS-000-003.M and recognize inoperable instruments. New JPM
- A3 Using a survey map and radiological work permit, determine conditions in the room and the required dose monitoring and protective clothing required while inside the room.
Modified JPM
- A4 Not Applicable

Facility: <u>Sequoyah 1 & 2</u>		Date of Examination: <u>1/2009</u>
Examination Level: RO <input type="checkbox"/> SRO <input checked="" type="checkbox"/>		Operating Test Number: <u>NRC</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, R	2.1.5 Ability to use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc. 2.9* / 3.9 JPM: Evaluate Overtime Requirements
Conduct of Operations	D, R	2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. 4.3 / 4.4 JPM: Calculate Manual Makeup to the Volume Control Tank. (JPM 005)
Equipment Control	N, S	2.2.12 Knowledge of surveillance procedures. 3.7 / 4.1 JPM: Perform Monthly Shift Log 0-SI-OPS-000-003.M
Radiation Control	N, R	2.3.11 Ability to Approve Release Permits. 3.8 / 4.3 JPM: Approval of a Waste Gas Decay Tank Release.
Emergency Procedures/Plan	M, S	2.4.38 Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator if required. 2.4 / 4.4 JPM: Classify the Event per the REP (High RCS Activity, Primary System Leakage Outside Containment). (JPM #018 modified)
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)		

SRO Admin JPM Summary

- A1a Determine when conditions exist that requires approval to exceed work hour restrictions. Modified JPM.
- A1b Perform calculation to manually raise the level in the VCT. Bank JPM
- A2 Perform a portion of Monthly Shift Log surveillance instruction 1-SI-OPS-000-003.M and recognize inoperable instruments. New JPM
- A3 Determine requirements for releasing a Waste Gas Decay Tank including hold-up time requirements, approval required in outside normal release hours, requirements with radiation monitor out of service and requirement if monitor is not repaired in identified ODCM time. New JPM
- A4 Evaluate plant conditions for E-Plan entry, classification, and required notifications in accordance with Radiological Emergency Plan procedures. Bank JPM #18.



SEQUOYAH NUCLEAR PLANT JOB PERFORMANCE MEASURE

JPM A.1.a

FINAL

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 _____

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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 have required 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
<p><u>STEP 1.:</u> Evaluate the hours worked against the requirements.</p> <p><u>STANDARD:</u> 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</p>	<p>Start Time____</p> <p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>
<p><u>STEP 2.:</u> Evaluate the hours worked against the requirements.</p> <p><u>STANDARD:</u> 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</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>

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 have required 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
FINAL

**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.

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% in accordance with 0-SO-62-7, "Boron Concentration Control".
2. Notify the SRO when the calculation is completed.

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
<p><u>STEP 1.:</u> Operator obtains appropriate copy of procedure and determines the appropriate section to perform.</p> <p><u>STANDARD:</u> Operator obtains copy of 0-SO-62-7 and determines that section 6.5 is the appropriate section.</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p> <p>Start Time___</p>	
<p><u>STEP 2.:</u> [2] PERFORM Appendix C Calculation of Boric Acid and Primary Water Integrator setting for manual makeup.</p> <p><u>STANDARD:</u> Operator goes to Appendix C</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p>	
<p>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).</p>		
<p><u>STEP 3.:</u> [1] OBTAIN Current RCS Boric Acid Concentration</p> <p><u>STANDARD:</u> Operator obtains current RCS boron concentration or uses initial conditions. RCS Boric acid concentration 1117 ppm</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p>	
<p><u>STEP 4.:</u> [2] OBTAIN Current BAT Boric Acid Concentration</p> <p><u>STANDARD:</u> Operator obtains current BAT boron concentration from Chem Lab or uses initial conditions. BAT Boric acid concentration 6820 ppm</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p>	
<p><u>STEP 5.:</u> [3] OBTAIN B-10 depletion value from Rx Eng Information page _____ PPM</p> <p><u>Cue:</u> <i>Current depletion value is 15 ppm, after operators asks for information page.</i></p> <p><u>STANDARD:</u> Operator obtains current boron depletion value and records 15 ppm.</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p>	
<p>NOTE Result in Step [4] should be rounded to the second decimal place.</p>		
<p><u>STEP 6.:</u> [4] CALCULATE BAT Boric Acid Concentration Ratio (BACR):</p> <p>NOTE: 6820 ppm ÷ 6820 ppm (from step 2) = 1.0</p> <p><u>STANDARD:</u> Operator observes that BACR is one (1.0).</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p> <p style="text-align: right;">Critical Step</p>	

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
<p><u>STEP 7.:</u> [5] CALCULATE B-10 corrected boron concentration:</p> $\frac{\text{STEP [1]}}{\text{STEP [3]}} - \frac{\text{STEP [3]}}{\text{STEP [3]}} = \frac{\text{B-10 corrected boron}}{\text{STEP [3]}}$ <p>NOTE: 1117 ppm – 15 ppm (from step 2) = 1102 ppm</p> <p>STANDARD: Operator calculates corrected B-10 concentration</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>	
<p><u>STEP 8.:</u> [6] DETERMINE Corrected Boric Acid Flow Rate and Controller Setting using appropriate table from TI-44 Appendix C.</p> <p>[a] RECORD Corrected Boric Acid Flow Rate from TI-44 Appendix C <u>Table 1.</u></p> <p>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 <u>13.35 gpm</u> (13.3 -13.4 gpm)</p> <p>STANDARD: Operator calculates the Corrected Boric Acid Flow rate from TI-44 Appendix C Table 1. 13.35 gpm (13.3 -13.4 gpm)</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>	
<p><u>STEP 9.:</u> [b] RECORD Correct Boric Acid Controller Setting from TI-44 Appendix C <u>Table 2</u></p> <p>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 26.65 - 26.70%.</p> <p>STANDARD: Operator calculates the Corrected Boric Acid Controller Setting from TI-44 Appendix C Table 2 for a value of 26.77% (26.65 - 26.70%)</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>	
<p><u>STEP 10.:</u> [7] Calculate Boric Acid Controller Setting</p> <p>[Corrected BA Controller Setting] x [BACR] = [Boric Acid Controller Setting]</p> <p>NOTE: 26.66% (26.7%) x 1.0 = 26.66% (26.65 - 26.70%)</p> <p>STANDARD: Operator calculates the Boric Acid Controller Setting (26.65 - 26.70%)</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>	
<p><u>STEP 11.:</u> [8] Desired VCT level - Actual VCT level X 20 gal = _____</p> <p>NOTE: (51% - 41) X 20 gal = 200 gal</p> <p>STANDARD: Operator calculates total volume of water to raise VCT level 10% to be 200 gallons.</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>	

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
<p>STEP 12.: [9] [Corrected BA Flow Rate] x [BACR] + 70 gpm = [Total Flow Rate]</p> <p>NOTE: 13.35 gpm x 1.0 + 70 gpm = 83.35 gpm (83.3-83.4)</p> <p>STANDARD: Operator determines total flow rate of ~ 83.4 gpm (83.3-83.4)</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p> <p style="text-align: right;">Critical Step</p>	
<p>STEP 13.: [Corrected BA Flow Rate] X BACR] ÷ Total Flow Rate X Total Volume Change = BORIC ACID INTEGRATOR SETTING</p> <p>NOTE: ((13.3 x 1.0) / (83.4)) x 200 = 31.89 gal. ((13.4 x 1.0) / (83.3)) x 200 = 32.17 gal.</p> <p>STANDARD: Operator establishes correct integrator setting as below [13.4 gpm X 1(BACR) ÷ 83.4 gpm] X 200 gal = ~ 32.1 gal (31.89 - 32.17)</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p> <p style="text-align: right;">Critical Step</p>	
<p>STEP 14.: 70 GPM (PW) ÷ Total Flow Rate X Total Volume = PRIMARY WATER INTEGRATOR SETTING</p> <p>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)</p> <p>NOTE: Operator may CHECK calculation using INFORMATION ONLY SPREADSHEET.</p> <p>STANDARD: Operator establishes correct integrator setting as below [70 gpm ÷ 83.4 gpm] X 200 gal = ~ 167.86 gal [70 gpm ÷ 83.3 gpm] X 200 gal = ~ 168.06 gal</p>	<p style="text-align: right;">___ SAT</p> <p style="text-align: right;">___ UNSAT</p> <p style="text-align: right;">Critical Step</p> <p style="text-align: right;">Stop Time_____</p>	

End of JPM

READ TO OPERATOR

Directions to Trainee:

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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% in accordance with 0-SO-62-7, "Boron Concentration Control".
2. Notify the SRO when the calculation is completed.

SQN 1,2	BORON CONCENTRATION CONTROL	0-SO-62-7 Rev. 51 Page 159 of 199
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APPENDIX C
Page 1 of 2

CALCULATION OF BORIC ACID AND PRIMARY WATER INTEGRATOR SETTING FOR MANUAL MAKEUP TO VCT (RCS)

- [1] OBTAIN Current RCS Boric Acid Concentration 1117 PPM
- [2] OBTAIN Current BAT Boric Acid Concentration 6820 PPM
- [3] OBTAIN B-10 depletion value from Rx Eng Information page 15 PPM

NOTE Result in Step [4] should be rounded to second decimal place.

- [4] CALCULATE BAT Boric Acid Concentration Ratio (BACR): $6820 \text{ ppm} \div \text{Step [2] ppm} = \underline{1.00}$
- [5] CALCULATE B-10 corrected boron concentration: $\frac{1117}{\text{STEP [1]}} - \frac{15}{\text{STEP [3]}} = \underline{1102}$ B-10 corrected boron

[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. 13.35 GPM
- [b] RECORD Corrected Boric Acid Controller Setting from TI-44 Appendix C Table 2. 26.7 %

[7] $\left(\frac{26.7}{\text{Corrected Boric Acid Controller Setting (Step [6][b])}} \right) \times \left(\frac{1.00}{\text{BACR from step 4}} \right) = \underline{26.7} \text{ (Boric Acid Controller Setting)}$

CONTINUED ON NEXT PAGE

SQN 1,2	BORON CONCENTRATION CONTROL	0-SO-62-7 Rev. 51 Page 160 of 199
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APPENDIX C

Page 2 of 2

[8]
$$\left[\frac{51\%}{\text{(Desired VCT level)}} - \frac{41\%}{\text{(Actual VCT level)}} \right] \times 20 \text{ GAL/percent} = \frac{200 \text{ GALS}}{\text{Total Volume}}$$

[9]
$$\left(\frac{13.35 \text{ GPM}}{\text{Corrected Boric Acid Flow Rate (Step [6][a])}} \right) \times \left(\frac{1}{\text{(BACR from step 4)}} \right) + 70 \text{ GPM (Primary H}^2\text{O)} = \frac{83.35 \text{ GPM}}{\text{Total Flow Rate}}$$

[10]
$$\left(\frac{13.35 \text{ GPM}}{\text{Corrected Boric Acid Flow Rate (Step [6][a])}} \right) \times \left(\frac{1}{\text{(BACR from step 4)}} \right) \div \frac{83.35 \text{ GPM}}{\text{(Obtained from step [9])}} \times \frac{200 \text{ GALS}}{\text{(Obtained from step [8])}} =$$

32 GALS
BORIC ACID INTEGRATOR
SETTING

[11]
$$70 \text{ GPM (Primary H}^2\text{O)} \div \frac{83.35 \text{ GPM}}{\text{Obtained from step [9]}} \times \frac{200 \text{ GALS}}{\text{Obtained from step [8]}} = \frac{168 \text{ GALS}}{\text{PRIMARY WATER INTEGRATOR SETTING}}$$

Calculation check: Step [10] results + Step [11] results should ~ = Step [8] results

**SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE**

**ADMIN A.2
JPM**

FINAL

**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.

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: ZAOP118C to 845
 ZAOP1126C to 830
 ZAOP1119C 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:

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 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																																					
<p>STEP 1: Obtain the appropriate procedure.</p> <p>STANDARD: Operator obtains 1-SI-OPS-000-003.M, "Monthly Shift Log", Appendix A.</p>	<p>Start Time ____</p> <p>__ SAT</p> <p>__ UNSAT</p>																																					
<p>STEP 2: Turbine Driven AFW Pump Speed Control Light Green</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="font-size: small;">SRK Reference</th> <th style="font-size: small;">MODE</th> <th style="font-size: small;">NOTE</th> <th style="font-size: small;">I/O LIMITS</th> <th style="font-size: small;">Instrument No.</th> <th style="font-size: small;">UNITS</th> <th style="font-size: small;">DATA</th> <th style="font-size: small;">REMARKS</th> </tr> </thead> <tbody> <tr> <td>Turb. Driven AFW Pump Speed Control Light Green</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">1,2,3</td> <td style="text-align: center;">1,2</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">1-HC-46-57</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p>STANDARD: Candidate determines green light lit on 1-HC-46-57-S on 1-M-3.</p> <p>COMMENTS:</p>	SRK Reference	MODE	NOTE	I/O 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	(N)	✓	<p>__ SAT</p> <p>__ UNSAT</p>																					
SRK Reference	MODE	NOTE	I/O 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	(N)	✓																															
<p>STEP 3: Auxiliary Feedwater Valve Mode Indicator Light Blue</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="font-size: small;">SRK Reference</th> <th style="font-size: small;">MODE</th> <th style="font-size: small;">NOTE</th> <th style="font-size: small;">I/O LIMITS</th> <th style="font-size: small;">Instrument No.</th> <th style="font-size: small;">UNITS</th> <th style="font-size: small;">DATA</th> <th style="font-size: small;">REMARKS</th> </tr> </thead> <tbody> <tr> <td rowspan="8">Auxiliary Feedwater Valve Mode Indicator Light Blue</td> <td rowspan="8" style="text-align: center;">N/A</td> <td rowspan="8" style="text-align: center;">1,2,3</td> <td rowspan="8" style="text-align: center;">1,3</td> <td rowspan="8" style="text-align: center;">N/A</td> <td>1-LCV-3-164</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-174</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-156</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-173</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-148</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-172</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-171</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>1-LCV-3-175</td> <td style="text-align: center;">(N)</td> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p style="text-align: right; margin-right: 50px;">Operator's Initials: <u> </u></p> <p>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.</p> <p>COMMENTS:</p>	SRK Reference	MODE	NOTE	I/O LIMITS	Instrument No.	UNITS	DATA	REMARKS	Auxiliary Feedwater Valve Mode Indicator Light Blue	N/A	1,2,3	1,3	N/A	1-LCV-3-164	(N)	✓	1-LCV-3-174	(N)	✓	1-LCV-3-156	(N)	✓	1-LCV-3-173	(N)	✓	1-LCV-3-148	(N)	✓	1-LCV-3-172	(N)	✓	1-LCV-3-171	(N)	✓	1-LCV-3-175	(N)	✓	<p>__ SAT</p> <p>__ UNSAT</p>
SRK Reference	MODE	NOTE	I/O LIMITS	Instrument No.	UNITS	DATA	REMARKS																															
Auxiliary Feedwater Valve Mode Indicator Light Blue	N/A	1,2,3	1,3	N/A	1-LCV-3-164	(N)	✓																															
					1-LCV-3-174	(N)	✓																															
					1-LCV-3-156	(N)	✓																															
					1-LCV-3-173	(N)	✓																															
					1-LCV-3-148	(N)	✓																															
					1-LCV-3-172	(N)	✓																															
					1-LCV-3-171	(N)	✓																															
					1-LCV-3-175	(N)	✓																															

Job Performance Checklist

STEP/STANDARD

SAT/UNSAT

STEP 4.: Auxiliary Feedwater Valve Position Indication

___ SAT

___ UNSAT

	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-3-158A (1-XX-55-8K)	Lit	LIT	
					1-LCV-3-164A (1-XX-55-8K)	Lit	LIT	
					1-LCV-3-172 (1-XX-55-8K)	Lit	LIT	
					1-LCV-3-175 (1-XX-55-8K)	Lit	LIT	
					1-LCV-3-156 (1-XX-55-8K)	Lit	LIT	
					1-LCV-3-184 (1-XX-55-8K)	Lit	LIT	
					1-LCV-3-148A (1-XX-55-8L)	Lit	LIT	
					1-LCV-3-171A (1-XX-55-8L)	Lit	LIT	
					1-LCV-3-173 (1-XX-55-8L)	Lit	LIT	
					1-LCV-3-174 (1-XX-55-8L)	Lit	LIT	
					1-LCV-3-148 (1-XX-55-8L)	Lit	LIT	
					1-LCV-3-171 (1-XX-55-8L)	Lit	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, 114-117 and Panel L Windows 62, 75, 114-117

COMMENTS:

STEP 5.: Motor Driven AFW Flowrate

___ SAT

___ UNSAT

	SR Reference	Mode	Note	TS Limits	Instrument No.	Units	Data	REMARKS
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	0	
					1-FI-3-163C	gpm	32	
					1-FI-3-165A (PAM Instrument)	gpm	0	
					1-FI-3-165C	gpm	0	
					1-FI-3-147A (PAM Instrument)	gpm	0	
					1-FI-3-147C	gpm	15	
					1-FI-3-170A (PAM Instrument)	gpm	0	
					1-FI-3-170C	gpm	0	

Operator's Initials: ~

Critical Step

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:

Job Performance Checklist

STEP/STANDARD

SAT/UNSAT

STEP 6.: ERCW to AFW Valve Position Indication

___ SAT

___ UNSAT

	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	8	OPERABLE	1-HS-3-118B/A	Lit	LIT	
					1-HS-3-118A/A	Lit	LIT	
					1-HS-3-128B/A	Lit	LIT	
					1-HS-3-128A/A	Lit	LIT	
	4.3.3.7.a.18.b	1,2,3	8	OPERABLE	1-HS-3-138B/A	Lit	LIT	
					1-HS-3-138A/A	Lit	LIT	
					1-HS-3-179B/A	Lit	LIT	
					1-HS-3-179A/A	Lit	LIT	

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

COMMENTS:

STEP 7.: Containment Isolation Valve Position Indication

___ SAT

___ UNSAT

	SR Reference	Mode	Note	TS Limits	Instrument No.	Units	Data	REMARKS
Containment Isolation Valve Position Indication	4.3.3.7.a.19	1,2,3	7	OPERABLE	XX-55-8K (Cnmt vent, Phase A, Phase B, Manual) TRAIN A	Lit	(V) ✓	
					XX-55-6L (Cnmt vent, Phase A, Phase B, Manual) TRAIN B	Lit	(V) ✓	
						Operator's Initials	~	

⁷ **VERIFY** Containment Isolation Valve Position Indicators are operable by performing a Lamp Test of panels XX-55-8K and 8L. 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:

Job Performance Checklist

STEP/STANDARD

SAT/UNSAT

STEP 8.: Main Steam Line Pressure

___ SAT

___ UNSAT

Critical Step

	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.3	1,2,3	8		OPERABLE	1-PI-1-1C	PSIG	860	
						1-PI-1-2A (PAM Instrument)	PSIG	870	
		1-PI-1-2B (PAM Instrument)	PSIG	870					
		1-PI-1-8C	PSIG	860					
	OPERABLE	1-PI-1-9A (PAM Instrument)	PSIG	860					
		1-PI-1-9B (PAM Instrument)	PSIG	870					
		1-PI-1-19C	PSIG	810					
	OPERABLE	1-PI-1-20A (PAM Instrument)	PSIG	880					
		1-PI-1-20B (PAM Instrument)	PSIG	870					
		1-PI-1-26C	PSIG	845					
	OPERABLE	1-PI-1-27A (PAM Instrument)	PSIG	865					
		1-PI-1-27B (PAM Instrument)	PSIG	870					

Operator's Initials:

^a 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 pressure instruments. Aux Control Room instrument 1-PI-1-19C reads 810 psig and the MCR instruments (1-PI-1-20A & 1-PI-20B) read 880-870 psig for a 70-60 psig difference (only 53 psig is allowed for acceptance criteria.)

COMMENTS:

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).

___ SAT

___ UNSAT

Critical Step

STANDARD: Candidate identifies the Motor Driven AFW Flow Rate 1-FI-3-163C and the the Main Steam Line Pressure 1-PI-19C instruments are outside the acceptable deviation ranges.

COMMENTS:

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
<p><u>STEP 10.:</u> DELIVERS package to Unit SRO for review and approval.</p> <p><i>Cue: state ' We will stop here"</i></p> <p><u>STANDARD:</u></p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Stop Time___</p>

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)

FINAL

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

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

=====

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. What is the maximum time allowed between briefings by RADCON on the contents of the RWP.

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p><u>STEP 1:</u> Anti-contamination clothing requirements to enter the Contamination Area between the heat exchangers on the top elevation.</p> <p><u>STANDARD:</u> On the RWP in the Anti-Contamination Clothing Requirements Matrix list every item that has a 2 in its block.</p> <p>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;</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>
<p><u>STEP 2:</u> 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.</p> <p><u>STANDARD:</u> Candidate identifies that the "Dose Alarm" would alarm. 20mr/hr X 3hr = 60mr which is greater than the dose alarm setpoint of 50mr.</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>
<p><u>STEP 3:</u> How often an individual is required to be briefed on the requirements of the RWP.</p> <p><u>STANDARD:</u> Candidate identifies a briefing is required quarterly.</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>

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. What is the maximum time allowed between briefings by RADCON on the contents of the RWP.

RADIOLOGICAL WORK PERMIT

BRIEFING REQUIRED QUARTERLY

FOR ALL NON AIRBORNE AREAS EXCLUDING CONT. & SPENT FUEL POOL

GENERAL DESCRIPTION

Status:ACTIVE
Start Date: 01-JAN-2008 00:00 End Date: 31-DEC-2008 23:59
Type:GENERAL MAP ID : Outage: N Name:
Task:ROUTINE OPERATIONS AND SURVEILLANCE PSE: N
HP Coverage:INTERMITTENT Authorization Type: ALL
ALARA Review Number:2008-99 Primary WorkDoc:
Person-mrem Estimate:500 Person-Hrs Estimate:25000
Dose Alarm:50 Dose Rate Alarm:100
DAC-hrs Tracked:Y
Work Area Description:All RCAs Excluding Containment and SFP area

DESCRIPTION OF WORK TO BE PERFORMED

RCA AREAS - OPS INSPECTION, VALVE ALIGNMENT AND SURVEILLANCE

ANTI-CONTAMINATION CLOTHING REQUIRMENTS

1,2,3	GLOVES, RUBBER, ONE PAIR	1,2,3,4	CLOTH INSERTS
2	LAB COAT	2,3	BOOTIES, CLOTH, ONE PAIR
2,3	SURGEON'S CAP	2,3,4	SHOE COVERS, ONE PAIR
2,3,4	SECURE GLOVES/BOOTIES	3,4	MODESTY CLOTHING
3,4	NO PERSONAL OUTER CLOTHING	3,4	COVERALLS, ONE PAIR
4	PAPER SUIT	4	GLOVES, RUBBER, TWO PAIR
4	BOOTIES, CLOTH, TWO PAIR	4	HOOD

DOSIMETRY REQUIREMENTS

ELECTRONIC DOSIMETER TLD

BRIEFING REQUIREMENTS

PRE-JOB BRIEFING

EQUIS

WORK STEPS

- 1 HANDS-ONLY ENTRY INTO CONTAMINATION AREAS
- 2 ENTRY INTO POSTED CONTAMINATION AREAS <10,000 DPM/100 CM2.
- 3 ENTRY INTO POSTED CONTAMINATION AREAS >10,000 DPM/100 CM2
- 4 ENTRY INTO POSTED HIGH CONTAMINATION AREAS

RADIOLOGICAL WORK PERMIT
BRIEFING REQUIRED QUARTERLY
FOR ALL NON AIRBORNE AREAS EXCLUDING CONT. & SPENT FUEL POOL

--- Continued ---

WORKER INSTRUCTIONS

- 1 REVIEW APPLICABLE SURVEY DATA PRIOR TO EACH ENTRY.
- 2 NOTIFY RADCON OF ANY UNUSUAL RADIOLOGICAL CONDITIONS (FOR EXAMPLE:
WATER, LEAKS, RADIATION MONITOR ALARMS)
- 3 NOTIFY RADCON PRIOR TO ANY CONTAMINATED SYSTEM BREACH.
- 4 CONSIDER ALL MATERIALS THAT BREACH THE CONTAMINATION AREA BOUNDARY TO BE
EXTERNALLY CONTAMINATED.
- 5 TVA SUPPLIED CLOTHING MAY BE USED INSTEAD OF MODESTY CLOTHING.
- 6 NO KNEELING OR CLIMBING OR ENTRY INTO PIPE CHASES IN LAB COAT DRESSOUT.
- 7 ACCESS TO THIS RWP INDICATES THE WORKER CAN HEAR THE ED ALARM OR OTHER
DOSE WARNING MEASURES HAVE BEEN PROVIDED.

SPECIAL INSTRUCTIONS

- 1 NOTIFY RADCON OF EXACT WORK AND LOCATION PRIOR TO EACH ENTRY.
HP Coverage: None
- 2 THIS RWP IS NOT VALID FOR ENTRY INTO POSTED HIGH RADIATION AREAS OR
LOCKED HIGH RADIATION AREAS
HP Coverage: None

APPROVAL

Prepared By: UMPETROV
Approved By:
Approved By:
Final Approval: SPMOHORN

End of RWP

RADIOLOGICAL WORK PERMIT

BRIEFING REQUIRED QUARTERLY

FOR ALL NON AIRBORNE AREAS EXCLUDING CONT. & SPENT FUEL POOL

GENERAL DESCRIPTION

Status:ACTIVE
Start Date: 01-JAN-2008 00:00 End Date: 31-DEC-2008 23:59
Type:GENERAL MAP ID : Outage: N Name:
Task:ROUTINE OPERATIONS AND SURVEILLANCE PSE: N
HP Coverage:INTERMITTENT Authorization Type: ALL
ALARA Review Number:2008-99 Primary WorkDoc:
Person-mrem Estimate:500 Person-Hrs Estimate:25000
Dose Alarm:50 Dose Rate Alarm:100
DAC-hrs Tracked:Y
Work Area Description:All RCAs Excluding Containment and SFP area

DESCRIPTION OF WORK TO BE PERFORMED

RCA AREAS - OPS INSPECTION, VALVE ALIGNMENT AND SURVEILLANCE

ANTI-CONTAMINATION CLOTHING REQUIRMENTS

1,2,3	GLOVES, RUBBER, ONE PAIR	1,2,3,4	CLOTH INSERTS
2	LAB COAT	2,3	BOOTIES, CLOTH, ONE PAIR
2,3	SURGEON'S CAP	2,3,4	SHOE COVERS, ONE PAIR
2,3,4	SECURE GLOVES/BOOTIES	3,4	MODESTY CLOTHING
3,4	NO PERSONAL OUTER CLOTHING	3,4	COVERALLS, ONE PAIR
4	PAPER SUIT	4	GLOVES, RUBBER, TWO PAIR
4	BOOTIES, CLOTH, TWO PAIR	4	HOOD

DOSIMETRY REQUIREMENTS

ELECTRONIC DOSIMETER TLD

BRIEFING REQUIREMENTS

PRE-JOB BRIEFING

EQUIS

WORK STEPS

- 1 HANDS-ONLY ENTRY INTO CONTAMINATION AREAS
- 2 ENTRY INTO POSTED CONTAMINATION AREAS <10,000 DPM/100 CM2.
- 3 ENTRY INTO POSTED CONTAMINATION AREAS >10,000 DPM/100 CM2
- 4 ENTRY INTO POSTED HIGH CONTAMINATION AREAS

RADIOLOGICAL WORK PERMIT
BRIEFING REQUIRED QUARTERLY
FOR ALL NON AIRBORNE AREAS EXCLUDING CONT. & SPENT FUEL POOL

--- Continued ---

WORKER INSTRUCTIONS

- 1 REVIEW APPLICABLE SURVEY DATA PRIOR TO EACH ENTRY.
- 2 NOTIFY RADCON OF ANY UNUSUAL RADIOLOGICAL CONDITIONS (FOR EXAMPLE:
WATER, LEAKS, RADIATION MONITOR ALARMS)
- 3 NOTIFY RADCON PRIOR TO ANY CONTAMINATED SYSTEM BREACH.
- 4 CONSIDER ALL MATERIALS THAT BREACH THE CONTAMINATION AREA BOUNDARY TO BE
EXTERNALLY CONTAMINATED.
- 5 TVA SUPPLIED CLOTHING MAY BE USED INSTEAD OF MODESTY CLOTHING.
- 6 NO KNEELING OR CLIMBING OR ENTRY INTO PIPE CHASES IN LAB COAT DRESSOUT.
- 7 ACCESS TO THIS RWP INDICATES THE WORKER CAN HEAR THE ED ALARM OR OTHER
DOSE WARNING MEASURES HAVE BEEN PROVIDED.

SPECIAL INSTRUCTIONS

- 1 NOTIFY RADCON OF EXACT WORK AND LOCATION PRIOR TO EACH ENTRY.
HP Coverage: None
- 2 THIS RWP IS NOT VALID FOR ENTRY INTO POSTED HIGH RADIATION AREAS OR
LOCKED HIGH RADIATION AREAS
HP Coverage: None

APPROVAL

Prepared By: UMPETROV
Approved By:
Approved By:
Final Approval: SPMOHORN

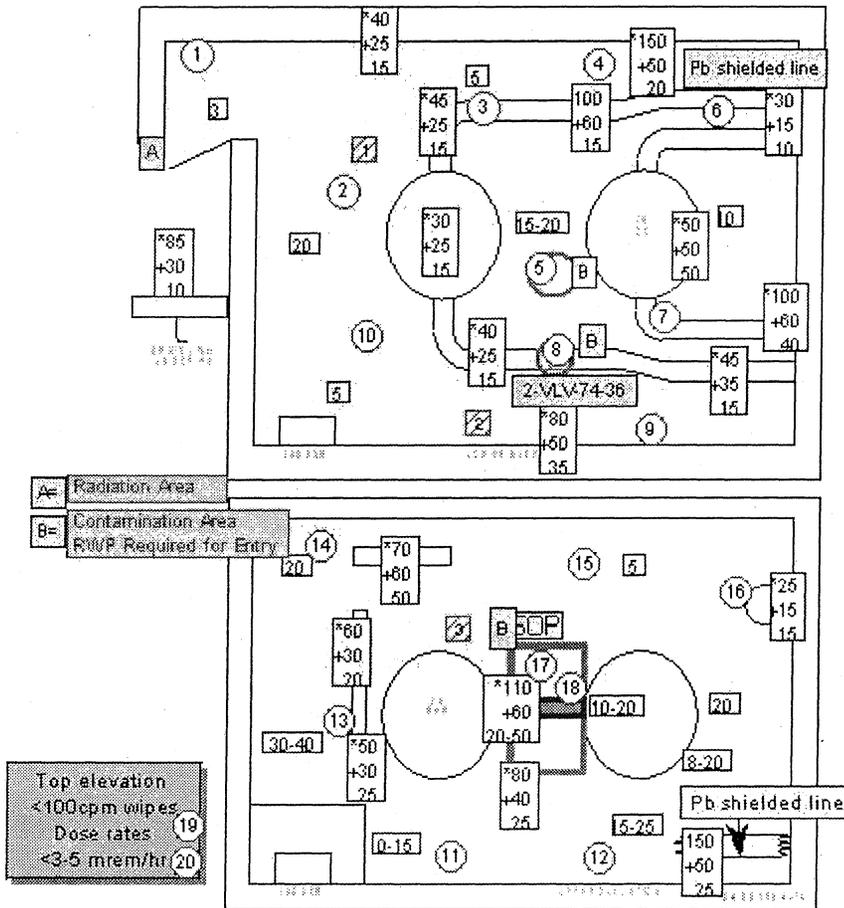
End of RWP

Map: A414.WMF - A414 RHR & Containment Spray Heat Exchangers 2A-A
 Survey #: 051508-10 Surveyed by Monarres, Allen, Gallant M on 5/15/2008 at 17:07
 Approved on: 5/16/2008 07:50

Return to EI.690 Map List
 Return to Main Map List

Summary of Highest Readings			
Smears		Air Samples & Wipes	
20)	<1000 DPM/100 cm2	βγ	Wipe 1) <100 CPM
19)	<1000 DPM/100 cm2	βγ	Wipe 2) <100 CPM
18)	<1000 DPM/100 cm2	βγ	Wipe 3) <100 CPM
17)	<1000 DPM/100 cm2	βγ	
16)	<1000 DPM/100 cm2	βγ	
15)	<1000 DPM/100 cm2	βγ	
14)	<1000 DPM/100 cm2	βγ	
13)	<1000 DPM/100 cm2	βγ	
12)	<1000 DPM/100 cm2	βγ	
11)	<1000 DPM/100 cm2	βγ	
10)	<1000 DPM/100 cm2	βγ	
9)	<1000 DPM/100 cm2	βγ	
8)	<1000 DPM/100 cm2	βγ	
7)	<1000 DPM/100 cm2	βγ	
6)	<1000 DPM/100 cm2	βγ	
5)	<1000 DPM/100 cm2	βγ	

Symbol Legend (for example only)	
Dose Rate	HS-50 Hot Spot
*150 ← Contact Reading	RCA Posting
+75 ← 30 cm Reading	Drip Bag
20 ← General Area	
15 Smear	15 Air Sample
RM	15 Wipe



SEQUOYAH NUCLEAR PLANT JOB PERFORMANCE MEASURE

ADMIN
SRO A.3
JPM

FINAL

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 1/2.1.2.
(3) the required action if it takes 40 days to get parts to restore the monitor to Operable status.

valuation Method : Simulator In-Plant

=====

Performer: _____
NAME Start Time _____

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

Evaluator: _____ / _____
SIGNATURE DATE

=====

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

=====
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
<p><u>STEP 1.:</u> Identify who must approve the release if the tank is to be released on the night shift at 2300.</p> <p><u>STANDARD:</u> Candidate identifies the approval of the US/SRO is required.</p> <p><u>COMMENTS:</u></p>	<p>Start Time_____</p> <p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>
<p><u>STEP 2.:</u> The required actions to allow a release with 0-RM-90-118A out of service.</p> <p><u>STANDARD:</u> Candidate identifies the actions of ODCM 1/2.1.2 contained in Table 1.1.2, "Radioactive Gaseous Effluent Monitoring Instrumentation", Action 40 (listed below)</p> <p>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:</p> <ul style="list-style-type: none"> 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. <p>Otherwise, suspend release of radioactive effluents via this pathway.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
<p><u>STEP 3:</u> The required action if it takes 40 days to get parts to restore the monitor to Operable status.</p> <p><u>STANDARD:</u> Candidate identifies 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. This is Action 'b' in ODCM 1.1.2, "Radioactive Gaseous Effluent Monitoring Instrumentation".</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p> <p>Stop Time___</p>

END of JPM

**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
JPM 018 modified

FINAL

Classify the Event per the REP

(High RCS Activity with Primary System
Leakage Outside Containment)

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
SRO
JOB PERFORMANCE MEASURE**

Task:

Classify the Event per the REP (High RCS Activity with Primary System Leakage Outside Containment)

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 a General Emergency due to high RCS activity, RCS leakage exceeding the capacity of one charging pump with Leakage Outside Cntmt. Notifications are made or delegated per the EPIP.

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

=====

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, EPIP-5, and SPP-3.5

References:

	Reference	Title	Rev No.
A.	EPIP-1	Emergency Plan Initiating Conditions Matrix	40
B.	EPIP-5	General Emergency	37
C.	SPP-3.5	Regulatory Reporting Requirements	20

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. A shutdown was initiated prior to reaching the Tech Spec limit on Unit 1 due to RCS activity being elevated and increasing.
2. After starting the shutdown, indications of a primary system leak developed.
3. AOP-R.05, "RCS Leak and Source Identification" was been implemented; a second CCP was started due to decreasing Pressurizer level.
4. The operators are attempting to identify the source of the leak.
5. 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, classify the event according to the EIPs and perform any required actions.
 - PZR level is 56% and stable.
 - Charging flow is 140 gpm.
 - Letdown flow is 0 gpm.
 - Containment pressure is +0.2 psid and steady.
 - Containment Sump level is not increasing.
 - RHR Pipe Break White Lights have just illuminated.
 - Auxiliary Building Vent 0-RM-90-101B is increasing.
 - Several Area Rad Monitors on EI 669 and 690 are in Hi Rad.
 - Chemistry reports a step rise in the RCS activity to 410 µCi/gm dose equivalent Iodine 131.

Elements of this JPM are time critical

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 1.: Refers to EPIP-1 to determine level of event.</p> <p>STANDARD: Operator refers to EPIP-1, Section 1, Fission Product Barrier Matrix. Operator determines that they have met the conditions of:</p> <p>1.1.2 Loss, "RCS sample activity is greater than 300 µCi/gm dose equivalent I131"</p> <p>1.2.2 Potential Loss, "Non Isolatable RCS leak exceeding the capacity of one charging pump in the normal charging alignment"</p> <p>1.3.2 Loss, "Containment pressure or sump level not increasing with a LOCA in progress"</p> <p>Based on "Emergency Class Criteria", the Operator determines the need to declare a General Emergency, based on Loss of two barriers and potential loss of the third barrier.</p>	<p>Task Start Time</p> <hr/> <p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step</p>
<p>STEP 2.: Implements EPIP-5 GENERAL EMERGENCY.</p> <p>Enter time Declaration made: _____</p> <p>Time from Task Acceptance to Declaration: _____</p> <p>STANDARD: Operator implements a GENERAL EMERGENCY per EPIP-5, Section 3.1. Operator is required to 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-5.</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Time Critical</p>
<p>STEP 3.:</p> <div data-bbox="305 1247 1143 1310" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>NOTE: IF there are personnel injuries, THEN IMPLEMENT EPIP-10, "Emergency Medical Response" in parallel with this procedure.</p> </div> <div data-bbox="305 1335 1143 1419" style="border: 1px solid black; padding: 5px;"> <p>NOTE: IF there are immediate hazards to plant personnel, THEN consider immediately implementing EPIP-8 "Personnel Accountability and Evacuation" in parallel with this procedure</p> </div> <p>Cue: <i>If Operator seeks information on injuries, state " NO injuries have been reported"</i></p> <p>Cue: <i>If Operator seeks information on immediate hazards, state " NO immediate hazards have been reported"</i></p> <p>STANDARD: Operator refers to the 2 notes.</p>	<p>___ SAT</p> <p>___ UNSAT</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 4.: 3.1 GENERAL EMERGENCY DECLARATION BY THE MAIN CONTROL ROOM Upon classifying events as a "GENERAL EMERGENCY", the SM/SED shall:</p> <p>[1] IF TSC is OPERATIONAL, (SED transferred to TSC), THEN GO TO Section 3.2. [2] RECORD time of Declaration</p> <p>STANDARD: Operator determines the TSC is not operational and records the time of declaration</p>	<p>___ SAT ___ UNSAT</p>
<p>STEP 5.: [3] ACTIVATE Emergency Paging System (EPS) as follows.</p> <p>[a] IF EPS has already been activated, THEN GO TO Step 4. [b] IF ongoing onsite Security events may present risk to the emergency responders, THEN CONSULT with Security to determine if site access is dangerous to the life and health of emergency responders. [c] IF ongoing events makes site access dangerous to the life and health of emergency responders, THEN SELECT STAGING AREA button on the EPS terminal INSTEAD of the EMERGENCY button. [d] ACTIVATE EPS using touch screen terminal. IF EPS fails to activate, THEN continue with step 4.</p> <p>Cue: <i>If Security contacted, state "No security event is in progress"</i></p> <p>STANDARD: Operator determines the EPS has not been activated and activates the EPS utilizing the 'Touch Screen'.</p>	<p>___ SAT ___ UNSAT</p> <p>Critical Step</p>
<p>STEP 6.: [4] EVALUATE Protective Action Recommendations using Appendix B.</p> <p>Cue: <i>When release data addressed, state "Release data not available for Appendix B."</i></p> <p>STANDARD: Operator determines from page 14, logic chart in EPIP-5, that appropriate protective action recommendation is RECOMMENDATION 2. This should be identified on the notification form in the next JPM step.</p>	<p>___ SAT ___ UNSAT</p> <p>Critical Step</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 7.: [5] COMPLETE Appendix C (TVA Initial Notification for General Emergency).</p> <ul style="list-style-type: none"> a. This is a Drill b. Their name, Shift Manager (SED) at SQN Plant. c. General Emergency declared on UNIT 1 d. EAL No. (LOSS 1.1.2) and (Potential LOSS 1.2.2), and (LOSS 1.3.2). e. Brief description of incident: [High RCS activity, LOCA outside containment exceeding the capacity of one charging pump]. f. Radiological Conditions [Either "Release information not known" or "Minor releases within federally approval limits"] g. Event Declared: [Time and Date] h. Wind direction at 46 meters [Southwest at 185 degrees] AND wind speed at 46 meters [5 mph] i. Protective Action Recommendation: [2 - Evacuate listed sectors (2 mile radius and 5 miles downwind) [A-1, B-1, C-1, D-1, A-2, B-2.] Shelter all other non-listed sectors.] Ask the ODS to repeat the information he has received to ensure accuracy. <p>Cue: 1. When candidate checks wind speed and direction, state "Wind direction is from 185 degrees" and the wind speed is 5 mph.</p> <p>2. Role play as the ODS and acknowledge report.</p> <p>STANDARD: Operator completes Appendix C with the information listed above in bold. The information in 'Brief description of incident' can vary as long as a description is included.</p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p>STEP 8.: [6] NOTIFY ODS.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">ODS: Ringdown Line or 5-751-1700 or 5-751-2495 or 9-785-1700</p> </div> <p>[a] IF EPS failed to activate from SQN, THEN DIRECT ODS to activate SQN EPS. IF ODS is also unable to activate EPS, THEN continue with step [5] [b].</p> <p>[b] READ completed Appendix C to ODS.</p> <p>STANDARD: Operator notifies ODS by telephone and provides the information on Appendix C. Notifies the ODS within 10 minutes after declaration is made and provides information from Appendix C.</p> <p>NOTE: Enter time call is made to the ODS: _____</p> <p>Time from Declaration (step 2) to ODS Notification: _____</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p style="text-align: center;">Time Critical Step</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p><u>STEP 9.:</u> [c] FAX completed Appendix C to ODS.</p> <div style="border: 1px solid black; width: fit-content; margin: 10px auto; padding: 2px 10px;">5-751-8820 (Fax)</div> <p><u>Cue:</u> After the operator demonstrates the fax will be sent, state "The support AUO will send the FAX for you.:"</p> <p><u>Evaluator Caution:</u> DO NOT LET THE EXAMINEE FAX THE FORM</p> <p><u>STANDARD:</u> Operator addresses FAXing the Notification Form to the ODS.</p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 10.:</u> [d] MONITOR for confirmation call from ODS that State/Local notifications complete: RECORD time State notified. _____ Notification Time</p> <p><u>Cue:</u> As the ODS, call back and report that the state has been notified.</p> <p><u>STANDARD:</u> Operator records State notification time when ODS confirms state has been notified</p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 11.:</u> [7] IF ODS CANNOT be contacted within <u>10 minutes</u> of declaration....</p> <p><i>Note to evaluator: Complete step text is lengthy and not repeated in this JPM step.</i></p> <p><u>STANDARD:</u> Operator N/As this step and continues.</p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 12.:</u> [8] ENSURE MSS/WMM in the OSC (x6427) is monitoring Emergency Response Organization (ERO) responses using printed report available in the OSC.</p> <p>[a] IF any ERO positions are not responding, THEN DIRECT MSS to CALL personnel to staff TSC/OSC positions. (Use REP Duty Roster and Call List.)</p> <p><u>Cue:</u> If the EPS touch screen is checked, report that the various positions are starting to respond.</p> <p><u>Cue:</u> When the MSS/WMM is contacted, report "The ERO response monitoring is in progress and personnel are reporting.</p> <p><u>STANDARD:</u> Operator should contact the MSS/WMM or check the screen to ensure responses are being obtained.</p>	<p>___ SAT</p> <p>___ UNSAT</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 13.: [9] NOTIFY plant staff using Appendix A. (Delegate as needed.)</p> <p>Cue: <i>If the appendix is delegated, then acknowledge the direction to perform - Appendix A.</i></p> <p>STANDARD: Operator should use Appendix A to notify plant staff or delegate the appendix to be performed.</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step unless JPM step 20 performed</p>
<p>Evaluator Note: Following steps 14-20 are from EPIP-5 Appendix A. If the Operator delegates the appendix performance, then the step will not be performed.</p>	
<p>STEP 14.: [1] IF there is a security threat, THEN</p> <p>[a] NOTIFY Security Shift Supervisor to implement SSI-1, "Security Instructions For Members Of The Security Force" and EPIP-11 "Security and Access Control".</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>8144 or 8568</p> </div> <p>[b] DETERMINE if Security recommends implementing the "Two Person Line of Sight" Rule.</p> <p>[c] IF Nuclear Security recommends establishing the "Two Person Line of Sight" Rule, THEN INFORM the SM/SED. ("Two Person Line of Sight" requires use of EPIP-8.)</p> <p>Cue: <i>When security contacted state, "There have been no reports of a security threat."</i></p> <p>STANDARD: Operator determines this step should be N/A'd</p>	<p>___ SAT</p> <p>___ UNSAT</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 15.: [2] NOTIFY Radiation Protection Lead:</p> <p>[a] STATE: "A GENERAL EMERGENCY HAS BEEN DECLARED, BASED UPON (Describe the conditions), AFFECTING UNIT(s) _____."</p> <p>7865 (RP Lab) or 6417, (RP Lab) Use Call List to Page RP Lead</p> <p>[b] DIRECT Radiation Protection to implement EPIP-14, "Radiation Protection Response".</p> <p>[c] DIRECT Radiation Protection to implement CECC EPIP-9, "Emergency Environmental Radiological Monitoring Procedures" which includes activation of the radiological monitoring van.</p> <p>NOTE: This notification may be delegated.</p> <p>Cue: As the Radcon Shift Supervisor, acknowledge the report.</p> <p>Cue: If delegated, report that the notification has been completed.</p> <p>STANDARD: Operator makes the notification and directs the Radcon Shift Supervisor to implement EPIP-14 AND CECC EPIP-9.</p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p>STEP 16.: [3] NOTIFY personnel in the Chemistry Lab:</p> <p>[a] STATE: "A GENERAL EMERGENCY HAS BEEN DECLARED, BASED UPON (Describe the conditions), AFFECTING UNIT(s) _____."</p> <p>[b] DIRECT Chemistry to implement EPIP-14, "Radiation Protection Response."</p> <p>NOTE: This notification may be delegated to an extra SRO/RO.</p> <p>Cue: As the Chemistry Shift Supervisor, acknowledge the report.</p> <p>Cue: If delegated, report that the notification has been completed.</p> <p>STANDARD: Operator makes the notification and directs the Chemistry Shift Supervisor to implement EPIP-14.</p>	<p>___ SAT</p> <p>___ UNSAT</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 17.: [4] ANNOUNCE to plant personnel on old plant PA and x4800: [a] "ATTENTION PLANT PERSONNEL. ATTENTION PLANT PERSONNEL. A GENERAL EMERGENCY HAS BEEN DECLARED BASED ON (<i>Describe the condition</i>), AFFECTING UNIT(s) _____. (if <i>not already staffed, add</i>) STAFF THE TSC AND OSC." [b] REPEAT Announcement.</p> <p>NOTE: This announcement may be delegated.</p> <p>STANDARD: Operator makes the announcement on both the old paging system and on x4800 bridge system or delegates the making of the announcement.</p> <p><i>Evaluator Note:</i> x4800 bridge not active on simulator</p>	<p>___ SAT ___ UNSAT</p>
<p>STEP 18.: [5] NOTIFY Plant Management in accordance with SPP-3.5 AND PROVIDE General Emergency Information.</p> <p><i>Evaluator Note:</i> Activation of the EPS will make the Plant Management aware of the REP actuation, however administrative procedures require notification.</p> <p>NOTE: This notification may be delegated.</p> <p>Cue: When operator references SPP-3.5, state "Another operator will make the SPP-3.5 notifications"</p> <p>Cue: If delegated, report that the notifications have been completed.</p> <p>STANDARD: Operator references SPP-3.5 to make the required notifications or delegates the making of the notifications.</p>	<p>___ SAT ___ UNSAT</p>
<p>STEP 19.: [6] NOTIFY the "On Call" NRC Resident AND PROVIDE General Emergency Information.</p> <p>NOTE: This notification may be delegated.</p> <p>Cue: When operator calls NRC resident, state "Another operator will make the SPP-3.5 notifications"</p> <p>Cue: If delegated, report that the notification has been completed.</p> <p>STANDARD: Operator makes the NRC resident notification or delegates the making of the notifications.</p>	<p>___ SAT ___ UNSAT</p>

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
<p>STEP 20.: [7] NOTIFY NRC of plan activation via ENS phone.</p> <p>The following Note precedes the step: NRC ENS notification should be made as soon as practicable, but within 1 hour of “GENERAL EMERGENCY” declaration. Whenever NRC requests, a qualified person must provide a continuous update to NRC Operations Center. Use EPIP-6, Appendix B as a briefing guide.</p> <p>NOTE: This notification may be delegated.</p> <p>Cue: <i>When NRC operations center contacted, acknowledge the report. If ENS number requested state “ENS number is 97745”</i></p> <p>Cue: <i>If delegated, report that the notifications have been completed.</i></p> <p>STANDARD: Operator references SPP-3.5 to make the required notifications or delegates the making of the notifications.</p>	<p>___ SAT</p> <p>___ UNSAT</p> <p>Critical Step if not delegated</p> <p>Time of notification</p> <p>_____</p>
<p>STEP 21.: [10] GO TO Section 3.3</p> <p>Cue: <i>When the operator initiates Section 3.3, state “The TSC is staffed and will assume the implementation of EPIP-5”.</i></p> <p>STANDARD: Operator goes to Section 3.3 to continue the performance of EPIP-5.</p>	<p>___ SAT</p> <p>___ UNSAT</p>

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. A shutdown was initiated prior to reaching the Tech Spec limit on Unit 1 due to RCS activity being elevated and increasing.
2. After starting the shutdown, indications of a primary system leak developed.
3. AOP-R.05, "RCS Leak and Source Identification" was been implemented; a second CCP was started due to decreasing Pressurizer level.
4. The operators are attempting to identify the source of the leak.
5. 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, classify the event according to the EPIPs and perform any required actions.
 - PZR level is 56% and stable.
 - Charging flow is 140 gpm.
 - Letdown flow is 0 gpm.
 - Containment pressure is +0.2 psid and steady.
 - Containment Sump level is not increasing
 - RHR Pipe Break White Lights have just illuminated.
 - Auxiliary Building Vent 0-RM-90-101B is increasing.
 - Several Area Rad Monitors on EI 669 and 690 are in Hi Rad.
 - Chemistry reports a step rise in the RCS activity to 410 $\mu\text{Ci/gm}$ dose equivalent Iodine 131.

KEY

**Appendix C
TVA INITIAL NOTIFICATION OF GENERAL EMERGENCY**

"WORDING CAN VARY"

ONE CHECKED IN EACH COLUMN AIRBORNE LIQUID

1. This is a Drill This is an Actual Event - Repeat - This is an Actual Event

2. This is NAME, Sequoyah has declared a **GENERAL EMERGENCY** affecting: Unit 1 Unit 2 Both Unit 1 and Unit 2

3. EAL Designator(s): 1.1.2L, 1.2.2P, 1.3.2L

4. Brief Description of the Event: HIGH RCS ACTIVITY WITH LOCA, EXCEEDING THE CAPACITY OF ONE CHARGING PUMP, OUTSIDE CONTAINMENT

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)

Airborne Releases Offsite <input checked="" type="checkbox"/> Minor releases within federally approved limits ¹ <input type="checkbox"/> Releases above federally approved limits ¹ <input checked="" type="checkbox"/> Release information not known (¹ Tech Specs)	Liquid Releases Offsite <input checked="" type="checkbox"/> Minor releases within federally approved limits ¹ <input type="checkbox"/> Releases above federally approved limits ¹ <input checked="" type="checkbox"/> Release information not known (¹ Tech Specs)
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6. Event Declared: Time: TIME Date: DATE

7. The Meteorological Conditions are: (Use 46 meter data from the Met Tower)

Wind Direction is FROM: 185 degrees Wind Speed: 5 m.p.h

8. Provide Protective Action Recommendation: (Check either 1 or 2 or 3.)

	R E C	WIND FROM *DEGREES DIRECTION (item 7) (Mark)	R E C	
<input type="checkbox"/> Recommendation 1 • EVACUATE LISTED SECTORS (2 mile Radius and 10 miles downwind) • SHELTER all other non-listed sectors. • CONSIDER issuance of POTASSIUM IODIDE in accordance with the State Plan.	1		2	<input checked="" type="checkbox"/> Recommendation 2 • EVACUATE LISTED SECTORS (2 mile Radius and 5 mile downwind) • SHELTER all other non-listed sectors. • CONSIDER issuance of POTASSIUM IODIDE in accordance with the State Plan.
A-1, B-1, C-1, D-1, C-2, -6, -7, -8, D-2, -3, -5, -6		12 - 49		A-1, B-1, C-1, D-1, C-2, D-2
A-1, B-1, C-1, D-1, D-2, -3, -4, -5, -6		50 - 70		A-1, B-1, C-1, D-1, D-2
A-1, B-1, C-1, D-1, A-3, -4, D-2, -3, -4, -5		71 - 112		A-1, B-1, C-1, D-1, A-3, D-2
A-1, B-1, C-1, D-1, A-2, -3, -4, -5, -6, D-4		113 - 146		A-1, B-1, C-1, D-1, A-2, A-3,
A-1, B-1, C-1, D-1, A-2, -3, -4, -5, -6, B-2		147 - 173		A-1, B-1, C-1, D-1, A-2, A-3, B-2
A-1, B-1, C-1, D-1, A-2, -5, -6, B-2, -3, -4		174 - 214		<input checked="" type="checkbox"/> A-1, B-1, C-1, D-1, A-2, B-2,
A-1, B-1, C-1, D-1, B-2, -3, -4, -5, -6, -7, -8		215 - 258		A-1, B-1, C-1, D-1, B-2, B-5,
A-1, B-1, C-1, D-1, B-2, -3, -5, -6, -7, -8, C-2, -3, -4, -5, -6		259 - 331		A-1, B-1, C-1, D-1, B-2, B-5, C-2
A-1, B-1, C-1, D-1, B-5, C-2, -3, -4, -5, -6, -7, -8		332 - 11		A-1, B-1, C-1, D-1, B-5, C-2

Recommendation 3
 SHELTER all sectors.
 CONSIDER issuance of Potassium Iodide in accordance with the State Plan.

9. Please repeat back the information you have received to ensure accuracy.

10. When completed, FAX this information to the ODS.