FINAL
Southern Nuclear
E. I. Hatch Nuclear Plant

Operations Training
JPM

ADMIN 1 (ALL)

TITLE		
Heat Stress Stay Time - Work In Steam Tunnel		
AUTHOR	**MEDIA NUMBER**	**TIME**
Ed Jones	**2011-301 ADMIN-1**	20 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	5/26/2011

SOUTHERN COMPANY

SOUTHERN NUCLEAR OPERATING COMPANY
PLANT E. I. HATCH

FORM TITLE: TRAINING MATERIAL REVISION SHEET

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-1**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
00	5/26/11	Initial Development.	ELJ	CME

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)

GENERAL REFERENCES:	**Unit 1 & 2**
	NMP-SH-002 (current version)

REQUIRED MATERIALS:	**Unit 1 & 2**
	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:

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

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)

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.	

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.

2.	Determine WBGT using one of the following methods.	The candidate selects Estimate WBGT using table provided in Appendix B if air temperature and relative humidity are known or measured. 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.	

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.	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)

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	The candidate determines the CAF to be +3°F. The candidate adds 101°F (WBGT) + 3°F (CAF) to obtain AWBGT = 104°F.	

5.	Estimate Work Level category (See definitions)	The candidate determines the work level is MODERATE (information was provided in Initial Conditions)	

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).	

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)	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
8.	Is AWBGT ≥ 103°F but < 108°F?	The candidate selects YES (AWBGT 104°F)	
9.	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.	

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.

****10.**	Estimate stay time per 6.3.1.5.	The candidate uses Appendix C to determine the maximum stay time of 30 minutes (accept ± 5 minutes)	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)

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).	

12.	Work job/task Calculate Recovery time per 6.3.2.1	The candidate determines that the task may be worked.	

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.

(Indicates critical step)**

FINAL

Southern Nuclear
E. I. Hatch Nuclear Plant

Operations TrainingJPM

ADMIN 2 SRO ONLY

TITLE		
DETERMINING OVERTIME AVAILABILITY		
AUTHOR	**MEDIA NUMBER**	**TIME**
Ed Jones	2011-301 ADMIN-2	20 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	5/26/2011

SOUTHERN NUCLEAR OPERATING COMPANY
PLANT E. I. HATCH

FORM TITLE: TRAINING MATERIAL REVISION SHEET

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-2**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
00	5/26/11	Complete rewrite of LR-JP-25035 for NMP-AD-016 implementation.	ELJ	CME

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)

GENERAL REFERENCES:	**Unit 1 & 2**
	NMP-AD-016-003

REQUIRED MATERIALS:	**Unit 1 & 2**
	NMP-AD-016-003

APPROXIMATE COMPLETION TIME: 15.0 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 two (2) operators is available.

INITIATING CUES:

IAW NMP-AD-016-003, "Scheduling and Calculating Work Hours," examine the work history of 2 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)

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.	

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	

****3.**	Operator determines that Operator #2 is ELIGIBLE to work on Unit 1 since only 3 days off are required in a rolling 15 day period. Operator #2 WILL VIOLATE OFFDAY requirements of at least 2.5 days per week for Unit 2. Operator #2 is ELIGIBLE to be called in to work on Unit 1. Operator #2 CANNOT be called in to work on Unit 2.	Referring to Operator #2 work history, the candidate DETERMINES that Operator #2 is: Eligible for U1 NOT eligible for U2	

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: Your task is complete.

(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 **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 **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

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Operations TrainingJPM

ADMIN 3 RO ONLY

TITLE		
CONDUCT OF OPERATIONS, 34SV-SUV-019-1 SURVEILLANCE		
AUTHOR	**MEDIA NUMBER**	**TIME**
Ed Jones	2011-301 ADMIN-3	15 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	5/26/2011

SOUTHERN COMPANY

SOUTHERN NUCLEAR OPERATING COMPANY PLANT E. I. HATCH	Page 1 of 1
FORM TITLE: TRAINING MATERIAL REVISION SHEET	

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-2**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
1	5/26/11	Made editorial changes from LR-JP-10022 to use on 2011-301 NRC Exam. Changed K/A to G2.1.7.	ELJ	CME

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 completeted 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)

GENERAL REFERENCES:	**Unit 1**
	34SV-SUV-019-1

REQUIRED MATERIALS:	**Unit 1**
	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

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 149ºF
   - 1T47-R612 PT 10 (1T47-N003) was 148ºF
6. SPDS is available

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)

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.	
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	
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 temperatute minus the minimum temperature is less than 40ºF.	
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 275ºF and the lowest temperature is greater than 50ºF.	

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)

NOTE: When addressing the temperature readings from the previous reading reply with:

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

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.	
****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 10ºF AND that a CR must be written	
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 275ºF and the minimum is greater than 50ºF AND the maximum temperature minus the minimum temperature of step 7.5.4 is less than 50ºF.	

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	
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 100ºF.	
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 275ºF and the minimum is greater than 50ºF.	
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 136.7ºF. (Accept ±1°F due to rounding errors)	

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 135ºF, 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.	

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	120 109 114 114 114	
7.5.2	Confirm max minus min in 7.5.1 ≤ 40°F	B	1,2,3	C		SAT	
7.5.3	Confirm max < 275°F and min > 50°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	IF the previous reading differs from the present reading by greater than 10°F OR IF erratic instrument behavior is observed THEN 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 IF CR submitted. NR IF NOT required	YES	
7.5.6	Confirm max < 275°F and min > 50°F AND max minus min ≤ 50°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 ≤ 100°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°F and min > 50°F in 7.5.7	B,C	1,2,3	C	NA	SAT	
7.5.10	Average Drywell Temperature (1) (SR 3.6.1.5.1)	L	1,2,3	C	≤ 150°F	136.7	
					INITIALS		
Calculations verified _____					DATE _____	TIME	

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

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 149ºF
   - 1T47-R612 PT 10 (1T47-N003) was 148ºF

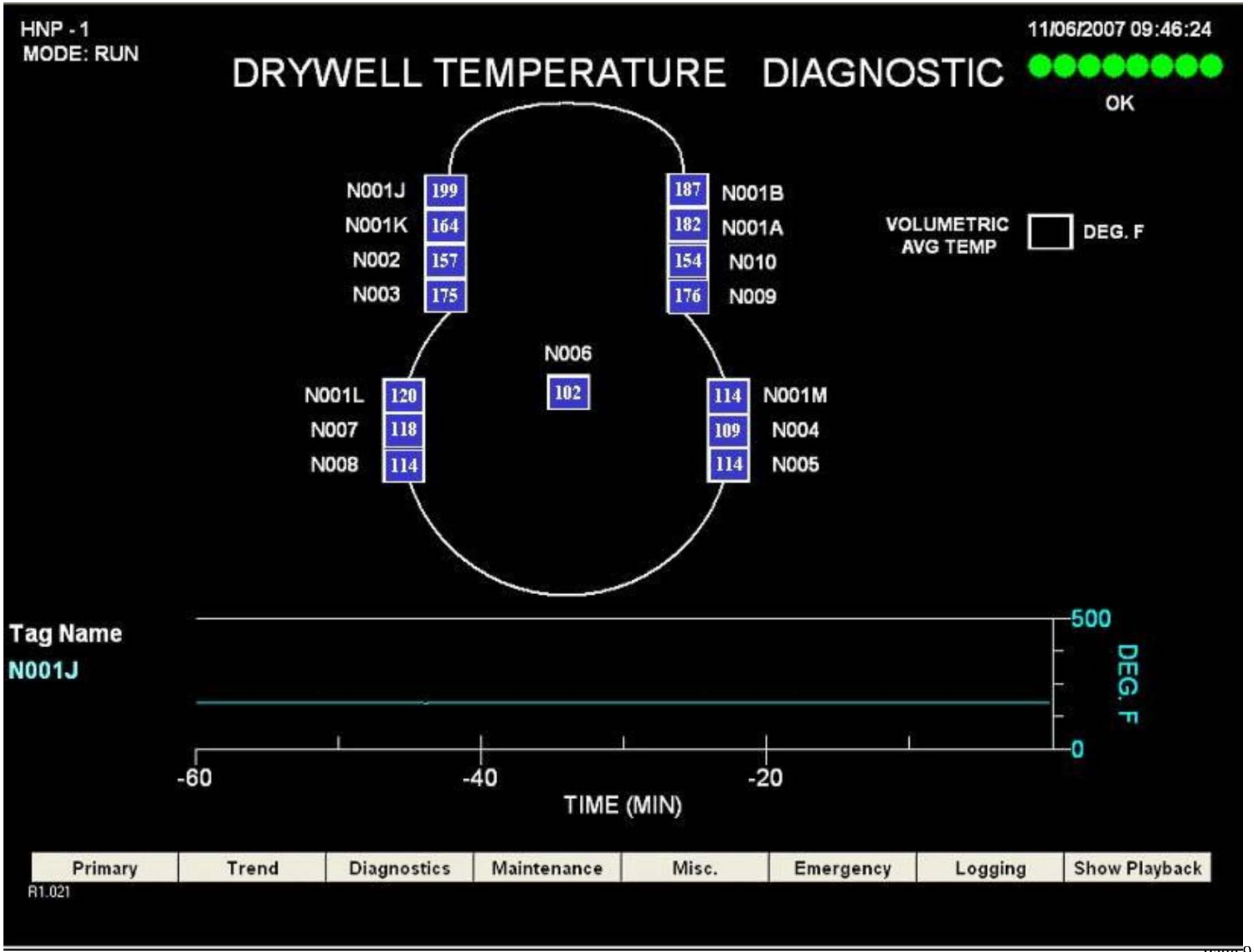
INITIATING CUES:

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



FINAL

Southern Nuclear
E. I. Hatch Nuclear Plant

Operations TrainingJPM

ADMIN 4 (SRO ONLY)
DO NOT GIVE AS A GROUP

TITLE		
CONTROL HYDROGEN AND OXYGEN CONCENTRATIONS IN PRIMARY CONTAINMENT WHEN PRIMARY CONTAINMENT GAS CONTROL FLOWCHART IS ENTERED		
AUTHOR	**MEDIA NUMBER**	**TIME**
Ed Jones	2011-301 ADMIN-4	20 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	5/26/2011

SOUTHERN COMPANY

SOUTHERN NUCLEAR OPERATING COMPANY
PLANT E. I. HATCH

FORM TITLE: TRAINING MATERIAL REVISION SHEET

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-4**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
00	5/26/11	Initial development using LR-JP-20172.1 to use on NRC Exam 2011-301.	ELJ	CME

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)

GENERAL REFERENCES:	**Unit 2**
	31EO-PCG-001-2

REQUIRED MATERIALS:	**Unit 2**
	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, address and state ALL steps, actions, and orders that are to be directed, due to these plant conditions.

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)

START TIME:_____

PROMPT: At this time **PROVIDE ALL ATTACHMENTS** to the student.

**1.	Enters the PCG flowchart.	The candidate ENTERS 31EO-PCG-001 flowchart.	
2.	Confirm the H_2O_2 analyzers are in service.	The candidate DETEMINES that the the H_2O_2 analyzers are in service by checking 2H11-P700 or SPDS.	
3.	Evaluate the override at C-5.	The candidate DETERMINES that path G-3 Point "T" is to be entered.	
4.	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	
**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.	

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.	

PROMPT: **WHEN** the candidate directs the securing DW Cooling Fans, **INFORM** the candidate that DW Cooling Fans are secured.

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
**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.	

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	
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.	
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.	
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 is service.	
12.	Evaluates the override at F-10, on path G-3, to determine if Torus level is below 285 inches.	The candiate DETERMINES that, based on initial conditions, Torus level is below 285 inches. (Currently 250 inches steady)	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
**13.	Evaluates the override at F-10, on path G-3, to determine whether Torus Spray should be initated.	The candidate DIRECTS an NPO to INITIATE Torus sprays per 34SO-E11-010-2, irrespective of adequate core cooling.	

PROMPT: **WHEN** the candidate directs the Torus Sprays to be initiated, **INFORM** the candidate Torus Sprays are being placed in service.

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

14.	Evaluates the override at F-10, on path G-3, to determine whether the DW is being vented through the Torus.	The candiate DETERMINES that, based on initial conditions, NO Primary Containment venting is in progress.	

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).	

**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.	

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 throught the Torus, **INFORM** the candidate the indications are DW pressure and Torus pressure are both slowly decreasing.

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
**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.	

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.

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.	

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	

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

END TIME:_____

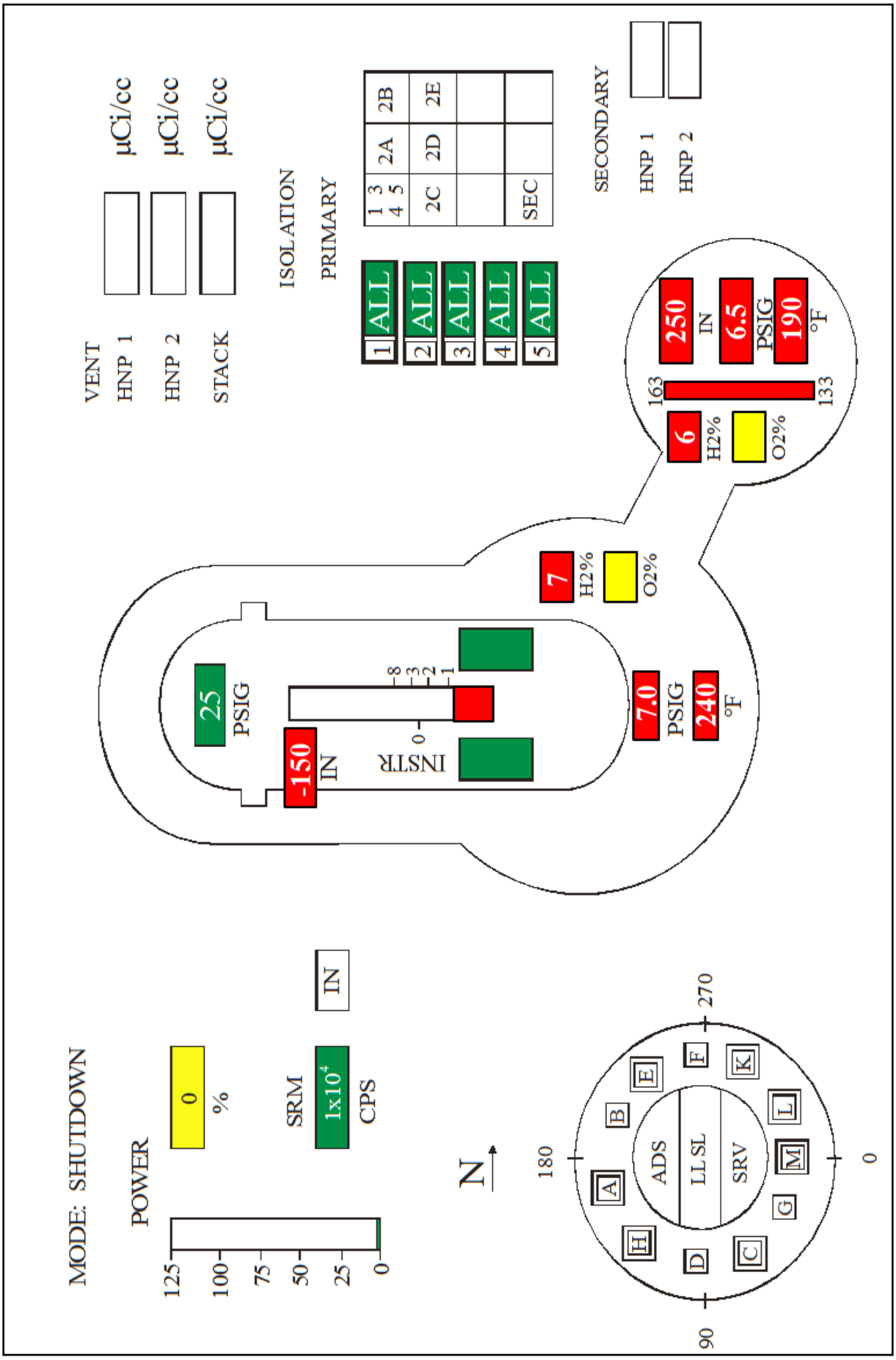
NOTE: The terminating cue shall be given to the candidate when:

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

TERMINATING CUE: We will stop here.

(Indicates critical step)**

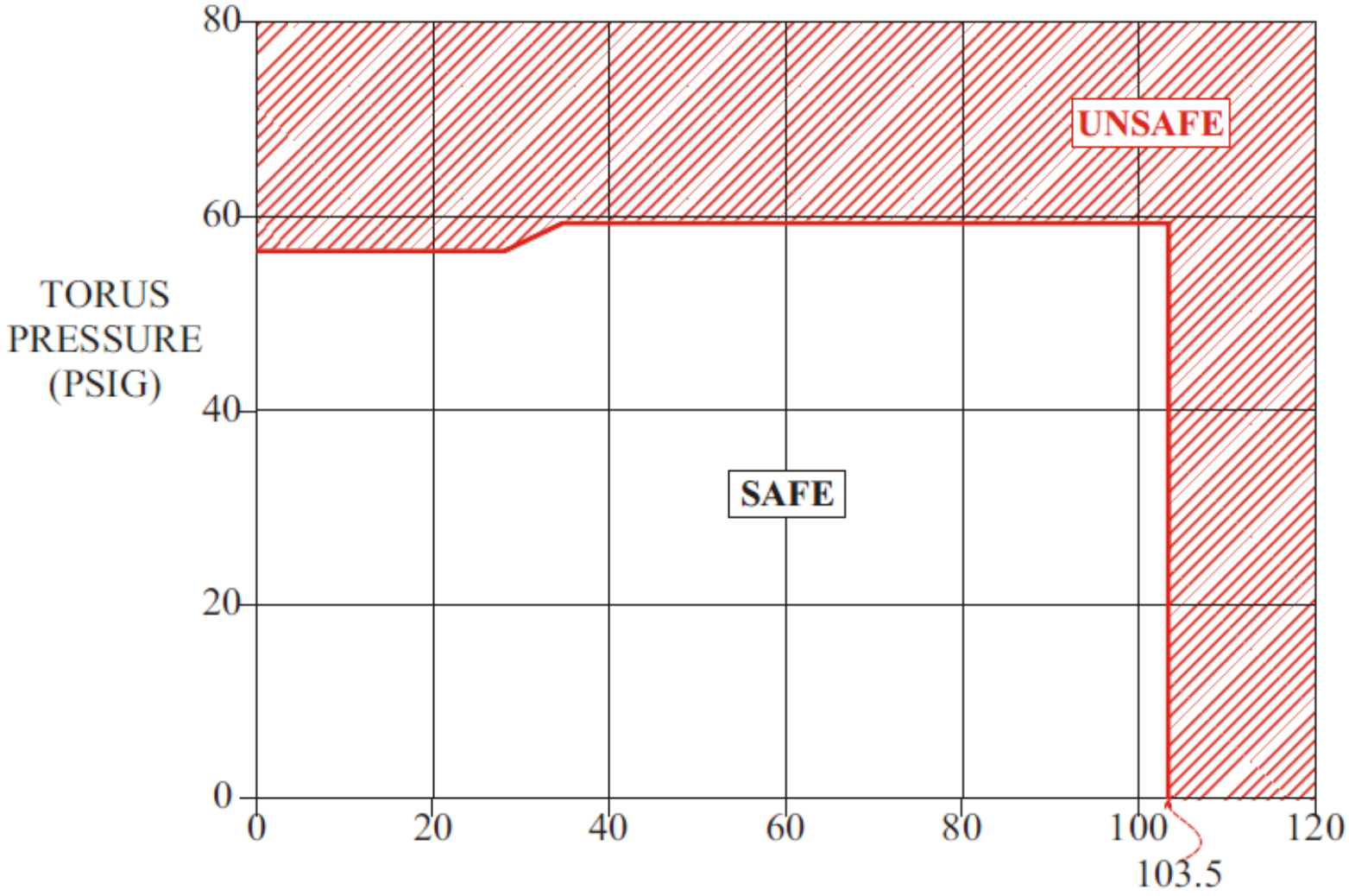
Attachment 1



GRAPH 13

UNIT 2

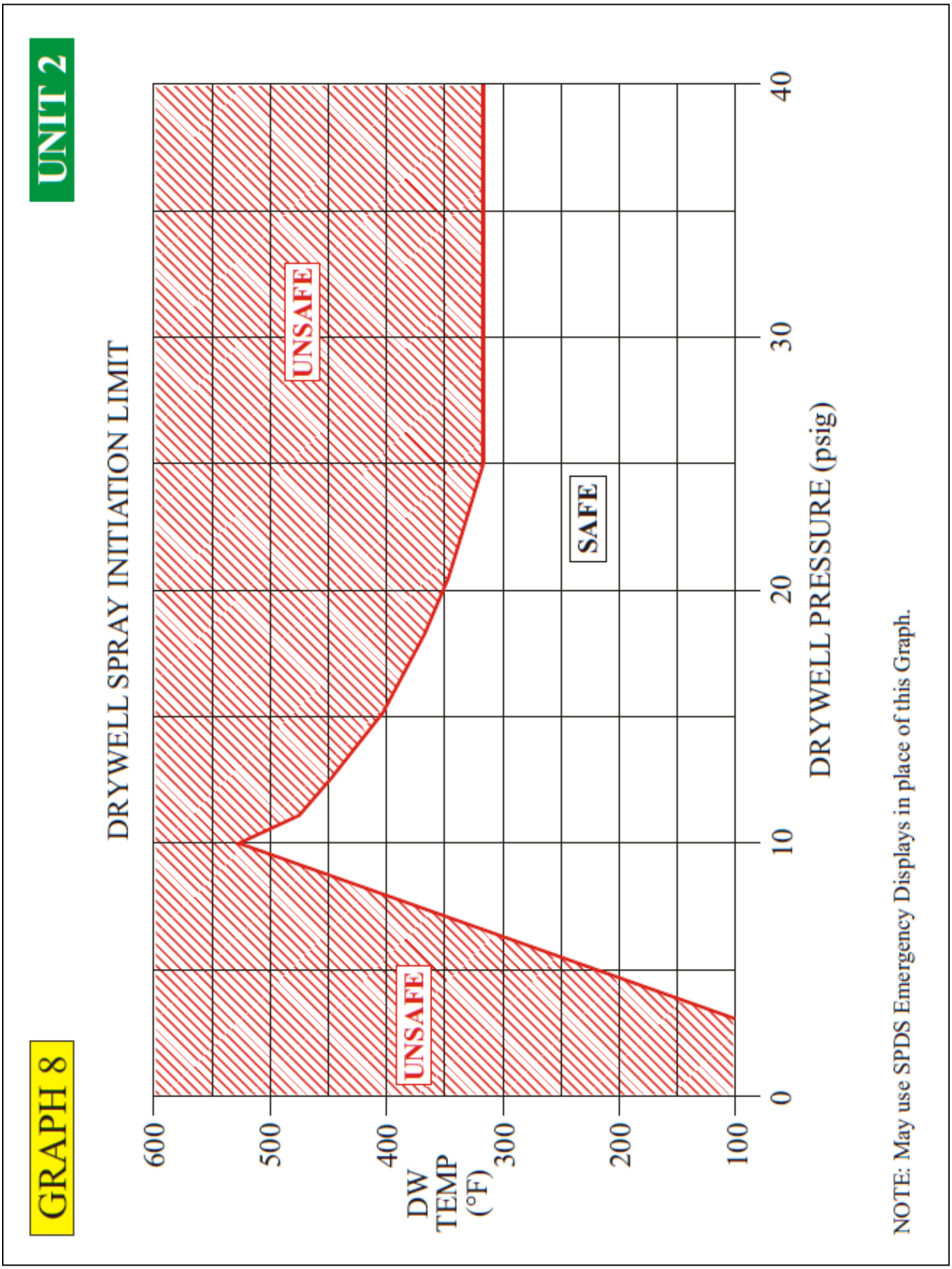
PRIMARY CONTAINMENT PRESSURE LIMIT



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

Attachment 2

Attachment 3



FINAL

Southern Nuclear
E. I. Hatch Nuclear Plant

Operations Training JPM

ADMIN 5 RO ONLY

TITLE		
DETERMINE THE EVACUATION ROUTE DURING AN EMERGENCY		
AUTHOR	**MEDIA NUMBER**	**TIME**
Ed Jones	**2011-301 ADMIN-5**	9.0 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	5/26/2011

SOUTHERN COMPANY

SOUTHERN NUCLEAR OPERATING COMPANY
PLANT E. I. HATCH

FORM TITLE: TRAINING MATERIAL REVISION SHEET

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-5**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
17	5/26/11	Revise JPM LR-JP-20059, due to implementation of NMP-EP 110 and NMP-EP-111 and for NRC Exam 2011-3011.	ELJ	CME

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)

GENERAL REFERENCES:	**Unit 1 & 2**
	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)

REQUIRED MATERIALS:	**Unit 1 & 2**
	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 an Elevated 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)

START TIME:_____

NOTE: The candidate may review NMP-EP-111 Checklist 1 "Page Announcements".

PROMPT: **AT THIS TIME PROVIDE** the candidate with the following:

o NMP-EP-111-002, "EMERGENCY NOTIFICATION NETWORK COMMUNICATOR INSTRUCTIONS – HATCH."
AND
o Also **PROVIDE** the attached SPDS Attachments.

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.	

**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	

NOTE: The candidate may review the NOTES at the top of NMP-EP-111-002, "IV. Standard Announcement For Notification Of SAE Or GE"

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

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**.

****4.**	Check wind direction.	At panel 1H11-P690, wind direction checked on one of the following: SPDS MIDAS screen OR SPDS MET Data screen	

****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: Rally point: PESB Exit Route: Main Access Road Evacuation Route: 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."	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)

NOTE: If the operator uses the 10 Meter wind direction, the evacuation route will (INCORRECTLY) state "Either direction on U.S. Highway 1 to Toombs Co. High School/Lyons or Appling Co. High School/Baxley."

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 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.

(Indicates critical step)**

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.**

NOTE:	Announcement of items 4 or 5 may be discontinued upon verification that non-essential personnel have left the plant site.

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
340º - 60º	Gate 17	Main Access Road	U.S. Highway 1 - North to Toombs Co. High School/Lyons
61º - 110º	PESB	Road behind Low Level Radwaste Building	U.S. Highway 1 - South to Appling Co. High School/ Baxley
111º - 225º	PESB	Main Access Road	U.S. Highway 1 - South to Appling Co. High School/ Baxley
226º - 339º	PESB	Main Access Road	Either direction on U.S. Highway 1 to Toombs Co. High School/Lyons or Appling Co. High School/Baxley

MIDAS INFORMATION

METEOROLOGICAL

10M WIND SPD 1Y33-R601	100M WIND SPD 1Y33-R603	10M WIND DIR 1Y33-R601	100M WIND DIR 1Y33-R603
5.0	**4.0**	**250**	**190**

AMBIENT TEMP **(F) 10M**	DELTA T **60-10**	DELTA T **100-10**	RAINFALL **15 MIN. AVG**
55	**-0.5**	**-1.0**	**.000**

RADIOLOGICAL

MAIN STACK		U1 RX. BLDG. VENT		U2 RX. BLDG. VENT	
NORMAL RANGE 1D11-K600A	KAMAN 1D11-R631	NORMAL RANGE 1D11-K619A	KAMAN 1D11-R631	NORMAL RANGE 2D11-K636A	KAMAN 2D11-R631
2.00E 01	5.02E-03	6.70E 01	5.04E-03	1.02E 06	5.00E-02
1D11-K600B		1D11-K619B		2D11-K636B	
1.96E 01		6.67E 01		1.04E 06	

STABILITY CLASS
D

METEROLOGICAL DATA

WIND	(DIRECTION FROM)	15-MIN. AVERAGE	STD-DEV	SPEED	15-MIN. AVERAGE
10 M ELEVATION	**250 DEG**	**250 DEG**	**12 DEG**	**1 MPH**	**0 MPH**
60 M ELEVATION	**220 DEG**	**220 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

FINAL

Southern Nuclear
E. I. Hatch Nuclear Plant

Operations Training JPM

ADMIN 6 SRO ONLY

TITLE		
Determine if ENN form is ready for approval, make recommendations to the Emergency Director		
AUTHOR	**MEDIA NUMBER**	**TIME CRITICAL**
Ed Jones	2011-301 ADMIN-6	15 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	05/26/2011

SOUTHERN COMPANY

SOUTHERN NUCLEAR OPERATING COMPANY PLANT E. I. HATCH	Page 1 of 1
FORM TITLE: TRAINING MATERIAL REVISION SHEET	

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-6**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
00	05/26/11	Initial development for NRC Exam 2011-301.	ELJ	CME

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)

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

REQUIRED MATERIALS:	**Unit 2**
	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.

THIS JPM IS TIME CRITICAL

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.	Evaluate whether ENN form Step 2, Initial/Follow-up, is correct.	The candidate determines that "INITIAL" is CORRECTLY selected for Step 1	

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.

****2.**	Evaluate whether ENN form Step 3, Site, is correct filled in.	The candidate determines that the SITE is NOT correctly filled in. The candidate is expected to recommend, to the Emergency Director (ED), that PLANT HATCH be written in the space provided for Step 3.	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
**3.	Evaluate whether ENN form Step 4, Emergency Classification, is correct.	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). The candidate is expected to recommend to the ED that a SITE AREA EMERGENCY is required to be selected/declared for Step 4.	
4.	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.	
5.	Evaluate whether ENN form Step 6, Emergency Release, is correct.	The candidate determines that NONE is CORRECTLY checked for Step 6.	

PROMPT: **IF** asked about whether an Offsite Dose Assessment has been performed, **INFORM** the candidate that NEITHER a Prompt Offsite Dose Assessment NOR an assessment by the Offsite Dose Assessment staff have been performed.

NOTE: 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.

6.	Evaluate whether ENN form Step 7, Release Significance, is correct.	The candidate determines that NOT APPLICABLE is CORRECTLY checked for Step 7.	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
7.	Evaluate whether ENN form Step 8, Event Prognosis, is correct.	The candidate determines that STABLE is CORRECTLY checked for Step 8.	

PROMPT: **IF ASKED** about the SPDS MIDAS screen, **PROVIDE** the candidate with ATTACHMENT 2, SPDS MIDAS Information screen display.

8.	Evaluate whether ENN form Step 9, Meteoroligical Date, is correct.	The candidate determines that: □ Wind Direction (163°) and □ Wind Speed (12 mph) are CORRECTLY filled in for Step 9.	
9.	Evaluate whether ENN form Step 9, Meteoroligical Date, is correct.	The candidate determines that: □ Precipitation (0) and □ Stability Class (E) are CORRECTLY filled in for Step 9.	
10.	Evaluate whether ENN form Step 10, Declaration/Termination and Time/Date are correct.	The candidate determines that: □ DECLARATION, □ TIME, and □ DATE are CORRECT for Step 10.	
****11.**	Evaluate whether ENN form Step 11, AFFECTED UNIT(S), is correct.	The candidate determines that Step 11 has NOT been correctly completed. The candiadate is expected to RECCOMEND to the ED, that UNIT 2 is required to be selected for Step 11.	

(Indicates critical step)**

STEP #	PERFORMANCE STEP	STANDARD	SAT/UNSAT (COMMENTS)
12.	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.	
13.	Evaluate whether ENN form Step 13, Remarks, is correct.	The candidate determines that Remarks are exceptable for Step 13.	

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.

(Indicates critical step)**

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

1. [X] A DRILL [ ] B ACTUAL EVENT MESSAGE # _____
2. [X] A INITIAL [ ] B FOLLOW-UP NOTIFICATION: TIME_____DATE____/____/__ AUTHENTICATION #_____
3. SITE: _____ Confirmation Phone #_____

4. EMERGENCY CLASSIFICATION: [X] A UNUSUAL EVENT [ ] B ALERT [ ] C SITE AREA EMERGENCY [ ] D 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: [X] NONE
[ ] B EVACUATE _____
[ ] C SHELTER _____
[ ] D 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.
[ ] E OTHER _____

6. EMERGENCY RELEASE: [X] None [ ] B Is Occurring [ ] C Has Occurred

7. RELEASE SIGNIFICANCE: [X] Not applicable [ ] B Within normal operating limits [ ] C Above normal operating limits [ ] D Under evaluation

8. EVENT PROGNOSIS: [ ] A Improving [X] B Stable [ ] C 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 [X] E [ ] F [ ] G

10. [X] A DECLARATION [ ] B TERMINATION Time 15:00 Date 06/01/2011

11. AFFECTED UNIT(S): [ ] 1 [ ] 2 [ ] All

12. UNIT STATUS: (Unaffected Unit(s) Status Not Required for Initial Notifications)
[ ] A U1 ____% Power Shutdown at Time _____ Date ___/____/____
[X] 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)

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

1. [X] DRILL [ ] ACTUAL EVENT — MESSAGE # _____
2. [X] INITIAL [ ] FOLLOW-UP — NOTIFICATION: TIME_____DATE____/____/__ AUTHENTICATION #_____
3. SITE: HATCH — Confirmation Phone #_____

4. EMERGENCY CLASSIFICATION: [ ] UNUSUAL EVENT [ ] ALERT [X] 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: [X] 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: [X] None [ ] Is Occurring [ ] Has Occurred

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

8. EVENT PROGNOSIS: [ ] Improving [X] 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* [ ] [ ] [ ] [ ] [X] [ ] [ ]

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

11. AFFECTED UNIT(S): [ ] 1 [X] 2 [ ] All

12. UNIT STATUS: (Unaffected Unit(s) Status Not Required for Initial Notifications)
[ ] U1 _____% Power Shutdown at Time _____ Date ___/____/____
[X] 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: [ ] Elevated [ ] Mixed [ ] Ground UNITS: [ ] Ci [ ] Ci/sec [ ] µCi/sec

MAGNITUDE: Noble Gases:_____ Iodines:_____ Particulates:_____ Other: _____

FORM: [ ] Airborne Start Time _____ Date ___/____/____ Stop Time _____ Date ___/____/____
[ ] 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)

HNP - 2
MODE: FUEL

MIDAS INFORMATION

OK

METEOROLOGICAL

10M WND SPD 15 MIN AVG. 1Y33-R601	100M WND SPD 15 MIN AVG. 1Y33-R603	10M WND DIR 15 MIN AVG. 1Y33-R601	100M WND DIR 15 MIN AVG. 1Y33-R603
12	12	163	163

AMBIENT TEMP. (F) 10 M	DELTA T 15 MIN AVG. 60 - 10	DELTA T 15 MIN AVG. 100 - 10	RAINFALL 15 MIN AVG.	STABILITY CLASS
74	1.425	1.044	0.000	E

RADIOLOGICAL

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

FLOW

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

Primary	Trend	Diagnostics	Maintenance	Misc.	Emergency	Logging	Show Playback

R1.022

FINAL

Southern Nuclear
E. I. Hatch Nuclear Plant

Operations TrainingJPM

ADMIN 7 ALL

TITLE		
USE A SYSTEM LOGIC DIAGRAM (RCIC)		
AUTHOR	**MEDIA NUMBER**	**TIME**
Anthony Ball	2011-301 ADMIN-7	15 Minutes
RECOMMENDED BY	**APPROVED BY**	**DATE**
N/R	C. M. EDMUND	5/26/2011

SOUTHERN COMPANY

SOUTHERN NUCLEAR OPERATING COMPANY
PLANT E. I. HATCH

FORM TITLE: TRAINING MATERIAL REVISION SHEET

Program/Course Code: **OPERATIONS TRAINING** Media Number: **2011-301 ADMIN-7**

Rev. No.	Date	Reason for Revision	Author's Initials	Supv's Initials
00	5/26/11	Revised JPM LR-JP-10018 for NRC Exam 2011-301.	ARB	CME

UNIT 1 () UNIT 2 (X)

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

GENERAL REFERENCES:	**Unit 2**
	H-27673, H-27675, H-27679

REQUIRED MATERIALS:	**Unit 2**
	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)

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 **open**.	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 **open**.	SAT / UNSAT / NA

NOTE: The operator may inform the Evaluator that 2E51-F010 will close, but this is NOT required and is an effect of the 2E51-F029 and 2E51-F031 opening.

END TIME:_____

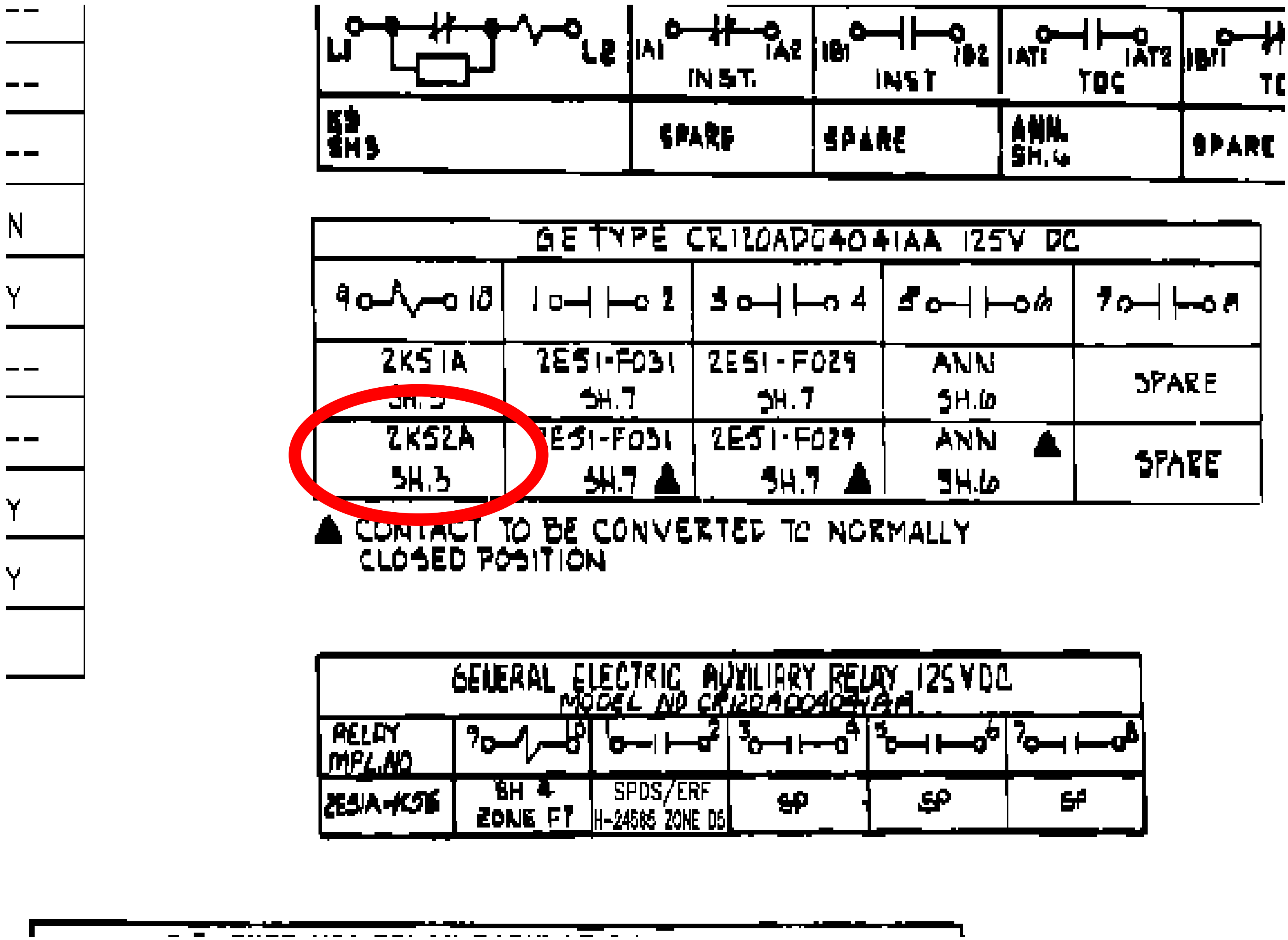
NOTE: The terminating cue shall be given to the operator when any one of the following is met:

- After JPM step #5 is complete.
- With no reasonable progress, the Applicant exceeds double the allotted time.
- Applicant states the task is complete.

TERMINATING CUE: We will stop here.

EVALUATOR – PICK UP the Initiating Cue sheet.

Answer key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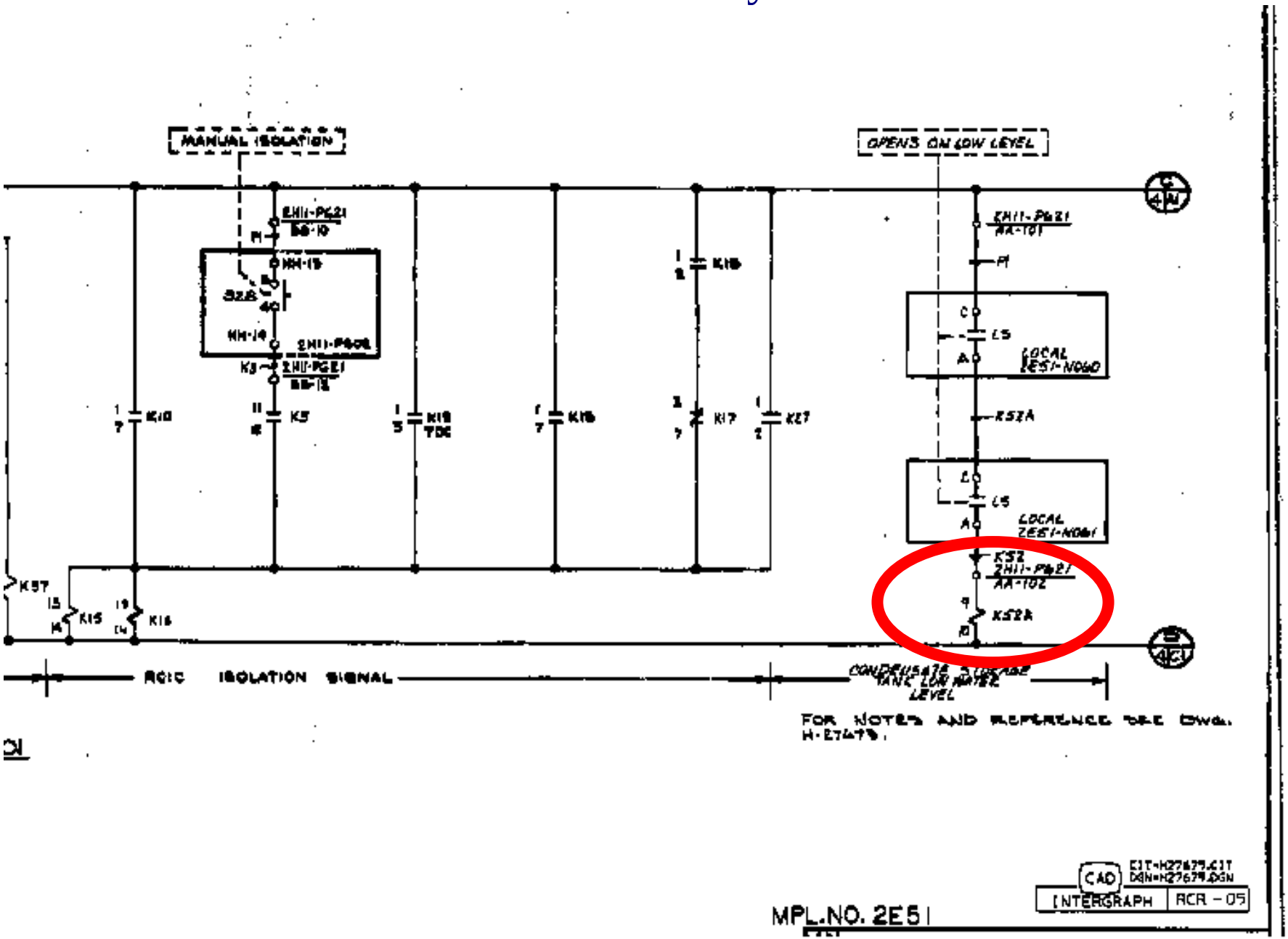
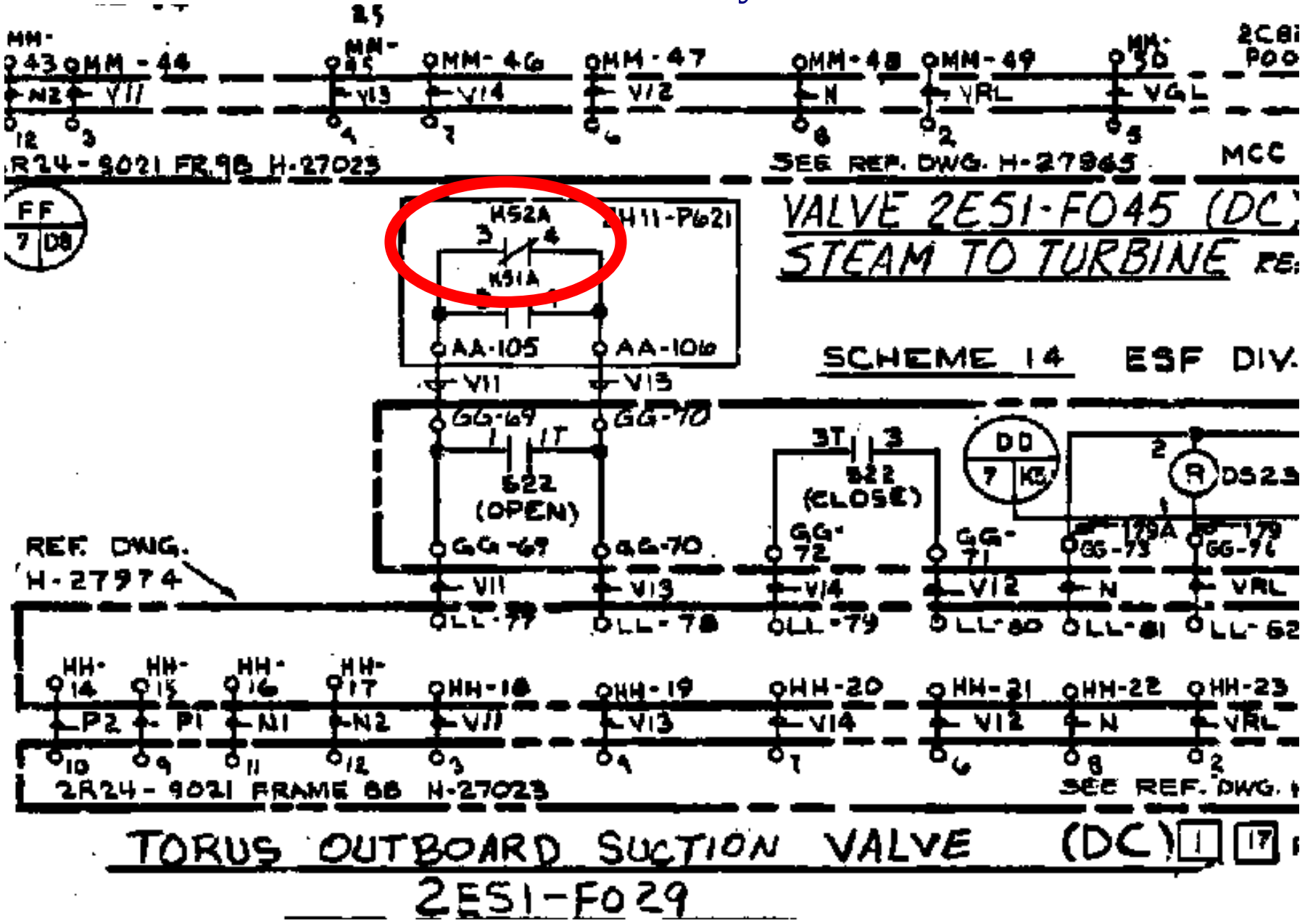
N
Y
--
--
Y
Y
L1
L2
1A1
1A2
INST.
1B1
1B2
INST
1AT1
1AT2
TOC
1BT1
KS
SH3
SPARE
SPARE
ANN.
SH.6
SPARE
GE TYPE CR120ADG4041AA 125V DC
9
10
1
2
3
4
5
6
7
8
2KS1A
2ES1-F031
SH.7
2ES1-F029
SH.7
ANN
SH.6
SPARE
2KS2A
SH.3
2ES1-F031
SH.7
2ES1-F029
SH.7
ANN
SH.6
SPARE
CONTACT TO BE CONVERTED TO NORMALLY
CLOSED POSITION
GENERAL ELECTRIC AUXILIARY RELAY 125VDC
MODEL NO CR120ADG4041AA
RELAY
MPL NO
2ES1A-K36
SH 4
ZONE F7
SPDS/ERF
H-24585 ZONE D5
SP
SP
SP

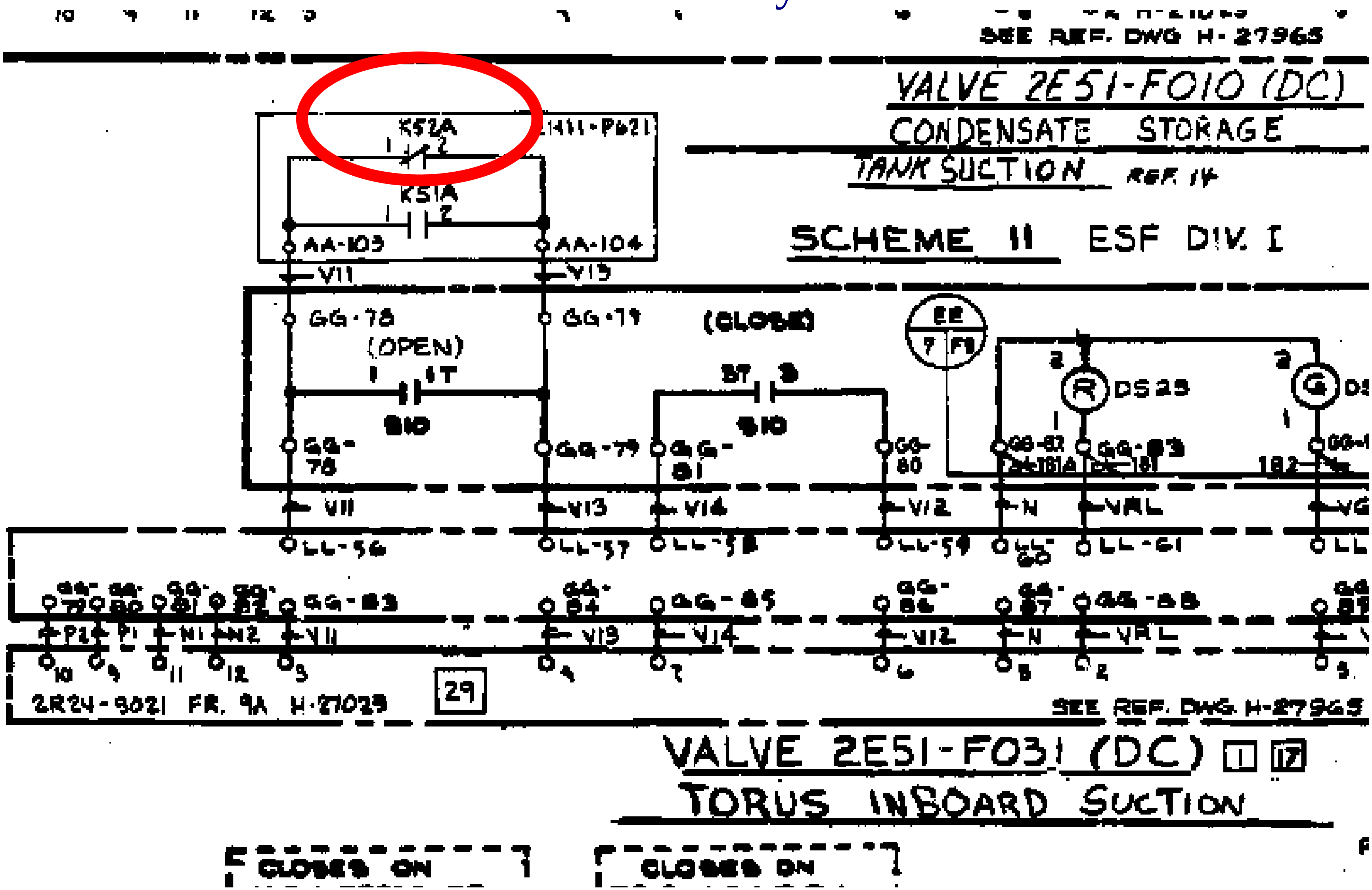
Answer key


MANUAL ISOLATION
OPENS ON LOW LEVEL
RCIC ISOLATION SIGNAL
FOR NOTES AND REFERENCE SEE DWG. H-27479.
MPL.NO. 2E51
CAD
INTERGRAPH
RCR - 05

Answer key


SEE REF. DWG. H-27965
MCC
VALVE 2ESI-F045 (DC)
STEAM TO TURBINE
K52A
K51A
2H11-P621
AA-105
AA-106
SCHEME 14 ESF DIV.
GG-69
GG-70
1T
3T
K22 (OPEN)
K22 (CLOSE)
REF. DWG. H-27974
2R24-9021 FR.9B H-27023
2R24-9021 FRAME 8B H-27023
SEE REF. DWG.
TORUS OUTBOARD SUCTION VALVE (DC)
2ESI-F029

Answer key


SEE REF. DWG H-27965
VALVE 2E51-F010 (DC)
CONDENSATE STORAGE
TANK SUCTION
REF. 14
SCHEME 11 ESF DIV. I
K52A
K51A
1H11-P621
AA-103
AA-104
V11
V13
GG-78
GG-79
(OPEN)
(CLOSE)
810
DS25
LL-56
LL-57
2R24-S021 FR. 9A H-27023
29
SEE REF. DWG. H-27965
VALVE 2E51-F031 (DC)
TORUS INBOARD SUCTION
CLOSES ON
CLOSES 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.