

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-A1RO/SRO
COMPLETION TIME: 20 MIN
JOB TITLE: URO/SRO
DUTY: CVCS
TASK TITLE: DETERMINE BORATION/DILUTION REQUIREMENT FOR A POWER INCREASE

KSA NO: 004A4.04
KSA RATING: 3.2/3.6
REVISION: 20031203

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT _____ CLASSROOM X

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: OTN-BG-00002, REACTOR MAKEUP CONTROL AND BORON THERMAL REGENERATION SYSTEM, REV 18
CURVE BOOK

TOOLS/EQUIPMENT: CALCULATOR, CURVE BOOK, RULER

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE PLANT IS CURRENTLY AT 50% POWER FOLLOWING REFUEL 13. CONTROL ROD BANK "D" IS POSITIONED AT 130 STEPS. CURRENT BORON CONCENTRATION IS 1500 PPM.

Initiating Cues: IT HAS BEEN DETERMINED THAT REACTOR POWER WILL BE RAISED BACK TO FULL POWER AT 10% PER HOUR. IN ORDER TO HAVE DELTA-I CLOSE TO THE TARGET AT 100%, REACTOR ENGINEERING REQUESTS THAT THE CONTROL RODS BE POSITIONED AT 215 STEPS ON CONTROL BANK "D" WHEN 100% POWER IS REACHED.

THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO ESTIMATE BY CALCULATION THE AMOUNT OF BORON/WATER THAT MUST BE ADDED TO THE RCS OVER THE REMAINING LOAD INCREASE TO REACH 100%.

NOTE: IGNORE THE EFFECTS OF XENON.

Task Standard: UPON COMPLETION OF THIS JPM THE OPERATOR WILL HAVE CALCULATED THE NECESSARY AMOUNT OF WATER TO OVERCOME THE POWER DEFECT ASSOCIATED WITH THE RETURN TO 100% POWER.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. DETERMINE THE REQUIRED CHANGE IN BORON CONCENTRATION TO COMPENSATE FOR THE POWER DEFECT FROM 50% TO 100%	PROVIDE THE OPERATOR A COPY OF THE CURVE BOOK	<p>OPERATOR SHOULD DETERMINE FROM THE CURVE BOOK THAT -535 PCM POWER DEFECT WILL NEED TO BE COMPENSATED FOR DURING THE INCREASE TO 100% POWER</p> <p>NOTE: 100%=-1125; 50%=-590 (FROM FIG 6-1A) DIFFERENCE -535 PCM. 200 PCM (FROM FIG 2-5) WILL BE ACCOUNTED FOR BY CONTROL RODS WITH THE REMAINING PCM COMPENSATED FOR BY RMCS</p>	<p>S U</p> <p>Comments:</p>
1. CONT.		<p>USING FIGURE 5-3, INVERSE BORON WORTH, CALCULATE BORON CONCENTRATION CHANGE FOR CURRENT BURNUP = (-335) (-0.1329 PPM/PCM) =44.5 PPM</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. CONT		CALCULATE FINAL BORON CONCENTRATION FROM 1500 PPM INITIAL CONCENTRATION (GIVEN IN INITIAL CONDITIONS) $CF = 1500 - 44.5 \text{ PPM}$ $CF = 1455.5 \text{ PPM}$	S U Comments:
1. CONT		USING EQUATION FROM CURVE BOOK FIGURE 7-5, CALCULATE GALLONS OF WATER NECESSARY TO REDUCE RCS BORON FROM 1500 PPM TO 1455.5 PPM. $V_w = \frac{M}{8.33} \ln\left(\frac{C_i}{C_f}\right)$	S U Comments:
1. CONT *		$V_M = \frac{509650}{8.33} \ln\left(\frac{1500}{1455.5}\right)$ $V_M = 1842 \text{ GALLONS}$ (1658-2026 GALLONS ACCEPTABLE ANSWERS) NOTE: "M" HAS BEEN INTERPOLATED FOR 50% POWER IN THE ABOVE EQUATION.	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
2. OPERATOR SHOULD INFORM THE CRS OF THE CALCULATED RESULT		OPERATOR PROVIDES CRS WITH RESULTS CALCULATED	<p style="text-align: center;">S U</p> <p>Comments:</p>
	RECORD STOP TIME ON PAGE 1		

* CRITICAL STEP

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Initial Conditions: THE PLANT IS CURRENTLY AT 50% POWER FOLLOWING REFUEL 13. CONTROL ROD BANK "D" IS POSITIONED AT 130 STEPS. CURRENT BORON CONCENTRATION IS 1500 PPM.

Initiating Cues: IT HAS BEEN DETERMINED THAT REACTOR POWER WILL BE RAISED BACK TO FULL POWER AT 10% PER HOUR. IN ORDER TO HAVE DELTA-I CLOSE TO THE TARGET AT 100%, REACTOR ENGINEERING REQUESTS THAT THE CONTROL RODS BE POSITIONED AT 215 STEPS ON CONTROL BANK "D" WHEN 100% POWER IS REACHED.

THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO ESTIMATE BY CALCULATION THE AMOUNT OF BORON/WATER THAT MUST BE ADDED TO THE RCS OVER THE REMAINING LOAD INCREASE TO REACH 100%.

NOTE: IGNORE THE EFFECTS OF XENON.

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: A STEAM BREAK OCCURS INSIDE CONTAINMENT ON THE STEAMLINE FROM 'A' STEAM GENERATOR. RCS PRESSURE IS CURRENTLY AT 1550 PSIG. 'A' STEAM GENERATOR PRESSURE IS 10 PSIG. A SAFETY INJECTION HAS OCCURRED.

Initiating Cues: YOU ARE AN EXTRA SRO ON SHIFT PERFORMING CONTROL ROOM OBSERVATIONS. THE SS HAS DIRECTED YOU TO DETERMINE THE INITIAL REPORTABILITY REQUIREMENTS FOR THIS EVENT PER APA-ZZ-00520, REPORTING REQUIREMENTS AND RESPONSIBILITIES, AND INFORM HIM WHEN COMPLETE. INCLUDE THE TIME REQUIREMENT AND THE AGENCY REQUIRING NOTIFICATION.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE DETERMINED THAT A 4 HOUR REPORT IS REQUIRED TO BE MADE TO THE NRC OPERATIONS CENTER.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF APA-ZZ-00520, REPORTING REQUIREMENTS AND RESPONSIBILITIES		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p style="text-align: center;">S U</p> <p>Comments:</p>
2.* DETERMINE A 4 HOUR REPORT NEEDS TO BE MADE TO THE NRC OPERATIONS CENTER		OPERATOR SHOULD DETERMINE A 4 HOUR REPORT NEEDS TO BE MADE TO THE NRC OPERATIONS CENTER (STEP 5.3 ON ATTACHMENT 1)	<p style="text-align: center;">S U</p> <p>Comments:</p>
3.	<p style="text-align: center;"><u>RECORD STOP TIME ON PAGE 1</u></p>		<p style="text-align: center;">S U</p> <p>Comments:</p>

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: A STEAM BREAK OCCURS INSIDE CONTAINMENT ON THE STEAMLIN FROM 'A' STEAM GENERATOR. RCS PRESSURE IS CURRENTLY AT 1550 PSIG. 'A' STEAM GENERATOR PRESSURE IS 10 PSIG. A SAFETY INJECTION HAS OCCURRED.

Initiating Cues: YOU ARE AN EXTRA SRO ON SHIFT PERFORMING CONTROL ROOM OBSERVATIONS. THE SS HAS DIRECTED YOU TO DETERMINE THE INITIAL REPORTABILITY REQUIREMENTS FOR THIS EVENT PER APA-ZZ-00520, REPORTING REQUIREMENTS AND RESPONSIBILITIES, AND INFORM HIM WHEN COMPLETE. INCLUDE THE TIME REQUIREMENT AND THE AGENCY REQUIRING NOTIFICATION.

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE REACTOR TRIPPED 2 DAYS AGO FROM 100% POWER AND IS CURRENTLY IN MODE 3 AT NOP/NOT CONDITIONS. THE STA HAS JUST COMPLETED A SHUTDOWN MARGIN CALCULATION WHILE SUBCRITICAL-METHOD 2, USING OSP-SF-00001, SHUTDOWN MARGIN CALCULATION.
THE PLANT COMPUTER IS NOT AVAILABLE.

Initiating Cues: THE SDM CALCULATION HAS BEEN GIVEN TO YOU FOR ACCEPTANCE CRITERIA VERIFICATION. NOTIFY THE SS OF THE RESULTS AND ANY REQUIRED ACTIONS.
ASSUME ALL CALCULATIONS ARE CORRECT.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE DETERMINED THAT THE SDM CALCULATION DOES NOT MEET THE ACCEPTANCE CRITERIA AND NOTIFY THE SS THAT IMMEDIATE BORATION SHOULD BE COMMENCED.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. USING OSP-SF-00001, SHUTDOWN MARGIN CALCULATION, REVIEW COMPLETED SDM CALCULATION		OPERATOR SHOULD COMPARE RESULTS OF THE SDM CALCULATION TO THE REQUIREMENTS GIVEN IN THE CORE OPERATING LIMITS REPORT (COLR)	<p style="text-align: center;">S U</p> <p>Comments:</p>
2. DETERMINE THAT THE CALCULATED SDM DOES NOT MEET THE ACCEPTANCE CRITERIA GIVEN IN THE COLR		OPERATOR SHOULD DETERMINE THAT THE COLR HAS A 1300 PCM SHUTDOWN REQUIREMENT AND THAT THE REACTOR CURRENTLY DOES NOT SATISFY THE SHUTDOWN MARGIN REQUIREMENTS	<p style="text-align: center;">S U</p> <p>Comments:</p>
3.* NOTIFY THE SS THAT SDM IS NOT SATISFIED AND THAT IMMEDIATE BORATION SHOULD BE COMMENCED	SS ACKNOWLEDGES	OPERATOR SHOULD RECOMMEND THAT IMMEDIATE BORATION BE COMMENCED	

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE REACTOR TRIPPED 2 DAYS AGO FROM 100% POWER AND IS CURRENTLY IN MODE 3 AT NOP/NOT CONDITIONS. THE STA HAS JUST COMPLETED A SHUTDOWN MARGIN CALCULATION WHILE SUBCRITICAL-METHOD 2, USING OSP-SF-00001, SHUTDOWN MARGIN CALCULATION.
THE PLANT COMPUTER IS NOT AVAILABLE.

Initiating Cues: THE SDM CALCULATION HAS BEEN GIVEN TO YOU FOR ACCEPTANCE CRITERIA VERIFICATION. NOTIFY THE SS OF THE RESULTS AND ANY REQUIRED ACTIONS.
ASSUME ALL CALCULATIONS ARE CORRECT.

SHUTDOWN MARGIN CALCULATION WHILE SUBCRITICAL - METHOD 2

<u>PERSON PERFORMING (PRINT)</u>	<u>INITIALS</u>	<u>DATE AND TIME</u>
R. B. Moody	RBM	Started 20040104 / 0400
		Completed 20040104 / 0410

7.5.1 Critical Conditions Prior To The Shutdown7.5.1.1 Shutdown Date 01-02-04 Time 04007.5.1.2 Burnup 360 EFPD7.5.1.3 Rx Power 100 %.7.5.1.4 Critical Boron Concentration 200 ppm7.5.1.5 Total Power Defect (from Curve Book Table 1-8) (+) 2155 pcm7.5.1.5.1 Redistribution Allowance and Voids Reactivity (+) 358 pcm
(from Curve Book Table 1-8)7.5.1.5.2 Corrected Total Power Defect (Step 7.5.1.5 + Step 7.5.1.5.1) (+) 2513 pcm7.5.1.6 Available Rod Worth (-) 4468 pcm7.5.1.7 Most reactive rod worth (+) 1038 pcm7.5.1.8 Worth of untrippable rod(s) and/or trippable rod(s)
misaligned below their bank
$$\frac{0}{(\text{No. of Inop. rods})} \times (+) \frac{1038}{(7.5.1.7)} \text{ pcm/rod} = (+) \underline{0} \text{ pcm}$$

7.5.1.9 Shutdown Reactivity

(+)	<u>2513</u> pcm	Corrected Total Power Defect (7.5.1.5.2)
+ (-)	<u>4468</u> pcm	Available Rod Worth (7.5.1.6)
+ (+)	<u>0</u> pcm	Untrippable/Misaligned Rods (7.5.1.8)
<hr/>		
= (-)	<u>1955</u> pcm	Shutdown Reactivity

7.6 SHUTDOWN REACTIVITY CORRECTIONS7.6.1 Xenon

NOTE: T/S BSR 3.1.1.1 requires the consideration of Samarium concentration when determining SDM. In the interest of providing a conservative SDM calculation, the Samarium concentration and associated reactivity worth is considered to be zero.

7.6.1.1 Critical Xenon Reactivity (-) 2990 pcm7.6.1.2 Time interval since shutdown (7.5.1.1) 48 hours7.6.1.3 Shutdown Xenon Reactivity (-) 900 pcm7.6.1.4 Net Xenon Reactivity (+) 2090 pcm(-) 900 pcm shutdown Xenon Reactivity Worth (7.6.1.3)- (-) 2990 pcm critical Xenon Reactivity Worth (7.6.1.1)= (+) 2090 pcm Net Xenon Reactivity Worth7.6.2 Rods7.6.2.1 Critical Rod height 215 Bank D .7.6.2.2 Critical Rod Worth (-) 10 pcm.7.6.2.3 Critical RIL 161 Bank D .7.6.2.4 Rod Worth at RIL (-) 360 pcm.7.6.2.5 Control Rod Correction (-) 315 pcm.
0.90 x (step 7.6.2.4 - step 7.6.2.2)7.6.3 Temperature7.6.3.1 Min. anticipated temperature 557 °F.7.6.3.2 Isothermal Temperature Defect () 0 pcm.

7.6.4	<u>Boron</u>	
7.6.4.1	Integral Worth for Critical Boron Concentration	(+) <u>1900</u> pcm
7.6.4.2	Boron Concentration from most recent sample	<u>200</u> ppm
7.6.4.3	B-10 depletion correction (0 if $7.6.4.2 \leq 7.5.1.4$; ($7.6.4.2 - 7.5.1.4$) x (-0.025) otherwise)	(-) <u>0</u> ppm
7.6.4.4	Corrected measured boron concentration (7.6.4.2 + 7.6.4.3)	<u>200</u> ppm
7.6.4.5	Integral Worth for Corrected Measured Boron Concen.	(+) <u>1900</u> pcm
7.6.4.6	Change in Boron Worth (7.6.4.1 - 7.6.4.5)	() <u>0</u> pcm
7.6.4.7	Xenon-Boron competition factor (+300 pcm)	(+) <u>300</u> pcm
7.6.4.8	Corrected change in boron worth (Step 7.6.4.6 + Step 7.6.4.7)	(+) <u>300</u> pcm
7.6.5	Total Shutdown Reactivity (Shutdown Margin Determination)	
7.6.5.1	Steps 7.5.1.9 + 7.6.1.4 + 7.6.2.5 + 7.6.3.2 + 7.6.4.8 =	(+) <u>120</u> pcm
7.7	<u>COLR COMPARISON</u>	
7.7.1	The Total Shutdown Reactivity from step 7.6.5.1 is more negative than the limits provided in the COLR.	
	Circle either YES / NO. If YES then sufficient core SDM exists to meet the Tech. Spec. requirement. If NO then sufficient core SDM does not exist; perform step 7.7.2.	
7.7.2	If sufficient core SDM does not exist to meet Tech. Spec. requirements, immediately initiate and continue boration using procedure OTO-ZZ-00003 until the proper shutdown margin is achieved.	

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-A4RO/SRO
COMPLETION TIME: 20 MINUTES
JOB TITLE: URO/SRO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE RADIOLOGICAL REQUIREMENTS TO ENTER A HIGH RADIATION AREA

KSA NO: G2.3.10
KSA RATING: 2.9/3.3
REVISION: 000515

The performance of this task was evaluated against the standards contained in this Admin JPM and determined to be:

SATISFACTORY

UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT X CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED X PERFORMED _____

REFERENCES: HDP-ZZ-01500, RADIOLOGICAL POSTING, REV 16
DRAWING M-22BG02
DRAWING M-2G022

TOOLS/EQUIPMENT: MAIN FRAME COMPUTER

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

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Initial Conditions: CALLAWAY PLANT IS INCREASING POWER FOLLOWING A REFUELING OUTAGE. CVCS MIXED BED DEMINERALIZER 'A', FBG03A, WAS PLACED IN SERVICE AND SUBSEQUENTLY REMOVED WHEN AN INCREASE IN RCS LEAKAGE WAS OBSERVED. BGV0534, CVCS MB DEMIN A BGPDI0133A LO ROOT, IS SUSPECTED OF CAUSING THE LEAKAGE.

Initiating Cues: THE SHIFT SUPERVISOR HAS DIRECTED YOU TO LOCATE BGV0534 AND ASSESS IT'S CONDITON. YOU ARE TO:

- DEMONSTRATE ABILITY TO LOCATE VALVE IN PLANT (ESCORT EVALUATOR TO VALVE ROOM).
- DISCUSS RADIOLOGICAL REQUIREMENTS TO ENTER ROOM.

Notes: DO NOT ALLOW CANDIDATE TO ENTER ROOM. CANDIDATE MAY DISCUSS ENTRY REQUIREMENTS WITH HEALTH PHYSICS PERSONNEL. **THIS ADMIN JPM SHOULD BE DONE JUST PRIOR TO P2 (ILE-2004-P2) DURING RCA ENTRY.**

TASK STANDARD: UPON COMPLETION OF THE TASK THE CANDIDATE WILL HAVE DETERMINED BGV0534 IS IN 'A' CVCS MIXED BED DEMINERALIZER ROOM, PHYSICALLY SHOW THE EVALUATOR THE ROOM LOCATION, AUX BUILDING 2000 LEVEL, ROOM 1308C, AND THE FOLLOWING REQUIREMENTS EXIST:

- CONTACT HP FOR SURVEY PRIOR TO ENTRY
- CAUTION HIGH RAD AREA
- CONTAMINATION AREA

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
<p>1. DETERMINE LOCATION OF BGV0534.</p> <p>CANDIDATE MAY USE ANY METHOD TO DETERMINE VALVE LOCATION: CEL, OTN CHECKLIST, MAIN FRAME COMPUTER, DRAWING, ETC....</p> <p>STEPS MAY BE PERFORMED IN ANY ORDER</p>	<p>CANDIDATE SHOULD DETERMINE THE LOCATION OF BGV0534.</p> <p>PRINT M22BG02 AND M2G022 OR MAIN FRAME COMPUTER WILL SHOW LOCATION IN 'A' CVCS MIXED BED DEMIN ROOM (ROOM 1308C)</p>	<p>S U</p> <p>Comments:</p>
<p>2.* PHYSICALLY SHOW THE EVALUATOR 'A' CVCS MIXED BED DEMIN ROOM (ROOM 1308C)</p>	<p>CANDIDATE SHOULD TAKE EVALUATOR TO THE ENTRANCE OF ROOM 1308C LOCATED IN THE AUXILIARY BUILDING 2000 LEVEL</p> <p>IF CANDIDATE ATTEMPTS TO ENTER THE ROOM WITHOUT HP PERSONNEL OR A SURVEY A FAILURE WILL RESULT.</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
<p>3.* DISCUSS RADIOLOGICAL REQUIREMENTS TO ENTER ROOM 1308C USING ONE OF THE FOLLOWING:</p> <p>SURVEY MAPS</p> <p>RADIOLOGICAL POSTING</p>	<p>CANDIDATE SHOULD DISCUSS REQUIREMENTS TO ENTER ROOM 1308C:</p> <p>CONTACT HP FOR SURVEY PRIOR TO ENTRY</p> <p>CAUTION HIGH RADIATION AREA</p> <p>CONTAMINATION AREA</p>	<p>S U</p> <p>Comments:</p>
<p>4.</p>	<p>THE JPM IS COMPLETE</p> <p><u>RECORD STOP TIME ON PAGE 1</u></p>	<p>S U</p> <p>Comments:</p>
<p>5.</p>	<p>COMPARE CANDIDATE'S RESULTS WITH THE FOLLOWING:</p> <p>ESCORT EVALUATOR TO AUX BUILDING 2000 LEVEL ROOM 1308C</p> <p>CONTACT HP FOR SURVEY PRIOR TO ENTRY</p> <p>CAUTION HIGH RADIATION AREA</p> <p>CONTAMINATION AREA</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

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Initial Conditions: CALLAWAY PLANT IS INCREASING POWER FOLLOWING A REFUELING OUTAGE. CVCS MIXED BED DEMINERALIZER 'A', FBG03A, WAS PLACED IN SERVICE AND SUBSEQUENTLY REMOVED WHEN AN INCREASE IN RCS LEAKAGE WAS OBSERVED. BGV0534, CVCS MB DEMIN A BGPDI0133A LO ROOT, IS SUSPECTED OF CAUSING THE LEAKAGE.

Initiating Cues: THE SHIFT SUPERVISOR HAS DIRECTED YOU TO LOCATE BGV0534 AND ASSESS IT'S CONDITON. YOU ARE TO:

- DEMONSTRATE ABILITY TO LOCATE VALVE IN PLANT (ESCORT EVALUATOR TO VALVE ROOM).
- DISCUSS RADIOLOGICAL REQUIREMENTS TO ENTER ROOM.

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Initial Conditions: THE SECURITY SHIFT SUPERVISOR HAS CALLED TO NOTIFY YOU THAT 3 PEOPLE HAVE BROKEN THROUGH THE MAIN GATE AND ARE CARRYING WEAPONS. THEY WERE LAST SEEN BY 'A' AIR COMPRESSOR.

Initiating Cues: YOU ARE THE SHIFT SUPERVISOR AND NEED TO DETERMINE THE EMERGENCY EVENT CLASSIFICATION REQUIRED PER EIP-ZZ-00101.

Notes: THIS JPM IS TIME CRITICAL WITHIN 15 MINUTES.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE DECLARED AN ALERT DUE TO CONFIRMED REPORT BY THE SECURITY SHIFT SUPVISOR OF AN INTRUSION BY A HOSTILE FORCE INTO THE PLANT PROTECTED AREA (GROUP 3B).

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF EIP-ZZ-00101, CLASSIFICATION OF EMERGENCIES		OPERATOR SHOULD OBTAIN PROCEDURE COPY	S U Comments:
2* DECLARE AN ALERT		OPERATOR SHOULD DECLARE AN ALERT DUE TO CONFIRMED REPORT OF HOSTILE FORCE INSIDE THE PROTECTED AREA (GROUP 3B)	S U Comments:
3.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

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Notes: THIS JPM IS TIME CRITICAL WITHIN 15 MINUTES.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-A1RO/SRO
COMPLETION TIME: 20 MIN
JOB TITLE: URO/SRO
DUTY: CVCS
TASK TITLE: DETERMINE BORATION/DILUTION REQUIREMENT FOR A POWER INCREASE

KSA NO: 004A4.04
KSA RATING: 3.2/3.6
REVISION: 20031203

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT _____ CLASSROOM X

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: OTN-BG-00002, REACTOR MAKEUP CONTROL AND BORON THERMAL REGENERATION SYSTEM, REV 18
CURVE BOOK

TOOLS/EQUIPMENT: CALCULATOR, CURVE BOOK, RULER

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE PLANT IS CURRENTLY AT 50% POWER FOLLOWING REFUEL 13. CONTROL ROD BANK "D" IS POSITIONED AT 130 STEPS. CURRENT BORON CONCENTRATION IS 1500 PPM.

Initiating Cues: IT HAS BEEN DETERMINED THAT REACTOR POWER WILL BE RAISED BACK TO FULL POWER AT 10% PER HOUR. IN ORDER TO HAVE DELTA-I CLOSE TO THE TARGET AT 100%, REACTOR ENGINEERING REQUESTS THAT THE CONTROL RODS BE POSITIONED AT 215 STEPS ON CONTROL BANK "D" WHEN 100% POWER IS REACHED.

THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO ESTIMATE BY CALCULATION THE AMOUNT OF BORON/WATER THAT MUST BE ADDED TO THE RCS OVER THE REMAINING LOAD INCREASE TO REACH 100%.

NOTE: IGNORE THE EFFECTS OF XENON.

Task Standard: UPON COMPLETION OF THIS JPM THE OPERATOR WILL HAVE CALCULATED THE NECESSARY AMOUNT OF WATER TO OVERCOME THE POWER DEFECT ASSOCIATED WITH THE RETURN TO 100% POWER.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. DETERMINE THE REQUIRED CHANGE IN BORON CONCENTRATION TO COMPENSATE FOR THE POWER DEFECT FROM 50% TO 100%	PROVIDE THE OPERATOR A COPY OF THE CURVE BOOK	<p>OPERATOR SHOULD DETERMINE FROM THE CURVE BOOK THAT -535 PCM POWER DEFECT WILL NEED TO BE COMPENSATED FOR DURING THE INCREASE TO 100% POWER</p> <p>NOTE: 100%=-1125; 50%=-590 (FROM FIG 6-1A) DIFFERENCE -535 PCM. 200 PCM (FROM FIG 2-5) WILL BE ACCOUNTED FOR BY CONTROL RODS WITH THE REMAINING PCM COMPENSATED FOR BY RMCS</p>	<p>S U</p> <p>Comments:</p>
1. CONT.		<p>USING FIGURE 5-3, INVERSE BORON WORTH, CALCULATE BORON CONCENTRATION CHANGE FOR CURRENT BURNUP = (-335) (-0.1329 PPM/PCM) =44.5 PPM</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. CONT		CALCULATE FINAL BORON CONCENTRATION FROM 1500 PPM INITIAL CONCENTRATION (GIVEN IN INITIAL CONDITIONS) $CF = 1500 - 44.5 \text{ PPM}$ $CF = 1455.5 \text{ PPM}$	S U Comments:
1. CONT		USING EQUATION FROM CURVE BOOK FIGURE 7-5, CALCULATE GALLONS OF WATER NECESSARY TO REDUCE RCS BORON FROM 1500 PPM TO 1455.5 PPM. $V_w = \frac{M}{8.33} \ln\left(\frac{C_i}{C_f}\right)$	S U Comments:
1. CONT *		$V_M = \frac{509650}{8.33} \ln\left(\frac{1500}{1455.5}\right)$ $V_M = 1842 \text{ GALLONS}$ (1658-2026 GALLONS ACCEPTABLE ANSWERS) NOTE: "M" HAS BEEN INTERPOLATED FOR 50% POWER IN THE ABOVE EQUATION.	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
2. OPERATOR SHOULD INFORM THE CRS OF THE CALCULATED RESULT		OPERATOR PROVIDES CRS WITH RESULTS CALCULATED	<p style="text-align: center;">S U</p> <p>Comments:</p>
	RECORD STOP TIME ON PAGE 1		

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE PLANT IS CURRENTLY AT 50% POWER FOLLOWING REFUEL 13. CONTROL ROD BANK "D" IS POSITIONED AT 130 STEPS. CURRENT BORON CONCENTRATION IS 1500 PPM.

Initiating Cues: IT HAS BEEN DETERMINED THAT REACTOR POWER WILL BE RAISED BACK TO FULL POWER AT 10% PER HOUR. IN ORDER TO HAVE DELTA-I CLOSE TO THE TARGET AT 100%, REACTOR ENGINEERING REQUESTS THAT THE CONTROL RODS BE POSITIONED AT 215 STEPS ON CONTROL BANK "D" WHEN 100% POWER IS REACHED.

THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO ESTIMATE BY CALCULATION THE AMOUNT OF BORON/WATER THAT MUST BE ADDED TO THE RCS OVER THE REMAINING LOAD INCREASE TO REACH 100%.

NOTE: IGNORE THE EFFECTS OF XENON.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-A2RO
COMPLETION TIME: 12 MINUTES
JOB TITLE: URO
DUTY: ADMINISTRATIVE
TASK TITLE: PERFORM CHANNEL CHECKS ON MAIN CONTROL BOARD INDICATORS

KSA NO: G2.1.33
KSA RATING: 3.4
REVISION: 20031203

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT _____ CLASSROOM X

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: OSP-ZZ-00001, CONTROL ROOM SHIFT AND DAILY LOG READINGS AND CHANNEL CHECKS, REV 41
ODP-ZZ-00020, INSTRUMENTATION CHANNEL DEVIATIONS, REV 11

TOOLS/EQUIPMENT: PAGE 14 AND 15 OF ATTACHMENT 1 OF OSP-ZZ-00001

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1. YOU ARE THE EXTRA REACTOR OPERATOR ON SHIFT.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM A CHANNEL CHECK OF THE READINGS ON THE ATTACHED TWO PAGES OF OSP-ZZ-00001, CONTROL ROOM SHIFT AND DAILY READINGS AND CHANNEL CHECKS. THE CRS HAS GRANTED PERMISSION TO USE CRITERIA 2. REPORT THE RESULTS, INCLUDING WHICH CRITERIA WAS USED, TO THE CRS.

Task Standard: UPON COMPLETION OF THIS TASK, THE CONDIDATE WILL HAVE:
(1) COMPLETED THE CHANNEL CHECKS
(2) DETERMINED THAT SG 'C' PRESS AND SG 'D' LEVEL AND PRESS ARE SAT BY CRITERIA 1
(3) DETERMINED THAT SG 'C' LEVEL AND AFW PUMP SUCT HDR PRESS ARE SAT BY CRITERIA 2

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW HIM TO REVIEW WORK TO BE PERFORMED		OPERATOR SHOULD REVIEW JPM INITIAL CONDITIONS AND INITIATING CUES NOTE: STEP OF THIS JPM MAY BE PERFORMED IN ANY ORDER	S U Comments:
2.* DETERMINE IF SG 'C' LEVEL CHANNELS ARE WITHIN 3% OF EACH OTHER (CRITERIA 1)		OPERATOR SHOULD REVIEW SG 'C' LEVEL FOR ALL CHANNELS AND DETERMINE THEY ARE SAT IAW CRITERIA 2 (ALL WITHIN 3% OF THE AVERAGE-51.75%) ODP-ZZ-00020, ATTACHMENT 1, PG 3	S U Comments:
3.* DETERMINE IF SG 'C' PRESSURE CHANNELS ARE WITHIN 70 PSIG OF EACH OTHER (CRITERIA 1)		OPERATOR SHOULD REVIEW SG 'C' PRESSURE FOR ALL CHANNELS AND DETERMINE THEY ARE WITHIN 70 PSIG OF EACH OTHER (915 HIGHEST TO 905 LOWEST) ODP-ZZ-00020, ATTACHMENT 1, PG 3	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4.* DETERMINE IF SG 'D' LEVEL CHANNELS ARE WITHIN 3% OF EACH OTHER (CRITERIA 1)</p>		<p>OPERATOR SHOULD REVIEW SG 'C' LEVEL FOR ALL CHANNELS AND DETERMINE THEY ARE WITHIN 3% OF EACH OTHER (51% HIGHEST TO 49% LOWEST)</p> <p>ODP-ZZ-00020, ATTACHMENT 1, PG 3</p>	<p>S U</p> <p>Comments:</p>
<p>5.* DETERMINE IF SG 'D' PRESSURE CHANNELS ARE WITHIN 70 PSIG OF EACH OTHER (CRITERIA 1)</p>		<p>OPERATOR SHOULD REVIEW SG 'D' PRESSURE FOR ALL CHANNELS AND DETERMINE THEY ARE WITHIN 70 PSIG OF EACH OTHER (940 HIGHEST TO 900 LOWEST)</p> <p>ODP-ZZ-00020, ATTACHMENT 1, PG 3</p>	<p>S U</p> <p>Comments:</p>
<p>6.* DETERMINE IF AFW PUMP SUCT HDR PRESS CHANNELS ARE WITHIN 1 PSIG OF EACH OTHER (CRITERIA 1)</p>		<p>OPERATOR SHOULD REVIEW AFW PUMP SCUT HDR PRESS FOR ALL CHANNELS AND DETERMINE THEY ARE SAT IAW CRITERIA 2 (ALL WITHIN 1% OF THE AVERAGE-17 PSIG)</p> <p>ODP-ZZ-00020, ATTACHMENT 1, PG 3</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. INFORM THE CRS YOU HAVE COMPLETED THE ASSIGNED LOGS- ALL ITEMS WERE SAT: SG 'C' PRESS, AND SG 'D' LEVEL AND PRESSURE BY CRITERIA 1 AND SG 'C' LEVEL AND AFW PUMP SUCT HDR PRESS BY CRITERIA 2	CRS ACKNOWLEDGES	INFORM CRS OF LOG REVIEW RESULTS	
	RECORD STOP TIME ON PAGE 1		

* CRITICAL STEP

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4 **12 Hour Shift**

Date _____

OSP-ZZ-00001
Rev. 7

	Mode	Hidden Text Tech. Spec./FSAR	I.D.	Acceptance Criteria	Units	00-02	12-14	CRI I	II
STEAM GENERATOR C (at RL025 and RL026)##									
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-553	≥4	%	51			51.75 average
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-538	≥4	%	52			
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-539	≥4	%	50			
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-537	≥4	%	54			
NR Level Inst Channel Check *	1-3	3.3.2-5.C#1, { REF: T023 SR 3.3.2-5.C#1 } 3.3.2-6.D.2#1 { REF: T023 SR 3.3.2-6.D.2#1 } 3.3.2-5.E.1#1, { REF: T023 SR 3.3.2-5.E.1#1 } 3.3.1-14.A#1 { REF: T023 SR 3.3.1-14.A#1 } 3.3.2-5.E.2#1, { REF: T023 SR 3.3.2-5.E.2#1 } 3.3.1-14.B#1 { REF: T023 SR 3.3.1-14.B#1 } 3.3.2-6.D.1#1 { REF: T023 SR 3.3.2-6.D.1#1 }			Sat/Unsat	Sat*		3%	3%
SG Press	1-3		AB PI-534A		psig	910			
SG Press	1-3		AB PI-536A		psig	915			
SG Press	1-3		AB PI-535A		psig	905			
SG Press Inst Channel Check ♦ **	1-3	3.3.2-1.E#1, { REF: T023 SR 3.3.2-1.E#1 } 3.3.2-4.E.1#1 { REF: T023 SR 3.3.2-4.E.1#1 } 3.3.2-4.E.2#1 { REF: T023 SR 3.3.2-4.E.2#1 }			Sat/Unsat	Sat		70 psig	70
STEAM GENERATOR D (at RL025 and RL026)##									
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-554	≥4	%	50			
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-547	≥4	%	51			
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-549	≥4	%	49			

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4 **12 Hour Shift**

Date _____

OSP-ZZ-00001
Rev. 7

	Mode	Hidden Text Tech. Spec./FSAR	I.D.	Acceptance Criteria	Units	00-02	12-14	CRI I	II
NR Level	1-4	3.4.6.2, {REF: T023 SR 3.4.6.2} 3.4.5.2 { REF: T023 SR 3.4.5.2}	AE LI-548	≥4	%	51			
NR Level Inst Channel Check *	1-3	3.3.2-5.C#1, {REF: T023 SR 3.3.2-5.C#1} 3.3.2-6.D.2#1 {REF: T023 SR 3.3.2-6.D.2#1} 3.3.2-5.E.1#1, {REF: T023 SR 3.3.2-5.E.1#1} 3.3.1-14.A#1 {REF: T023 SR 3.3.1-14.A#1} 3.3.2-5.E.2#1, {REF: T023 SR 3.3.2-5.E.2#1} 3.3.1-14.B#1 {REF: T023 SR 3.3.1-14.B#1} 3.3.2-6.D.1#1 {REF: T023 SR 3.3.2-6.D.1#1}			Sat/Unsat	Sat		3%	3
SG Press	1-3		AB PI-545A		psig	900			
SG Press	1-3		AB PI-546A		psig	925			
SG Press	1-3		AB PI-544A		psig	940			
SG Press Inst Channel Check ♦ **	1-3	3.3.2-1.E#1, {REF: T023 SR 3.3.2-1.E#1} 3.3.2-4.E.1#1, {REF: T023 SR 3.3.2-4.E.1#1} 3.3.2-4.E.2#1 {REF: T023 SR 3.3.2-4.E.2#1}			Sat/Unsat	Sat		70 psig	70

- * Modes 2 & 3 – Except when all MFIVs are CLOSED.
- ** Mode 2 & 3 – Except when all MSIVs are CLOSED.
- ♦ Mode 3 – Above the P-11 (Pressurizer Pressure) interlock and below P-11 unless the function is blocked.
- ## Level readings are required for ≥ 4% in Modes 3 and 4 and recorded in Modes 1-3 for channel checks.

REMARKS: *Sat by Criteria 2

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4

12 Hour Shift

Date _____

OSP-ZZ-00001
Rev. 7

Hidden Text

Mode	Tech. Spec./FSAR	I.D.	Acceptance Criteria	Units	00-02	12-14	CRI 1	II
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AUXILIARY FEEDWATER (at RL026)

AFW Pump Suct Hdr Press	1-3		AL PI-37	psig	16			17 avg
AFW Pump Suct Hdr Press	1-3		AL PI-38	psig	17			
AFW Pump Suct Hdr Press	1-3		AL PI-39	psig	18			
AFW Pump Suct Press Channel Check	1-3	3.3.2-6.H#1 { REF: T023 SR 3.3.2-6.H#1 }		Sat / Unsat	Sat*		1 psig	1 psig

ULTIMATE HEAT SINK

UHS Water Level	1-4 *	3.7.9.1 { REF: T023 SR 3.7.9.1 }	RK020-55D	No Alarm	N/A	No Alarm		
UHS Water Avg Temp	1-4	3.7.9.2 { REF: T023 SR 3.7.9.2 }	** EF TR-0113	≤ 90	°F	80°		

OSP-BB-00007 { REF: O030 OSP-BB-00007 }

OSP-BB-00007 { REF: O030 OSP-BB-00007 } Tabular Log Data Sheet	***	3.4.3.1, { REF: T023 SR 3.4.3.1 } 16.4.4.1.1 { REF: F125 16.4.4.1.1 }	❖		Sat / Unsat	N/A SAT		
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METEOROLOGY PRIMARY OR BACKUP (from Plant Computer)

Wind Speed 10 Meters	All		MET DATA DISPLAY		## M/Sec			
Wind Speed 60 Meters	All		MET DATA DISPLAY		## M/Sec			
Wind Direction 10 Meters	All		MET DATA DISPLAY		## Degrees			
Wind Direction 60 Meters	All		MET DATA DISPLAY		## Degrees			
Air Temp Delta 10-60 Meters	All		MET DATA DISPLAY		## °C			
Meteorological Instruments Channel Checks	All	16.3.3.3.1 { REF: F125 16.3.3.3.1 }	MET DATA DISPLAY		## Sat / Unsat		###	

* If Window 55D in Alarm have an Operator verify level greater than 57.9% using local indicators EF LI-27 and EF LI-27A.

** Take reading from RECORDER located in ESW Pump Room A

*** Planned heat-up or cool-down in progress and RCS inservice leak and hydrostatic testing.

❖ RCS Does not exceed the limits specified in the PTLR.
 PZR Heat-up does not exceed 100°F per hour
 Cool-down does not exceed 200°F per hour
 Maximum spray temperature differential of 583°F

Readings are recorded on AM shift. Data reliability exists if "Time of Data" and the computer time are within 15 minutes of each other.
 At wind speeds below .45 m/s, alarms for wind speed and direction are common due to the starting threshold for the transmitters. Use other tower heights for channel check comparisons.

Primary and secondary MET readings compare favorably and there is no indication on MET DATA DISPLAY that the readings/indications are unreliable.

REMARKS: * Sat by Criteria 2

Hidden Text

<i>Mode</i>	<i>Tech. Spec./FSAR</i>	<i>I.D.</i>	<i>Acceptance Criteria</i>	<i>Units</i>	<i>00-02</i>	<i>12-14</i>	<i>CRI 1</i>	<i>II</i>
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Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1. YOU ARE THE EXTRA REACTOR OPERATOR ON SHIFT.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM A CHANNEL CHECK OF THE READINGS ON THE ATTACHED TWO PAGES OF OSP-ZZ-00001, CONTROL ROOM SHIFT AND DAILY READINGS AND CHANNEL CHECKS. THE CRS HAS GRANTED PERMISSION TO USE CRITERIA 2. REPORT THE RESULTS, INCLUDING WHICH CRITERIA WAS USED, TO THE CRS.

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4 **12 Hour Shift**

Date _____

OSP-ZZ-00001
Rev. 7

	Mode	Hidden Text Tech. Spec./FSAR	I.D.	Acceptance Criteria	Units	00-02	12-14	CRI 1
STEAM GENERATOR C (at RL025 and RL026)##								
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-553	≥4	%	51		
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-538	≥4	%	52		
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-539	≥4	%	50		
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-537	≥4	%	54		
NR Level Inst Channel Check *	1-3	3.3.2-5.C#1, { REF: T023 SR 3.3.2-5.C#1 } 3.3.2-6.D.2#1 { REF: T023 SR 3.3.2-6.D.2#1 } 3.3.2-5.E.1#1, { REF: T023 SR 3.3.2-5.E.1#1 } 3.3.1-14.A#1 { REF: T023 SR 3.3.1-14.A#1 } 3.3.2-5.E.2#1, { REF: T023 SR 3.3.2-5.E.2#1 } 3.3.1-14.B#1 { REF: T023 SR 3.3.1-14.B#1 } 3.3.2-6.D.1#1 { REF: T023 SR 3.3.2-6.D.1#1 }			Sat/Unsat			3%
SG Press	1-3		AB PI-534A		psig	910		
SG Press	1-3		AB PI-536A		psig	915		
SG Press	1-3		AB PI-535A		psig	905		
SG Press Inst Channel Check ♦ **	1-3	3.3.2-1.E#1, { REF: T023 SR 3.3.2-1.E#1 } 3.3.2-4.E.1#1 { REF: T023 SR 3.3.2-4.E.1#1 } 3.3.2-4.E.2#1 { REF: T023 SR 3.3.2-4.E.2#1 }			Sat/Unsat			70 psig
STEAM GENERATOR D (at RL025 and RL026)##								
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-554	≥4	%	50		
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-547	≥4	%	51		
NR Level	1-4	3.4.6.2, { REF: T023 SR 3.4.6.2 } 3.4.5.2 { REF: T023 SR 3.4.5.2 }	AE LI-549	≥4	%	49		

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4 **12 Hour Shift**

Date _____

OSP-ZZ-00001
Rev. 7

	Mode	Hidden Text Tech. Spec./FSAR	I.D.	Acceptance Criteria	Units	00-02	12-14	CRI 1
NR Level	1-4	3.4.6.2, {REF: T023 SR 3.4.6.2} 3.4.5.2 { REF: T023 SR 3.4.5.2}	AE LI-548	≥4	%	51		
NR Level Inst Channel Check *	1-3	3.3.2-5.C#1, {REF: T023 SR 3.3.2-5.C#1} 3.3.2-6.D.2#1 {REF: T023 SR 3.3.2-6.D.2#1} 3.3.2-5.E.1#1, {REF: T023 SR 3.3.2-5.E.1#1} 3.3.1-14.A#1 {REF: T023 SR 3.3.1-14.A#1} 3.3.2-5.E.2#1, {REF: T023 SR 3.3.2-5.E.2#1} 3.3.1-14.B#1 {REF: T023 SR 3.3.1-14.B#1} 3.3.2-6.D.1#1 {REF: T023 SR 3.3.2-6.D.1#1}			Sat/Unsat			3%
SG Press	1-3		AB PI-545A		psig	900		
SG Press	1-3		AB PI-546A		psig	925		
SG Press	1-3		AB PI-544A		psig	940		
SG Press Inst Channel Check ♦ **	1-3	3.3.2-1.E#1, {REF: T023 SR 3.3.2-1.E#1} 3.3.2-4.E.1#1, {REF: T023 SR 3.3.2-4.E.1#1} 3.3.2-4.E.2#1 {REF: T023 SR 3.3.2-4.E.2#1}			Sat/Unsat			70 psig

- * Modes 2 & 3 – Except when all MFIVs are CLOSED.
- ** Mode 2 & 3 – Except when all MSIVs are CLOSED.
- ♦ Mode 3 – Above the P-11 (Pressurizer Pressure) interlock and below P-11 unless the function is blocked.
- ## Level readings are required for ≥ 4% in Modes 3 and 4 and recorded in Modes 1-3 for channel checks.

REMARKS:

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4 **12 Hour Shift**

Date _____

OSP-ZZ-00001
Rev. 7

	<i>Mode</i>	<i>Hidden Text</i> <i>Tech. Spec./FSAR</i>	<i>I.D.</i>	<i>Acceptance Criteria</i>	<i>Units</i>	<i>00-02</i>	<i>12-14</i>	<i>CRI 1</i>
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AUXILIARY FEEDWATER (at RL026)

AFW Pump Suct Hdr Press	1-3		AL PI-37		psig	16		
AFW Pump Suct Hdr Press	1-3		AL PI-38		psig	17		
AFW Pump Suct Hdr Press	1-3		AL PI-39		psig	18		
AFW Pump Suct Press Channel Check	1-3	3.3.2-6.H#1 { <i>REF: T023 SR 3.3.2-6.H#1</i> }			Sat / Unsat			1 psig

ULTIMATE HEAT SINK

UHS Water Level	1-4 *	3.7.9.1 { <i>REF: T023 SR 3.7.9.1</i> }	RK020-55D	No Alarm	N/A	No Alarm		
UHS Water Avg Temp	1-4	3.7.9.2 { <i>REF: T023 SR 3.7.9.2</i> }	** EF TR-0113	≤ 90	°F	80		

OSP-BB-00007 { REF: O030 OSP-BB-00007 }

OSP-BB-00007 { <i>REF: O030 OSP-BB-00007</i> } Tabular Log Data Sheet	***	3.4.3.1 , { <i>REF: T023 SR 3.4.3.1</i> } 16.4.4.1.1 { <i>REF: F125 16.4.4.1.1</i> }		◆	Sat / Unsat	N/A SAT		
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METEOROLOGY PRIMARY OR BACKUP (from Plant Computer)

Wind Speed 10 Meters	All		MET DATA DISPLAY		## M/Sec			
Wind Speed 60 Meters	All		MET DATA DISPLAY		## M/Sec			
Wind Direction 10 Meters	All		MET DATA DISPLAY		## Degrees			
Wind Direction 60 Meters	All		MET DATA DISPLAY		## Degrees			
Air Temp Delta 10-60 Meters	All		MET DATA DISPLAY		## °C			
Meteorological Instruments Channel Checks	All	16.3.3.3.1 { <i>REF: F125 16.3.3.3.1</i> }	MET DATA DISPLAY		## Sat / Unsat			###

* If Window 55D in Alarm have an Operator verify level greater than 57.9% using local indicators EF LI-27 and EF LI-27A.

** Take reading from RECORDER located in ESW Pump Room A

*** Planned heat-up or cool-down in progress and RCS inservice leak and hydrostatic testing.

◆ RCS Does not exceed the limits specified in the PTLR.
 PZR Heat-up does not exceed 100°F per hour
 Cool-down does not exceed 200°F per hour
 Maximum spray temperature differential of 583°F

Readings are recorded on AM shift. Data reliability exists if "Time of Data" and the computer time are within 15 minutes of each other.
 At wind speeds below .45 m/s, alarms for wind speed and direction are common due to the starting threshold for the transmitters. Use other tower heights for channel check comparisons.

Primary and secondary MET readings compare favorably and there is no indication on MET DATA DISPLAY that the readings/indications are unreliable.

REMARKS:

CONTROL ROOM SHIFT & DAILY READINGS AND CHANNEL CHECK
MODES 1 – 4

Date _____

OSP-ZZ-00001
Rev. 7

12 Hour Shift

Hidden Text

<i>Mode</i>	<i>Tech. Spec./FSAR</i>	<i>I.D.</i>	<i>Acceptance Criteria</i>	<i>Units</i>	<i>00-02</i>	<i>12-14</i>	<i>CRI 1</i>
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CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-A3RO
COMPLETION TIME: 18 MINUTES
JOB TITLE: URO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE WPA REQUIREMENTS FOR PUMP MAINTENANCE

KSA NO: G2.2.13
KSA RATING: 3.6
REVISION: 20031203

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT _____ CLASSROOM X

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: APA-ZZ-00310, WORKMAN'S PROTECTION ASSURANCE AND CAUTION
TAGGING, REV 18
ODP-ZZ-00310, WPA AND CAUTION TAGGING, REV 18
DRAWING M-22AN01
DRAWING E-23AN01

TOOLS/EQUIPMENT: TAGOUT CONTINUATION SHEET

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. You may use any approved reference materials normally available to you, unless directed otherwise. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Administrative Job Performance Measure will be satisfied.

Initial Conditions: THE 'A' DEMINERALIZED WATER TRANSFER PUMP (PAN01A) MUST BE TAGGED OUT TO REPLACE THE PUMP MOTOR. USE OF THE MAINFRAME COMPUTER IS NOT ALLOWED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DETERMINE THE TAGOUT REQUIREMENTS FOR PAN01A. USE THE TAGOUT CONTINUATION SHEET PROVIDED TO LIST THE TAGOUT REQUIREMENTS. THE TAGOUT REQUIREMENTS SHOULD INCLUDE THE COMPONENTS TO BE TAGGED AND THEIR TAGGED POSITION.

INFORM THE CONTROL ROOM SUPERVISOR WHEN YOU HAVE COMPLETED THE TAGOUT CONTINUATION SHEET.

Notes: **USE OF THE MAINFRAME COMPUTER IS NOT ALLOWED.**

TASK STANDARD: UPON COMPLETION OF THE TASK THE CANDIDATE WILL HAVE TAGGED OUT THE 'A' DEMIN WATER TRANSFER WATER PUMP WITH THE TAGOUT REQUIREMENTS IDENTIFIED ON A TAGOUT CONTINUATION SHEET.

START TIME: _____

STOP TIME: _____

TASK

NUMBER - ELEMENT

CUE

STANDARD

SCORE

			<p>S U</p>
<p>1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW HIM TO REVIEW WORK TO BE PERFORMED</p>		<p>OPERATOR SHOULD REVIEW JPM INITIAL CONDITIONS AND INITIATING CUES</p> <p>NOTE: STEPS OF THIS JPM MAY BE PERFORMED IN ANY ORDER</p>	<p>Comments:</p>
<p>2.* TAGOUT PAN01 SUPPLY BREAKER, PG11JDF3, TO THE OFF POSITION</p>		<p>OPERATOR SHOULD DETERMINE THE NEED TO TAGOUT SUPPLY BREAKER, PG11JDF3, TO THE OPEN POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>3.* TAGOUT PAN01 SUCTION VALVE, ANV0021, TO THE CLOSED POSITION</p>		<p>OPERATOR SHOULD DETERMINE THE NEED TO TAGOUT PAN01 SUCTION VALVE, ANV0021, TO THE CLOSED POSITION</p> <p>NOTE: EITHER STEP 3 OR STEPS 4 AND 5 HAVE TO BE PERFORMED TO SATISFACTORILY TAG OUT PAN01 FOR MAINTENANCE</p>	<p>S U</p> <p>Comments:</p>

TASK

NUMBER - ELEMENT

CUE

STANDARD

SCORE

			<p style="text-align: center;">S U</p>
<p>4.* TAGOUT PAN01 DISCHARGE VALVE, ANV0027, TO THE CLOSED POSITION</p>		<p>OPERATOR SHOULD DETERMINE THE NEED TO TAGOUT PAN01 DISCHARGE VALVE, ANV0027, TO THE CLOSED POSITION NOTE: EITHER STEP 3 OR STEPS 4 AND 5 HAVE TO BE PERFORMED TO SATISFACTORILY TAG OUT PAN01 FOR MAINTENANCE</p>	<p style="text-align: center;">Comments:</p>
<p>5.* TAGOUT PAN01 RECIRC VALVE, ANV0029, TO THE CLOSED POSITION</p>		<p>OPERATOR SHOULD DETERMINE THE NEED TO TAGOUT PAN01 RECIRC VALVE, ANV0029, TO THE CLOSED POSITION NOTE: EITHER STEP 3 OR STEPS 4 AND 5 HAVE TO BE PERFORMED TO SATISFACTORILY TAG OUT PAN01 FOR MAINTENANCE</p>	<p style="text-align: center;">Comments:</p>
<p>6. TAGOUT HANDSWITCH AN HIS-0001 FOR PAN01 WITH A WIP TAG</p>		<p>OPERATOR SHOULD DETERMINE THE NEED TO TAGOUT HANDSWITCH AN HIS-0001 WITH A WIP TAG</p>	<p style="text-align: center;">Comments:</p>

TASK

NUMBER - ELEMENT

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. INFORM THE CRS THAT YOU HAVE COMPLETED THE TAGOUT CONTINUATION SHEET FOR THE SCHEDULED MAINTENANCE ON PAN01	CRS ACKNOWLEDGES	OPERATOR SHOULD INFORM THE CRS THAT HE HAS COMPLETED THE TAGOUT CONTINUATION SHEET FOR PAN01	
8.	RECORD STOP TIME ON PAGE 1		

2000/11/29
09:20:12

TEST -- AmerenUE -- TEST
WORKMAN'S PROTECTION ASSURANCE SYSTEM
TAGOUT CONTINUATION SHEET

OPWP1351
PAGE: 1

NOTES:

WPA NUMBER :
WPA TYPE : HOLD OFF
WPA CLASSIFICATION :
PROTECTED COMPONENT :
I.V. REQUIRED :

TAG SEQ NBR	TAGGED COMPONENT	TAGGING POSITION	PLACED BY INIT DATE	INDEPENDENT VERIFICATION INIT & DATE	RESTORE SEQ NBR	RESTORE POSITION	RESTORED BY INIT & DATE	INDEPENDENT VERIFICATION INIT & DATE
1	PG11JD3	OFF						
SERVICE DESC.:					LOCATION:			
TAG NOTES :					LOCK TYPE:		BLDG:	
					ELEVATION:		ROOM:	
2	ANV0021	CLOSED						
SERVICE DESC.:					LOCATION:			
TAG NOTES :					LOCK TYPE:		BLDG:	
					ELEVATION:		ROOM:	
3	ANV0027	CLOSED						
SERVICE DESC.:					LOCATION:			
TAG NOTES :					LOCK TYPE:		BLDG:	
					ELEVATION:		ROOM:	
4	ANV0029	CLOSED						
SERVICE DESC.:					LOCATION:			
TAG NOTES :					LOCK TYPE:		BLDG:	
					ELEVATION:		ROOM:	
5	AN HIS-0001	INFO ONLY						
SERVICE DESC.:					LOCATION:			
TAG NOTES : WIP Tag					LOCK TYPE:		BLDG:	
					ELEVATION:		ROOM:	

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE 'A' DEMINERALIZED WATER TRANSFER PUMP (PAN01A) MUST BE TAGGED OUT TO REPLACE THE PUMP MOTOR. **USE OF THE MAINFRAME COMPUTER IS NOT ALLOWED.**

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DETERMINE THE TAGOUT REQUIREMENTS FOR PAN01A. USE THE TAGOUT CONTINUATION SHEET PROVIDED TO LIST THE TAGOUT REQUIREMENTS. THE TAGOUT REQUIREMENTS SHOULD INCLUDE TO COMPONENTS TO BE TAGGED AND THEIR TAGGED POSITION.

INFORM THE CONTROL ROOM SUPERVISOR WHEN YOU HAVE COMPLETED THE TAGOUT CONTINUATION SHEET.

2000/11/29
09:20:12

TEST -- AmerenUE -- TEST
WORKMAN'S PROTECTION ASSURANCE SYSTEM
TAGOUT CONTINUATION SHEET

OPWP1351
PAGE: 1

NOTES:

WPA NUMBER :
WPA TYPE :
WPA CLASSIFICATION :
PROTECTED COMPONENT :
I.V. REQUIRED :

TAG SEQ NBR	TAGGED COMPONENT	TAGGING POSITION	PLACED BY INIT DATE	INDEPENDENT		RESTORE SEQ NBR	RESTORE POSITION	RESTORED BY INIT & DATE	INDEPENDENT		
				VERIFICATION INIT & DATE					VERIFICATION INIT & DATE		
1											
SERVICE DESC.:				LOCATION:				LOCK TYPE: BLDG:			
TAG NOTES :								ELEVATION: ROOM:			
2											
SERVICE DESC.:				LOCATION:				LOCK TYPE: BLDG:			
TAG NOTES :								ELEVATION: ROOM:			
3											
SERVICE DESC.:				LOCATION:				LOCK TYPE: BLDG:			
TAG NOTES :								ELEVATION: ROOM:			
4											
SERVICE DESC.:				LOCATION:				LOCK TYPE: BLDG:			
TAG NOTES :								ELEVATION: ROOM:			
5											
SERVICE DESC.:				LOCATION:				LOCK TYPE: BLDG:			
TAG NOTES :								ELEVATION: ROOM:			

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-A4RO/SRO
COMPLETION TIME: 20 MINUTES
JOB TITLE: URO/SRO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE RADIOLOGICAL REQUIREMENTS TO ENTER A HIGH RADIATION AREA

KSA NO: G2.3.10
KSA RATING: 2.9/3.3
REVISION: 000515

The performance of this task was evaluated against the standards contained in this Admin JPM and determined to be:

SATISFACTORY

UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT X CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED X PERFORMED _____

REFERENCES: HDP-ZZ-01500, RADIOLOGICAL POSTING, REV 16
DRAWING M-22BG02
DRAWING M-2G022

TOOLS/EQUIPMENT: MAIN FRAME COMPUTER

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. You may use any approved reference materials normally available to you, unless directed otherwise. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Administrative Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS INCREASING POWER FOLLOWING A REFUELING OUTAGE. CVCS MIXED BED DEMINERALIZER 'A', FBG03A, WAS PLACED IN SERVICE AND SUBSEQUENTLY REMOVED WHEN AN INCREASE IN RCS LEAKAGE WAS OBSERVED. BGV0534, CVCS MB DEMIN A BGPDI0133A LO ROOT, IS SUSPECTED OF CAUSING THE LEAKAGE.

Initiating Cues: THE SHIFT SUPERVISOR HAS DIRECTED YOU TO LOCATE BGV0534 AND ASSESS IT'S CONDITON. YOU ARE TO:

- DEMONSTRATE ABILITY TO LOCATE VALVE IN PLANT (ESCORT EVALUATOR TO VALVE ROOM).
- DISCUSS RADIOLOGICAL REQUIREMENTS TO ENTER ROOM.

Notes: DO NOT ALLOW CANDIDATE TO ENTER ROOM. CANDIDATE MAY DISCUSS ENTRY REQUIREMENTS WITH HEALTH PHYSICS PERSONNEL. **THIS ADMIN JPM SHOULD BE DONE JUST PRIOR TO P2 (ILE-2004-P2) DURING RCA ENTRY.**

TASK STANDARD: UPON COMPLETION OF THE TASK THE CANDIDATE WILL HAVE DETERMINED BGV0534 IS IN 'A' CVCS MIXED BED DEMINERALIZER ROOM, PHYSICALLY SHOW THE EVALUATOR THE ROOM LOCATION, AUX BUILDING 2000 LEVEL, ROOM 1308C, AND THE FOLLOWING REQUIREMENTS EXIST:

- CONTACT HP FOR SURVEY PRIOR TO ENTRY
- CAUTION HIGH RAD AREA
- CONTAMINATION AREA

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
<p>1. DETERMINE LOCATION OF BGV0534.</p> <p>CANDIDATE MAY USE ANY METHOD TO DETERMINE VALVE LOCATION: CEL, OTN CHECKLIST, MAIN FRAME COMPUTER, DRAWING, ETC....</p> <p>STEPS MAY BE PERFORMED IN ANY ORDER</p>	<p>CANDIDATE SHOULD DETERMINE THE LOCATION OF BGV0534.</p> <p>PRINT M22BG02 AND M2G022 OR MAIN FRAME COMPUTER WILL SHOW LOCATION IN 'A' CVCS MIXED BED DEMIN ROOM (ROOM 1308C)</p>	<p>S U</p> <p>Comments:</p>
<p>2.* PHYSICALLY SHOW THE EVALUATOR 'A' CVCS MIXED BED DEMIN ROOM (ROOM 1308C)</p>	<p>CANDIDATE SHOULD TAKE EVALUATOR TO THE ENTRANCE OF ROOM 1308C LOCATED IN THE AUXILIARY BUILDING 2000 LEVEL</p> <p>IF CANDIDATE ATTEMPTS TO ENTER THE ROOM WITHOUT HP PERSONNEL OR A SURVEY A FAILURE WILL RESULT.</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
<p>3.* DISCUSS RADIOLOGICAL REQUIREMENTS TO ENTER ROOM 1308C USING ONE OF THE FOLLOWING:</p> <p>SURVEY MAPS</p> <p>RADIOLOGICAL POSTING</p>	<p>CANDIDATE SHOULD DISCUSS REQUIREMENTS TO ENTER ROOM 1308C:</p> <p>CONTACT HP FOR SURVEY PRIOR TO ENTRY</p> <p>CAUTION HIGH RADIATION AREA</p> <p>CONTAMINATION AREA</p>	<p>S U</p> <p>Comments:</p>
<p>4.</p>	<p>THE JPM IS COMPLETE</p> <p><u>RECORD STOP TIME ON PAGE 1</u></p>	<p>S U</p> <p>Comments:</p>
<p>5.</p>	<p>COMPARE CANDIDATE'S RESULTS WITH THE FOLLOWING:</p> <p>ESCORT EVALUATOR TO AUX BUILDING 2000 LEVEL ROOM 1308C</p> <p>CONTACT HP FOR SURVEY PRIOR TO ENTRY</p> <p>CAUTION HIGH RADIATION AREA</p> <p>CONTAMINATION AREA</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. You may use any approved reference materials normally available to you, unless directed otherwise. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Administrative Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS INCREASING POWER FOLLOWING A REFUELING OUTAGE. CVCS MIXED BED DEMINERALIZER 'A', FBG03A, WAS PLACED IN SERVICE AND SUBSEQUENTLY REMOVED WHEN AN INCREASE IN RCS LEAKAGE WAS OBSERVED. BGV0534, CVCS MB DEMIN A BGPDI0133A LO ROOT, IS SUSPECTED OF CAUSING THE LEAKAGE.

Initiating Cues: THE SHIFT SUPERVISOR HAS DIRECTED YOU TO LOCATE BGV0534 AND ASSESS IT'S CONDITON. YOU ARE TO:

- DEMONSTRATE ABILITY TO LOCATE VALVE IN PLANT (ESCORT EVALUATOR TO VALVE ROOM).
- DISCUSS RADIOLOGICAL REQUIREMENTS TO ENTER ROOM.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-BACKUP KSA NO: 010A2.03
COMPLETION TIME: 6 MINUTES KSA RATING: 4.1/4.2
JOB TITLE: URO/SRO REVISION: 20031114
DUTY: RCS
TASK TITLE: INITIATE COLD OVERPRESSURE MITIGATION

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB X PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: OTN-BB-00005, PRESSURIZER AND PRESSURIZER PRESSURE CONTROL,
REVISION 6

TOOLS/EQUIPMENT:

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 5, COOLING DOWN TO MODE 6 FOR AN OUTAGE. RHR SUCTION RELIEF VALVES ARE SUPPLYING COLD OVERPRESSURE MITIGATION.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE COLD OVERPRESSURE MITIGATION ON THE PRESSURIZER PORVS (ARM COMS) PER SECTION 5.1 OF OTN-BB-00005.
NOTIFY THE CRS WHEN COMS IS IN SERVICE.

Fault: INSERT THE FOLLOWING TO CAUSE BB-PV-455A TO OPEN WHEN ARMED:

- 1) USE IC-166 (Password nrcrbm)
- 2) USE MALF PRS12a, 'A' PORV(1); CONDITIONAL = X21I139A ACTIVATE.

Task Standard: UPON COMPLETION OF THIS JPM, PORV 455A WILL HAVE BEEN "ARMED" AND ISOLATED/CLOSED AFTER FAILING OPEN.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-BB-00005, PRESSURIZER AND PRESSURIZER PRESSURE CONTROL		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p style="text-align: center;">S U</p> <p>Comments:</p>
2. REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-BB-00005 SECTION 2.0	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS	<p style="text-align: center;">S U</p> <p>Comments:</p>
3. REVIEW THE INITIAL CONDITIONS OF OTN-BB-00005 SECTION 3.0	ALL INITIAL CONDITIONS ARE SATISFIED	<p>OPERATOR MAY REVIEW INITIAL CONDITIONS OF OTN-BB-00005</p> <p>NOTE: INITIAL CONDITIONS DO NOT APPLY TO COMS</p>	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. PRIOR TO ANY RCS COLD LEG DECREASING $\leq 275^{\circ}\text{F}$, INITIATE COLD OVERPRESSURE MITIGATION</p> <p>STEP 5.1.1</p>	<p>COMS IS BEING PROVIDED BY THE RHR SUCTION RELIEF VALVES</p>	<p>OPERATOR SHOULD VERIFY COMS IN SERVICE</p>	<p>S U</p> <p>Comments:</p>
<p>5. ENSURE RCS PRESSURE IS LESS THAN BOTH UPPER AND LOWER PRESSURE PORV SETPOINTS</p> <p>STEP 5.1.1.1</p>		<p>OPERATOR SHOULD COMPARE RCS WIDE RANGE PRESSURE BB PT-405 & 403 TO OOA-BB-0001B</p>	<p>S U</p> <p>Comments:</p>
<p>6. VERIFY BB HIS-8000A IS IN THE OPEN POSITION</p> <p>STEP 5.1.1.2</p>	<p>BB HIS-8000A IS OPEN, RED LIGHT ON, GREEN LIGHT IS OFF</p>	<p>OPERATOR SHOULD VERIFY BB HIS-8000A IS IN THE OPEN POSITION</p> <p>STEPS 6 & 7 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. VERIFY BB HIS-8000B IS IN THE OPEN POSITION. STEP 5.1.1.2	BB HIS-8000B IS IN THE OPEN POSITION, RED LIGHT ON, GREEN LIGHT IS OFF	OPERATOR SHOULD VERIFY BB HIS-8000B IS IN THE OPEN POSITION STEPS 6 & 7 MAY BE PERFORMED IN ANY ORDER	S U Comments:
8. VERIFY BB HIS-455A IS IN THE AUTO POSITION STEP 5.1.1.3	BB HIS-455A IS IN THE AUTO POSITION	OPERATOR SHOULD VERIFY BB HIS-455A IS IN THE AUTO POSITION STEPS 8 & 9 MAY BE PERFORMED IN ANY ORDER	S U Comments:
9. VERIFY BB HIS-456A IS IN THE AUTO POSITION STEP 5.1.1.3	BB HIS-456A IS IN THE AUTO POSITION	OPERATOR SHOULD VERIFY BB HIS-456A IS IN THE AUTO POSITION STEPS 8 & 9 MAY BE PERFORMED IN ANY ORDER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
10. PLACE THE COLD OVERPRESSURE ARMING SWITCH BB HS-8000A TO THE 'ARM' POSITION STEP 5.1.1.4	SWITCH BB HS-8000A HAS BEEN PLACED IN 'ARM'	OPERATOR SHOULD PLACE SWITCH BB HS-8000A TO THE 'ARM' POSITION NOTE: WHEN PORV FAILURE NOTICED, STEP 12 SHOULD BE USED STEPS 10 AND 11 MAY BE PERFORMED IN ANY ORDER	S U Comments:
11. PLACE THE COLD OVERPRESSURE ARMING SWITCH BB HS-8000B TO THE 'ARM' POSITION STEP 5.1.1.4	SWITCH BB HS-8000B HAS BEEN PLACED IN 'ARM'	OPERATOR SHOULD PLACE SWITCH BB HS-8000B TO THE 'ARM' POSITION STEPS 10 AND 11 MAY BE PERFORMED IN ANY ORDER	S U Comments:
12* VERIFY BB PCV-455A PORV IS CLOSED STEP 5.1.1.5	BB PCV-455A RED LIGHT IS ON AND GREEN LIGHT IS OFF	OPERATOR SHOULD ISOLATE FAILED PZR PORV VALVE 455A BY CLOSING BLOCK VALVE 8000A STEPS 12 & 13 MAY BE PERFORMED IN ANY ORDER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13. VERIFY BB PCV-456A IS CLOSED STEP 5.1.1.5	BB PCV-456A GREEN LIGHT IS ON AND RED LIGHT IS OFF	OPERATOR SHOULD VERIFY PORV BB PCV-456A IS CLOSED STEPS 12 & 13 MAY BE PERFORMED IN ANY ORDER	S U Comments:
14.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 5, COOLING DOWN TO MODE 6 FOR AN OUTAGE. RHR SUCTION RELIEF VALVES ARE SUPPLYING COLD OVERPRESSURE MITIGATION.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE COLD OVERPRESSURE MITIGATION ON THE PRESSURIZER PORVS (ARM COMS) PER SECTION 5.1 OF OTN-BB-00005.
NOTIFY THE CRS WHEN COMS IS IN SERVICE.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-C1
COMPLETION TIME: 17 MINUTES
JOB TITLE: URO/SRO
DUTY: RPS
TASK TITLE: RESPOND TO A FAILED POWER RANGE INSTRUMENT

KSA NO: 015A4.03
KSA RATING: 3.8/3.9
REVISION: 20040106

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM SIMULATOR/LAB _____ PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED PERFORMED _____

REFERENCES: OTO-SE-00003, POWER RANGE NUCLEAR CHANNEL FAILURE, REV. 10

TOOLS/EQUIPMENT: ATTACHMENT 2 OF OTO-SE-00003

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 AT 100% POWER. THE PLANT HAS EXPERIENCED A FAILURE OF POWER RANGE CHANNEL N42. ALL IMMEDIATE OPERATOR ACTIONS HAVE BEEN COMPLETED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM POWER RANGE CHANNEL N42 TRIP INITIATION PER OTO-SE-00003, "POWER RANGE NUCLEAR CHANNEL FAILURE", USING ATTACHMENT 2.
INFORM THE CONTROL ROOM SUPERVISOR WHEN YOU HAVE VERIFIED THE PROPER BISTABLE LIGHTS ARE LIT ON SC066W.

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

Task Standard: UPON COMPLETION OF THIS JPM, POWER RANGE NUCLEAR INSTRUMENT CHANNEL N42 WILL HAVE ITS INPUTS TO CHANNEL COMPARATORS AND ROD STOP DEFEATED, REACTOR PROTECTION BISTABLES TRIPPED, AND CONTROL POWER FUSES REMOVED.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF OTO-SE-00003, POWER RANGE NUCLEAR CHANNEL FAILURE, ATTACHMENT 2		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p style="text-align: center;">S U</p> <p>Comments:</p>
2.* ON THE DETECTOR CURRENT COMPARATOR DRAWER, PLACE THE "UPPER SECTION" SWITCH TO THE PR N42 POSITION. VERIFY THAT THE UPPER CHANNEL DEFEAT LIGHT IS LIT AND ANN78B PR UPPER DETECTOR FLUX DEV ALARM IS CLEAR	<p>THE "UPPER SECTION" SWITCH IS SELECTED TO THE PR N42 POSITION AND THE CHANNEL DEFEAT LIGHT IS ON</p> <p>ANN 78B PR UPPER DETECTOR FLUX DEV IS CLEAR</p>	<p>OPERATOR SHOULD SELECT PR N42 ON THE "DETECTOR CURRENT COMPARATOR" DRAWER AND VERIFY 78B PR UPPER DETECTOR FLUX DEV ALARM IS CLEAR</p>	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>3.* ON THE DETECTOR CURRENT COMPARATOR DRAWER, PLACE THE "LOWER SECTION" SWITCH TO THE PR N42 POSITION. VERIFY THAT THE LOWER CHANNEL DEFEAT LIGHT IS LIT AND THAT ANN 78C, PR LOWER DETECTOR FLUX DEV, IS CLEAR</p>	<p>THE "LOWER SECTION" SWITCH IS IN THE PR N42 POSITION AND THE "CHANNEL DEFEAT" LIGHT IS ON</p> <p>ANN 78C, PR LOWER DETECTOR FLUX DEV IS CLEAR</p>	<p>OPERATOR SHOULD SELECT PR N42 ON THE "DETECTOR CURRENT COMPARATOR" DRAWER AND VERIFY 78C PR UPPER DETECTOR FLUX DEV ALARM IS CLEAR</p>	<p>S U</p> <p>Comments:</p>
<p>4.* ON THE DETECTOR CURRENT COMPARATOR DRAWER, SELECT THE "ROD STOP BYPASS" SWITCH TO BYPASS PR N42 POSITION AND VERIFY ANN 82A, PR OVER PWR ROD STOP CLEARS</p>	<p>BYPASS PR N42 SELECTED WITH THE "ROD STOP BYPASS" SWITCH</p> <p>ANN 82A, PR OVER PWR ROD STOP CLEARS</p>	<p>OPERATOR SHOULD BYPASS PR N42 WITH THE "ROD STOP BYPASS" SWITCH ON SE054D AND ANN 82A, PR OVER PWR ROD STOP IS CLEAR</p>	<p>S U</p> <p>Comments:</p>
<p>5.* ON THE DETECTOR CURRENT COMPARATOR DRAWER, SELECT THE "POWER MISMATCH BYPASS" SWITCH TO THE BYPASS PR N42 POSITION</p>	<p>BYPASS PR N42 SELECTED BY THE "POWER MISMATCH BYPASS" SWITCH</p>	<p>OPERATOR SHOULD SELECT BYPASS PR N42 WITH THE "POWER MISMATCH BYPASS" SWITCH ON SE054D</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>6. ON COMPARATOR AND RATE DRAWER, SELECT CHANNEL N42 WITH THE "COMPARATOR CHANNEL DEFEAT" SWITCH AND VERIFY ANN 78A, PR CHANNEL DEV CLEARS</p>	<p>N42 IS SELECTED BY THE 'COMPARATOR CHANNEL DEFEAT' SWITCH AND COMPARATOR DEFEAT LIGHT IS ON ANN 78A, PR CHANNEL DEV CLEARS</p>	<p>OPERATOR SHOULD SELECT N42 WITH THE "COMPARATOR CHANNEL DEFEAT" SWITCH ON SE054D AND VEIFY ANN 78A, PR CHANNEL DEV CLEARS</p>	<p>S U Comments:</p>
<p>7. IF REACTOR POWER LEVEL IS BELOW P-10, SKIP THE REMAINING STEPS OF THIS ATTACHMENT, AND PERFORM ATTACHMENT 9</p>	<p>REACTOR POWER IS ABOVE P-10</p>	<p>OPERATOR SHOULD VERIFY THAT REACTOR POWER IS ABOVE P-10 AND COMPLETE ATTACHMENT 2</p>	<p>S U Comments:</p>
<p>8.* REMOVE CONTROL POWER FUSES FOR CHANNEL N42</p>	<p>POWER RANGE CHANNEL N-42 CONTROL POWER FUSES ARE REMOVED</p>	<p>OPERATOR SHOULD PUSH AND TURN THE CONTROL POWER FUSES FOR N42 ON CABINET SE054D AND THEN REMOVE THE FUSES FROM THE DRAWER</p>	<p>S U Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>9. INFORM THE SS AND URO OF THE REMOVAL OF CONTROL POWER FUSES N42</p>	<p>SS ACKNOWLEDGES AND HAS THE OS ENTER IT IN THE SS LOGS</p> <p>URO ACKNOWLEDGES AND ENTERS IT IN THE URO LOGS</p>	<p>OPERATOR SHOULD INFORM THE SS AND URO N42 CONTROL POWER FUSES HAVE BEEN REMOVED</p>	<p>S U</p> <p>Comments:</p>
<p>10. CALL AN I&C TECHNICIAN TO PLACE BS-3 AND BS-4 ON SB042 TEST CARD TS/421C/D IN THE TEST POSITION</p>	<p>I&C TECH ACKNOWLEDGES AND HAS PLACED BS-3 AND BS-4 IN "TEST" ON TEST CARD TS/41C/D IN CABINET SB042</p> <p>NOTE: SIMULATOR OPERATOR SHOULD RUN BAT SE022.txt TO TRIP BISTABLES</p>	<p>OPERATOR SHOULD CONTACT AN I&C TECHNICIAN TO PLACE B-3 AND BS-4 IN THE TEST POSITION IN CABINET SB042 TEST CARDS</p>	<p>S U</p> <p>Comments:</p>
<p>11. ON PANEL SB069 VERIFY OTΔT L2 TB421 C PR HI SETPT NC42R PR HI FLUX NC 42U PR LO SETPT NC42P STATUS LIGHTS ARE LIT</p>	<p>OTΔT L2 TB421C PR HI SETPT NC42R PR HI FLUX NC 42U PR LO SETPT NC42P LIGHTS ARE LIT ON SB069</p>	<p>OPERATOR SHOULD VERIFY OT T L2 TB421C PR HI SETPT NC42R PR HI FLUX NC 42U PR LO SETPT NC42P LIGHTS ARE LIT ON SB069 PANEL</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
12. VERIFY ON PANEL SC066W THAT THE STATUS LIGHTS FOR CHAN II INPUT TO C-3 AND N42 BYP C-2 OVER PWR ROD STOP ARE LIT	CH II INPUT TO C-3 ON SC066W IS LIT N42 BYP C-2 OVER PWR ROD STOP IS LIT	OPERATOR SHOULD VERIFY CH II INPUT TO C-3 AND N42 BYP C-2 OVER PWR ROD STOP ARE LIT ON SC066W, MISC BISTABLES, RL024	S U Comments:
13. INFORM THE CONTROL ROOM SUPERVISOR ATTACHMENT 2 OF OTO-SE-00003 HAS BEEN COMPLETED	CONTROL ROOM SUPERVISOR ACKNOWLEDGES	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THE ASSIGNED TASK HAS BEEN COMPLETED	S U Comments:
	THE JPM IS COMPLETE <u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 AT 100% POWER. THE PLANT HAS EXPERIENCED A FAILURE OF POWER RANGE CHANNEL N42. ALL IMMEDIATE OPERATOR ACTIONS HAVE BEEN COMPLETED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM POWER RANGE CHANNEL N42 TRIP INITIATION PER OTO-SE-00003, "POWER RANGE NUCLEAR CHANNEL FAILURE", USING ATTACHMENT 2.
INFORM THE CONTROL ROOM SUPERVISOR WHEN YOU HAVE VERIFIED THE PROPER BISTABLE LIGHTS ARE LIT ON SC066W.

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-P1
COMPLETION TIME: 12 MINUTES
JOB TITLE: URO/SRO
DUTY: SAFETY RELATED ELEC AND DIST (NN)
TASK TITLE: SHIFT AN INSTRUMENT BUS FROM BACKUP TO NORMAL POWER

KSA NO: 062A4.04
KSA RATING: 2.6/2.7
REVISION: 20031114

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT X CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ X PERFORMED _____

REFERENCES: OTN-NN-00001, 120V VITAL AC INSTRUMENT POWER - CLASS 1E (NN),
REV 10

TOOLS/EQUIPMENT: PPE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: INSTRUMENT BUS NN01 HAD BEEN PLACED ON THE CONSTANT VOLTAGE TRANSFORMER (CVT THRU NG01A) FOR MAINTENANCE TO PERFORM AN INSPECTION ON INVERTER NN11. INSTRUMENT BUSES NN12, 13 AND 14 ARE ENERGIZED FROM THEIR RESPECTIVE DC BUSSES AND BATTERY CHARGERS. THE PLANT IS IN MODE 6. INVERTER NN11 HAS HAD POST MAINTENANCE CHECKS PERFORMED. ALL REQUIRED BREAKER LINEUPS ARE COMPLETE. THE STATIC TRANSFER SWITCH IS IN THE BYPASS SOURCE SUPPLYING LOAD POSITION. THE P202 (BYPASS SOURCE SUPPLYING LOAD) RED LIGHT IS ILLUMINATED. A CREW BRIEFING HAS BEEN CONDUCTED.

Initiating Cues: YOU HAVE BEEN DIRECTED TO TRANSFER NN01 BACK TO THE NORMAL SOURCE (INVERTER AND NK01) FROM THE CONSTANT VOLTAGE TRANSFORMER, PER OTN-NN-00001, SECTION 4.6.2.
INFORM THE CONTROL ROOM SUPERVISOR WHEN DONE.

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE TRANSFERRED NN01 TO THE NORMAL POWER SUPPLY (INVERTER AND NK01)

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-NN-00001, 120V VITAL AC INSTRUMENT POWER - CLASS 1E (NN)		OPERATOR SHOULD OBTAIN PROCEDURE COPY	S U Comments:
2. REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-NN-00001 STEP 2.0	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS	S U Comments:
3. REVIEW THE INITIAL CONDITIONS STEP 3.0	ALL INITIAL CONDITIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. CHECK THAT THE MANUAL BYPASS SWITCH (S1) IS IN THE NORMAL SOURCE POSITION</p> <p>STEP 4.6.2.1</p>	<p>SWITCH S1 IS IN THE BYPASS SOURCE POSITION</p>	<p>OPERATOR SHOULD CHECK THE POSITION OF SWITCH S1</p>	<p>S U</p> <p>Comments:</p>
<p>5. IF THE MANUAL BYPASS SWITCH (S1) IS IN THE BYPASS SOURCE POSITION, THEN PERFORM SECTION 4.6.1 PRIOR TO PROCEEDING</p> <p>STEP 4.6.2.1.1</p>		<p>OPERATOR SHOULD GO TO SECTION 4.6.1 DUE TO POSITION OF NN11 MANUAL BYPASS SWITCH SELECTED TO BYPASS SOURCE POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>6. VERIFY THE MANUAL BYPASS SWITCH (S1) IS IN THE BYPASS SOURCE POSITION</p> <p>STEP 4.6.1.1.</p>	<p>THE MANUAL BYPASS SWITCH (S1) IS IN THE BYPASS SOURCE POSITION</p>	<p>OPERATOR SHOULD VERIFY NN11 MANUAL BYPASS SWITCH (S1) IS IN THE BYPASS SOURCE POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK		CUE	STANDARD	SCORE
NUMBER - ELEMENT				
7.	ENSURE BREAKER B1-DC INPUT IS CLOSED STEP 4.6.1.2	BREAKER B1 IS CLOSED	OPERATOR SHOULD ENSURE NN11'S B1 (DC INPUT) IS IN THE CLOSED POSITION STEPS 7 THRU 11 MAY BE PERFORMED IN ANY ORDER	S U Comments:
8.	ENSURE BREAKER B2-INVERTER OUTPUT IS IN THE CLOSED POSITION STEP 4.6.1.2	BREAKER B2 IS IN THE CLOSED POSITION	OPERATOR SHOULD ENSURE NN11'S INVERTER OUTPUT (B2) IS IN THE CLOSED POSITION STEPS 7 THRU 11 MAY BE PERFORMED IN ANY ORDER	S U Comments:
9.	ENSURE BREAKER B3-BYPASS SOURCE INPUT TO STATIC SWITCH, IS IN THE CLOSED POSITION STEP 4.6.1.2	BREAKER B3 IS IN THE CLOSED POSITION	OPERATOR SHOULD ENSURE BYPASS SOURCE INPUT TO STATIC SWITCH (B3) IS IN THE CLOSED POSITION FOR NN11 STEPS 7 THRU 11 MAY BE PERFORMED IN ANY ORDER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10. ENSURE BREAKER B4-BYPASS SOURCE INPUT TO MBS IS IN THE CLOSED POSITION</p> <p>STEP 4.6.1.2</p>	<p>BREAKER B4 IS IN THE CLOSED POSITION</p>	<p>OPERATOR SHOULD ENSURE THE BYPASS SOURCE INPUT TO MBS (B4) IS IN THE CLOSED POSITION</p> <p>STEPS 7 THRU 11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>11. ENSURE BREAKER B800-BYPASS CVT INPUT IS IN THE CLOSED POSITION</p> <p>STEP 4.6.1.2</p>	<p>BREAKER B800 IS IN THE CLOSED POSITION</p>	<p>OPERATORS SHOULD ENSURE NN11'S BYPASS CVT INPUT BREAKER (B800) IS IN THE CLOSED POSITION</p> <p>STEPS 7 THRU 11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>12. VERIFY THAT THE IN SYNC LIGHT (P11) IS LIT</p> <p>STEP 4.6.1.3</p>	<p>THE IN SYNC LIGHT (P11) IS ILLUMINATED</p>	<p>OPERATOR SHOULD VERIFY THE NN11 IN SYNC (P11) LIGHT IS LIT</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>13. CHECK THAT THE BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS LIT</p> <p>STEP 4.6.1.4</p>	<p>THE BYPASS SOURCE SUPPLYING LOAD (P202) RED LIGHT IS ILLUMINATED</p>	<p>OPERATORS SHOULD VERIFY NN11'S BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS LIT</p>	<p>S U</p> <p>Comments:</p>
<p>14.*TURN THE MANUAL BYPASS TRANSFER SWITCH (S1) TO THE NORMAL SOURCE POSITION</p> <p>STEP 4.6.1.5</p>	<p>SWITCH S1 IS NOW IN THE NORMAL POSITION</p>	<p>OPERATOR SHOULD TURN NN11'S MANUAL BYPASS TRANSFER SWITCH (S1) TO THE NORMAL SOURCE POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>15. INFORM THE CONTROL ROOM THAT NN11 IS SUPPLIED BY THE ALTERNATE POWER SOURCE NG01ABR1 VIA THE STATIC TRANSFER SWITCH BYPASSING THE INVERTER</p> <p>STEP 4.6.1.6</p>	<p>CONTROL ROOM ACKNOWLEDGES</p>	<p>OPERATOR SHOULD INFORM THE CONTROL ROOM THAT NN11 IS BEING SUPPLIED BY THE ALTERNATE POWER SOURCE NG01ABR1 VIA THE STATIC TRANSFER SWITCH</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>16. PERFORM SECTION 4.6.2 TO PLACE NN11 TO NORMAL ALIGNMENT</p> <p>STEP 4.6.1.7</p>		<p>OPERATOR SHOULD RETURN TO SECTION 4.6.2</p>	<p>S U</p> <p>Comments:</p>
<p>17. CHECK THAT THE MANUAL BYPASS SWITCH (S1) IS IN THE NORMAL SOURCE POSITION</p> <p>STEP 4.6.2.1</p>	<p>SWITCH S1 IS IN THE NORMAL SOURCE POSITION</p>	<p>OPERATOR SHOULD CHECK THE POSITION OF SWITCH S1</p>	
<p>18. VERIFY BREAKER B1-DC INPUT IS CLOSED</p> <p>STEP 4.6.2.2.</p>	<p>BREAKER B1 IS CLOSED</p>	<p>OPERATOR SHOULD VERIFY NN11'S DC INPUT BREAKER (B1) IS IN THE CLOSED POSITION.</p> <p>STEPS 18 AND 19 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. VERIFY BREAKER B2-INVERTER OUTPUT IS IN THE CLOSED POSITION STEP 4.6.2.2	BREAKER B2 IS IN THE CLOSED POSITION	OPERATOR SHOULD VERIFY THAT NN11'S INVERTER OUTPUT BREAKER (B2) IS IN THE CLOSED POSITION STEPS 18 AND 19 MAY BE PERFORMED IN ANY ORDER	S U Comments:
20. VERIFY THE BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS LIT STEP 4.6.2.3	THE BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS ILLUMINATED	OPERATOR SHOULD VERIFY NN11'S BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS LIT	S U Comments:
21. VERIFY THE INVERTER SUPPLYING LOAD AMBER LIGHT (P201) IS NOT LIT STEP 4.6.2.4	THE INVERTER SUPPLYING LOAD AMBER LIGHT (P201) IS NOT LIT	OPERATOR SHOULD VERIFY NN11'S INVERTER SUPPLYING LOAD AMBER LIGHT (P201) IS NOT LIT	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>22. VERIFY THE IN SYNC LIGHT (P11) IS LIT</p> <p>STEP 4.6.2.5</p>	<p>THE IN SYNC LIGHT (P11) IS ILLUMINATED</p>	<p>OPERATOR SHOULD VERIFY NN11'S IN SYNC LIGHT (P11) IS LIT</p>	<p>S U</p> <p>Comments:</p>
<p>23.* PUSH THE INVERTER TO LOAD PUSHBUTTON (S201)</p> <p>STEP 4.6.2.6</p>	<p>THE INVERTER TO LOAD PUSHBUTTON (S201) HAS BEEN DEPRESSED</p>	<p>OPERATOR SHOULD DEPRESS INVERTER TO LOAD PUSHBUTTON (S201) FOR NN11</p>	<p>S U</p> <p>Comments:</p>
<p>24. VERIFY THE INVERTER SUPPLYING LOAD AMBER LIGHT (P201) IS LIT</p> <p>STEP 4.6.2.6.1</p>	<p>THE INVERTER SUPPLYING LOAD AMBER LIGHT (P201) IS ILLUMINATED</p>	<p>OPERATOR SHOULD VERIFY NN11'S INVERTER SUPPLYING LOAD AMBER LIGHT (P201) IS LIT</p> <p>STEPS 24 & 25 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
25. VERIFY THE BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS <u>NOT</u> LIT STEP 4.6.2.6.2	THE BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS NOT ILLUMINATED	OPERATOR SHOULD VERIFY NN11'S BYPASS SOURCE SUPPLYING LOAD RED LIGHT (P202) IS NOT LIT STEPS 24 & 25 MAY BE PERFORMED IN ANY ORDER	S U Comments:
26. PUSH THE ALARM RESET PUSHBUTTON (S3) STEP 4.6.2.7	ALARM RESET PUSHBUTTON (S3) HAS BEEN PUSHED	OPERATOR SHOULD RESET NN11'S ALARMS WITH THE ALARM PUSHBUTTON (S3)	S U Comments:
27. VERIFY THE MCB ANNUNCIATOR ALARM WINDOW 25B IS NOT LIT STEP 4.6.2.8	ALARM WINDOW 25B IS NOT LIT	OPERATOR SHOULD VERIFY MCB ANNUNCIATOR ALARM WINDOW 25B IS NOT LIT	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
28. INFORM THE CONTROL ROOM THAT NN11 IS SUPPLIED BY THE NORMAL POWER SOURCE NK0111 STEP 4.6.2.9	CONTROL ROOM ACKNOWLEDGES	OPERATOR SHOULD INFORM THE CONTROL ROOM NN11 IS BEING SUPPLIED BY THE NORMAL POWER SOURCE NK0111	S U Comments:
29.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: INSTRUMENT BUS NN01 HAD BEEN PLACED ON THE CONSTANT VOLTAGE TRANSFORMER (CVT THRU NG01A) FOR MAINTENANCE TO PERFORM AN INSPECTION ON INVERTER NN11. INSTRUMENT BUSES NN12, 13 AND 14 ARE ENERGIZED FROM THEIR RESPECTIVE DC BUSES AND BATTERY CHARGERS. THE PLANT IS IN MODE 6. INVERTER NN11 HAS HAD POST MAINTENANCE CHECKS PERFORMED. ALL REQUIRED BREAKER LINEUPS ARE COMPLETE. THE STATIC TRANSFER SWITCH IS IN THE BYPASS SOURCE SUPPLYING LOAD POSITION. THE P202 (BYPASS SOURCE SUPPLYING LOAD) RED LIGHT IS ILLUMINATED. A CREW BRIEFING HAS BEEN CONDUCTED.

Initiating Cues: YOU HAVE BEEN DIRECTED TO TRANSFER NN01 BACK TO THE NORMAL SOURCE (INVERTER AND NK01) FROM THE CONSTANT VOLTAGE TRANSFORMER, PER OTN-NN-00001, SECTION 4.6.2.
INFORM THE CONTROL ROOM SUPERVISOR WHEN DONE.

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-P2
COMPLETION TIME: 10 MINUTES
JOB TITLE: URO/SRO
DUTY: EMERGENCY OPERATIONS
TASK TITLE: LOCALLY CLOSE VALVES FOR A CIS-B

KSA NO: 103A2.03
KSA RATING: 3.5/3.8
REVISION: 20031114

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT X CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ X PERFORMED _____

REFERENCES: ECA-0.0, LOSS OF ALL AC POWER, ATTACHMENT 10, REV 1B2

TOOLS/EQUIPMENT: ATTACHMENT 10
PPE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

JPM NO: ILE-2004-P2

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT WAS AT 100% POWER WHEN A LOSS OF ALL AC POWER OCCURRED. THE CONTROL ROOM ENTERED EMERGENCY PROCEDURE ECA-0.0, LOSS OF ALL AC POWER.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM ATTACHMENT 10, CISB OUTER CTMT ISO VALVES, OF ECA-0.0, REPOSITION ANY REQUIRED VALVES AND INFORM HIM WHEN DONE.
NOTIFY THE CRS WHEN ATTACHMENT 10 IS COMPLETE.

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

Task Standard: UPON COMPLETION OF THIS JPM, VALVES ASSOCIATED WITH PENETRATIONS 74, 75, AND 76 WILL BE CLOSED OR VERIFIED CLOSED.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>1. OBTAIN A VERIFIED WORKING COPY OF ATTACHMENT 10 OF ECA-0.0, LOSS OF ALL AC POWER</p>	<p>PROVIDE OPERATOR WITH COPY OF ATTACHMENT 10</p>	<p>OPERATOR SHOULD OBTAIN ATTACHMENT 10 COPY</p>	<p>S U Comments:</p>
<p>2 GO TO THE AUX BUILDING NORTH PIPING PENETRATION ROOM #1323</p> <p>STEP 1.0</p>		<p>OPERATOR SHOULD GO TO THE NORTH PIPING PENETRATION ROOM #1323</p> <p>NOTE: OPERATOR SHOULD GO THRU HP ACCESS</p>	<p>S U Comments:</p>
<p>3 VERIFY CLOSED EG-HV-71, CCW TO RCS OUTER CTMT ISO</p> <p>STEP 1.a</p>	<p>EG-HV-71 IS OPEN</p>	<p>OPERATOR SHOULD DEMONSTRATE KNOWLEDGE OF HOW TO VERIFY A MOTOR-OPERATED VALVE OPEN/CLOSED</p> <p>NOTE: PEN 74</p>	<p>S U Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4.* CLOSE EG-HV-71, CCW TO RCS OUTER CTMT ISO</p> <p>STEP 1.a</p>	<p>EG-HV-71 IS NOW CLOSED</p>	<p>OPERATOR SHOULD CLOSE EG-HV-71</p> <p>NOTE: OPERATOR SHOULD BE ABLE TO DESCRIBE HOW TO CLOSE A LIMITORQUE VALVE</p>	<p>S U</p> <p>Comments:</p>
<p>5. VERIFY CLOSED EG-HV-58, CCW TO RCS OUTER CTMT ISO</p> <p>STEP 1.b</p>	<p>EG-HV-58 IS OPEN</p>	<p>OPERATOR SHOULD VERIFY POSITION OF EG-HV-58</p> <p>NOTE: PEN 74</p>	<p>S U</p> <p>Comments:</p>
<p>6* OPERATOR SHOULD CLOSE EG-HV-58, CCW TO RCS OUTER CTMT ISO</p> <p>STEP 1.b</p>	<p>EG-HV-58 IS NOW CLOSED</p>	<p>OPERATOR SHOULD CLOSE EG-HV-58</p> <p>NOTE: PEN 74</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. VERIFY CLOSED EG-HV-126, CCW TO RCS CTMT BYPASS</p> <p>STEP 1.c</p>	<p>EG-HV-126 IS CLOSED</p>	<p>OPERATOR SHOULD VERIFY CLOSED EG-HV-126, CCW TO RCS CTMT BYPASS</p> <p>NOTE : PEN 74</p>	<p>S U</p> <p>Comments:</p>
<p>8. VERIFY CLOSED EG-HV-127, CCW TO RCS CTMT BYPASS</p> <p>STEP 1.d</p>	<p>EG-HV-127 IS CLOSED</p>	<p>OPERATOR SHOULD VERIFY CLOSED EG-HV-127, CCW TO RCS CTMT BYPASS</p> <p>NOTE : PEN 74</p>	<p>S U</p> <p>Comments:</p>
<p>9. VERIFY CLOSED EG-HV-61, CCW FROM RCS OUTER CTMT ISO</p> <p>STEP 1.e</p>	<p>EG-HV-61 IS OPEN</p>	<p>OPERATOR SHOULD VERIFY POSITION OF EG-HV-61</p> <p>NOTE : PEN 76</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10* CLOSE EG-HV-61, CCW FROM RCS OUTER CTMT ISO</p> <p>STEP 1.e</p>	<p>EG-HV-61 IS NOW CLOSED</p>	<p>OPERATOR SHOULD CLOSE EG-HV-61</p> <p>NOTE : PEN 76</p>	<p>S U</p> <p>Comments:</p>
<p>11. VERIFY CLOSED EG-HV-133, CCW FROM RCS CTMT BYPASS</p> <p>STEP 1.f</p>	<p>EG-HV-133 IS CLOSED</p>	<p>OPERATOR SHOULD VERIFY CLOSED EG-HV-133</p> <p>NOTE : PEN 76</p>	<p>S U</p> <p>Comments:</p>
<p>12. VERIFY CLOSE EG-HV-59, CCW FROM RCS OUTER CTMT ISO</p> <p>STEP 1.g</p>	<p>EG-HV-59 IS OPEN</p>	<p>OPERATOR SHOULD VERIFY POSITION OF EG-HV-59</p> <p>NOTE : PEN 75</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>13* CLOSE EG-HV-59, CCW FROM RCS OUTER CTMT ISO</p> <p>STEP 1.g</p>	<p>EG-HV-59 IS NOW CLOSED</p>	<p>OPERATOR SHOULD CLOSE EG-HV-59, CCW FROM RCS OUTER CTMT ISO</p> <p>NOTE : PEN 75</p>	<p>S U</p> <p>Comments:</p>
<p>14. VERIFY CLOSED EG-HV-131, CCW FROM RCS CTMT BYPASS</p> <p>STEP 1.h</p>	<p>EG-HV-131 IS CLOSED</p>	<p>OPERATOR SHOULD VERIFY CLOSED EG-HV-131</p> <p>NOTE : PEN 75</p>	<p>S U</p> <p>Comments:</p>
<p>15. INFORM CONTROL ROOM SUPERVISOR ATTACHMENT 10 HAS BEEN COMPLETED</p>	<p>CONTROL ROOM SUPERVISOR ACKNOWLEDGES</p>	<p>OPERATOR SHOULD INFORM CONTROL ROOM SUPERVISOR ATTACHMENT 10 HAS BEEN COMPLETED</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16.	THE JPM IS COMPLETE <u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT WAS AT 100% POWER WHEN A LOSS OF ALL AC POWER OCCURRED. THE CONTROL ROOM ENTERED EMERGENCY PROCEDURE ECA-0.0, LOSS OF ALL AC POWER.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM ATTACHMENT 10, CISB OUTER CTMT ISO VALVES, OF ECA-0.0, REPOSITION ANY REQUIRED VALVES AND INFORM HIM WHEN DONE.
NOTIFY THE CRS WHEN ATTACHMENT 10 IS COMPLETE.

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-P3
COMPLETION TIME: 13 MINUTES
JOB TITLE: URO/SRO
DUTY: FIREWATER SYSTEM
TASK TITLE: MAINTAIN FIRE SYSTEM PRESSURE

KSA NO: 086A4.01
KSA RATING: 3.3/3.3
REVISION: 20031114

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT X CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ X PERFORMED _____

REFERENCES: OTN-KC-00001, FIRE PROTECTION SYSTEM, REV 15

TOOLS/EQUIPMENT: PPE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 AT 100% POWER. FIRE BRIGADE TRAINING IS ABOUT TO START. BOTH FIRE WATER STORAGE TANKS ARE FILLED TO GREATER THAN 31 FEET.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO START THE ELECTRIC DRIVEN FIRE PUMP TO MAINTAIN FIRE SYSTEM HEADER PRESSURE PER SECTION 4.2 OF OTN-KC-00001, FIRE PROTECTION SYSTEM. **INFORM THE CONTROL ROOM SUPERVISOR WHEN SECTION 4.2 HAS BEEN COMPLETED.**

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

Task Standard: UPON COMPLETION OF THIS JPM, THE ELECTRIC DRIVEN FIRE PUMP WILL HAVE BEEN USED TO MAINTAIN FIRE SYSTEM PRESSURE FOR FIRE BRIGADE USE AND PLACED IN SERVICE TO SUPPORT A PLANT FIRE.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-KC-00001, FIRE PROTECTION SYSTEM	PROVIDE OPERATOR WITH PROCEDURE	OPERATOR SHOULD OBTAIN A COPY OF OTN-KC-00001, FIRE PROTECTION SYSTEM	S U Comments:
2. REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-KC-00001, FIRE PROTECTION SYSTEM SECTION 2	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS	S U Comments:
3. REVIEW INITIAL CONDITIONS OF OTN-KC-00001, FIRE PROTECTION SYSTEM SECTION 3	ALL INITIAL CONDITIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. ROTATE FIRE PROT WTR MAKE-UP SWITCHES, HSKC1001A AND HSKC1001B, TO THE "OFF" POSITION</p> <p>STEP 4.2.1</p>	<p>FIRE PROT WTR MAKE-UP SWITCH HSKC1001A IS IN THE "OFF" POSITION</p> <p>FIRE PROT WTR MAKE-UP SWITCH HSKC1001B IS IN THE "OFF" POSITION</p>	<p>OPERATOR SHOULD ROTATE FIRE PROT WTR MAKE-UP SWITCHES HSKC1001A AND HSKC1001B TO THE "OFF" POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>5.* OPEN VKC1038C, ELECTRIC FIRE PUMP TO FIRE WATER STORAGE TANK ISOLATION</p> <p>STEP 4.2.2</p>	<p>VKC1038C IS OPEN</p> <p>THE ELECTRIC FIRE PUMP HAS STARTED</p>	<p>OPERATOR SHOULD OPEN VKC1038C</p>	<p>S U</p> <p>Comments:</p>
<p>6. IF PKC1001A HAS NOT STARTED, SLIGHTLY OPEN VKC1038D, DIESEL/ELECTRIC FIRE PUMPS TO WATER STORAGE TANK HDR ISO</p> <p>STEP 4.2.3</p>	<p>PKC1001A IS RUNNING</p>	<p>OPERATOR SHOULD REALIZE PKC1001A IS RUNNING AND CONTINUE WITH THE PROCEDURE</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7.* THROTTLE OPEN VKC1038D UNTIL FLOW RATE ON FIKC1001 INDICATES BETWEEN 1100 GPM AND 1300 GPM</p> <p>STEP 4.2.4.1</p>	<p>FIKC1001 INDICATES 1200 GPM</p> <p>NOTE: IF VKC1038D IS <u>NOT</u> OPENED, FLOW WILL INDICATE ZERO</p>	<p>OPERATOR SHOULD THROTTLE OPEN VKC1038D</p>	<p>S U</p> <p>Comments:</p>
<p>8. VERIFY PKC1001A PROPER OPERATION WITH NO SIGNS OF OVERHEATING</p> <p>STEP 4.2.5</p>	<p>THERE IS A SMALL AMOUNT OF WATER LEAKING FROM THE PACKING GLAND AND ALL TEMPERATURES ARE NORMAL</p>	<p>OPERATOR SHOULD CHECK PKC1001A FOR SIGNS OF OVERHEATING</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>9. CHECK HOLES IN THE LOWER PUMP CASING ALLOWING PACKING LEAKOFF TO DRAIN TO THE FLOOR</p> <p>STEP 4.2.5</p>	<p>THE HOLES IN THE LOWER PUMP CASING ARE ALLOWING PACKING LEAKOFF TO DRAIN TO THE FLOOR</p>	<p>OPERATOR SHOULD CHECK THE HOLES IN THE LOWER PUMP CASING TO ENSURE PACKING LEAKOFF DRAINS TO THE FLOOR</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10. NO WATER IS DISCHARGING FROM THE AIR RELIEF VALVE ON TOP OF THE PUMP CASING</p> <p>STEP 4.2.5</p>	<p>THERE IS NO WATER DISCHARGING FROM THE AIR RELIEF VALVE</p>	<p>OPERATOR SHOULD CHECK PKC1001A AIR RELIEF VALVE TO ENSURE NO WATER IS DISCHARGING</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>11. PKC1001A RUNS SMOOTHLY WITHOUT EXCESSIVE VIBRATION</p> <p>STEP 4.2.5</p>	<p>PKC1001A IS RUNNING SMOOTHLY</p>	<p>OPERATOR SHOULD CHECK THAT PKC1001A IS RUNNING SMOOTHLY</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>12. MONITOR FIRE WATER STORAGE TANK LEVELS TO ENSURE THEY STAY ABOVE 31 FEET</p> <p>STEP 4.2.6</p>	<p>FIRE WATER STORAGE TANK LEVELS ARE ABOVE 31 FEET</p>	<p>OPERATOR SHOULD MONITOR FIRE WATER STORAGE TANK LEVELS</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13.	THE PLANT FIRE ALARM HAS SOUNDED AND A FIRE HAS BROKEN OUT IN THE TURBINE BUILDING	OPERATOR SHOULD CONTINUE WITH STEP 4.2.7 AND PERFORM STEPS 4.2.8.1, 4.2.8.2 AND 4.2.8.4 THROUGH 4.2.9	S U Comments:
14. IF A FIRE OCCURS WHILE PKC1001A IS IN RECIRCULATION IMMEDIATELY PERFORM STEPS 4.2.8.1, 4.2.8.2 AND 4.2.8.4 THROUGH 4.2.9 STEP 4.2.7		OPERATOR SHOULD CONTINUE WITH STEP 4.2.8.1	S U Comments:
*15. CLOSE VKC1038D, DIESEL/ELECTRIC FIRE PUMPS TO WATER STORAGE TANK HDR ISO STEP 4.2.8.1	VKC1038D IS CLOSED	OPERATOR SHOULD CLOSE VKC1038D PERFORMING EITHER STEP 15 OR 16 WILL ISOLATE FIRE HEADER RECIRC LINE AND SATISFY CRITICAL STEP CRITERIA	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*16. CLOSE VKC1038C, ELECTRIC FIRE PUMP TO FIRE WATER STORAGE TANK ISOLATION</p> <p>STEP 4.2.8.2</p>	<p>VKC1038C IS CLOSED</p>	<p>OPERATOR SHOULD CLOSE VKC1038C</p> <p>PERFORMING EITHER STEP 15 OR 16 WILL ISOLATE FIRE HEADER RECIRC LINE AND SATISFY CRITICAL STEP CRITERIA</p>	<p>S U</p> <p>Comments:</p>
<p>17. ON CPKC1001, ENSURE CPKC1001CB01 IS IN THE "ON" POSITION</p> <p>STEP 4.2.8.4</p>	<p>CPKC1001CB01 IS IN THE "ON" POSITION</p>	<p>OPERATOR SHOULD ENSURE CPKC1001CB01 IS IN THE "ON" POSITION</p> <p>NOTE: LOCATED ON CONTROLLER FOR ELECTRIC FIRE PUMP</p>	<p>S U</p> <p>Comments:</p>
<p>18. ROTATE THE SWITCHES ON PG105AB4 FOR THE FIRE WATER MAKEUP SYSTEM TO AUTO UNLESS A REGEN IS IN PROGRESS</p> <p>STEP 4.2.9</p>	<p>THERE ARE NO REGENS IN PROGRESS IN THE DEMIN BUILDING</p> <p>HSKC1001A IS IN THE "AUTO" POSITION</p> <p>HSKC1001B IS IN THE "AUTO" POSITION</p>	<p>OPERATOR SHOULD CHECK IF A REGEN IS IN PROGRESS</p> <p>OPERATOR SHOULD ROTATE FIRE PROT WTR MAKE-UP SWITCHES ON PG105AB4 TO THE "AUTO" POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. PERFORM CHECKOFF LIST #11 STEP 4.2.10	ANOTHER OPERATOR WILL PERFORM CHECKOFF LIST #11	OPERATOR SHOULD RECOGNIZE NEED TO PERFORM CHECKOFF LIST #11	S U Comments:
20. INFORM CRS THAT FIRE SYSTEM TESTING IS COMPLETE	CRS ACKNOWLEDGES THAT TESTING IS COMPLETE	OPERATOR SHOULD NOTIFY CRS THAT FIRE SYSTEM TESTING IS COMPLETE	
21.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 AT 100% POWER. FIRE BRIGADE TRAINING IS ABOUT TO START. BOTH FIRE WATER STORAGE TANKS ARE FILLED TO GREATER THAN 31 FEET.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO START THE ELECTRIC DRIVEN FIRE PUMP TO MAINTAIN FIRE SYSTEM HEADER PRESSURE PER SECTION 4.2 OF OTN-KC-00001, FIRE PROTECTION SYSTEM. **INFORM THE CONTROL ROOM SUPERVISOR WHEN SECTION 4.2 HAS BEEN COMPLETED.**

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-P3
COMPLETION TIME: 13 MINUTES
JOB TITLE: URO/SRO
DUTY: FIREWATER SYSTEM
TASK TITLE: MAINTAIN FIRE SYSTEM PRESSURE

KSA NO: 086A4.01
KSA RATING: 3.3/3.3
REVISION: 20031114

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB _____ PLANT X CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ X PERFORMED _____

REFERENCES: OTN-KC-00001, FIRE PROTECTION SYSTEM, REV 15

TOOLS/EQUIPMENT: PPE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 AT 100% POWER. FIRE BRIGADE TRAINING IS ABOUT TO START. BOTH FIRE WATER STORAGE TANKS ARE FILLED TO GREATER THAN 31 FEET.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO START THE ELECTRIC DRIVEN FIRE PUMP TO MAINTAIN FIRE SYSTEM HEADER PRESSURE PER SECTION 4.2 OF OTN-KC-00001, FIRE PROTECTION SYSTEM. **INFORM THE CONTROL ROOM SUPERVISOR WHEN SECTION 4.2 HAS BEEN COMPLETED.**

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

Task Standard: UPON COMPLETION OF THIS JPM, THE ELECTRIC DRIVEN FIRE PUMP WILL HAVE BEEN USED TO MAINTAIN FIRE SYSTEM PRESSURE FOR FIRE BRIGADE USE AND PLACED IN SERVICE TO SUPPORT A PLANT FIRE.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-KC-00001, FIRE PROTECTION SYSTEM	PROVIDE OPERATOR WITH PROCEDURE	OPERATOR SHOULD OBTAIN A COPY OF OTN-KC-00001, FIRE PROTECTION SYSTEM	S U Comments:
2. REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-KC-00001, FIRE PROTECTION SYSTEM SECTION 2	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS	S U Comments:
3. REVIEW INITIAL CONDITIONS OF OTN-KC-00001, FIRE PROTECTION SYSTEM SECTION 3	ALL INITIAL CONDITIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. ROTATE FIRE PROT WTR MAKE-UP SWITCHES, HSKC1001A AND HSKC1001B, TO THE "OFF" POSITION</p> <p>STEP 4.2.1</p>	<p>FIRE PROT WTR MAKE-UP SWITCH HSKC1001A IS IN THE "OFF" POSITION</p> <p>FIRE PROT WTR MAKE-UP SWITCH HSKC1001B IS IN THE "OFF" POSITION</p>	<p>OPERATOR SHOULD ROTATE FIRE PROT WTR MAKE-UP SWITCHES HSKC1001A AND HSKC1001B TO THE "OFF" POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>5.* OPEN VKC1038C, ELECTRIC FIRE PUMP TO FIRE WATER STORAGE TANK ISOLATION</p> <p>STEP 4.2.2</p>	<p>VKC1038C IS OPEN</p> <p>THE ELECTRIC FIRE PUMP HAS STARTED</p>	<p>OPERATOR SHOULD OPEN VKC1038C</p>	<p>S U</p> <p>Comments:</p>
<p>6. IF PKC1001A HAS NOT STARTED, SLIGHTLY OPEN VKC1038D, DIESEL/ELECTRIC FIRE PUMPS TO WATER STORAGE TANK HDR ISO</p> <p>STEP 4.2.3</p>	<p>PKC1001A IS RUNNING</p>	<p>OPERATOR SHOULD REALIZE PKC1001A IS RUNNING AND CONTINUE WITH THE PROCEDURE</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7.* THROTTLE OPEN VKC1038D UNTIL FLOW RATE ON FIKC1001 INDICATES BETWEEN 1100 GPM AND 1300 GPM</p> <p>STEP 4.2.4.1</p>	<p>FIKC1001 INDICATES 1200 GPM</p> <p>NOTE: IF VKC1038D IS <u>NOT</u> OPENED, FLOW WILL INDICATE ZERO</p>	<p>OPERATOR SHOULD THROTTLE OPEN VKC1038D</p>	<p>S U</p> <p>Comments:</p>
<p>8. VERIFY PKC1001A PROPER OPERATION WITH NO SIGNS OF OVERHEATING</p> <p>STEP 4.2.5</p>	<p>THERE IS A SMALL AMOUNT OF WATER LEAKING FROM THE PACKING GLAND AND ALL TEMPERATURES ARE NORMAL</p>	<p>OPERATOR SHOULD CHECK PKC1001A FOR SIGNS OF OVERHEATING</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>9. CHECK HOLES IN THE LOWER PUMP CASING ALLOWING PACKING LEAKOFF TO DRAIN TO THE FLOOR</p> <p>STEP 4.2.5</p>	<p>THE HOLES IN THE LOWER PUMP CASING ARE ALLOWING PACKING LEAKOFF TO DRAIN TO THE FLOOR</p>	<p>OPERATOR SHOULD CHECK THE HOLES IN THE LOWER PUMP CASING TO ENSURE PACKING LEAKOFF DRAINS TO THE FLOOR</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10. NO WATER IS DISCHARGING FROM THE AIR RELIEF VALVE ON TOP OF THE PUMP CASING</p> <p>STEP 4.2.5</p>	<p>THERE IS NO WATER DISCHARGING FROM THE AIR RELIEF VALVE</p>	<p>OPERATOR SHOULD CHECK PKC1001A AIR RELIEF VALVE TO ENSURE NO WATER IS DISCHARGING</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>11. PKC1001A RUNS SMOOTHLY WITHOUT EXCESSIVE VIBRATION</p> <p>STEP 4.2.5</p>	<p>PKC1001A IS RUNNING SMOOTHLY</p>	<p>OPERATOR SHOULD CHECK THAT PKC1001A IS RUNNING SMOOTHLY</p> <p>STEPS 8-11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>12. MONITOR FIRE WATER STORAGE TANK LEVELS TO ENSURE THEY STAY ABOVE 31 FEET</p> <p>STEP 4.2.6</p>	<p>FIRE WATER STORAGE TANK LEVELS ARE ABOVE 31 FEET</p>	<p>OPERATOR SHOULD MONITOR FIRE WATER STORAGE TANK LEVELS</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13.	THE PLANT FIRE ALARM HAS SOUNDED AND A FIRE HAS BROKEN OUT IN THE TURBINE BUILDING	OPERATOR SHOULD CONTINUE WITH STEP 4.2.7 AND PERFORM STEPS 4.2.8.1, 4.2.8.2 AND 4.2.8.4 THROUGH 4.2.9	S U Comments:
14. IF A FIRE OCCURS WHILE PKC1001A IS IN RECIRCULATION IMMEDIATELY PERFORM STEPS 4.2.8.1, 4.2.8.2 AND 4.2.8.4 THROUGH 4.2.9 STEP 4.2.7		OPERATOR SHOULD CONTINUE WITH STEP 4.2.8.1	S U Comments:
*15. CLOSE VKC1038D, DIESEL/ELECTRIC FIRE PUMPS TO WATER STORAGE TANK HDR ISO STEP 4.2.8.1	VKC1038D IS CLOSED	OPERATOR SHOULD CLOSE VKC1038D PERFORMING EITHER STEP 15 OR 16 WILL ISOLATE FIRE HEADER RECIRC LINE AND SATISFY CRITICAL STEP CRITERIA	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*16. CLOSE VKC1038C, ELECTRIC FIRE PUMP TO FIRE WATER STORAGE TANK ISOLATION</p> <p>STEP 4.2.8.2</p>	<p>VKC1038C IS CLOSED</p>	<p>OPERATOR SHOULD CLOSE VKC1038C</p> <p>PERFORMING EITHER STEP 15 OR 16 WILL ISOLATE FIRE HEADER RECIRC LINE AND SATISFY CRITICAL STEP CRITERIA</p>	<p>S U</p> <p>Comments:</p>
<p>17. ON CPKC1001, ENSURE CPKC1001CB01 IS IN THE "ON" POSITION</p> <p>STEP 4.2.8.4</p>	<p>CPKC1001CB01 IS IN THE "ON" POSITION</p>	<p>OPERATOR SHOULD ENSURE CPKC1001CB01 IS IN THE "ON" POSITION</p> <p>NOTE: LOCATED ON CONTROLLER FOR ELECTRIC FIRE PUMP</p>	<p>S U</p> <p>Comments:</p>
<p>18. ROTATE THE SWITCHES ON PG105AB4 FOR THE FIRE WATER MAKEUP SYSTEM TO AUTO UNLESS A REGEN IS IN PROGRESS</p> <p>STEP 4.2.9</p>	<p>THERE ARE NO REGENS IN PROGRESS IN THE DEMIN BUILDING</p> <p>HSKC1001A IS IN THE "AUTO" POSITION</p> <p>HSKC1001B IS IN THE "AUTO" POSITION</p>	<p>OPERATOR SHOULD CHECK IF A REGEN IS IN PROGRESS</p> <p>OPERATOR SHOULD ROTATE FIRE PROT WTR MAKE-UP SWITCHES ON PG105AB4 TO THE "AUTO" POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. PERFORM CHECKOFF LIST #11 STEP 4.2.10	ANOTHER OPERATOR WILL PERFORM CHECKOFF LIST #11	OPERATOR SHOULD RECOGNIZE NEED TO PERFORM CHECKOFF LIST #11	S U Comments:
20. INFORM CRS THAT FIRE SYSTEM TESTING IS COMPLETE	CRS ACKNOWLEDGES THAT TESTING IS COMPLETE	OPERATOR SHOULD NOTIFY CRS THAT FIRE SYSTEM TESTING IS COMPLETE	
21.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 AT 100% POWER. FIRE BRIGADE TRAINING IS ABOUT TO START. BOTH FIRE WATER STORAGE TANKS ARE FILLED TO GREATER THAN 31 FEET.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO START THE ELECTRIC DRIVEN FIRE PUMP TO MAINTAIN FIRE SYSTEM HEADER PRESSURE PER SECTION 4.2 OF OTN-KC-00001, FIRE PROTECTION SYSTEM. **INFORM THE CONTROL ROOM SUPERVISOR WHEN SECTION 4.2 HAS BEEN COMPLETED.**

Notes: **ALL OPERATOR ACTIONS ARE TO BE SIMULATED.**

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT HAS EXPERIENCED A LARGE LOSS OF COOLANT ACCIDENT. A SAFETY INJECTION HAS OCCURRED. PLANT OPERATORS ARE CURRENTLY IN E-1, "LOSS OF REACTOR OR SECONDARY COOLANT".

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE THE 'A' CONTAINMENT HYDROGEN ANALYZER, SGS02A, IN SERVICE PER OTN-GS-00001, SECTION 4.2. THE PRE-SERVICE STARTUP AND STANDBY ALIGNMENT OF HYDROGEN ANALYZERS HAS ALREADY BEEN COMPLETED, (SECTION 4.1).
INFORM THE CONTROL ROOM SUPERVISOR WHEN SGS02A IS IN SERVICE.

NOTES: Use IC-168 (Password nrc2)

CTMT H2 INDICATION
SET MALF METER

- GSAI19
- RAMP START=0
- RAMP TIME=120 SEC
- DELAY TIME=0 SEC
- VALUE=1.5
- EVENT TRIGGER=1
- SET EVENT TRIGGERS
- 1=X20I36A

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE PLACED 'A' HYDROGEN ANALYZER IN SERVICE.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OPTAIN A VERIFIED WORKING COPY OF OTN-GS-00001		OPERATOR SHOULD OBTAIN PROCEDURE COPY	S U Comments:
2. REVIEW PRECAUTIONS AND LIMITATIONS SECTION 2	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW PRECAUTIONS AND LIMITATIONS	S U Comments:
3. ENSURE SECTION 4.1, PRE-SERVICE STARTUP AND STANDBY ALIGNMENT OF HYDROGEN ANALYZERS IS COMPLETE STEP 4.2.1	SECTION 4.1 HAS BEEN COMPLETED	OPERATOR MAY VERIFY SECTION 4.1 HAS BEEN COMPLETED NOTE: GIVEN IN INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. ENSURE THE H2 MIXING FANS AND CTMT COOLERS ARE IN SERVICE STEP 4.2.2	ALL H2 MIXING FANS AND CTMT COOLERS ARE IN SERVICE	OPERATOR SHOULD VERIFY H2 MIXING FANS AND CTMT COOLERS ARE IN SERVICE	S U Comments:
5. RESTORE ELECTRICAL POWER TO HYDROGEN ANALYZER 'A' CTMT ISO VALVES BY PLACING GS HIS-40 IN NON-ISO STEP 4.2.3	GS HIS-40 IS IN THE NON-ISO POSITION	OPERATOR SHOULD PLACE GS HIS-40, HYDROGEN ANALYZER 'A' CTMT ISO VALVE, IN NON-ISO NOTE: STEPS 5 AND 6 MAY BE PERFORMED IN ANY ORDER	S U Comments:
6. RESTORE ELECTRICAL POWER TO HYDROGEN ANALYZER 'A' CTMT ISO VALVES BY PLACING GS HIS-42 IN THE NON-ISO POSITION STEP 4.2.3	GS HIS-42 IS IN THE NON-ISO POSITION	OPERATOR SHOULD PLACE GS HIS-42, HYDROGEN ANALYZER 'A' CTMT ISO VALVE IN NON-ISO NOTE: STEPS 5 AND 6 MAY BE PERFORMED IN ANY ORDER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7.* OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-13 WITH PUSHBUTTON GS-HIS-13</p> <p>STEP 4.2.4</p>	<p>GS-HIS-13 SHOWS RED LIGHT GOES ON AND GREEN LIGHT GOES OFF</p>	<p>OPERATOR SHOULD OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-13 WITH PUSHBUTTON GS- HIS-13</p> <p>NOTE: STEPS 7 THROUGH 11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>8.* OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-14 WITH PUSHBUTTON GS-HIS-14</p> <p>STEP 4.2.4</p>	<p>GS-HIS-14 RED LIGHT GOES ON AND GREEN LIGHT GOES OFF</p>	<p>OPERATOR SHOULD OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-14 WITH PUSHBUTTON GS-HIS-14</p> <p>NOTE: STEPS 7 THROUGH 11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>9.* OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-12 WITH PUSHBUTTON GS-HIS-12</p> <p>STEP 4.2.4</p>	<p>GS-HIS-12 RED LIGHT GOES ON AND GREEN LIGHT GOES OFF</p>	<p>OPERATOR SHOULD OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-12 WITH GS-HIS-12</p> <p>NOTE: STEPS 7 THROUGH 11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>10.* OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-17 WITH PUSHBUTTON GS-HIS-17</p> <p>STEP 4.2.4</p>	<p>GS-HIS-17 RED LIGHT GOES ON AND GREEN LIGHT GOES OFF</p>	<p>OPERATOR SHOULD OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-17 WITH GS-HIS-17</p> <p>NOTE: STEPS 7 THROUGH 11 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
11.* OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-18 WITH PUSHBUTTON GS-HIS-18 STEP 4.2.4	GS-HIS-18 RED LIGHT GOES ON AND GREEN LIGHT GOES OFF	OPERATOR SHOULD OPEN 'A' HYDROGEN ANALYZER CTMT ISOLATION VALVE GS-HV-18 WITH PUSHBUTTON GS-HIS-18 NOTE: STEPS 7 THROUGH 11 MAY BE PERFORMED IN ANY ORDER	S U Comments:
12.* PLACE HYDROGEN ANALYZER 'A' IN THE ANALYZ POSITION BY TAKING SWITCH GS-HIS-16A FOR SGS02A TO 'ANLYZ' STEP 4.2.6	SWITCH GS-HIS-16A IS IN 'ANLYZ'	OPERATOR SHOULD TAKE SWITCH GS-HIS-16A TO 'ANLYZ' ON RL020	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13. MONITOR GS-AI-19 FOR HYDROGEN CONCENTRATION STEP 4.2.6.1	HYDROGEN CONCENTRATION INDICATES APPROXIMATELY 0% ON GS-AI-19	OPERATOR SHOULD MONITOR GS-AI-19 FOR HYDROGEN CONCENTRATION	S U Comments:
14. VERIFY HYDROGEN ANALYZER SGS02A WAS IN THE STANDBY LINEUP STEP 4.2.6.1 NOTE b	NOTE 'A' HYDROGEN ANALYZER WAS IN THE STANDBY POSITION	OPERATOR MAY VERIFY 'A' HYDROGEN ANALYZER WAS IN THE STANDBY LINEUP	S U Comments:
15. WAIT FOR A 15 MINUTE WARMUP PERIOD PRIOR TO TAKING DATA STEP 4.2.6.1 NOTE b	OVER 15 MINUTES HAS GONE BY	OPERATOR SHOULD WAIT A MINIMUM OF 15 MINUTES FOR 'A' HYDROGEN ANALYZER USE	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. MONITOR CONTAINMENT HYDROGEN CONCENTRATION ON GS-AI-19 STEP 4.2.6.1	GS-AI-19 SHOWS HYDROGEN CONCENTRATION TO BE STABLE AT 1.5%	OPERATOR SHOULD MONITOR GS-AI-19 FOR HYDROGEN CONCENTRATION	S U Comments:
	<u>RECORD STOP TIME ON PAGE 1</u>		

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT HAS EXPERIENCED A LARGE LOSS OF COOLANT ACCIDENT. A SAFETY INJECTION HAS OCCURRED. PLANT OPERATORS ARE CURRENTLY IN E-1, "LOSS OF REACTOR OR SECONDARY COOLANT".

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE THE 'A' CONTAINMENT HYDROGEN ANALYZER, SGS02A, IN SERVICE PER OTN-GS-00001, SECTION 4.2. THE PRE-SERVICE STARTUP AND STANDBY ALIGNMENT OF HYDROGEN ANALYZERS HAS ALREADY BEEN COMPLETED, (SECTION 4.1).
INFORM THE CONTROL ROOM SUPERVISOR WHEN SGS02A IS IN SERVICE.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-S2
COMPLETION TIME: 17 MINUTES
JOB TITLE: URO/SRO
DUTY: EMERGENCY ACTIONS
TASK TITLE: DEPRESSURIZE RCS TO MINIMIZE BREAK FLOW (SGTR)

KSA NO: 038EA1.04
KSA RATING: 4.3/4.1
REVISION: 20031128

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB X PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: E-3, STEAM GENERATOR TUBE RUPTURE, REV 1B4

TOOLS/EQUIPMENT: NONE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: A TUBE RUPTURE HAS OCCURRED IN 'A' STEAM GENERATOR FOLLOWING A TRIP OF 'D' RCP DUE TO A LOCKED ROTOR. ALL ACTIONS OF E-0 AND E-3 ARE COMPLETE THROUGH STEP 15 OF E-3. PRESSURIZER SPRAY IS NOT AVAILABLE. 'B' PORV IS TAGGED OOS FOR MAINTENANCE.

Initiating Cues: YOU, AS THE REACTOR OPERATOR, HAVE BEEN DIRECTED TO COMMENCE A DEPRESSURIZATION OF THE RCS TO MINIMIZE BREAK FLOW IAW E-3, STEP 16.
NOTIFY THE CRS ONCE YOU HAVE COMMENCED RCS DEPRESSURIZATION.

Notes: Use IC 169 (Password nrc2).
Place WIP tags on 'A' CCP and 'B' PORV.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE STARTED DEPRESSURIZING THE RCS USING ALTERNATE SPRAY.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. LOCATE A COPY OF E-3, STEAM GENERATOR TUBE RUTPURE		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p style="text-align: center;">S U</p> <p>Comments:</p>
2. PZR SPRAY – AVAILABLE STEP 16.a	<p>‘D’ RCP IS NOT AVAILABLE</p> <p>GIVEN IN IC’S THAT PRESSURIZER SPRAY IS NOT AVAILABLE</p>	<p>OPERATOR SHOULD RECOGNIZE THAT PZR SPRAY IS NOT AVAILABLE FROM NOT HAVING ‘D’ RCP IN SERVICE ALSO GIVEN IN IC’S</p>	
3. PZR PORV – AT LEAST ONE AVAILABLE STEP 17.a	<p>BB HIS-455A, ‘A’ PORV HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD RECOGNIZE THAT ‘A’ PORV IS AVAILABLE</p>	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. OPEN ONE PZR PORV STEP 17.b.	BB HIS-455A, 'A' PORV HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS OUT	OPERATOR SHOULD ATTEMPT TO OPEN 'A' PORV AND RECOGNIZE THAT PORV WILL NOT OPEN	S U Comments:
5. ESTABLISH AUXILIARY SPRAY PER ATTACHMENT 7 STEP 17.a. RNO	CRS ACKNOWLEDGES THAT AUXILIARY SPRAY WILL HAVE TO BE USED FOR THE RCS DEPRESSURIZATION	OPERATOR SHOULD REFER TO ATTACHMENT 7 TO ESTABLISH AUXILIARY SPRAY	S U Comments:
6. RESET CISA IF NECESSARY STEP 1	CISA HAS BEEN RESET	OPERATOR SHOULD RECOGNIZE THAT CISA HAS BEEN PREVIOUSLY RESET IN E-3	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. ESTABLISH INSTRUMENT AIR TO CTMT STEP 2	INSTRUMENT AIR HAS BEEN ESTABLISHED TO CTMT	OPERATOR SHOULD RECOGNIZE THAT INSTRUMENT AIR HAS BEEN PREVIOUSLY ESTABLISHED TO CTMT IN E-3	S U Comments:
8. CLOSE THE CHARGING HEADER BACK PRESSURE CONTROL VALVE, BG HC-182 STEP 3	CHARGING HEADER BACK PRESSURE CONTROL VALVE, BG HC-182 INDICATES ZERO DEMAND	OPERATOR SHOULD ROTATE THE POT FOR BG HC-182 IN THE CLOCKWISE DIRECTION UNTIL DEMAND POSITION IS ZERO	S U Comments:
9.* OPEN THE CHARGING PUMPS TO REGEN HX CTMT ISO VALVE, BG HIS- 8105 STEP 4	BG HIS-8105 HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN PUSHBUTTON FOR BG HIS-8105 STEPS 9 AND 10 MAY BE PERFORMED IN ANY ORDER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10.* OPEN THE CHARGING PUMPS TO REGEN HX CTMT ISO VALVE, BG HIS-8106</p> <p>STEP 4</p>	<p>BG HIS-8106 HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD DEPRESS THE OPEN PUSHBUTTON FOR BG HIS-8106</p> <p>STEPS 9 AND 10 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>11.* OPEN THE REGEN HX TO PZR AUXILIARY SPRAY VALVE, BG HIS-8145</p> <p>STEP 5</p>	<p>BG HIS-8145 HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD DEPRESS THE OPEN PUSHBUTTON FOR BG HIS-8145</p>	<p>S U</p> <p>Comments:</p>
<p>12. CLOSE THE REGEN HX TO RCS LOOP COLD LEG VALVE, BG HIS-8146</p> <p>STEP 6</p>	<p>BG HIS-8146 HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD DEPRESS THE CLOSE PUSHBUTTON FOR BG HIS-8146</p> <p>STEPS 12 AND 13 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. INFORM THE CRS THAT RCS DEPRESSURIZATION HAS BEEN COMMENCED USING AUXILIARY SPRAY	CONTROL ROOM SUPERVISOR ACKNOWLEDGES	OPERATOR SHOULD INFORM CRS THAT DEPRESSURIZATION HAS COMMENCED	
17.	<u>RECORD STOP TIME ON PAGE 1</u>		<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: A TUBE RUPTURE HAS OCCURRED IN 'A' STEAM GENERATOR FOLLOWING A TRIP OF 'D' RCP DUE TO A LOCKED ROTOR. ALL ACTIONS OF E-0 AND E-3 ARE COMPLETE THROUGH STEP 15 OF E-3. PRESSURIZER SPRAY IS NOT AVAILABLE. 'B' PORV IS TAGGED OOS FOR MAINTENANCE.

Initiating Cues: YOU, AS THE REACTOR OPERATOR, HAVE BEEN DIRECTED TO COMMENCE A DEPRESSURIZATION OF THE RCS TO MINIMIZE BREAK FLOW IAW E-3, STEP 16.
NOTIFY THE CRS ONCE YOU HAVE COMMENCED RCS DEPRESSURIZATION.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-S3
COMPLETION TIME: 10 MINUTES
JOB TITLE: URO/SRO
DUTY: EMERGENCY ACTIONS
TASK TITLE: PREPARE FOR HOT LEG RECIRCULATION

KSA NO: 011EA1.11
KSA RATING: 4.2/4.2
REVISION: 20031128

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB X PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: E-1, LOSS OF REACTOR OR SECONDARY COOLANT, REV 1B3

TOOLS/EQUIPMENT: ATTACHMENT 6

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE PLANT HAS EXPERIENCED A LARGE BREAK LOCA. A SAFETY INJECTION HAS BEEN INITIATED. THE LOCA OCCURRED NINE (9) HOURS AGO.

Initiating Cues: YOU, AS THE REACTOR OPERATOR, HAVE BEEN DIRECTED TO PERFORM E-1, STEP 19, ATTACHMENT 6, PREPARATION FOR TRANSFER TO HOT LEG RECIRCULATION.
INFORM THE CONTROL ROOM SUPERVISOR WHEN ATTACHMENT 6 HAS BEEN COMPLETED.

Notes: Use IC-168 (Password nrc2)
Place WIP tag on 'B' SI Pump.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE VERIFIED AND ESTABLISHED THE REQUIRED CONDITIONS FOR THE PLANT TO BE PLACED IN HOT LEG RECIRCULATION.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. LOCATE A COPY OF ATTACHMENT 6 OF E-1, LOSS OF REACTOR OR SECONDARY COOLANT		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p style="text-align: center;">S U</p> <p>Comments:</p>
2. ENSURE SI PUMPS TO COLD LEG INJ VALVE INDICATES OPEN AT EM HIS-8835 STEP 1.a	EM HIS-8835 HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	<p>OPERATOR SHOULD CHECK THAT EM HIS-8835 HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p> <p>NOTE: STEPS 2 THRU 7 MAY BE PERFORMED IN ANY ORDER</p>	<p style="text-align: center;">S U</p> <p>Comments:</p>
3. ENSURE SI PUMP B DISCH TO HOT LEG INJ VALVE INDICATES CLOSED AT EM HIS-8802B STEP 1.a	EM HIS-8802B HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT	<p>OPERATOR SHOULD CHECK THAT EM HIS-8802B HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT</p> <p>NOTE: STEPS 2 THRU 7 MAY BE PERFORMED IN ANY ORDER</p>	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK				SCORE
NUMBER - ELEMENT	CUE	STANDARD		
4. ENSURE RHR TO ACC INJ LOOPS 3 AND 4 VALVE INDICATES OPEN AT EJ HIS-8809B STEP 1.a	EJ HIS-8809B HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD CHECK THAT EJ HIS-8809B HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT NOTE: STEPS 2 THRU 7 MAY BE PERFORMED IN ANY ORDER	S U Comments:	
5. ENSURE RHR HOT LEG RECIRC VLV INDICATES CLOSED AT EJ HIS-8840 STEP 1.a	EJ HIS-8840 HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT	OPERATOR SHOULD CHECK THAT EJ HIS-8840 HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT NOTE: STEPS 2 THRU 7 MAY BE PERFORMED IN ANY ORDER	S U Comments:	
6. ENSURE SI PUMP A DISCH TO HOT LEG INJ VALVE INDICATES CLOSED AT EM HIS-8802A STEP 1.a	EM HIS-8802A HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT	OPERATOR SHOULD CHECK THAT EM HIS-8802A HANDSWITCH GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT NOTE: STEPS 2 THRU 7 MAY BE PERFORMED IN ANY ORDER	S U Comments:	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. ENSURE RHR TO ACC INJ LOOPS 1 AND 2 VALVE INDICATES OPEN AT EJ HIS-8809A STEP 1.a	EJ HIS-8809A HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD CHECK THAT EJ HIS-8809A HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT NOTE: STEPS 2 THRU 7 MAY BE PERFORMED IN ANY ORDER	S U Comments:
8. VERIFY CONTROL ROOM INDICATION FOR RHR TRAIN B HOT LEG RECIRC VLV, EJ HIS-8716B STEP 1.c	EJ HIS-8716B HANDSWITCH RED LIGHT IS NOT LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD RECOGNIZE THAT EJ HIS-8716B HANDSWITCH RED LIGHT IS NOT LIT AND THE GREEN LIGHT IS NOT LIT NOTE: STEPS 8 THRU 13 MAY BE PERFORMED IN ANY ORDER	S U Comments:
9.* DISPATCH THE PEO TO NG02B-DR3 TO CHECK THE BREAKER FOR EJ HIS-8716B STEP 1.d	PEO REPORTS THAT BREAKER NG02B-DR3 IS OPEN - NO REASON IS KNOWN WHY BKR IS OPEN AND NO PROBLEMS ARE SEEN IN THE AREA CONCERNING THE BKR IF ASKED, CRS CONCURS WITH HAVING THE PEO CLOSE BREAKER	OPERATOR SHOULD DIRECT PEO TO CHECK NG02B-DR3 AND CLOSE BKR NOTE: STEPS 8 THRU 13 MAY BE PERFORMED IN ANY ORDER	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10.* DIRECT THE PEO TO CLOSE BREAKER NG02B-DR3</p> <p>STEP 1.d PERFORM THE FOLLOWING WHEN DIRECTED TO CLOSE BREAKER: STATUS LIGHT SA066Y_M04W – ON SA066Y_M04A – OFF LIGHT EJHIS8716B_OR – ON</p>	<p>BREAKER NG02B-DR3 HAS BEEN CLOSED - EJ HIS-8716B HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD CHECK THAT EJ HIS-8716B HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p> <p>NOTE: STEPS 8 THRU 13 MAY BE PERFORMED IN ANY ORDER</p>	
<p>11. VERIFY CONTROL ROOM INDICATION FOR SI PUMP B DISCH TO COLD LEG INJ VLV, EM HIS-8821B</p> <p>STEP 1.c</p>	<p>EM HIS-8821B HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD CHECK THAT EM HIS-8821B HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p> <p>NOTE: STEPS 8 THRU 13 MAY BE PERFORMED IN ANY ORDER</p>	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>12. VERIFY CONTROL ROOM INDICATION FOR SI PUMP A DISCH TO COLD LEG INJ VLV, EM HIS-8821A</p> <p>STEP 1.c</p>	<p>EM HIS-8821A HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD CHECK THAT EM HIS-8821A HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p> <p>NOTE: STEPS 8 THRU 13 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>13. VERIFY CONTROL ROOM INDICATION FOR RHR TRAIN A HOT LEG RECIRC VLV, EJ HIS-8716A</p> <p>STEP 1.c</p>	<p>EJ HIS-8716A HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD CHECK THAT EJ HIS-8716A HANDSWITCH RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p> <p>NOTE: STEPS 8 THRU 13 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>14. INFORM THE CRS THAT ATTACHMENT 6 HAS BEEN COMPLETED</p>	<p>CRS ACKNOWLEDGES THAT ATTACHMENT 6 IS COMPLETE</p>	<p>OPERATOR SHOULD INFORM THE CRS THAT ATTACHMENT 6 IS COMPLETE</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
15.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: THE PLANT HAS EXPERIENCED A LARGE BREAK LOCA. A SAFETY INJECTION HAS BEEN INITIATED. THE LOCA OCCURRED NINE (9) HOURS AGO.

Initiating Cues: YOU, AS THE REACTOR OPERATOR, HAVE BEEN DIRECTED TO PERFORM E-1, STEP 19, ATTACHMENT 6, PREPARATION FOR TRANSFER TO HOT LEG RECIRCULATION.
INFORM THE CONTROL ROOM SUPERVISOR WHEN ATTACHMENT 6 HAS BEEN COMPLETED.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-S4
COMPLETION TIME: 14 MINUTES
JOB TITLE: URO/SRO
DUTY: CONTAINMENT PURGE
TASK TITLE: PLACE CTMT SHUTDOWN PURGE IN SERVICE

KSA NO: 029A2.03
KSA RATING: 2.7.3.1
REVISION: 20031203

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED

REFERENCES: OTN-GT-00001, CONTAINMENT PURGE SYSTEM, REV 18
HTP-ZZ-02012, GASEOUS RADWASTE RELEASE PERMIT (CONTAINMENT),
REV 37

TOOLS/EQUIPMENT:

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT HAS JUST ENTERED MODE 5 IN PREPARATION FOR REFUEL. THE INNER AND OUTER SPECTACLE FLANGES ON BOTH THE SHUTDOWN PURGE SUPPLY AND EXHAUST LINES HAVE BEEN REMOVED. CHILL WATER HAS BEEN ISOLATED TO SGF01 IAW OTN-GF-00001. THE CONTAINMENT EQUIPMENT HATCH IS CLOSED AND WILL REMAIN CLOSED UNTIL MODE 6 IS ENTERED.

THE PEO HAS BEEN BRIEFED AND IS IN THE AUXILIARY BUILDING TO ASSIST PLACING CONTAINMENT SHUTDOWN PURGE IN SERVICE.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE THE CONTAINMENT SHUTDOWN PURGE SYSTEM IN SERVICE PER OTN-GT-00001, SECTION 4.5, PLACING THE SHUTDOWN PURGE SYSTEM IN SERVICE. SECTION 4.2, CONTAINMENT PURGE PRE-START OPERATION, HAS BEEN COMPLETED AND THE GASEOUS RADWASTE RELEASE PERMIT-CONTAINMENT, HAS BEEN DELIVERED TO THE CONTROL ROOM. YOU HAVE ALL KEYS NEEDED FOR THE ESFAS CABINETS.

INFORM THE CRS WHEN THE CONTAINMENT SHUTDOWN PURGE SYSTEM IS IN SERVICE.

Notes: Use IC-166 (Password nrcrbm)

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE PLACED THE CONTAINMENT SHUTDOWN PURGE SYSTEM IN SERVICE.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-GT-00001, CONTAINMENT PURGE SYSTEM AND RELEASE PERMIT		OPERATOR SHOULD OBTAIN PROCEDURE COPY AND RELEASE PERMIT	S U Comments:
2. REVIEW PRECAUTIONS AND LIMITATIONS OF OTN-GT-00001 SECTION 2	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW PRECAUTIONS AND LIMITATIONS	S U Comments:
3. REVIEW INITIAL CONDITIONS OF OTN-GT-00001 SECTION 3	OUTSIDE AIR TEMPERATURE IS EXPECTED TO REMAIN GREATER THAN 50°F FOR THE TIME THAT SHUTDOWN PURGE WILL BE IN SERVICE	OPERATOR SHOULD REVIEW INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. VERIFY BOTH THE INNER AND OUTER SPECTACLE FLANGES ON BOTH THE SHUTDOWN PURGE SUPPLY AND EXHAUST LINES ARE REMOVED</p> <p>STEP 4.5.1</p>	<p>ALL REQUIRED FLANGES HAVE BEEN REMOVED – GIVEN IN INITIAL CONDITIONS</p>	<p>OPERATOR SHOULD VERIFY THAT SPECTACLE FLANGES HAVE BEEN REMOVED</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	
<p>5. ISOLATE CHILL WATER TO SGF01 PER OTN-GF-00001</p> <p>STEP 4.5.2</p>	<p>CHILL WATER IS ISOLATED – GIVEN IN INITIAL CONDITIONS</p>	<p>OPERATOR SHOULD VERIFY THAT CHILL WATER IS ISOLATED</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	
<p>6. DIRECT THE PEO TO OPEN GBV0049, PURGE UNIT CHILLED WATER DISCHARGE ISO VALVE</p> <p>STEP 4.5.3</p>	<p>PEO REPORTS THAT GBV0049 IS OPEN</p>	<p>OPERATOR SHOULD DIRECT THE PEO TO OPEN GBV0049</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. ENSURE A GASEOUS RADWASTE RELEASE PERMIT HAS BEEN APPROVED PER SECTION 4.2</p> <p>STEP 4.5.4</p>	<p>A GASEOUS RADWASTE RELEASE PERMIT HAS BEEN APPROVED</p>	<p>OPERATOR SHOULD VERIFY HE HAS AN APPROVED GASEOUS RADWASTE RELEASE PERMIT</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>8. MONITOR OR TREND THE FOLLOWING: SDRE0041/SDRE0042/ GTPDI0040</p> <p>TIME TREND “MINIVENT” MAY BE USED</p> <p>STEP 4.5.5</p>	<p>TIME TREND “MINIVENT” HAS BEEN DISPLAYED</p>	<p>OPERATOR SHOULD MONITOR SDRE0041/SDRE0042/ GTPDI0040</p> <p>NOTE: TIME TREND “MINIVENT” MAY BE USED</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>6. RECORD CONTAINMENT PRESSURE USING GTPDI0040 OR GTD0040 ON THE GASEOUS RADWASTE PERMIT</p> <p>STEP 4.5.6</p>	<p>CONTAINMENT PRESSURE HAS BEEN RECORDED ON THE GASEOUS RADWASTE PERMIT</p>	<p>OPERATOR SHOULD RECORD CONTAINMENT PRESSURE USING GTPDI0040 OR GTD0040 ON THE GASEOUS RADWASTE PERMIT</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. BYPASS GTRE0022 AT THE ESFAS CABINETS STEP 4.5.7	GTRE0022 HAS BEEN BYPASSED AT THE ESFAS CABINET	OPERATOR SHOULD BYPASS GTRE0022 AT THE ESFAS CABINET STEPS 4-10 MAY BE PERFORMED IN ANY ORDER	
8. BYPASS GTRE0033 AT THE ESFAS CABINETS STEP 4.5.7	GTRE0033 HAS BEEN BYPASSED AT THE ESFAS CABINET	OPERATOR SHOULD BYPASS GTRE0033 AT THE ESFAS CABINET STEPS 4-10 MAY BE PERFORMED IN ANY ORDER	
9. INITIAL/DATE/TIME RECORDERS GT RR- 21B AND GT RR-58 ON SP010 STEP 4.5.8	RECORDERS GT RR- 21B AND GT RR-58 HAVE BEEN MARKED	OPERATOR SHOULD INITIAL/DATE/TIME RECORDERS GT RR- 21B AND GT RR-58 ON SP010 STEPS 4-10 MAY BE PERFORMED IN ANY ORDER	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10. DIRECT THE PEO TO ENSURE THE FOLLOWING AIR SUPPLY VALVES ARE OPEN: GTHZ0006V1 GTHZ0007V1 GTHZ0008V1 GTHZ0009V1</p> <p>STEP 4.5.9</p>	<p>THE PEO REPORTS THAT AIR SUPPLY VALVES GTHZ0006V1 GTHZ0007V1 GTHZ0008V1 GTHZ0009V1 ARE OPEN</p>	<p>OPERATOR SHOULD DIRECT THE PEO TO ENSURE THAT THE FOLLOWING AIR SUPPLY VALVES ARE OPEN: GTHZ0006V1 GTHZ0007V1 GTHZ0008V1 GTHZ0009V1</p> <p>STEPS 4-10 MAY BE PERFORMED IN ANY ORDER</p>	
<p>11.* START CGT01,CTMT S/D PURGE EXH FAN, USING GT HIS-34</p> <p>STEP 4.5.10</p>	<p>GT HIS-34 RED LIGHTS ILLUMINATE AND GREEN LIGHTS GO OUT</p>	<p>OPERATOR SHOULD START CGT01,CTMT S/D PURGE EXH FAN, USING GT HIS-34</p>	
<p>12.* OPEN GTHZ0011 USING GT HIS-11</p> <p>STEP 4.5.11</p>	<p>GT HIS-11 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT</p>	<p>OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-11</p> <p>STEPS 12 THROUGH 15 MAY BE PERFORMED IN ANY ORDER</p>	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13.* OPEN GTHZ0009 USING GT HIS-9 STEP 4.5.11	GT HIS-9 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-9 STEPS 12 THROUGH 15 MAY BE PERFORMED IN ANY ORDER	S U Comments:
14.* OPEN GTHZ0028 USING GT HIS-28 STEP 4.3.6.1	GT HIS-28 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-28 STEPS 12 THROUGH 15 MAY BE PERFORMED IN ANY ORDER	S U Comments:
15.* OPEN GTHZ0029 USING GT HIS-29 STEP 4.3.6.1	GT HIS-29 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-29 STEPS 12 THROUGH 15 MAY BE PERFORMED IN ANY ORDER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. RECORD THE DATE AND TIME THE DAMPERS WERE OPENED ON THE GASEOUS RADWASTE RELEASE PERMIT AND THE RO DAILY LOG STEP 4.5.11.1	DATE AND TIME HAVE BEEN RECORDED ON THE GASEOUS RADWASTE RELEASE PERMIT AND THE RO DAILY LOG	OPERATOR SHOULD RECORD THE DATE AND TIME THAT THE DAMPERS WERE OPENED ON THE GASEOUS RADWASTE RELEASE PERMIT AND THE RO DAILY LOG	S U Comments:
17. INFORM THE COUNT ROOM TECHNICIAN WHEN PURGE IS INITIATED STEP 4.5.11.2	COUNT ROOM TECHNICIAN ACKNOWLEDGES	OPERATOR SHOULD NOTIFY THE COUNT ROOM TECHNICIAN OF THE TIME THE PURGE WAS INITIATED	S U Comments:
18. MONITOR CONTAINMENT PRESSURE TO BE LESS THAN 10" WG STEP 4.5.12	CONTAINMENT PRESSURE IS LESS THAN 10" WG	OPERATOR SHOULD MONITOR CONTAINMENT PRESSURE	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19.* OPEN GTHZ0008 USING GT HIS-8 STEP 4.5.12.1	GT HIS-8 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN PUSHBUTTON FOR GT HIS-8	
20.* CLOSE GTHZ0011 USING GT HIS-11 STEP 4.5.12.2	GT HIS-11 GREEN LIGHT IS LIT AND THE RED LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE CLOSE PUSHBUTTON FOR GT HIS-11	
21. DO NOT PERFORM STEPS 4.5.13 THROUGH 4.5.15 IF THE EQUIPMENT HATCH IS OPEN. NOTE PRECEDING STEP 4.5.13	EQUIPMENT HATCH IS CLOSED – GIVEN IN INITIAL CONDITIONS	OPERATOR SHOULD DETERMINE THAT THE EQUIPMENT HATCH IS CLOSED AND PERFORM STEPS 4.5.13 THROUGH 4.5.15	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
22. MONITOR CONTAINMENT PRESSURE TO BE LESS THAN 4.25" WG STEP 4.5.13	CONTAINMENT PRESSURE IS LESS THAN 4.25" WG	OPERATOR SHOULD MONITOR CONTAINMENT PRESSURE	
23.* OPEN GTHZ0026 USING GT HIS-26 STEP 4.5.13	GT-HIS-26 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-26 NOTE: STEPS 23 AND 24 MAY BE PERFORMED IN ANY ORDER	
24.* OPEN GTHZ0027 USING GT HIS-27 STEP 4.5.13	GT-HIS-27 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-27 NOTE: STEPS 23 AND 24 MAY BE PERFORMED IN ANY ORDER	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
25.* START SGT01, CTMT S/D PURGE AIR SPLY UNIT, USING GT HIS-1 STEP 4.5.14	GT HIS-1 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD START SGT01,CTMT S/D PURGE AIR SPLY UNIT, USING GT HIS-1	
26.* OPEN GTHZ0007 USING GT HIS-7 STEP 4.5.15	GT-HIS-7 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-7 NOTE: STEPS 26 AND 27 MAY BE PERFORMED IN ANY ORDER	
27.* OPEN GTHZ0006 USING GT HIS-6 STEP 4.5.15	GT-HIS-6 RED LIGHT IS LIT AND THE GREEN LIGHT IS NOT LIT	OPERATOR SHOULD DEPRESS THE OPEN THE PUSHBUTTON FOR GT HIS-6 NOTE: STEPS 26 AND 27 MAY BE PERFORMED IN ANY ORDER	

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
28. INFORM THE CONTROL ROOM SUPERVISOR THAT CONTAINMENT S/D PURGE HAS BEEN PLACED IN SERVICE	CRS ACKNOWLEDGES	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT CONTAINMENT S/D PURGE HAS BEEN PLACED IN SERVICE	
29.	RECORD STOP TIME ON PAGE 1		

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT HAS JUST ENTERED MODE 5 IN PREPARATION FOR REFUEL. THE INNER AND OUTER SPECTACLE FLANGES ON BOTH THE SHUTDOWN PURGE SUPPLY AND EXHAUST LINES HAVE BEEN REMOVED. CHILL WATER HAS BEEN ISOLATED TO SGF01 IAW OTN-GF-00001. THE CONTAINMENT EQUIPMENT HATCH IS CLOSED AND WILL REMAIN CLOSED UNTIL MODE 6 IS ENTERED.

THE PEO HAS BEEN BRIEFED AND IS IN THE AUXILIARY BUILDING TO ASSIST PLACING CONTAINMENT SHUTDOWN PURGE IN SERVICE.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE THE CONTAINMENT SHUTDOWN PURGE SYSTEM IN SERVICE PER OTN-GT-00001, SECTION 4.5, PLACING THE SHUTDOWN PURGE SYSTEM IN SERVICE. SECTION 4.2, CONTAINMENT PURGE PRE-START OPERATION, HAS BEEN COMPLETED AND THE GASEOUS RADWASTE RELEASE PERMIT-CONTAINMENT, HAS BEEN DELIVERED TO THE CONTROL ROOM. YOU HAVE ALL KEYS NEEDED FOR THE ESFAS CABINETS.

INFORM THE CRS WHEN THE CONTAINMENT SHUTDOWN PURGE SYSTEM IS IN SERVICE.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-S5 KSA NO: 041A4.08
COMPLETION TIME: 5 MINUTES KSA RATING: 3.0/3.1
JOB TITLE: URO/SRO REVISION: 20031112
DUTY: MAIN STEAM
TASK TITLE: PLACE STEAM DUMPS IN STEAM PRESSURE MODE

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB X PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: OTN-AB-00001, MAIN STEAM SYSTEM, REVISION 11

TOOLS/EQUIPMENT:

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS SHUTTING DOWN FOR AN OUTAGE. REACTOR POWER IS APPROXIMATELY 15%.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE THE STEAM DUMPS IN THE STEAM PRESSURE MODE PER SECTION 4.5 OF OTN-AB-00001, MAIN STEAM SYSTEM.

Notes: USE IC-167 (Password nrcrbm). USE MALF MSS13b, (STEAM HEADER TRANSMITTER FAILURE PT-507); SELECT 1500 PSIG; 1 SECOND RAMP; ACTIVATE.

ENSURE AB-PK-507 INDICATES 100% AND AB-UI-500 INDICATES 0%.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-AB-00001, MAIN STEAM SYSTEM		OPERATOR SHOULD OBTAIN A PROCEDURE COPY	S U Comments:
2. REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-AB-00001 SECTION 2	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD READ THE PRECAUTIONS AND LIMITATIONS	S U Comments:
3. REVIEW THE INITIAL CONDITIONS OF OTN-AB-00001 SECTION 3	ALL INITIAL CONDITIONS ARE SATISFIED ASK IF THE OPERATOR UNDERSTANDS THE INITIAL CONDITIONS AND INITIATING CUES	OPERATOR SHOULD READ THE INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. ENSURE STEAM HEADER PRESSURE CONTROLLER ABPK0507 MATCHES STEAM DUMP DEMAND ABUI0500 NOTE: CAUTION PRIOR TO STEP 4.5.1		OPERATOR SHOULD ENSURE ABPK0507 STEAM HEADER PRESSURE CONTROLLER MATCHES ABUI0500	S U Comments:
5.*		OPERATOR SHOULD DETERMINE THAT STEAM DUMPS SHOULD NOT BE PLACED IN THE STEAM PRESSURE MODE	S U Comments:
6.	THE JPM IS COMPLETE <u>RECORD STOP TIME</u> <u>ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS SHUTTING DOWN FOR AN OUTAGE. REACTOR POWER IS APPROXIMATELY 15%.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PLACE THE STEAM DUMPS IN THE STEAM PRESSURE MODE PER SECTION 4.5 OF OTN-AB-00001, MAIN STEAM SYSTEM.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-S6
COMPLETION TIME: 10 MINUTES
JOB TITLE: URO/SRO
DUTY: CLASS 1E 480 VAC
TASK TITLE: CROSS-CONNECTING LOAD CENTERS

KSA NO: 062A4.01
KSA RATING: 3.3/3.1
REVISION: 20031113

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED

REFERENCES: OTN-NG-00001, CLASS 1E 480 VAC ELECTRICAL SYSTEM, REV 9

TOOLS/EQUIPMENT: NONE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1. IT HAS BEEN DETERMINED THAT BREAKER NG0101 (LOAD CENTER NG01 FEEDER FROM NB01) HAS ELECTRICAL PROBLEMS. ELECTRICIANS ARE PREPARED TO REPLACE BREAKER NG0101. THE STA IS READY TO ACTIVATE THE EOSL CREATED FOR CROSS CONNECTING LOAD CENTERS NG01 AND NG03.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO CROSS-CONNECT LOAD CENTERS NG01 AND NG03 PER OTN-NG-00001, CLASS 1E 480 VAC ELECTRICAL SYSTEM, SECTION 5.1.
INFORM THE CRS WHEN NG01 AND NG03 ARE CROSS-CONNECTED AND BREAKER NG0101 IS OPEN.

Notes: USE IC 167 (Password nrcrbm). SHIFT TO 'ABC' FOR AIR COMPRESSOR USE. ENSURE THE FOLLOWING EQUIPMENT IS OPERATING: 'A' FUEL POOL COOLING PUMP, 'A' AIR COMPRESSOR, CTMT COOLING FANS 'A, B, C, D', BOTH CLASS IE A/C, AND CR A/C UNIT 'A'.
TAG OUT THE 'B' SFP COOLING PUMP.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE DETERMINED AMPERAGE LOADING ON NG01/NG03 IS TOO HIGH, SECURED EQUIPMENT AND THEN CROSS-CONNECTED NG01 AND NG03.

START TIME: _____

STOP TIME: _____

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OTN-NG-00001, CLASS 1E 480 VAC ELECTRICAL SYSTEM		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p>S U</p> <p>Comments:</p>
2. REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-NG-00001 SECTION 2	ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	THE OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS	<p>S U</p> <p>Comments:</p>
3. REVIEW THE INITIAL CONDITIONS OF OTN-NG-00001 SECTION 3	ALL INITIAL CONDITIONS ARE SATISFIED	THE OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. TWO LOAD CENTERS WITHIN EACH LOAD GROUP MAY BE CROSS-CONNECTED, PROVIDED THE COMBINED TOTAL AMPERAGE BEING DRAWN BY THE TWO DOES NOT EXCEED 1200 AMPS</p> <p>CAUTION PRIOR TO STEP 5.1.1</p>	<p>SEO REPORTS: NG01 AMPS = 650 NG03 AMPS = 710</p>	<p>OPERATOR DIRECTS SEO TO CHECK NG01 AND NG03 AMPERAGE ON THE LOCAL AMMETERS.</p>	<p>S U Comments:</p>
<p>5. CLOSING NG0116 TIE BREAKER FOR NG01 AND NG03 MAKES THE 4 DEGRADED VOLTAGES CHANNELS INOPERABLE. ENSURE T/S COMPLIANCE PRIOR TO CLOSING CROSS-TIE BREAKER</p> <p>STEP 5.1.1</p>	<p>ALL REQUIRED T/S HAVE BEEN ENTERED</p>	<p>OPERATOR MAY REVIEW T/S ACT 3.3.5.B.1 AND ACT 3.8.1.F</p>	<p>S U Comments:</p>
<p>6. CREATE AND ACTIVATE AN EOSL TO TRACK THE INOPERABILITY OF THE 4 BUS DEGRADED VOLTAGE CHANNELS FOR NB01</p> <p>STEP 5.1.2</p>	<p>IF ASKED: THE EOSL HAS BEEN ACTIVATED FOR NB01 DEGRADED VOLTAGE</p>	<p>OPERATOR SHOULD VERIFY AN EOSL HAS BEEN ACTIVATED</p>	<p>S U Comments:</p>

* CRITICAL STEP

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. ENSURE COMBINED TOTAL AMPERAGE BEING DRAWN BY NG01 AND NG03 IS < 1200 AMPS WHEN READ ON THE LOCAL AMMETERS</p> <p>STEP 5.1.3</p>	<p>SEO REPORTS: NG01 AMPS = 650 NG03 AMPS = 710</p>	<p>OPERATOR SHOULD CONTACT SEO AND DETERMINE TOTAL AMPERAGE ON NG01 AND NG03, THEN INFORM THE CRS TOTAL AMPERAGE EXCEEDS 1200 AMPS</p>	<p>S U</p> <p>Comments:</p>
<p>8. REDUCE NG01/NG03 TOTAL AMPERAGE BY SECURING LOADS</p>	<p>THE CRS DIRECTS YOU TO HAVE 'B' AIR COMPRESSOR PLACED IN SERVICE AND SECURE THE 'A' AIR COMPRESSOR</p> <p>SEO REPORTS NG01 AMPS 650 AND NG03 AMPS 450</p>	<p>OPERATOR RECOGNIZES NEED TO REDUCE NG01/NG03 LOADS PRIOR TO CROSS-CONNECTING LOAD CENTERS</p>	<p>S U</p> <p>Comments:</p>
<p>9. DIRECT THE SEO TO REMOVE THE 'A' AIR COMPRESSOR FROM LEAD AND SELECT 'B' AIR COMPRESSOR FOR LEAD</p>	<p>THE SEO REPORTS THAT THE 'A' AIR COMPRESSOR HAS BEEN TAKEN OUT OF LEAD AND THAT NG03 AMPS NOW READ 450 AMPS</p> <p>NG01 STILL READS 650</p>	<p>OPERATOR DIRECTS SEO TO REMOVE 'A' AIR COMPRESSOR FROM LEAD AND PLACE 'B' AIR COMPRESSOR IN LEAD</p>	

* CRITICAL STEP

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10.*HOLD NG0116, TIE BKR FOR NG01 AND NG03, IN THE CLOSED POSITION WITH HANDSWITCH NG-HIS-10</p> <p>STEP 5.1.4.</p>	<p>NG-HIS-10 AMBER LIGHT ILLUMINATES AND GREEN LIGHT GOES OUT</p>	<p>OPERATOR SHOULD HOLD TIE BKR FOR NG01 AND NG03, IN THE CLOSED POSITION WITH HANDSWITCH NG-HIS-10</p> <p>NOTE : OPERATOR SHOULD NOT RELEASE SWITCH</p>	<p>S U</p> <p>Comments:</p>
<p>11.* OPEN THE NG01 480V FEEDER BREAKER (NG0101) WITH HANDSWITCH NG-HIS-9</p> <p>STEP 5.1.5</p>	<p>NG-HIS-9 GREEN LIGHT ILLUMINATES AND RED LIGHT GOES OUT</p> <p>NG-HIS-10 RED LIGHT ILLUMINATES AND AMBER LIGHT GOES OUT</p>	<p>OPERATOR SHOULD OPEN NG01 480V FEEDER BKR (NG0101) WITH HANDSWITCH NG-HIS-9</p>	<p>S U</p> <p>Comments:</p>
<p>12. RELEASE NG0116, TIE BKR FOR NG01 AND NG03 HANDSWITCH NG-HIS-10</p> <p>STEP 5.1.6</p>	<p>HANDSWITCH NG-HIS-10 HAS BEEN RELEASED</p>	<p>OPERATOR SHOULD RELEASE HANDSWITCH NG-HIS-10</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>13. ENSURE COMBINED TOTAL AMPERAGE BEING DRAWN BY NG03 IS < 1200 AMPS</p> <p>STEP 5.1.7</p>	<p>NG01 INDICATES 0 AMPS</p> <p>NG03 INDICATES 1100 AMPS</p>	<p>OPERATOR SHOULD CONTACT THE SEO TO REVIEW TOTAL AMPERAGE ON NG03</p>	<p>S U</p> <p>Comments:</p>
<p>14. NOTIFY EQUIPMENT OPERATORS TO INSPECT LOAD CENTERS NG01, NG03 AND ASSOCIATED MOTOR CONTROL CENTERS</p> <p>STEP 5.1.8</p>	<p>EQUIPMENT OPERATORS REPORT NG01, NG03 AND ASSOCIATED MOTOR CONTROL CENTERS ARE NORMAL</p>	<p>OPERATOR SHOULD HAVE NG01, NG03 AND ASSOCIATED MOTOR CONTROL CENTERS INSPECTED</p>	<p>S U</p> <p>Comments:</p>
<p>15. INFORM THE CONTROL ROOM SUPERVISOR THAT NG01 AND NG03 ARE CROSS-CONNECTED WITH NG0101 OPEN</p>	<p>CONTROL ROOM SUPERVISOR ACKNOWLEDGES</p>	<p>OPERATOR SHOULD NOTIFY THE CONTROL ROOM SUPERVISOR THE ASSIGNED TASK IS COMPLETED</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

16.	<u>RECORD STOP TIME ON PAGE 1</u>		S U Comments:

* CRITICAL STEP

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1. IT HAS BEEN DETERMINED THAT BREAKER NG0101 (LOAD CENTER NG01 FEEDER FROM NB01) HAS ELECTRICAL PROBLEMS. ELECTRICIANS ARE PREPARED TO REPLACE BREAKER NG0101. THE STA IS READY TO ACTIVATE THE EOSL CREATED FOR CROSS CONNECTING LOAD CENTERS NG01 AND NG03.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO CROSS-CONNECT LOAD CENTERS NG01 AND NG03 PER OTN-NG-00001, CLASS 1E 480 VAC ELECTRICAL SYSTEM, SECTION 5.1.
INFORM THE CRS WHEN NG01 AND NG03 ARE CROSS-CONNECTED AND BREAKER NG0101 IS OPEN.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2004-S7
COMPLETION TIME: 10 MINUTES
JOB TITLE: URO/SRO
DUTY: CONTROL ROD DRIVE SYSTEM
TASK TITLE: PERFORM CONTROL ROD PARTIAL MOVEMENT TEST

KSA NO: 001A4.03
KSA RATING: 4.0/3.7
REVISION: 20040106

The performance of this task was evaluated against the standards contained in this JPM and determined to be:

SATISFACTORY UNSATISFACTORY

Reason, if UNSATISFACTORY:

EVALUATORS SIGNATURE: _____ DATE: _____

TASK PERFORMER: _____

LOCATION OF PERFORMANCE:

CONTROL ROOM _____ SIMULATOR/LAB X PLANT _____ CLASSROOM _____

METHOD OF PERFORMANCE: SIMULATED _____ PERFORMED X

REFERENCES: OSP-SF-00002, CONTROL ROD PARTIAL MOVEMENT, REVISION 13

TOOLS/EQUIPMENT: OSP-SF-00002, CONTROL ROD PARTIAL MOVEMENT, ATTACHMENT 1

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 STEADY STATE CONDITIONS. T_{AVE} AND T_{REF} ARE MATCHED. THERE IS NO TESTING OR MAINTENANCE BEING PERFORMED. THE CONTROL ROD PARTIAL MOVEMENT TESTING HAS BEEN COMPLETED ON ALL SHUTDOWN AND CONTROL BANKS **EXCEPT** SHUTDOWN BANK 'A'. THE PRIMARY OPERATOR IS AT THE ROD CONTROL CABINETS AND HAS KEY #149.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM THE CONTROL ROD PARTIAL MOVEMENT TEST FOR 'A' SHUTDOWN BANK RODS ONLY, PER OSP-SF-00002, SECTION 6.1.
INFORM THE CONTROL ROOM SUPERVISOR WHEN READY TO PERFORM THE RESTORATION SECTION 7.

Notes: USE IC-167 (Password nrcrbm). PROVIDE (AT LEAST) A COPY OF ATTACHMENT 1 OF OSP-SF-00002. ENSURE SHUTDOWN BANKS ARE POSITIONED AT 228 STEPS.

Task Standard: UPON COMPLETION OF THIS JPM, ALL SHUTDOWN BANK 'A' CONTROL RODS WILL HAVE BEEN INSERTED AT LEAST 10 STEPS INTO THE CORE AND RESTORED TO THEIR PRETEST POSITION.

START TIME: _____

STOP TIME: _____

**TASK
NUMBER - ELEMENT**

CUE

STANDARD

SCORE

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A VERIFIED WORKING COPY OF OSP-SF-00002, CONTROL ROD PARTIAL MOVEMENT		OPERATOR SHOULD OBTAIN PROCEDURE COPY	<p>S U</p> <p>Comments:</p>
2. REVIEW INITIAL CONDITIONS OF OSP-SF-00002 SECTION 4	<p>ALL INITIAL CONDITIONS ARE SATISFIED</p> <p>ASK IF THE OPERATOR UNDERSTANDS THE INITIAL CONDITIONS AND INITIATING CUES</p>	OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS	<p>S U</p> <p>Comments:</p>
3.* PLACE ROD BANK AUTO/MANUAL SEL SW, SE HS-9 TO THE 'SBA' POSITION STEP 6.1.1	SE HS-9 IS IN THE 'SBA' POSITION	OPERATOR SHOULD PLACE HANDSWITCH SE HS-9 IN THE 'SBA' POSITION	<p>S U</p> <p>Comments:</p>

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. ENSURE PROPER GROUP SELECT LIGHT IS LIT ON POWER CABINETS FOR 'SBA'</p> <p>STEP 6.1.1.1</p>	<p>THE PEO REPORTS THAT GROUP SELECT LIGHT 'C' IS ON IN 1AC AND 2AC POWER CABINETS</p>	<p>OPERATOR SHOULD CONTACT PRIMARY OPERATOR TO VERIFY THAT GROUP SELECT LIGHT 'C' IS ON IN 1AC AND 2AC POWER CABINETS</p>	<p>S U</p> <p>Comments:</p>
<p>5. RECORD THE SHUTDOWN BANK STEP COUNTER POSITION FOR SHUTDOWN BANK 'A' ON ATTACHMENT 1</p> <p>STEP 6.1.2</p>	<p>SC SB-A1 & SC SB-A2 INDICATE 228 STEPS</p>	<p>OPERATOR SHOULD RECORD THE SHUTDOWN BANK 'A' STEP COUNTERS POSITION ON ATTACHMENT 1</p>	<p>S U</p> <p>Comments:</p>
<p>8. RECORD THE SHUTDOWN BANK STEP COUNTERS POSITION FOR SHUTDOWN BANK 'A' ON ATTACHMENT 1</p> <p>STEP 6.1.4</p>	<p>SC-SB-A1 & -A2 INDICATE 228 STEPS</p>	<p>OPERATOR SHOULD RECORD THE SHUTDOWN BANK 'A' STEP COUNTERS POSITION ON ATTACHMENT 1</p> <p>STEPS 8 AND 9 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>9. RECORD THE DRPI (SF074) POSITION FOR SHUTDOWN BANK 'A' ON ATTACHMENT 1</p> <p>STEP 6.1.4</p>	<p>SF074 INDICATES 228 STEPS FOR ALL SHUTDOWN BANK 'A' RODS</p>	<p>OPERATOR SHOULD RECORD THE SHUTDOWN BANK 'A' DRPI INDICATION ON ATTACHMENT 1</p> <p>STEPS 8 AND 9 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>10. USING SF HS-2, INSERT SHUTDOWN BANK 'A' 2 STEPS PER STEP COUNTER INDICATION</p> <p>STEP 6.1.5.1</p>	<p>SC-SB-A1 AND SC SB-A2 INDICATE 226 STEPS</p>	<p>OPERATOR SHOULD INSERT SHUTDOWN BANK 'A' USING SF HS-2 AT LEAST 2 STEPS AND NO MORE THAN 3 STEPS</p>	<p>S U</p> <p>Comments:</p>
<p>11. VERIFY THAT NO ROD CONTROL ALARMS ARE PRESENT</p> <p>STEP 6.1.5.1.1</p>	<p>NO ROD CONTROL ANNUNCIATORS ARE ON</p>	<p>OPERATOR SHOULD VERIFY NO ROD CONTROL ANNUNCIATORS ARE ON</p>	<p>S U</p> <p>Comments:</p>

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
12. USING SF HS-2, WITHDRAW SHUTDOWN BANK 'A' BANK TO 228 STEPS PER STEP COUNTER INDICATION STEP 6.1.5.2	SC SB-A1 AND SC SB-A2 INDICATE 228 STEPS	OPERATOR SHOULD WITHDRAW SHUTDOWN BANK 'A' USING SF HS-2 TO 228 STEPS BY STEP COUNTER INDICATION	<p style="text-align: center;">S U</p> Comments:
13. VERIFY NO ROD CONTROL ALARMS ARE PRESENT STEP 6.1.5.2.1	NO ROD CONTROL ANNUNCIATORS ARE ON	OPERATOR SHOULD VERIFY NO ROD CONTROL ANNUNCIATORS ARE ON	<p style="text-align: center;">S U</p> Comments:
14.* USING SF HS-2, MAN ROD CTRL, INSERT SHUTDOWN BANK 'A' AT LEAST 12 STEPS AS INDICATED BY THE STEP COUNTERS AND DIGITAL ROD POSITION INDICATION STEP 6.1.6	ANNUNCIATOR 79C, 'CONTROL ROD DEV', ALARMS SC SB-A1 AND SC SB-A2 INDICATE 216 STEPS ALL SHUTDOWN BANK 'A' DRPI LIGHTS ARE LIT AT THE 216 POSITION	OPERATOR SHOULD INSERT SHUTDOWN BANK 'A' WITH SF HS- 2, MAN ROD CTRL, A MINIMUM OF 12 STEPS	<p style="text-align: center;">S U</p> Comments:

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
15. RECORD THE DIGITAL ROD POSITION INDICATION, SF-074, FOR SHUTDOWN BANK 'A' IN ATTACHMENT 1 STEP 6.1.6.1	SF-074 FOR ALL RODS IN SHUTDOWN BANK 'A' INDICATE 216 STEPS	OPERATOR SHOULD RECORD THE DIGITAL ROD POSITION INDICATION, SF-074, SHUTDOWN BANK 'A' IN ATTACHMENT 1	S U Comments:
16. RECORD THE SHUTDOWN BANK 'A' STEP COUNTER SC SB-A1 & SC SB-A2 POSITIONS, IN ATTACHMENT 1 STEP 6.1.6.1	SC SB-A1 & SC SB-A2 INDICATE 216 STEPS	OPERATOR SHOULD RECORD THE SHUTDOWN BANK 'A' STEP COUNTERS POSITION IN ATTACHMENT 1	S U Comments:
17.* USING SF HS-2, MAN ROD CTRL, RETURN SHUTDOWN BANK 'A' TO 228 STEPS STEP 6.1.7	ALL SHUTDOWN BANK 'A' DRPI LIGHTS ARE INDICATING THE 228 POSITION SC SB-A1 AND SC SB-A2 INDICATE 228 STEPS	OPERATOR SHOULD WITHDRAW SHUTDOWN BANK 'A' TO 228 STEPS USING SF HS-2, MAN ROD CTRL	S U Comments:

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>18. RECORD THE DIGITAL ROD POSITION INDICATION (SF-074) FOR SHUTDOWN BANK 'A' IN ATTACHMENT 1</p> <p>STEP 6.1.7.1</p>	<p>SF-074 FOR ALL RODS IN SHUTDOWN BANK 'A' INDICATE 228 STEPS</p>	<p>OPERATOR SHOULD RECORD THE DIGITAL ROD POSITION INDICATION SF-074, SHUTDOWN BANK 'A' IN ATTACHMENT 1</p> <p>STEPS 18 AND 19 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>19. RECORD THE SHUTDOWN BANK 'A' STEP COUNTER POSITION ON ATTACHMENT 1</p> <p>STEP 6.1.7.1</p>	<p>SC SB-A1 & SC SB-A2 INDICATE 228 STEPS</p>	<p>OPERATOR SHOULD RECORD SHUTDOWN BANK 'A' STEP COUNTER POSITION ON ATTACHMENT 1</p> <p>STEPS 18 AND 19 MAY BE PERFORMED IN ANY ORDER</p>	<p>S U</p> <p>Comments:</p>
<p>20. OBSERVE THE DRPI PANEL TO VERIFY THAT ALL SHUTDOWN BANK 'A' RODS ARE AT THE SAME LEVEL</p> <p>STEP 6.1.8</p>	<p>SF-074 FOR ALL RODS IN SHUTDOWN BANK 'A' INDICATE 228 STEPS</p>	<p>OPERATOR SHOULD OBSERVE ALL RODS FOR SHUTDOWN BANK 'A' ARE AT THE SAME LEVEL USING THE DIGITAL ROD POSITION INDICATION PANEL, SF-074</p>	<p>S U</p> <p>Comments:</p>

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
21. PROCEED TO SECTION 7 , RESTORATION NOTE FOLLOWING STEP 6.1.9	CRS STATES - NO FURTHER ROD TESTING IS REQUIRED, RETURN ROD CONTROL TO "MANUAL".	DETERMINE THAT ROD TESTING IS COMPLETE	S U Comments:
	<u>RECORD STOP TIME ON PAGE 1</u>		

Read to Performer: I will explain the initial conditions, which steps to simulate or discuss, and provide initiating and subsequent cues. You may use any approved reference materials normally available to you. Make all written reports, oral reports, and log entries as if the evolution was actually being performed. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions: CALLAWAY PLANT IS IN MODE 1 STEADY STATE CONDITIONS. T_{AVE} AND T_{REF} ARE MATCHED. THERE IS NO TESTING OR MAINTENANCE BEING PERFORMED. THE CONTROL ROD PARTIAL MOVEMENT TESTING HAS BEEN COMPLETED ON ALL SHUTDOWN AND CONTROL BANKS **EXCEPT** SHUTDOWN BANK 'A'. THE PRIMARY OPERATOR IS AT THE ROD CONTROL CABINETS AND HAS KEY #149.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM THE CONTROL ROD PARTIAL MOVEMENT TEST FOR 'A' SHUTDOWN BANK RODS ONLY, PER OSP-SF-00002, SECTION 6.1.
INFORM THE CONTROL ROOM SUPERVISOR WHEN READY TO PERFORM THE RESTORATION SECTION 7.

CALLAWAY PLANT TRAINING DEPARTMENT

DYNAMIC SIMULATOR SCENARIO

SIMULATOR SCENARIO: ILE-2004-DS1
REVISION NUMBER: REV 0
REVISION DATE: December 29, 2003

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

SCENARIO TITLE:
EARTHQUAKE CAUSES LOSS OF "OFF-SITE"
POWER AND NE01 FAILURE CAUSES LOSS OF ALL
AC

EXAM #: ILE-2004-DS1

INITIAL CONDITIONS:

The plant is operating at 80% steady state power with 'A' CCP tagged out.

EVENT - TITLE	KSA #	RATING
A) Pressurizer Level Channel 461 Failure	011A2.11	3.4 / 3.6
B) Letdown Isolation Valve Failure	004A2.07	3.4 / 3.7
C) Place Excess Letdown In Service	028AA1.05	2.8 / 2.9
D) 'A' RCP High Vibration Requiring Power Reduction	015AA1.23	3.1 / 3.2
E) Plant Shutdown due to RCP High Vibration	004A4.01	3.8 / 3.9
F) 'A' S/G ASD Failure	041A4.06	2.9 / 3.1
G) Loss of Off-Site Power and NB02	056AA2.44	4.3 / 4.5
H) Automatic Reactor Trip Failure	029EA1.12	4.1 / 4.0
I) Turbine Driven Aux. Feed Pump Fails To Auto Start	061A2.04	3.4 / 3.8
J) Loss of All AC due to NE01 Failure	055EA2.02	4.4 / 4.6

SCENARIO LENGTH:

Approximately 70 minutes.

SCENARIO COMPLETION CRITERIA:

This scenario is complete when the crew initiates ECA-0.0, Step 16, Depressurize Intact S/Gs to 220 PSIG.

The plant is at 80% power with 'A' CCP tagged out for motor bearing replacement. The 'A' CCP should be returned to service in 8-12 hours. This is an 'A' train week for maintenance.

Pressurizer Level Channel BB LT-461 fails low, causing a loss of CVCS letdown. The crew should respond per OTO-BB-00007, "Pressurizer Level Channel Failure", and refer to Technical Specification 3.3.1. When letdown restoration is attempted, BG LCV-0459 will not open. The crew should place excess letdown in service per OTN-BG-00001, "Chemical and Volume Control System".

An RCP Vibration annunciator is received and 'A' RCP is indicating over 15 mils on the shaft. The crew should respond IAW OTO-BB-00002, "Reactor Coolant Pump Off-Normal", and reduce reactor power in preparation for securing the 'A' RCP.

During the power reduction, the 'A' S/G Atmospheric Steam Dump fails open. The crew should respond per OTO-AB-00001, "Steam Dump Malfunction", and manually close the failed atmospheric steam dump. Technical Specification 3.7.4 should be referred to.

A major earthquake causes a loss of off-site power and a lockout on 4160V Bus NB02. The crew should respond to the reactor trip per E-0, "Reactor Trip or Safety Injection". The reactor fails to automatically trip. The crew must manually trip the reactor.

The TDAFP fails to automatically start. The crew must manually start the TDAFP.

At the completion of Step 3 of ES-0.1, "Reactor Trip Response", the 'A' diesel generator will trip causing a Loss of All AC Power. The crew will transition to ECA-0.0, "Loss of All AC Power".

The scenario is complete when the crew initiates ECA-0.0, Step 16, Depressurize Intact S/Gs to 220 PSIG.

- 1) Initialize at IC-19, 80% steady state power, BOL.
- 2) Run Batch File DSILE1.TXT and BG01A.TXT.
 - Preloads events A, B, D, F-J
 - **VERIFY REMOTE SBI006 INHIBIT IS ACTIVE**
- 3) Set Conditionals for Triggers.
 - Trigger 2 - Event Action - 0
Command – “SET CRCPV2(1)=16”
- 4) Ensure that an easel is set up around back of the simulator with the following information:
 - ‘A’ RCP Shaft Vibration 17.8 mils
 - ‘A’ RCP Frame Vibration .9 mils
 - ‘A’ RCP Shaft Vibration is ↑ @ 1.4 mils/hr.
 - ‘A’ RCP Frame Vibration is ↑ @ .2 mils/hr.
 - ‘B’, ‘C’, & ‘D’ RCP Shaft Vibration is 8.0 mils
 - ‘B’, ‘C’, & ‘D’ RCP Frame Vibration is 1.0 mils
- 5) Ensure the Immediate Boration Timer is reset.
- 6) Ensure NIS indicates 80% power.
- 7) Ensure step counters for Control Bank ‘D’ are set to 180 steps and all other steps counters are at 228 steps.
- 8) Check Rx Trip Switch has a RED Flag.
- 9) Ensure the digital display is selected to PZR Pressure and Auctioneered HI Tave.
- 10) Ensure Decrease Loading Rate Button is “ON”.

- 11) Update status board to a "A" Train Week.
- 12) Update Status Board T/S LCO 3.5.2, Condition A (72 hours).
- 13) Update status board to show CCP suction boron concentration:

"A" 1168 ppm, 5 days ago

"B" 1197 ppm, 2 weeks ago

- 14) Ensure the following is indicated on the "white board"

50 sec Imm Borate Per 10% PWR Reduction	
1/2 Boron	1/2 Rods
8 Gal/%	3 Steps/%

- 15) WIP Tag on 'A' CCP Handswitch and place in PTL.
- 16) Turnover sheets and log sheets are on the desks.
- 17) Ensure RM-11 is on the Training System.
- 18) Ensure chart recorders are "rolled forward".
- 19) Ensure alarm printer is "ON".
- 20) Ensure copies of the following procedures are in the file drawers:
 - OTO-AB-00001 OTO-BB-00007 OTN-BG-00001
 - OTO-BB-00002 E-0 ES-0.1
 - ECA-0.0 CSF-1

Event No.	Malf. No.	Event Type*	Event Description
A	PRS02c	I	PZR Level Channel 459 Failure
B	OVERRIDE	C	Letdown Isolation Valve Failure
C		N	Place Excess Letdown In Service
D	OVERRIDE	C	'A' RCP High Vibration
E		R	Plant Shutdown Due To RCP High Vibration
F ⁺	MSS07a	C	'A' S/G ASD Failure
G	NBS005	M	Loss of Off-Site Power And NB02
H	CRF13	C	Auto Reactor Trip Failure
I	SBI006	C	TDAFP Auto Start Failure
J ⁺⁺	EPS06a	C	Loss Of All AC Power (IPE/PRA)

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

+ Initiate after a 2% power reduction.

++ Initiate at Step 3 of ES-0.1.

EVENT INITIATING CUE (Instructor enters times ACTUATED)

Start	_____	Time	Completion Of Shift Turnover
A	_____	Time	PZR Level Channel Failure-Manual from Trigger 1
C	_____	Time	Place Excess Letdown In Service
D	_____	Time	RCP High Vibration-Manual from Trigger 2
F	_____	Time	S/G ASD Failure-Manual from Trigger 3
G, H	_____	Time	Loss of Off-Site Power and NB02, Auto RX Trip Failure- Manual from Trigger 4
I	_____	Time	TDAFW Pump Auto Start Failure
J	_____	Time	Loss of All AC-Manual from Trigger 5
End	_____	Time	Completion Of Scenario

MODE: 1
RX POWER: 80%
TURBINE LOAD: 967 MW
ROD MOVEMENT: NONE
DILUTION LAST SHIFT: 80 gallons
BORATION LAST SHIFT: NONE
AEHV38 THROTTLED TO: 8% OPEN
COOLING TOWER B/D REQUESTED: 4K
CIRC PUMP TURBINE SETBACK: ENABLED
SAMPLE VALVES OPEN: NONE
CDF: Green
LERF: Green
GRID STATUS: Green
RCS BORON: 1141 PPM
DELTA I: -10
COND VAC: 3.8

ENGINEERING / CHEMISTRY / RADWASTE / HP:

None

EQUIPMENT OOS & WPA:

- PBG01A OOS for motor bearing replacement, 8-12 hours of work remains. T/S 3.5.2, Condition A, 72 hours.

INFORMATION:

None

SAFETY ITEMS / RED BARRIER TAPE:

None

EVENT

ADDITIONAL INFORMATION

- A Respond as I&C to trip bistables
- BAT "bb07_3.txt"
BAT "doorclosed.txt"
- If contacted as EDO, acknowledge the OTO entry
- B Respond as Work Control if requested to investigate the failure of BGLV0461.
- D If called, answer as the RCP and Vibration Engineers and recommend securing the RCP as soon as possible.
- E If the EDO is contacted, answer and agree the plant should be shutdown.
- F Respond as I&C to troubleshoot failed ASD
- G Respond as Secondary EO and report that NB0209 breaker has a 186 lockout relay dropped, but there are no other flags dropped.
- Respond as Electrical Maintenance if requested to investigate the trip of NB0209
- Respond as Secondary EO and secure 'B' DG, use the following
Remote kjs002 Local/Manual
Remote kjs008 Stop
- J Respond as an Equipment Operator and report that 'A' DG annunciator panel KJ121 has the following alarms
- 1A Fuel Oil Pressure Low
1B Fuel Filter Differential Pressure High
- Respond as I&C to perform OTO-GK-00001, Loss of Control Room HVAC.
- Respond as HP to take radiation readings in Area 5.

BRIEF DESCRIPTION: Pressurizer Level Channel Failure

EXPECTED OPERATOR / PLANT RESPONSE**RO****BOP****CRS**

ANNUNCIATORS:

PZR 17% HTRS OFF LTDN ISO 32B
PZR LO LVL DEV 32C
LTDN HX DISCH FLOW HILO 39E

- | | | | |
|---|-------|-------|-------|
| 1) Implement OTO-BB-00007, "Pressurizer Level Channel Failure" | _____ | _____ | _____ |
| • Identify pressurizer level channel BB LT-461 failure | _____ | _____ | _____ |
| • Select away from the failed channel using switch BB LS-459D | _____ | _____ | _____ |
| 2) Reduce charging flow to minimum required for RCP seal injection | _____ | _____ | _____ |
| 3) Restore PZR level to program level (See Events B & C) | _____ | _____ | _____ |
| • If required, restart the variable heaters using BB HIS-50 | _____ | _____ | _____ |
| • Select a valid level channel for the Pressurizer Program Level Recorder using switch BB LS-459E | _____ | _____ | _____ |
| • Verify pressurizer level control is normal | _____ | _____ | _____ |
| 4) Refer to Tech Specs and ensure compliance with minimum channel requirements and action statements
T/S 3.3.1 Condition M (6 hrs to trip bistables) | _____ | _____ | _____ |
| 5) Contact I&C to have the instrument failure investigated, and request tripping of bistables | _____ | _____ | _____ |

COMMENTS:

* Denotes Critical Task

EVENT: **A** **POSITION:** **EXAM #** **ILE98DS1**

BRIEF DESCRIPTION: **Pressurizer Level Channel Failure**

EXPECTED OPERATOR / PLANT RESPONSE **RO** **BOP** **CRS**

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Place Excess Letdown In Service Due To A Normal Letdown Isolation Valve Failure

EXPECTED OPERATOR / PLANT RESPONSE	RO	BOP	CRS
HAND CTRL”, to the open position to establish excess letdown flow			
• Ensure Excess Letdown HX Outlet temperature using BG TI-122 on panel RL002; does not exceed 175°F	_____		_____
• Verify RCP seal water leak-off flow is 1-5 gpm with normal RCS operating pressure as indicated on BG FR-154 through BG FR-157 on panel RL022	_____		_____
• After approximately 2 minutes, direct excess letdown flow to the VCT as follows	_____		_____
• Slowly turn BG HC-123 to the closed position to secure excess letdown flow	_____		_____
• Ensure BG HC-123 in the closed position and select BGHV8143 to the VCT position using BG HIS-8143	_____		_____
• Ensure open either set of Excess Letdown HX Valves	_____		_____
• Slowly turn BG HC-123 to the open position to re-establish excess letdown flow	_____		_____
• Notify Radwaste that excess letdown flow is now directed to the VCT	_____		_____
• Ensure Excess Letdown HX Outlet temperature, using BG TI-122 on panel RL002, does not exceed 175°F	_____		_____
• Verify RCP seal water leak-off is 1-5 gpm with normal operating pressure as indicated on BG FR-154 through BG FR-157 on panel RL022	_____		_____

COMMENTS:

* Denotes Critical Task

EVENT: D/E

EXAM # ILE-2004-DS1

BRIEF DESCRIPTION: RCP Vibration Requiring Power Reduction

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

RCP VIB / SYS ALERT

70B

1) Implement OTO-BB-00002, "Reactor Coolant Pump Off-Normal", Attachment 1

- Check RCP Vibrations

Continue monitoring RCP vibration

Contact the RCP and Vibration System Engineers to determine if securing the RCP is required

If the RCP is to be secured perform the following:

Reduce reactor power to less than 48% (P-8 extinguished on SB069) IAW OTG-ZZ-00004, "Power Operations"

Begin the load decrease at a rate directed by the Control Room Supervisor using the EHC LOAD DECREASE pushbutton

Note: After crew has reduced power by at least 2%, initiate Event F, 'A' S/G ASD fails open.

COMMENTS:

* Denotes Critical Task

EVENT: F

EXAM # ILE-2004-DS1

BRIEF DESCRIPTION: 'A' S/G ASD Fails Open

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

S/G PORV OPEN

109F

- | | | | |
|--|-------|-------|-------|
| 1) Identify AB-PV-1 failure. | _____ | _____ | _____ |
| 2) Implement OTO-AB-00001, "Steam Dump Malfunction" | | | _____ |
| • Place the controller for the failed valve in manual and close | | _____ | _____ |
| 3) Notify the Count Room Tech of the valve opening and provide open/close times | _____ | | _____ |
| 4) Refer to Tech Specs and ensure compliance with required action statements
T/S 3.7.4 – seven day action statement | | | _____ |
| 5) Contact I&C to have the failure investigated and repaired | _____ | | _____ |

COMMENTS:

* Denotes Critical Task

EVENT: G/H/I

EXAM # ILE-2004-DS1

BRIEF DESCRIPTION: Loss of Site Power and NB02, RX Auto Trip Failure, TDAFP Auto Start Failure

EXPECTED OPERATOR / PLANT RESPONSE	RO	BOP	CRS
---	-----------	------------	------------

- | | | | |
|--|-------|-------|-------|
| 2) Perform actions of ES-0.1 | | | _____ |
| • Check PZR PORV and Block Valve Status | _____ | _____ | _____ |
| • Check RCS temperature | _____ | _____ | _____ |
| • Check feedwater status | | _____ | _____ |
| Establish feed flow to S/Gs to obtain greater than 300,000 LBM/HR (manually start the TDAFP) | | | |
| 3) Recognize NE01 failure and transition to ECA-0.0, "Loss Of All AC Power" | | | _____ |

COMMENTS:

* Denotes Critical Task

EVENT: J

EXAM # ILE-2004-DS1

BRIEF DESCRIPTION: Loss of All AC due to NE01 Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

- Check if S/G tubes are not ruptured _____
- Check intact S/G levels _____
- Check DC bus loads _____
- Check CST to AFP suction header pressure - Greater than 7 PSIG _____
- Commence Depressurization of Intact S/Gs to 220 PSIG _____

COMMENTS:

* Denotes Critical Task

RCP Vibration Data

All the "OK" green lights are illuminated.

"A" RCP Shaft Vibration 17.8 mils

"A" RCP Frame Vibration .9 mils

"A" RCP Shaft Vibration is ↑ @ 1.4 mils/hr

"A" RCP Frame Vibration is ↑ @ 0.2 mils/hr

"B", "C", & "D" RCP Shaft Vibrations are 8.0 mils

"B", "C", & "D" RCP Frame Vibrations are 1.0 mils

CALLAWAY PLANT TRAINING DEPARTMENT

DYNAMIC SIMULATOR SCENARIO

SIMULATOR SCENARIO: ILE-2004-DS2
REVISION NUMBER: REV 0
REVISION DATE: December 29, 2003

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

SCENARIO TITLE:
LOSS OF COOLANT WITH A LOSS OF RECIRC
CAPABILITY

EXAM #: ILE-2004-DS2

INITIAL CONDITIONS:

The plant is operating at 100% steady state power with 'A' CCP tagged out.

EVENT - TITLE	KSA #	RATING
A) Decrease Letdown Flow From 120 GPM To 75 GPM	001A4.06	3.6 / 3.1
B) 'B' S/G Pressure Channel Failure	035A2.03	3.4 / 3.6
C) Faulty Primary RTD	016A2.01	3.0 / 3.1
D) RCP Seal Failure	003A2.01	3.5 / 3.9
E) LOCA 'A' Cold Leg	011EA1.13	4.1 / 4.2
F) Auto SI Initiation Failure	013A4.03	4.5 / 4.7
G) 'B' CCP Auto Start Failure	006A3.02	4.1 / 4.1
H) Loss of Cold-Leg Recirculation Capability	005A2.04	2.9 / 2.9
I) RHR Pump Trip	005A4.01	3.6 / 3.4

SCENARIO LENGTH:

Approximately 70 minutes.

SCENARIO COMPLETION CRITERIA:

This scenario is complete when ECA-1.1, "Loss of Emergency Coolant Recirculation", is entered.

The plant is at 100% power, equilibrium xenon, BOL, steady state. The 'A' CCP is out of service for motor bearing replacement and should be ready to return to service in 8-12 hours. Chemistry has requested that RCS letdown be reduced to 75 GPM.

Five (5) minutes into the scenario, Steam Pressure Channel AB PT-525 fails low, causing a level perturbation on 'B' S/G. The crew should respond per OTO-AB-00003, "Steam Generator Pressure Channel Failure", and stabilize 'B' S/G level.

When the actions are completed, the Reactor Coolant Loop 1 Thot RTD will fail high. The crew should take action in accordance with OTO-BB-00004, "RTD Channel Failure", and defeat the failed channel to prevent abnormal steam dump and/or control rod operation.

When all actions for the failed RTD are complete, the 'A' RCP will experience a seal failure. The crew should respond using OTO-BB-00002, "RCP OFF-NORMAL", and manually trip the RX/TURBINE and the 'A' RCP. A RCS large break LOCA occurs when the 'A' RCP is secured.

Automatic safety injection fails to actuate which requires manually initiating SI. The 'B' CCP fails to automatically start and must be manually started. Upon SI actuation power fails to EJ-HIS-8804B, RHR to SI PUMP B SUCT. 'A' RHR pump breaker trips and indication shows a breaker lockout. The crew should perform the required actions of E-0 and transition to E-1, "Loss of Primary or Secondary Coolant". At Step 12 of E-1, the crew should transition to ECA-1.1, "Loss of Emergency Coolant Recirculation", based upon the loss of EJ-HIS-8804B and 'A' RHR pump failing to start.

The scenario is complete when ECA-1.1, "Loss of Emergency Coolant Recirculation", is entered.

- 15) Initialize at IC-20, 100% power.
- 15) Run Batch Files “DSILE2.txt” and BG01a.txt.
- 15) Ensure immediate boration timer is reset.
- 15) Ensure NIS indicates 100% power.
- 15) Check Rx Trip switch has a red flag.
- 15) Ensure step counters for Control Bank “D” are set at 215 steps and all other step counters are set at 228 steps.
- 15) Ensure the digital display is selected to REP0482A and RET0499A.
- 15) Ensure Decrease Loading Rate Button is “ON”.
- 15) Update the status board for “A” train week.
- 15) White board has following boron concentrations:
 - “A” CCP 5 days ago 1115 ppm
 - “B” CCP 15 days ago 1120 ppm
- 15) Place WIP tag on ‘A’ CCP and update status board as shown:

ITEM	TS	OUT	ALLOW
PBG01A	3.5.2	(-8 HOURS)	72 HOURS

- 15) Microphones are available for each person being evaluated and a videotape is in the VCR.
- 15) Ensure the RM-11 is on the training system.
- 15) Turnover sheets and log sheets are on desks.
- 15) Ensure copies of the following procedures are in the file drawers:
 - OTO-AB-00003 OTN-BG-00001 CSF-1
 - OTO-BB-00004 E-1 E-0
 - OTO-BB-00002 ECA-1.1

SCENARIO SEQUENCE OF EVENTS GUIDE**EXAM #: ILE-2004-DS2**

Event No.	Malf. No.	Event Type*	Event Description
A		N	Decrease Letdown Flow From 120 GPM To 75 GPM
B	MSS01f	I	'B' S/G Pressure Channel Failure
C	RCS01a	I	Loop 1 HL RTD Fails High
D	CVC06a	C	'A' RCP Seal Failure
E	RCS06a	M	LOCA 'A' Cold Leg-IPE/PRA
F	SBI001	C	Auto SI Actuation Failure
G	SBI008d	C	CCP Start Failure
H	OVERRIDE	C	EJHIS8804B Power Failure
I	RHR01a	C	'A' RHR Pump Trip

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

EVENT INITIATING CUE (Instructor enters times ACTUATED)

Start	_____ Time	Completion of shift turnover
A	_____ Time	Letdown flow reduced to 75 GPM
B	_____ Time	S/G Pressure Channel Failure-Manual from Trigger 1
C	_____ Time	RTD Fails-Manual from Trigger 2
D	_____ Time	RCP Seal Failure-Manual from Trigger 6
E, F	_____ Time	Safety Injection
G	_____ Time	'B' CCP Started
End	_____ Time	Completion of Scenario

INSTRUCTOR TURNOVER INFORMATION**EXAM #: ILE-2004-DS2**

MODE: 1
RX POWER: 100%
TURBINE LOAD: 1216 MW
ROD MOVEMENT: NONE
DILUTION LAST SHIFT: 80 gallons
BORATION LAST SHIFT: NONE
AEHV38 THROTTLED TO: 10% OPEN
COOLING TOWER B/D REQUESTED: 4K
CIRC PUMP TURBINE SETBACK: ENABLED
SAMPLE VALVES OPEN: NONE
CDF: Green
LERF: Green
GRID STATUS: Green
RCS BORON: 1092 PPM
DELTA I: -12.5
COND VAC: 4.0

ENGINEERING / CHEMISTRY / RADWASTE / HP:

None

EQUIPMENT OOS & WPA:

- PBG01A OOS for motor bearing replacement, 8-12 hours of work remains. T/S 3.5.2, Condition A, 72 hours.

INFORMATION:

None

SAFETY ITEMS / RED BARRIER TAPE:

None

EVENT**ADDITIONAL INFORMATION**

- B Act as I&C and acknowledge the failure of AB PT-525, and inform the CR that troubleshooting/repair will be pursued.
Use bat "ab03_525.txt" to trip bistables. (PCS cabinet door-ANNB093)
- C Act as I&C, if contacted, and acknowledge the RTD channel failure. If requested, act as I&C technician and come to the Control Room and receive instructions to trip bistables. Inform the SS/OS that plans will be made to troubleshoot the RTD channel failure.
- Run Batch File "BB082.txt" to trip bistables. (PCS cabinet door-ANNB093)
- H Act as Primary, if requested, and report that the breaker for EJ HV8804B appears to be tripped. If directed to reclose, inform the CR that the breaker will not close.
- I Act as Secondary, if requested, and report that there is an instantaneous overcurrent lockout on NB0101, 'A' RHR pump breaker.
- Act as Primary, if requested, and report that the lower bearing on the 'A' RHR pump motor is extremely hot.
- If contacted as maintenance, report that pump trip will be investigated.

EVENT: A

EXAM #

ILE-2004-DS2

BRIEF DESCRIPTION: Reduce Letdown Flow

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS:

NONE

- | | | |
|---|-------|-------|
| 1) Inform Chemistry that letdown flow is being changed | _____ | _____ |
| 2) Place BG PK-131 in Manual and adjust to control pressure on BG PI-131 at 400 psig | _____ | _____ |
| 3) Close the 45 GPM orifice, using BG HIS-8149AA | _____ | _____ |
| 4) Monitor BG PI-131 and manually control pressure at 350 psig | _____ | _____ |
| 5) When flow and pressure have stabilized, place BG PK-131 in auto | _____ | _____ |
| 6) Monitor letdown temperature and slowly adjust potentiometer on BG TK-130 from 3.0 to 4.3 to control letdown temp at 95°-115° F | _____ | _____ |
| 7) If the NCP is in service, open BGHV8109 when NCP flow is less than 100 GPM | _____ | _____ |
| 8) Ensure charging flow is maintaining pressurizer level | _____ | _____ |

COMMENTS:

*** Denotes Critical Task**

EVENT: B

EXAM #

ILE-2004-DS2

BRIEF DESCRIPTION: Steam Pressure Channel Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS: SG B FLOW MISMATCH 109D
RX PARTIAL TRIP 83C

- 1) Implement OTO-AB-00003, "Steam Generator Pressure Failure" —— —
 - Identify failed channel (AB PT-525) —— —
 - Select the alternate steam flow channel —— —
 - Stabilize level at 50% —— —
- 2) Refer to Tech Specs and ensure compliance with minimum channel requirements and action statements ——
T/S 3.3.2 Condition D (6 hrs to trip bistables)
- 3) Notify I&C to have the instrument failure investigated, and request tripping of bistables ——

COMMENTS:

*** Denotes Critical Task**

EVENT: C

EXAM #

ILE-2004-DS2

BRIEF DESCRIPTION: Loop 1 Hot Leg RTD Failure to 650 Degrees F

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS: REACT DEV 77A
OPΔT ROD STOP 82C
LOOP 2/3/4 ΔT LO DEV 67B, 68B, 69B
OTΔT ROD STOP 82B
RX PARTIAL TRIP 83C

- | | | | |
|---|-------|-------|-------|
| 1) Identify the failure of Loop 1 HOT LEG RTD | _____ | _____ | _____ |
| 2) Implement OTO-BB-00004, "RTD Channel Failure", and direct operator actions | | | _____ |
| • Identify the failed channel | _____ | | _____ |
| • Defeat the failed channel | _____ | | _____ |
| • Terminate abnormal events (rod insertion, steam dump actions, etc.) | _____ | _____ | _____ |
| 3) Refer to Technical Specifications and ensure compliance with minimum channel requirements and action statements: | | | _____ |
| • T/S 3.3.1 Condition E 6 hours | | | |
| • T/S 3.3.2 Condition M 6 hours | | | |
| 4) Notify I&C to trip the required bistables per Attachment 1, and to troubleshoot and repair | _____ | | |

COMMENTS:

*** Denotes Critical Task**

BRIEF DESCRIPTION: RCP Seal Failure with Primary LOCA and Loss of Recirc Capability

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS: RCP #1 SEAL FLOW HI 72A

1) Identify high RCP seal flow and ensure implementation of OTO-BB-00002, RCP OFF NORMAL	___	___	___
• Check RCP No. 1 seal leakoff flow	___	___	___
• Trip reactor/turbine	___	___	___
• Secure 'A' RCP	___	___	___
2) Implement E-0, "Reactor Trip or Safety Injection", and direct actions of RO/BOP			___
• Verify reactor trip	___		___
• Verify turbine trip		___	___
• Verify NB01/NB02 energized	___	___	___
* • Check if SI is actuated – manually actuate at least one train of SI equipment	___	___	___
• Assign an RO to perform Attachment 12			___
• Ensure ESW pumps running	___	___	
• Ensure at least one CCW pump running in each train	___	___	
• Ensure feedwater isolation	___	___	
• Ensure CIS-A	___	___	
• Ensure AFW actuation	___	___	

COMMENTS:

*** Denotes Critical Task**

BRIEF DESCRIPTION: RCP Seal Failure with Primary LOCA and Loss of Recirc Capability

EXPECTED OPERATOR / PLANT RESPONSE **RO BOP CRS**

*	<ul style="list-style-type: none">• Ensure SI initiation – Establish flow from at least one high head ECCS pump, by starting the “B” CCP, before transition out of E-0.• Check CTMT coolers• Ensure CPIS• Check if main steamlines should be isolated• Check if CTMT spray is required• Ensure CRVIS• Notify the CRS	____	____	____
3)	Continue with the actions of E-0, "Reactor Trip or Safety Injection"	____	____	____
	<ul style="list-style-type: none">• Ensure ECCS flow• Ensure total AFW flow greater than 300,000 lbm/hr• Ensure AFW valve alignment• Ensure SI valve alignment<ul style="list-style-type: none">- Identify trip of 'A' RHR pump• Check RCS temperature• Check Pzr PORVs and spray valves• Check if RCPs should be stopped• Check if S/Gs are not faulted• Check if S/G tubes are not ruptured• Check if RCS is intact	____	____	____

COMMENTS:

*** Denotes Critical Task**

BRIEF DESCRIPTION: RCP Seal Failure with Primary LOCA and Loss of Recirc Capability

EXPECTED OPERATOR / PLANT RESPONSE	RO	BOP	CRS
4) Ensure transition to E-1, "Loss of Reactor or Secondary Coolant"			—
• Ensure implementation of CSF Status Monitoring			—
5) Ensure the actions of E-1, "Loss of Reactor or Secondary Coolant" are performed			—
• Check if RCPs should be stopped	—	—	—
• Check if S/Gs are not faulted	—	—	—
• Check intact S/G levels	—	—	—
• Check secondary radiation	—	—	—
• Check Pzr PORVs and block valves	—	—	—
• Check if SI flow should be reduced	—	—	—
• Check if containment spray should be stopped	—	—	—
• Check if RHR pumps should be stopped	—	—	—
• Check RCS and S/G pressures	—	—	—
• Check if DGs should be stopped	—	—	—
• Initiate evaluation of plant status	—	—	—
• Identify loss of 'A' RHR pump and inability to open EJ-HV-8804B, "RHR to SI Pump 'B' Suct" – recognize need to transition to ECA-1.1	—	—	—
7) Ensure transition to ECA-1.1, "Loss of Emergency Coolant Recirculation"			—

COMMENTS:

*** Denotes Critical Task**

CALLAWAY PLANT TRAINING DEPARTMENT

DYNAMIC SIMULATOR SCENARIO

SIMULATOR SCENARIO: ILE-2004-DSBU
REVISION NUMBER: REV 0
REVISION DATE: December 29, 2003

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

SCENARIO TITLE:
LOSS OF HEAT SINK WITHOUT CCP's

EXAM #: ILE-2004-DSBU

INITIAL CONDITIONS:

The plant is operating at 100% steady state power with 'A' CCP tagged out.

EVENT - TITLE	KSA #	RATING
A) Pump Down UHS	076A4.01	2.9/2.9
B) Pressurizer Pressure Channel Failure	027AA2.15	3.7/4.0
C) S/G Level Channel Failure	035A2.03	3.4/3.6
D) Multiple Rod Drop	003AA2.01	3.7/3.9
E) NB02 Bus Trip/Lockout	062A3.05	3.5/3.6
F) Failure of Automatic Turbine Trip	045A3.04	3.4/3.6
G) 'A' CCW Pump Trip with Auto Start Failure of 'C' CCW Pump	008A2.01	3.3/3.6
H) Loss of All Feedwater	E05EA1.1	4.1/4.0

SCENARIO LENGTH:

Approximately 70 minutes.

SCENARIO COMPLETION CRITERIA:

This scenario is complete when Step 17 of FR-H.1 is finished. (After CCW is restored IAW Attachment 12 of E-0).

The plant is at 100% power. The 'A' CCP is out of service for motor bearing replacement and should be ready to return to service in 8-12 hours. The UHS pond level is high as indicated by Annunciator 55D and needs to be pumped down to clear the annunciator IAW OTN-EF-00001, "Essential Service Water System".

Five (5) minutes into the scenario, pressurizer pressure channel 458 will fail high. The crew should enter OTO-BB-00006, "Pressurizer Pressure Channel Failure", and refer to Technical Specifications 3.3.1 and 3.3.2.

After actions are complete for BB PT-458, S/G level channel 552 will fail to zero on 'B' S/G. The crew should enter OTO-AE-00003, "Steam Generator Level Channel Failure", and refer to Technical Specifications 3.3.1 and 3.3.2.

The next event that occurs will be a drop of multiple control rods. The crew should enter OTO-SF-00003, "Dropped Control Rod", trip the reactor, and go to E-0, "Reactor Trip or Safety Injection". The turbine will have to be manually tripped. If the turbine is not tripped promptly, a Safety Injection will occur due to low steamline pressure. When the 'B' MDAFP starts, a fault occurs on the breaker resulting in a loss of NB02. This will cause a loss of all charging and a loss of the 'B' MDAFP.

Sixty (60) seconds after the trip, the TDAFP will trip due to a severe oil line leak on the governor control valve. This will result in a red path on Heat Sink. If an SI did not occur, when the crew transitions to ES-0.1, "Reactor Trip Response", the CSFs will become applicable, and a transition to FR-H.1, "Response To Loss of Secondary Heat Sink" should occur. If an SI did occur, then the transition to FR-H.1 will be from Step 7 of E-0. The 'A' CCW pump fails to start when the SI occurs and cannot be manually started. The 'C' CCW pump will fail to automatically start and must be manually started by the crew.

At Step 4 of FR-H.1, the crew will be directed to Step 10 to initiate an RCS bleed and feed.

The scenario is completed when Step 17 of FR-H.1 is finished. (After CCW is restored by E-0, Attachment 12)

- 1) Initialize at IC-20; 100% power.
- 2) Run Batch File "DSILEBU.txt".
- 3) Ensure Immediate Boration Timer is reset.
- 4) Place 'A' CCP handswitch in pull-to-lock and attach a WIP tag.
- 5) Ensure BB PT-455 selected as controlling channel.
- 6) Ensure NIS indicates 100% power.
- 7) Check Rx Trip switch has a red flag.
- 8) Control Rods D Bank is at 215, all others are at 228.
- 9) Ensure digital display is selected to REP0482A and RET0499A.
- 10) Ensure Decrease Loading Rate Button is "ON".
- 11) Update the status board for 'A' Train week.
- 12) Update status board 'A' CCP, 3.5.2, Condition A, 72 hours.
- 13) White board has following Boron Concentrations:
 - "A" CCP 5 days ago 1115 ppm
 - "B" CCP 15 days ago 1120 ppm
- 14) Ensure the RM-11 is on the training system.
- 15) Turnover sheets and log sheets are on desks.
- 16) Ensure copies of the following procedures are in the file drawers:
 - OTO-BB-00006
 - OTO-AE-00003
 - OTO-SF-00003
 - E-0
 - ES-0.1
 - FR-H.1
 - OTN-EF-00001, marked up to pump down the UHS

SCENARIO OUTLINE**EXAM #: ILE-2004-DSBU**

Event No.	Malf. No.	Event Type*	Event Description
A		N	Pump Down the UHS
B	PRS01D	I	PZR Press Channel 458 Fails High
C	FWM02f	I	S/G Level Channel 552 Fails Low
D	CRF15e	M	Multiple Dropped Rods
E	NBS005	C	NB02 Bus Lock Out
F	TUR08b	C	Turbine Auto Trip Failure
G	CCW06a SBI008o	C	'A' CCW Pump Trip/'C' CCW Pump Auto Start Failure
H	FWM12a FWM12c	C	Loss of All Feedwater-IPE/PRA

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

<u>EVENT</u>	<u>INITIATING CUE (Instructor enters times ACTUATED)</u>
Start	_____ Time Completion Of Shift Turnover
A	_____ Time UHS Pump Down Complete
B	_____ Time PZR Pressure Channel Failure-Manual from Trigger 1
C	_____ Time S/G Level Channel Failure-Manual from Trigger 7
D	_____ Time Dropped Rods-Manual from Trigger 2
E	_____ Time Loss Of NB02
F	_____ Time Turbine Manually Tripped
G	_____ Time CCW Pump 'C' Started
H	_____ Time Bleed/Feed Started
End	_____ Time Completion Of Scenario

INSTRUCTOR TURNOVER INFORMATION**EXAM #: ILE-2004-DSBU**

MODE: 1
RX POWER: 100%
TURBINE LOAD: 1216 MW
ROD MOVEMENT: NONE
DILUTION LAST SHIFT: 80 GAL
BORATION LAST SHIFT: NONE
AEHV38 THROTTLED TO: 10% OPEN
COOLING TOWER B/D REQUESTED: 4K
CIRC PUMP TURBINE SETBACK: ENABLED
SAMPLE VALVES OPEN: NONE
CDF: GREEN
LERF: GREEN
GRID STATUS: GREEN
RCS BORON: 1092
DELTA I: -12.5
COND VAC: 4.0

ENGINEERING / CHEMISTRY / RADWASTE / HP:

None

EQUIPMENT OOS & WPA:

- PBG01A OOS for motor bearing replacement, 8-12 hours of work remains. T/S 3.5.2, Condition A, 72 hours.

INFORMATION:

UHS pond level is high and needs to be pumped down to clear Annunciator 55D. 'A' ESW pump should be used to lower UHS pond level.

SAFETY ITEMS / RED BARRIER TAPE:

None

EVENT**ADDITIONAL INFORMATION**

- A After pump down of the UHS has been started, clear Annunciator 55D after 2 minutes and call back as the IEO and report that UHS pond level is now at 76.8%.
- B If contacted as I&C, perform actions as directed by the crew.
Use bat "bb042.txt" to trip bistables. (PCS cabinet door-ANN B093)
- C If contacted as I&C, perform actions as directed by the crew.
Use bat "ae08_2.txt" to trip bistables. (PCS cabinet door-ANN B093)
- D If directed as the PEO, report the 2BD power cabinet has two blown fuses.
- E If directed as the SEO to investigate NB02 trip, report that BKR NB0209 has instantaneous overcurrent and lockout.
- G If directed as SEO to investigate 'A' CCW Pump trip, report lockout on breaker.
- H If directed as SEO, report a significant oil leak on the TDAFW pump governor control assembly.
If directed to check 'A' MDAFP, report that the pump bearings are red hot and the breaker has a TOC relay dropped.

EVENT: B

EXAM #

ILE-2004-DSBU

BRIEF DESCRIPTION: Pressurizer Pressure Channel 456 Failure to 2500 psig

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS: PZR PRESS HI 34B

- | | | |
|---|-----|-----|
| 1) Identify the failure of Pressurizer Pressure Channel 458 | ___ | ___ |
| 2) Ensure implementation of OTO-BB-00006, "Pressurizer Pressure Channel Failure" | ___ | ___ |
| • Identify the failed channel | ___ | ___ |
| • Select away from the failed channel with BB-PS-455F | ___ | ___ |
| • Terminate any pressure transient | ___ | ___ |
| 3) Ensure proper operation of the following equipment: | ___ | ___ |
| • PZR Power Operated Relief Valves. | ___ | ___ |
| • PZR Spray Valves. | ___ | ___ |
| • PZR Backup Heaters. | ___ | ___ |
| 4) Select a valid channel for the following recorders: | ___ | ___ |
| • RCS PZR Press Recorder | ___ | ___ |
| • OPΔT/OTΔT Temp Recorder | ___ | ___ |
| 5) Ensure a valid readout is displayed on the Digital Readout | ___ | ___ |
| 6) Refer to Technical Specifications and ensure compliance with minimum channel requirements and action statements. | ___ | ___ |
| • T/S 3.3.1 Condition E, M 6 hours | ___ | ___ |
| • T/S 3.3.2 Condition D 6 hours | ___ | ___ |
| 7) Notify I&C to trip the required bistables and to troubleshoot/repair | ___ | ___ |

COMMENTS:

*** Denotes Critical Task**

EVENT: C

EXAM #

ILE-2004-DSBU

BRIEF DESCRIPTION: S/G Level Channel Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS: S/G B LEV DEV

109C

- | | | | |
|---|--|--|---|
| 1) Ensure implementation of OTO-AE-00003, "Steam Generator Level Channel Failure" | | | — |
| • Identify the failed channel | | | — |
| • Select away from the failed channel | | | — |
| • Stabilize S/G level at 50% | | | — |
| 2) Refer to Technical Specification and ensure compliance with minimum channel requirements and action statements | | | — |
| • T/S 3.3.1 Condition E 6 hours | | | — |
| • T/S 3.3.2 Condition I, D 6 hours | | | — |
| 3) Notify I&C to trip the required bistables and to troubleshoot/repair | | | — |

COMMENTS:

*** Denotes Critical Task**

EVENT: D

EXAM #

ILE-2004-DSBU

BRIEF DESCRIPTION: Multiple Dropped Rods

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

ANNUNCIATORS: TWO/MORE RODS AT BOTTOM 81A
ROD AT BOTTOM 81B

- | | | | |
|---|-------|-------|-------|
| 1) Identify the multiple rod drop | _____ | _____ | _____ |
| 2) Ensure implementation of OTO-SF-00003, "Dropped Control Rod" | _____ | _____ | _____ |
| • Trip the reactor and proceed to E-0, "Reactor Trip Or Safety Injection" | _____ | _____ | _____ |

COMMENTS:

*** Denotes Critical Task**

EVENT: E / F / G

EXAM #

ILE-2004-DSBU

BRIEF DESCRIPTION: Loss of NB02/Failure of Automatic Turbine Trip/CCW Pump Trip

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

- | | | | |
|---|-------|-------|-------|
| 1) Ensure implementation of E-0, "Reactor Trip or Safety Injection", and direct RO/BOP to: | _____ | _____ | _____ |
| • Ensure the reactor is tripped | _____ | | _____ |
| * • Manually trip the turbine prior to reaching a severe challenge on Subcriticality or Integrity or transitioning to ECA-2.1 | _____ | _____ | _____ |
| • Identify the loss of NB02 | _____ | _____ | _____ |
| • Check if SI is actuated | _____ | _____ | _____ |
| 2) Transition to ES-0.1, "Reactor Trip Response" (from Step 4 of E-0, RNO or continue in E-0 if SI has occurred and transition to FR-H.1 at Step 7 | | | _____ |
| 3) Ensure implementation of the "CSF Status Trees" when E-0 is exited. Transition should be made to FR-H.1 when red path is identified for Heat Sink. | | | _____ |

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Loss of All Feedwater

EXPECTED OPERATOR / PLANT RESPONSE

RO BOP CRS

<p>1) Ensure transition to FR-H.1, "Response to Loss of Secondary Heat Sink" (from Heat Sink CSF Status Tree or at Step 7 of E-0)</p>	<p>_____</p>	<p>_____</p>	<p>_____</p>
<p>2) Ensure implementation of the actions of FR-H.1</p> <ul style="list-style-type: none"> • Check if secondary heat sink is required • Try to establish AFW flow to at least 1 S/G • Stop all RCP's • Check CCP status ★ • Initiate RCS bleed and feed so that the RCS depressurizes sufficiently for intermediate head injection to occur • Actuate SI • Verify RCS feed path • Reset SI • Reset CISA and CISB • Establish instrument air to Ctmt • Establish RCS bleed path • Ensure adequate RCS bleed path in Step 16 with PZR PORV's <u>or</u> Rx Vessel Head Vents • Perform Attachment 12 of E-0, "Reactor Trip or Safety Injection" • Ensure ESW Pump Running ★ • Start 'C' CCW Pump • Ensure Feedwater Isolation 	<p>_____</p>	<p>_____</p>	<p>_____</p>

COMMENTS:

★ Denotes Critical Task
