

**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations Training  
JPM**

**ADMIN 1 (ALL)**

<b>TITLE</b>		
<b>Heat Stress Stay Time - Work In Steam Tunnel</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Ed Jones	2011-301 ADMIN-1	20 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>
N/R		





UNIT 1 (X) UNIT 2 (X)

**TASK TITLE:** Heat Stress Stay Time - Work In Steam Tunnel

**JPM NUMBER:** 2011-301 ADMIN-1

**TASK STANDARD:** The task shall be completed when the workers Stay Time has been determined IAW NMP-SH-002.

**TASK NUMBER:** None

**OBJECTIVE NUMBER:** None

**K/A CATALOG JTA IMPORTANCE RATING:**

**K/A CATALOG NUMBER:** G2.1.26

**RO** 3.4

**SRO** 3.6

**OPERATOR APPLICABILITY:** Nuclear Plant Operator (NPO)

<b>GENERAL REFERENCES:</b>	<b>Unit 1 &amp; 2</b>
	NMP-SH-002 (current version)

<b>REQUIRED MATERIALS:</b>	<b>Unit 1 &amp; 2</b>
	NMP-SH-002 (current version)

**APPROXIMATE COMPLETION TIME:** 20 Minutes

**SIMULATOR SETUP:** N/A

## **UNIT 1 & 2**

### **READ TO THE OPERATOR**

#### **INITIAL CONDITIONS:**

1. You are a member of a team scheduled to perform work in the Unit 2 Steam Tunnel.
2. The work will be in close proximity to Main Steam Lines which are pressurized with 700 psig steam.
3. Steam Tunnel Temperature is 98°F.
4. Steam Tunnel Humidity is 100%.
5. Worker Clothing: OREX coveralls over OREX modesty garments.
6. The work that is being performed is MODERATE WORK LEVEL.
7. The work is expected to take 25 minutes.

#### **INITIATING CUES:**

Use NMP-SH-002, "Heat Stress" and the information provided to determine BOTH:

- o The estimated Adjusted Wet Bulb Globe Temperature (AWBGT)  
AND
- o The MAXIMUM STAY TIME for the team members while performing the work.

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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START TIME: \_\_\_\_\_

**NOTE:** The candidate may review the Precautions & Limitations and various sections of the procedure prior to determining the AWBGT and stay time.

**NOTE:** If the candidate does NOT use the Attachment 1 flowchart for this JPM; but the AWBGT and Stay Times are CORRECTLY determined, then the task will be considered PASSED with comments explaining that Hatch Procedure Use expectations were NOT met.

1.	Step 6.5 direction: Follow decision making flowchart contained in Attachment 1.	The candidate enters the decision making flowchart contained in Attachment 1.	SAT / UNSAT / NA
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PROMPT: **IF ASKED** whether a WBGT meter is available to be used, **INFORM** the candidate that the task of estimating stay time will NOT be performed using a WBGT meter.

<b>**2.</b>	Determine WBGT using one of the following methods ...	<p>The candidate selects Estimate WBGT using table provided in Appendix B if air temperature and relative humidity are known or measured.</p> <p>The candidate evaluates Appendix B and DETERMINES that at 98°F with 100% humidity, the WBGT= 98°F, then adds +3°F for radiant heat present and WBGT = 101°F.</p>	SAT / UNSAT / NA
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3.	Determine the clothing ensemble to be worn during the work	The candidate determines the Worker Clothing ensemble to be OREX coveralls over OREX modesty garments.	SAT / UNSAT / NA
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**(\*\* Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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PROMPT: **IF ASKED** about clothing to be worn during the work activities, **INFORM** the candidate to refer to the Initial Conditions.

**4.	Calculate AWBGT (per 6.2.3) by incorporating Clothing Adjustment Factor (CAF) obtained from Appendix A	<p>The candidate determines the CAF to be +3°F.</p> <p>The candidate adds 101°F (WBGT) + 3°F (CAF) to obtain</p> <p>AWBGT = 104°F (Accept ± 2°F).</p>	SAT / UNSAT / NA
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5.	Estimate Work Level category (See definitions)	The candidate determines the work level is MODERATE (information was provided in Initial Conditions)	SAT / UNSAT / NA
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**6.	Is AWBGT ≥ 89°F for Light Work Level, ≥84°F for Moderate Work Level, OR ≥ 82°F for Heavy Work?	The candidate selects YES (AWBGT 104°F with MODERATE work).	SAT / UNSAT / NA
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PROMPT: **IF ASKED** about supervisors encouraging employees to report medical conditions, **INFORM** the candidate that supervisors have encouraged and provided an opportunity to employees to report any medical conditions they may have to Medical Representatives (Per 5.2)  
AND  
Employees have identified to the Medical Representative any personal health problem or medication (prescription or over the counter being taken that may adversely affect their health in high temperature environments (Per 5.5)

**7.	Is AWBGT ≥ 103°F?	The candidate selects YES (AWBGT 104°F)	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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<b>**8.</b>	Is AWBGT $\geq$ 103°F but < 108°F?	The candidate selects YES (AWBGT 104°F )	SAT / UNSAT / NA
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<b>**9.</b>	Per 6.1.2.1, must use Engineering control and/or Administrative controls.	The candidate DETERMINES that Engineering control and/or Administrative controls are required to be used.	SAT / UNSAT / NA
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PROMPT: **WHEN ASKED** about Engineering Controls or Admin Controls, **INFORM** the candidate that Admin Controls IAW step 6.3.1.2 are in place :

- o Work is being done in the cool of the morning
- o Power tools are being used
- o Cool fluids available to drink etc.).

PROMPT: **IF ASKED** about Heat Stress PPE, **INFORM** the candidate Heat Stress PPE is NOT being used.

<b>**10.</b>	Estimate stay time per 6.3.1.5.	The candidate uses Appendix C to determine the maximum stay time of 30 minutes (accept $\pm$ 5 minutes)	SAT / UNSAT / NA
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**(\*\* Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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PROMPT: **IF Operator** does NOT state if stay time is acceptable, **ASK** the Operator if the stay time is acceptable for this job.

11.	Is stay time acceptable?	The candidate determines that the Estimated Stay Time is acceptable (25 minute job with a 30 minute stay time).	SAT / UNSAT / NA
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12.	Work job/task Calculate Recovery time per 6.3.2.1	The candidate determines that the task may be worked.	SAT / UNSAT / NA
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PROMPT: **IF ASKED** about calculating Recovery time, **INFORM** the candidate Recovery Time will be calculated at a later time.

**END TIME:** \_\_\_\_\_

**NOTE:** The terminating cue shall be given to the Operator when:

- With no reasonable progress, the Operator exceeds double the allotted time.
- Operator states the task is complete.

**TERMINATING CUE:** We will stop here.

**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations TrainingJPM**

**ADMIN 2 SRO ONLY**

<b>TITLE</b>		
<b>DETERMINING OVERTIME AVAILABILITY</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Ed Jones	2011-301 ADMIN-2	20 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>
N/R		





UNIT 1 (X)      UNIT 2 (X)

**TASK TITLE:**                    **DETERMINING OVERTIME AVAILABILITY**

**JPM NUMBER:**                2011-301 ADMIN-2

**TASK STANDARD:**            The task shall be complete when the operator has determined which operators are available for overtime per NMP-AD-016.

**TASK NUMBER:**                300.001

**OBJECTIVE NUMBER:**        300.001.J

**K/A CATALOG JTA IMPORTANCE RATING:**

**K/A CATALOG NUMBER:** G2.1.5

**RO**    2.9

**SRO**   3.9

**OPERATOR APPLICABILITY:**    Senior Reactor Operator (SRO)

<b>GENERAL REFERENCES:</b>	<b>Unit 1 &amp; 2</b>
	NMP-AD-016-003

<b>REQUIRED MATERIALS:</b>	<b>Unit 1 &amp; 2</b>
	NMP-AD-016-003

**APPROXIMATE COMPLETION TIME:**    20 Minutes

**SIMULATOR SETUP:**    N/A

## **UNIT 1 & 2**

### **READ TO THE OPERATOR**

#### **INITIAL CONDITIONS:**

1. Unit 2 is operating at 100% power.
2. Unit 1 is in a 30 day Refueling Outage
4. The Shift Manager has directed you to determine which NPOs would meet 10CFR26 Fatigue Rules, such that they can work Dayshift tomorrow (Friday, 6/24), for Unit 1 OR Unit 2.
5. The operators, that are called in, will work 12 hours on FRIDAY DAY SHIFT, on 06/24/2011.
6. The work history of four (4) operators is available.

#### **INITIATING CUES:**

IAW NMP-AD-016-003, "Scheduling and Calculating Work Hours," examine the work history of 4 operators.

Determine whether each operator will or will NOT be eligible to fill a NPO position for DAY SHIFT on Friday 06:30 to 18:30 06/24/2011, without violating 10CFR26 limitations, for EACH Unit.

**NOTE:** Consider each operator for each Unit independently  
Limit your answer to the 3 week work history provided

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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START TIME: \_\_\_\_\_

PROMPT: **AT** this time, **GIVE** the candidate the attached operator work histories that have PROVIDE TO CANDIDATE in the header.

1.	Candidate identifies the procedure needed to perform the task.	Candidate has obtained procedure NMP-AD-016-003.	SAT / UNSAT / NA
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PROMPT: **IF ASKED** about the shift cycle being shorter than the actual shift cycles in the plant, **INFORM** the candidate to consider the work history as a repeating cycle for the purposes of this evaluation.

**2.	Operator determines that Operator #1 WILL qualify to work EITHER unit WITHOUT violating 10CFR26 requirements.  Operator #1 is eligible to be called-in to work on EITHER unit.	Referring to Operator #1 work history, the candidate DETERMINES that Operator #1 is:  Eligible for U1 Eligible for U2	SAT / UNSAT / NA
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**3.	Operator determines that Operator #2 WILL violate the CEILING LIMIT of working 72 hours in 7 day period for either unit.  Operator #2 CANNOT be called in to work on EITHER unit.	Referring to Operator #2 work history, the candidate DETERMINES that Operator #2 is:  NOT eligible for U1 NOT eligible for U2	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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**4.	<p>Operator determines that Operator #3 WILL violate BREAK requirements, and will not have the required 10 hour break between successive work periods for either unit.</p> <p>Operator #3 CANNOT be called in to work in EITHER unit.</p>	<p>Referring to Operator #3 work history, the candidate DETERMINES that Operator #3 is:</p> <p>NOT eligible for U1 NOT eligible for U2</p>	SAT / UNSAT / NA
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**5.	<p>Operator determines that Operator #4 is ELIGIBLE to work on Unit 1 since only 3 days off are required in a rolling 15 day period. Operator #4 WILL VIOLATE OFFDAY requirements of at least 2.5 days per week for Unit 2.</p> <p>Operator #4 is ELIGIBLE to be called in to work on Unit 1.</p> <p>Operator #4 CANNOT be called in to work on Unit 2.</p>	<p>Referring to Operator #4 work history, the candidate DETERMINES that Operator #4 is:</p> <p>Eligible for U1 NOT eligible for U2</p>	SAT / UNSAT / NA
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**END  
TIME:** \_\_\_\_\_

**NOTE:** The terminating cue shall be given to the operator when:

- With no reasonable progress, the operator exceeds double the allotted time.
- Operator states the task is complete.

**TERMINATING CUE:** We will stop here.

(\*\* Indicates critical step)

**Attachment 1**  
**EVALUATOR ANSWER KEY**

**NPO #1 Work History**

NPO #1 hours worked indicate **DAY Shift** hours (06:30 – 18:30) on the **OUTAGE Unit**.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	1	12		06/11 (Sat)	1	12		06/18 (Sat)	1	12
06/5 (Sun)	1	12		06/12 (Sun)	1	12		06/19 (Sun)		ROD
06/6 (Mon)		ROD		06/13 (Mon)		ROD		06/20 (Mon)		ROD
06/7 (Tue)		ROD		06/14 (Tue)		ROD		06/21 (Tue)	1	12
06/8 (Wed)		ROD		06/15 (Wed)		ROD		06/22 (Wed)	1	12
06/9 (Thur)	1	12		06/16 (Thur)	1	12		06/23 (Thur)	1	12
06/10 (Fri)	1	12		06/17 (Fri)	1	12		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)



**NPO #2 Work History**

NPO #2 hours worked indicate **DAY Shift** hours (06:30 – 18:30) on the **OPERATING Unit**.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	2	12		06/11 (Sat)	2	12		06/18 (Sat)	2	12
06/5 (Sun)	2	12		06/12 (Sun)	2	12		06/19 (Sun)	2	12
06/6 (Mon)		ROD		06/13 (Mon)		ROD		06/20 (Mon)	2	12
06/7 (Tue)		ROD		06/14 (Tue)	2	12		06/21 (Tue)	2	12
06/8 (Wed)		ROD		06/15 (Wed)	2	12		06/22 (Wed)	2	12
06/9 (Thur)	2	12		06/16 (Thur)		ROD		06/23 (Thur)	2	12
06/10 (Fri)	2	12		06/17 (Fri)		ROD		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)

**ROD = Regular Off Day**

**Attachment 1**  
**EVALUATOR ANSWER KEY**  
**NPO #3 Work History**

NPO #3 hours worked indicate **NIGHT Shift** hours (18:30 – 06:30) on the **OUTAGE Unit**.

NOTE: For NIGHT shifts, the hours shown are reported on the day the worker arrives on shift to begin work; for example, if the worker reported to work at 18:30 on Saturday night, the hours worked show up as 12 hours on Saturday.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	1	12		06/11 (Sat)	1	12		06/18 (Sat)	1	12
06/5 (Sun)	1	ROD		06/12 (Sun)	1	12		06/19 (Sun)		ROD
06/6 (Mon)	1	ROD		06/13 (Mon)		ROD		06/20 (Mon)		ROD
06/7 (Tue)	1	12		06/14 (Tue)	1	12		06/21 (Tue)	1	12
06/8 (Wed)	1	12		06/15 (Wed)	1	12		06/22 (Wed)	1	12
06/9 (Thur)	1	12		06/16 (Thur)	1	12		06/23 (Thur)	1	12
06/10 (Fri)	1	12		06/17 (Fri)	1	12		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)



**NPO #4 Work History**

NPO #4 hours worked indicate **NIGHT Shift** hours (19:30 – 07:30) on the **OPERATING Unit**.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	2	12		06/11 (Sat)	2	12		06/18 (Sat)	2	12
06/5 (Sun)	2	12		06/12 (Sun)	2	12		06/19 (Sun)	2	12
06/6 (Mon)		ROD		06/13 (Mon)	2	12		06/20 (Mon)	2	12
06/7 (Tue)		ROD		06/14 (Tue)	2	12		06/21 (Tue)	2	12
06/8 (Wed)		ROD		06/15 (Wed)		ROD		06/22 (Wed)	2	12
06/9 (Thur)	2	12		06/16 (Thur)		ROD		06/23 (Thur)		ROD
06/10 (Fri)	2	12		06/17 (Fri)	2	12		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)

**ROD = Regular Off Day**

**Attachment 1**  
**PROVIDE TO CANDIDATE**

**NPO #1 Work History**

NPO #1 hours worked indicate **DAY Shift** hours (06:30 – 18:30) on the **OUTAGE Unit**.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	1	12		06/11 (Sat)	1	12		06/18 (Sat)	1	12
06/5 (Sun)	1	12		06/12 (Sun)	1	12		06/19 (Sun)		ROD
06/6 (Mon)		ROD		06/13 (Mon)		ROD		06/20 (Mon)		ROD
06/7 (Tue)		ROD		06/14 (Tue)		ROD		06/21 (Tue)	1	12
06/8 (Wed)		ROD		06/15 (Wed)		ROD		06/22 (Wed)	1	12
06/9 (Thur)	1	12		06/16 (Thur)	1	12		06/23 (Thur)	1	12
06/10 (Fri)	1	12		06/17 (Fri)	1	12		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)



**NPO #2 Work History**

NPO #2 hours worked indicate **DAY Shift** hours (06:30 – 18:30) on the **OPERATING Unit**.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	2	12		06/11 (Sat)	2	12		06/18 (Sat)	2	12
06/5 (Sun)	2	12		06/12 (Sun)	2	12		06/19 (Sun)	2	12
06/6 (Mon)		ROD		06/13 (Mon)		ROD		06/20 (Mon)	2	12
06/7 (Tue)		ROD		06/14 (Tue)	2	12		06/21 (Tue)	2	12
06/8 (Wed)		ROD		06/15 (Wed)	2	12		06/22 (Wed)	2	12
06/9 (Thur)	2	12		06/16 (Thur)		ROD		06/23 (Thur)	2	12
06/10 (Fri)	2	12		06/17 (Fri)		ROD		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)

**ROD = Regular Off Day**

**Attachment 1**  
**PROVIDE TO CANDIDATE**

**NPO #3 Work History**

NPO #3 hours worked indicate **NIGHT Shift** hours (18:30 – 06:30) on the **OUTAGE Unit**.

NOTE: For NIGHT shifts, the hours shown are reported on the day the worker arrives on shift to begin work; for example, if the worker reported to work at 18:30 on Saturday night, the hours worked show up as 12 hours on Saturday.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	1	12		06/11 (Sat)	1	12		06/18 (Sat)	1	12
06/5 (Sun)	1	ROD		06/12 (Sun)	1	12		06/19 (Sun)		ROD
06/6 (Mon)	1	ROD		06/13 (Mon)		ROD		06/20 (Mon)		ROD
06/7 (Tue)	1	12		06/14 (Tue)	1	12		06/21 (Tue)	1	12
06/8 (Wed)	1	12		06/15 (Wed)	1	12		06/22 (Wed)	1	12
06/9 (Thur)	1	12		06/16 (Thur)	1	12		06/23 (Thur)	1	12
06/10 (Fri)	1	12		06/17 (Fri)	1	12		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)



**NPO #4 Work History**

NPO #4 hours worked indicate **NIGHT Shift** hours (19:30 – 07:30) on the **OPERATING Unit**.

Date	Unit	Hrs		Date	Unit	Hrs		Date	Unit	Hrs
06/4 (Sat)	2	12		06/11 (Sat)	2	12		06/18 (Sat)	2	12
06/5 (Sun)	2	12		06/12 (Sun)	2	12		06/19 (Sun)	2	12
06/6 (Mon)		ROD		06/13 (Mon)	2	12		06/20 (Mon)	2	12
06/7 (Tue)		ROD		06/14 (Tue)	2	12		06/21 (Tue)	2	12
06/8 (Wed)		ROD		06/15 (Wed)		ROD		06/22 (Wed)	2	12
06/9 (Thur)	2	12		06/16 (Thur)		ROD		06/23 (Thur)		ROD
06/10 (Fri)	2	12		06/17 (Fri)	2	12		06/24 (Fri)		

- Eligible to work Dayshift U1 (Outage)                       NOT Eligible to work Dayshift U1 (Outage)  
 Eligible to work Dayshift U2 (Operating)                       NOT Eligible to work Dayshift U2 (Operating)

**ROD = Regular Off Day**

**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations TrainingJPM**

**ADMIN 3 RO ONLY**

<b>TITLE</b>		
<b>CONDUCT OF OPERATIONS, 34SV-SUV-019-1 SURVEILLANCE</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Ed Jones	2011-301 ADMIN-3	15 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>





UNIT 1 (X)    UNIT 2 ( )

**TASK TITLE:**

**CONDUCT OF OPERATIONS, 34SV-SUV-019-1  
SURVEILLANCE**

**JPM NUMBER:**

2011-301 ADMIN-3

**TASK STANDARD:**

This task will be satisfactorily met when the student has completed section 7.5 of 34SV-SUV-019-1, SURVEILLANCE CHECKS, and informed the evaluator that Unit 1 drywell cooling system should be placed in “Additional Cooling Operating Mode.”

**TASK NUMBER:**

**OBJECTIVE NUMBER:**

**JTA IMPORTANCE RATING:**

**K/A CATALOG NUMBER:** G2.1.7

**RO** 4.40

**SRO** 4.70

**OPERATOR APPLICABILITY:** Reactor Operator (RO)

<b>GENERAL REFERENCES:</b>	<b>Unit 1</b>
	34SV-SUV-019-1

<b>REQUIRED MATERIALS:</b>	<b>Unit 1</b>
	34SV-SUV-019-1. Complete previous shift data in step 7.5.4 (149 and 148) Calculators

**APPROXIMATE COMPLETION TIME:** 15 Minutes

**SIMULATOR SETUP:** NOT applicable

# EVALUATOR COPY

## UNIT 1

### READ TO THE CANDIDATE

#### INITIAL CONDITIONS:

1. Unit 1 is operating at 100 % power.
2. 1T47-R611 is out of service.
3. 1T47-R612 is out of service.
4. The SS has directed this surveillance be completed as a paper version.
5. 1T47-R611 PT 14 and 1T47-R612 PT 10 Previous readings:
  - 1T47-R611 PT 14 (1T47-N009) was 149°F
  - 1T47-R612 PT 10 (1T47-N003) was 148°F

#### INITIATING CUES:

Complete section 7.5 of 34SV-SUV-019-1, SURVEILLANCE CHECKS, which evaluates drywell temperatures,

AND

Inform the evaluator of any actions that need to be taken as a result of the readings or results obtained from this surveillance.

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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PROMPT: **GIVE** the operator an entire copy of 34SV-SUV-019-1.

START TIME: \_\_\_\_\_

**NOTE:** When the candidate addresses the need for SPDS readings provide Attachment 1.

1.	Determine method for obtaining temperature readings.	Per NOTE "S" of 34SV-SUV-019-1, the candidate determines temperature readings can be obtained from SPDS.	SAT / UNSAT / NA
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2.	Performs step 7.5.1 of 34SV-SUV-019-1.	From the SPDS screen shot, the candidate list the temperature readings on the surveillance sheet with no errors for; 1T47-N001L            120 N004                    109 N008,                   114 N001M,                114 N005                    114	SAT / UNSAT / NA
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3.	Performs step 7.5.2 of 34SV-SUV-019-1.	The candidate evaluates the temperatures from step 7.5.1 and determines the maximum temperature minus the minimum temperature is less than 40°F.	SAT / UNSAT / NA
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4.	Performs step 7.5.3 of 34SV-SUV-019-1.	The candidate evaluates the readings in step 7.5.1. and concludes the highest is less than 275°F and the lowest temperature is greater than 50°F.	SAT / UNSAT / NA
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STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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**NOTE:** When addressing the temperature readings from the previous reading reply with:

- 1T47-R611 PT 14 (1T47-N009) was 149°F
- 1T47-R612 PT 10 (1T47-N003) was 148°F.

5.	Performs step 7.5.4 of 34SV-SUV-019-1.	From the SPDS screen shot, the candidate list the temperature readings on the surveillance sheet for 1T47-N009 176 and 1T47-N003 175 and list the temperatures from the previous readings provided by the evaluator.	SAT / UNSAT / NA
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**6.	Performs step 7.5.5 of 34SV-SUV-019-1.	The candidate compares the current temperature readings in step 7.5.4 to those from the previous reading and concludes the temperatures DO differ by more than 10°F AND that a CR must be written	SAT / UNSAT / NA
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7.	Performs step 7.5.6 of 34SV-SUV-019-1.	The candidate confirms the maximum reading in step 7.5.4 is less than 275°F and the minimum is greater than 50°F AND the maximum temperature minus the minimum temperature of step 7.5.4 is less than 50°F.	SAT / UNSAT / NA
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STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
8.	Performs step 7.5.7 of 34SV-SUV-019-1.	From the SPDS screen shot, the candidate list the temperature readings on the surveillance sheet with no errors for; 1T47-N001J,           199 N001K,                164 N002,                 157 N001A,               182 N001B,               187 N010.                 154	SAT / UNSAT / NA
9.	Performs step 7.5.8 of 34SV-SUV-019-1.	The candidate determines the maximum temperature from step 7.5.7 minus the lowest temperature from step 7.5.7 is less than 100°F.	SAT / UNSAT / NA
10.	Performs step 7.5.9 of 34SV-SUV-019-1.	The candidate confirms the maximum reading in step 7.5.7 is less than 275°F and the minimum is greater than 50°F.	SAT / UNSAT / NA
11.	Performs step 7.5.10 of 34SV-SUV-019-1.	Using the formula at the bottom of the surveillance page, the candidate calculates the average drywell temperature to be 136.7°F. (Accept ±1°F due to rounding errors)	SAT / UNSAT / NA

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
**12.	Addresses any additional actions that are required as a result of the average drywell temperature reading.	The candidate informs the evaluator that since average drywell temperature exceeds 135°F, per note “L” of the surveillance the shift is to place the Drywell Cooling System in “Additional Cooling Operating mode” per 34SO-T47-001-1.	SAT / UNSAT / NA

**END  
TIME:** \_\_\_\_\_

**NOTE:** The terminating cue shall be given to the operator when:

- With no reasonable progress, the operator exceeds double the allotted time.
- Operator states the task is complete.

**TERMINATING CUE:** That completes this JPM.

# Answer Key

7.5	PANEL - INSTRUMENT / TECH SPEC.	NOTE	REAC MODE	FREQ	T/S OR OPER LIM	N	D
7.5.1	1H11-P657: - 1T47-R611, Pt 9 (1T47-N001L) Pt 11 (1T47-N004) Pt 13 (1T47-N008) 1H11-P654: - 1T47-R612, Pt 9 (1T47-N001M) Pt 11 (1T47-N005)	R,S,C (spec only)	1,2,3	c	NA	120	
						109	
						114	
						114	
7.5.2	Confirm max minus min in 7.5.1 $\leq 40^\circ\text{F}$	B	1,2,3	c		SAT	
7.5.3	Confirm max $< 275^\circ\text{F}$ and min $> 50^\circ\text{F}$ in 7.5.1	B,C	1,2,3	c	NA	SAT	
7.5.4	1H11-P657: - 1T47-R611, PT 14 (1T47-N009) Previous shift reading Present reading 1H11-P654: - 1T47-R612, PT 10 (1T47-N003) Previous shift reading Present reading	R,S	1,2,3	c	NA	149	
						176	
						148	
						175	
7.5.5	<u>IF</u> the previous reading differs from the present reading by greater than $10^\circ\text{F}$ <u>OR IF</u> erratic instrument behavior is observed <u>THEN</u> submit a CR to evaluate the Operability of the instruments in step 7.5.4. (SR 3.3.3.1.1 for 3.3.3.1-1(10))	N/A	1,2,3	c	YES <u>IF</u> CR submitted. NR <u>IF</u> NOT required	YES	
7.5.6	Confirm max $< 275^\circ\text{F}$ and min $> 50^\circ\text{F}$ <u>AND</u> max minus min $\leq 50^\circ\text{F}$ in 7.5.4 (SR 3.3.3.1.1 for 3.3.3.1-1(10))	B	1,2,3	c	NA	SAT	
7.5.7	1H11-P657: - 1T47-R611, Pt 7, (1T47-N001J) Pt 8, (1T47-N001K) Pt 10, (1T47-N002) 1H11-P654: - 1T47-R612, Pt 7, (1T47-N001A) Pt 8, (1T47-N001B) Pt 13, (1T47-N010)	R,S	1,2,3	c	NA	199	
						164	
						157	
						182	
						187	
154							
7.5.8	Confirm max minus min in 7.5.7 $\leq 100^\circ\text{F}$ (SR 3.3.3.1.1 for 3.3.3.1.1(10))	B	1,2,3	c		SAT	
7.5.9	Confirm max $< 275^\circ\text{F}$ and min $> 50^\circ\text{F}$ in 7.5.7	B,C	1,2,3	c	NA	SAT	
7.5.10	Average Drywell Temperature (SR 3.6.1.5.1) <span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">1</span>	L	1,2,3	c	$\leq 150^\circ\text{F}$	136.7	

INITIAL  
S

Calculations verified \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_

$$\textcircled{1} \quad \text{DW Temp} = \frac{(7.5.1 \text{ TE's})}{5} (0.63) + \frac{(7.5.4 \text{ TE's})}{2} (0.22) + \frac{(7.5.7 \text{ TE's})}{6} (0.15)$$

# UNIT 1

## READ TO THE CANDIDATE

### INITIAL CONDITIONS:

1. Unit 1 is operating at 100 % power.
2. 1T47-R611 is out of service.
3. 1T47-R612 is out of service.
4. The SS has directed this surveillance be completed as a paper version.
5. 1T47-R611 PT 14 and 1T47-R612 PT 10 Previous readings:
  - 1T47-R611 PT 14 (1T47-N009) was 149°F
  - 1T47-R612 PT 10 (1T47-N003) was 148°F

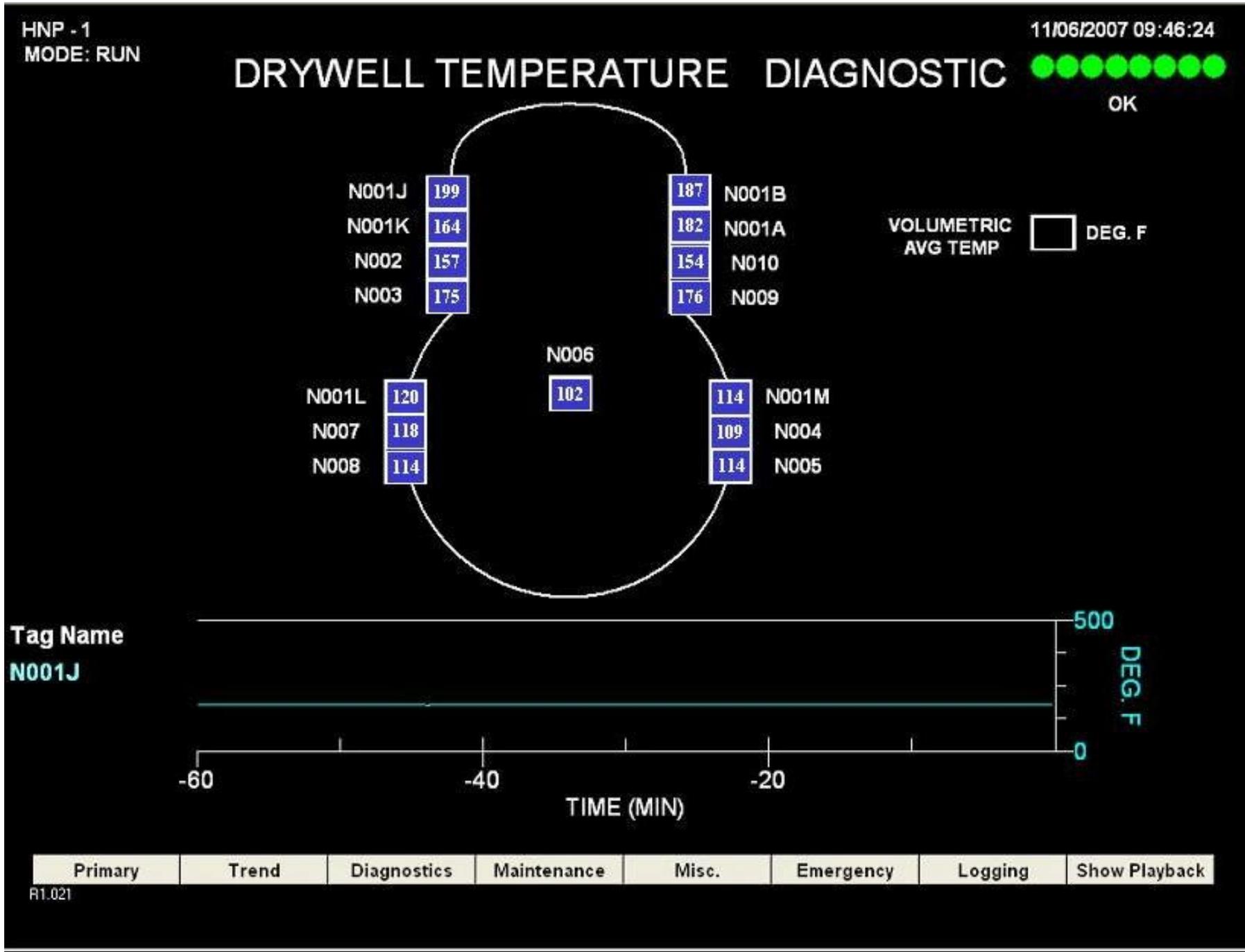
### INITIATING CUES:

Complete section 7.5 of 34SV-SUV-019-1, SURVEILLANCE CHECKS, which evaluates drywell temperatures,

AND

Inform the evaluator of any actions (if any) that need to be taken as a result of the readings or results obtained from this surveillance.

Attachment 1



**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations TrainingJPM**

**ADMIN 4 (SRO ONLY)**

<b>TITLE</b>		
<b>CONTROL HYDROGEN AND OXYGEN CONCENTRATIONS IN PRIMARY CONTAINMENT WHEN PRIMARY CONTAINMENT GAS CONTROL FLOWCHART IS ENTERED</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Ed Jones	2011-301 ADMIN-4	20 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>
N/R		





UNIT 1 ( ) UNIT 2 (X)

**TASK TITLE:** CONTROL HYDROGEN AND OXYGEN  
CONCENTRATIONS IN PRIMARY CONTAINMENT  
WHEN PRIMARY CONTAINMENT GAS CONTROL  
FLOWCHART IS ENTERED

**JPM NUMBER:** 2011-301 ADMIN-4

**TASK STANDARD:** The task shall be complete when the operator has directed the  
required actions per 31EO-PCG-001-2, Primary Containment Gas  
Control

**TASK NUMBER:** 201.072

**PLANT HATCH JTA IMPORTANCE RATING:**

**RO** 4.57

**SRO** 3.88

**K/A CATALOG NUMBER:** G2.3.11

**K/A CATALOG JTA IMPORTANCE RATING:**

**RO** 3.80

**SRO** 3.70

**OPERATOR APPLICABILITY:** Senior Reactor Operator (SRPO)

<b>GENERAL REFERENCES:</b>	<b>Unit 2</b>
	31EO-PCG-001-2

<b>REQUIRED MATERIALS:</b>	<b>Unit 2</b>
	31EO-PCG-001-2

**APPROXIMATE COMPLETION TIME:** 20 Minutes

**SIMULATOR SETUP:** N/A

## UNIT 2

### READ TO THE OPERATOR

#### INITIAL CONDITIONS:

1. You are the SS on Unit 2
2. A reactor scram occurred due to a LOCA
3. An Emergency Depressurization has been performed
4. RWL is stable at -150 inches, using all available Core Spray and RHR pumps
5. Torus water level is stable at 250 inches
6. NO Primary Containment Venting is in progress
7. NO Primary Containment Purging is in progress
8. Estimated Offsite Dose has been calculated at 1800 mR/hr
9. A Projected Offsite Dose has been calculated at 2,100 mR/hr

#### INITIATING CUES:

Evaluate the PCG EOP flowchart, “31EO-PCG-001-2” ONLY.

IAW the PCG flowchart, state ALL actions/orders that are to be directed, due to these plant conditions.

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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START TIME: \_\_\_\_\_

PROMPT: **WHEN** the SPDS Primary Display is mentioned, **PROVIDE ATTACHMENT 1** to the student.

<b>**1.</b>	Enters the PCG flowchart.	The candidate ENTERS 31EO-PCG-001 flowchart.	SAT / UNSAT / NA
<b>2.</b>	Confirm the H <sub>2</sub> O <sub>2</sub> analyzers are in service.	The candidate DETERMINES that the the H <sub>2</sub> O <sub>2</sub> analyzers are in service by checking 2H11-P700 or SPDS.	SAT / UNSAT / NA

PROMPT: **IF** asked, **INFORM** the candidate that the analyzers have been in-service for 3 hours.  
 Drywell H<sub>2</sub> reading ..... 7%  
 Drywell O<sub>2</sub> is yellow and the screen is blank.  
 Torus H<sub>2</sub> reading ..... 6%  
 Torus O<sub>2</sub> is is yellow and the screen is blank.

PROMPT: **IF** asked for a DW atmospheric sample **INFORM** the candidate that an order has been sent out to perform a DW atmospheric sample, then **INFORM** the candidate that, using TIME COMPRESSION, DW and Torus oxygen concentrations are both at 7%.

<b>**3.</b>	Evaluate the override at C-5.	The candidate DETERMINES that path G-3 Point "T" is to be entered.	SAT / UNSAT / NA
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<b>4.</b>	At C-10 on path G-3, determine a reactor scram, by performing RC Point A, is required.	The candidate DETERMINES a reactor scram is required and that it has already occurred based on Initial conditions	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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**5.	Uses step at C-10 on path G-3, to direct an NPO to secure Recirculation Pumps.	The candidate DIRECTS an NPO to secure Recirculation Pumps.	SAT / UNSAT / NA
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PROMPT: **WHEN** the candidate directs the securing of Recirculation Pumps, **INFORM** the candidate that the Recirculation Pumps are secured.

**6.	Uses step at C-10 on path G-3, to direct an NPO to secure Drywell Cooling Fans.	The candidate DIRECTS an NPO to secure Drywell Cooling Fans.	SAT / UNSAT / NA
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PROMPT: **WHEN** the candidate directs the securing DW Cooling Fans, **INFORM** the candidate that DW Cooling Fans are secured.

**7.	Uses step at C-10 on path G-3, to direct an NPO to secure Drywell Return Air Fans.	The candidate DIRECTS an NPO to secure Drywell Return Air Fans.	SAT / UNSAT / NA
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PROMPT: **WHEN** the candidate directs the securing Drywell Return Air Fans, **INFORM** the candidate that Drywell Return Air Fans are secured.

8.	At D-10 on path G-3, determine that an Emergency Depressurization (ED) is required.	The candidate DETERMINES that, based on Initial conditions, an ED has already been performed	SAT / UNSAT / NA
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9.	Evaluates the override at D-10, on path G-3, to determine whether DW or Torus Spray should continue, if in progress.	The candidate DETERMINES that, based on Initial conditions, neither DW NOR Torus sprays are currently in service.	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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PROMPT: **IF** Primary Containment Pressure Limit (PCPL), Graph 13 is requested, **PROVIDE ATTACHMENT 2** to the student.

10.	Evaluates the override at E-10, on path G-3, and determines whether Primary Containment Pressure Limit (PCPL), Graph 13 is being exceeded.	The candidate DETERMINES that, based on initial conditions, the PCPL limit is NOT being exceeded.	SAT / UNSAT / NA
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11.	Evaluates the override at E-10, on path G-3, to determine whether Torus Spray should be secured.	The candidate DETERMINES that, based on initial conditions, Torus spray is NOT in service.	SAT / UNSAT / NA
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12.	Evaluates the override at F-10, on path G-3, to determine if Torus level is below 285 inches.	The candidate DETERMINES that, based on initial conditions, Torus level is below 285 inches. (Currently 250 inches steady)	SAT / UNSAT / NA
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<b>**13.</b>	Evaluates the override at F-10, on path G-3, to determine whether Torus Spray should be initiated.	The candidate DIRECTS an NPO to INITIATE Torus sprays per 34SO-E11-010-2, irrespective of adequate core cooling.	SAT / UNSAT / NA
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PROMPT: **WHEN** the candidate directs the Torus Cooling to be initiated, **INFORM** the candidate Torus Sprays are being placed in service.

PROMPT: **IF ASKED** about RWL, **INFORM** the candidate RWL has begun to decrease very slowly.

**(\*\* Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
14.	Evaluates the override at F-10, on path G-3, to determine whether the DW is being vented through the Torus.	The candidate DETERMINES that, based on initial conditions, NO Primary Containment venting is in progress.	SAT / UNSAT / NA
15.	Evaluates decision step at G-10, on path G-3, to determine whether Torus Water level is below 300 inches.	The candidate DETERMINES that Torus level is below 300 inches. (Chooses YES, proceeds to the right to vent the Torus).	SAT / UNSAT / NA
**16.	Using step at G-11, on path G3, directs Vent torus per 31EO-EOP-104-2 irrespective of offsite radioactivity release rate. If necessary, defeat isolation interlocks.	The candidate DIRECTS an NPO to Vent torus per 31EO-EOP-104-2, irrespective of offsite radioactivity release rate. If necessary, defeat isolation interlocks.	SAT / UNSAT / NA

PROMPT: **WHEN** directed to initiate venting of the Torus, **INFORM** the candidate that, using Time Compression, Torus venting is in progress.

PROMPT: **IF ASKED** whether the DW is being vented through the Torus, **INFORM** the candidate the indications are DW pressure and Torus pressure are both slowly decreasing.

**17.	Using step at H-10, on path G3, directs Initiate and maximize primary containment purge flow per 31EO-EOP-104-2 irrespective of offsite radioactivity release rate	The candidate DIRECTS an NPO to Initiate and maximize primary containment purge flow per 31EO-EOP-104-2 irrespective of offsite radioactivity release rate.	SAT / UNSAT / NA
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PROMPT: **WHEN** directed to initiate Primary Containment Purge flow, **INFORM** the candidate that, using Time Compression, Primary Containment purge flow has been initiated and maximized.

(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
18.	Evaluates the override at J-10, on path G-3, to determine when DW Sprays are required to be secured.	The candidate DETERMINES that, based on initial conditions, DW spray is NOT in service.	SAT / UNSAT / NA
**19.	Evaluates the override at J-10, on path G-3, to determine whether DW Sprays should be placed in service.	The candidate DETERMINES that, based on initial conditions, DW spray is NOT to be placed in service due to Torus level being above 215 inches	SAT / UNSAT / NA

PROMPT: **IF** DW Spray Initiation Limit Graph 8 is requested, **PROVIDE ATTACHMENT 3** to the student.

PROMPT: **WHEN** the operator addresses decreasing Drywell Hydrogen concentrations, **INFORM** the operator that another operator will continue to monitor these concentrations.

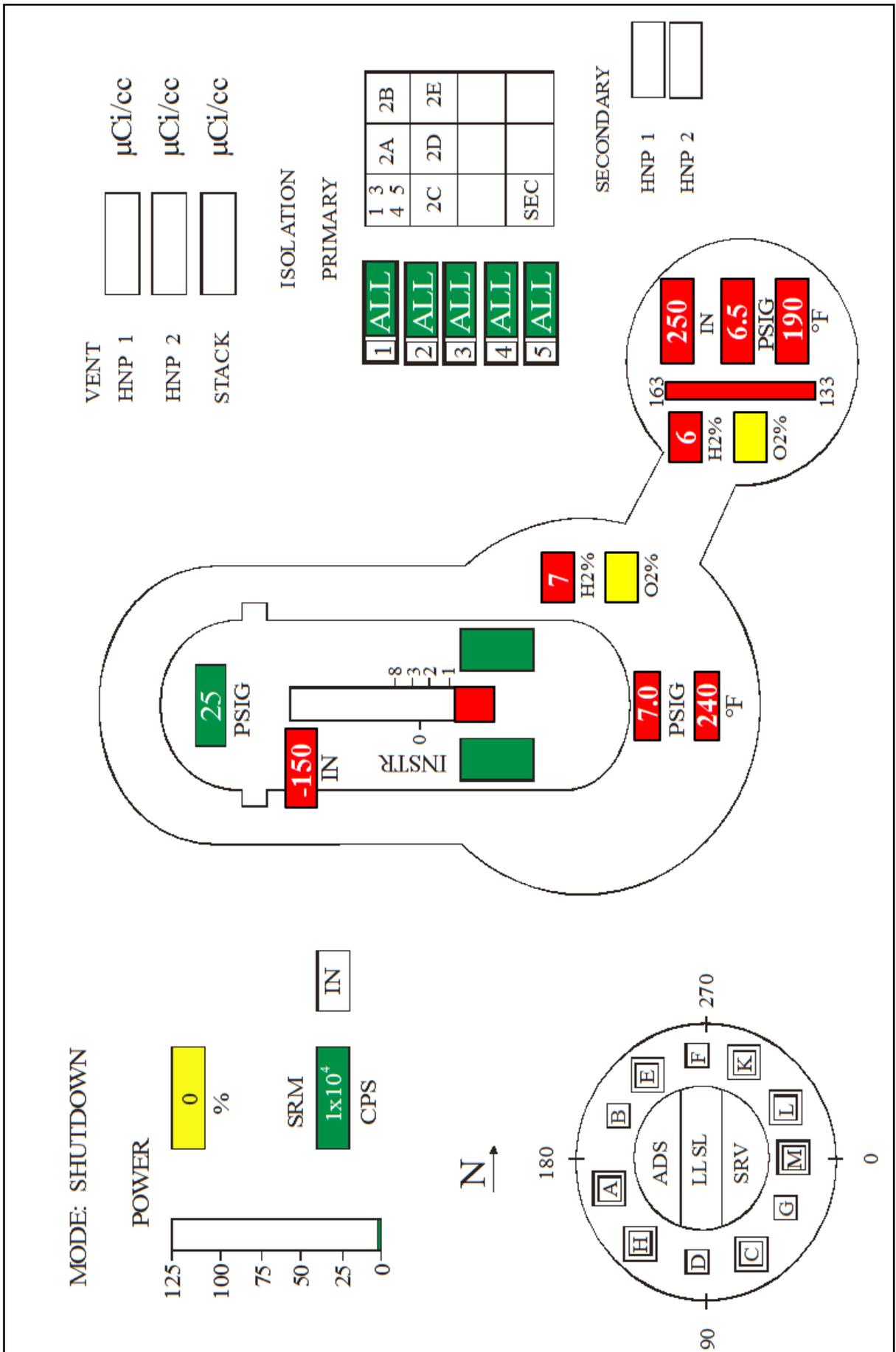
**END TIME:** \_\_\_\_\_

**NOTE:** The terminating cue shall be given to the candidate when:

- With no reasonable progress, the candidate exceeds double the allotted time.
- Candidate states the task is complete.

**TERMINATING CUE:** We will stop here.

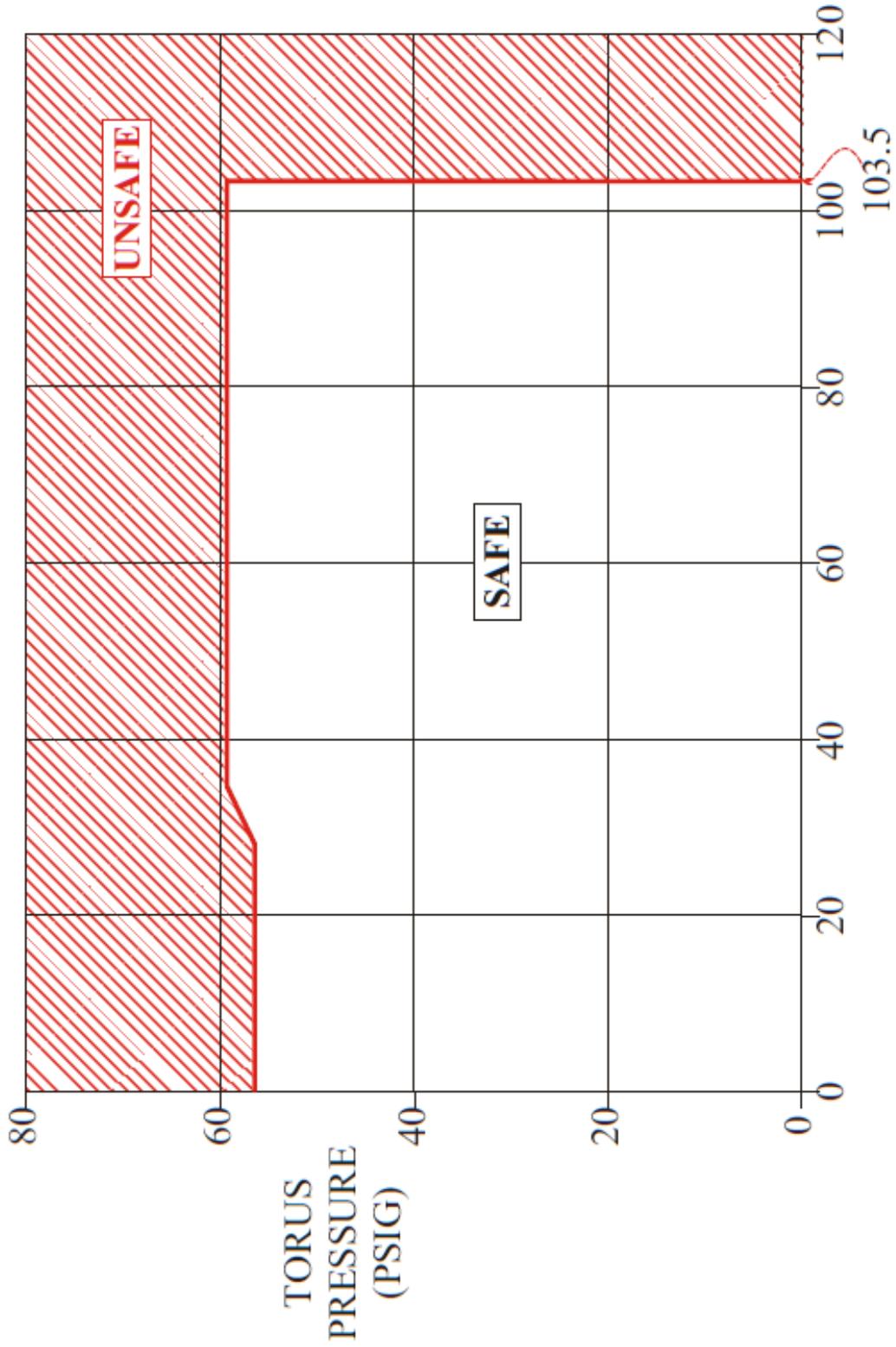
# Attachment 1



**GRAPH 13**

**UNIT 2**

PRIMARY CONTAINMENT PRESSURE LIMIT

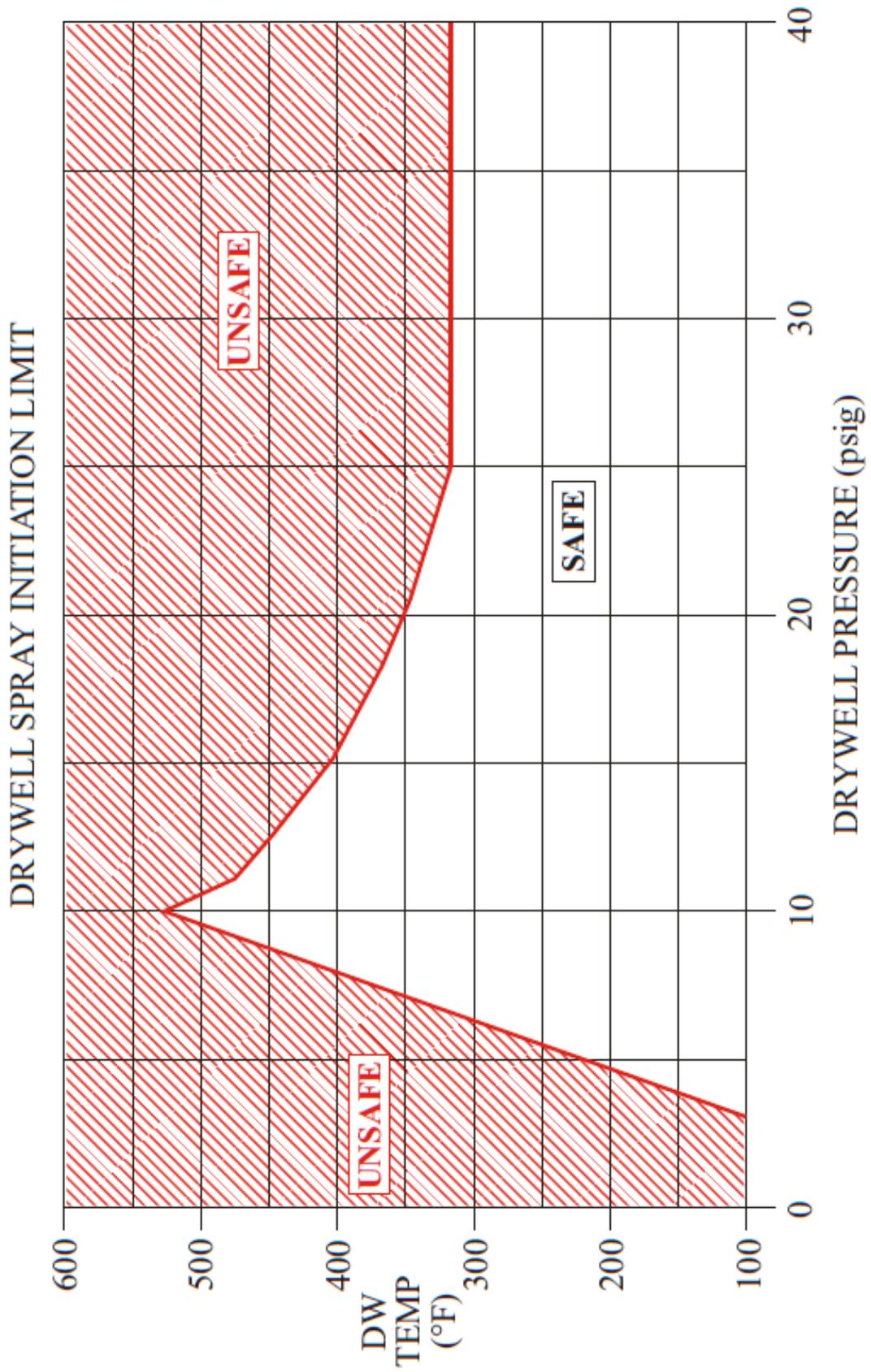


PRIMARY CONTAINMENT WATER LEVEL (ft)

NOTE: May use SPDS Emergency Displays in place of this Graph.

GRAPH 8

UNIT 2



NOTE: May use SPDS Emergency Displays in place of this Graph.

**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations Training JPM**

**ADMIN 5 RO ONLY**

<b>TITLE</b>		
<b>DETERMINE THE EVACUATION ROUTE DURING AN EMERGENCY</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Ed Jones	2011-301 ADMIN-5	9.0 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>
N/R		





**UNIT 1 (X)    UNIT 2 (X)**

**TASK TITLE:**            **DETERMINE THE EVACUATION ROUTE DURING AN EMERGENCY**

**JPM NUMBER:**        2011-301 ADMIN-5

**TASK STANDARD:**    The task shall be completed when the wind direction has been checked and an evacuation route has been determined per 73EP-EIP-005-0 & TRN-0144.

**TASK NUMBER:**        200.059

**OBJECTIVE NUMBER:** 200.059.A

**PLANT HATCH JTA IMPORTANCE RATING:**

**RO**    3.86

**SRO**  3.96

**K/A CATALOG NUMBER:** 295038EA102

**K/A CATALOG JTA IMPORTANCE RATING:**

**RO**    3.00

**SRO**  3.80

**OPERATOR APPLICABILITY:** Nuclear Plant Operator (NPO)

<b>GENERAL REFERENCES:</b>	<b>Unit 1 &amp; 2</b>
	73EP-EIP-005-0 (current version) NMP-EP-110 (current version) NMP-EP-110-GL02 (current version) NMP-EP-111 (current version) NMP-EP-111-002 (current version)

<b>REQUIRED MATERIALS:</b>	<b>Unit 1 &amp; 2</b>
	73EP-EIP-005-0 (current version) NMP-EP-111 (current version) NMP-EP-111-002 (current version)

**APPROXIMATE COMPLETION TIME:** 9.0 Minutes

**SIMULATOR SETUP:** N/A

## **UNIT 1 & 2**

### **READ TO THE CANDIDATE**

#### **INITIAL CONDITIONS:**

1. A Reactor scram has occurred.
2. Plant conditions have resulted in a radioactive release.
3. A Prompt Off-Site Dose Assessment calculation has been performed and an Offsite Release has been verified to be in progress.
4. Peak calculated TEDE is 100 mRem/hr.
5. The Emergency Director (ED) has declared a Site Area Emergency.
6. The ED has directed a PA announcement to be performed in accordance with NMP-EP-111.
7. SPDS is available.

#### **INITIATING CUES:**

Your task is to fill out the appropriate form required to make the PA announcement for this emergency IAW NMP-EP-111-002, "EMERGENCY NOTIFICATION NETWORK COMMUNICATOR INSTRUCTIONS – HATCH."

**NOTE:** Another operator will make the actual page announcement IAW NMP-EP-111 Checklist 1 "Page Announcements."

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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START TIME: \_\_\_\_\_

**NOTE:** The candidate may review NMP-EP-111 Checklist 1 “Page Announcements”.

PROMPT: **AT THIS TIME PROVIDE** the candidate with the entire copy of NMP-EP-111-002, “EMERGENCY NOTIFICATION NETWORK COMMUNICATOR INSTRUCTIONS – HATCH.”

1.	Select correct section of NMP-EP-111-002.	The candidate uses NMP-EP-111-002, Table of Contents and determines that Instruction 5 - Emergency Page Announcement Selection Guidance is the required section.	SAT / UNSAT / NA
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**2.	Select the correct form to use for a Site-Area Emergency announcement.	The candidate uses NMP-EP-111-002, Instruction 5 to determine that “IV. Standard Announcement For Notification Of Site-Area Or General Emergency” (see page 14) is the required form	SAT / UNSAT / NA
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**NOTE:** The candidate may review the NOTES at the top of NMP-EP-111-002, “IV. Standard Announcement For Notification Of SAE Or GE”

3.	IV. a. Refer to “Selection Guidance” information on page 11 to determine the applicable rally point, exit route and evacuation route. Record the applicable information.	The candidate determines that wind direction is required in order to select the correct evacuation route.	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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**NOTE:** Only one indication must be checked to satisfactorily complete Step 4.

PROMPT: **IF** the Candidate addresses wind direction at panel 1H11-P689, Y33-S/ZR R604 (WIND SPEED/DIRECTION 23 METER ELEVATION), **INDICATE** for the Candidate that this recorder is **INOPERABLE**.

PROMPT: **WHEN** the Candidate addresses wind direction indications, **USE** the applicable attached figure.

**4.	Check wind direction.	At panel 1H11-P690, wind direction checked on one of the following recorders: R601 (10 METER) R602 (60 METER) R603 (100 METER) OR SPDS MIDAS screen OR SPDS MET Data screen	SAT / UNSAT / NA
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**5.	Determine the applicable rally point, exit route and evacuation route. Record the applicable information.	The candidate uses "Selection Guidance" information on page 11 to determine: <u>Rally point:</u> PESB <u>Exit Route:</u> Main Access Road <u>Evacuation Route:</u> U.S. Highway 1 - South to Appling Co. High School/ Baxley  The candidate then RECORDS the information in appropriate section of "IV. Standard Announcement For Notification Of Site-Area Or General Emergency."	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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**NOTE:** The candidate may select DRILL for item 1. This is ACCEPTABLE practice for the purpose of training evaluations at Hatch.

PROMPT: **IF** the Candidate addresses contacting Security to activate the PA system in the Simulator and Skills Buildings **INFORM** the Candidate that Security has been directed to activate the PA system in the Simulator and Skills Buildings

PROMPT: **IF** the Candidate addresses NMP-EP-111 Checklist 1 “Page Announcements,” as the Shift Supervisor, **INFORM** the Candidate that this will be performed by another Operator.

**END  
TIME:** \_\_\_\_\_

**NOTE:** The terminating cue shall be given to the Candidate when:

- With no reasonable progress, the Candidate exceeds double the allotted time.
- Candidate states the task is complete.

**TERMINATING CUE:** We will stop here.

# EVALUATOR ANSWER KEY

## IV. STANDARD ANNOUNCEMENT INSTRUCTIONS FOR SITE-AREA OR GENERAL EMERGENCY

- NOTES:**
- The appropriate emergency tone and announcement must be made as soon as possible, but not to exceed **15** minutes after the initial emergency declaration
  - The person making this announcement is expected to announce all applicable information.
- a. Refer to “Selection Guidance” information on page 11 to determine the applicable rally point, exit route and evacuation route. Record the applicable information below needed for this announcement.
  - b. Contact Security to direct activation of the Public Address system in the Simulator and Skills Buildings PRIOR to beginning the announcement.
  - c. Perform IAW NMP-EP-111 Checklist 1 “Page Announcements”.

(Select one)  **Site-Area Emergency** or  **General Emergency**

1. **ATTENTION ALL PERSONNEL. THIS (  IS /  IS NOT ) A DRILL. A/AN **Site-Area Emergency** HAS BEEN DECLARED.**
2. (Select one): A RADIOLOGICAL RELEASE (  IS /  IS NOT ) IN PROGRESS.
3. **ALL EMERGENCY RESPONSE PERSONNEL ARE TO REPORT TO YOUR EMERGENCY RESPONSE FACILITY AND INITIATE EMERGENCY IMPLEMENTING PROCEDURES.**

<b>NOTE:</b>	Announcement of items 4 or 5 may be discontinued upon verification that non-essential personnel have left the plant site.
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4. Use if a radiological release **is not** in progress

**ALL NON-ESSENTIAL PERSONNEL ARE TO EXIT THE PLANT SITE USING THE MAIN ACCESS ROAD. THE EVACUATION ROUTE IS EITHER DIRECTION ON U. S. HIGHWAY 1.**

5. Use if a radiological release **is** in progress

**ALL NON-ESSENTIAL PERSONNEL ARE TO EXIT THE PLANT SITE USING (select one):**

**THE MAIN ACCESS ROAD**,  **THE ROAD BEHIND THE LOW LEVEL RADWASTE BUILDING**,  **OTHER** (specify another exit route) \_\_\_\_\_.

### **AND**

**THE EVACUATION ROUTE IS (Select one):**

**EITHER DIRECTION ON U.S. HIGHWAY 1. REPORT TO THE STATE RECEPTION CENTER AT EITHER TOOMBS CO. HIGH SCHOOL IN LYONS OR APPLING CO. HIGH SCHOOL IN BAXLEY.**

**SOUTH ON U. S. HIGHWAY 1. REPORT TO THE STATE RECEPTION CENTER AT APPLING CO. HIGH SCHOOL IN BAXLEY.**

**NORTH ON U. S. HIGHWAY 1. REPORT TO THE STATE RECEPTION CENTER AT TOOMBS CO. HIGH SCHOOL IN LYONS.**

# EVALUATOR ANSWER KEY

## SELECTION GUIDANCE FOR STANDARD ANNOUNCEMENT RALLY POINT/SITE EXIT ROUTE/ EVACUATION ROUTE

Is a radiological release in progress?  Yes  No

**IF** a. A radiological release Is Not in progress:

**THEN** b. The following rally point, site exit route, and evacuation route will be used:

- Rally Point – Plant Entry & Security Building (PESB)
- Site Exit Route – Main Access Road
- Evacuation Route – Either direction on U. S. Hwy 1.

**IF** c. A radiological release Is in progress:

**THEN** Use the chart below to determine the rally point, site exit route, evacuation route and State Reception Center, based on wind direction.

Consult with Security to determine alternative(s) IF designated rally point and/or site exit route cannot be used. The use of an alternate rally point requires notifying Security and HP prior to making the announcement.

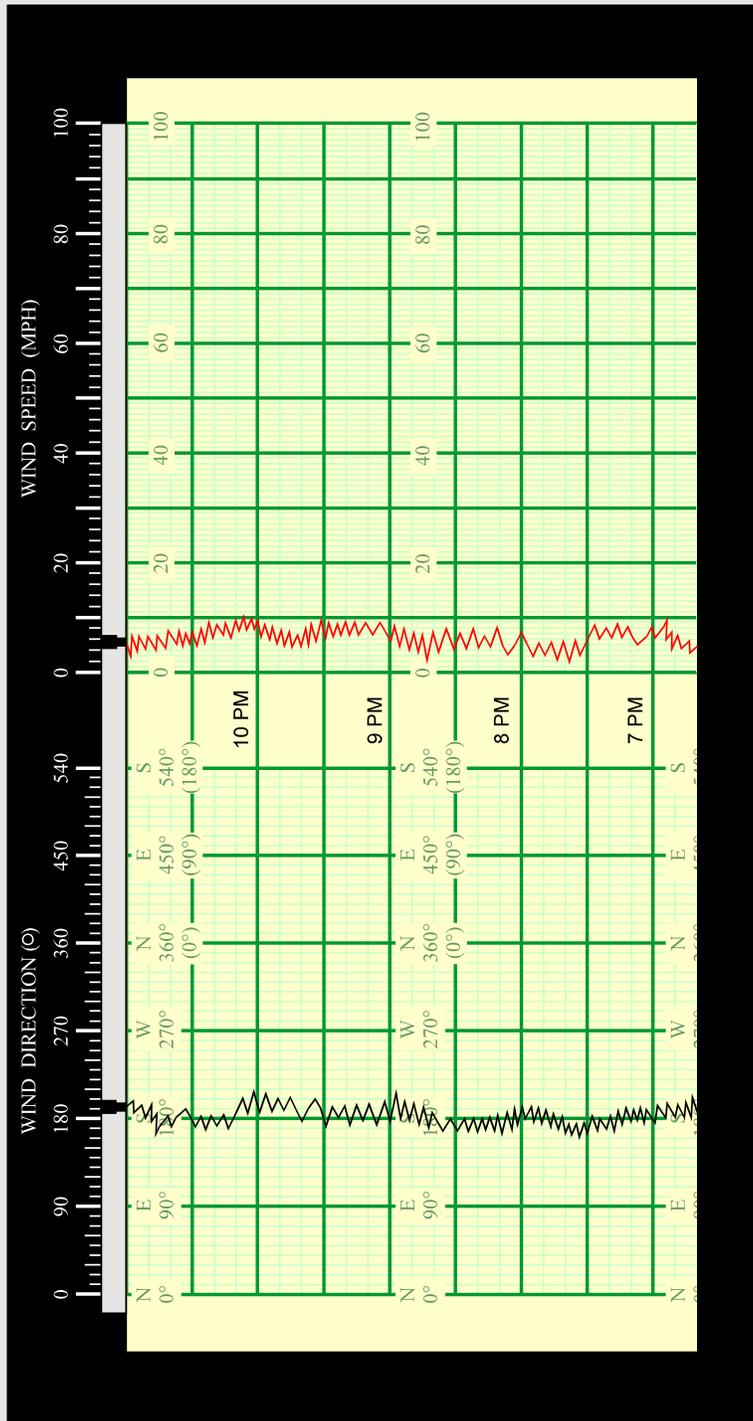
**NOTE:** The 15 minute average wind direction information should be read using the meteorological instrumentation that corresponds to the primary release point.

Wind Direction From:	Rally Point:	Site Exit Route:	Evacuation Route/State Reception Center
340° - 60°	Gate 17	Main Access Road	U.S. Highway 1 - North to Toombs Co. High School/Lyons
61° - 110°	PESB	Road behind Low Level Radwaste Building	U.S. Highway 1 - South to Appling Co. High School/ Baxley
<b>111° - 225°</b>	<b>PESB</b>	<b>Main Access Road</b>	<b>U.S. Highway 1 - South to Appling Co. High School/ Baxley</b>
226° - 339°	PESB	Main Access Road	Either direction on U.S. Highway 1 to Toombs Co. High School/Lyons or Appling Co. High School/Baxley

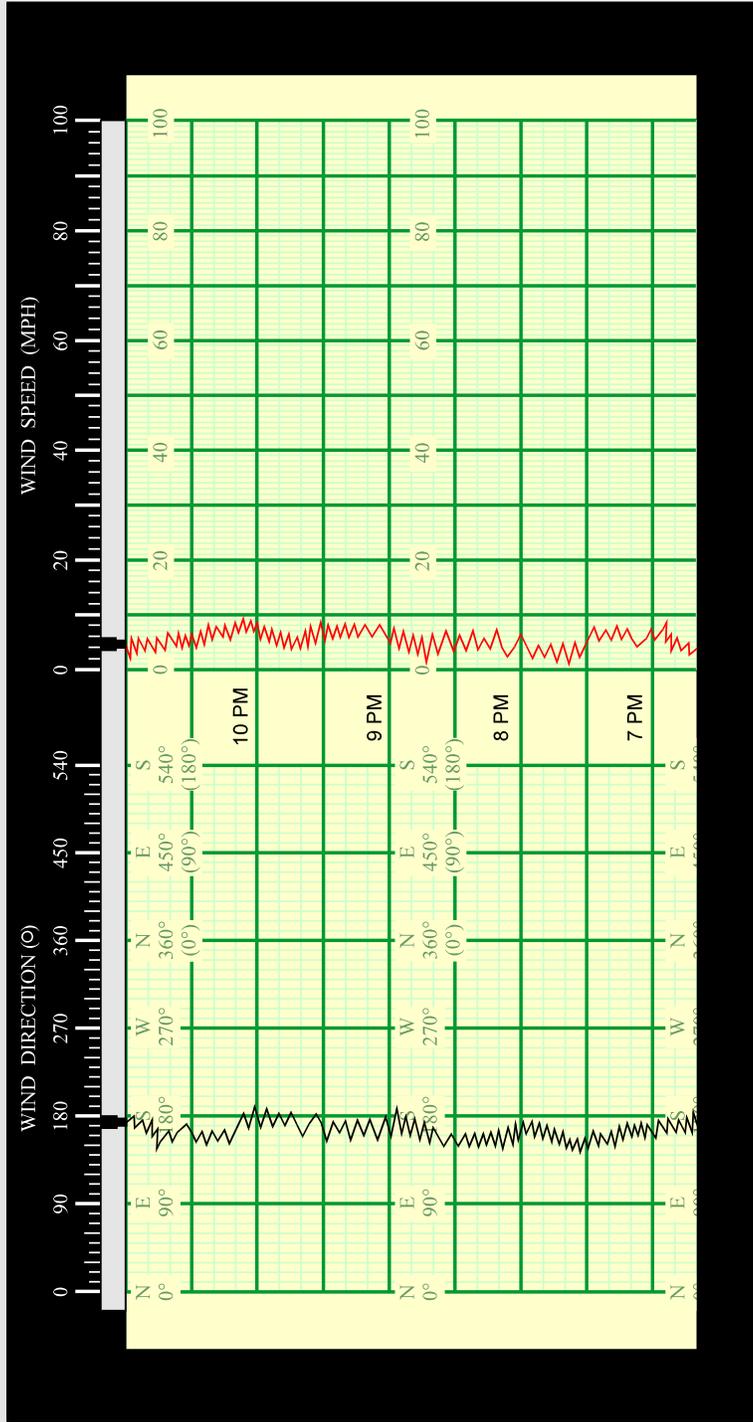
# 10M ELEVATION

R601

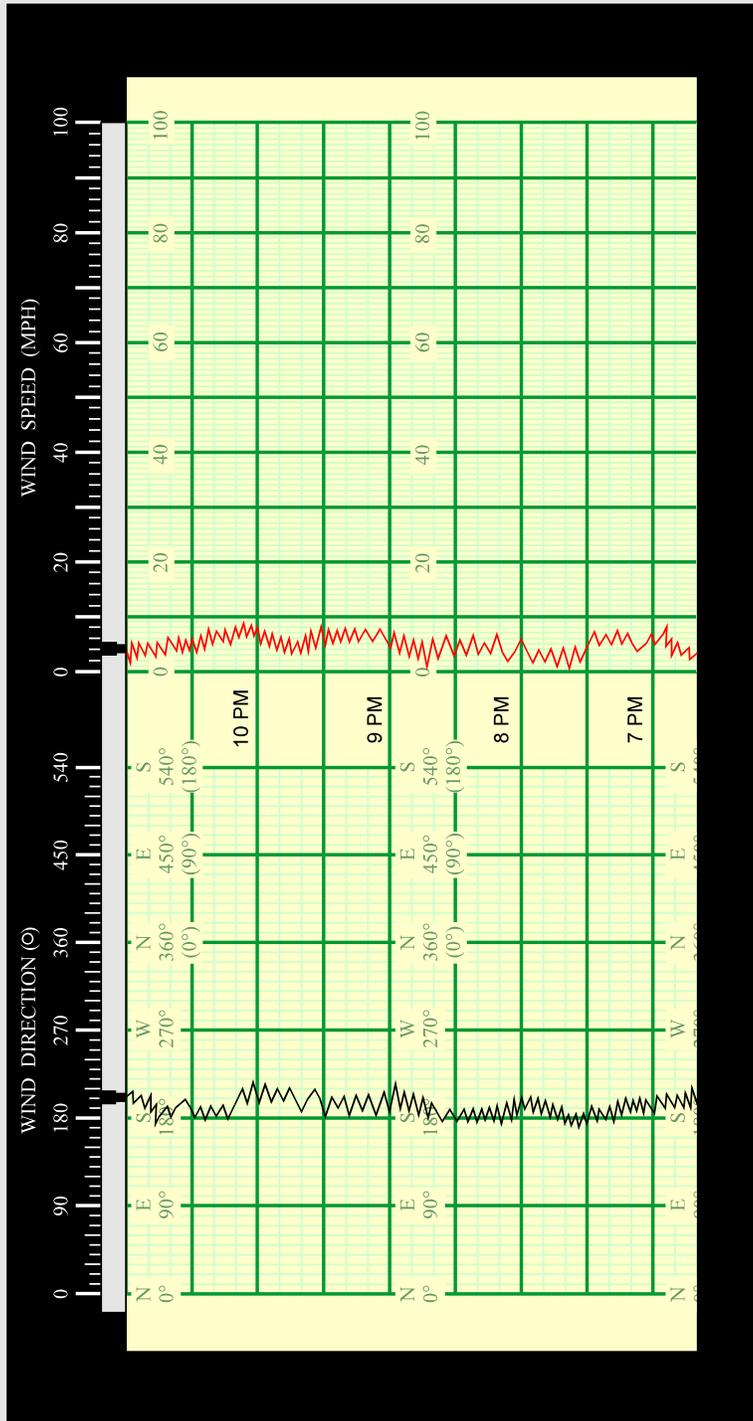
INST BUS B



60M ELEVATION  
R602 INST BUS B



100M ELEVATION  
R603  
INST BUS B



# MIDAS INFORMATION

## METEOROLOGICAL

10M WIND SPD 1Y33-R601 5.0	100M WIND SPD 1Y33-R603 4.0	10M WIND DIR 1Y33-R601 190	100M WIND DIR 1Y33-R603 200
AMBIENT TEMP (F) 10M 55	DELTA T 60-10 -0.5	DELTA T 100-10 -1.0	RAINFALL 15 MIN. AVG .000

## RADIOLOGICAL

MAIN STACK	U1 RX. BLDG. VENT	U2 RX. BLDG. VENT
NORMAL RANGE	KAMAN	NORMAL RANGE
1D11-K600A 2.00E 01	1D11-R631 5.02E-03	2D11-K636A 1.02E 06
1D11-K600B 1.96E 01	1D11-K619A 6.70E 01	2D11-K636B 1.04E 06
STABILITY CLASS		
D		

# METEROLOGICAL DATA

WIND	(DIRECTION FROM)	15-MIN. AVERAGE	STD-DEV	SPEED	15-MIN. AVERAGE
10 M ELEVATION	185 DEG	189 DEG	12 DEG	1 MPH	0 MPH
60 M ELEVATION	179 DEG	180 DEG	6 DEG	2 MPH	2 MPH
100 M ELEVATION	190 DEG	189 DEG	4 DEG	4 MPH	4 MPH
23 M ELEVATION - BACKUP	190 DEG	191 DEG	4 DEG	2 MPH	2 MPH

TEMPERATURE	15-MIN AVERAGE
-------------	----------------

10 M ELEVATION AMBIENT	-30 DEG F	FLOW*	----
10 M ELEVATION AMBIENT - BACKUP	74 DEG F	FLOW	----
10 M DEWPOINT	73 DEG F		----
60 M - 10 M DELTA TEMP.	-10 DEG F	FLOW	-4.1 DEG F
100 M - 10 M DELTA TEMP.	-10 DEG F	FLOW	-2.4 DEG F
45 M - 10 M DELTA TEMP. - BACKUP	1.5 DEG F	FLOW	2.4 DEG F

PERCIPITATION

.00 INCHES SINCE MIDNIGHT

**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations Training JPM**

**ADMIN 6 SRO ONLY**

<b>TITLE</b>		
<b>Determine if ENN form is ready for approval, make recommendations to the Emergency Director</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Ed Jones	2011-301 ADMIN-6	15 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>
N/R		





UNIT 1 ( )    UNIT 2 (X)

**TASK TITLE:**

**Determine if ENN form is ready for approval, make recommendations to the Emergency Director**

**JPM NUMBER:**

2011-301 ADMIN-6

**TASK STANDARD:**

The task shall be complete when the operator determined that the ENN form contains 3 critical errors.

**TASK NUMBER:**

300.046

**JTA IMPORTANCE RATING:**

**K/A CATALOG NUMBER:** G2.4.40

**RO** 2.7

**SRO** 4.5

**OPERATOR APPLICABILITY:** Senior Reactor Operator (SRO)

<b>GENERAL REFERENCES:</b>	<b>Unit 2</b>
	NMP-EP-110 (Current Version) NMP-EP-110-GL02 (Current Version) NMP-EP-111 (Current Version) EAL Flowcharts (Current Version) SPDS MIDAS screen

<b>REQUIRED MATERIALS:</b>	<b>Unit 2</b>
	NMP-EP-110 (Current Version) NMP-EP-110-GL02 (Current Version) NMP-EP-111 (Current Version) EAL Flowcharts (Current Version) SPDS MIDAS screen Completed ENN form with errors

**APPROXIMATE COMPLETION TIME:** 15 Minutes

**SIMULATOR SETUP:** N/A

## **UNIT 2**

### **READ TO THE OPERATOR**

#### **INITIAL CONDITIONS:**

1. Unit 2 was operating at 100% power when a reactor scram occurred.
2. All rods did NOT fully insert.
3. Reactor power is at 10% RTP.
4. The Standby Liquid Control system has been INITIATED.
5. There are NO Main Stack or Reactor Building ventilation alarms illuminated.
6. The Emergency Director has declared a NOTIFICATION OF UNUSUAL EVENT (NOUE).
7. The electronic ENN system is NOT available.
8. The SPDS MIDAS screen is available.
9. This will be the the FIRST notification made.
10. Declaration Time and Date 15:00, 06/01/2011

#### **INITIATING CUES:**

Use NMP-EP-111, "Emergency Notifications" and PERFORM a Peer Check of the ENN form for accuracy and RECOMMEND to the Emergency Director whether it is accurate and ready for approval.

REPORT any errors to the Emergency Director.

**NOTE:** Consider CURRENT time and date to be 15:00 on 06/01/2011

**NOTE:** On Item 1 "DRILL" has been selected and should NOT be considered as a part of this evaluated exercise.

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
--------	------------------	----------	----------------------

**START TIME:** \_\_\_\_\_

**NOTE:** The candidate may address filling in Message #, Confirmation Phone #. These items may are not REQUIRED to be filled in until after the form is approved by the Emergency Director and are NOT to be considered for the purposes of this evaluation.

**NOTE:** CRITICAL STEPS are based on EP Performance Indicator criteria.

PROMPT: **PROVIDE ATTACHED ENN Form** to the candidate (Attachment 1).

1.	Refer to required procedure.	Candidate refers to NMP-EP-111	SAT / UNSAT / NA
2.	Evaluate whether ENN form Step 2, Initial/Follow-up, is correct.	The candidate determines that "INITIAL" is CORRECTLY selected for Step 1	SAT / UNSAT / NA

PROMPT: **IF ASKED** about Step 1, **INFORM** the candidate that on Item 1 "DRILL" has been selected and should NOT be considered as a part of this evaluated exercise.

<b>**3.</b>	Evaluate whether ENN form Step 3, Site, is correct filled in.	<p>The candidate determines that the SITE is NOT correctly filled in.</p> <p>The candidate is expected to recommend, to the Emergency Director (ED), that PLANT HATCH be written in the space provided for Step 3.</p>	SAT / UNSAT / NA
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**(\*\* Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
**4.	Evaluate whether ENN form Step 4, Emergency Classification, is correct.	<p>The candidate refers to the EAL Flowcharts to determine that the Unusual Event declaration is NOT correct (based on the EAL (SS2) and EAL description).</p> <p>The candidate is expected to recommend to the ED that a SITE AREA EMERGENCY is required to be selected/declared for Step 4.</p>	SAT / UNSAT / NA
**5.	Evaluate whether ENN form Step 5, PARs, is correct.	The candidate determines that NONE is CORRECTLY selected and that the remainder of the Step 5 check boxes are not required to be checked.	SAT / UNSAT / NA
**6.	Evaluate whether ENN form Step 6, Emergency Release, is correct.	The candidate determines that NONE is CORRECTLY checked for Step 6.	SAT / UNSAT / NA
<p>PROMPT: <b>IF</b> asked about whether an Offsite Dose Assessment has been performed, <b>INFORM</b> the candidate that NEITHER a Prompt Offsite Dose Assessment NOR an assessment by the Offsite Dose Assessment staff have been performed.</p>			
<p><b>NOTE:</b> 73EP-EIP-018-0, "Prompt Offsite Dose Assessment" directs that 73EP-EIP-018-0 be exited due to lack of alarms in the alarm condition (i.e. Prompt Offsite Dose will not be calculated since there is no evidence of a release being in progress). Per the Initial Conditions sheet of this JPM, there are NO Main Stack or Reactor Building ventilation alarms illuminated.</p>			
7.	Evaluate whether ENN form Step 7, Release Significance, is correct.	The candidate determines that NOT APPLICABLE is CORRECTLY checked for Step 7.	SAT / UNSAT / NA

(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
--------	------------------	----------	----------------------

8.	Evaluate whether ENN form Step 8, Event Prognosis, is correct.	The candidate determines that STABLE is CORRECTLY checked for Step 8.	SAT / UNSAT / NA
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PROMPT: **IF ASKED** about the SPDS MIDAS screen, **PROVIDE** the candidate with ATTACHMENT 2, SPDS MIDAS Information screen display.

<b>**9.</b>	Evaluate whether ENN form Step 9, Meteorological Date, is correct.	The candidate determines that: <input type="checkbox"/> Wind Direction (163°) and <input type="checkbox"/> Wind Speed (12 mph) are CORRECTLY filled in for Step 9.	SAT / UNSAT / NA
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10.	Evaluate whether ENN form Step 9, Meteorological Date, is correct.	The candidate determines that: <input type="checkbox"/> Precipitation (0) and <input type="checkbox"/> Stability Class (E) are CORRECTLY filled in for Step 9.	SAT / UNSAT / NA
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<b>**11.</b>	Evaluate whether ENN form Step 10, Declaration/Termination and Time/Date are correct.	The candidate determines that: <input type="checkbox"/> DECLARATION, <input type="checkbox"/> TIME, and <input type="checkbox"/> DATE are CORRECT for Step 10.	SAT / UNSAT / NA
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<b>**12.</b>	Evaluate whether ENN form Step 11, AFFECTED UNIT(S), is correct.	The candidate determines that Step 11 has NOT been correctly completed.  The candidate is expected to RECCOMEND to the ED, that UNIT 2 is required to be selected for Step 11.	SAT / UNSAT / NA
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(\*\* Indicates critical step)

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
13.	Evaluate whether ENN form Step 12, Unit Status, is correct.	The candidate determines that Unit status is CORRECTLY filled in for both units and that shutdown time is NOT required to be filled in based on current conditions, for Step 12.	SAT / UNSAT / NA
13.	Evaluate whether ENN form Step 13, Remarks, is correct.	The candidate determines that Remarks are acceptable for Step 13.	SAT / UNSAT / NA

**NOTE:** The terminating cue shall be given to the candidate when:

- The candidate reports the 3 errors and makes correct recommendations to the ED, or,
- With no reasonable progress, the candidate exceeds double the allotted time, or,
- Candidate states the task is complete.

**END  
TIME:** \_\_\_\_\_

**TERMINATING CUE:** We will stop here.

# Attachment 1

<b>Southern Nuclear Operating Company</b>		
<b>Nuclear Management Instruction</b>	Emergency Notifications	NMP-EP-111 Version 3.0 Page 35 of 47

**Figure 1 – Emergency Notification Form (page 1 of 2)**

1.  DRILL       ACTUAL EVENT      MESSAGE # \_\_\_\_\_  
 2.  INITIAL       FOLLOW-UP      NOTIFICATION: TIME \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ AUTHENTICATION # \_\_\_\_\_  
 3. SITE: \_\_\_\_\_ Confirmation Phone # \_\_\_\_\_

4. EMERGENCY CLASSIFICATION:     UNUSUAL EVENT     ALERT     SITE AREA EMERGENCY     GENERAL EMERGENCY  
 BASED ON EAL# 552    EAL DESCRIPTION: FAILURE OF RPS, BOTH AUTOMATIC AND MANUAL SCRAMS WERE UNSUCCESSFUL. THE REACTOR WAS NOT MADE SUBCRITICAL

5. PROTECTIVE ACTION RECOMMENDATIONS:     NONE  
 EVACUATE \_\_\_\_\_  
 SHELTER \_\_\_\_\_  
 Advise Remainder of EPZ to Monitor Local Radio/TV Stations/Tone Alert Radios for Additional Information and Consider the use of KI (potassium iodide) in accordance with State plans and policy.  
 OTHER \_\_\_\_\_

6. EMERGENCY RELEASE:     None     Is Occurring     Has Occurred

7. RELEASE SIGNIFICANCE:     Not applicable     Within normal operating limits     Above normal operating limits     Under evaluation

8. EVENT PROGNOSIS:     Improving     Stable     Degrading

9. METEOROLOGICAL DATA:    Wind Direction from 163 degrees\*    Wind Speed 12 mph\*

(\*May not be available for Initial Notifications\*)    Precipitation 0 \*    Stability Class\*  A  B  C  D  F  G

10.  DECLARATION     TERMINATION    Time 15:00    Date 06/01/2011

11. AFFECTED UNIT(S):     I     II     III

12. UNIT STATUS:     U1 \_\_\_\_\_ % Power    Shutdown at Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 (Unaffected Unit(s) Status Not Required for Initial Notifications)     U2 10 % Power    Shutdown at Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

13. REMARKS:    THE STANDBY LIQUID SYSTEM IS CURRENTLY INJECTING BORON INTO THE UNIT 2 REACTOR.

**FOLLOW-UP INFORMATION (Lines 14 through 16 Not Required for Initial Notifications)**

EMERGENCY RELEASE DATA NOT REQUIRED IF LINE 6 A IS SELECTED.

14. RELEASE CHARACTERIZATION:    TYPE:  A Elevated     B Mixed     C Ground    UNITS:  A Ci     B Ci/sec     C µCi/sec

MAGNITUDE:    Noble Gases: \_\_\_\_\_    Iodines: \_\_\_\_\_    Particulates: \_\_\_\_\_    Other: \_\_\_\_\_

FORM:  A Airborne    Start Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Stop Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 B Liquid    Start Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Stop Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

15. PROJECTION PARAMETERS:    Projection period: \_\_\_\_\_ Hours    Estimated Release Duration \_\_\_\_\_ Hours  
 Projection performed:    Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_    Accident Type: \_\_\_\_\_

16. PROJECTED DOSE:    DISTANCE    TEDE (mrem)    Adult Thyroid CDE (mrem)  
 Site boundary    \_\_\_\_\_    \_\_\_\_\_  
 2 Miles    \_\_\_\_\_    \_\_\_\_\_  
 5 Miles    \_\_\_\_\_    \_\_\_\_\_  
 10 Miles    \_\_\_\_\_    \_\_\_\_\_

17. APPROVED BY: \_\_\_\_\_ Title \_\_\_\_\_ Time \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

NOTIFIED BY: \_\_\_\_\_

RECEIVED BY: _____ Time _____ Date ____/____/____ (To be completed by receiving organization)
--

# Attachment 1

<b>Southern Nuclear Operating Company</b>		
 <b>SOUTHERN COMPANY</b> <small>Energy to Serve Your World</small>	<b>Nuclear Management Instruction</b>	Emergency Notifications
		NMP-EP-111 Version 3.0 Page 36 of 47

Figure 1 – Emergency Notification Form (page 2 of 2)

<b>GOVERNMENT AGENCIES NOTIFIED</b>	
Record the name, date and agencies notified:	
1.	(name)
	(date/time) <span style="float: right;">(agency)</span>
2.	(name)
	(date/time) <span style="float: right;">(agency)</span>
3.	(name)
	(date/time) <span style="float: right;">(agency)</span>
4.	(name)
	(date/time) <span style="float: right;">(agency)</span>
5.	(name)
	(date/time) <span style="float: right;">(agency)</span>
6.	(name)
	(date/time) <span style="float: right;">(agency)</span>
7.	(name)
	(date/time) <span style="float: right;">(agency)</span>

HNP - 2  
MODE: FUEL

# MIDAS INFORMATION



## METEOROLOGICAL

10M WND SPD 15 MIN AVG. 1Y33-R601	12	100M WND SPD 15 MIN AVG. 1Y33-R603	163	100M WND DIR 15 MIN AVG. 1Y33-R603	163
AMBIENT TEMP. (F) 10 M	74	DELTA T 15 MIN AVG. 60 - 10	1.425	DELTA T 15 MIN AVG. 100 - 10	1.044
		RAINFALL 15 MIN AVG.	0.000	STABILITY CLASS	E

## RADIOLOGICAL

MAIN STACK		U1 RX BLDG. VNT		U2 RX BLDG. VNT	
NORMAL RANGE 1D11-K600A	5.88E+00	NORMAL RANGE 1D11-K619A	5.44E+01	NORMAL RANGE 2D11-K636A	2D11-K636B
ACCIDENT RANGE 1D11-R631		ACCIDENT RANGE 1D11-R631		ACCIDENT RANGE 2D11-R631	9.99E-04
1D11-K600B	6.60E+00	1D11-K619B	2.81E+01		

## FLOW

MAIN STACK EXHAUST FLOW A	20849	U1 RX BLDG VENT STACK FLOW A	244999	U2 RX BLDG VENT STACK FLOW A	112241	U2 RX BLDG VENT STACK FLOW B	122953
14293		U1 RX BLDG VENT STACK FLOW B	223006				

Primary	Trend	Diagnostics	Maintenance	Misc.	Emergency	Logging	Show Playback
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R11.022

**DRAFT**

**Southern Nuclear  
E. I. Hatch Nuclear Plant**

**Operations TrainingJPM**

**ADMIN 7 ALL**

<b>TITLE</b>		
<b>USE A SYSTEM LOGIC DIAGRAM (RCIC)</b>		
<b>AUTHOR</b>	<b>MEDIA NUMBER</b>	<b>TIME</b>
Anthony Ball	2011-301 ADMIN-7	15 Minutes
<b>RECOMMENDED BY</b>	<b>APPROVED BY</b>	<b>DATE</b>





<b>TASK TITLE:</b>	<b>USE A SYSTEM LOGIC DIAGRAM (RCIC)</b>
<b>JPM NUMBER:</b>	2011-301 ADMIN-7
<b>TASK STANDARD:</b>	The task shall be complete when the Applicant has determined the failure condition of a relay using Plant Hatch logic drawings.
<b>TASK NUMBER:</b>	100.17
<b>OBJECTIVE NUMBER:</b>	100.017.O

**PLANT HATCH JTA IMPORTANCE RATING:**

**RO**

**SRO**

**K/A CATALOG NUMBER:** G2.2.41

**K/A CATALOG JTA IMPORTANCE RATING:**

**RO** 3.5

**SRO** 3.5

**OPERATOR APPLICABILITY:** Nuclear Plant Operator (NPO)

<b>GENERAL REFERENCES:</b>	<b>Unit 2</b>
	H-27673, H-27675, H-27679

<b>REQUIRED MATERIALS:</b>	<b>Unit 2</b>
	H-27673, H-27675, H-27679

**APPROXIMATE COMPLETION TIME:** 15 Minutes

**SETUP:** This JPM may be performed at any plant location , i.e. simulator, classroom, assessment room but must have a computer available and connected to the LAN, allowing the student access to plant drawing, Tech Specs, and procedures.

# EVALUATOR COPY

## UNIT 2

### READ TO THE APPLICANT

#### INITIAL CONDITIONS:

1. Unit 2 is at 100% power.
2. Relay 2E51-K52A is inoperative and is de-energized.
3. All other plant components are operable.
4. The RCIC logic function diagram LFD-2-RCIC-03 shows the related drawings are H-27675 and H-27679, which will be provided to you along with H-27673.

#### INITIATING CUES:

Describe the effect on the RCIC System if relay 2E51-K52A failed in the de-energized state. Prove your answer using plant logic drawings. The effect on system annunciators is NOT required.

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
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START  
TIME: \_\_\_\_\_

**NOTE:** Provide the Applicant with drawings H-27673, H-27675, H-27679.

1.	Applicant identifies the contacts associated with relay 2E51-K52A which effect system equipment.	Applicant locates the relay tabulation for 2E51-K52A on plant drawing H 27673.	SAT / UNSAT / NA
2.	Locate on the logic drawing 2E51-K52A contacts for valve 2E51-F031.	On drawing H 27679 the Applicant locates contacts 1-2 in the logic scheme 11, valve 2E51-F031's logic.	SAT / UNSAT / NA
**3.	Applicant determines the function of 2E51-K52A contacts for valve 2E51-F031.	Determines that upon de-energization of the relay, contacts 1-2 close, sending a signal to 2E51-F031 to <b>open</b> .	SAT / UNSAT / NA
4.	Locate on the logic drawing 2E51-K52A contacts for valve 2E51-F029.	On drawing H 27679 the Applicant locates contacts 3-4 in the logic scheme 14, valve 2E51-F029's logic.	SAT / UNSAT / NA
**5.	Applicant determines the function of 2E51-K52A contacts for valve 2E51-F029.	Determines that upon de-energization of the relay, contacts 3-4 close, sending a signal to 2E51-F029 to <b>open</b> .	SAT / UNSAT / NA

END  
TIME: \_\_\_\_\_

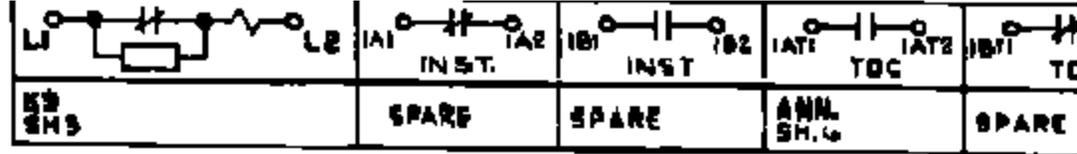
**NOTE:** The terminating cue shall be given to the Applicant when:

- With no reasonable progress, the Applicant exceeds double the allotted time.
- Applicant states the task is complete.

**TERMINATING CUE:** That completes this JPM.

# Answer key

--  
--  
--  
N  
Y  
--  
--  
Y  
Y  
--



GE TYPE CR120AD04041AA 125V DC				
ZK51A SH. 3	ZES1-F031 SH. 7	ZES1-F029 SH. 7	ANN SH. 6	SPARE
ZK52A SH. 3	ZES1-F031 SH. 7 ▲	ZES1-F029 SH. 7 ▲	ANN ▲ SH. 6	SPARE

▲ CONTACT TO BE CONVERTED TO NORMALLY CLOSED POSITION

GENERAL ELECTRIC AUXILIARY RELAY 125VDC MODEL NO CR120AD04041AA					
RELAY IMPL. NO					
ZES1A-K016	SH 4 ZONE FT	SPDS/ERF H-24585 ZONE DS	SP	SP	SP





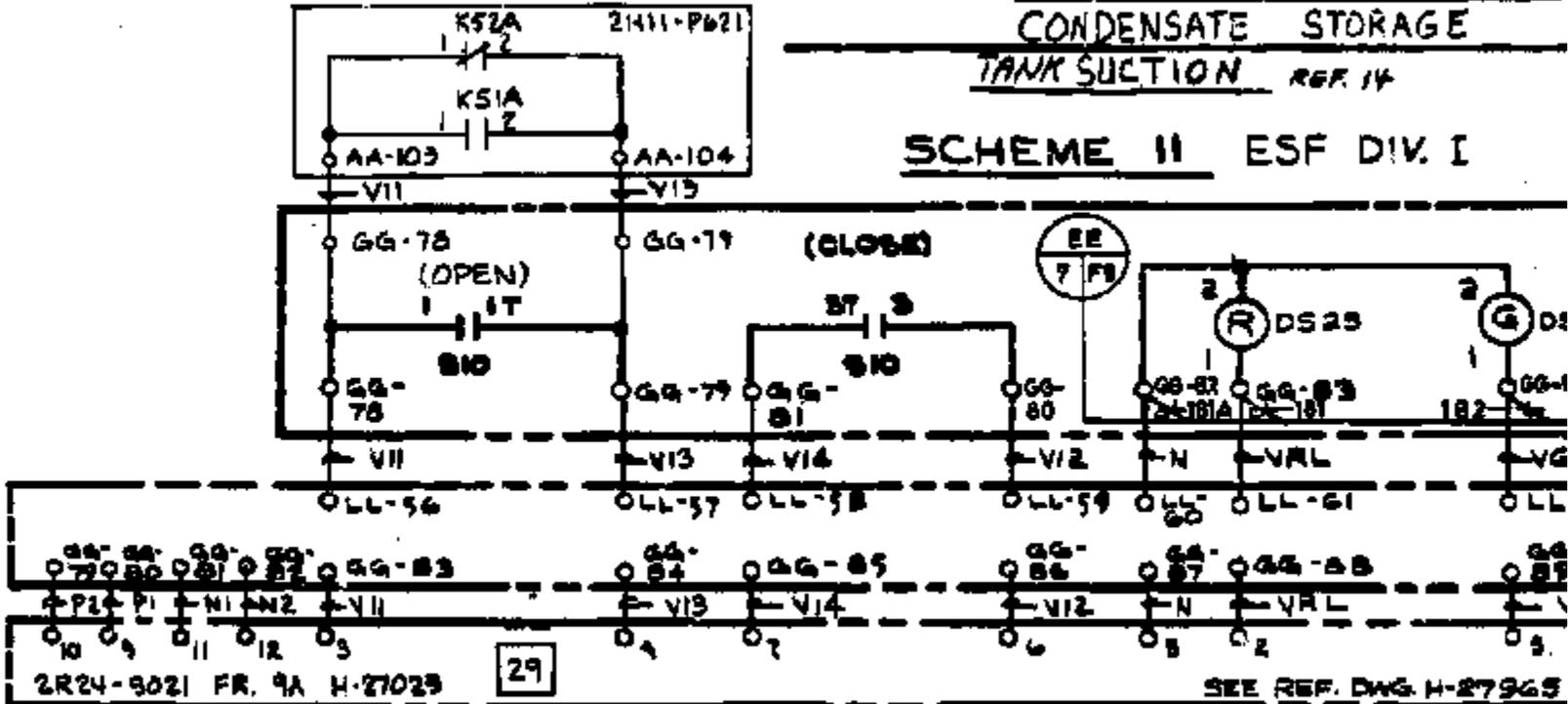
# Answer key

SEE REF. DWG H-27965

## VALVE 2E51-FO10 (DC) CONDENSATE STORAGE

TANK SUCTION REF. 14

### SCHEME II ESF DIV. I



SEE REF. DWG H-27965

## VALVE 2E51-FO31 (DC) □ □

### TORUS INBOARD SUCTION

CLOSING ON

CLOSING ON

## **UNIT 2**

### **READ TO THE APPLICANT**

#### **INITIAL CONDITIONS:**

1. Unit 2 is at 100% power.
2. Relay 2E51-K52A is inoperative and is de-energized.
3. All other plant components are operable.
4. The RCIC logic function diagram LFD-2-RCIC-03 shows the related drawings are H-27675 and H-27679, which will be provided to you along with H-27673.

#### **INITIATING CUES:**

Describe the effect on the RCIC System if relay 2E51-K52A failed in the de-energized state. Prove your answer using plant logic drawings. The effect on system annunciators is NOT required.