

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

ADMIN-120

**UNIT 3 SFP BORON AND VOLUME CHANGE
CALCULATION**

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Calculate the minimum makeup volumes from CBAST and 3B BHUT to raise Final SFP Boron Concentration and level and determine operability of CBAST if makeup is performed

Alternate Path:

NO

Facility JPM #:

Admin-120

K/A Rating(s):

System: Gen
K/A: 2.1.23
Rating: 4.3/4.4

Task Standard:

Calculate makeup volumes and recognize that CBAST will be outside the procedural limits of operability if used as the boric acid makeup source

Preferred Evaluation Location:

Simulator _____ In-Plant _____ Classroom X

Preferred Evaluation Method:

Perform X Simulate _____

References:

OP/3/A/1104/006 C (SFP Makeup), Enclosure 4.8 (Unit 3 SFP Makeup From CBAST)
OP/3/A/1104/006 C (SFP Makeup), Enclosure 4.1 (Unit 3 SFP Boron and Volume Change Calculation)

OP/0/A/1108/001 (Curves and General Information), Enclosure 4.2 (CBAST Volume Vs. Level Curve – All Units)
OP/0/A/1108/001 (Curves and General Information), Enclosure 4.15 (CBAST Concentration Vs. Level Curve – All Units)

Validation Time: 20 min.

Time Critical: NO

Candidate: _____

NAME

Time Start: _____

Time Finish: _____

Performance Rating: SAT _____ UNSAT _____

Performance Time _____

Examiner: _____

NAME

SIGNATURE

DATE

Comments

SIMULATOR OPERATOR INSTRUCTIONS:

NONE

Tools/Equipment/Procedures Needed:

- OP/3/A/1104/006 C (SFP Makeup)
- OP/0/A/1108/001 (Curves and General Information), Enclosure 4.2 (CBAST Volume Vs. Level Curve – All Units)
- OP/0/A/1108/001 (Curves and General Information), Enclosure 4.15 (CBAST Concentration Vs. Level Curve–All Units)
- Clear plastic chart reading aid

READ TO OPERATOR

DIRECTIONS TO STUDENT:

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:

- Unit 3 Reactor power = 75% stable
- Unit 3 Spent Fuel Pool (SFP) level = 0.0 ft
- Unit 3 SFP Boron = 2525 ppm
- Unit 3 CBAST Boron = 13,200 ppm
- Unit 3 CBAST level = 75 inches
- 3B BHUT Boron = 0 ppm
- 3SF-1 and 3SF-2 are closed
- Unit 3 SFP level will be increased to + 0.5 ft and the Unit 3 SFP concentration will be raised to 2575ppmb using Unit 3 CBAST and 3B BHUT.

INITIATING CUE:

You are directed to perform the procedure to makeup to the Unit 3 SFP as follows:

- Raise Final Unit 3 SFP Boron Concentration to 2575 ppm and level to +0.5 feet.

Using the in-progress procedure provided and any other required procedure(s), perform OP/3/A/1104/006 C (SFP Makeup), Encl. 4.8 (Unit 3 SFP Makeup) through Step 2.4.

Assume you have SRO agreement/concurrence whenever it is required.

START TIME: _____

<p><u>STEP 1:</u> Step 2.2 Determine required U3 SFP makeup volume from CBAST and DW. IF, desired utilize Enclosure 4.1 (U3 SFP Boron and Volume Change Calculation).</p> <p><u>STANDARD:</u> Refer to Enclosure 4.1 (U3 SFP Boron and Volume Change Calculation) and determine that there is 1041gal/0.1 foot in the SFP and then calculate total gallons required to raise level to +0.5ft.</p> <p> $0.5 \text{ ft} \times 1041 \text{ gal}/0.1 \text{ ft} = \mathbf{5205 \text{ gallons}}$</p> <p> OR Calculate the total gallons required to raise level to + 0.5 ft using OP/1108/001 (Curves and General Information) Encl. 4.26 (Miscellaneous Data).</p> <p> $0.5 \text{ ft} \times 1041 \text{ gal}/0.1 \text{ ft} = \mathbf{5205 \text{ gallons}}$</p> <p><u>COMMENTS:</u></p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
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STEP 2: Step 2.2 (cont.)
Determine the required concentration of the makeup volume

STANDARD: Refer to Enclosure 4.1 (U3 SFP Boron and Volume Change Calculation) step 2.1.

Note: *SFP final vol = 376,000 gal + (1041 gal/0.1ft X 0.5 ft) = 381,205 gal*

$$C_1V_1 + C_2V_2 = C_fV_f$$

C_1 = 2525 ppm = Present Unit 3 SFP Boron concentration

V_1 = 376,000 gal = Present Unit 3 SFP volume gal

C_2 = unknown

V_2 = 5205gal

C_f = 2575 ppm = Desired SFP Boron Concentration

V_f = 381,205 gal = Final SFP Volume

Required makeup concentration = 6186.9 ppm

Accept 6186 – 6187 ppm

Note: *This calculation may be performed in different sequences using various derivations of the same equation below.*

$$(C_1V_1 + C_2V_2 + C_3V_3 = C_fV_f)$$

COMMENTS:

___ SAT

___ UNSAT

<p>STEP 3: Step 2.2 (cont.) Determine the required CBAST makeup volume</p> <p>STANDARD: Refer to Enclosure 4.1 (U3 SFP Boron and Volume Change Calculation) step 2.1.</p> <p>$C_1V_1 + C_2V_2 = C_fV_f$ $C_1 = 0 \text{ ppm} = 3\text{B BHUT concentration}$ $V_1 = \text{unknown}$ $C_2 = 13,200 \text{ ppm} = \text{CBAST concentration}$ $V_2 = \text{unknown}$ $C_f = 6187\text{ppm} = \text{Required Boron Concentration of makeup}$ $V_f = 5205 \text{ gal} = \text{Final SFP Makeup Volume}$</p> <p>$V_2 = C_f V_f / C_2 = 2439.6 \text{ gal}$</p> <p>CBAST volume = 2439 gal Accept 2439 – 2440 gal</p> <p><i>Note: This calculation may be performed in different sequences using various derivations of the same equation. Steps 2, 3, and 4 demonstrate one method. Step 5 demonstrates an alternate method. If the candidate performs the calculation as one formula (shown below), skip steps 2, 3, and 4 and go to step 5</i></p> <p>$(C_1V_1 + C_2V_2 + C_3V_3 = C_fV_f)$</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
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<p>STEP 4: Step 2.2 (cont.) Determine 3B BHUT makeup volume required.</p> <p>STANDARD: Refer to Enclosure 4.1 (U3 SFP Boron and Volume Change Calculation) step 2.1.</p> <p>3B BHUT volume = Total required makeup volume - CBAST volume 3B BHUT volume = 5205 gal – 2440 gal = <u>2765 gal</u></p> <p>3B BHUT volume = 2765 gal Accept 2764 – 2766 gal</p> <p><i>Note: This calculation may be performed in different sequences using various derivations of the same equation. Steps 2, 3, and 4 demonstrate one method. Step 5 demonstrates an alternate method. If the candidate performs the calculation as one formula (shown below), skip steps 2, 3, and 4 and go to step 5</i></p> $(C_1V_1 + C_2V_2 + C_3V_3 = C_fV_f)$ <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p>STEP 5: Step 2.3 Obtain SRO approval of the CBAST and DW makeup volumes.</p> <p>STANDARD: SRO approval of the CBAST and DW makeup volumes is obtained.</p> <p>CUE: SRO approval of the makeup volumes has been given</p> <p>COMMENTS:</p>	<p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 7:</u> Step 2.4 Determine if sufficient level will be available to satisfy "CBAST Concentration vs. Level" curve in OP/0/A/1108/001 (Curves and General Information)</p> <p><u>STANDARD:</u> Refer to OP/0/A/1108/001 Enclosure 4.2 (CBAST Volume Vs. Level Curve – All Units) and determine that a CBAST level of 75 inches equates to 11,000 gallons in CBAST.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 8:</u> Step 2.4 (cont.) Determine if sufficient level will be available to satisfy "CBAST Concentration vs. Level Curve - All Units" in OP/0/A/1108/001 (Curves and General Information)</p> <p><u>STANDARD:</u> Refer to OP/0/A/1108/001 Enclosure 4.15 (CBAST Concentration vs. Level Curve - All Units) and determine that the minimum level required in CBAST at 13,200 ppm to meet Operability is approximately 58± 1 inches</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 9:</u> Step 2.4 (cont.) Determine if sufficient level will be available to satisfy "CBAST Concentration vs. Level" curve in OP/0/A/1108/001 (Curves and General Information)</p> <p><u>STANDARD:</u> Refer to OP/0/A/1108/001 Enclosure 4.2 (CBAST Volume Vs. Level Curve – All Units) and calculate the remaining level in CBAST if 1278 gallons is transferred from CBAST to the Unit 3 SFP.</p> <p>11,000 gal – 2440 gal = 8560 gal</p> <p>8560 gal is approximately 64 ± 2 inches which is more than the required level of 58 ± 1 inches</p> <p>.</p> <p><u>COMMENTS</u></p> <p>END TASK</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
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TIME STOP: _____

CRITICAL STEP EXPLANATIONS:

STEP #	Explanation
3	C1V1 calculation required to determine CBAST volume
4	C1V1 calculation required to determine minimum 3B BHUT volume
9	Required to determine if final CAST level is less than that required to meet Operability

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

INITIAL CONDITIONS:

- Unit 3 Reactor power = 75% stable
- Unit 3 Spent Fuel Pool (SFP) level = 0.0 ft
- Unit 3 SFP Boron = 2525 ppm
- Unit 3 CBAST Boron = 13,200 ppm
- Unit 3 CBAST level = 75 inches
- 3B BHUT Boron = 0 ppm
- 3SF-1 and 3SF-2 are closed
- Unit 3 SFP level will be increased to + 0.5ft and the Unit 3 SFP concentration will be raised to 2575 ppmb using Unit 3 CBAST and 3B BHUT.

INITIATING CUE:

You are directed to perform the procedure to makeup to the Unit 3 SFP as follows:

- Raise Final Unit 3 SFP Boron Concentration to 2575 ppm and level to +0.5 feet.

Using the in-progress procedure provided and any other required procedure(s), perform OP/3/A/1104/006 C (SFP Makeup), Encl. 4.8 (Unit 3 SFP Makeup) through Step 2.4.

Assume you have SRO agreement/concurrence whenever it is required.

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

Admin-124

Determine if RO License requirements are met

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Determine if RO License requirements are met per NSD 512 for minimum On-Shift Experience

Alternate Path:

N/A

Facility JPM #:

ADMIN-124

K/A Rating(s):

System: Gen
K/A: 2.1.4
Rating: 3.3/3.8

Task Standard:

Completes Form 512-1 and determines requirements of NSD 512 are NOT met.

Preferred Evaluation Location:

Simulator In-Plant Classroom X

Preferred Evaluation Method:

Perform X Simulate _____

References:

NSD 512 (Maintenance of RO/SRO NRC Licenses)

Validation Time: 15 minutes

Time Critical: NO

Candidate: _____
NAME

Time Start: _____
Time Finish: _____

Performance Rating: SAT _____ UNSAT _____

Performance Time _____

Examiner: _____
NAME

SIGNATURE

DATE

COMMENTS

SIMULATOR OPERATOR INSTRUCTIONS:

NONE

Tools/Equipment/Procedures Needed:

NSD 512 (Maintenance of RO/SRO NRC Licenses)

READ TO OPERATOR

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:

Today's date is 4/29/14. You are a Reactor Operator. Your work history for April of this year is as follows:

4/12/14	Worked 12 hours as BOP on Unit 1 (day shift). Took turnover at beginning of shift and gave turnover at end of shift.
4/13/14	Worked 8 hours as OATC on Unit 1 and 4 hours OATC doing crew JIT training on Simulator A (day shift). Took turnover at beginning and gave turnover at end of both of these assignments.
4/14/14	Worked 10 hours as BOP on Unit 1 (day shift). Took turnover at beginning of shift.
4/19/14	Worked 12 hours as BOP on Unit 1 (night shift). Took turnover at beginning of shift and gave turnover at end of shift.
4/20/14	Worked 12 hours as OATC on Unit 3 (night shift). Took turnover at beginning of shift and gave turnover at end of shift.
4/21/14	Worked 6 hours as OATC on Unit 3 and 6 hours as BOP on Unit 1 (night shift). Took turnover at beginning of shift and did NOT give turnover at end of shift.
4/27/14	Worked 12 hours as NEO on Unit 3 (day shift). Took turnover at beginning of shift and gave turnover at end of shift.

INITIATING CUES:

The SM directs you to review your work history for April, complete form NSD 512-1 through Section 3 of based on the above work history, and determine if you meet NSD 512 requirements to maintain an active RO license for the following quarter.

START TIME: _____

<p><u>STEP 1:</u> Evaluate 4/12/14 work period</p> <p><u>STANDARD:</u> Determines that requirement is met and adds this period to Form 512-1. Required position for 12 hrs. with Turnover at beginning and end of shift.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 2:</u> Evaluate 4/13/14 work period</p> <p><u>STANDARD:</u> Determines that requirement is not met because Simulator time does not count toward maintain RO license requirements</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 3:</u> Evaluate 4/14/14 work period</p> <p><u>STANDARD:</u> Determines that requirement is not met. No turnover at end of shift, <12hrs worked in position.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 4:</u> Evaluate 4/19/14 work period</p> <p><u>STANDARD:</u> Determines that requirement is met and adds this period to Form 512-1. Required position for 12 hrs. with Turnover at beginning and end of shift.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 5</u> Evaluate 4/20/14 work period</p> <p><u>STANDARD:</u> Determines that requirement is met and adds this period to Form 512-1. Required position for 12 hrs. with Turnover at beginning and end of shift.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 6:</u> Evaluate 4/21/14 work period</p> <p><u>STANDARD:</u> Determines that requirement is not met. No turnover at end of shift and position not filled for entire shift.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 7:</u> Evaluate 4/27/14 work period</p> <p><u>STANDARD:</u> Determines that NEO is not a required position and cannot be credited toward maintenance of RO license</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 8:</u> Compares credited time vs minimum requirements</p> <p><u>STANDARD:</u> Determines that there are only 3 12 hour shifts that can be credited and therefore his minimum fourth quarter requirements to maintain his active RO License are not met.</p> <p><u>COMMENTS:</u></p> <p style="text-align: center;">END OF TASK</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

TIME STOP: _____

CRITICAL STEP EXPLANATIONS:

STEP #	Explanation
1	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
2	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
3	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
4	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
5	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
6	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
7	Required to determine if minimum On Shift Experience requirements of NSD 512 have been met.
8	This step makes the determination regarding minimum license requirement.

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

INITIAL CONDITIONS:

Today's date is 4/29/14. You are a Reactor Operator. Your work history for April of this year is as follows:

- 4/12/14 Worked 12 hours as BOP on Unit 1 (day shift). Took turnover at beginning of shift and gave turnover at end of shift.
- 4/13/14 Worked 8 hours as OATC on Unit 1 and 4 hours OATC doing crew JIT training on Simulator A (day shift). Took turnover at beginning and gave turnover at end of both of these assignments.
- 4/14/14 Worked 10 hours as BOP on Unit 1 (day shift). Took turnover at beginning of shift.
- 4/19/14 Worked 12 hours as BOP on Unit 1 (night shift). Took turnover at beginning of shift and gave turnover at end of shift.
- 4/20/14 Worked 12 hours as OATC on Unit 3 (night shift). Took turnover at beginning of shift and gave turnover at end of shift.
- 4/21/14 Worked 6 hours as OATC on Unit 3 and 6 hours as BOP on Unit 1 (night shift). Took turnover at beginning of shift and did NOT give turnover at end of shift.
- 4/27/14 Worked 12 hours as NEO on Unit 3 (day shift). Took turnover at beginning of shift and gave turnover at end of shift.

INITIATING CUES:

The SM directs you to review your work history for April, complete form NSD 512-1 through Section 3 of based on the above work history, and determine if you meet NSD 512 requirements to maintain an active RO license for the following quarter.

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

Admin-142

Evaluate Items for Entry Into Containment

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Evaluate the list of items and determine if they can be taken into Containment while in Mode 4

Alternate Path:

N/A

Facility JPM #:

NEW

K/A Rating(s):

System: Gen

K/A: 2.1.13

Rating: 2.5/3.2

Task Standard:

Preferred Evaluation Location:

Simulator ____ In-Plant ____ Classroom X

Preferred Evaluation Method:

Perform X Simulate ____

References:

SD 1.3.9 - Containment Material Control

Validation Time: 15 minutes

Time Critical: NO

Candidate: _____

NAME

Time Start: _____

Time Finish: _____

Performance Rating: SAT ____ UNSAT ____

Performance Time ____

Examiner: _____

NAME

SIGNATURE

DATE

COMMENTS

SIMULATOR OPERATOR INSTRUCTIONS:

NONE

Tools/Equipment/Procedures Needed:

SD 1.3.9 (Containment Material Control)

READ TO OPERATOR

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:

- Unit startup in progress
- Reactor is in MODE 4
- Startup has been delayed waiting on completion of valve repair inside Containment
- Valve work is taking place outside the secondary shielding on the 2nd grating level
- You are working as the WCC SRO

INITIATING CUES:

- The containment hatch monitor has requested you evaluate the list of items provided to determine if they can be carried into containment by the crew performing the valve repairs
- Indicate on the attached list if each item is allowed to be carried into Containment to facilitate the repairs

START TIME: _____

<p><u>STEP 1:</u> Evaluate red 1 gallon plastic bucket.</p> <p><u>STANDARD:</u> Determines that the red bucket can be taken into containment per Section 5.0 of SD 1.3.9. Additionally, specific guidance in section M2 of Encl. 7.5 allows it.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 2:</u> Evaluate yellow plastic bag with wrenches.</p> <p><u>STANDARD:</u> Determines that the bag with wrenches is allowed into containment per Section 5.0 step F</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 3:</u> Evaluate 25 feet of nylon rope with ends melted</p> <p><u>STANDARD:</u> Determines that the nylon rope can be taken into containment per Section 5.0. Additionally, specific guidance in section D of Encl. 7.5 allows it.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 4:</u> Evaluate roll of gray Duct Tape</p> <p><u>STANDARD:</u> Determines the roll of Duct Tape can NOT be taken into Containment per step 4.B.3 of Encl 7.5.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 5</u> Evaluate 100 foot drop cord</p> <p><u>STANDARD:</u> Determines that the drop cord can be taken into containment per Section 5.0 of SD 1.3.9.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 6:</u> Evaluate the Electric Wrench</p> <p><u>STANDARD:</u> Determines that the electric wrench can be taken into containment per Section 5.0 of SD 1.3.9.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 7:</u> Evaluate the two sockets</p> <p><u>STANDARD:</u> Determines that the sockets can be taken into containment per Section 5.0 of SD 1.3.9.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 8:</u> Evaluate the valve wrapped in clear poly</p> <p><u>STANDARD:</u> Determines that the valve wrapped in clear poly can NOT be taken into containment due to the clear poly. Although a PIP has already been generated. guidance in step 4.H.7 prohibits the clear plastic and the section on Special Cases step 6.B requires not only a PIP be generated, but the engineering evaluation completed before taking the items into containment.</p> <p><i>CUE: If asked, no engineering evaluation has been performed to allow the clear poly to be taken into containment.</i></p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 9:</u> Evaluate the absorptive paper</p> <p><u>STANDARD:</u> Determines that the absorptive paper can be taken into containment per section 4.A since it is not > 25 sq. ft</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 7:</u> Evaluate the hammer</p> <p><u>STANDARD:</u> Determines that the hammer can be taken into containment per Section 5.0 of SD 1.3.9.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>

TIME STOP: _____

CRITICAL STEP EXPLANATIONS:

STEP #	Explanation
4	Critical to prevent Chloride and Fluoride stress corrosion on stainless steel piping inside containment
8	Critical to prevent blockage of the LPI Emergency Sump suction path during a loca

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

INITIAL CONDITIONS:

- Unit startup in progress
- Reactor is in MODE 4
- Startup has been delayed waiting on completion of valve repair inside Containment
- Valve work is taking place outside the secondary shielding on the 2nd grating level
- You are working as the WCC SRO

INITIATING CUES:

- The containment hatch monitor has requested you evaluate the list of items provided to determine if they can be carried into containment by the crew performing the valve repairs
- Indicate on the attached list if each item is allowed to be carried into Containment to facilitate the repairs

List of items for evaluation:

Assume all items will be documented as taken in and then removed from Containment when the crew leaves unless otherwise indicated.

- 1) Red 1 gallon plastic bucket. _____
- 2) *Yellow plastic bag that contains contaminated tools. _____

*Per maintenance the bag contains two Stainless Steel wrenches (3/4" and 1").

- 3) 25 feet of nylon rope with ends melted. _____
- 4) Roll of gray duct tape. _____
- 5) 100 foot drop cord _____
- 6) Electric wrench. _____
- 7) 2 sockets (3/4" and 1"). _____
- 8) 2" valve wrapped in clear poly. _____

*A PIP has already been generated by Maintenance directing engineering to evaluate leaving the poly inside containment if this crew has to leave RB before repairs are completed.

- 9) 10 feet X 2 feet sheet of absorptive paper. _____
- 10) Hammer _____

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

Admin-242

**Perform NI Surveillance and Determine Any
Required Actions**

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Perform NI Surveillance and Determine Any Required Actions

Alternate Path:

N/A

Facility JPM #:

NEW

K/A Rating(s):

System: Gen
K/A: 2.2.12
Rating: 3.7/4.1

Task Standard:

Perform SR 3.3.1.2 in accordance with PT/1/A/0600/001 (Periodic Instrument Surveillance) and determine that actions should be taken to correct NI calibration but a PIP is NOT required.

Preferred Evaluation Location:

Simulator ____ In-Plant ____ Classroom X

Preferred Evaluation Method:

Perform X Simulate ____

References:

PT/1/A/0600/001 (Periodic Instrument Surveillance)
OP/1/A/1102/004 (Operation at Power)

Validation Time: 14 minutes

Time Critical: NO

Candidate:

NAME

Time Start: _____

Time Finish: _____

Performance Rating: SAT ____ UNSAT ____

Performance Time ____

Examiner:

NAME

SIGNATURE

DATE

COMMENTS

SIMULATOR OPERATOR INSTRUCTIONS:

NONE

Tools/Equipment/Procedures Needed:

- PT/1/A/0600/001 (Periodic Instrument Surveillance)
- OP/1/A/1102/004 (Operation at Power)

READ TO OPERATOR

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:

- Power escalation to 100% concluded at midnight last shift.
- Current Time is 0730
- Power history is attached

INITIATING CUES:

Using the attached power history, you are to perform the Day Shift RPS Instrumentation Heat Balance Check Power Range Amplifiers Surveillance (SR 3.3.1.2) on Page 8 of 28 of PT/1/A/0600/001 (Periodic Instrument Surveillance) Enclosure 13.1 (Mode 1&2) and determine the current minimum actions required (if any) at Time = 0730. Assume NO previous actions have been taken.

START TIME: _____

<p><u>STEP 1:</u> Determine if the unit is at Steady State</p> <p>NOTE: Steady State is defined as being $\pm 2\%$ of a steady power level for ≥ 4 hours</p> <p><u>STANDARD:</u> Using the NOTE above and the attached power history, determine that the unit is at Steady State as defined by this surveillance ($\pm 2\%$ of a steady power level for ≥ 4 hours).</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 2</u> IF in Mode 1 during steady state conditions AND Rx Power > 90% power, verify Rx Power within applicable limits:</p> <ul style="list-style-type: none"> Refer to Limits and Precautions of OP/1/A/1102/004 (Operation At Power) for applicable limits. <p><u>STANDARD:</u> Candidate refers to Limits and Precautions of OP/1/A/1102/004 (Operation At Power)</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 3:</u> Determine the magnitude of NI offset.</p> <p><u>STANDARD:</u> Candidate refers to the power history provided and determines that CTP = 99.996% and NI-5 = 97.91% therefore NI-5 is out of calibration by 2.086%</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 4:</u> Determine if NI offset is conservative or non-conservative.</p> <p><u>STANDARD:</u> Candidate refers to the Note for limit and precaution step 2.2.5 and determines that NI-5 is non-conservative since Core Thermal Power is > NI-5.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 5:</u> Determine which Limit and Precaution contains guidance needed.</p> <p><u>STANDARD:</u> Based on power history, 2.2.6 C applies since it is for use "During operation with Reactor > 90% CTP (power maneuvering OR steady state)"</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 6:</u> Determine actions required by Limit and Precaution 2.2.6 C.</p> <p><u>STANDARD:</u> Determine that the following is required:</p> <ul style="list-style-type: none"> Take actions to restore NI's to allowable range (perform NI calibration) <p>Note: Since NI's have been out by 2% for \leq 2 hours, the actions of 2.2.6.C.1 AND 2.2.6.C.2 are NOT required.</p> <p><u>COMMENTS:</u></p> <p style="text-align: center;">END TASK</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

TIME STOP: _____

CRITICAL STEP EXPLANATIONS:

STEP #	Explanation
3	Determining the magnitude of NI error is required to determine the correct NI tolerance allowed for the current plant conditions.
4	Determining that NI's are non-conservative is required to determine the correct NI tolerance allowed for the current plant conditions.
6	These actions are required based on current status of NI's to ensure Safety Analysis assumptions are met.

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

INITIAL CONDITIONS:

- Power escalation to 100% concluded at midnight last shift.
- Current Time is 0730
- Power history is attached

INITIATING CUES:

Using the attached power history, you are to perform the Day Shift RPS Instrumentation Heat Balance Check Power Range Amplifiers Surveillance (SR 3.3.1.2) on Page 8 of 28 of PT/1/A/0600/001 (Periodic Instrument Surveillance) Enclosure 13.1 (Mode 1&2) and determine the current minimum actions required (if any) at Time = 0730. Assume NO previous actions have been taken.

Unit 1 Power history is as follows:

	O1P0899 Core Thermal Power	O1E4066 NI-5	O1E4067 NI-6	O1E4068 NI-7	O1E4069 NI-8
0500	99.962%	99.79%	99.99%	99.99%	99.99%
0700	99.987%	97.71%	100.00%	99.91%	100.01%
0715	100.001%	97.88%	99.99%	99.98%	99.99%
0730	99.996%	97.91%	100.00%	100.00%	100.00%

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

ADMIN-310

Select Individuals for Planned Emergency Exposure

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Determine total dose that will be received and using the profiles provided and the guidelines provided in RP/0/B/1000/011 (Planned Emergency Exposure) select two individuals to receive a Planned Emergency Exposure

Alternate Path:

No

Facility JPM #:

NEW

K/A Rating(s):

System: GEN
K/A: 2.3.13
Rating: 3.4/3.8

Task Standard:

Determine the total dose received and the personnel to receive the Planned Emergency Exposure.

Preferred Evaluation Location:

Simulator ____ In-Plant ____ Classroom X

Preferred Evaluation Method:

Perform X Simulate ____

References:

RP/0/A/1000/002 (Control Room Emergency Coordinator Procedure)
RP/0/B/1000/011 (Planned Emergency Exposure)

Validation Time: 15 minutes

Time Critical: NO

Candidate: _____
NAME

Time Start: _____
Time Finish: _____

Performance Rating: SAT ____ UNSAT ____

Performance Time ____

Examiner: _____
NAME

SIGNATURE DATE

=====

COMMENTS

SIMULATOR OPERATOR INSTRUCTIONS:

NONE

Tools/Equipment/Procedures Needed:

- RP/0/B/1000/011 (Planned Emergency Exposure)

READ TO OPERATOR

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:

- Unit 1 is in MODE 3
- A Large Break LOCA with failed fuel has occurred
- TSC is not yet in service
- You are acting as the Emergency Coordinator
- An individual has sustained life threatening injuries in the Unit 1 North LPI room
- RP reports dose rates in the area to be 83 R/hr
- It will take two people 20 minutes to get the injured individual clear of the area
- There are five individuals profiled below that are available to perform the rescue operation

Name	Age (years)	Sex	Volunteer	YTD TEDE Dose
Walker	27	Male	Yes	125 mrem
Tinsley	29	Male	Yes	1,237 mrem
Harper	30	Female	Yes	45 mrem
Long	51	Male	No	68 mrem
Price	56	Male	Yes	112 mrem

- None of the five have received a previous Planned Special Exposure
- None of the five have any abnormal relevant medical conditions

INITIATING CUES:

1. Calculate the total dose that will be received by each individual performing the rescue operation. Assume no dose is received other than while performing the rescue operation.
2. RP/0/A/1000/002 Encl. 4.4 (Emergency Coordinator Parallel Actions) step 1.14 has directed you to use the guidelines in RP/0/B/1000/011 (Planned Emergency Exposure) to authorize two of the individuals above to receive a Planned Emergency Exposure.

Document the total dose per individual that would be received during this evolution and the names of the individuals authorized below:

START TIME: _____

<p><u>STEP 1:</u> Calculate the individual total dose to be received.</p> <p><u>STANDARD:</u> 20 minutes = .33 hrs 0.33 hrs X 83 R/hr = 27.6 Rem</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 2:</u> Reference RP/0/B/1000/011 (Planned Emergency Exposure)</p> <p><u>STANDARD:</u> Determine the following: Since dose received will exceed 25 Rem per step 2.1.1 personnel are required to be volunteers and therefore Mr. Long is excluded.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 3:</u> Reference RP/0/B/1000/011 (Planned Emergency Exposure)</p> <p><u>STANDARD:</u> Determine the following: Per step 2.1.3 Ms. Harper is excluded due to being child bearing age.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 4:</u> Reference RP/0/B/1000/011 (Planned Emergency Exposure)</p> <p><u>STANDARD:</u> Determine the following: Since Mr. Tinsley has received significantly more dose, guidance in step 2.1.4 would lead to excluding Mr. Tinsley.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 5:</u> Reference RP/0/B/1000/011 (Planned Emergency Exposure)</p> <p><u>STANDARD:</u> Determine that Mr. Price and Mr. Walker will be authorized to receive the Planned Emergency Exposure</p> <p><u>COMMENTS:</u></p> <p style="text-align: center;">END OF TASK</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
---	---

STOP TIME: _____

CRITICAL STEP EXPLANATIONS:

STEP #	Explanation
1	Required to determine that dose received will be > 25 Rem and therefore require a volunteer
2	Required to authorize the correct individuals
3	Required to authorize the correct individuals
4	Required to authorize the correct individuals
5	Results in correct individuals receiving the Planned Emergency Exposure

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

INITIAL CONDITIONS:

- Unit 1 is in MODE 3
- A Large Break LOCA with failed fuel has occurred
- TSC is not yet in service
- You are acting as the Emergency Coordinator
- An individual has sustained life threatening injuries in the Unit 1 North LPI room
- RP reports dose rates in the area to be 83 R/hr
- It will take two people 20 minutes to get the injured individual clear of the area
- There are five individuals profiled below that are available to perform the rescue operation

Name	Age (years)	Sex	Volunteer	YTD TEDE Dose
Walker	27	Male	Yes	125 mrem
Tinsley	29	Male	Yes	1,237 mrem
Harper	30	Female	Yes	45 mrem
Long	51	Male	No	68 mrem
Price	56	Male	Yes	112 mrem

- None of the five have received a previous Planned Special Exposure
- None of the five have any abnormal relevant medical conditions

INITIATING CUES:

1. Calculate the total dose that will be received by each individual performing the rescue operation. Assume no dose is received other than while performing the rescue operation.
2. RP/0/A/1000/002 Encl. 4.4 (Emergency Coordinator Parallel Actions) step 1.14 has directed you to use the guidelines in RP/0/B/1000/011 (Planned Emergency Exposure) to authorize two of the individuals above to receive a Planned Emergency Exposure.

Document the total dose per individual that would be received during this evolution and the names of the individuals authorized below:

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

ADMIN-311

STAY TIME CALCULATION

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Determine stay time for an activity

Alternate Path:

No

Facility JPM #:

Admin 303

K/A Rating(s):

System: GEN

K/A: 2.3.7

Rating: 3.5/3.6

Task Standard:

Determine the total dose received and the time required to receive an ED Dose Alarm

Preferred Evaluation Location:

Simulator _____ In-Plant _____

Preferred Evaluation Method:

Perform X Simulate _____

References:

PD-RP-ALL-001 (Radiation Protection)

Validation Time: 13 minutes

Time Critical: NO

Candidate: _____

NAME

Time Start: _____

Time Finish: _____

Performance Rating: SAT _____ UNSAT _____

Performance Time: _____

Examiner: _____

NAME

SIGNATURE

DATE

COMMENTS

SIMULATOR OPERATOR INSTRUCTIONS:

None

Tools/Equipment/Procedures Needed:

Room 61 Survey Map

READ TO OPERATOR

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:

Unit 1 is in AP/26, Loss of Decay Heat Removal and you are to:

- Stage yourself inside Room 61 where you can minimize your dose while waiting
- Vent 1A LPI pump when directed
- RWP sets the following limits:
 - Dose Rate Alarm = 200 mR/hr
 - Dose Alarm = 50 mR

Room 61 is posted: **High Radiation Area**

0800 – You enter Room 61

0830 – You are directed to vent 1A LPI pump

0855 – Venting is completed. You immediately exit the Room and report back to the Control Room.

INITIATING CUES:

Based on the time line above, RWP 23, and Room 61 survey map provided:

1. Determine the amount of dose that was received while in Room 61.
2. Assuming no dose was received until you entered Room 61, determine the time (beginning at 0830) you could spend actually venting the 1A LPI pump that would result in an ED Dose Alarm.

START TIME: _____

<p><u>STEP 1:</u> Determine the dose that will be received while waiting in the LEWA?</p> <p><u>STANDARD:</u> Calculates the dose received for the duration of the task.</p> <p>Based on a 20 minute wait at the LEWA with a dose rate of 3 mr/hr:</p> <p>LEWA dose: 7 mr/hr X 0.5 hr = 3.5 mR</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 2:</u> Determine the dose that will be received while venting the LPI pump?</p> <p><u>STANDARD:</u> Calculates the dose received for the duration of the task.</p> <p>Based on 25 minutes at LPI Pump and the nearest posted general area dose rates (75 mr/hr):</p> <p>Vent time dose: 25/60 hr X 75 mr/hr = 31.25 mR</p> <p>NOTE: Acceptable range is 31 mR to 32 mR</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 3:</u> Total dose received while in Room 61?</p> <p>Determined by summing the LEWA dose and the dose received while venting the pump.</p> <p><u>STANDARD:</u> Calculates the dose received for the duration of the task.</p> <p>Estimated total dose received is 3.5mR + 31.25mR = 34.75 mR</p> <p>NOTE: Acceptable range is 34.5 mR to 35.5 mR</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 4:</u> Determine the minimum time that the pump could have been vented before reaching an ED Dose Alarm?</p> <p><u>STANDARD:</u> Calculates maximum venting time.</p> <p>The RWP Dose Alarm is 50 mR.</p> <p>Subtract LEWA dose 50R - 3.5mR = 46.6mR Vent time dose rate is Rad level = 75 mr/hr</p> <p>Solving: 23.5 mr is allowable dose once venting starts</p> <p style="text-align: center;">$\frac{46.6 \text{ mr}}{75 \text{ mr/hr}} = 0.6213 \text{ hours or } 37.3 \text{ minutes}$</p> <p>Note: Acceptable range is 37 - 38 minutes.</p> <p><u>COMMENTS:</u></p> <p style="text-align: center;">END TASK</p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

STOP TIME: _____

CRITICAL STEP EXPLANATIONS:

STEP #	Explanation
1	Required to calculate dose received while performing task.
2	Required to calculate dose received while performing task.
3	Required to calculate dose received while performing task.
4	Required to calculate the maximum venting time.

Room 61 LPI & RBS Pumps		Survey # M-021506-17	Date/Time Today 0412				
<div><div><div>ROOM 61 LPI AND RB PUMPS</div><div><div><div><div><div>112</div><div>Significant Dose Contributor</div><div>SUMP PUMPS</div><div>+975</div><div>③</div><div>1C LPI</div><div>95</div></div><div><div>1A RBS</div><div>*50 +30</div><div>88</div><div>①</div><div>1A LPI</div><div>75</div></div><div><div>②</div><div>7</div><div>STAIRS</div><div>58</div></div><div><div>LEWA</div><div>②</div></div></div><div><div>N</div><div>→</div></div></div></div></div></div>							
<div>Comments: CONTACT RP REGARDING ANY ATTEMPTS TO CLEAN LPI ROOM SUMP</div> <div><div><div>Symbol Legend (for example only)</div><div><div><div>Dose Rate</div><div><div>*150</div><div>+75</div><div>20</div></div><div><div>Contact Reading</div><div>30 cm Reading</div><div>General Area</div></div></div><div><div>HS-50</div><div>RCA</div><div><div><div>Hot Spot</div><div>Posting</div><div>Drip Bag</div></div></div></div><div><div>①5</div><div>①5</div><div>①5</div></div><div><div>Smear</div><div>Air Sample</div><div>Wipe</div></div></div></div><div>Type: Job Coverage</div><div><div>RWP: 5036</div><div>Reactor Power = 100%</div></div></div> <div>Unless otherwise noted, dose rates in mrem/hr.</div>		<div>Summary of Highest Readings</div> <table border="1"><thead><tr><th>Smears</th><th>Air Samples & Wipes</th></tr></thead><tbody><tr><td>1) 554 DPM/100 cm2 β/γ 2) 485 DPM/100 cm2 β/γ 3) 1453 DPM/100 cm2 β/γ</td><td></td></tr></tbody></table>		Smears	Air Samples & Wipes	1) 554 DPM/100 cm2 β/γ 2) 485 DPM/100 cm2 β/γ 3) 1453 DPM/100 cm2 β/γ	
		Smears	Air Samples & Wipes				
		1) 554 DPM/100 cm2 β/γ 2) 485 DPM/100 cm2 β/γ 3) 1453 DPM/100 cm2 β/γ					
Surveyor: W. Walters		Approved by: N. Wriston, Date: Today					

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

INITIAL CONDITIONS:

Unit 1 is in AP/26, Loss of Decay Heat Removal and you are to:

- Stage yourself inside Room 61 where you can minimize your dose while waiting
- Vent 1A LPI pump when directed
- RWP sets the following limits:
 - Dose Rate Alarm = 200 mR/hr
 - Dose Alarm = 50 mR

Room 61 is posted: **High Radiation Area**

0800 – You enter Room 61

0830 – You are directed to vent 1A LPI pump

0855 – Venting is completed. You immediately exit the Room and report back to the Control Room.

INITIATING CUES:

Based on the time line above, RWP 23, and Room 61 survey map provided:

3. Determine the amount of dose that was received while in Room 61.
4. Assuming no dose was received until you entered Room 61, determine the time (beginning at 0830) you could spend actually venting the 1A LPI pump that would result in an ED Dose Alarm.

**REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

ADMIN-430

**Determine Emergency Classification and Protective Action
Recommendations**

(SRO Only)

CANDIDATE

EXAMINER

REGION II
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Determine Emergency Classification and Protective Action Recommendations

Alternate Path:

NO

Facility JPM #:

CRO-407

K/A Rating(s):

System: Gen
K/A: 2.4.38
Rating: 2.4/4.4

Task Standard:

Appropriate classification is determined and associated Emergency Notification Form is completed.

Preferred Evaluation Location:

Simulator _____ In-Plant _____ Classroom X

Preferred Evaluation Method:

Perform X Simulate _____

References:

RP/0/A/1000/01, Emergency Classification
RP/0/A/1000/02, Control Room Emergency Coordinator Procedure
RP/0/B/1000/015A, Offsite Communications From The Control Room
BASIS Document (Volume "A", Section "D" of the Emergency Plan)

Validation Time: 20 min.

Time Critical: Yes

Candidate: _____
NAME

Time Start: _____
Time Finish: _____

Performance Rating: SAT _____ UNSAT _____

Performance Time: _____

Examiner: _____
NAME

SIGNATURE / DATE

Comments

SIMULATOR OPERATOR INSTRUCTIONS

NONE

Tools/Equipment/Procedures Needed:

RP/0/A/1000/01

RP/0/A/1000/02

READ TO OPERATOR

DIRECTIONS TO STUDENT

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

TIME: 5 Minutes ago

- Unit 2 & 3 at 100% power
- Unit 1 tripped due to a turbine control system malfunction
- 1A SG MSRV 1MS-6 failed to fully reseal resulted in 1A SG pressure stabilizing at \approx 850 psig

CURRENT CONDITIONS

- Chemistry reports Unit 1 RCS activity is 305 μ Ci/ml DEI
- 1A SG tube leakage calculated at 105 gpm
- 1RIA-58 (High Range Containment Monitor) reading 1.3 R/hr and slowly increasing

INITIATING CUE

You are to perform the required actions of the Emergency Coordinator by referring to RP/0/B/1000/01, Emergency Classification:

1. Determine Emergency Classification at present time.
2. Complete appropriate Emergency Notification Form for the current conditions.

Inform the examiner when you have made the classification.

THIS IS A TIME CRITICAL JPM

Note: Do not use Emergency Coordinator's judgment while classifying the event. When required, an operator will maintain the Emergency Coordinator's Log and assume the duties of the Control Room Offsite Communicator.

START TIME: _____

<p><u>STEP 1:</u> Classify the Event</p> <p><u>STANDARD:</u> Refer to RP/0/B/1000/01 (Emergency Classification) Enclosure 4.1 (Fission Product Barrier Matrix). Classify the event as a "General Emergency" due to the following: Loss of RCS barrier (5 points) (1RIA-58 > 1.0 R/hr) Loss of Fuel Clad Barriers (5 points) (Coolant activity $\geq 300 \mu\text{Ci/ml DEI}$) Loss of Containment Barrier (3 points) (Failure of secondary side of SG results in a direct opening to the environment with SG Tube Leak $\geq 10 \text{ gpm}$ in the SAME SG)</p> <p>Time for Classification _____</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 2:</u> Commence the Off-Site Notification Form.</p> <p><u>STANDARD:</u> Go to RP/0/A/1000/002 (Control Room Emergency Coordinator Procedure) and initiate procedure by determining symptoms for entry exist and check Step 1.1</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 3:</u> Step 2.1. IF No EAL exists, AND ERO activation is desired, THEN GO TO Enclosure 4.4, (ERO Pager Activation)</p> <p><u>STANDARD:</u> Determine step 2.1 does not apply</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 4:</u> Step 2.2 Declare the appropriate Emergency Classification level. Classification <u>GE</u> (UE, ALERT, SAE, GE) Time Declared: _____</p> <p><u>STANDARD:</u> Declare a GE due to: 4.1.G.2 Loss of all three barriers</p> <p>STOP TIME #1: Time GE Declared _____ (Actual time) (SAT is < Start Time + 15 minutes)</p> <p><u>COMMENTS:</u></p>	<p>TIME CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 5:</u> Step 2.3 IF a Security event is in progress THEN GO TO Step 2.5</p> <p><u>STANDARD:</u> Determine Steps 2.3 does not apply</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 6:</u> Step 2.4 IF assistance from ERO personnel is desired/required:</p> <p><u>STANDARD:</u> Determine Steps 2.4 does not apply</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 7:</u> Step 2.5 Appoint Control Room Offsite Communicator(s) and notify him to be prepared to transmit messages.</p> <p><u>STANDARD:</u> Any name (real or imaginary) is acceptable.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 8:</u> Step 2.6 IAAT Changing plant conditions require an emergency classification upgrade,</p> <p><u>STANDARD:</u> An Upgrade is not expected.</p> <p><u>COMMENTS:</u></p>	<p>___ SAT</p> <p>___ UNSAT</p>

<p><u>STEP 9:</u> Step 2.7 Obtain the appropriate Offsite Notification form from the Emergency Plan cart.</p> <p><u>STANDARD:</u> Initial General Emergency form # 4.1.G.2 is selected and candidate continues to fill-out form per substeps of Step 2.7.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
<p><u>STEP 10:</u> Step 2.7</p> <p>Ensure EAL # as determined by RP/0/A/1000/001 matches Line 4. (4.1.G.2)</p> <p>Line 1 Mark appropriate box "Drill" or "Actual Event" (DRILL)</p> <p>*Line 1 Enter Message # (#1)</p> <p>*Line 2 Mark Initial (INITIAL marked)</p> <p>*Line 8 Mark "Stable" unless an upgrade or additional PARs are anticipated within an hour. (A condition marked is CRITICAL; stable, improving or degrading- does not matter)</p> <p> • Refer to Enclosure 4.9, (Event Prognosis Definitions)</p> <p>*Line 10 Military time and date of declaration (Refer to date/time in Step 2.2) (Inserts time from STEP 1 and today's date, military time is not critical as long as time is specific and accurate)</p> <p>Line 11 If more than one unit affected, mark "All" (Unit 1 only)</p> <p>*Line 12 Mark affected unit(s) (reference Line 11) AND enter power level of affected unit(s) or time/date of shutdown {14} (Unit 1 0% power, Shutdown 5 minutes ago with today's date.)</p> <p>Line 13 If the OSM has no remarks, write "None"</p> <p><u>STANDARD:</u> Correctly fills out Emergency Notification Form in accordance with Key.</p> <p><u>COMMENTS:</u></p>	<p>*CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>

<p>STEP 11: Step 2.7 Continued</p> <p>Line 17 - OSM signature, CURRENT Time/Date (MUST SIGN)</p> <p>STANDARD: Correctly fills out Emergency Notification Form within 15 minutes of classification time recorded in step 1.</p> <p>STOP TIME #2: Time for Notification _____ (Actual time) (SAT is < Stop Time #1 + 15 minutes)</p> <p>COMMENTS:</p> <p>END OF TASK</p>	<p>TIME CRITICAL STEP</p> <p>___ SAT</p> <p>___ UNSAT</p>
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TIME STOP: _____

CRITICAL STEP EXPLANATIONS

STEP #	Explanation
1	The candidate needs to be able to utilize the procedure and determine the conditions meet a General Emergency classification.
4	This is a time critical step. The candidate needs to declare the SAE within 15 minutes of beginning the JPM. (The start of the JPM is the beginning of the assessment period)
9	The correct form that matches the EAL # is selected.
10	The emergency notification form is accurately filled-out; identified steps from the KEY are critical items.
11	This is a time critical step. The Candidate needs to complete the notification form within 15 minutes from the time the EAL was declared. (Declaration time is the time recorded in JPM step 4)

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

INITIAL CONDITIONS

TIME: 5 Minutes ago

- Unit 2 & 3 at 100% power
- Unit 1 tripped due to a turbine control system malfunction
- 1A SG MSRV 1MS-6 failed to fully reseal resulted in 1A SG pressure stabilizing at \approx 850 psig

CURRENT CONDITIONS

- Chemistry reports Unit 1 RCS activity is 305 μ Ci/ml DEI
- 1A SG tube leakage calculated at 105 gpm
- 1RIA-58 (High Range Containment Monitor) reading 1.3 R/hr and slowly increasing

INITIATING CUE

You are to perform the required actions of the Emergency Coordinator by referring to RP/0/B/1000/01, Emergency Classification:

1. Determine Emergency Classification at present time.
2. Complete appropriate Emergency Notification Form for the current conditions.

Inform the examiner when you have made the classification.

THIS IS A TIME CRITICAL JPM

Note: Do not use Emergency Coordinator's judgment while classifying the event. When required, an operator will maintain the Emergency Coordinator's Log and assume the duties of the Control Room Offsite Communicator.