NRC Admin RO / SRO Job Performance Measure "a"

Facility: Vogtle

Task No: V-LO-TA-37026

Task Title: Determine Maximum Allowable Venting Time for Venting Voids in the Reactor Vessel

JPM No: V-NRC-JP-19263-HL19

K/A Reference: G2.1.25 RO 3.9 SRO 4.2

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions: **Unit 2 has experienced a LOCA.**

RCS pressure is recovering and the control room crew has transitioned to 19263-C, "Response to Voids in Reactor Vessel," due to low RVLIS level.

Initiating Cue: **The Shift Supervisor has directed you to, "Use the indications provided to determine the maximum allowable venting time by completing Attachment 3 of 19263-C."**

1AR-12979, Containment Hydrogen Recorder, is OOS.

Task Standard:	Candidate correctly determines the maximum allowable venting time using Attachment 3 of 19263-C, “Response to Voids in Reactor Vessel.”
Required Materials:	Attachment 3 and Figure 1 of 19263-C, “Response to Voids in Reactor Vessel” (rev. 22) Six pages of instrument pictures Calculator Ruler or straight edge
General References:	None
Time Critical Task:	No
Validation Time:	12 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

START TIME: _____

***JPM 1.** **Determine maximum allowable venting time.**

Standard: **Candidate correctly determines a maximum allowable venting time of 1.05 – 1.19 minutes or 1.15 – 1.31 minutes by completing Attachment 3 of 19263-C, "Response to Voids in Reactor Vessel."**
NOTE: Either range is acceptable based on which hydrogen concentration meter is selected in Step 2.a. of Attachment 3.

NOTE TO EXAMINER: The Answer Key is on the following pages.

Comment:

STOP TIME: _____

Terminating cue: Candidate returns initiating cue sheet.

INSTRUMENT READINGS OBTAINED FROM PICTURES
(DO NOT PROVIDE TO CANDIDATES)

Indicator	Value
UT-2501	140° F
AI-12979 / AI-12980	1.9% / 2.0%
PI-408	750 psig
PI-418	800 psig
PI-428	750 psig
PI-438	775 psig

ATTACHMENT 3 ANSWER KEY (DO NOT PROVIDE TO CANDIDATES)
Critical step data is highlighted

1. Determine Containment Volume at Standard Temperature and Pressure:

   a. Record Containment Temperature (°F).
   (Plant Computer Point UT-2501) **140**

   b. Convert using Rankine Temperature:
   492 / (1.a. + 460) = **0.8 – 0.82**

   c. Calculate CNMT Volume at STP:
   (2.75E6 Cu. ft.) x (1.b.) = **2.2 – 2.255 E6**

2. Determine the maximum H_2 (hydrogen) volume that can be safely vented:

   a. Record Containment H2 reading in percent.
   (AI-12979 or AI-12980 or AR-12979) **1.9 or 2 (based on meter selected)**

   b. Determine H_2 concentration margin:
   [3.0% - (2.a.)] / 100% = **0.011 or 0.01 (based on value used in 2.a.)**

   c. Calculate maximum volume:
   (2.b.) x (1.c.) = **24200 - 24805 or 22000 – 22550 (based on value used in 2.b.)**

3. Determine H_2 Vent Flow rate as a function of RCS pressure:

   a. Record RCS pressure using highest reading meter. **800 (highest reading)**
      - PI-408
      - PI-418
      - PI-428
      - PI-438

   b. Use FIGURE 1 to determine H_2 Flow rate. **20000 [± 1000]**

4. Calculate maximum venting time:

   a. Maximum Venting time:
   (2.c.) / (3.b.) = **1.15 – 1.31 or 1.05 – 1.19** minutes **(ranges based on value used in 2.c.)**

END OF ATTACHMENT 3

FIGURE 1 ANSWER KEY (DO NOT PROVIDE TO CANDIDATES)

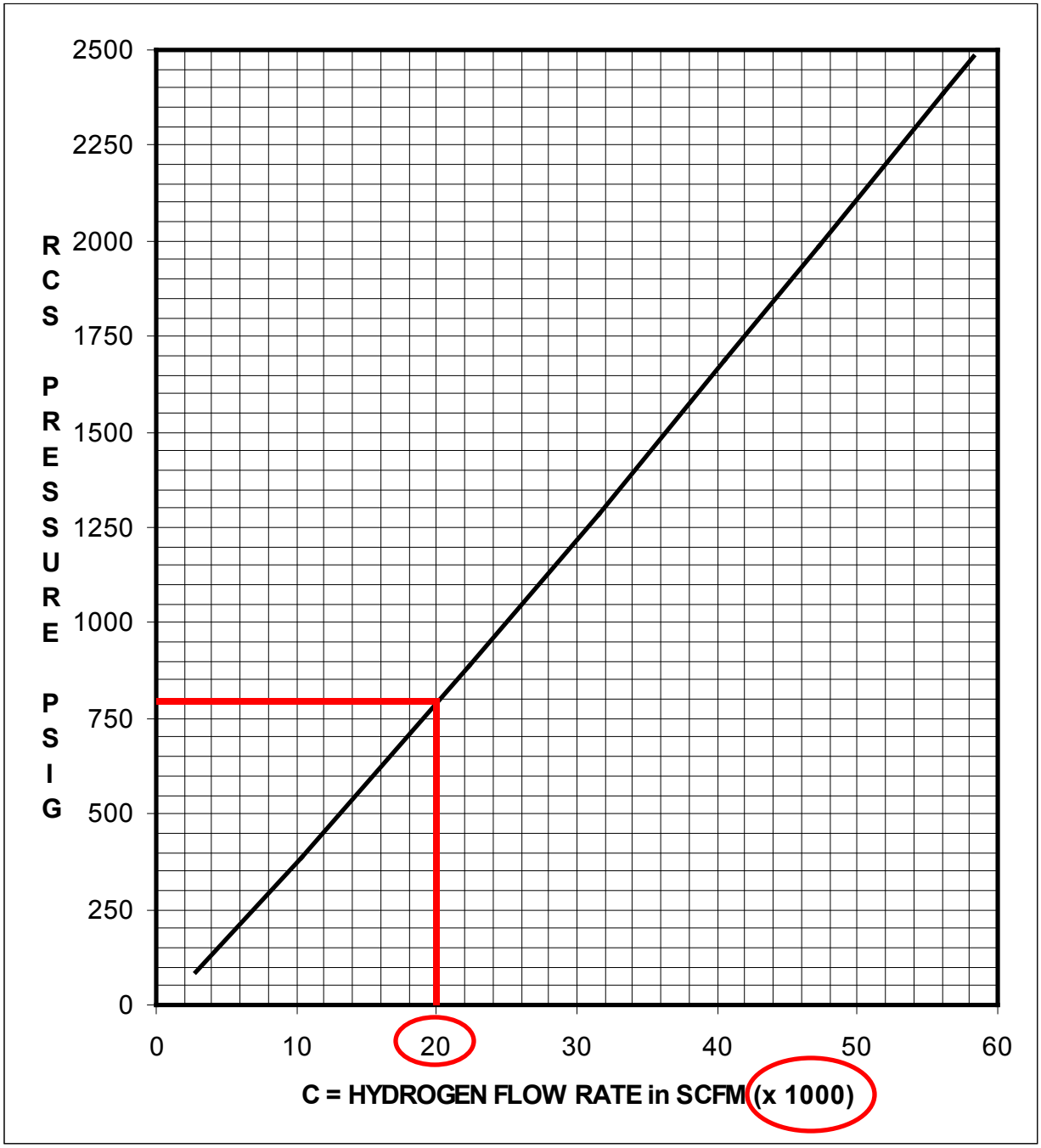


FIGURE 1
HYDROGEN FLOW RATE VERSUS RCS PRESSURE

Verification of Completion

Job Performance Measure No.: V-NRC-JP-19263-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

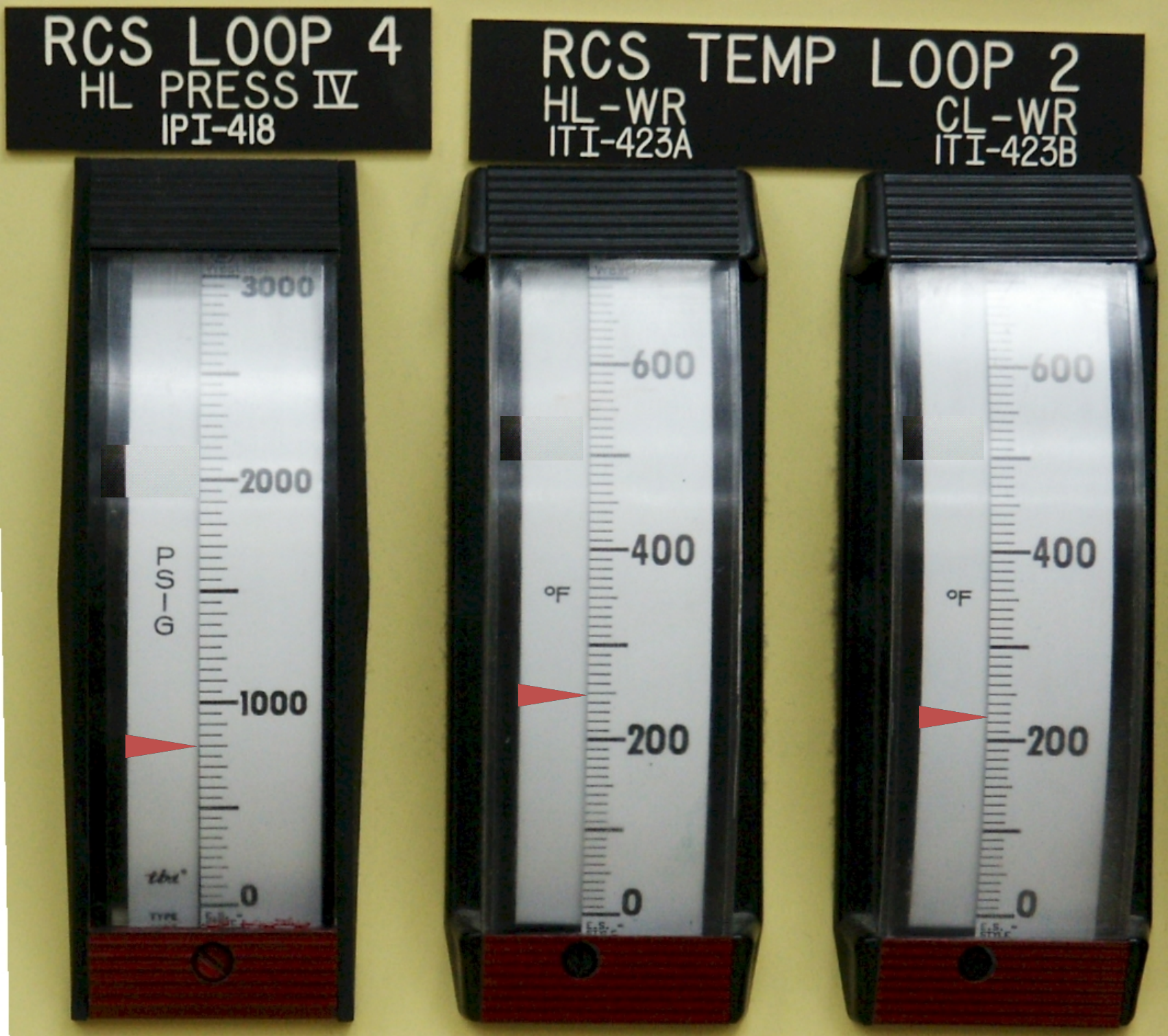
Initial Conditions: **Unit 2 has experienced a LOCA.**

RCS pressure is recovering and the control room crew has transitioned to 19263-C, "Response to Voids in Reactor Vessel," due to low RVLIS level.

Initiating Cue: **The Shift Supervisor has directed you to, "Use the indications provided to determine the maximum allowable venting time by completing Attachment 3 of 19263-C."**

1AR-12979, Containment Hydrogen Recorder, is OOS.

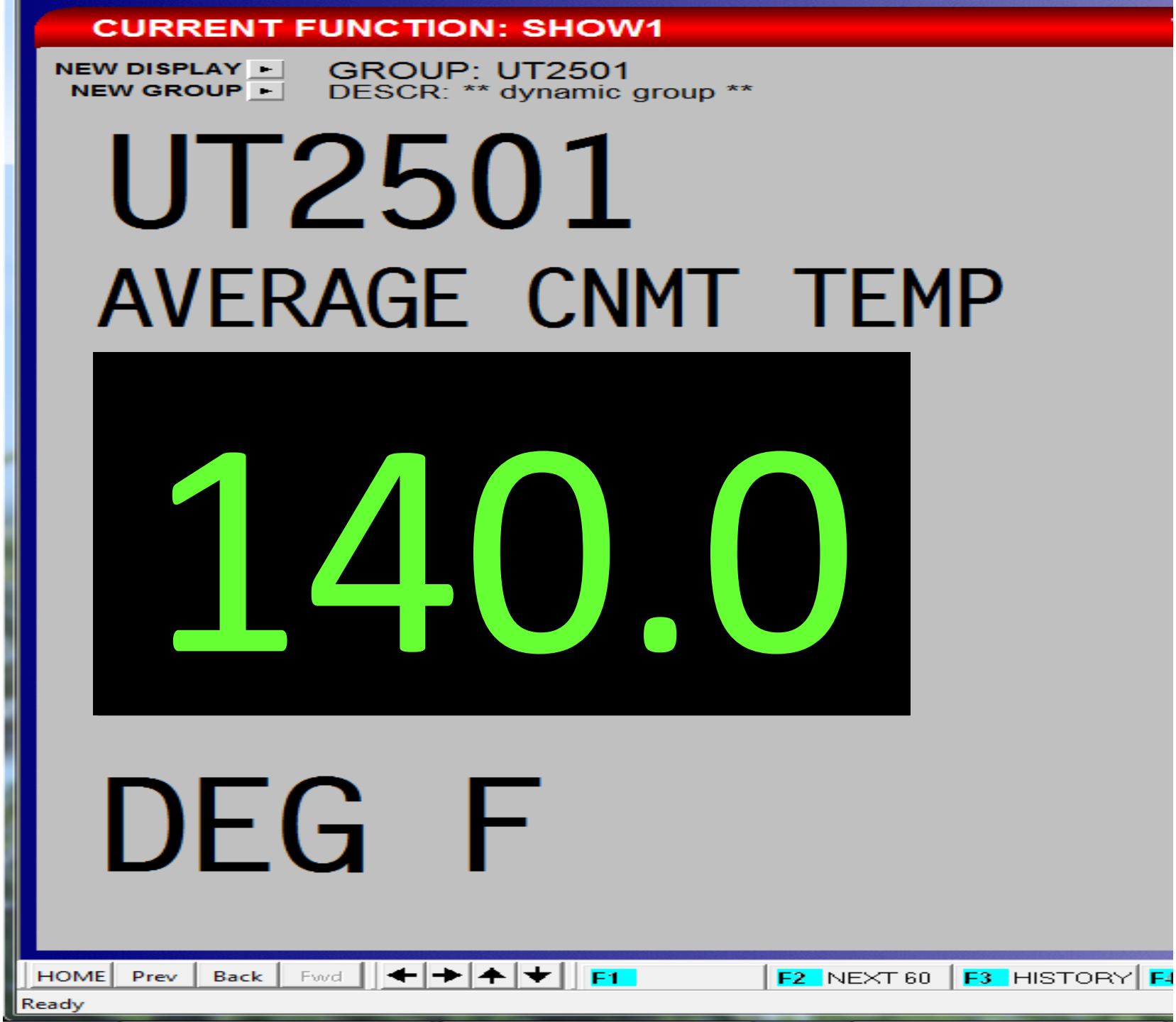

RCS LOOP I
HL PRESS III
IPI-408
3000
2000
PSIG
1000
0
RCS TEMP LOOP I
HL-WR
ITI-413A
CL-WR
ITI-413B
600
400
°F
200
0
600
400
°F
200
0


RCS LOOP 4
HL PRESS IV
IPI-418
3000
2000
PSIG
1000
0
RCS TEMP LOOP 2
HL-WR
ITI-423A
CL-WR
ITI-423B
600
400
°F
200
0
600
400
°F
200
0


RCS LOOP 4
HL PRESS II
IPI-428
3000
2000
PSIG
1000
0
RCS TEMP LOOP 3
HL-WR
ITI-433A
CL-WR
ITI-433B
600
400
°F
200
0
600
400
°F
200
0


RCS LOOP I
HL PRESS I
IPI-438
3000
2000
1000
0
PSIG
RCS TEMP LOOP 4
HL-WR
ITI-443A
CL-WR
ITI-443B
600
400
200
0
°F
600
400
200
0
°F


CNMT HYDROGEN
MONITOR I
IAI-12979
MONITOR II
IAI-12980
10
8
6
%
4
2
0
10
8
6
%
4
2
0


CURRENT FUNCTION: SHOW1
NEW DISPLAY
NEW GROUP
GROUP: UT2501
DESCR: ** dynamic group **
UT2501
AVERAGE CNMT TEMP
140.0
DEG F
HOME
Prev
Back
Fwd
F1
F2 NEXT 60
F3 HISTORY
Ready

NRC RO / SRO Admin Job Performance Measure "b"

Facility: Vogtle

Task No: V-LO-TA-27003

Task Title: Determine Shutdown Margin With One Stuck Rod

JPM No: V-NRC-JP-14005-HL19

K/A Reference: G2.1.43 RO 4.1 SRO 4.3

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions: **During control rod operability testing on Unit 1, CBD rod D-4 does not move when demanded.**

The Shift Supervisor has entered Tech Spec LCO 3.1.4, "Rod Group Alignment Limits."

Initiating Cue: **The Shift Supervisor has directed you to, "Use 14005-1, 'Shutdown Margin and Keff Calculations,' and the provided references to calculate the available Shutdown Margin for the current conditions."**

Current conditions:

Unit 1 power history: 100% power for last 30 days

Cycle burn-up: 8,500 MWD/MTU

CBD rod D4 failed to move on demand and is considered untrippable

RCS boron concentration: 1450 ppm

Power level: 100%

Tavg: 585.4° F

ARO position: 228 steps

Axial Offset Reactivity Correction: 0 pcm

Rod Bank Demand Positions:	**DRPI Indication Positions:**
CBA 228	**CBA 228**
CBB 228	**CBB 228**
CBC 228	**CBC 228**
CBD 220	**CBD 222 (Rod D4 at 228)**
SDA 228	**SDA 228**
SDB 228	**SDB 228**
SDC 228	**SDC 228**
SDD 228	**SDD 228**
SDE 228	**SDE 228**

Task Standard:	Candidate correctly calculates an available shutdown margin of 1.65 – 1.67% (or 1.7% if significant figures are being tracked by the candidate) Δk/k for the given conditions using 14005-1, “Shutdown Margin and Keff Calculations.”
Required Materials:	14005-1, “Shutdown Margin and Keff Calculations” (rev. 27.1) TR 13.1.1, “Shutdown Margin (SDM)” Current conditions sheet PTDB COLR Calculator
General References:	None
Time Critical Task:	No
Validation Time:	15 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

START TIME: _____

JPM 1. 6.1.1 IF Shutdown Margin is to be calculated in Mode 1 or 2, complete Data Sheet 1. Data Sheet 1 accounts for: (a) one or more untrippable rods, (b) one or more individual rods not aligned within 12 steps of their group step counter demand position below the insertion limit for their respective bank(s) and (c) one or more shutdown or control banks below insertion limits specified in the COLR.

Standard: Candidate determines Data Sheet 1 is to be used to calculate Shutdown Margin.

Comment:

JPM 2. Data Sheet 1: Shutdown Margin in Modes 1 and 2
Section A: Record current conditions.

Standard: Candidate records the current conditions in Data Sheet 1, Section A, of 14005-1, "Shutdown Margin and Keff Calculations."

Comment:

***JPM 3. Section B Calculate available Shutdown Margin.**

Standard: Candidate correctly calculates an available Shutdown Margin of 1.662 – 1.663 % Δk/k using Data Sheet 1 of 14005-1, "Shutdown Margin and Keff Calculations."

NOTE TO EXAMINER: The Answer Key is on the following pages.

Comment:

STOP TIME: _____

Terminating cue: Candidate returns initiating cue sheet.

Data Sheet 1, Section A, ANSWER KEY (DO NOT PROVIDE TO CANDIDATES)

NOTE TO EXAMINER: Data entered in Section A is not critical.

A.1 Cycle Burnup __8500____ MWD/MTU
(From Reactor Engineering)

A.2 Rod bank demand positions

CBA _228___ CBB _228___ CBC _228___ CBD _220__

SBA _228___ SBB _228___ SBC _228___ SBD _228___ SBE _228___

A.3 Individual rods not aligned within 12 steps of their group step counter demand position

__N/A__ _____ _____ _____ _____ _____ _____

A.4 Rod Bank Insertion Limit (COLR 2.4 and 2.5)

CBA 225 CBB 225 CBC 225 CBD 161

SBA 225 SBB 225 SBC 225 SBD 225 SBE 225

A.5 Number of steps (by demand position) each control rod bank in A.2 is BELOW its insertion limit

CBA _N/A___ CBB _____ CBC _____ CBD _____

Number of steps (by demand position) each shutdown rod bank in A.2 is BELOW its insertion limit

SBA _N/A___ SBB _____ SBC _____ SBD _____ SBE _____

A.6 Review A.3 and record below the number of steps (by DRPI indication) each individual rod in A.3 is BELOW the rod insertion limit A.4 for its bank

_N/A___ _____ _____ _____ _____ _____ _____

A.7 Number of Actual Untrippable Rods __1__

A.8 Boron Concentration _1450__ ppm

A.9 Power Level _100__ %

Data Sheet 1, Section B, ANSWER KEY (DO NOT PROVIDE TO CANDIDATES)

NOTE TO EXAMINER: Critical step data is highlighted.

B.1 Worth of rods at "ARI-1 Rod Worth For SDM" at Power Level (A.9) and Burnup (A.1) (PTDB TAB 1.5.2-T1) + ***5299*** pcm

B.2 Worth of rod banks below insertion limit:
(Summation of A.5) x 18

0 x 18 = + ***0*** pcm

B.3 Worth of individual rods misaligned below the insertion limit for their bank:
(Summation of A.6) x 4

0 x 4 = + ***0*** pcm

B.4 "Worth Of Most Reactive Rod For SDM" at Burnup (A.1) (PTDB TAB 1.5.3-T1) + ***834*** pcm

B.5 Worth of Actual Untrippable Rods:

IF HAVE UNTRIPPABLE RODS:
[(A.7) x (B.4) x 1.35] + [(B.4) x 0.35]

[1 x 834 x 1.35] + [834 x 0.35] =

OR

IF ALL RODS ARE TRIPPABLE: 0 + ***1400 - 1418*** pcm
(NOTE: Low end of ranges provide allowance if tracking significant figures)

B.6 Adjusted rod worth considering untrippable rods, misaligned rods, rods below the insertion limit, and uncertainty:
[(B.1) - (B.2) - (B.3) - (B.5)] x 0.93

[5299 - 0 - 0 - 1418] x 0.93 = + ***3609 - 3617*** pcm ***or 3600***

B.7 "Power Defect For Shutdown Margin" at Power Level (A.9) and Burnup (A.1) (PTDB TAB 1.1.2-T1) + ***1897*** pcm

B.8 Void Collapse Defect + 50 pcm

(Continued on next page)

Data Sheet 1, Section B, ANSWER KEY (DO NOT PROVIDE TO CANDIDATES)

B.9 Axial Offset Reactivity Correction
(From Reactor Engineering) + 0 pcm

B.10 Available Shutdown Reactivity:
(B.6) - (B.7) - (B.8) - (B.9)

3609 - 3617 - 1897 - 50 - 0 = (+) ***1662 - 1670*** pcm
or 3600 ***or 1653***

B.11 Shutdown margin: (B.10) / 1000.0 (+) ***1.65 – 1.67*** %
or 1.7

ACCEPTANCE CRITERIA

Shutdown Margin (B.11) shall be greater than or equal to limit specified in the COLR per Technical Requirement Manual TR 13.1.1 (COLR 2.1.1).

☒ YES ☐ NO

Completed By: *Candidate* *Today's date / time*
Signature Date/Time

Verified By: _____
Signature Date/Time

Verification of Completion

Job Performance Measure No.: V-NRC-JP-14005-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: During control rod operability testing on Unit 1, CBD rod D-4 does not move when demanded.

The Shift Supervisor has entered Tech Spec LCO 3.1.4, "Rod Group Alignment Limits."

Initiating Cue: The Shift Supervisor has directed you to, "Use 14005-1, 'Shutdown Margin and Keff Calculations,' and the provided references to calculate the available Shutdown Margin for the current conditions."

Current conditions:

Unit 1 power history: 100% power for last 30 days

Cycle burn-up: 8,500 MWD/MTU

CBD rod D4 failed to move on demand and is considered untrippable

RCS boron concentration: 1450 ppm

Power level: 100%

Tavg: 585.4° F

ARO position: 228 steps

Axial Offset Reactivity Correction: 0 pcm

Rod Bank Demand Positions:	**DRPI Indication Positions:**
CBA 228	**CBA 228**
CBB 228	**CBB 228**
CBC 228	**CBC 228**
CBD 220	**CBD 222 (Rod D4 at 228)**
SDA 228	**SDA 228**
SDB 228	**SDB 228**
SDC 228	**SDC 228**
SDD 228	**SDD 228**
SDE 228	**SDE 228**

NRC RO Admin Job Performance Measure "c"

Facility: Vogtle

Task No: V-LO-TA-17007

Task Title: Perform Quadrant Power Tilt Ratio Surveillance for Inoperable QPTR Monitor Alarm

JPM No: V-NRC-JP-14915-HL19

K/A Reference: G2.2.12 RO 3.7 SRO 4.1

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions: **Unit 1 is at 100% RTP.**

Annunciator ALB10-E06 RADIAL TILT is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: **The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs,' for QPTR Monitoring,**

AND

complete Section 7.0, Evaluation and Review, using the following provided data."

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	430 mA
1NI-42	B	405 mA
1NI-43	B	445 mA
1NI-44	B	425 mA

Task Standard:	Candidate performs QPTR calculation correctly using 14915-1, Data Sheet 7, and determines the upper value is 1.03 (> 1.02).
Required Materials:	14915-1, “Special Condition Surveillance Logs” (rev. 48.1) Unit 1 Plant Technical Data Book, Tab 5.0 (rev. 159) Calculator Red Ink Pen, if requested
General References:	None
Time Critical Task:	No
Validation Time:	12 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

START TIME: _____

JPM 1.

NOTE TO EXAMINER: An example of Data Sheet 7, Sheets 1 and 2, is included at end of JPM.

DATA SHEET 7 Sheet 1 of 2

QUADRANT POWER TILT RATIO

NOTES

- The arrangement of the NI rack layout is Channel I, II, IV, and III.
- If ALB 10 D02 or E02 annunciate and power is less than 50% performance of this data sheet is not required.
- If ALB 10 E06 annunciates and power is less than 10% performance of this data sheet is not required.
- Prior to taking readings from the upper and lower detector meters, change scales on the RANGE MILLI-AMPS Switch and then return it to its original position. This will wipe the switch contacts giving a more accurate reading.

1. Calculate and record Quadrant Power Tilt Ratio at least once per 12 hours using Sheet 2. PC based spreadsheet may be used for QPTR calculation if normalization factors used are verified current with the PTDB Tab 5.0 revision. If performing a manual calculation, compare PTDB Tab 5.0 with the PC Spreadsheet (if the PC is available) to verify normalization factors.

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided."

Standard: Candidate reviews NOTES and step. PC Spreadsheet is not available.

Comment:

JPM 2. 2. With one Power Range NI inoperable, obtain TILT DEVIATION from Reactor Engineering as determined from moveable incore detectors and verify it is within ±0.02 of QPTR obtained from the operable power range NIs. (Use avg. and max. of 3 operable NIs)

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided."

Standard: Candidate reviews step and determines no Power Range NI is inoperable, so obtaining TILT DEVIATION is not required.

Comment:

JPM 3.

NOTE
A Fluke 8050A Digital Multimeter may be used to obtain more accurate current values for calculation of QPTR.

3. If a Fluke 8050A Digital Multimeter will be used to obtain current values from the NI Drawer, record instrument information below:

Instrument ID No._____

Cal Due Date_____

Standard: Candidate reviews step and determines a Multimeter will not be used.

Comment:

***JPM 4.** **4. Verify Quadrant Power Tilt Ratio is less than or equal to 1.02.**

Standard: **Candidate calculates the Quadrant Power Tilt Ratio using Sheet 2 of Data Sheet 7 and determines the upper value is 1.03 (> 1.02).** NOTE: Rounding to two decimal places is not critical.

Comment:

***JPM 5.** **5. With Quadrant Power Tilt Ratio greater than 1.02, initiate action in accordance with Technical Specification LCO 3.2.4** and continue to calculate and record QPTR once every 12 hours on Sheet 2.

Standard: **Section 7.0, Evaluation and Review, is correctly completed to notify the Shift Supervisor that the calculated Quadrant Power Tilt Ratio exceeds the Technical Specification limit.**

Comment:

STOP TIME: _____

Terminating cue: Candidate returns initiating cue sheet.

DATA SHEET 7
QUADRANT POWER TILT RATIO

NOTES

- The arrangement of the NI rack layout is Channel I, II, IV and III.
- If ALB 10 D02 or E02 annunciate and power is less than 50% performance of this data sheet is not required.
- If ALB 10 E06 annunciates and power is less than 10% performance of this data sheet is not required.
- Prior to taking readings from the upper and lower detector meters, change scales on the RANGE MILLI-AMPS Switch and then return it to its original position. This will wipe the switch contacts giving a more accurate reading.

1. Calculate and record Quadrant Power Tilt Ratio at least once per 12 hours using Sheet 2. PC based spreadsheet may be used for QPTR calculation if normalization factors used are verified current with the PTDB Tab 5.0 revision. If performing a manual calculation, compare PTDB Tab 5.0 with the PC Spreadsheet (if the PC is available) to verify normalization factors.

2. With one Power Range NI inoperable, obtain TILT DEVIATION from Reactor Engineering as determined from moveable incore detectors and verify it is within ±0.02 of QPTR obtained from the operable power range NIs. (Use avg and max of 3 operable NIs).

NOTE

A Fluke 8050A Digital Multimeter may be used to obtain more accurate current values for calculation of QPTR.

3. If a Fluke 8050A Digital Multimeter will be used to obtain current values from the NI Drawer, record instrument information below.

   Instrument ID No._____

   Cal Due Date_____

4. Verify Quadrant Power Tilt Ratio is less than or equal to 1.02.

5. With Quadrant Power Tilt Ratio greater than 1.02, initiate action in accordance with Technical Specification LCO 3.2.4 and continue to calculate and record QPTR once every 12 hours on sheet 2.

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)
(CRITICAL STEPS ARE HIGHLIGHTED YELLOW)

NOTE TO EXAMINER: Rounding of the values is not critical. The critical element is based on using the correct current and normalization factor to determine the value.

DATA SHEET 7 Sheet 2 of 2

DATE ____*Today*_____

TIME ____*Now*_____

NI Channel	Detector	Current		Factor*		
41	A	409 mA	x	1.112	=	***454.808*** (1)
42	A	380 mA	x	1.108	=	***421.040*** (1)
43	A	450 mA	x	1.025	=	***461.250*** (1)
44	A	415 mA	x	1.096	=	***454.840*** (1)
					Avg =	***447.985*** (1)

QPTR (Upper) = Max(upper) / Avg(upper) = ***1.03*** (2)

NI Channel	Detector	Current		Factor*		
41	B	430 mA	x	1.058	=	***454.940*** (1)
42	B	405 mA	x	1.071	=	***433.755*** (1)
43	B	445 mA	x	1.000	=	***445.000*** (1)
44	B	425 mA	x	1.052	=	***447.100*** (1)
					Avg =	***445.199*** (1)

QPTR (Lower) = Max(lower) / Avg(lower) = ***1.02*** (2)

QPTR = Max of QPTR(upper) or QPTR(lower) = ***1.03***

TILT DEVIATION = N/A
(from Reactor Engineering if applicable)

COMPLETED BY ____*Candidate*_____

Shift Supervisor Review: _____/_____/_____
Initial Date Time

*Factor = Normalization Factor from Plant Technical Data Book tab 5.0
Note 1 = Calculations should be performed to 3 decimal places
Note 2 = Round to 2 decimal places (if the 3rd decimal is ≥5 round up, if 3rd decimal is <5, round down)

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)
(CRITICAL STEPS ARE HIGHLIGHTED YELLOW)

7.0 EVALUATION AND REVIEW

7.1 TEST PURPOSE

Special Condition(s):

Quadrant Power Tilt Monitor alarm is inoperable

Data Sheet(s) completed (Circle Appropriate Sheets):

1 2 3 4a 4b 5 6 7 8 9 10 11 12 13 14 15 16 17 18

7.2 Results obtained through the performance of this procedure meet the ACCEPTANCE CRITERIA of Section 6.0.

☐ YES ☒ NO

7.3 IF no was checked, immediately notify the SS and initiate action in accordance with the actions specified on the data sheet(s) not meeting the acceptance criteria.

7.4 Comments (include any abnormal conditions and corrective actions taken):

Upper QPTR exceeds 1.02

Test Completed and SS Notified: _____ _____ _____

Supervisory Review: _____ _____ _____
Signature Date Time

Verification of Completion

Job Performance Measure No.: V-NRC-JP-14915-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: **Unit 1 is at 100% RTP.**

Annunciator ALB10-E06, RADIAL TILT, is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: **The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs,' for QPTR Monitoring,**

AND

complete of Section 7.0, Evaluation and Review, using the following provided data."

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	430 mA
1NI-42	B	405 mA
1NI-43	B	445 mA
1NI-44	B	425 mA

NRC SRO Admin Job Performance Measure "c"

Facility: Vogtle

Task No: V-LO-TA-17007

Task Title: Perform and Evaluate Quadrant Power Tilt Ratio Surveillance for Inoperable QPTR Monitor Alarm

JPM No: V-NRC-JP-14915-HL19

K/A Reference: G2.2.12 RO 3.7 SRO 4.1

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions: **Unit 1 is at 100% RTP.**

You just started your 12-hour shift.

Annunciator ALB10-E06 RADIAL TILT is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: **The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs,' for QPTR Monitoring,**

AND

complete Section 7.0, Evaluation and Review, using the following provided data."

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	430 mA
1NI-42	B	405 mA
1NI-43	B	445 mA
1NI-44	B	425 mA

Based on the results of the surveillance, is any Tech Spec LCO NOT met?

If any Tech Spec LCO is NOT met, THEN determine all Tech Spec REQUIRED ACTIONS to be performed during your shift, if any, for the given plant conditions.

Task Standard:	Candidate performs QPTR calculation correctly using 14915-1, Data Sheet 7, and determines the upper value is 1.03 (> 1.02). Candidate then evaluates the data to determine the correct Tech Spec applicable actions.
Required Materials:	14915-1, “Special Condition Surveillance Logs” (rev. 48.1) Unit 1 Plant Technical Data Book, Tab 5.0 (rev. 159) Tech Specs and Tech Spec Bases Calculator Red Ink Pen, if requested
General References:	None
Time Critical Task:	No
Validation Time:	16 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

START TIME: _____

JPM 1.

NOTE TO EXAMINER: An example of Data Sheet 7, Sheets 1 and 2, is included at end of JPM.

DATA SHEET 7 Sheet 1 of 2

QUADRANT POWER TILT RATIO

NOTES

- The arrangement of the NI rack layout is Channel I, II, IV, and III.
- If ALB 10 D02 or E02 annunciate and power is less than 50% performance of this data sheet is not required.
- If ALB 10 E06 annunciates and power is less than 10% performance of this data sheet is not required.
- Prior to taking readings from the upper and lower detector meters, change scales on the RANGE MILLI-AMPS Switch and then return it to its original position. This will wipe the switch contacts giving a more accurate reading.

1. Calculate and record Quadrant Power Tilt Ratio at least once per 12 hours using Sheet 2. PC based spreadsheet may be used for QPTR calculation if normalization factors used are verified current with the PTDB Tab 5.0 revision. If performing a manual calculation, compare PTDB Tab 5.0 with the PC Spreadsheet (if the PC is available) to verify normalization factors.

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided."

Standard: Candidate reviews NOTES and step. PC Spreadsheet is not available.

Comment:

JPM 2. 2. With one Power Range NI inoperable, obtain TILT DEVIATION from Reactor Engineering as determined from moveable incore detectors and verify it is within ±0.02 of QPTR obtained from the operable power range NIs. (Use avg. and max. of 3 operable NIs)

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided."

Standard: Candidate reviews step and determines no Power Range NI is inoperable, so obtaining TILT DEVIATION is not required.

Comment:

JPM 3.

NOTE
A Fluke 8050A Digital Multimeter may be used to obtain more accurate current values for calculation of QPTR.

3. If a Fluke 8050A Digital Multimeter will be used to obtain current values from the NI Drawer, record instrument information below.

Instrument ID No._____

Cal Due Date_____

Standard: Candidate reviews step and determines a Multimeter will not be used.

Comment:

***JPM 4.** **4. Verify Quadrant Power Tilt Ratio is less than or equal to 1.02.**

Standard: **Candidate calculates the Quadrant Power Tilt Ratio using Sheet 2 of Data Sheet 7 and determines the upper value is 1.03 (> 1.02).** NOTE: Rounding to two decimal places is not critical.

Comment:

***JPM 5.** **5. With Quadrant Power Tilt Ratio greater than 1.02, initiate action in accordance with Technical Specification LCO 3.2.4** and continue to calculate and record QPTR once every 12 hours on sheet 2.

The Tech Spec LCO 3.2.4 REQUIRED ACTION for QPTR > 1.02 is to limit THERMAL POWER to ≥ 3% below RTP for each 1% of QPTR > 1.00 within 2 hours. **With calculated QPTR = 1.03, a power reduction to at least 9% below RTP (100% – 9% = 91%) is required.**

NOTE TO EXAMINER: LCO 3.2.4 includes additional required actions to perform periodic manual QPTR calculations and to perform other surveillances after the thermal power reduction. These actions are NOT necessary to successfully complete the critical step, which is to "initiate action in accordance with Technical Specification LCO 3.2.4."

Standard: **Candidate determines a power reduction to 9% below RTP (91%) is required.**

Comment:

STOP TIME: _____

Terminating cue: Candidate returns initiating cue sheet.

3.2 POWER DISTRIBUTION LIMITS

3.2.4 QUADRANT POWER TILT RATIO (QPTR)

LCO 3.2.4 The QPTR shall be ≤ 1.02.

APPLICABILITY: MODE 1 with THERMAL POWER > 50% RTP.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. ----------NOTE---------- Required Action A.6 must be completed whenever Required Action A.5 is implemented. ---------- QPTR not within limit.	A.1	Limit THERMAL POWER to ≥ 3% below RTP for each 1% of QPTR > 1.00.	2 hours
	AND		
	A.2.1	Perform SR 3.2.4.1.	Once per 12 hours
	AND		
	A.2.2	Limit THERMAL POWER to ≥ 3% below RTP for each 1% QPTR > 1.00.	----------NOTE---------- For performances of Required Action A.2.2 the Completion Time is measured from the completion of SR 3.2.4.1. ---------- 2 hours
	AND		
	A.3	Perform SR 3.2.1.1 and SR 3.2.2.1.	Within 24 hours after achieving equilibrium conditions with THERMAL POWER limited by Required Actions A.1 and A.2.2

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)			AND Once per 7 days thereafter
	AND		
	A.4	Reevaluate safety analyses and confirm results remain valid for duration of operation under this condition.	Prior to increasing THERMAL POWER above the limit of Required Action A.1 and A.2.2
	AND		
	A.5	----------NOTE---------- Perform Required Action A.5 only after Required Action A.4 is completed. ----------	
		Calibrate excore detectors to show QPTR = 1.00.	Prior to increasing THERMAL POWER above the limit of Required Action A.1 and A.2.2
	AND		
			(continued)
A. (continued)	A.6	----------NOTE---------- Perform Required Action A.6 only after Required Action A.5 is completed. ----------	
		Perform SR 3.2.1.1 and SR 3.2.2.1.	----------NOTE---------- Only one of the following Completion Times, whichever becomes applicable first, must be met. ---------- Within 24 hours after reaching RTP OR Within 48 hours after increasing THERMAL POWER above the limit of Required Action A.1 and A.2.2

DATA SHEET 7
QUADRANT POWER TILT RATIO

NOTES

- The arrangement of the NI rack layout is Channel I, II, IV and III.
- If ALB 10 D02 or E02 annunciate and power is less than 50% performance of this data sheet is not required.
- If ALB 10 E06 annunciates and power is less than 10% performance of this data sheet is not required.
- Prior to taking readings from the upper and lower detector meters, change scales on the RANGE MILLI-AMPS Switch and then return it to its original position. This will wipe the switch contacts giving a more accurate reading.

1. Calculate and record Quadrant Power Tilt Ratio at least once per 12 hours using Sheet 2. PC based spreadsheet may be used for QPTR calculation if normalization factors used are verified current with the PTDB Tab 5.0 revision. If performing a manual calculation, compare PTDB Tab 5.0 with the PC Spreadsheet (if the PC is available) to verify normalization factors.

2. With one Power Range NI inoperable, obtain TILT DEVIATION from Reactor Engineering as determined from moveable incore detectors and verify it is within ±0.02 of QPTR obtained from the operable power range NIs. (Use avg and max of 3 operable NIs).

NOTE

A Fluke 8050A Digital Multimeter may be used to obtain more accurate current values for calculation of QPTR.

3. If a Fluke 8050A Digital Multimeter will be used to obtain current values from the NI Drawer, record instrument information below.

   Instrument ID No._____

   Cal Due Date_____

4. Verify Quadrant Power Tilt Ratio is less than or equal to 1.02.

5. With Quadrant Power Tilt Ratio greater than 1.02, initiate action in accordance with Technical Specification LCO 3.2.4 and continue to calculate and record QPTR once every 12 hours on sheet 2.

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)
(CRITICAL STEPS ARE HIGHLIGHTED YELLOW)

NOTE TO EXAMINER: Rounding of the values is not critical. The critical element is based on using the correct current and normalization factor to determine the value.

DATA SHEET 7 Sheet 2 of 2

DATE ___*Today*___

TIME ___*Now*___

NI Channel	Detector	Current		Factor*		
41	A	409 mA	x	1.112	=	***454.808*** (1)
42	A	380 mA	x	1.108	=	***421.040*** (1)
43	A	450 mA	x	1.025	=	***461.250*** (1)
44	A	415 mA	x	1.096	=	***454.840*** (1)
					Avg =	***447.985*** (1)

QPTR (Upper) = Max(upper) / Avg(upper) = ***1.03*** (2)

NI Channel	Detector	Current		Factor*		
41	B	430 mA	x	1.058	=	***454.940*** (1)
42	B	405 mA	x	1.071	=	***433.755*** (1)
43	B	445 mA	x	1.000	=	***445.000*** (1)
44	B	425 mA	x	1.052	=	***447.100*** (1)
					Avg =	***445.199*** (1)

QPTR (Lower) = Max(lower) / Avg(lower) = ***1.02*** (2)

QPTR = Max of QPTR(upper) or QPTR(lower) = ***1.03***

TILT DEVIATION = N/A
(from Reactor Engineering if applicable)

COMPLETED BY ___*Candidate*___

Shift Supervisor Review: _____/_____/_____
Initial Date Time

*Factor = Normalization Factor from Plant Technical Data Book tab 5.0
Note 1 = Calculations should be performed to 3 decimal places
Note 2 = Round to 2 decimal places (if the 3rd decimal is ≥5 round up, if 3rd decimal is <5, round down)

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)
(CRITICAL STEPS ARE HIGHLIGHTED YELLOW)

7.0 **EVALUATION AND REVIEW**

7.1 **TEST PURPOSE**

Special Condition(s):

Quadrant Power Tilt Monitor alarm is inoperable

Data Sheet(s) completed (Circle Appropriate Sheets):

1 2 3 4a 4b 5 6 7 8 9 10 11 12 13 14 15 16 17 18

7.2 Results obtained through the performance of this procedure meet the ACCEPTANCE CRITERIA of Section 6.0.

☐ YES ☒ NO

7.3 IF no was checked, immediately notify the SS and initiate action in accordance with the actions specified on the data sheet(s) not meeting the acceptance criteria.

7.4 Comments (include any abnormal conditions and corrective actions taken):

Upper QPTR exceeds 1.02

Test Completed and SS Notified: _____ _____ _____

Supervisory Review: _____ _____ _____
Signature Date Time

Verification of Completion

Job Performance Measure No.: V-NRC-JP-14915-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: **Unit 1 is at 100% RTP.**

Annunciator ALB10-E06, RADIAL TILT, is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: **The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs,' for QPTR Monitoring,**

AND

complete of Section 7.0, Evaluation and Review, using the following provided data."

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	430 mA
1NI-42	B	405 mA
1NI-43	B	445 mA
1NI-44	B	425 mA

Based on the results of the surveillance, is any Tech Spec LCO NOT met?

If any Tech Spec LCO is NOT met, THEN determine all Tech Spec REQUIRED ACTIONS to be performed during your shift, if any, for the given plant conditions.

NRC SRO Admin Job Performance Measure "d"

Facility: Vogtle

Task No: N/A

Task Title: Assess Radiological Conditions in an Emergency and Determine if a Task Can be Performed

JPM No: V-NRC-JP-91301-HL19

K/A Reference: G2.3.14 SRO 3.8

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and will provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions: **Unit 1, SG #1 has a tube rupture, and SGs #2 and #4 have tube leaks.**

Chemistry samples indicate fuel failure has occurred.

A General Emergency has been declared with site boundary doses exceeding PAGs.

SGs #1, #2, and #4 ARVs have failed open and are required to be isolated.

A Systems Operator (SO) is assigned to manually isolate the ARVs.

The SO has an accumulated year-to-date dose of 960 mrem.

The SO is NOT a volunteer.

The following times are required to close each manual ARV isolation valve:

TASK	ESTIMATED TIME
Isolate 1PV-3000 (loop 1 ARV)	15 minutes
Isolate 1PV-3010 (loop 2 ARV)	20 minutes
Isolate 1PV-3030 (loop 4 ARV)	18 minutes

NOTE: Assume no dose is received while traveling between tasks and that the actual completion times are the same as the estimated times.

Initiating Cue: **You are the Emergency Director. Based on the given conditions and using the survey maps provided, answer the following questions:**

a. What is the Emergency Exposure Limit for the assigned Systems Operator to perform the tasks listed above?

b. Can the Systems Operator complete all of the tasks listed above without exceeding the applicable Emergency Exposure Limit?

Task Standard: Upon successful completion of this JPM, the candidate will correctly:

1. State the Emergency Exposure Limit for the SO to isolate the ARVs (protect a large population).
2. Determine if the tasks can be performed without exceeding the Emergency Exposure Limit.

Required Materials: 91301-C, “Emergency Exposure Guidelines”
ARV valve room survey maps
Calculator

General References: None

Time Critical Task: No

Validation Time: 16 minutes

NOTE TO EXAMINER: JPM knowledge of the Emergency Exposure Limits is an SRO-Only objective. However, since the candidate is given the limits in 91301-C, the JPM is not an SRO-Only JPM.

V-LO-LP-40101-34: State the emergency TEDE limits for the following (SRO only):

a. All activities
b. Protecting valuable property
c. Lifesaving actions or protection of large populations

Performance Information

Critical steps denoted with an asterisk and bolded.

START TIME: _____

***JPM 1. Determine applicable Emergency Exposure Limit.**

Given a General Emergency with three failed fission product barriers, closure of the open ARVs will limit the exposure to a large population. Since the Systems Operator is NOT a volunteer, the Emergency Exposure Limit is 25 rem.

Isolating the ARVs is not done to protect equipment or property, which would have an Emergency Exposure Limit of 10 rem.

Standard: Candidate determines that the applicable Emergency Exposure Limit for the task is 25 rem.

Comment:

***JPM 2. Calculate the dose received while isolating 1PV-3000 (loop 1 ARV).**

Using the correct survey map, a dose rate of 16 rem/hour at the valve is determined.

The valve operation will take 15 minutes.

16 rem/hour (1 hour / 60 minutes) (15 minutes) = 4 rem [no range on calculated value]

Standard: Candidate calculates dose to isolate 1PV-3000 to be 4 rem [no range on final value].

Comment:

***JPM 3.** **Calculate the dose received while isolating 1PV-3010 (loop 2 ARV).**

Using the correct survey map, a dose rate of 48 rem/hour at the valve is determined.

The valve operation will take 20 minutes.

48 rem/hour (1 hour / 60 minutes) (20 minutes) = 16 rem [no range on calculated value]

Standard: **Candidate calculates dose to isolate 1PV-3010 to be 16 rem [no range on final value].**

Comment:

***JPM 4.** **Calculate the dose received while isolating 1PV-3030 (loop 4 ARV).**

Using the correct survey map, a dose rate of 14 rem/hour at the valve is determined.

The valve operation will take 18 minutes.

14 rem/hour (1 hour / 60 minutes) (18 minutes) = 4.2 rem [no range on calculated value]

Standard: **Candidate calculates dose to isolate 1PV-3010 to be 4.2 rem [no range on final value].**

Comment:

***JPM 5.** **Determine if the Emergency Exposure Limit will be exceeded.**

Total calculated dose received would be:

4 rem + 16 rem + 4.2 rem = 24.2 rem (non-emergency exposure is not added)

Standard: **Candidate determines that the total dose received (24.2 rem) will NOT exceed the Emergency Exposure Limit (25 rem) for the tasks performed.**
NOTE: The annual SO dose to date, 960 mrem, is NOT added to the emergency exposure of 24.2 rem.

Comment:

STOP TIME: _____

Terminating cue: Candidate returns initiating cue sheet.

Verification of Completion

Job Performance Measure No.: V-NRC-JP-91301-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: **Unit 1, SG #1 has a tube rupture, and SGs #2 and #4 have tube leaks.**

Chemistry samples indicate fuel failure has occurred.

A General Emergency has been declared with site boundary doses exceeding PAGs.

SGs #1, #2, and #4 ARVs have failed open and are required to be isolated.

A Systems Operator (SO) is assigned to manually isolate the ARVs.

The SO has an accumulated year-to-date dose of 960 mrem.

The SO is NOT a volunteer.

The following times are required to close each manual ARV isolation valve:

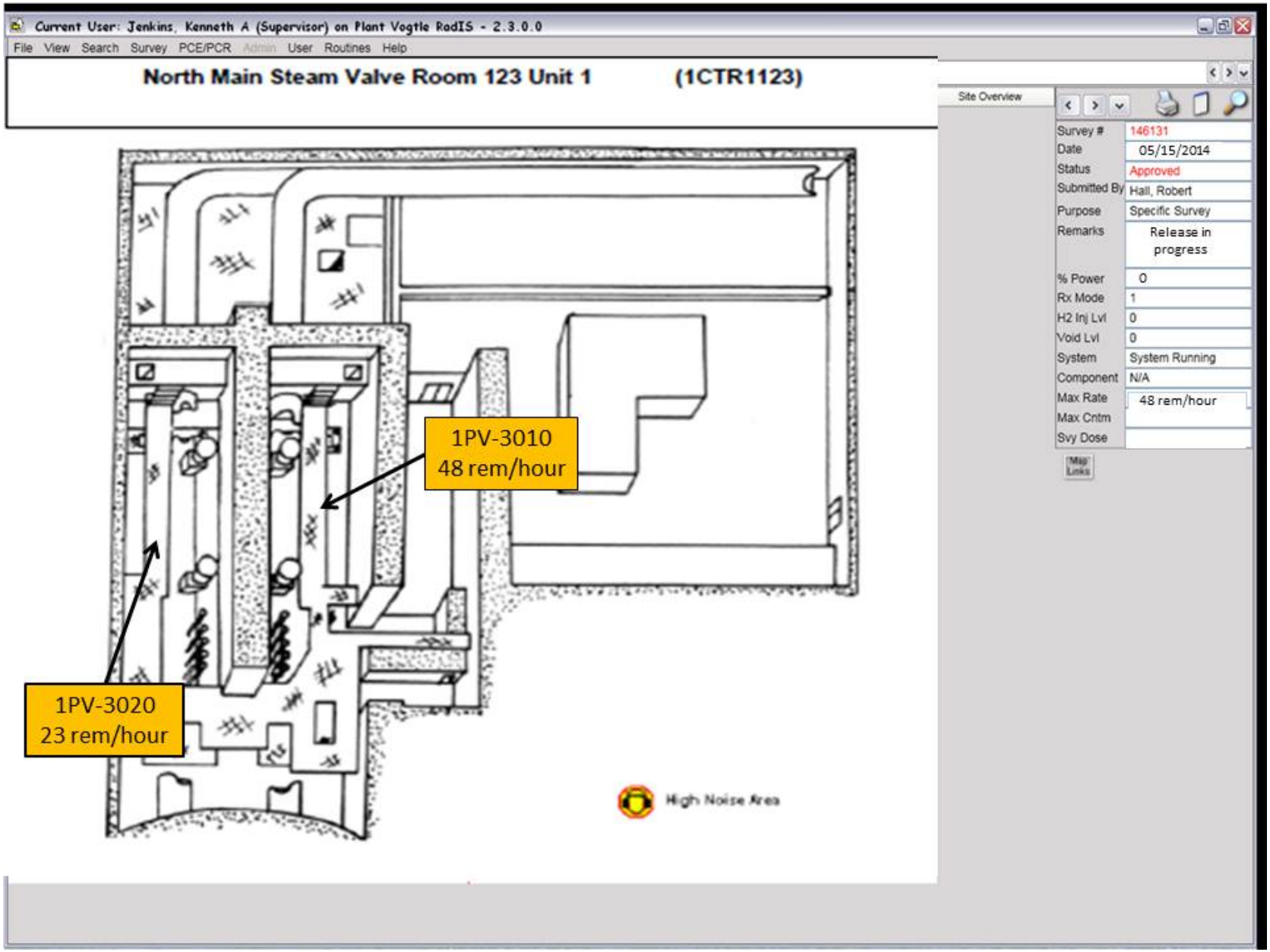
TASK	ESTIMATED TIME
Isolate 1PV-3000 (loop 1 ARV)	15 minutes
Isolate 1PV-3010 (loop 2 ARV)	20 minutes
Isolate 1PV-3030 (loop 4 ARV)	18 minutes

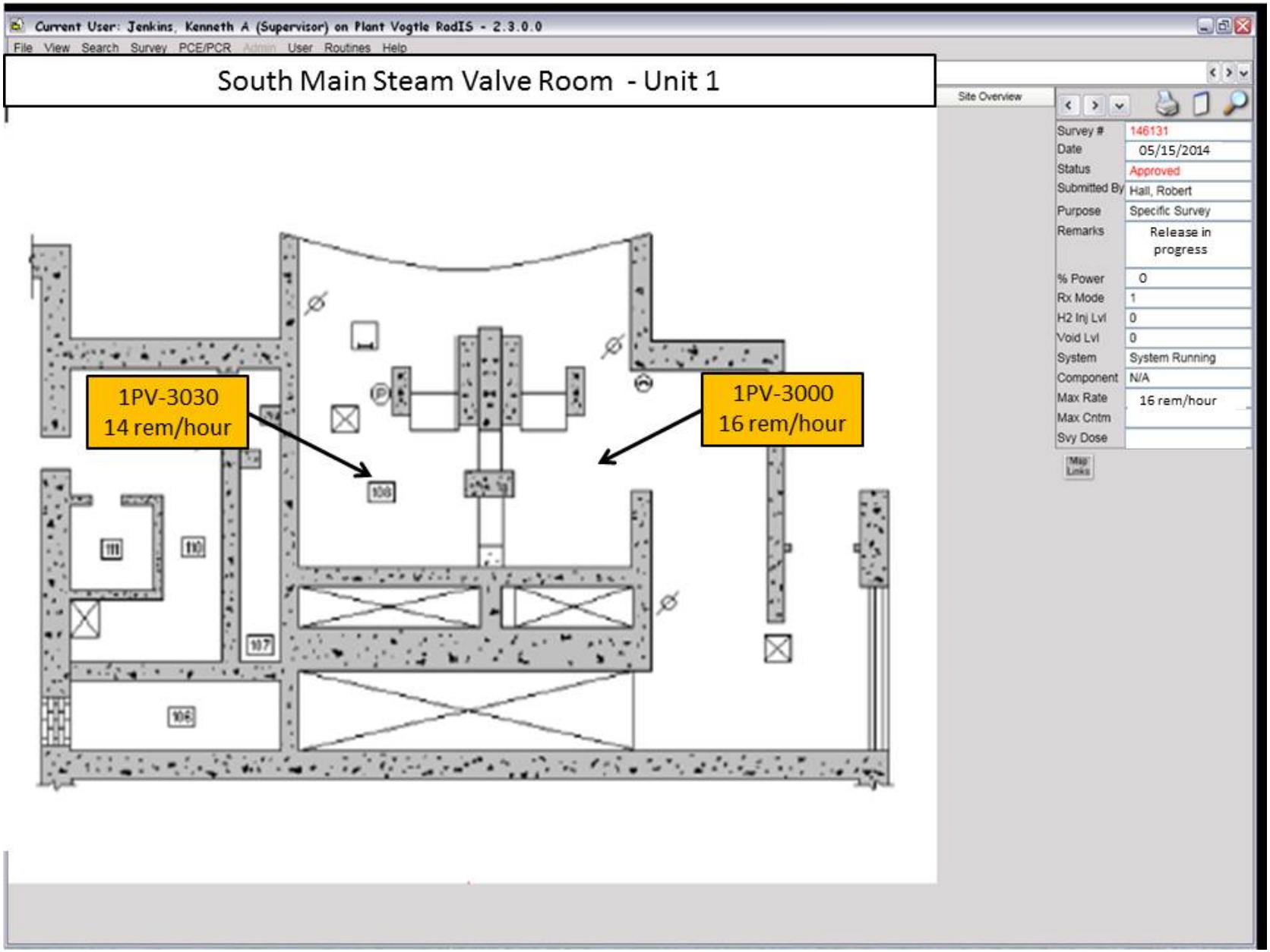
NOTE: Assume no dose is received while traveling between tasks and that the actual completion times are the same as the estimated times.

Initiating Cue: **You are the Emergency Director. Based on the given conditions and using the survey maps provided, answer the following questions:**

a. What is the Emergency Exposure Limit for the Systems Operator to perform the tasks listed above?

b. Can the Systems Operator complete all of the tasks listed above without exceeding the applicable Emergency Exposure Limit?


Current User: Jenkins, Kenneth A (Supervisor) on Plant Vogtle RadIS - 2.3.0.0
File View Search Survey PCE/PCR Admin User Routines Help
North Main Steam Valve Room 123 Unit 1 (1CTR1123)
1PV-3010
48 rem/hour
1PV-3020
23 rem/hour
High Noise Area
Site Overview
Survey # 146131
Date 05/15/2014
Status Approved
Submitted By Hall, Robert
Purpose Specific Survey
Remarks Release in progress
% Power 0
Rx Mode 1
H2 Inj Lvl 0
Void Lvl 0
System System Running
Component N/A
Max Rate 48 rem/hour
Max Cntm
Svy Dose


Current User: Jenkins, Kenneth A (Supervisor) on Plant Vogtle RadIS - 2.3.0.0
File View Search Survey PCE/PCR Admin User Routines Help
South Main Steam Valve Room - Unit 1
Site Overview
Survey # 146131
Date 05/15/2014
Status Approved
Submitted By Hall, Robert
Purpose Specific Survey
Remarks Release in progress
% Power 0
Rx Mode 1
H2 Inj Lvl 0
Void Lvl 0
System System Running
Component N/A
Max Rate 16 rem/hour
Max Cntm
Svy Dose
1PV-3030
14 rem/hour
1PV-3000
16 rem/hour
108
111
110
107
106

NRC RO Admin Job Performance Measure "e"

Facility: Vogtle

Task No: V-LO-TA-40003

Task Title: Perform ERO Recall and ENN Notification

JPM No: V-NRC-JP-NMP-EP-111-HL19

K/A Reference: G2.4.43 RO 3.2

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

THIS IS A TIME CRITICAL JPM

Initial Conditions: **Unit 1 has tripped due to a small LOCA.**

The Shift Manager assumed the role of Emergency Director and declared an Alert Emergency.

WebEOC is NOT available.

Initiating Cue: **The Emergency Director has directed you to, "Perform the duties of the ENN Communicator and:**

1) **Perform an ERO recall per NMP-EP-111-003, Instruction 5 and;**

2) **Perform an ENN roll call for the MANUAL notification method per NMP-EP-111-F04 and;**

3) **Perform receipt confirmation of the MANUAL notification form per NMP-EP-111-F06."**

Task Standard:	Candidate completes the ERO recall, ENN roll call, and confirms receipt of the manual ENN form in accordance with the NMP-EP-111 instructions.
Required Materials:	NMP-EP-111-003, “Emergency Notification Communicator Instructions – Vogtle” (rev. 6.0) NMP-EP-111-F04, “Emergency Notifications Roll Call Instructions” (rev. 1.0) NMP-EP-111-F06, “Manual Emergency Notification Transmission and Confirmation Instructions” (rev. 1.0) NMP-EP-111-F09, “Plant Vogtle Emergency Notification Agency Listing” (rev. 1.0) NMP-EP-111-F10, “SNC Emergency Notifications Form (ENF),” completed by the Exam Team for the candidate to transmit (rev. 1.0) VEGP Emergency Recall Packet and Phone Book
General References:	None
Time Critical Task:	Yes
Validation Time:	15 minutes

Lines 1, 2, and 4 of the Emergency Notification Form (ENF) are marked critical in accordance with 60201-C, “Simulator Training and Documentation,” which requires satisfactory completion of these lines to meet the Emergency Preparedness Performance Indicator.

SIMULATOR SETUP:

1. Ensure the ENN telephone cord in the rear of the ENN telephone is labeled “simulator” and NOT the actual ENN phone cord.

2. Ensure the ENN telephone in the simulator booth is plugged into the phone jack and perform a test of the communications with the Shift Supervisor platform phone before JPM initiation.

3. Test the emergency recall phone number for an Alert Emergency prior to JPM initiation.

4. NMP-EP-111-F10, “SNC Emergency Notifications Form (ENF),” should be completed with the exception of Lines 2 (Notification Time and Date and Authentication #), 10 (Time), 12 (Shutdown Time), and 17 (Time) prior to the start of this JPM.

5. The start time of this JPM should be the time recorded on line 10 (the candidate has 15 minutes from the declaration time to confirm receipt of the message).

Setup time: 10 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

JPM 1.

NOTES TO EXAMINER: The examiner shall record the start time of the JPM on Line 10, which is the Declaration Time, on the Emergency Notification Form prior to providing it to the candidate.

Candidate is given the Emergency Notification Form, NMP-EP-111-003, NMP-EP-111-F04, NMP-EP-111-F06, and NMP-EP-F09 at this time.

Standard: N/A

Comment:

JPM 2.

BEGIN TIME CRITICAL NOTIFICATION: _____ (should be same time as Line 10 of Emergency Notification Form)

NMP-EP-111-003, Instruction 5, for activating the ERO recall

NOTES

- ERO personnel should be recalled only if an Alert, Site Area Emergency or General Emergency has been declared or when directed by the Emergency Director.
- If the Alert, Site Area Emergency or General Emergency involves an actual or credible imminent threat of attack on the plant by a hostile force, then activate the Security Emergency Scenario.
- Only VEGP Management is notified when the NOUE scenario is activated.
- There is a three to four minute delay between initiating the emergency recall and the callback to the control room from the recall system.

Standard: Candidate reads NOTES prior to Step 1.

Comment:

***JPM 3.** **1. Operations personnel shall activate the "Primary" emergency recall system in accordance with posted system instructions** (Either NOUE or Alert/Site Area/General or Security Scenario as appropriate).

NOTE TO EXAMINER: The "posted system instructions" are in an envelope in the drawer to the left of the ENN phone.

Standard: **Candidate activates the "Primary" emergency recall system for an Alert emergency.** NOTE: The critical step is associated with selection of the correct system (primary) and the correct classification (alert). It is acceptable for the candidate to terminate the call sequence and redial if done prior to the system activation.

- Dial 1-866-546-7934.
- Enter "User ID" (456456) followed by #.
- Enter "Security PIN" (123456) followed by #.
- Enter "Scenario ID" (1330) followed by #.
- Enter "Scenario PIN" (1330) followed by #.
- Press {3} when prompted to start the scenario.
- Wait for the message, "The scenario is building."
- Press the # sign and hang up.

Comment:

JPM 4. 2. Operations personnel should verify the "Primary" emergency recall system is operable via a call back to the control room by the emergency recall system. In addition, the Shift Manager's beeper should activate and display a predetermined emergency pager text message and a call-in number.

NOTE TO EXAMINER: The candidate should pick up the phone, speak any word, and hang up. The system will call back up to three times. This is normal.

Standard: Candidate verifies the "Primary" emergency recall system is operable via a return call (phone will ring shortly after recall system is activated).

Comment:

JPM 5. Steps 3, 4, and 5 activate the “Backup” emergency recall system and are not applicable.

6. Record date, time, and name below after completing the ‘Instructions For Activation of the Vogtle Emergency Recall System’ as delineated within the posted instructions.

Standard: Candidate N/As Steps 3, 4, and 5, and records date, time, and name on Step 6.

Comment:

JPM 6. <u>NMP-EP-111-F04, for performing the ENN roll call</u>

1.0. Obtain a copy of the appropriate site specific procedure (NMP-EP-111-003).

Standard: Candidate checks that NMP-EP-111-003 is available.

Comment:

JPM 7. 2.0. Select the appropriate instruction from the site specific document to operate the equipment for contacting the warning points or EOCs.

NOTE TO EXAMINER: The instruction for contacting the ENN agencies is found in NMP-EP-111-003, Instruction 6. This is a Reference Use procedure, so the candidate may refer to it as necessary.

Standard: Candidate refers to NMP-EP-111-003, Instruction 6, as necessary for establishing contact with the ENN agencies.

Comment:

JPM 8. 3.0. Obtain a copy of the appropriate site specific Form for Applicable Agencies (NMP-EP-111-F09).

Standard: Candidate checks that NMP-EP-111-F09 is available.

Comment:

***JPM 9. 4.0. Establish contact on the ENN by performing a roll call of the applicable agencies. Each agency should be contacted. Check off each agency as acknowledgement is obtained.**

NOTE TO EXAMINER: NMP-EP-111-003, Instruction 6, directs the candidate to establish contact with the ENN agencies as follows:

- Operation is accomplished by dialing a two digit calling code to call all stations or individual stations.
- Press ** on the ENN phone to ring ALL stations.

Standard: Candidate establishes contact on the ENN by pressing ** on the ENN phone to ring all stations.

Comment:

JPM 10. 5.0. Perform roll call using step 5.1 for the electronic notification method or Step 5.2 for the manual notification method.

5.2. When performing roll call for manual EN form transmission, read the following script:

> THIS IS A [☒ DRILL ☐ ACTUAL EMERGENCY] MESSAGE.
>
> THIS IS [YOUR NAME] _____ AT
>
> [☐Plant FARLEY ☐ Plant HATCH ☒ Plant VOGTLE].
>
> OBTAIN A BLANK EMERGENCY NOTIFICATION FORM AND STANDBY TO RECEIVE AN EMERGENCY NOTIFICATION MESSAGE USING THE MANUAL NOTIFICATION METHOD.

Standard: Candidate reads the script over the ENN phone with DRILL, candidate's name, and VOGTLE inserted in the appropriate lines.

Comment:

JPM 11. 6.0. Call each facility by name and confirm they are in standby.

NOTE TO EXAMINER: The facilities listed on NMP-EP-111-F09 are:

- ☐ Burke County EMA
- ☐ Georgia Emergency Management (GEMA)
- ☐ Savannah River Site (SRS)
- ☐ South Carolina Emergency Management Division (SC-EMD)
- ☐ Aiken County EMA
- ☐ Barnwell County EMA
- ☐ Allendale County EMA

CUE: Simulator Operator will respond on the ENN phone as each agency is contacted.

Standard: Candidate calls each facility by name on the ENN phone to complete roll call.

Comment:

JPM 12. 7.0. IF time allows, THEN agencies not contacted by the ENN should be contacted using the phone numbers provided.

8.0. IF ROLL CALL of the applicable agencies is not complete upon completion of the EN form, THEN terminate roll call and proceed to NMP-EP-111-F05 to perform receipt confirmation of the electronic EN form or NMP-EP-111-F06 to transmit the EN form manually.

Standard: N/A

Comment:

JPM 13. <u>NMP-EP-111-F06, for performing manual notification and confirmation</u>

NOTES
1) All responsible state and local agencies must confirm receipt of the EN form within 15 minutes of the initial/upgrade emergency declaration or change in PARs.
2) IF an agency does not respond to the initial attempt to contact, THEN the remaining agencies listed should be contacted prior to any further attempts to contact the non-responsive agency.

1.0. Obtain a copy of the appropriate site specific procedure (NMP-EP-111-003).

Standard: Candidate reviews NOTES and checks that NMP-EP-111-003 is available.

Comment:

JPM 14. 2.0. Select the appropriate instruction from the site specific document to operate the equipment for contacting the warning points or EOCs.

Standard: Candidate has already contacted the agencies, so no action is required.

Comment:

JPM 15. 3.0. Obtain a copy of the appropriate site specific Form for Applicable Agencies (NMP-EP-111-F09).

Standard: Candidate checks that NMP-EP-111-F09 is available.

Comment:

JPM 16. 4.0. IF ROLL CALL of the applicable agencies is not complete, THEN terminate roll call.

Standard: N/A

Comment:

***JPM 17.** **5.0. (Vogtle Only) IF any agency requires message authentication, THEN authenticate the message as follows:**

a. Enter the code provided by the requesting agency.

b. Select GET AUTHENTICATION CODE from the ENN Communicator's packet.

c. Provide the authentication code supplied by the system to the agency requiring authentication verbally over the ENN.

CUE: Simulator Operator will respond on the ENN phone, "South Carolina requests authentication for code word #27."

Standard: **Candidate provides code word from the ENN Communicator's packet (drawer to the left of the phone).** NOTE: The code word will be provided to the examiner prior to the JPM administration.

Comment:

JPM 18. 6.0. Read the following script:

THIS IS A [☒ DRILL ☐ ACTUAL EMERGENCY] MESSAGE.

THIS IS [YOUR NAME] _____ AT

[☐Plant FARLEY ☐ Plant HATCH ☒ Plant VOGTLE].

RECORD THE FOLLOWING INFORMATION ON YOUR BLANK EMERGENCY NOTIFICATION FOR EMERGENCY NOTIFICATION MESSAGE NUMBER [MESSAGE NUMBER] _____.

Standard: Candidate reads the script over the ENN phone with DRILL, candidate's name, VOGTLE, and Message #1 inserted in the appropriate lines.

Comment:

***JPM 19.** Transmit the EN Form data verbally as follows:

7.1. Read the notification form (line by line) through line 5, allowing ample time for the recipient to transfer the verbal data onto a blank form.

Line 1 – Block A, DRILL, and message #1

Line 2 – Block A, INITIAL, and Authentication #27

Line 3 – Site, VOGTLE, confirmation phone # (706) 826-3652

Line 4 – Emergency Classification, Block B, Alert, based on EAL # FA1, EAL Description: Loss of RCS Barrier

Line 5 – Protective Action Recommendations, Block A – NONE

Standard: **Candidate reads the EN Form data (line by line) through line 5 over the ENN phone. NOTE: Lines 1 and 4 are critical.**

Comment:

***JPM 20.** Transmit the EN Form data verbally as follows:

7.2. After reading line 5 of the EN Form, contact each required agency by name for the applicable site.

7.2.1. Record the TIME (HH:MM), DATE (mm/dd/yy), and name or operator number of the agency representative for each agency that acknowledges receipt of EN message through line 5 on the site specific agency notification form.

7.2.2. Record on line 2 of the EN Form the TIME (HH:MM) and DATE (mm/dd/yy) the first agency confirms receipt of the EN Form through line 5.

END TIME CRITICAL NOTIFICATION: _____ (should be same time as Line 2 of Emergency Notification Form)

Standard: **Candidate contacts each facility to confirm receipt of the EN message and records the time and date that the first agency confirms receipt on Line 2 of the Emergency Notification Form.**

Comment:

JPM 21. Transmit the EN Form data verbally as follows:

7.2. After reading line 5 of the EN Form, contact each required agency by name for the applicable site.

7.2.3. Direct the agencies to standby to receive the remainder of the information for the EN Form.

CUE: "Another ENN Communicator will complete the remainder of the procedure."

Standard: N/A

Comment:

Terminating cue: Candidate returns initiating cue sheet.

Verification of Completion

Job Performance Measure No.: V-NRC-JP-NMP-EP-111-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

Southern Nuclear Operating Company			
SOUTHERN COMPANY	Emergency Implementing Procedure	SNC Emergency Notifications Form (ENF)	NMP-EP-111-F10 Version 1.0 Page 1 of 1

1. [ ] DRILL [ ] ACTUAL EVENT MESSAGE # 1
2. [X] INITIAL [ ] FOLLOW-UP NOTIFICATION: TIME _____ DATE ____/____/__ AUTHENTICATION # _____
3. SITE: Vogtle Confirmation Phone # 706-826-3652

4. EMERGENCY CLASSIFICATION: [ ] A UNUSUAL EVENT [X] B ALERT [ ] C SITE AREA EMERGENCY [ ] D GENERAL EMERGENCY
BASED ON EAL# FA1 EAL DESCRIPTION: Loss of RCS Barrier

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] Stable [ ] C Degrading

9. METEOROLOGICAL DATA: Wind Direction from _____ degrees* Wind Speed _____ mph*

("May not be available for Initial Notifications)" Precipitation _____* Stability Class* [ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G

10. [X] DECLARATION [ ] B TERMINATION Time _____ Date ____/____/____

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

12. UNIT STATUS: (Unaffected Unit(s) Status Not Required for Initial Notifications)
[X] U1 0 % Power Shutdown at Time _____ Date ___/____/____
[ ] U2 ____ % Power Shutdown at Time _____ Date ___/____/____

13. REMARKS:

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)

THIS IS A TIME CRITICAL JPM

Initial Conditions: **Unit 1 has tripped due to a small LOCA.**

The Shift Manager assumed the role of Emergency Director and declared an Alert Emergency.

WebEOC is NOT available.

Initiating Cue: **The Emergency Director has directed you to, "Perform the duties of the ENN Communicator and:**

1) **Perform an ERO recall per NMP-EP-111-003, Instruction 5 and;**

2) **Perform an ENN roll call for the MANUAL notification method per NMP-EP-111-F04 and;**

3) **Perform receipt confirmation of the MANUAL notification form per NMP-EP-111-F06."**

SRO Admin Job Performance Measure "e"

Facility: Vogtle

Task No: V-LO-TA-40002

Task Title: Classify an Emergency Event and Complete the Emergency Notification Form

JPM No: V-NRC-JP-NMP-EP-110-HL19

K/A Reference: G2.4.41 SRO 4.6

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

THIS IS A TIME CRITICAL JPM

Initial Conditions: **The Unit 1 seismic monitoring system confirmed a seismic event with an earthquake acceleration of 0.14 g.**

Unit 1 is in Mode 3 following a reactor trip 20 minutes ago.

Safety Injection is actuated due to 275 gpm RCS leakage.

Unit 1 containment pressure relief was in progress, and can NOT be isolated.

1RE-005 and 1RE-006 are both indicating 2.6 E+4 mr/hr.

1RE-12444C is indicating 8.3 E-2 µCi/cc.

Wind direction (10 meter, 15 min. avg.) is currently 20º at 4.5 mph.

Stability class is 'D' with no precipitation.

WebEOC is NOT functional.

The ENN Communicator has completed recall and roll call.

Initiating Cue: **You are the Emergency Director, and based on the given conditions, complete Checklist 1, Classification Determination, of NMP-EP-110, "Emergency Classification Determination and Initial Action," through Step 6 to determine the HIGHEST emergency classification level,**

AND

complete NMP-EP-111-F10, "SNC Emergency Notifications Form (ENF)," for the declared emergency.

Classify the Unit 1 emergency only. Consider Unit 2 unaffected.

Task Standard:	Candidate correctly declares a Site Area Emergency within 15 minutes and completes the Emergency Notification Form (NMP-EP-111-F10) within an additional 15 minutes. No PARs are required for the classification.
Required Materials:	NMP-EP-110, "Emergency Classification Determination and Initial Action" (rev. 6.1) NMP-EP-110-GL03, "VEGP EALs - ICs, Threshold Values and Basis," Figures 1, 2, and 3 (rev. 4.0) NMP-EP-111, "Emergency Notifications" (rev. 8.0) NMP-EP-111-003, "Emergency Notification Communicator Instructions – Vogtle" (rev. 6.0) NMP-EP-111-F10, "SNC Emergency Notifications Form (ENF)" (rev. 1.0) NMP-EP-112, "Protective Action Recommendations" (rev. 3.0)
General References:	None
Time Critical Task:	YES
Validation Time:	30 minutes (15 minutes to declare the emergency and 15 minutes to notify authorities by completing the Emergency Notification Form)

Lines 1, 2, 4, 5, 6, and 10 of the Emergency Notification Form (ENF) are critical based on 60201-C, "Simulator Training and Documentation," which requires satisfactory completion of these lines to meet the Emergency Preparedness Performance Indicator.

Line 17 is critical based on the time requirement of NMP-EP-111, "Emergency Notifications," to notify State and Local Agencies within 15 minutes of the declaration of an emergency.

Performance Information

Critical steps are denoted with an asterisk and bolded.

BEGIN TIME CRITICAL FOR CLASSIFICATION DETERMINATION: _____ (time JPM begins)

JPM 1. NMP-EP-110, Checklist 1 – Classification Determination

> NOTE
> Key Parameters should be allowed to stabilize to accurately represent plant conditions prior to classifying an event.

Initial Actions

1. Determine the appropriate Initiating Condition Matrix for classification of the event based on the current operating mode:

☑ HOT IC/EAL Matrix Evaluation Chart (Go To Step 2) to evaluate the Barriers
☐ COLD IC/EAL Matrix Evaluation Chart (Go To Step 3)
☐ Both HOT & COLD IC/EAL Matrix Evaluation Chart apply (Go To Step 2)

Standard: Candidate selects the HOT IC/EAL Matrix to evaluate the barriers.

Comment:

JPM 2. Evaluate the status of the fission product barrier using Figure 1, Fission Product Barrier Evaluation.

2.a. Select the condition of each fission product barrier:

	LOSS	POTENTIAL LOSS	INTACT
Fuel Cladding Integrity	☐	☐	☑
Reactor Coolant System	☑	☐	☐
Containment Integrity	☑	☐	☐

Standard: Candidate checks loss of RCS barrier (1RE-005/006 > 2.0 E+4 mr/hr) and loss of Containment Integrity barrier (purge dampers will not close). Fuel Cladding Integrity is intact.

Comment:

JPM 3. Evaluate the status of the fission product barrier using Figure 1, Fission Product Barrier Evaluation.

2.b. Determine the highest applicable fission product barrier Initiating Condition (IC):

(select one) ☐ FG1 ☑ FS1 ☐ FA1 ☐ FU1 ☐ None

Standard: Candidate selects FS1 for "Loss or Potential Loss of ANY Two Barriers." NOTE: This information is found at the top of Figure 1.

Comment:

JPM 4. 3. Evaluate AND determine the highest applicable IC/EAL using the Matrix Evaluation Chart(s) identified in Step 1, THEN go to Step 4.

Hot IC# __FS1__ Unit __1__ and/or Cold IC#_____ Unit _____ or ☐ None

Standard: Candidate determines that the highest IC/EAL is FS1 (Site Area) based on the Fission Product Barrier Evaluation, which is higher than HA1 (Alert based on seismic event > 0.12 g) from the HOT IC/EAL Matrix Evaluation Chart, Figure 2.

Comment:

***JPM 5. 4. Check the highest emergency classification level identified from either Step 2b or 3:**

Classification	Based on IC#	Classification	Based on IC#
☐ General	_____	☐ Alert	_____
☑ **Site-Area**	**FS1**	☐ NOUE	_____
		☐ None	N/A

Remarks (Identify the specific EAL, as needed): _____

Standard: Candidate checks the Site Area Classification block and records IC# FS1. Remarks line may be N/A or include the EAL.

Comment:

***JPM 6.** **5. Declare the event by approving the Emergency Classification.**

_____ Date: _____/_____/_____ Time: _____
Emergency Director

Standard: **Candidate signs as Emergency Director and records the current date and time.**
NOTE: The critical step is making the declaration within 15 minutes.

END TIME CRITICAL FOR CLASSIFICATION DETERMINATION: _____ (time of emergency declaration on Line 5)

Comment:

JPM 7. 6. Obtain Meteorological Data (not required prior to event declaration):

Wind Direction (from) __20°____ Wind Speed __4.5____
Stability Class __D____ Precipitation __None__

Standard: Candidate obtains meteorological data from Initial Conditions.

Comment:

JPM 8. 7. Initiate Attachment 2, Checklist 2 – Emergency Plan Initiation.

Standard: N/A. Per the Initiating Cue, candidate is required to complete Checklist 1 through Step 6, and then complete NMP-EP-111-F10, “SNC Emergency Notifications Form (ENF)”.

Comment:

JPM 9. NMP-EP-111-F03, “Plant Vogtle Emergency Notification Form Completion Instructions,” provides guidance for Emergency Notifications Form (ENF) completion.

NOTE TO EXAMINER: NMP-EP-111-F03 is an Information Use procedure, so the candidate is not required to read the instructions line-by-line. The candidate may refer to it as necessary. The JPM includes all of the steps, but the task standard is correct completion of NMP-EP-111-F10 (Emergency Notifications Form), not that each individual step of NMP-EP-111-F03 is read and marked.

Standard: Candidate refers to NMP-EP-111-F03 as required to complete NMP-EP-111-F10.

Comment:

BEGIN TIME CRITICAL FOR EMERGENCY NOTIFICATION FORM: _____ (same time as emergency declaration)

***JPM 10.** **Line 1:** Enter MESSAGE NUMBER. MESSAGE NUMBER is automatically assigned during the transmittal process if using the electronic EN Form tool. Message numbers are sequential for the duration of the Event.

Standard: **Candidate marks Block ‘A’ (DRILL) or Block ‘B’ (ACTUAL)** and enters MESSAGE #1.

Comment:

***JPM 11.** **Line 2: Select the appropriate message type. INITIAL will be checked for any notification associated with the declaration and/or change of an emergency classification (including Termination).**

Standard: **Candidate marks Block ‘A’ (INITIAL).** NOTE: Notification time and authentication number will be completed by the ENN communicator at a later time.

Comment:

JPM 12. Line 3: Enter or confirm the correct site and site call back number is displayed. When using the electronic form the site location is automatically completed based on prior selections.

Standard: Candidate enters Vogtle for the site. NOTE: On the in-plant forms, the Vogtle phone number is already filled in.

Comment:

***JPM 13. Line 4: Select the appropriate EAL from the drop down list (For Termination, Select Termination). Confirm the brief description of the initiating conditions for the emergency classification declared is auto completed based on the EAL number selected. The event description block cannot be edited. Additional information or information relative to competing events should be included on Line 13, REMARKS.**

Standard: Candidate marks Block 'C' (SITE AREA EMERGENCY), enters EAL # FS1, and provides a brief EAL description (Loss or Potential Loss of ANY Two Barriers – or similar wording).

Comment:

***JPM 14. Line 5: Complete Lines 5B, 5C, 5D, 5E.**

Standard: Candidate marks Block 'A' (NONE) since PARs are not required for a Site Area emergency.

Comment:

NOTES

- Information for Lines 6, 7, and 9 are obtained from dose assessment (e.g., Dose Assessment Staff in either the TSC or the EOF, as appropriate).
- IF an effluent monitor is out of service or failed, THEN an increased attention to detail is required when item 6 and 7 tables are evaluated.

***JPM 15. Line 6: Select the appropriate box for EMERGENCY RELEASE using the following table to determine the status of a radiological release:**

IF:	THEN:
FMT readings or Dose assessment results (automated or manual) have been completed AND indicate an emergency radiological release is underway	Check B Is Occurring
At least one of the following effluent monitors is in alarm, AND completed dose projection results (automated or manual) are not available: RE-12444C, RE-12444D, RE-12444E, RE-12839C, RE-12839D, RE-12839E, RE-16980A	**Check X Is Occurring**
Conditions exist indicating that a radiological release is occurring based on plant conditions (e.g. SGTR with known path to the environment, site specific effluent radiation monitor readings, FMT readings, etc.)	Check B Is Occurring
Elevated indications do not exist on any of the following effluent monitor: RE-12444C, RE-12444D, RE-12444E, RE-12839C, RE-12839D, RE-12839E, RE-16980A	Check A None
Dose assessment results (automated or manual) have been completed AND indicate an emergency radiological release is NOT underway	Check A None
Dose assessment results indicate an emergency radiological release occurred previously AND is no longer underway	Check C Has Occurred

Standard: **Candidate marks Block 'B' (Is Occurring).** NOTE: Candidate may base selection on 1RE-12444C reading or on plant conditions indicating a release is in progress.

Comment:

JPM 16. Line 7: Select the appropriate box for RELEASE SIGNIFICANCE using the following table to determine the release significance:

IF:	THEN:
Elevated indications do not exist on any of the following effluent monitor: RE-12444C, RE-12444D, RE-12444E, RE-12839C, RE-12839D, RE-12839E, RE-16980A	Check A Not applicable
Elevated indications exist on at least one of the following effluent monitors AND no effluent monitors are in alarm AND completed dose assessment results (automated or manual) are not available: RE-12444C, RE-12444D, RE-12444E, RE-12839C, RE-12839D, RE-12839E, RE-16980A	Check D Under Evaluation
Line 6B or 6C is marked and NO effluent monitor is or has been in alarm OR has exceeded the specified threshold	Check B Within normal operating limits
6B or 6C is marked and ANY of the following effluent monitors is or has been in alarm OR has exceeded the specified threshold: RE-12444C, RE-12444D, RE-12444E, RE-12839C, RE-12839D, RE-12839E, RE-16980A	*Check X Above normal operating limits*
FMT readings or Dose assessment results (automated or manual) have been completed AND indicate an emergency radiological release is underway	Check C Above normal operating limits
Dose assessment results indicate an emergency radiological release occurred previously AND is no longer underway	Check C Above normal operating limits

Standard: Candidate marks Block ‘C’ (Above normal operating limits) based on 1RE-12444C indication.

Comment:

JPM 17. Line 8: Select the appropriate box for EVENT PROGNOSIS using the following guidance:

Mark box A Improving if mitigation efforts appear successful, progressing toward termination.

Mark box X Stable if escalation to a higher classification is unlikely based on current conditions.

Mark box C Degrading if escalation to a higher emergency classification or PAR change is likely.

Standard: Candidate marks Block 'B' (Stable) since conditions are not degrading.

Comment:

JPM 18. Line 9: Enter the 15-minute averaged Wind Direction, Wind Speed, and Precipitation values, and check the appropriate "Stability Class" from NMP-EP-110 Checklist 1.

Standard: Candidate records the Met Tower Data provided in the Initial Conditions. Wind direction is from 20 degrees, wind speed is 4.5 mph, stability class is 'D', and there is no precipitation.

Comment:

***JPM 19. Line 10: Enter the time and date (mm/dd/yy) when the current emergency classification was declared or terminated.**

Standard: Candidate marks Block 'A' (DECLARATION) and enters the time and date of the declaration from Line 5 of NMP-EP-110, Checklist 1.

Comment:

JPM 20. Line 11: Select the affected unit or “ALL” block if both units are affected by the EAL indicated in Line 4. For events involving equipment that is common to both units, “ALL” should be selected.

Standard: Candidate marks Block ‘1’ for Unit 1.

Comment:

JPM 21. Line 12: Unit Status:

12.1. Enter the % power.

12.2. Enter the time (HH:MM) and date of the shutdown if applicable.

Standard: Candidate marks Block ‘A’ (U1), enters 0% power, and enters shutdown time (20 minutes ago) and date. NOTE: The unaffected unit’s status is not required for the initial notification.

Comment:

JPM 22. Line 13: Record any current information related to the emergency such as significant events which have occurred, significant equipment which is out of service or malfunctioning, events occurring which may impact offsite resources.

Standard: Candidate may provide remarks about the emergency, but none is required.

Comment:

JPM 23. IF INITIAL was checked on Line 2 THEN proceed to Line 17, OTHERWISE proceed to Step 15.

Standard: Candidate proceeds to Line 17 (Step 18.0) and leaves Lines 14, 15, and 16 blank.

Comment:

***JPM 24. Line 17: Review and Approval**

18.1. Enter the name of the individual completing the emergency notification form.

18.2. Enter the name of the ED or EOF Mgr approving the emergency notification form.

18.3. Enter the time (HH:MM) and date (mm/dd/yy) the emergency notification form is approved. The specified format is required to proceed.

Standard: **Candidate signs for approval as the Emergency Director and records the current date and time.** NOTE: The critical step is completing the form within 15 minutes of the Classification Declaration Time recorded on Line 10.

END TIME CRITICAL FOR EMERGENCY NOTIFICATION FORM: _____ (same as time recorded on Line 17)

Comment:

Terminating cue: Candidate returns cue sheet and completed forms.

KEY – Do NOT Give to Candidates

Yellow highlighted items are critical

Emergency Notification Form

1. [X] DRILL OR [B] ACTUAL EVENT MESSAGE # 1
2. [X] INITIAL [B] FOLLOW-UP NOTIFICATION: TIME_____DATE____/____/__ AUTHENTICATION # _____
3. SITE: Vogtle Confirmation Phone #1-706-826-3562(SIM)

4. EMERGENCY CLASSIFICATION: [A] UNUSUAL EVENT [B] ALERT [X] SITE AREA EMERGENCY [D] GENERAL EMERGENCY
   BASED ON EAL# FS1 EAL DESCRIPTION: Loss or Potential Loss of Any Two Barriers

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: [A] None [X] Is Occurring [C] Has Occurred
7. RELEASE SIGNIFICANCE: [A] Not applicable [B] Within normal operating limits [X] Above normal operating limits [D] Under evaluation
8. EVENT PROGNOSIS: [A] Improving [X] Stable [C] Degrading
9. METEOROLOGICAL DATA: Wind Direction from 20 degrees* Wind Speed 4.5 mph*

(*May not be available for Initial Notifications)* Precipitation None * Stability Class* [A] [B] [C] [X] [E] [F] [G]

10. [X] DECLARATION [B] TERMINATION Time Line 5 of Checklist 1 Date Checklist 1 date /___/___
11. AFFECTED UNIT(S): [X] 2 [All]
12. UNIT STATUS: (Unaffected Unit(s) Status Not Required for Initial Notifications)
    [X] U1 0 % Power Shutdown at Time T -20 min Date Today /__/___
    [B] U2 _____% Power Shutdown at Time _____ Date ___/_____/____
13. REMARKS: None

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 [B] Liquid
Start Time _____ Date ___/_____/____Stop Time _____ Date ___/_____/____
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: Candidate Title ED Time <T +15 from line 10 Date___/ TODAY /____

NOTIFIED BY: _____

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

Verification of Completion

Job Performance Measure No.: V-NRC-JP-NMP-EP-110-HL19

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory / Unsatisfactory

Examiner's signature and date: _____ _____

THIS IS A TIME CRITICAL JPM

Initial Conditions: **The Unit 1 seismic monitoring system confirmed a seismic event with an earthquake acceleration of 0.14 g.**

Unit 1 is in Mode 3 following a reactor trip 20 minutes ago.

Safety Injection is actuated due to 275 gpm RCS leakage.

Unit 1 containment pressure relief was in progress, and can NOT be isolated.

1RE-005 and 1RE-006 are both indicating 2.6 E+4 mr/hr.

1RE-12444C is indicating 8.3 E-2 µCi/cc.

Wind direction (10 meter, 15 min. avg.) is currently 20º at 4.5 mph.

Stability class is 'D' with no precipitation.

WebEOC is NOT functional.

The ENN Communicator has completed recall and roll call.

Initiating Cue: **You are the Emergency Director, and based on the given conditions, complete Checklist 1, Classification Determination, of NMP-EP-110, "Emergency Classification Determination and Initial Action," through Step 6 to determine the HIGHEST emergency classification level,**

AND

complete NMP-EP-111-F10, "SNC Emergency Notifications Form (ENF)," for the declared emergency.

Classify the Unit 1 emergency only. Consider Unit 2 unaffected.