

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A1 RO/SRO
COMPLETION TIME: 10 MINUTES
JOB TITLE: URO/SRO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE IF ROD INSERTION LIMIT HAS BEEN EXCEEDED

K/A NO: G 2.1.7
K/A RATING: 3.7/4.4
REVISION: APRIL 29, 2002

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: _____

REFERENCES: OSP-ZZ-00001, Control Room Shift and Daily Log Readings and Channel Checks, Rev 37
CURVE BOOK, COLR, Figure 2, Rod Bank Insertion Limits Versus Rated Thermal
Power – Four Loop Operation, Rev 0

TOOLS/EQUIPMENT: Attachment 3 of OSP-ZZ-00001
Calculator

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A1 RO/SRO

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 IN MODE 1. A FAILURE IN THE MAIN GENERATOR PROTECTION CIRCUIT HAS CAUSED A TURBINE RUNBACK. REACTOR POWER HAS BEEN STABILIZED AT APPROXIMATELY 50%. THE ROD INSERTION LIMIT MONITOR WAS DECLARED INOPERABLE 30 MINUTES AGO.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO PERFORM OSP-ZZ-00001, CONTROL ROOM SHIFT AND DAILY LOG READINGS AND CHANNEL CHECKS, ATTACHMENT 3, INOPERABLE ROD INSERTION LIMIT MONITOR.

NI READINGS ARE AS FOLLOWS:

SE NI-41B	50.0%	SE NI-42B	49.9%
SE NI-43B	49.8%	SE NI-44B	50.3%

DRPI READINGS ARE AS FOLLOWS:

	CB "A"	CB "B"	CB "C"	CB "D"
Group 1 Rods	226	226	155	40
Group 2 Rods	226	226	155	40

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL DETERMINE THAT CONTROL BANKS "C" & "D" ARE BELOW THE REQUIRED ROD INSERTION LIMITS.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
<p>1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED</p> <p>STEPS MAY BE PREFORMED IN ANY ORDER</p>	<p>CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES</p>	<p>S U</p> <p>Comments:</p>
<p>2. CANDIDATE OBTAINS CORRECT CURVE BOOK FIGURE</p>	<p>CANDIDATE SHOULD OBTAIN CURVE BOOK COLR FIGURE 2</p> <p>HAND CANDIDATE COPY OF CURVE BOOK COLR FIGURE 2 AFTER THEY DEMONSTRATE THE ABILITY TO LOCATE (GREEN SHEET)</p>	<p>S U</p> <p>Comments:</p>
<p>3. DETERMINE REACTOR POWER LEVEL</p>	<p>CANDIDATE SHOULD DETERMINE REACTOR POWER TO BE 50%</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
4. DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "A"	CANDIDATE SHOULD DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "A" IS ≥ 225 STEPS AND RECORD AS SAT ON ATTACHMENT 3	S U Comments:
5. DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "B"	CANDIDATE SHOULD DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "B" IS ≥ 225 STEPS AND RECORD AS SAT ON ATTACHMENT 3	S U Comments:
*6. DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "C"	CANDIDATE SHOULD DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "C" IS ≥ 160 STEPS AND RECORD AS UNSAT ON ATTACHMENT 3	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*7. DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "D"	CANDIDATE SHOULD DETERMINE ROD INSERTION LIMIT FOR CONTROL BANK "D" IS ≥ 45 STEPS AND RECORD AS UNSAT ON ATTACHMENT 3	S U Comments:
8.	THIS ADMIN JPM IS COMPLETE <u>RECORD STOP TIME ON PAGE 1</u>	S U Comments:

* CRITICAL STEP

EXAM KEY

OSP-ZZ-00001

Rev. 6

INOPERABLE ROD INSERTION LIMIT MONITOR

PERSON PERFORMING (PRINT)	INITIALS	TIME / DATE
PERSON PERFORMING (PRINT)	INITIALS	TIME / DATE
PERSON PERFORMING (PRINT)	INITIALS	TIME / DATE
PERSON PERFORMING (PRINT)	INITIALS	TIME / DATE

THE POSITION OF EACH CONTROL BANK SHALL BE DETERMINED TO BE WITHIN THE INSERTION LIMIT AT LEAST ONCE PER FOUR HOURS WHEN THE ROD INSERTION LIMIT MONITOR IS INOPERABLE. **FSAR 16.1.3.4**

NOTE: INCLUDE THIS ATTACHMENT WITH ATTACHMENT 1 WHEN REQUIRED

ROD INSERTION LIMIT MONITOR DETERMINED TO BE INOPERABLE:

TIME / DATE

VERIFY DRPI ABOVE INSERTION LIMITS PER COLR FIG. 2 AND RECORD SAT OR UNSAT FOR EACH CONTROL BANK.

<i>Reference</i>	<i>Time</i>	<i>Bank A</i>	<i>Bank B</i>	<i>Bank C</i>	<i>Bank D</i>	<i>Initials</i>
	Time	SAT	SAT	UNSAT	UNSAT	
	T + 4 hrs					
	T + 8 hrs					
	T + 12 hrs					
	T + 16 hrs					
	T + 20 hrs					

ROD INSERTION LIMIT MONITOR
RETURNED TO SERVICE:

NO, MONITOR
CONTINUED

EXAM KEY

OSP-ZZ-00001

Rev. 6

YES

DATE / TIME / INITIALS

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 IN MODE 1. A FAILURE IN THE MAIN GENERATOR PROTECTION CIRCUIT HAS CAUSED A TURBINE RUNBACK. REACTOR POWER HAS BEEN STABILIZED AT APPROXIMATELY 50%. THE ROD INSERTION LIMIT MONITOR WAS DECLARED INOPERABLE 30 MINUTES AGO.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO PERFORM OSP-ZZ-00001, CONTROL ROOM SHIFT AND DAILY LOG READINGS AND CHANNEL CHECKS, ATTACHMENT 3, INOPERABLE ROD INSERTION LIMIT MONITOR.

NI READINGS ARE AS FOLLOWS:

SE NI-41B	50.0%	SE NI-42B	49.9%
SE NI-43B	49.8%	SE NI-44B	50.3%

DRPI READINGS ARE AS FOLLOWS:

	CB "A"	CB "B"	CB "C"	CB "D"
Group 1 Rods	226	226	155	40
Group 2 Rods	226	226	155	40

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A2 RO/SRO
COMPLETION TIME: 15 MINUTES
JOB TITLE: URO/SRO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE DILUTION REQUIREMENTS

K/A NO: G 2.1.25
K/A RATING: 2.8/3.1
REVISION: APRIL 30, 2002

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: _____

REFERENCES: Curve Book, Figure 5-2, Differential Boron Worth (HZP) Callaway Nuclear Plant Cycle 12 ,
Rev 12
Curve Book, Figure 7-5, Reactor Makeup Control System Nomographs (Boron Dilution), Rev
01

TOOLS/EQUIPMENT: Calculator

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A2 RO/SRO

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 IN MODE 3, 557°F, CYCLE 12 WITH CORE AGE AT MOL (BURNUP OF 10,000 MWD/MTU). THE SHUTDOWN BANKS HAVE BEEN PULLED AND THE ESTIMATED CRITICAL POSITION (ECP) HAS BEEN CALCULATED. THE ECP ASSUMED XENON FREE CONDITION WITH A CRITICAL ROD HEIGHT OF 100 STEPS ON CONTROL BANK "D". THE ECP REQUIRES A POSITIVE REACTIVITY ADDITION OF 2,800 PCM BY DILUTION TO ACHIEVE THE REQUIRED CRITICAL BORON CONCENTRATION. PRESENT RCS BORON CONCENTRATION IS 1600 PPM. PRESSURIZER LEVEL IS AT 25%.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO CALCULATE THE DILUTION VOLUME REQUIRED (GALLONS) TO ACHIEVE THE REQUIRED CRITICAL BORON CONCENTRATION. **THE DILUTION SHOULD BE CALCULATED USING THE DILUTION EQUATION INSTEAD OF USING THE DILUTION NOMOGRAPH TO ENSURE GREATER ACCURACY.**

Notes: THE USE OF THE PC NUCLEAR DESIGN REPORT IS NOT ALLOWED.

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL HAVE CALCULATED THE REQUIRED DILUTION VOLUME OF $15,069 \pm 430$ GALLONS (14,639 – 15,499 GALLONS).

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE OBTAINS CORRECT CURVE BOOK FIGURES	CANDIDATE SHOULD OBTAIN CURVE BOOK FIGURES 5-2 AND 7-5 HAND CANDIDATE COPY OF CURVE BOOK FIGURES AFTER THEY DEMONSTRATE THE ABILITY TO LOCATE (GREEN SHEETS)	S U Comments:
*3. CANDIDATE SHOULD DETERMINE THE DIFFERENTIAL BORON WORTH (DBW) FOR HOT ZERO POWER (HZP)	CANDIDATE SHOULD REFER TO CURVE BOOK FIGURE 5-2, DIFFERENTIAL BORON WORTH (HZP) AND DETERMINE THE DBW TO BE – 8.1 ± 0.2 PCM/PPM	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
4. CANDIDATE SHOULD CALCULATE THE REQUIRED BORON CONCENTRATION CHANGE	$\Delta\text{PPM}_{\text{Boron}} = \Delta\text{Reactivity} \div \text{DBW}$ $= +2,800 \text{ PCM} \div -8.1 \text{ PCM/PPM}$ $= -345.7 \pm 8.7 \text{ PPM}$	<p style="text-align: center;">S U</p> <p>Comments:</p>
5. CANDIDATE SHOULD DETERMINE THE FINAL BORON CONCENTRATION	$\text{PPM}_{\text{BoronFinal}} = \text{PPM}_{\text{BoronInitial}} + \Delta\text{PPM}_{\text{Boron}}$ $\text{PPM}_{\text{BoronFinal}} = 1600 \text{ PPM} - 345.7 \text{ PPM}$ $\text{PPM}_{\text{BoronFinal}} = 1254.3 \pm 8.7 \text{ PPM}$	<p style="text-align: center;">S U</p> <p>Comments:</p>
*6. CANDIDATE SHOULD DETERMINE THE REQUIRED DILUTION VOLUME USING EQUATION ON FIGURE 7-5	$V = (M \div 8.33) [\ln (C_i \div C_f)]$ $V = (515676 \div 8.33) [\ln (1600 \div 1254.3)]$ $V = 61905.9 [\ln 1.2756]$ $V = 15,069 \pm 430 \text{ GALLONS}$ $V = 14,639 - 15,499 \text{ GALLONS}$	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
7.	THIS ADMIN 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 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 IN MODE 3, 557°F, CYCLE 12 WITH CORE AGE AT MOL (BURNUP OF 10,000 MWD/MTU). THE SHUTDOWN BANKS HAVE BEEN PULLED AND THE ESTIMATED CRITICAL POSITION (ECP) HAS BEEN CALCULATED. THE ECP ASSUMED XENON FREE CONDITION WITH A CRITICAL ROD HEIGHT OF 100 STEPS ON CONTROL BANK "D". THE ECP REQUIRES A POSITIVE REACTIVITY ADDITION OF 2,800 PCM BY DILUTION TO ACHIEVE THE REQUIRED CRITICAL BORON CONCENTRATION. PRESENT RCS BORON CONCENTRATION IS 1600 PPM. PRESSURIZER LEVEL IS AT 25%.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO CALCULATE THE DILUTION VOLUME REQUIRED (GALLONS) TO ACHIEVE THE REQUIRED CRITICAL BORON CONCENTRATION. **THE DILUTION SHOULD BE CALCULATED USING THE DILUTION EQUATION INSTEAD OF USING THE DILUTION NOMOGRAPH TO ENSURE GREATER ACCURACY.**

Notes: THE USE OF THE PC NUCLEAR DESIGN REPORT IS NOT ALLOWED.

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A3 RO
COMPLETION TIME: 15 MINUTES
JOB TITLE: URO
DUTY: ADMINISTRATIVE
TASK TITLE: CALCULATE RHR PUMP RUN TIME FOR FLOOD UP

K/A NO: G 2.2.27
K/A RATING: 2.6
REVISION: MAY 14, 2002

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: _____

REFERENCES: OTS-KE-00017, FILLING THE REFUELING POOL, REV 11
TANK DATA BOOK, TDB-001 PAGE 74, REV 36
FSAR 16.1.2.5, BORATED WATER SOURCES - SHUTDOWN

TOOLS/EQUIPMENT: CALCULATOR

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A3 RO

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 IN MODE 6. THE CREW IS PREPARING TO FILL THE REFUELING POOL FROM THE RWST USING THE "A" RHR PUMP PER OTS-KE-00017, FILLING THE REFUELING POOL. THE RWST LEVEL IS CURRENTLY AT 93.6%.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO CALCULATE THE MAXIMUM TIME THE "A" RHR PUMP CAN BE RUN FOR FILLING THE REFUELING POOL BEFORE THE RWST WILL BE AT THE MINIMUM VOLUME REQUIRED BY FSAR 16.1.2.5. ASSUME THAT THE "A" RHR PUMP FLOW REMAINS CONSTANT AT 2,100 GPM THROUGHOUT THE FILLING EVOLUTION AND THAT NO MAKEUP IS PERFORMED ON THE RWST.

Notes:

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL HAVE CALCULATED THE MAXIMUM RUN TIME FOR THE "A" RHR PUMP IS 161.2 MINUTES WITHIN A TOLERANCE OF -5% (153.1 – 161.2 MINUTES).

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE SHOULD REFER TO FSAR 16.1.2.5 AND TANK DATA BOOK PAGE 74 FOR RWST VOLUMES	CANDIDATE SHOULD REFER TO FSAR 16.1.2.5 AND TANK DATA BOOK PAGE 74 FOR RWST VOLUMES HAND CANDIDATE COPY OF FSAR 16.1.2.5 AND TANK DATA BOOK PAGE 74 AFTER THEY DEMONSTRATE THE ABILITY TO LOCATE (GREEN SHEETS)	S U Comments:
3. CANDIDATE SHOULD DETERMINE THE CURRENT RWST VOLUME IN GALLONS USING THE TANK DATA BOOK	CANDIDATE SHOULD DETERMINE FROM PAGE 74 OF THE TANK DATA BOOK THAT 93.6% IS EQUIVALENT TO 394,000 GALLONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*4. CANDIDATE SHOULD DETERMINE THE MINIMUM RWST VOLUME IN GALLONS FROM FSAR 16.1.2.5	CANDIDATE SHOULD DETERMINE THE MINIMUM RWST VOLUME FROM FSAR 16.1.2.5 IS 55,416 GALLONS	S U Comments:
5. CANDIDATE SHOULD DETERMINE HOW MUCH BORATED WATER CAN BE PUMPED FROM THE RWST TO THE REFUELING POOL	$\Delta_{\text{Volume}} = \text{Volume}_{\text{Initial}} - \text{Volume}_{\text{Final}}$ $\Delta_{\text{Volume}} = 394,000 - 55,416$ $\Delta_{\text{Volume}} = 338,584 \text{ GALLONS}$	S U Comments:
*6. CANDIDATE SHOULD DETERMINE HOW LONG THE "A" RHR PUMP CAN BE RUN PRIOR TO REACHING THE FSAR MINIMUM LIMIT FOR RWST VOLUME	$\text{Time} = \Delta_{\text{Volume}} \div \text{Pump Flowrate}$ $\text{Time} = 338,584 \div 2,100$ $\text{Time} = 161.2 \text{ MINUTES}$ $\text{Tolerance Of } -5\% = -8.1$ $\text{Time} = 161.2 - 8.1 = 153.1$ $\text{Time} = 153.1 - 161.2 \text{ MINUTES}$	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
7.	THIS ADMIN 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 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 IN MODE 6. THE CREW IS PREPARING TO FILL THE REFUELING POOL FROM THE RWST USING THE "A" RHR PUMP PER OTS-KE-00017, FILLING THE REFUELING POOL. THE RWST LEVEL IS CURRENTLY AT 93.6%.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO CALCULATE THE MAXIMUM TIME THE "A" RHR PUMP CAN BE RUN FOR FILLING THE REFUELING POOL BEFORE THE RWST WILL BE AT THE MINIMUM VOLUME REQUIRED BY FSAR 16.1.2.5. ASSUME THAT THE "A" RHR PUMP FLOW REMAINS CONSTANT AT 2,100 GPM THROUGHOUT THE FILLING EVOLUTION AND THAT NO MAKEUP IS PERFORMED ON THE RWST.

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A3 SRO
COMPLETION TIME: 15 MINUTES
JOB TITLE: SRO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE ACTIONS FOR VALVE STROKE TEST

K/A NO: G 2.2.12
K/A RATING: 3.4
REVISION: MAY 1, 2002

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: _____

REFERENCES: OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE
INSERVICE TEST, REV 4

TOOLS/EQUIPMENT: NONE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A3 SRO

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 IN MODE 1. OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE INSERVICE TEST HAS BEEN PERFORMED. THE TEST RESULTS WERE OUTSIDE THE NORMAL RANGE. THE SHIFT SUPERVISOR DIRECTED THE IMMEDIATE RETEST OF THE VALVE. THE RESULTS WERE THE SAME FOR THE SECOND TEST.

Initiating Cues: YOU ARE THE CONTROL ROOM SUPERVISOR AND HAVE BEEN GIVEN ATTACHMENT 1 FOR REVIEW. YOU ARE TO DETERMINE WHAT ACTIONS SHOULD BE TAKEN BASED ON THE RESULTS OF THIS SURVEILLANCE.

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL DETERMINE THAT THE DATA IS TO BE ANALYZED WITHIN 96 HOURS TO VERIFY THAT THE NEW STROKE TIME REPRESENTS ACCEPTABLE VALVE OPERATION **OR** THE VALVE SHALL BE DECLARED INOPERABLE.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE SHOULD REVIEW THE TEST RESULTS ON ATTACHMENT 1	CANDIDATE SHOULD REVIEW THE TEST RESULTS ON ATTACHMENT 1	S U Comments:
3. CANDIDATE SHOULD OBTAIN A COPY OF OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE INSERVICE TEST AND REVIEW THE ACCEPTANCE CRITERIA	CANDIDATE SHOULD DETERMINE THAT THE OPEN STROKE TIME IS LESS THAN THE MAXIMUM ALLOWED STROKE TIME, BUT OUTSIDE THE NORMAL RANGE FOR BOTH THE 1 ST AND 2 ND TESTS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*4. CANDIDATE SHOULD DETERMINE WHAT ACTIONS SHOULD BE TAKEN BASED ON THE RESULTS OF THIS SURVEILLANCE	<p>CANDIDATE SHOULD DETERMINE THE FOLLOWING:</p> <p>THE DATA IS TO BE ANALYZED WITHIN 96 HOURS TO VERIFY THAT THE NEW STROKE TIME REPRESENTS ACCEPTABLE VALVE OPERATION OR THE VALVE SHALL BE DECLARED INOPERABLE</p>	<p>S U</p> <p>Comments:</p>
5.	<p>THIS ADMIN JPM IS COMPLETE</p> <p><u>RECORD STOP TIME ON PAGE 1</u></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 IN MODE 1. OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE INSERVICE TEST HAS BEEN PERFORMED. THE TEST RESULTS WERE OUTSIDE THE NORMAL RANGE. THE SHIFT SUPERVISOR DIRECTED THE IMMEDIATE RETEST OF THE VALVE. THE RESULTS WERE THE SAME FOR THE SECOND TEST.

Initiating Cues: YOU ARE THE CONTROL ROOM SUPERVISOR AND HAVE BEEN GIVEN ATTACHMENT 1 FOR REVIEW. YOU ARE TO DETERMINE WHAT ACTIONS SHOULD BE TAKEN BASED ON THE RESULTS OF THIS SURVEILLANCE.

VALVE TEST DATA SHEET

PERSON PERFORMING

INITIAL

REACTOR OPERATOR

RO

DATE STARTED JULY 31, 2002

BALANCE OF PLANT OPERATOR

BOP

DATE COMPLETED JULY 31, 2002

VALVE	AS FOUND POS	INIT REM POS	INIT LOCAL POS	OBSERVED STROKE TIME(S)		NORMAL STROKE TIME RANGE (S)		MAX OPEN STR TIME(S)	MAX CLOSE STR TIME(S)	FULL STROKE REM POS	FULL STROKE LOCAL POS	RESTOR POS	RESTOR VERIF	RESTOR INDEP VERIF
				O	C	O	C							
ECHV0011	OPEN	OPEN	OPEN	46.1 46.1*	56.1 56.1*	49.3-62.9	49.3-62.9	62.9	62.9	CLOSED	CLOSED	OPEN	RO	BOP

* Indicates data from second test.

M&TE ID NUMBERS RECORDED ON STS COMPLETION FORMS SW-2001-OP

CALLAWAY PLANT ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO:	ILE-2002-A4 RO	K/A NO:	G 2.3.10
COMPLETION TIME:	15 MINUTES	K/A RATING:	2.9
JOB TITLE:	URO	REVISION:	MAY 1, 2002
DUTY:	ADMINISTRATIVE		
TASK TITLE:	CALCULATE STAY TIME		

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: _____

REFERENCES: APA-ZZ-01000, CALLAWAY PLANT HEALTH PHYSICS PROGRAM, REV 16

TOOLS/EQUIPMENT: CALCULATOR

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A4 RO

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 CONTROL ROOM SUPERVISOR HAS REQUESTED YOU TO HANG WPA IN AN AREA WHERE THE KNOWN RADIATION DOSE RATE IS 425 mrem/hr. YOUR CURRENT YEAR EXPOSURE HISTORY ACCORDING TO YOUR NRC FORM 4 IS AS FOLLOWS:

- COMMITTED DOSE EQUIVALENT (CDE) 20 mrem
- COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE) 100 mrem
- DEEP-DOSE EQUIVALENT (DDE) 200 mrem
- EYE DOSE EQUIVALENT (LDE) 15 mrem
- SHALLOW DOSE EQUIVALENT (SDE) 10 mrem

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DETERMINE YOUR MAXIMUM STAY TIME IN THE CAUTION HIGH RADIATION AREA WHILE HANGING THE WPA BEFORE EXCEEDING THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE).

Notes:

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL HAVE CALCULATED THE MAXIMUM STAY TIME FOR HANGING THE WPA IS 4.0 HOURS WITHIN A TOLERANCE OF -5% (3.8 - 4.0 HOURS).

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE SHOULD REFER TO APA-ZZ-01000, CALLAWAY PLANT HEALTH PHYSICS PROGRAM	CANDIDATE SHOULD REFER TO APA-ZZ-01000, CALLAWAY PLANT HEALTH PHYSICS PROGRAM	S U Comments:
3. CANDIDATE SHOULD DETERMINE THEIR CURRENT TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE)	$TEDE = DDE + CEDE$ $TEDE = 200 \text{ mrem} + 100 \text{ mrem}$ $TEDE = 300 \text{ mrem}$	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*4. CANDIDATE SHOULD DETERMINE THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TEDE	CANDIDATE SHOULD DETERMINE THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TEDE IS 2,000 mrem	S U Comments:
5. CANDIDATE SHOULD DETERMINE THEIR EXPOSURE MARGIN	EXPOSURE MARGIN = CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TEDE MINUS THEIR CURRENT TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE) Margin = 2,000 mrem – 300 mrem Margin = 1,700 mrem	S U Comments:
*6. CANDIDATE SHOULD DETERMINE THEIR MAXIMUM STAY TIME IN THE CAUTION HIGH RADIATION AREA	Stay Time = Margin ÷ Dose Rate Stay Time = 1,700 mrem ÷ 425 mrem/hr Stay Time = 4 hours Tolerance Of -5% = -0.2 hours Stay Time = 3.8 – 4.0 hours	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
7.	THIS ADMIN 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 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 CONTROL ROOM SUPERVISOR HAS REQUESTED YOU TO HANG WPA IN AN AREA WHERE THE KNOWN RADIATION DOSE RATE IS 425 mrem/hr. YOUR CURRENT YEAR EXPOSURE HISTORY ACCORDING TO YOUR NRC FORM 4 IS AS FOLLOWS:

- COMMITTED DOSE EQUIVALENT (CDE) 20 mrem
- COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE) 100 mrem
- DEEP-DOSE EQUIVALENT (DDE) 200 mrem
- EYE DOSE EQUIVALENT (LDE) 15 mrem
- SHALLOW DOSE EQUIVALENT (SDE) 10 mrem

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DETERMINE YOUR MAXIMUM STAY TIME IN THE CAUTION HIGH RADIATION AREA WHILE HANGING THE WPA BEFORE EXCEEDING THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE).

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A3 SRO
COMPLETION TIME: 15 MINUTES
JOB TITLE: SRO
DUTY: ADMINISTRATIVE
TASK TITLE: DETERMINE ACTIONS FOR VALVE STROKE TEST

K/A NO: G 2.2.12
K/A RATING: 3.4
REVISION: MAY 1, 2002

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: _____

REFERENCES: OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE
INSERVICE TEST, REV 4

TOOLS/EQUIPMENT: NONE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A3 SRO

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 IN MODE 1. OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE INSERVICE TEST HAS BEEN PERFORMED. THE TEST RESULTS WERE OUTSIDE THE NORMAL RANGE. THE SHIFT SUPERVISOR DIRECTED THE IMMEDIATE RETEST OF THE VALVE. THE RESULTS WERE THE SAME FOR THE SECOND TEST.

Initiating Cues: YOU ARE THE CONTROL ROOM SUPERVISOR AND HAVE BEEN GIVEN ATTACHMENT 1 FOR REVIEW. YOU ARE TO DETERMINE WHAT ACTIONS SHOULD BE TAKEN BASED ON THE RESULTS OF THIS SURVEILLANCE.

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL DETERMINE THAT THE DATA IS TO BE ANALYZED WITHIN 96 HOURS TO VERIFY THAT THE NEW STROKE TIME REPRESENTS ACCEPTABLE VALVE OPERATION **OR** THE VALVE SHALL BE DECLARED INOPERABLE.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE SHOULD REVIEW THE TEST RESULTS ON ATTACHMENT 1	CANDIDATE SHOULD REVIEW THE TEST RESULTS ON ATTACHMENT 1	S U Comments:
3. CANDIDATE SHOULD OBTAIN A COPY OF OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE INSERVICE TEST AND REVIEW THE ACCEPTANCE CRITERIA	CANDIDATE SHOULD DETERMINE THAT THE OPEN STROKE TIME IS LESS THAN THE MAXIMUM ALLOWED STROKE TIME, BUT OUTSIDE THE NORMAL RANGE FOR BOTH THE 1 ST AND 2 ND TESTS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*4. CANDIDATE SHOULD DETERMINE WHAT ACTIONS SHOULD BE TAKEN BASED ON THE RESULTS OF THIS SURVEILLANCE	<p>CANDIDATE SHOULD DETERMINE THE FOLLOWING:</p> <p>THE DATA IS TO BE ANALYZED WITHIN 96 HOURS TO VERIFY THAT THE NEW STROKE TIME REPRESENTS ACCEPTABLE VALVE OPERATION OR THE VALVE SHALL BE DECLARED INOPERABLE</p>	<p>S U</p> <p>Comments:</p>
5.	<p>THIS ADMIN JPM IS COMPLETE</p> <p><u>RECORD STOP TIME ON PAGE 1</u></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 IN MODE 1. OSP-EC-V001A, FUEL POOL HEAT EXCHANGER "A" SHELL SIDE OUT ISO VALVE INSERVICE TEST HAS BEEN PERFORMED. THE TEST RESULTS WERE OUTSIDE THE NORMAL RANGE. THE SHIFT SUPERVISOR DIRECTED THE IMMEDIATE RETEST OF THE VALVE. THE RESULTS WERE THE SAME FOR THE SECOND TEST.

Initiating Cues: YOU ARE THE CONTROL ROOM SUPERVISOR AND HAVE BEEN GIVEN ATTACHMENT 1 FOR REVIEW. YOU ARE TO DETERMINE WHAT ACTIONS SHOULD BE TAKEN BASED ON THE RESULTS OF THIS SURVEILLANCE.

VALVE TEST DATA SHEET

PERSON PERFORMING

INITIAL

REACTOR OPERATOR

RO

DATE STARTED JULY 31, 2002

BALANCE OF PLANT OPERATOR

BOP

DATE COMPLETED JULY 31, 2002

VALVE	AS FOUND POS	INIT REM POS	INIT LOCAL POS	OBSERVED STROKE TIME(S)		NORMAL STROKE TIME RANGE (S)		MAX OPEN STR TIME(S)	MAX CLOSE STR TIME(S)	FULL STROKE REM POS	FULL STROKE LOCAL POS	RESTOR POS	RESTOR VERIF	RESTOR INDEP VERIF
				O	C	O	C							
ECHV0011	OPEN	OPEN	OPEN	46.1 46.1*	56.1 56.1*	49.3-62.9	49.3-62.9	62.9	62.9	CLOSED	CLOSED	OPEN	RO	BOP

* Indicates data from second test.

M&TE ID NUMBERS RECORDED ON STS COMPLETION FORMS SW-2001-OP

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A4 RO
COMPLETION TIME: 15 MINUTES
JOB TITLE: URO
DUTY: ADMINISTRATIVE
TASK TITLE: CALCULATE STAY TIME

K/A NO: G 2.3.10
K/A RATING: 2.9
REVISION: MAY 1, 2002

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: _____

REFERENCES: APA-ZZ-01000, CALLAWAY PLANT HEALTH PHYSICS PROGRAM, REV 16

TOOLS/EQUIPMENT: CALCULATOR

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A4 RO

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 CONTROL ROOM SUPERVISOR HAS REQUESTED YOU TO HANG WPA IN AN AREA WHERE THE KNOWN RADIATION DOSE RATE IS 425 mrem/hr. YOUR CURRENT YEAR EXPOSURE HISTORY ACCORDING TO YOUR NRC FORM 4 IS AS FOLLOWS:

- | | |
|--|----------|
| • COMMITTED DOSE EQUIVALENT (CDE) | 20 mrem |
| • COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE) | 100 mrem |
| • DEEP-DOSE EQUIVALENT (DDE) | 200 mrem |
| • EYE DOSE EQUIVALENT (LDE) | 15 mrem |
| • SHALLOW DOSE EQUIVALENT (SDE) | 10 mrem |

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DETERMINE YOUR MAXIMUM STAY TIME IN THE CAUTION HIGH RADIATION AREA WHILE HANGING THE WPA BEFORE EXCEEDING THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE).

Notes:

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL HAVE CALCULATED THE MAXIMUM STAY TIME FOR HANGING THE WPA IS 4.0 HOURS WITHIN A TOLERANCE OF -5% (3.8 - 4.0 HOURS).

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE SHOULD REFER TO APA-ZZ-01000, CALLAWAY PLANT HEALTH PHYSICS PROGRAM	CANDIDATE SHOULD REFER TO APA-ZZ-01000, CALLAWAY PLANT HEALTH PHYSICS PROGRAM	S U Comments:
3. CANDIDATE SHOULD DETERMINE THEIR CURRENT TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE)	$TEDE = DDE + CEDE$ $TEDE = 200 \text{ mrem} + 100 \text{ mrem}$ $TEDE = 300 \text{ mrem}$	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*4. CANDIDATE SHOULD DETERMINE THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TEDE	CANDIDATE SHOULD DETERMINE THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TEDE IS 2,000 mrem	S U Comments:
5. CANDIDATE SHOULD DETERMINE THEIR EXPOSURE MARGIN	EXPOSURE MARGIN = CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TEDE MINUS THEIR CURRENT TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE) Margin = 2,000 mrem – 300 mrem Margin = 1,700 mrem	S U Comments:
*6. CANDIDATE SHOULD DETERMINE THEIR MAXIMUM STAY TIME IN THE CAUTION HIGH RADIATION AREA	Stay Time = Margin ÷ Dose Rate Stay Time = 1,700 mrem ÷ 425 mrem/hr Stay Time = 4 hours Tolerance Of -5% = -0.2 hours Stay Time = 3.8 – 4.0 hours	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
7.	THIS ADMIN 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 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 CONTROL ROOM SUPERVISOR HAS REQUESTED YOU TO HANG WPA IN AN AREA WHERE THE KNOWN RADIATION DOSE RATE IS 425 mrem/hr. YOUR CURRENT YEAR EXPOSURE HISTORY ACCORDING TO YOUR NRC FORM 4 IS AS FOLLOWS:

- COMMITTED DOSE EQUIVALENT (CDE) 20 mrem
- COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE) 100 mrem
- DEEP-DOSE EQUIVALENT (DDE) 200 mrem
- EYE DOSE EQUIVALENT (LDE) 15 mrem
- SHALLOW DOSE EQUIVALENT (SDE) 10 mrem

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DETERMINE YOUR MAXIMUM STAY TIME IN THE CAUTION HIGH RADIATION AREA WHILE HANGING THE WPA BEFORE EXCEEDING THE CALLAWAY PLANT ADMINISTRATIVE DOSE LIMIT FOR WHOLE BODY TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE).

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A4 SRO
COMPLETION TIME: 15 MINUTES
JOB TITLE: SRO
DUTY: ADMINISTRATIVE
TASK TITLE: REPORTABILITY FOR EXCEEDING EXPOSURE LIMITS

K/A NO: G 2.3.4
K/A RATING: 3.1
REVISION: MAY 1, 2002

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: _____

REFERENCES: APA-ZZ-00520, REPORTING REQUIREMENTS AND RESPONSIBILITIES, REV 16

TOOLS/EQUIPMENT: NONE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A4 SRO

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 IN MODE 6. REFUELING ACTIVITIES ARE IN PROGRESS. AN EQUIPMENT OPERATOR WAS SENT INSIDE THE INCORE INSTRUMENT TUNNEL TO HANG WPA. DUE TO AN INCORE INSTRUMENT THIMBLE BEING RETRACTED, THE EQUIPMENT OPERATOR RECEIVED AN OVEREXPOSURE OF 30 REM TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE).

Initiating Cues: YOU ARE THE CONTROL ROOM SUPERVISOR. YOU HAVE BEEN DIRECTED TO DETERMINE THE FOLLOWING ITEMS:

1. IS THIS OVEREXPOSURE REPORTABLE
2. IF YES, WHO IS THE PRIMARY RECIPIENT OF THE REPORT
3. IF YES, WHAT IS THE TIME LIMIT FOR THE REPORT

TASK STANDARD: UPON COMPLETION OF THE TASK, THE CANDIDATE WILL HAVE DETERMINED THE FOLLOWING:

1. THE OVEREXPOSURE **IS** REPORTABLE
2. THE PRIMARY RECIPIENT IS THE **NRC OPERATIONS CENTER**
3. THE TIME LIMIT FOR THE REPORT IS **ONE HOUR**

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED	CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES	S U Comments:
2. CANDIDATE SHOULD REFER TO APA-ZZ-00520, REPORTING REQUIREMENTS AND RESPONSIBILITIES	CANDIDATE SHOULD REFER TO APA-ZZ-00520, REPORTING REQUIREMENTS AND RESPONSIBILITIES ATTACHMENT 1 SECTION 3.3 OR ATTACHMENT 2 ITEM 11 CONTAIN THE REPORTING CRITERIA FOR THIS EVENT	S U Comments:
*3. CANDIDATE SHOULD DETERMINE WHETHER THE OVEREXPOSURE IS REPORTABLE	CANDIDATE SHOULD DETERMINE THE OVEREXPOSURE <u>IS</u> REPORTABLE	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
*4. CANDIDATE SHOULD DETERMINE WHO IS THE PRIMARY RECIPIENT OF THE REPORT	<p>CANDIDATE SHOULD DETERMINE THE <u>NRC OPERATIONS CENTER</u> IS THE PRIMARY RECIPIENT OF THE REPORT</p> <p>NRC ENS LINE (RED PHONE) IS ALSO AN ACCEPTABLE ANSWER</p>	<p>S U</p> <p>Comments:</p>
*5. CANDIDATE SHOULD DETERMINE THE TIME LIMIT FOR THE REPORT	<p>CANDIDATE SHOULD DETERMINE THE TIME LIMIT FOR THE REPORT IS <u>ONE HOUR</u></p>	<p>S U</p> <p>Comments:</p>
6.	<p>THIS ADMIN JPM IS COMPLETE</p> <p><u>RECORD STOP TIME ON PAGE 1</u></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 IN MODE 6. REFUELING ACTIVITIES ARE IN PROGRESS. AN EQUIPMENT OPERATOR WAS SENT INSIDE THE INCORE INSTRUMENT TUNNEL TO HANG WPA. DUE TO AN INCORE INSTRUMENT THIMBLE BEING RETRACTED, THE EQUIPMENT OPERATOR RECEIVED AN OVEREXPOSURE OF 30 REM TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE).

Initiating Cues: YOU ARE THE CONTROL ROOM SUPERVISOR. YOU HAVE BEEN DIRECTED TO DETERMINE THE FOLLOWING ITEMS:

1. IS THIS OVEREXPOSURE REPORTABLE
2. IF YES, WHO IS THE PRIMARY RECIPIENT OF THE REPORT
3. IF YES, WHAT IS THE TIME LIMIT FOR THE REPORT

CALLAWAY PLANT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

ADMIN JPM NO: ILE-2002-A5 SRO
COMPLETION TIME: 15 MINUTES
JOB TITLE: SRO
DUTY: ADMINISTRATIVE
TASK TITLE: EMERGENCY EVENT CLASSIFICATION

K/A NO: G 2.4.41
K/A RATING: 4.1
REVISION: APRIL 30, 2002

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: _____

REFERENCES: EIP-ZZ-00101, CLASSIFICATION OF EMERGENCIES, REV 29

TOOLS/EQUIPMENT: NONE

FACILITY REPRESENTATIVE: _____ DATE: _____

CHIEF EXAMINER: _____ DATE: _____

ADMIN JPM NO: ILE-2002-A5 SRO

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 WAS AT 100% REACTOR POWER WHEN AN INPUT BUFFER CARD FAILED IN SA075A CAUSING ALL MSIVs TO CLOSE. THE REACTOR WAS TRIPPED AND SAFETY INJECTION WAS INITIATED WHEN "D" STEAM GENERATOR PRESSURE REACHED 615 PSIG. IT WAS LATER DETERMINED THAT A SAFETY RELIEF VALVE WAS STUCK OPEN ON "D" STEAM GENERATOR. ALL EFFORTS TO GAG THE STUCK OPEN SAFETY RELIEF VALVE HAVE FAILED. OPERATORS WERE IN PROCEDURE E-2, FAULTED STEAM GENERATOR ISOLATION, WHEN SJ-RE-02 (SG BLOWDOWN SAMPLE MONITOR) WENT INTO HI HI ALARM INDICATING $2.35 \text{ E}^{-3} \mu\text{Ci/cc}$. IT WAS DETERMINED THAT TUBES HAD RUPTURED IN THE "D" STEAM GENERATOR DURING THE DEPRESSURIZATION. OPERATORS ARE CURRENTLY IN PROCEDURE E-3, STEAM GENERATOR TUBE RUPTURE.

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

Notes: **THIS IS A TIME CRITICAL ADMIN JPM TO BE COMPLETED WITHIN 15 MINUTES.**

TASK STANDARD: UPON COMPLETION OF THIS TASK THE CANDIDATE SHOULD DETERMINE A SITE EMERGENCY EXIST DUE TO GROUP 2D EAL.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	STANDARD	SCORE
<p>1. PROVIDE CANDIDATE WITH MATERIAL AND ALLOW TIME FOR REVIEW OF WORK TO BE PERFORMED</p> <p>STEPS MAY BE PREFORMED IN ANY ORDER</p>	<p>CANDIDATE SHOULD REVIEW ADMIN JPM INITIAL CONDITIONS AND INITIATING CUES</p>	<p>S U</p> <p>Comments:</p>
<p>2. OBTAIN A COPY OF EIP-ZZ-00101, CLASSIFICATION OF EMERGENCIES</p>	<p>CANDIDATE SHOULD OBTAIN A COPY OF EIP-ZZ-00101, CLASSIFICATION OF EMERGENCIES</p>	<p>S U</p> <p>Comments:</p>
<p>*3. APPLY GROUP 2D EAL AND DECLARE A SITE EMERGENCY DUE TO A CTMT BARRIER LOSS INDICATOR <u>and</u> ANY RCS BARRIER INDICATOR</p> <p>(APPLICABLE IN MODES 1 THROUGH 4)</p>	<p>CANDIDATE SHOULD DETERMINE THE FOLLOWING APPLY FROM GROUP 2D EAL:</p> <p>CONTAINMENT BARRIER LOSS INDICATOR 3.a and 3.b.1 AND RCS BARRIER LOSS INDICATOR 2.a.3 and 2.b.1 OR RCS BARRIER POTENTIAL LOSS INDICATOR 6.a.3 and 6.b</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	STANDARD	SCORE
4.	THE JPM IS COMPLETE <u>RECORD STOP TIME ON</u> <u>PAGE 1</u>	S U Comments:
5.	COMPARE CANDIDATE'S ANSWER WITH THE FOLLOWING: SITE EMERGENCY DECLARED GROUP 2D EAL	S U Comments:

* 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 WAS AT 100% REACTOR POWER WHEN AN INPUT BUFFER CARD FAILED IN SA075A CAUSING ALL MSIVs TO CLOSE. THE REACTOR WAS TRIPPED AND SAFETY INJECTION WAS INITIATED WHEN "D" STEAM GENERATOR PRESSURE REACHED 615 PSIG. IT WAS LATER DETERMINED THAT A SAFETY RELIEF VALVE WAS STUCK OPEN ON "D" STEAM GENERATOR. ALL EFFORTS TO GAG THE STUCK OPEN SAFETY RELIEF VALVE HAVE FAILED. OPERATORS WERE IN PROCEDURE E-2, FAULTED STEAM GENERATOR ISOLATION, WHEN SJ-RE-02 (SG BLOWDOWN SAMPLE MONITOR) WENT INTO HI HI ALARM INDICATING $2.35 \text{ E}^{-3} \mu\text{Ci/cc}$. IT WAS DETERMINED THAT TUBES HAD RUPTURED IN THE "D" STEAM GENERATOR DURING THE DEPRESSURIZATION. OPERATORS ARE CURRENTLY IN PROCEDURE E-3, STEAM GENERATOR TUBE RUPTURE.

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

Notes: **THIS IS A TIME CRITICAL ADMIN JPM TO BE COMPLETED WITHIN 15 MINUTES.**

REFERENCE USE

CALLAWAY PLANT WAS IN MODE 1 WHEN A TRANSIENT OCCURRED WHICH RESULTED IN AN EMERGENCY EVENT DECLARATION. WHAT IS THE PRIMARY MEANS OF COMMUNICATIONS USED TO MAKE INITIAL NOTIFICATIONS TO THE STATE EMERGENCY MANAGEMENT AGENCY (SEMA) AND THE FOUR COUNTIES IN THE EMERGENCY PLANNING ZONE?

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2002-B/U
COMPLETION TIME: 8 MINUTES
JOB TITLE: URO/SRO
DUTY: CONTAINMENT COOLING SYSTEM
TASK TITLE: START "A" CTMT COOLER FAN

K/A NO: 022A4.01
K/A RATING: 3.6/3.6
REVISION: APRIL 29, 2002

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-GN-00001, CONTAINMENT COOLING AND CRDM COOLING, REVISION 11

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" CONTAINMENT COOLER FAN WAS SECURED FOR ROUTINE MAINTENANCE. ONE (1) CAVITY COOLING FAN IS RUNNING, THREE (3) CRDM COOLING FANS ARE RUNNING, AND THE PZR COOLING FAN IS SECURED.

Initiating Cues: THE MAINTENANCE ON "A" CONTAINMENT COOLER FAN HAS BEEN COMPLETED. YOU HAVE BEEN DIRECTED TO START THE "A" CONTAINMENT COOLER FAN USING SECTION 4.2 OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes: USE IC-170 OR IC-166. STOP "A" CONTAINMENT COOLER WITH GN HIS-5 AND PLACE HANDSWITCH GN-HS-5 IN SLOW. PARAMETER, GNS001, HI VIB, DELAY 31 SECONDS, EVENT TRIGGER = 10, INSERT. EVENT, TRIGGER #10, TYPE "x20i64r.eq.true", ACCEPT NEW EVENT.

Task Standard: UPON COMPLETION OF THIS JPM, THE "A" CONTAINMENT COOLER FAN WILL HAVE BEEN STARTED AND SECURED DUE TO HIGH VIBRATIONS.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>1. OBTAIN A COPY OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING</p>	<p>PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEETS)</p>	<p>OPERATOR SHOULD OBTAIN A COPY OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING</p>	<p>S U Comments:</p>
<p>2. REVIEW PRECAUTIONS AND LIMITATIONS OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING STEP 2.0</p>	<p>IF ASKED, ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED</p>	<p>OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING</p>	<p>S U Comments:</p>
<p>3. REVIEW INITIAL CONDITIONS OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING STEP 3.0</p>	<p>IF ASKED, ALL INITIAL CONDITIONS ARE SATISFIED</p>	<p>OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING</p>	<p>S U Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*4. PLACE SELECTOR SWITCH GN HS-5 FOR SGN01A IN THE FAST POSITION</p> <p>STEP 4.2.1</p>	<p>GN HS-5 IS IN THE FAST POSITION</p>	<p>OPERATOR SHOULD PLACE SELECTOR SWITCH GN HS-5 FOR SGN01A IN THE FAST POSITION</p> <p>LOCATED ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>5. VIBRATION ON CONTAINMENT COOLERS MAY BE MONITORED AT THE FOLLOWING COMPUTER POINT</p> <p>SGN01A: GNY0007</p> <p>STEP 4.2.2</p>		<p>OPERATOR SHOULD MONITOR VIBRATION OF SGN01A AT COMPUTER POINT GNY0007 FOR "A" CONTAINMENT COOLER FAN</p>	<p>S U</p> <p>Comments:</p>
<p>*6. START CONTAINMENT AIR COOLER "A", SGN01A, WITH HANDSWITCH GN HIS-5</p> <p>STEP 4.2.3</p>	<p>GN HIS-5 RED SLOW LIGHT IS LIT AND THE GREEN LIGHT IS OUT</p>	<p>OPERATOR SHOULD SELECT "RUN" ON GN HIS-5, CONTAINMENT COOLER FAN "A"</p> <p>LOCATED ON RL020</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. SGN01A WILL SHIFT TO FAST AFTER 30 SECONDS</p> <p>NOTE PRIOR TO STEP 4.2.4</p>	<p>30 SECONDS AFTER SELECTING RUN, THE RED FAST LIGHT IS LIT AND THE RED SLOW LIGHT IS OUT</p>	<p>OPERATOR SHOULD OBSERVE THE RED FAST LIGHT ILLUMINATE AND THE RED SLOW LIGHT GO OUT</p> <p>LOCATED ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>8. IF ANY VIBRATION ALARM OCCURS, CONSULT THE CONTROL ROOM SUPERVISOR TO DETERMINE IF FAN SHOULD BE STOPPED, OR TO RESET THE ALARM ON RP312</p> <p>STEP 4.2.4</p>	<p>GNY0007 INDICATES "A" CONTAINMENT COOLER FAN HAS HIGH VIBRATION</p> <p>THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE HIGH VIBRATION ON THE "A" CONTAINMENT COOLER</p>	<p>OPERATOR SHOULD DETERMINE "A" CONTAINMENT COOLER HAS HIGH VIBRATION AND INFORM CONTROL ROOM SUPERVISOR</p>	<p>S U</p> <p>Comments:</p>
<p>9.</p>	<p>THE CONTROL ROOM SUPERVISOR DIRECTS "A" CONTAINMENT COOLER FAN BE SECURED PER SECTION 4.3 OF OTN-GN-00001</p> <p>NOTE: HAND APPLICANT SECTION 4.3 OF OTN-GN-00001 (PINK SHEET)</p>		<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*10. STOP "A" CONTAINMENT COOLER FAN, SGN01A, WITH HANDSWITCH GN HIS-5</p> <p>STEP 4.3.1</p>	<p>GN HIS-5 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD STOP "A" CONTAINMENT COOLER WITH HANDSWITCH GN HIS-5</p>	<p>S U</p> <p>Comments:</p>
<p>11. IF CONTAINMENT COOLER 1D HAS BEEN SECURED AND RCS TEMPERATURE IS >120°F START THE PZR COOLING FAN</p> <p>STEP 4.3.2</p>		<p>OPERATOR SHOULD REALIZE "A" CONTAINMENT COOLER FAN WAS SECURED</p>	<p>S U</p> <p>Comments:</p>
<p>12. INFORM THE CONTROL ROOM SUPERVISOR THAT THE "A" CONTAINMENT COOLER HAS BEEN SECURED</p>	<p>THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE</p>	<p>OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT THE "A" CONTAINMENT COOLER HAS BEEN SECURED</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13.	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: "A" CONTAINMENT COOLER FAN WAS SECURED FOR ROUTINE MAINTENANCE. ONE (1) CAVITY COOLING FAN IS RUNNING, THREE (3) CRDM COOLING FANS ARE RUNNING, AND THE PZR COOLING FAN IS SECURED.

Initiating Cues: THE MAINTENANCE ON "A" CONTAINMENT COOLER FAN HAS BEEN COMPLETED. YOU HAVE BEEN DIRECTED TO START THE "A" CONTAINMENT COOLER FAN USING SECTION 4.2 OF OTN-GN-00001, CONTAINMENT COOLING AND CRDM COOLING. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-C1	K/A NO:	013A4.01
COMPLETION TIME:	6 MINUTES	K/A RATING:	4.5/4.8
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM		
TASK TITLE:	MANUALLY OPERATE MSIVs WHICH FAIL TO ACTUATE		

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: E-0, REACTOR TRIP OR SAFETY INJECTION, REVISION 1B5
OOA-SA-0001A, SA075A EMERGENCY OVERRIDE PANEL OPERATION,
REVISION 2

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 3. THE CONTROL ROOM CREW IS RESPONDING TO A SAFETY INJECTION PER E-0, REACTOR TRIP OR SAFETY INJECTION.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (BOP REACTOR OPERATOR) TO CHECK IF MAIN STEAMLINES SHOULD BE ISOLATED PER STEP 9 OF ATTACHMENT 12 OF E-0, REACTOR TRIP OR SAFETY INJECTION AND PERFORM ALL ACTIONS AND RESPONSE NOT OBTAINED ACTIONS PER STEP 9. INFORM THE CONTROL ROOM SUPERVISOR WHEN STEP 9 HAS BEEN COMPLETED.

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes:

Task Standard: UPON COMPLETION OF THIS JPM, ALL MSIVs WILL HAVE BEEN FAST CLOSED FROM SA075A.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF E-0, REACTOR TRIP OR SAFETY INJECTION, ATTACHMENT 12, STEP 9	PROVIDE OPERATOR WITH COPY OF ATTACHMENT 12, STEP 9 (GREEN SHEET)	OPERATOR SHOULD OBTAIN A COPY OF E-0, REACTOR TRIP OR SAFETY INJECTION, ATTACHMENT 12, STEP 9	S U Comments:
2. CHECK IF SG PRESSURES ARE LESS THAN OR EQUAL TO 615 PSIG STEP 9a	ALL STEAM GENERATOR PRESSURES ARE AT 590 PSIG	OPERATOR SHOULD CHECK STEAM GENERATOR PRESSURES ON RL026	S U Comments:
3. ENSURE MSIVs AND MSIV BYPASS VALVES - CLOSED STEP 9b	ALL MSIVs RED LIGHTS ARE LIT AND GREEN LIGHTS ARE OUT ALL MSIV BYPASSES GREEN LIGHTS ARE LIT AND RED LIGHTS ARE OUT	OPERATOR SHOULD CHECK MSIV AND BYPASS POSITIONS ON RL027	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>4. FAST CLOSE MSIV AND BYPASS VALVES USING AB-HS-79 OR AB-HS-80</p> <p>STEP 9b RNO</p>	<p>ALL MSIVs RED LIGHTS ARE LIT AND GREEN LIGHTS ARE OUT</p> <p>ALL MSIV BYPASSES GREEN LIGHTS ARE LIT AND RED LIGHTS ARE OUT</p>	<p>OPERATOR SHOULD DEPRESS EITHER AB-HS-79 OR AB-HS-80</p> <p>NOTE: OPERATOR MAY USE BOTH</p>	<p>S U</p> <p>Comments:</p>
<p>5. IF THE MSIVs DID NOT FAST CLOSE, THEN USE THE OPERATOR AIDS OOA-SA-0001A OR OOA-SA-0001B TO FAST CLOSE MSIVs</p> <p>STEP 9b RNO</p>	<p>CONTROL ROOM SUPERVISOR DIRECTS USE OF OOA-SA-0001A FOR SA075A</p> <p>NOTE: HAND APPLICANT OOA-SA-0001A (PINK SHEET)</p>	<p>OPERATOR SHOULD LOCATE OPERATOR AID OOA-SA-0001A AT SA075A</p>	<p>S U</p> <p>Comments:</p>
<p>6. SECURE POWER TO THE 3 PLC "LOGIC CHANNELS" AS FOLLOWS:</p> <p>STEP 1.1</p>		<p>OPERATOR SHOULD LOCATE THE 3 LOGIC CHANNEL POWER SWITCHES LOCATED ABOVE THE EMERGENCY OVERRIDE PANEL</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*7. SECURE POWER TO THE LOGIC CHANNEL 1 BY PLACING LOGIC CH. 1 SWITCH TO THE OFF POSITION</p> <p>STEP 1.1</p>	<p>LOGIC CH. 1 POWER SWITCH IS IN OFF</p>	<p>OPERATOR SHOULD SECURE POWER TO LOGIC CHANNEL 1 BY PLACING LOGIC CH. 1 TO THE OFF POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*8. SECURE POWER TO THE LOGIC CHANNEL 2 BY PLACING LOGIC CH. 2 SWITCH TO THE OFF POSITION</p> <p>STEP 1.1</p>	<p>LOGIC CH. 2 POWER SWITCH IS IN OFF</p>	<p>OPERATOR SHOULD SECURE POWER TO LOGIC CHANNEL 2 BY PLACING LOGIC CH. 2 TO THE OFF POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*9. SECURE POWER TO THE LOGIC CHANNEL 3 BY PLACING LOGIC CH. 3 SWITCH TO THE OFF POSITION</p> <p>STEP 1.1</p>	<p>LOGIC CH. 3 POWER SWITCH IS IN OFF</p>	<p>OPERATOR SHOULD SECURE POWER TO LOGIC CHANNEL 3 BY PLACING LOGIC CH. 3 TO THE OFF POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*10. PLACE THE MSIV ENABLE SWITCH TO ENABLE</p> <p>STEP 1.2</p>	<p>MSIV ENABLE SWITCH IS IN THE ENABLE POSITION</p>	<p>OPERATOR SHOULD PLACE THE MSIV ENABLE SWITCH (S99) TO ENABLE ON THE EMERGENCY OVERRIDE PANEL</p>	<p>S U</p> <p>Comments:</p>
<p>*11. FAST CLOSE 'A' MSIV (AB-HV-14) BY PLACING AB-HV-14 MSIV TOGGLE SWITCH TO THE FC POSITION</p> <p>STEP 1.3</p>	<p>MSIV 'A' TOGGLE SWITCH IS IN THE (FC) FAST CLOSE POSITION</p>	<p>OPERATOR SHOULD PLACE MSIV 'A' TOGGLE SWITCH (S95) TO THE (FC) FAST CLOSE POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*12. FAST CLOSE 'B' MSIV (AB-HV-17) BY PLACING AB-HV-17 MSIV TOGGLE SWITCH TO THE FC POSITION</p> <p>STEP 1.3</p>	<p>MSIV 'B' TOGGLE SWITCH IS IN THE (FC) FAST CLOSE POSITION</p>	<p>OPERATOR SHOULD PLACE MSIV 'B' TOGGLE SWITCH (S96) TO THE (FC) FAST CLOSE POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*13. FAST CLOSE 'C' MSIV (AB-HV-20) BY PLACING AB-HV-20 MSIV TOGGLE SWITCH TO THE FC POSITION</p> <p>STEP 1.3</p>	<p>MSIV 'C' TOGGLE SWITCH IS IN THE (FC) FAST CLOSE POSITION</p>	<p>OPERATOR SHOULD PLACE MSIV 'C' TOGGLE SWITCH (S97) TO THE (FC) FAST CLOSE POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*14. FAST CLOSE 'D' MSIV (AB-HV-11) BY PLACING AB-HV-11 MSIV TOGGLE SWITCH TO THE FC POSITION</p> <p>STEP 1.3</p>	<p>MSIV 'D' TOGGLE SWITCH IS IN THE (FC) FAST CLOSE POSITION</p>	<p>OPERATOR SHOULD PLACE MSIV 'D' TOGGLE SWITCH (S98) TO THE (FC) FAST CLOSE POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>15. IF THE MSIV DID NOT CLOSE, GO TO THE OTHER TRAIN MSFIS CABINET, SA075B AND PERFORM THE FAST CLOSURE OPERATION</p> <p>STEP 1.4</p>	<p>ALL MSIVs GREEN LIGHTS ARE LIT AND RED LIGHTS ARE OUT</p>	<p>OPERATOR SHOULD CHECK MSIV POSITIONS ON RL027</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. INFORM THE CONTROL ROOM SUPERVISOR THAT STEP 9 IS COMPLETE AND ALL MSIVs HAVE BEEN CLOSED	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT STEP 9 IS COMPLETE AND ALL MSIVs HAVE BEEN CLOSED	S U Comments:
17.	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 3. THE CONTROL ROOM CREW IS RESPONDING TO A SAFETY INJECTION PER E-0, REACTOR TRIP OR SAFETY INJECTION.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (BOP REACTOR OPERATOR) TO CHECK IF MAIN STEAMLINES SHOULD BE ISOLATED PER STEP 9 OF ATTACHMENT 12 OF E-0, REACTOR TRIP OR SAFETY INJECTION AND PERFORM ALL ACTIONS AND RESPONSE NOT OBTAINED ACTIONS PER STEP 9. INFORM THE CONTROL ROOM SUPERVISOR WHEN STEP 9 HAS BEEN COMPLETED.

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2002-P1
COMPLETION TIME: 11 MINUTES
JOB TITLE: URO/SRO
DUTY: CHEMICAL AND VOLUME CONTROL SYSTEM
TASK TITLE: EMERGENCY BORATION PER FR-S.1

K/A NO: 004A2.14
K/A RATING: 3.8/3.9
REVISION: APRIL 29, 2002

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: FR-S.1, RESPONSE TO NUCLEAR POWER GENERATION, REVISION 1B3

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: THE "A" S/G LEVEL HAS DECREASED BELOW THE LO LO LEVEL REACTOR TRIP SETPOINT AND THE REACTOR HAS FAILED TO TRIP. THE CREW HAS ATTEMPTED TO MANUALLY TRIP THE REACTOR. THE ATTEMPT WAS UNSUCCESSFUL.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO INITIATE IMMEDIATE BORATION OF THE RCS AT STEP 4 OF FR-S.1, RESPONSE TO NUCLEAR POWER GENERATION.

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes:

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL BE BORATING THE RCS THROUGH BGV0177.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF FR-S.1, RESPONSE TO NUCLEAR POWER GENERATION	PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEET)	OPERATOR SHOULD OBTAIN A COPY OF FR-S.1, RESPONSE TO NUCLEAR POWER GENERATION	<p style="text-align: center;">S U</p> Comments:
*2. ENSURE AT LEAST ONE (1) CCP OR NCP IS RUNNING STEP 4.a	BG-HIS-1A, CCP "A" RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD LOOK FOR A RED LIGHT LIT ON ANY OF THE FOLLOWING PUMPS: CCP "A" BG-HIS-1A CCP "B" BG-HIS-2A NCP BG HIS-3 LOCATED ON RL001	<p style="text-align: center;">S U</p> Comments:
*3. OPEN EMERGENCY BORATE TO CHARGING PUMPS SUCTION VALVE BG-HIS-8104 STEP 4.b.(1)	BG-HIS-8104 GREEN LIGHT REMAINS LIT AND RED LIGHT DOES <u>NOT</u> COME ON	OPERATOR SHOULD ATTEMPT TO OPEN EMERGENCY BORATE TO CHARGING PUMPS SUCTION VALVE BG-HIS-8104 LOCATED ON RL001	<p style="text-align: center;">S U</p> Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. INITIATE IMMEDIATE BORATION OF RCS BY PERFORMING ATTACHMENT 1, IMMEDIATE RCS BORATION STEP 4.b RNO	PROVIDE OPERATOR WITH A COPY OF ATTACHMENT 1 (PINK SHEET)	OPERATOR SHOULD REALIZE THAT BGHV8104 DID NOT OPEN AND GO TO ATTACHMENT 1	S U Comments:
5. ENSURE A CCP OR THE NCP IS RUNNING STEP 1.a.(1)	BG-HIS-1A, CCP "A" RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD LOOK FOR A RED LIGHT LIT ON ANY OF THE FOLLOWING PUMPS: CCP "A" BG-HIS-1A CCP "B" BG-HIS-2A NCP BG HIS-3 LOCATED ON RL001	S U Comments:
6. OPEN CCP SUCTIONS FROM RWST, BN-HIS-112D AND BN-HIS-112E STEP 1.a.(2)	BN-HIS-112D GREEN LIGHT REMAINS LIT AND RED LIGHT DOES <u>NOT</u> COME ON BN-HIS-112E GREEN LIGHT REMAINS LIT AND RED LIGHT DOES <u>NOT</u> COME ON	OPERATOR SHOULD ATTEMPT TO OPEN CCP SUCTIONS FROM RWST, BN-HIS-112D AND BN-HIS-112E LOCATED ON RL001	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. DIRECT AN EQUIPMENT OPERATOR (EO) TO OPEN ALTERNATE IMMEDIATE BORATION VALVE BGV0177 STEP 1.b.(1)	YOU ARE NOW THE PRIMARY EO AND THE REACTOR OPERATOR HAS DIRECTED YOU TO LOCALLY OPEN ALTERNATE IMMEDIATE BORATION VALVE BGV0177	OPERATOR SHOULD DIRECT AN EQUIPMENT OPERATOR (EO) TO OPEN ALTERNATE IMMEDIATE BORATION VALVE BGV0177 LOCATED IN AB 1974, "A" SI PUMP ROOM	
8. PROCEED TO "A" SAFETY INJECTION PUMP ROOM STEP 1.b.(1)		OPERATOR SHOULD GO TO HP ACCESS, THEN PROCEED TO THE AUX BLDG 1974' LEVEL, "A" SI PUMP ROOM	<p style="text-align: center;">S U</p> <p>Comments:</p>
9. LOCATE ALTERNATE IMMEDIATE BORATION VALVE BGV0177 STEP 1.b.(1)		OPERATOR SHOULD LOCATE ALTERNATE IMMEDIATE BORATION VALVE, BGV0177, ALONG THE NORTH WALL IN THE "A" SI PUMP ROOM	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*10. OPEN ALTERNATE IMMEDIATE BORATION VALVE BGV0177</p> <p>STEP 1.b.(1)</p>	<p>BGV0177 IS OPEN</p>	<p>OPERATOR SHOULD TURN THE HANDWHEEL FOR ALTERNATE IMMEDIATE BORATION VALVE BGV0177, IN THE COUNTER-CLOCKWISE DIRECTION UNTIL OPEN</p>	<p>S U</p> <p>Comments:</p>
<p>11. INFORM THE REACTOR OPERATOR THAT BGV0177 IS OPEN</p>	<p>THE REACTOR OPERATOR ACKNOWLEDGES THE TASK IS COMPLETE</p>	<p>OPERATOR SHOULD INFORM THE REACTOR OPERATOR THAT BGV0177 IS OPEN</p>	<p>S U</p> <p>Comments:</p>
<p>12.</p>	<p>THE JPM IS COMPLETE</p> <p><u>RECORD STOP TIME ON PAGE 1</u></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 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" S/G LEVEL HAS DECREASED BELOW THE LO LO LEVEL REACTOR TRIP SETPOINT AND THE REACTOR HAS FAILED TO TRIP. THE CREW HAS ATTEMPTED TO MANUALLY TRIP THE REACTOR. THE ATTEMPT WAS UNSUCCESSFUL.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (REACTOR OPERATOR) TO INITIATE IMMEDIATE BORATION OF THE RCS AT STEP 4 OF FR-S.1, RESPONSE TO NUCLEAR POWER GENERATION.

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2002-P2
COMPLETION TIME: 11 MINUTES
JOB TITLE: URO/SRO
DUTY: CONTAINMENT SYSTEM
TASK TITLE: LOCALLY CLOSE VALVES FOR CIS A

K/A NO: 103A2.03
K/A RATING: 3.5/3.8
REVISION: APRIL 29, 2002

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, REVISION 1B2

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: THERE HAS BEEN A LOSS OF ALL AC POWER AT THE CALLAWAY PLANT. THE CONTROL ROOM HAS ENTERED EMERGENCY PROCEDURE, ECA-0.0, LOSS OF ALL AC POWER.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM ATTACHMENT 3 (CISA-CONTINGENCY ACTIONS) OF ECA-0.0, LOSS OF ALL AC POWER. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes:

Task Standard: UPON COMPLETION OF THIS JPM, VALVES ASSOCIATED WITH PENETRATIONS 23, 24, 25, 26, 32 AND 65 WILL BE CLOSED.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF ATTACHMENT 3 OF ECA-0.0, LOSS OF ALL AC POWER	PROVIDE OPERATOR WITH A COPY OF ATTACHMENT 3 (GREEN SHEET)	OPERATOR SHOULD OBTAIN A COPY OF ATTACHMENT 3 OF ECA-0.0, LOSS OF ALL AC POWER	S U Comments:
2. GO TO THE AUX BUILDING SOUTH PIPING PENETRATION ROOM 1322 STEP 1.0		OPERATOR SHOULD GO TO HP ACCESS, THEN PROCEED TO THE SOUTH PIPING PENETRATION ROOM 1322	S U Comments:
*3. ENSURE CLOSED BG-HV-8100, SEAL WTR RTN OUTER CTMT ISO VLV STEP 1.a	BG-HV-8100 IS OPEN OPERATOR SHOULD DEMONSTRATE KNOWLEDGE OF HOW TO CLOSE A MOTOR OPERATED VALVE (DECLUTCH AND ROTATE THE HANDWHEEL IN THE CLOSED DIRECTION) BG-HV-8100 IS NOW CLOSED	OPERATOR SHOULD ENSURE CLOSED BG-HV-8100, SEAL WTR RTN OUTER CTMT ISO VLV NOTE: BG-HV-8100 IS A MOTOR OPERATED VALVE @ PEN 24	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*4. ENSURE CLOSED BG-HV-8152, CVCS LTDN SYS OUT CTMT ISO</p> <p>STEP 1.b</p>	<p>BG-HV-8152 IS OPEN</p> <p>OPERATOR SHOULD DEMONSTRATE KNOWLEDGE OF HOW TO CLOSE AN AIR OPERATED VALVE (VALVE WILL FAIL CLOSED ON LOSS OF AIR)</p> <p>BG-HV-8152 IS NOW CLOSED</p>	<p>OPERATOR SHOULD ENSURE CLOSED BG-HV-8152, CVCS LTDN SYS OUT CTMT ISO</p> <p>NOTE: BG-HV-8152 IS AN AIR OPERATED VALVE @ PEN 23</p>	<p>S U</p> <p>Comments:</p>
<p>5. ENSURE CLOSED BL-HV-8047, RX M/U WTR OUTER CTMT ISO</p> <p>STEP 1.c</p>	<p>BL-HV-8047 IS CLOSED</p>	<p>OPERATOR SHOULD ENSURE CLOSED BL-HV-8047, RX M/U WTR OUTER CTMT ISO</p> <p>NOTE: BL-HV-8047 IS AN AIR OPERATED VALVE @ PEN 25</p>	<p>S U</p> <p>Comments:</p>
<p>6. ENSURE CLOSED HB-HV-7136, RCDT HX OUT HDR OUTER CTMT ISO</p> <p>STEP 1.d</p>	<p>HB-HV-7136 IS CLOSED</p>	<p>OPERATOR SHOULD ENSURE CLOSED HB-HV-7136, RCDT HX OUT HDR OUTER CTMT ISO</p> <p>NOTE: HB-HV-7136 IS AN AIR OPERATED VALVE @ PEN 26</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. ENSURE CLOSED LF-FV-0096, CTMT NORM SUMP PMPS DISCH HDR AUX BLDG FCV</p> <p>STEP 1.e</p>	<p>LF-FV-0096 IS CLOSED</p>	<p>OPERATOR SHOULD ENSURE CLOSED LF-FV-0096, CTMT NORM SUMP PMPS DISCH HDR AUX BLDG FCV</p> <p>NOTE: LF-FV-0096 IS AN AIR OPERATED VALVE @ PEN 32</p>	<p>S U</p> <p>Comments:</p>
<p>8. ENSURE CLOSED GS-HV-21, H2 PURGE OUTER CTMT ISO</p> <p>STEP 1.f</p>	<p>GS-HV-21 IS CLOSED</p>	<p>OPERATOR SHOULD ENSURE CLOSED GS-HV-21, H2 PURGE OUTER CTMT ISO</p> <p>NOTE: GS-HV-21 IS A MOTOR OPERATED VALVE @ PEN 65</p>	<p>S U</p> <p>Comments:</p>
<p>9. INFORM THE CONTROL ROOM SUPERVISOR THAT ATTACHMENT 3 OF ECA-0.0 IS COMPLETE</p>	<p>THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE</p>	<p>OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT ATTACHMENT 3 OF ECA-0.0 IS COMPLETE</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
10.	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: THERE HAS BEEN A LOSS OF ALL AC POWER AT THE CALLAWAY PLANT. THE CONTROL ROOM HAS ENTERED EMERGENCY PROCEDURE, ECA-0.0, LOSS OF ALL AC POWER.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM ATTACHMENT 3 (CISA-CONTINGENCY ACTIONS) OF ECA-0.0, LOSS OF ALL AC POWER. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-P3	K/A NO:	064A4.01
COMPLETION TIME:	11 MINUTES	K/A RATING:	4.0/4.3
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	EMERGENCY DIESEL GENERATOR SYSTEM		
TASK TITLE:	LOCALLY START NE01 EMERGENCY DG		

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, REVISION 1B2

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: THERE HAS BEEN A LOSS OF ALL AC POWER AT THE CALLAWAY PLANT. THE CONTROL ROOM HAS ENTERED EMERGENCY PROCEDURE, ECA-0.0, LOSS OF ALL AC POWER. THE CONTROL ROOM SUPERVISOR IS AT STEP 5.a OF ECA-0.0, LOSS OF ALL AC POWER, AND DETERMINED THAT NEITHER EMERGENCY DIESEL GENERATOR (NE01 OR NE02) HAS STARTED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR DIRECTS YOU TO LOCALLY START NE01 PER ATTACHMENT 2 (LOCALLY STARTING EMERGENCY DIESEL GENERATOR) OF ECA-0.0, LOSS OF ALL AC POWER. THE CAUSE FOR THE FAILURE TO START IS UNKNOWN. INFORM THE CONTROL ROOM SUPERVISOR WHEN NE01 IS STARTED AND THE MASTER TRANSFER SWITCH IS IN "AUTO".

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes:

Task Standard: UPON COMPLETION OF THIS JPM, EMERGENCY DIESEL GENERATOR NE01 WILL BE RUNNING WITH ITS MASTER TRANSFER SWITCH (KJ-HS-9) IN "AUTO".

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF ATTACHMENT 2 OF ECA-0.0, LOSS OF ALL AC POWER	PROVIDE OPERATOR WITH A COPY OF ATTACHMENT 2 (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF ATTACHMENT 2 OF ECA-0.0, LOSS OF ALL AC POWER	S U Comments:
2. REVIEW NOTES ON ENGINE SHUTDOWN RELAY AND START FAILURE NOTES PRIOR TO STEP A		OPERATOR SHOULD REVIEW NOTES	S U Comments:
3. DETERMINE AND CORRECT CAUSE OF THE DIESEL GENERATORS FAILURE TO START STEP A	NO ANNUNCIATORS ARE IN ALARM ON PANEL KJ-121	OPERATOR SHOULD ATTEMPT TO DETERMINE CAUSE OF FAILURE NOTE: THE CAUSE FOR THE FAILURE TO START IS UNKNOWN (GIVEN IN INITIATING CUES)	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. PERFORM PART D FOR UNKNOWN FAILURES TO START STEP A		OPERATOR SHOULD DETERMINE PART D SHOULD BE PERFORMED	S U Comments:
5. PERFORM A WALKDOWN OF NE01 TO ENSURE THAT NO OBVIOUS ADVERSE CONDITIONS EXIST PRIOR TO STARTING THE DIESEL STEP D.2.a	THERE ARE NO OBVIOUS ADVERSE CONDITIONS	OPERATOR SHOULD PERFORM A WALKDOWN OF NE01 TO ENSURE THAT NO OBVIOUS ADVERSE CONDITIONS EXIST PRIOR TO STARTING THE DIESEL	S U Comments:
6. ON PANEL NE107, BREAK THE GLASS ON THE EMERGENCY START POP-OUT BUTTON (KJ-HS-1D) STEP D.2.b	NE01 DID NOT START	OPERATOR SHOULD USE THE ATTACHED HAMMER TO BREAK THE GLASS ON THE EMERGENCY START POP-OUT BUTTON (KJ-HS-1D) NOTE: THIS CAN ALSO BE PERFORMED BY UNSCREWING THE GLASS COVER	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. PLACE THE MASTER TRANSFER SWITCH (KJ-HS-9) IN LOC/MAN</p> <p>STEP D.2.d</p>	<p>KJ-HS-9 IS IN LOC/MAN</p> <p>AUDIBLE ALARM ON PANEL KJ-121</p> <p>"SWITCH NOT IN AUTO" ANNUNCIATOR IS IN ALARM</p> <p>ALARM IS SILENCED</p>	<p>OPERATOR SHOULD PLACE THE MASTER TRANSFER SWITCH (KJ-HS-9) IN LOC/MAN</p> <p>OPERATOR SHOULD ACKNOWLEDGE ALARM</p>	<p>S U</p> <p>Comments:</p>
<p>8. PRESS AND HOLD THE LOCAL START PUSHBUTTON (KJ-HS-1C)</p> <p>STEP D.2.e</p>	<p>NE01 DID NOT START</p>	<p>OPERATOR SHOULD PRESS AND HOLD THE LOCAL START PUSHBUTTON (KJ-HS-1C)</p>	<p>S U</p> <p>Comments:</p>
<p>9. PLACE THE MASTER TRANSFER SWITCH (KJ-HS-9) IN AUTO</p> <p>STEP D.2.f</p>	<p>WHEN KJ-HS-9 IS PLACED IN AUTO, THE "SWITCH NOT IN AUTO" ANNUNCIATOR CLEARS ON PANEL KJ-121</p> <p>NE01 DID NOT START</p>	<p>OPERATOR SHOULD PLACE THE MASTER TRANSFER SWITCH (KJ-HS-9) IN AUTO</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
10. PLACE THE MASTER TRANSFER SWITCH KJ-HS-9 IN LOC/MAN STEP D.2.h	KJ-HS-9 IS IN LOC/MAN AUDIBLE ALARM ON PANEL KJ-121 "SWITCH NOT IN AUTO" ANNUNCIATOR IS IN ALARM ALARM IS SILENCED	OPERATOR SHOULD PLACE THE MASTER TRANSFER SWITCH KJ-HS-9 IN LOC/MAN OPERATOR SHOULD ACKNOWLEDGE ALARM	S U Comments:
11. LOCATE THE MANUAL AIR START CONTROL VALVE ON THE UPPER GENERATOR END OF THE DIESEL STEP D.2.h		OPERATOR SHOULD GO TO THE SOUTH END OF THE D/G AND GO UP THE LADDER TO CLIMB ON TOP OF THE DIESEL AT THE GENERATOR END	S U Comments:
*12. REMOVE THE CAP ON TOP OF THE MANUAL AIR START CONTROL VALVE HOUSING STEP D.2.h.(1)	CAP IS REMOVED	OPERATOR SHOULD REMOVE THE CAP ON TOP OF THE MANUAL AIR START CONTROL VALVE HOUSING	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*13. REMOVE THE HANDLE ATTACHED TO THE SIDE OF THE AIR START CONTROL VALVE AND PLACE THE HANDLE IN THE SLOT ON TOP OF THE AIR START CONTROL VALVE</p> <p>STEP D.2.h.(2)</p>	<p>HANDLE IS IN THE SLOT ON TOP OF THE AIR START CONTROL VALVE</p>	<p>OPERATOR SHOULD REMOVE THE HANDLE ATTACHED TO THE SIDE OF THE AIR START CONTROL VALVE AND PLACE THE HANDLE IN THE SLOT ON TOP OF THE AIR START CONTROL VALVE</p>	<p>S U</p> <p>Comments:</p>
<p>*14. PUSH THE HANDLE DOWN TO START THE ENGINE</p> <p>STEP D.2.h.(3)</p>	<p>THE HANDLE HAS BEEN PUSHED DOWN</p> <p>NE01 HAS STARTED</p>	<p>OPERATOR SHOULD PUSH THE HANDLE DOWN TO START THE ENGINE</p>	<p>S U</p> <p>Comments:</p>
<p>*15. PLACE THE MASTER TRANSFER SWITCH KJ-HS-9 IN AUTO</p> <p>STEP D.2.i</p>	<p>WHEN KJ-HS-9 IS PLACED IN AUTO, THE "SWITCH NOT IN AUTO" ANNUNCIATOR CLEARS ON PANEL KJ-121</p>	<p>OPERATOR SHOULD PLACE THE MASTER TRANSFER SWITCH KJ-HS-9 IN AUTO</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. INFORM THE CONTROL ROOM SUPERVISOR THAT NE01 HAS STARTED AND THE MASTER TRANSFER SWITCH IS IN "AUTO"	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT NE01 HAS STARTED AND THE MASTER TRANSFER SWITCH IS IN "AUTO"	S U Comments:
17.	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: THERE HAS BEEN A LOSS OF ALL AC POWER AT THE CALLAWAY PLANT. THE CONTROL ROOM HAS ENTERED EMERGENCY PROCEDURE, ECA-0.0, LOSS OF ALL AC POWER. THE CONTROL ROOM SUPERVISOR IS AT STEP 5.a OF ECA-0.0, LOSS OF ALL AC POWER, AND DETERMINED THAT NEITHER EMERGENCY DIESEL GENERATOR (NE01 OR NE02) HAS STARTED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR DIRECTS YOU TO LOCALLY START NE01 PER ATTACHMENT 2 (LOCALLY STARTING EMERGENCY DIESEL GENERATOR) OF ECA-0.0, LOSS OF ALL AC POWER. THE CAUSE FOR THE FAILURE TO START IS UNKNOWN. INFORM THE CONTROL ROOM SUPERVISOR WHEN NE01 IS STARTED AND THE MASTER TRANSFER SWITCH IS IN "AUTO".

ALL OPERATOR ACTIONS ARE TO BE SIMULATED

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-S1	K/A NO:	001A4.06
COMPLETION TIME:	15 MINUTES	K/A RATING:	2.9/3.2
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	CONTROL ROD DRIVE SYSTEM		
TASK TITLE:	RECOVER A DROPPED CONTROL ROD		

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-SF-00003, DROPPED CONTROL ROD, REVISION 8

TOOLS/EQUIPMENT: REACTOR OPERATOR LOG 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 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. THIRTY MINUTES AGO, CONTROL ROD H-8 DROPPED INTO THE CORE. ALL IMMEDIATE ACTIONS HAVE BEEN PERFORMED. THE PLANT HAS BEEN STABILIZED WITH TAVG AND TREF $\Delta T < 3^{\circ}\text{F}$. THE EDO AND REACTOR ENGINEER HAVE AGREED THE PROBLEM IS CORRECTED AND THE PLANT IS READY FOR RECOVERY. CURRENTLY IN T/S LCO 3.1.4, CONDITION "B".

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO RECOVER THE DROPPED ROD (H-8) BY PERFORMING STEPS 6.1 THROUGH 6.3.11 OF OTO-SF-00003, DROPPED CONTROL ROD. THE PRIMARY EO IS STATIONED AT THE ROD CONTROL CABINETS IF YOU NEED HIS ASSISTANCE. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes: USE IC-170. (MALFUNCTION CRF4_53 IS USED TO DROP ROD H-8)

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE ALIGNED CONTROL ROD H-8 WITH ITS GROUP ± 4 STEPS.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF OTO-SF-00003, DROPPED CONTROL ROD	PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF OTO-SF-00003, DROPPED CONTROL ROD	S U Comments:
2. DETERMINE THE NEED TO PERFORM A QPTR STEP 6.1		OPERATOR SHOULD DETERMINE A QPTR IS NOT REQUIRED	S U Comments:
3. IF ANNUNCIATOR 78B OR 78C OR 78F IS IN ALARM, CHECK COMPUTER POINTS REU1151 THRU REU1162 TO DETERMINE QUADRANT POWER TILT RATIO STEP 6.1.1	ANNUNCIATORS 78B, 78C AND 78F NOT LIT. ALL ALARMS ARE OPERABLE IF CHECKED ALL COMPUTER POINTS INDICATE < 1.02	OPERATOR SHOULD RECOGNIZE ANNUNCIATORS 78B, 78C AND 78F ARE NOT IN ALARM	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. IF QPTR IS GREATER THAN 1.02, REFER TO T/S LCO 3.2.4 STEP 6.1.1.1	ALL COMPUTER POINTS INDICATE QPTR < 1.02	OPERATOR SHOULD DETERMINE QPTR IS NOT REQUIRED	S U Comments:
5. REFER TO T/S LCO 3.1.4 STEP 6.2	NOTE: GIVEN IN THE INITIAL CONDITIONS	OPERATOR MAY REFER TO T/S LCO 3.1.4	S U Comments:
6. IF DROPPED ROD OCCURS DURING A STARTUP OR AT A LOW ENOUGH POWER SUCH THAT THE REACTOR GOES SUBCRITICAL, THE REACTOR SHOULD BE SHUTDOWN TO MODE 3 STEP 6.2.1	REACTOR POWER IS APPROXIMATELY 99%	OPERATOR SHOULD RECOGNIZE THAT THE REACTOR HAS NOT GONE SUBCRITICAL	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>7. IF DROPPED ROD RECOVERY IS NOT GOING TO BE COMPLETED PRIOR TO EXCEEDING 1 HOUR, REACTOR ENGINEERING MUST BE CONTACTED TO DETERMINE GUIDELINES FOR RECOVERY</p> <p>STEP 6.2.2</p>	<p>ROD DROPPED 30 MINUTES AGO</p> <p>NOTE: GIVEN IN INITIAL CONDITIONS</p>	<p>OPERATOR SHOULD RECOGNIZE THE DROPPED ROD WILL BE RECOVERED WITHIN 1 HOUR</p>	<p>S U</p> <p>Comments:</p>
<p>8. REACTOR ENGINEERING AND THE EDO MUST BE NOTIFIED OF A ROD DROP PRIOR TO RECOVERY</p> <p>STEP 6.2.4</p>	<p>IF ASKED, REACTOR ENGINEERING AND EDO HAVE BEEN NOTIFIED THAT THE DROPPED ROD IS READY TO BE RECOVERED</p> <p>NOTE: GIVEN IN INITIAL CONDITIONS</p>	<p>THE OPERATOR MAY ASK IF REACTOR ENGINEERING OR THE EDO ARE AWARE THAT THE DROPPED ROD IS READY TO BE RECOVERED</p>	<p>S U</p> <p>Comments:</p>
<p>*9. PLACE THE ROD BANK AUTO/MAN SEL SWITCH, SE HS-9, TO THE AFFECTED BANK POSITION</p> <p>STEP 6.3.1</p>	<p>CB "D" IS SELECTED WITH SE-HS-9</p>	<p>OPERATOR SHOULD SELECT CB "D" ON THE ROD BANK AUTO/MAN SEL SWITCH, SE-HS-9 ON RL003</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*10. ENSURE THAT THE PROPER GROUP SELECT LIGHT IS LIT ON THE POWER CABINETS WITH SELECTED RODS PRIOR TO MOVING ROD BANKS</p> <p>STEP 6.3.1.1</p>	<p>PRIMARY EO REPORTS THAT GROUP SELECT LIGHT "B" IS LIT ON POWER CABINETS 1 BD AND 2 BD</p>	<p>THE OPERATOR SHOULD CONTACT THE PRIMARY EO AND ASK WHICH GROUP SELECT LIGHT IS ON POWER CABINETS 1 BD AND 2 BD</p>	<p>S U</p> <p>Comments:</p>
<p>11. LOCATE CONTROL ROD DISCONNECT SWITCH BOX</p> <p>STEP 6.3.2</p>		<p>OPERATOR SHOULD GO TO THE CONTROL ROD DISCONNECT SWITCH BOX IN THE BACK OF THE CONTROL ROOM (IN THE NIS CABINET IN SIMULATOR)</p>	<p>S U</p> <p>Comments:</p>
<p>*12. PLACE CONTROL ROD D-4 IN THE DISCONNECTED POSITION</p> <p>STEP 6.3.2</p> <p>NOTE: STEPS 12, 13, 14 AND 15 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>D-4 IS DISCONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR D-4 AND MOVE IT UP TO THE ROD DISCONNECTED POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*13. PLACE CONTROL ROD M-12 IN THE DISCONNECTED POSITION</p> <p>STEP 6.3.2</p> <p>NOTE: STEPS 12, 13, 14 AND 15 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>M-12 IS DISCONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR M-12 AND MOVE IT UP TO THE ROD DISCONNECT POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*14. PLACE CONTROL ROD D-12 IN THE DISCONNECTED POSITION</p> <p>STEP 6.3.2</p> <p>NOTE: STEPS 12, 13, 14 AND 15 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>D-12 IS DISCONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR D-12 AND MOVE IT UP TO THE ROD DISCONNECT POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*15. PLACE CONTROL ROD M-4 IN THE DISCONNECTED POSITION</p> <p>STEP 6.3.2</p> <p>NOTE: STEPS 12, 13, 14 AND 15 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>M-4 IS DISCONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR M-4 AND MOVE IT UP TO THE ROD DISCONNECT POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. INDEPENDENTLY VERIFY ALL LIFT COIL DISCONNECT SWITCHES FOR THE AFFECTED BANK, EXCEPT THE DROPPED ROD, ARE IN THE DISCONNECTED POSITION STEP 6.3.2.1	INDEPENDENT VERIFICATION HAS BEEN PERFORMED	OPERATOR SHOULD REQUEST THAT AN INDEPENDENT VERIFICATION BE PERFORMED	S U Comments:
17. RECORD IN THE RO LOG THE POSITION OF THE "GROUP" STEP COUNTER FOR THE GROUP CONTAINING THE DROPPED ROD STEP 6.3.3	NOTE: SEE STEP COUNTER FOR CONTROL BANK D-2 FOR READING	OPERATOR SHOULD RECORD READING FROM SC CB-D2, CTRL BANK D2 STEP COUNTER, ON RL003	S U Comments:
*18. MANUALLY RESET TO ZERO (0) THE STEP COUNTER FOR THE AFFECTED GROUP STEP 6.3.4	SC CB-D2 IS RESET TO ZERO (0)	OPERATOR SHOULD OPEN WINDOW AND RESET THE STEP COUNTER TO ZERO (0) BY HAND FOR CONTROL BANK D GROUP 2	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. AT THE PULSE-TO-ANALOG CONVERTER CABINET, HOLD THE AUTO-MANUAL SWITCH IN THE MANUAL POSITION STEP 6.3.5.1	PRIMARY EO HAS BEEN CONTACTED AND IS HOLDING THE AUTO-MANUAL SWITCH IN "MANUAL"	OPERATOR SHOULD CONTACT PRIMARY EO TO HOLD THE SWITCH IN THE MANUAL POSITION NOTE: REMOTE, SFS001, DE-ENERGIZE, INSERT	S U Comments:
*20. BEGIN WITHDRAWING THE DROPPED ROD TO THE GROUP STEP COUNTER POSITION RECORDED IN STEP 6.3.3 STEP 6.3.6	ANNUNCIATOR 79A, ROD CTRL URG FAIL, HAS LIT ONLY H-8 IS MOVING ANNUNCIATOR IS ACKNOWLEDGED	OPERATOR SHOULD PLACE IN-HOLD-OUT SWITCH IN THE OUT POSITION AND VERIFY THAT ONLY H-8 IS MOVING OPERATOR SHOULD ACKNOWLEDGE ANNUNCIATOR 79A	S U Comments:
21. BORATE OR ADJUST TURBINE LOAD AS REQUIRED TO MAINTAIN $T_{AVE} - T_{REF} \Delta T < 3^{\circ}F$ STEP 6.3.6.2		OPERATOR SHOULD BORATE THE RCS OR ADJUST TURBINE LOAD AS REQUIRED TO MAINTAIN THE $T_{AVE} - T_{REF} \Delta T < 3^{\circ}F$	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*22. WITHDRAW ROD TO INITIAL STEP COUNTER READING ± 4 STEPS</p> <p>STEP 6.3.6</p>	<p>ROD H-8 IS NOW AT THE DESIRED STEP COUNTER POSITION</p>	<p>OPERATOR SHOULD WITHDRAW ROD TO INITIAL STEP COUNTER READING ± 4 STEPS</p>	<p>S U</p> <p>Comments:</p>
<p>23. COMPARE THE DRPI ASSOCIATED WITH THE BANK OF THE DROPPED ROD WITH THE DROPPED ROD DRPI TO ENSURE THEY AGREE</p> <p>STEP 6.3.7</p>	<p>THE DROPPED ROD IS AT THE SAME HEIGHT AS ITS BANK</p>	<p>OPERATOR SHOULD EXAMINE ROD POS INDICATION, SF074, ON PANEL RL022 TO ENSURE THE DROPPED ROD POSITION AGREES WITH ITS ASSOCIATED BANK POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>24. RELEASE THE "AUTO-MANUAL" SWITCH AT THE PULSE-TO-ANALOG CONVERTER CABINET</p> <p>STEP 6.3.8</p>	<p>"AUTO-MANUAL" SWITCH IS IN AUTOMATIC</p>	<p>OPERATOR SHOULD CONTACT THE PRIMARY EO AND INSTRUCT HIM TO RELEASE THE "AUTO-MANUAL" SWITCH</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
25. RESET THE ROD CTRL URG FAIL ALARM USING SF HS-4, ROD CONTROL ALARM RESET PUSHBUTTON ON PANEL RL003 STEP 6.3.9	ROD CONTROL URGENT FAILURE IS RESET	OPERATOR SHOULD DEPRESS SF HS-4, ROD CTRL ALARM RESET, ON PANEL RL003	S U Comments:
26. LOCATE ROD DISCONNECT SWITCH BOX STEP 6.3.10		OPERATOR SHOULD RETURN TO THE CONTROL ROD DISCONNECT SWITCH BOX	S U Comments:
*27. PLACE CONTROL ROD D-4 IN THE CONNECTED POSITION STEP 6.3.10 NOTE: STEPS 27, 28, 29 AND 30 MAY BE ACCOMPLISHED IN ANY ORDER	D-4 IS CONNECTED	OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR D-4 AND MOVE IT DOWN TO THE ROD CONNECTED POSITION	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*28. PLACE CONTROL ROD M-12 IN THE CONNECTED POSITION</p> <p>STEP 6.3.10</p> <p>NOTE: STEPS 27, 28, 29 AND 30 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>M-12 IS CONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR M-12 AND MOVE IT DOWN TO THE ROD CONNECTED POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*29. PLACE CONTROL ROD D-12 IN THE CONNECTED POSITION</p> <p>STEP 6.3.10</p> <p>NOTE: STEPS 27, 28, 29 AND 30 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>D-12 IS CONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR D-12 AND MOVE IT DOWN TO THE ROD CONNECTED POSITION</p>	<p>S U</p> <p>Comments:</p>
<p>*30. PLACE CONTROL ROD M-4 IN THE CONNECTED POSITION</p> <p>STEP 6.3.10</p> <p>NOTE: STEPS 27, 28, 29 AND 30 MAY BE ACCOMPLISHED IN ANY ORDER</p>	<p>M-4 IS CONNECTED</p>	<p>OPERATOR SHOULD TAKE THE TOGGLE SWITCH FOR M-4 AND MOVE IT DOWN TO THE ROD CONNECTED POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
31. INDEPENDENTLY VERIFY DISCONNECT SWITCHES TO THE ROD CONNECTED POSITION STEP 6.3.10.1	INDEPENDENT VERIFICATION HAS BEEN PERFORMED	OPERATOR SHOULD REQUEST THAT AN INDEPENDENT VERIFICATION BE PERFORMED	S U Comments:
32. RETURN THE ROD AUTO/MAN SELECTOR SWITCH SE HS-9 TO THE AUTO OR MANUAL POSITION AS REQUIRED BY THE SS STEP 6.3.11	THE SS DIRECTS YOU TO RETURN ROD CONTROL TO MANUAL	OPERATOR SHOULD PUT THE BANK SELECTOR SWITCH ON RL003 IN THE MANUAL POSITION	S U Comments:
33. INFORM THE CONTROL ROOM SUPERVISOR THAT DROPPED ROD, H-8, HAS BEEN RESTORED	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT DROPPED ROD, H-8, HAS BEEN RESTORED	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
34.	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. THIRTY MINUTES AGO, CONTROL ROD H-8 DROPPED INTO THE CORE. ALL IMMEDIATE ACTIONS HAVE BEEN PERFORMED. THE PLANT HAS BEEN STABILIZED WITH TAVG AND TREF $\Delta T < 3^{\circ}\text{F}$. THE EDO AND REACTOR ENGINEER HAVE AGREED THE PROBLEM IS CORRECTED AND THE PLANT IS READY FOR RECOVERY. CURRENTLY IN T/S LCO 3.1.4, CONDITION "B".

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO RECOVER THE DROPPED ROD (H-8) BY PERFORMING STEPS 6.1 THROUGH 6.3.11 OF OTO-SF-00003, DROPPED CONTROL ROD. THE PRIMARY EO IS STATIONED AT THE ROD CONTROL CABINETS IF YOU NEED HIS ASSISTANCE. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-S2	K/A NO:	005A4.01
COMPLETION TIME:	12 MINUTES	K/A RATING:	3.6/3.4
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	RESIDUAL HEAT REMOVAL SYSTEM		
TASK TITLE:	PERFORM 'B' RHR PUMP NON-SURVEILLANCE RUN		

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: OTS-EJ-0004B, RHR PUMP 'B' NON-SURVEILLANCE RUN, REVISION 2

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. THE 'B' RHR PUMP CIRCUIT BREAKER WAS RACKED OUT FOR AN ENGINEERING INSPECTION. THE INSPECTION HAS BEEN COMPLETED AND THE CIRCUIT BREAKER HAS BEEN RACKED IN. THE 'A' RHR TRAIN IS OPERABLE AND BOTH RHR TRAINS ARE IN THEIR NORMAL STANDBY ALIGNMENT.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO START THE 'B' RHR PUMP PER OTS-EJ-0004B, RHR PUMP 'B' NON-SURVEILLANCE RUN. INFORM THE CONTROL ROOM SUPERVISOR WHEN THE 'B' RHR PUMP IS RUNNING.

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes: USE IC-170. ENSURE 'B' CCW TRAIN IS IN SERVICE.

Task Standard: UPON COMPLETION OF THIS JPM, THE 'B' RHR PUMP WILL HAVE BEEN STARTED PER OTS-EJ-0004B.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF OTS-EJ-0004B, RHR PUMP 'B' NON- SURVEILLANCE RUN	PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF OTS-EJ-0004B, RHR PUMP 'B' NON- SURVEILLANCE RUN	S U Comments:
2. REVIEW PRECAUTIONS AND LIMITATIONS OF OTS-EJ-0004B, RHR PUMP 'B' NON- SURVEILLANCE RUN STEP 2.0	IF ASKED, ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS OF OTS- EJ-0004B, RHR PUMP 'B' NON- SURVEILLANCE RUN	S U Comments:
3. REVIEW INITIAL CONDITIONS OF OTS-EJ-0004B, RHR PUMP 'B' NON- SURVEILLANCE RUN STEP 3.0	IF ASKED, ALL INITIAL CONDITIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS OF OTS-EJ-0004B, RHR PUMP 'B' NON- SURVEILLANCE RUN	S U Comments:

* CRITICAL STEP

TASK				
NUMBER - ELEMENT	CUE	STANDARD	SCORE	
4. ENSURE EJ HIS-8701B, RHR PMP B SUCT IS CLOSED STEP 4.1	EJ HIS-8701B GREEN LIGHT IS OUT AND RED LIGHT IS OUT NOTE: EJHIS8701B IS NORMALLY CLOSED AND DE-ENERGIZED	OPERATOR SHOULD VERIFY EJ HIS-8701B, RHR PMP B SUCT IS CLOSED. LOCATED ON RL017	S U Comments:	
5. ENSURE EJ HIS- 8811B, CTMT RECIRC SUMP B TO RHR PMP B SUCT IS CLOSED STEP 4.1	EJ HIS-8811B GREEN LIGHT IS LIT AND RED LIGHT IS OUT	OPERATOR SHOULD VERIFY EJ HIS- 8811B, CTMT RECIRC SUMP B TO RHR PMP B SUCT IS CLOSED LOCATED ON RL017	S U Comments:	
6. ENSURE BN HIS-8812B, B RHR SUCT FROM RWST IS OPEN STEP 4.1	BN HIS-8812B RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD VERIFY BN HIS-8812B, B RHR SUCT FROM RWST IS OPEN LOCATED ON RL017	S U Comments:	

* CRITICAL STEP

TASK				
NUMBER - ELEMENT	CUE	STANDARD	SCORE	
7. ENSURE EJ HIS-611, B RHR PMP MINI FCV IS OPEN STEP 4.1	EJ HIS-611 RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD VERIFY EJ HIS-611, B RHR PMP MINI FCV IS OPEN LOCATED ON RL017	S U	Comments:
8. ENSURE EJ HIS-8840A, PWR LOCKOUT SWITCH FOR EJ-HV-8840 IS IN THE ISO POSITION STEP 4.1	EJ HIS-8840A ISO WHITE LIGHT IS OUT	OPERATOR SHOULD VERIFY EJ HIS-8840A, PWR LOCKOUT SWITCH FOR EJ-HV-8840 IS IN THE ISO POSITION LOCATED ON RL017	S U	Comments:
9. ENSURE EJ HIS-8840, RHR TRNS A&B SI SYS HOT LEG RECIRC IS CLOSED STEP 4.1	EJ HIS-8840 GREEN LIGHT IS LIT AND RED LIGHT IS OUT	OPERATOR SHOULD VERIFY EJ HIS-8840, RHR TRNS A&B SI SYS HOT LEG RECIRC IS CLOSED LOCATED ON RL017	S U	Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10. ENSURE EJ HIC-607, RHR HX B OUTLET FCV IS CLOSED</p> <p>STEP 4.1</p>	<p>AFTER EJ HIC-607 POTENTIOMETER IS TURNED FULLY CLOCKWISE THE METER INDICATES ZERO PERCENT OPEN</p>	<p>OPERATOR SHOULD CLOSE EJ HIC-607, RHR HX B OUTLET FCV BY TURNING EJ HIC-607 POTENTIOMETER FULLY CLOCKWISE</p> <p>LOCATED ON RL017</p>	<p>S U</p> <p>Comments:</p>
<p>11. ENSURE EJ FK-619, RHR HX B BYPASS FLOW CTRL M/A STATION IS CLOSED</p> <p>STEP 4.1</p>	<p>EJ FK-619 IS IN MANUAL AND HAS A ZERO DEMAND</p>	<p>OPERATOR SHOULD VERIFY EJ FK-619, RHR HX B BYPASS FLOW CTRL M/A STATION IS CLOSED</p> <p>LOCATED ON RL017</p>	<p>S U</p> <p>Comments:</p>
<p>12. ENSURE EJ HIS-8804B, B RHR PMP TO SI PMPS SUCT IS CLOSED</p> <p>STEP 4.1</p>	<p>EJ HIS-8804B GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD VERIFY EJ HIS-8804B, B RHR PMP TO SI PMPS SUCT IS CLOSED</p> <p>LOCATED ON RL017</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13. ENSURE EJ HIS-8890A, RHR TRN A ACC INJ SIS TEST LINE IS CLOSED STEP 4.1	EJ HIS-8890A GREEN LIGHT IS LIT AND RED LIGHT IS OUT	OPERATOR SHOULD VERIFY EJ HIS-8890A, RHR TRN A ACC INJ SIS TEST LINE IS CLOSED LOCATED ON RL017	S U Comments:
14. ENSURE EJ HIS-8890B, RHR TRN B ACC INJ SIS TEST LINE IS CLOSED STEP 4.1	EJ HIS-8890B GREEN LIGHT IS LIT AND RED LIGHT IS OUT	OPERATOR SHOULD VERIFY EJ HIS-8890B, RHR TRN B ACC INJ SIS TEST LINE IS CLOSED LOCATED ON RL017	S U Comments:
15. IF IN MODES 5 OR 6, PERFORM THIS STEP STEP 4.2		OPERATOR SHOULD DETERMINE THIS STEP IS NOT APPLICABLE SINCE THE PLANT IS IN MODE 1. GIVEN IN INITIAL CONDITIONS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. ENSURE SW/ESW IS ALIGNED TO THE 'B' CCW HX STEP 4.3.1	EF HIS-52 RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD VERIFY SW/ESW IS ALIGNED TO THE 'B' CCW HX NOTE: THIS IS ACCOMPLISHED BY VERIFYING EF HIS-52 IS OPEN LOCATED ON RL019	S U Comments:
17. ENSURE 'B' TRAIN CCW IS IN OPERATION STEP 4.3.2	'B' CCW PUMP IS RUNNING	OPERATOR SHOULD VERIFY THAT EITHER THE 'B' OR 'D' CCW PUMP IS RUNNING LOCATED ON RL019	S U Comments:
*18. ENSURE EGHV0102, CCW TO RHR HX B IS OPEN USING EG HIS-102 STEP 4.3.3	AFTER EG HIS-102 OPEN PUSHBUTTON HAS BEEN DEPRESSED, EG HIS-102 RED LIGHT WILL ILLUMINATE AND GREEN LIGHT WILL EXTINGUISH	OPERATOR SHOULD OPEN EGHV0102 BY DEPRESSING THE OPEN PUSHBUTTON ON EG HIS-102 LOCATED ON RL017	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>19. IF MCB ALARM 53A IS LIT, THEN THROTTLE CLOSED ECHV0012, FUEL POOL HX B SHELL SIDE CCW OUTLET, USING EC HIS-12, UNTIL ALARM 53A CLEARS</p> <p>STEP 4.3.4</p>	<p>MCB ALARM 53A WILL CLEAR, IF CCW FLOW HAS BEEN PROPERLY ADJUSTED</p>	<p>OPERATOR SHOULD THROTTLE EC HIS-12 AS REQUIRED TO ENSURE THAT MCB ALARM 53A IS NOT IN ALARM</p> <p>LOCATED ON RL019</p>	<p>S U</p> <p>Comments:</p>
<p>20. ENSURE CCW FLOW TO THE RHR HX B AS INDICATED BY EGFI0064 IS GREATER THAN 3.8E+6 LBM/HR</p> <p>STEP 4.3.5</p>	<p>IF REQUESTED, THE PRIMARY EO REPORTS THAT EGFI0064 INDICATES 4.2E+6 LBM/HR</p> <p>IF EGF0702 IS USED, TELL THE OPERATOR IT READS 4.2E+6 LBM/HR</p>	<p>OPERATOR SHOULD CONTACT THE PRIMARY EO TO VERIFY THAT EGFI0064 IS GREATER THAN 3.8E+6 LBM/HR</p> <p>OPERATOR MAY USE COMPUTER POINT EGF0702 TO VERIFY THIS FLOW</p>	<p>S U</p> <p>Comments:</p>
<p>21. ENSURE CCW FLOW TO THE PUMP SEAL COOLER AS INDICATED BY EGFI0092 IS \geq 3000 LBM/HR</p> <p>STEP 4.3.6</p>	<p>IF REQUESTED, THE PRIMARY EO REPORTS THAT EGFI0092 INDICATES 3400 LBM/HR</p> <p>IF EGF0712 IS USED, TELL THE OPERATOR IT READS 3400 LBM/HR</p>	<p>OPERATOR SHOULD CONTACT THE PRIMARY EO TO VERIFY THAT EGFI0092 IS \geq 3000 LBM/HR</p> <p>OPERATOR MAY USE COMPUTER POINT EGF0712 TO VERIFY THIS FLOW</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
22. NOTIFY HEALTH PHYSICS THAT THE RHR PUMP IS GOING TO BE STARTED STEP 4.4	IF CONTACTED, ACKNOWLEDGE THAT THE 'B' RHR PUMP WILL BE STARTED	OPERATOR SHOULD CONTACT HP PERSONNEL AND INFORM THEM THAT THE 'B' RHR PUMP WILL BE STARTED	S U Comments:
*23. USING EJ HIS-2, START RHR PUMP 'B' STEP 4.5	AFTER THE PUMP HANDSWITCH IS TAKEN TO RUN, EJ HIS-2 RED LIGHT WILL ILLUMINATE AND GREEN LIGHT WILL EXTINGUISH	OPERATOR SHOULD START THE 'B' RHR PUMP USING EJ HIS-2 LOCATED ON RL017	S U Comments:
24. INFORM THE CONTROL ROOM SUPERVISOR THAT THE 'B' RHR PUMP IS RUNNING	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT THE 'B' RHR PUMP IS RUNNING	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
25.	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. THE 'B' RHR PUMP CIRCUIT BREAKER WAS RACKED OUT FOR AN ENGINEERING INSPECTION. THE INSPECTION HAS BEEN COMPLETED AND THE CIRCUIT BREAKER HAS BEEN RACKED IN. THE 'A' RHR TRAIN IS OPERABLE AND BOTH RHR TRAINS ARE IN THEIR NORMAL STANDBY ALIGNMENT.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO START THE 'B' RHR PUMP PER OTS-EJ-0004B, RHR PUMP 'B' NON-SURVEILLANCE RUN. INFORM THE CONTROL ROOM SUPERVISOR WHEN THE 'B' RHR PUMP IS RUNNING.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-S3	K/A NO:	045A2.17
COMPLETION TIME:	15 MINUTES	K/A RATING:	2.7/2.9
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	MAIN TURBINE		
TASK TITLE:	MAIN TURBINE MECHANICAL O/S TRIP TEST		

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: OSP-AC-00004, MAIN TURBINE TRIP TEST, REVISION 13

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. THE MECHANICAL OVERSPEED TRIP TEST IS REQUIRED TO BE PERFORMED PER SECTION 6.3 OF OSP-AC-00004, MAIN TURBINE TRIP TEST. A PRE-JOB BRIEF HAS BEEN PERFORMED AND THE SECONDARY EQUIPMENT OPERATOR (EO) HAS OBTAINED KEY 91 FROM THE SHIFT SUPERVISOR. THE SHIFT SUPERVISOR HAS GIVEN PERMISSION TO PERFORM THE MECHANICAL OVERSPEED TRIP TEST. YOU ARE THE BOP REACTOR OPERATOR.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM THE MECHANICAL OVERSPEED TRIP TEST ON THE MAIN TURBINE PER SECTION 6.3 OF OSP-AC-00004, MAIN TURBINE TRIP TEST. SECTIONS 6.1 AND 6.2 HAVE BEEN COMPLETED. INFORM THE CONTROL ROOM SUPERVISOR WHEN SECTION 6.3 HAS BEEN COMPLETED.

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes: USE IC-170.
ENSURE A LAMP TEST HAS BEEN PERFORMED ON THE EHC CONTROL PANEL.
STEPS 7 AND 11 WILL REQUIRE THE USE OF REMOTE CHS005.

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE DETERMINED THAT ACHS0001 WAS PLACED IN THE INCORRECT POSITION, HALTED THE TEST, CORRECTED THE POSITION OF ACHS0001, AND COMPLETED THE PERFORMANCE OF THE MECHANICAL OVERSPEED TRIP TEST.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF OSP-AC-00004, MAIN TURBINE TRIP TESTS	PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF OSP-AC-00004, MAIN TURBINE TRIP TESTS	S U Comments:
2. REVIEW ACCEPTANCE CRITERIA OF OSP-AC-00004, MAIN TURBINE TRIP TESTS STEP 2.0		OPERATOR SHOULD REVIEW THE ACCEPTANCE CRITERIA OF OSP-AC-00004, MAIN TURBINE TRIP TESTS	S U Comments:
3. REVIEW PRECAUTIONS AND LIMITATIONS OF OSP-AC-00004, MAIN TURBINE TRIP TESTS STEP 3.0	IF ASKED, ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE PRECAUTIONS AND LIMITATIONS OF OSP- AC-00004, MAIN TURBINE TRIP TESTS	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. REVIEW INITIAL CONDITIONS OF OSP-AC-00004, MAIN TURBINE TRIP TESTS STEP 4.0	IF ASKED, ALL INITIAL CONDITIONS ARE SATISFIED	OPERATOR SHOULD REVIEW THE INITIAL CONDITIONS OF OSP-AC-00004, MAIN TURBINE TRIP TESTS	S U Comments:
5. REVIEW NOTES, CAUTIONS, AND MECHANICAL OVERSPEED TRIP TEST PROCEDURE STEP 6.3		OPERATOR SHOULD REVIEW THE NOTES, CAUTIONS, AND MECHANICAL OVERSPEED TRIP TEST PROCEDURE	S U Comments:
6. OBTAIN THE SHIFT SUPERVISOR'S PERMISSION TO OPERATE THE BYPASS SWITCH STEP 6.3.1	IF ASKED, THE SHIFT SUPERVISOR HAS GIVEN PERMISSION TO OPERATE THE BYPASS SWITCH NOTE: GIVEN IN THE INITIAL CONDITIONS	OPERATOR MAY OBTAIN THE SHIFT SUPERVISOR'S PERMISSION TO OPERATE THE BYPASS SWITCH	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*7. OBTAIN KEY 91 FROM THE SS AND INSERT KEY IN THE BYPASS SWITCH ACHS0001. TURN THE KEY TO THE MECHANICAL TRIP TEST BYPASS POSITION</p> <p>STEP 6.3.2</p>	<p>SECONDARY EO REPORTS THAT KEY 91 HAS BEEN INSERTED INTO ACHS0001 AND TURNED TO THE MECHANICAL TRIP TEST BYPASS POSITION</p>	<p>OPERATOR SHOULD DIRECT THE SECONDARY EO TO INSERT KEY 91 INTO ACHS0001 AND TURN THE SWITCH TO THE MECHANICAL TRIP TEST BYPASS POSITION</p> <p>SET REMOTE CHS005 TO "ETT BYPASS"</p>	<p>S U</p> <p>Comments:</p>
<p>*8. VERIFY THAT THE "LOCKED OUT" LIGHT IS ENERGIZED</p> <p>STEP 6.3.2.1</p>	<p>"LOCKED OUT" LIGHT IS <u>NOT</u> ENERGIZED</p> <p>AFTER THE SS/CRS IS INFORMED OF THE INCORRECT RESPONSE, THE SS/CRS DIRECTS THE OPERATOR TO RE-VERIFY STEP 6.3.2</p>	<p>OPERATOR SHOULD DETERMINE THAT THE "LOCKED OUT" IS <u>NOT</u> ENERGIZED, STOP THE TEST, AND INFORM THE SS/CRS</p>	<p>S U</p> <p>Comments:</p>
<p>9. OPERATOR SHOULD RE-VERIFY THE POSITION OF ACHS0001</p> <p>STEP 6.3.2</p>	<p>SECONDARY EO REPORTS THAT HE INCORRECTLY PLACED ACHS0001 IN THE <u>ELECTRICAL</u> TRIP TEST BYPASS POSITION</p>	<p>OPERATOR SHOULD DIRECT THE SECONDARY EO TO RE-VERIFY THE POSITION OF ACHS0001</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>10. OPERATOR SHOULD INFORM THE SS/CRS THAT ACHS0001 WAS INCORRECTLY PLACED IN THE <u>ELECTRICAL</u> TRIP TEST BYPASS POSITION</p> <p>STEP 6.3.2</p>	<p>THE SS/CRS DIRECTS THE OPERATOR TO RE-PERFORM STEP 6.3.2 AND CONTINUE THE TEST</p>	<p>OPERATOR SHOULD INFORM THE SS/CRS OF THE INCORRECT OPERATION OF SWITCH ACHS0001</p>	<p>S U</p> <p>Comments:</p>
<p>*11. OBTAIN KEY 91 FROM THE SS AND INSERT KEY IN THE BYPASS SWITCH ACHS0001. TURN THE KEY TO THE MECHANICAL TRIP TEST BYPASS POSITION</p> <p>STEP 6.3.2</p>	<p>SECONDARY EO REPORTS THAT KEY 91 HAS BEEN INSERTED INTO ACHS0001 AND TURNED TO THE MECHANICAL TRIP TEST BYPASS POSITION</p>	<p>OPERATOR SHOULD DIRECT THE SECONDARY EO TO INSERT KEY 91 INTO ACHS0001 AND TURN THE SWITCH TO THE MECHANICAL TRIP TEST BYPASS POSITION</p> <p>SET REMOTE CHS005 TO "NORMAL" THEN TO "MTT BYPASS"</p>	<p>S U</p> <p>Comments:</p>
<p>12. VERIFY THAT THE "LOCKED OUT" LIGHT IS ENERGIZED</p> <p>STEP 6.3.2.1</p>	<p>"LOCKED OUT" LIGHT IS ENERGIZED</p>	<p>OPERATOR SHOULD DETERMINE THAT THE "LOCKED OUT" IS ENERGIZED</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>13. VERIFY THAT THE "NORMAL" LIGHT IS DEENERGIZED</p> <p>STEP 6.3.2.2</p>	<p>"NORMAL" LIGHT IS DEENERGIZED</p>	<p>OPERATOR SHOULD DETERMINE THAT THE "NORMAL" LIGHT IS DEENERGIZED</p>	<p>S U</p> <p>Comments:</p>
<p>14. OBSERVE THAT THE "MECHANICAL O/S RESET" AND THE "TRIP PISTON RESET" LIGHTS ARE ENERGIZED</p> <p>STEP 6.3.3</p>	<p>"MECHANICAL O/S RESET" LIGHT IS ENERGIZED</p> <p>"TRIP PISTON RESET" LIGHT IS ENERGIZED</p>	<p>OPERATOR SHOULD VERIFY THAT THE "MECHANICAL O/S RESET" AND THE "TRIP PISTON RESET" LIGHTS ARE ENERGIZED</p>	<p>S U</p> <p>Comments:</p>
<p>15. VERIFY THAT ALL OTHER LIGHTS IN THIS GROUP <u>EXCEPT</u> THE "LOCKED OUT" LIGHT ARE DEENERGIZED</p> <p>STEP 6.3.4</p>	<p>"LOCKED OUT" LIGHT IS THE ONLY LIGHT ENERGIZED IN THIS GROUP</p>	<p>OPERATOR SHOULD VERIFY THAT ONLY THE "LOCKED OUT" LIGHT IS ENERGIZED IN THIS GROUP</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*16. DEPRESS AND HOLD THE "START MECH O/S TRIP TEST" PUSHBUTTON AND VERIFY THAT THE PUSHBUTTON LIGHT ENERGIZES</p> <p>STEP 6.3.5</p>	<p>"START MECH O/S TRIP TEST" PUSHBUTTON IS DEPRESSED AND THE PUSHBUTTON LIGHT IS ENERGIZED</p>	<p>OPERATOR SHOULD DEPRESS AND HOLD THE "START MECH O/S TRIP TEST" PUSHBUTTON AND VERIFY THAT THE PUSHBUTTON LIGHT ENERGIZES</p>	<p>S U</p> <p>Comments:</p>
<p>*17. RELEASE THE "START MECH O/S TRIP TEST" PUSHBUTTON</p> <p>STEP 6.3.6</p>	<p>"START MECH O/S TRIP TEST" PUSHBUTTON HAS BEEN RELEASED</p>	<p>OPERATOR SHOULD RELEASE THE "START MECH O/S TRIP TEST" PUSHBUTTON</p>	<p>S U</p> <p>Comments:</p>
<p>18. OBSERVE THAT THE "MECH O/S RESET" LIGHT DEENERGIZES AND THAT THE "TRIPPED" LIGHT ENERGIZES</p> <p>STEP 6.3.6.1</p>	<p>"MECH O/S RESET" LIGHT DEENERGIZES</p> <p>"TRIPPED" LIGHT ENERGIZES</p>	<p>OPERATOR SHOULD VERIFY THAT THE "MECH O/S RESET" LIGHT DEENERGIZES AND THAT THE "TRIPPED" LIGHT ENERGIZES</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. VERIFY THAT THE ANNUNCIATOR, 112B, MECH O/S TURB TRIP ALARMS STEP 6.3.6.2	ANNUNCIATOR, 112B, MECH O/S TURB TRIP HAS ALARMED	OPERATOR SHOULD VERIFY THAT THE ANNUNCIATOR, 112B, MECH O/S TURB TRIP ALARMS	S U Comments:
20. VERIFY THAT THE ANNUNCIATOR, 122F, TURB ELEC MALF ALARMS STEP 6.3.6.3	ANNUNCIATOR, 122F, TURB ELEC MALF HAS ALARMED	OPERATOR SHOULD VERIFY THAT THE ANNUNCIATOR, 122F, TURB ELEC MALF ALARMS	S U Comments:
21. OBSERVE THAT THE "RESETTING" LIGHT ENERGIZES STEP 6.3.6.4	"RESETTING" LIGHT IS ENERGIZED	OPERATOR SHOULD OBSERVE THAT THE "RESETTING" LIGHT ENERGIZES	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
22. OBSERVE THAT THE "MECH O/S TRIPPED" LIGHT DEENERGIZES AND THE "RESET" LIGHT ENERGIZES STEP 6.3.6.5	"MECH O/S TRIPPED" LIGHT IS DEENERGIZED "RESET" LIGHT IS ENERGIZED	OPERATOR SHOULD OBSERVE THAT THE "MECH O/S TRIPPED" LIGHT DEENERGIZES AND THE "RESET" LIGHT ENERGIZES	S U Comments:
23. OBSERVE THAT THE "START MECH O/S TRIP TEST" LIGHT DEENERGIZES STEP 6.3.6.6	"START MECH O/S TRIP TEST" LIGHT IS DEENERGIZED	OPERATOR SHOULD OBSERVE THAT THE "START MECH O/S TRIP TEST" LIGHT DEENERGIZES	S U Comments:
24. OBSERVE THAT THE "RESETTING" LIGHT IS DEENERGIZED STEP 6.3.6.7	"RESETTING" LIGHT IS DEENERGIZED	OPERATOR SHOULD OBSERVE THAT THE "RESETTING" LIGHT IS DEENERGIZED	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
25. RESET ANNUNCIATOR 112B, MECH O/S TURB TRIP STEP 6.3.12	ANNUNCIATOR 112B, MECH O/S TURB TRIP, CLEARS AFTER THE ANNUNCIATOR RESET PUSHBUTTON HAS BEEN PRESSED	OPERATOR SHOULD RESET ANNUNCIATOR 112B, MECH O/S TURB TRIP, WITH THE ANNUNCIATOR RESET PUSHBUTTON	S U Comments:
26. INFORM THE CONTROL ROOM SUPERVISOR THAT SECTION 6.3 OF OSP-AC-00004 HAS BEEN COMPLETED	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETED	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT SECTION 6.3 OF OSP-AC-00004 HAS BEEN COMPLETED	S U Comments:
27.	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. THE MECHANICAL OVERSPEED TRIP TEST IS REQUIRED TO BE PERFORMED PER SECTION 6.3 OF OSP-AC-00004, MAIN TURBINE TRIP TEST. A PRE-JOB BRIEF HAS BEEN PERFORMED AND THE SECONDARY EQUIPMENT OPERATOR (EO) HAS OBTAINED KEY 91 FROM THE SHIFT SUPERVISOR. THE SHIFT SUPERVISOR HAS GIVEN PERMISSION TO PERFORM THE MECHANICAL OVERSPEED TRIP TEST. YOU ARE THE BOP REACTOR OPERATOR.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO PERFORM THE MECHANICAL OVERSPEED TRIP TEST ON THE MAIN TURBINE PER SECTION 6.3 OF OSP-AC-00004, MAIN TURBINE TRIP TEST. SECTIONS 6.1 AND 6.2 HAVE BEEN COMPLETED. INFORM THE CONTROL ROOM SUPERVISOR WHEN SECTION 6.3 HAS BEEN COMPLETED.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO: ILE-2002-S4
COMPLETION TIME: 15 MINUTES
JOB TITLE: URO/SRO
DUTY: PRESSURIZER PRESSURE CONTROL
TASK TITLE: DEPRESSURIZE AND BLOCK SAFETY INJECTION

K/A NO: 010A4.01
K/A RATING: 3.7/3.5
REVISION: APRIL 29, 2002

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: OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN,
REVISION 23

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 3, WITH RCS T_{AVG} AT 557°F AND RCS PRESSURE AT 2050 PSIG. 'A' AND 'D' RCPs ARE IN OPERATION.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DEPRESSURIZE THE RCS TO LESS THAN 1970 PSIG AND BLOCK SAFETY INJECTION PER OTG-ZZ-00006, STEPS 5.2.13 THROUGH 5.2.14.5. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

Notes: USE IC-166. (THIS IC WAS BUILT FROM IC-7 STARTING POINT)

Task Standard: UPON COMPLETION OF THIS JPM, THE OPERATOR WILL HAVE BLOCKED BOTH TRAINS OF PRESSURIZER PRESSURE AND STEAM LINE PRESSURE SAFETY INJECTION.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN	PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN	S U Comments:
2. REVIEW GENERAL NOTES OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN STEP 2.0	IF ASKED, ALL GENERAL NOTES ARE SATISFIED	OPERATOR SHOULD REVIEW GENERAL NOTES OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN	S U Comments:
3. REVIEW PRECAUTIONS AND LIMITATIONS OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN STEP 3.0	IF ASKED, ALL PRECAUTIONS AND LIMITATIONS ARE SATISFIED	OPERATOR SHOULD REVIEW PRECAUTIONS AND LIMITATIONS OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. REVIEW INITIAL CONDITIONS OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN STEP 4.0	IF ASKED, ALL INITIAL CONDITIONS ARE SATISFIED	OPERATOR SHOULD REVIEW INITIAL CONDITIONS OF OTG-ZZ-00006, PLANT COOLDOWN HOT STANDBY TO COLD SHUTDOWN	S U Comments:
5. START TO DEPRESSURIZE THE RCS AS FOLLOWS: STEP 5.2.13			S U Comments:
6. ENSURE ALL PZR HEATERS ARE ON TO MAXIMIZE SPRAY FLOW STEP 5.2.13.1	ALL PZR HEATERS ARE ON	OPERATOR SHOULD ENSURE ALL PZR HEATERS ARE ON TO MAXIMIZE SPRAY FLOW	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
7. <u>NOTE:</u> AUTO PZR PRESSURE CONTROL MAY BE USED UNTIL PRESSURE HAS DECREASED TO 1700 PSIG BY ADJUSTING THE POTENTIOMETER ON BB PK-455A INSTEAD OF USING MANUAL CONTROL		OPERATOR MAY USE AUTO PZR PRESSURE CONTROL INSTEAD OF MANUAL	S U Comments:
*8. SET THE SPRAY VALVE IN THE OPERATING RCS LOOP IN MANUAL AND SLOWLY OPEN (OR ADJUST BB PK-455A) TO BEGIN DE-PRESSURIZATION STEP 5.2.13.2	THE SPRAY VALVE IN THE 'A' RCS LOOP HAS BEEN OPENED AND RCS PRESSURE IS DECREASING	THE OPERATOR SHOULD OPEN THE SPRAY VALVE IN THE 'A' RCS LOOP TO BEGIN RCS DEPRESSURIZATION	S U Comments:
9. MAINTAIN THE RCS IN ACCORDANCE WITH THE PRESSURE AND TEMPERATURE BAND AS DELINEATED ON CURVE BOOK FIGURE 8-6 STEP 5.2.13.3	PRESSURE AND TEMPERATURE ARE WITHIN THE LIMITS OF FIGURE 8-6 OF THE CURVE BOOK	OPERATOR SHOULD ENSURE THAT RCS PRESSURE AND TEMPERATURE ARE WITHIN THE LIMITS OF FIGURE 8-6 OF THE CURVE BOOK	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*10. MAINTAIN AT LEAST 50°F SUBCOOLING DURING THE DEPRESSURIZATION AND COOLDOWN</p> <p>STEP 5.2.13.4</p>	<p>RCS SUBCOOLING IS GREATER THAN 50°F</p>	<p>OPERATOR SHOULD MAINTAIN AT LEAST 50°F SUBCOOLING DURING THE DEPRESSURIZATION AND COOLDOWN</p>	<p>S U</p> <p>Comments:</p>
<p>*11. PRIOR TO REACHING 1900 PSIG, ENSURE STEP 5.2.14 IS COMPLETED</p> <p>STEP 5.2.13.5</p>		<p>OPERATOR SHOULD MAINTAIN RCS PRESSURE GREATER THAN 1849 PSIG (SI SETPOINT) UNTIL STEP 5.2.14 IS COMPLETE</p>	<p>S U</p> <p>Comments:</p>
<p>12. WHEN RCS PRESSURE DECREASES BELOW 1970 PSIG AND PRIOR TO 1900 PSIG, COMPLETE THE FOLLOWING:</p> <p>STEP 5.2.14</p>			<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13. <u>CAUTION</u> : IF RCS PRESSURE RISES ABOVE 1970 PSIG AFTER BLOCKING, THEN THE SAFETY INJECTION BLOCK SIGNALS WILL AUTOMATICALLY RESET. IT WILL BE NECESSARY TO REBLOCK WHEN PRESSURE AGAIN DECREASES.		OPERATOR SHOULD READ CAUTION.	S U Comments:
14. VERIFY THAT THE PERMISSIVE P-11 STATUS LIGHT IS LIT ON SB069 STEP 5.2.14.1	PERMISSIVE P-11 STATUS LIGHT IS LIT ON SB069	OPERATOR SHOULD VERIFY THAT THE PERMISSIVE P-11 STATUS LIGHT IS LIT ON SB069	S U Comments:
*15. BLOCK THE PRESSURIZER PRESSURE SAFETY INJECTION TRAIN 'A' AND TRAIN 'B' SIGNALS WITH SB-HS-7 AND SB-HS-8 ON RL002 STEP 5.2.14.2	SB-HS-7 AND SB-HS-8 HAVE BEEN DEPRESSED	OPERATOR SHOULD DEPRESS SB-HS-7 AND SB-HS-8	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>16. VERIFY THAT BOTH PRESSURIZER SAFETY INJECTION TRAINS 'A' AND 'B' BLOCKED STATUS LIGHTS ARE LIT ON SB069</p> <p>STEP 5.2.14.3</p>	<p>BOTH PRESSURIZER SAFETY INJECTION TRAINS 'A' AND 'B' BLOCKED STATUS LIGHTS ARE LIT ON SB069</p>	<p>OPERATOR SHOULD VERIFY THAT BOTH PRESSURIZER SAFETY INJECTION TRAINS 'A' AND 'B' BLOCKED STATUS LIGHTS ARE LIT ON SB069</p>	<p>S U</p> <p>Comments:</p>
<p>*17. BLOCK THE STEAM LINE ISOLATION/ SAFETY INJECTION TRAIN 'A' AND TRAIN 'B' SIGNALS WITH SB-HS-9 AND SB-HS-10 ON RL002</p> <p>STEP 5.2.14.4</p>	<p>SB-HS-9 AND SB-HS-10 HAVE BEEN DEPRESSED</p>	<p>OPERATOR SHOULD DEPRESS SB-HS-9 AND SB-HS-10</p>	<p>S U</p> <p>Comments:</p>
<p>18. VERIFY THAT THE STEAM LINE ISOLATION/SAFETY INJECTION TRAINS 'A' AND 'B' BLOCKED STATUS LIGHTS ARE LIT ON SB069</p> <p>STEP 5.2.14.5</p>	<p>THE STEAM LINE ISOLATION/SAFETY INJECTION TRAINS 'A' AND 'B' BLOCKED STATUS LIGHTS ARE LIT ON SB069</p>	<p>OPERATOR SHOULD VERIFY THAT THE STEAM LINE ISOLATION/SAFETY INJECTION TRAINS 'A' AND 'B' BLOCKED STATUS LIGHTS ARE LIT ON SB069</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. INFORM THE CONTROL ROOM SUPERVISOR THAT THE RCS HAS BEEN DEPRESSURIZED TO < 1970 PSIG AND SAFETY INJECTION HAS BEEN BLOCKED	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT THE RCS HAS BEEN DEPRESSURIZED TO < 1970 PSIG AND SAFETY INJECTION HAS BEEN BLOCKED	S U Comments:
20.	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 3, WITH RCS T_{AVG} AT 557°F AND RCS PRESSURE AT 2050 PSIG. 'A' AND 'D' RCPs ARE IN OPERATION.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU TO DEPRESSURIZE THE RCS TO LESS THAN 1970 PSIG AND BLOCK SAFETY INJECTION PER OTG-ZZ-00006, STEPS 5.2.13 THROUGH 5.2.14.5. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-S5	K/A NO:	015A2.02
COMPLETION TIME:	15 MINUTES	K/A RATING:	3.1/3.5
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	NUCLEAR INSTRUMENTATION SYSTEM		
TASK TITLE:	RESPOND TO A FAILED POWER RANGE INSTRUMENT		

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, REVISION 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 3. 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 (BOP REACTOR OPERATOR) TO PERFORM POWER RANGE CHANNEL N42 TRIP INITIATION USING ATTACHMENT 2 OF OTO-SE-00003, POWER RANGE NUCLEAR CHANNEL FAILURE. INFORM THE CONTROL ROOM SUPERVISOR WHEN YOU HAVE VERIFIED THE PROPER BISTABLE LIGHTS ARE LIT ON SC066W.

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes: USE IC-166. (MALFUNCTION NIS03B IS USED TO FAIL THE CHANNEL TO 200% POWER)
ENSURE THE REACTOR TRIP BREAKERS ARE CLOSED.

Task Standard: UPON COMPLETION OF THIS JPM, POWER RANGE NUCLEAR INSTRUMENT CHANNEL N42 WILL HAVE ITS INPUTS TO CHANNEL COMPARATORS AND ROD STOP DEFEATED, INSTRUMENT POWER FUSES REMOVED, P-10 JUMPER INSTALLED, AND REACTOR PROTECTION BISTABLES TRIPPED.

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	PROVIDE OPERATOR WITH COPY OF ATTACHMENT 2 (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF OTO-SE-00003, POWER RANGE NUCLEAR CHANNEL FAILURE, ATTACHMENT 2	S U Comments:
2. SS AUTHORIZATION TO REMOVE THE CONTROL POWER FUSES, (IF REACTOR POWER LEVEL IS BELOW P-10, CONTROL POWER FUSES REMAIN INSTALLED) TO BYPASS N42 AND TRIP THE REACTOR PROTECTION B/S		OPERATOR SHOULD DETERMINE SS AUTHORIZATION IS NOT REQUIRED SINCE POWER LEVEL IS BELOW P-10 CONTROL POWER FUSES WILL REMAIN INSTALLED	S U Comments:
*3. PLACE THE "UPPER SECTION" SWITCH TO THE PR N42 POSITION AND VERIFY THAT THE UPPER "CHANNEL DEFEAT" LIGHT IS LIT AND THAT ANN 78B, PR UPPER DETECTOR FLUX DEV IS CLEAR	"UPPER SECTION" SWITCH IS IN THE PR N42 POSITION UPPER "CHANNEL DEFEAT" LIGHT IS LIT ANN 78B, PR UPPER DETECTOR FLUX DEV IS CLEAR	OPERATOR SHOULD PLACE THE "UPPER SECTION" SWITCH TO THE PR N42 POSITION AND VERIFY THAT THE UPPER "CHANNEL DEFEAT" LIGHT IS LIT AND THAT ANN 78B, PR UPPER DETECTOR FLUX DEV IS CLEAR	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*4. PLACE THE "LOWER SECTION" SWITCH TO THE PR N42 POSITION AND VERIFY THAT THE LOWER "CHANNEL DEFEAT" LIGHT IS LIT AND THAT ANN 78C, PR LOWER DETECTOR FLUX DEV IS CLEAR</p>	<p>" LOWER SECTION" SWITCH IS IN THE PR N42 POSITION</p> <p>LOWER "CHANNEL DEFEAT" LIGHT IS LIT</p> <p>ANN 78C, PR LOWER DETECTOR FLUX DEV IS CLEAR</p>	<p>OPERATOR SHOULD PLACE THE " LOWER SECTION" SWITCH TO THE PR N42 POSITION AND VERIFY THAT THE LOWER "CHANNEL DEFEAT" LIGHT IS LIT AND THAT ANN 78C, PR LOWER DETECTOR FLUX DEV IS CLEAR</p>	<p>S U</p> <p>Comments:</p>
<p>*5. PLACE THE ROD STOP BYPASS SWITCH TO THE BYPASS PR N42 POSITION AND VERIFY THAT ANN 82A, PR OVER PWR ROD STOP IS CLEAR</p>	<p>ROD STOP BYPASS SWITCH IS IN THE BYPASS PR N42 POSITION</p> <p>ANN 82A, PR OVER PWR ROD STOP IS CLEAR</p>	<p>OPERATOR SHOULD PLACE THE ROD STOP BYPASS SWITCH TO THE BYPASS PR N42 POSITION AND VERIFY THAT ANN 82A, PR OVER PWR ROD STOP IS CLEAR</p>	<p>S U</p> <p>Comments:</p>
<p>*6. PLACE THE POWER MISMATCH BYPASS SWITCH TO THE BYPASS PR N42 POSITION</p>	<p>POWER MISMATCH BYPASS SWITCH IS IN THE BYPASS PR N42 POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER MISMATCH BYPASS SWITCH TO THE BYPASS PR N42 POSITION</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*7. PLACE THE COMPARATOR CHANNEL DEFEAT SWITCH TO THE N42 POSITION AND VERIFY THAT THE COMPARATOR DEFEAT LIGHT IS LIT AND THAT ANN 78A, PR CHANNEL DEV IS CLEAR</p>	<p>COMPARATOR CHANNEL DEFEAT SWITCH IS IN THE N42 POSITION</p> <p>COMPARATOR DEFEAT LIGHT IS LIT</p> <p>ANN 78A, PR CHANNEL DEV IS CLEAR</p>	<p>OPERATOR SHOULD PLACE THE COMPARATOR CHANNEL DEFEAT SWITCH TO THE N42 POSITION AND VERIFY THAT THE COMPARATOR DEFEAT LIGHT IS LIT AND THAT ANN 78A, PR CHANNEL DEV IS CLEAR</p>	<p>S U</p> <p>Comments:</p>
<p>8. IF REACTOR POWER LEVEL IS BELOW P-10, SKIP THE NEXT 2 STEPS AND PERFORM ATTACHMENT 9</p>	<p>AFTER OPERATOR DETERMINES ATTACHMENT 9 IS REQUIRED, PROVIDE OPERATOR WITH COPY OF ATTACHMENT 9 (PINK SHEETS)</p>	<p>OPERATOR SHOULD DETERMINE THE NEXT 2 STEPS SHOULD BE SKIPPED AND PERFORM ATTACHMENT 9</p>	<p>S U</p> <p>Comments:</p>
<p>*9. REMOVE THE INSTRUMENT POWER FUSES FOR N42</p>	<p>N42 INSTRUMENT POWER FUSES ARE REMOVED</p>	<p>OPERATOR SHOULD REMOVE THE INSTRUMENT POWER FUSES FOR N42</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
10. INSTALL THE CONTROL POWER FUSES (IF REMOVED EARLIER) FOR N42		OPERATOR SHOULD REALIZE THE CONTROL POWER FUSES FOR N42 WERE NOT REMOVED EARLIER	S U Comments:
11. INFORM THE SS AND URO THAT THE INSTRUMENT POWER FUSES FOR N42 HAVE BEEN REMOVED AND ENTER IN THE SS AND URO LOG	SS WILL ENTER FUSE REMOVAL IN THE SS LOG URO WILL ENTER FUSE REMOVAL IN THE URO LOG	OPERATOR SHOULD INFORM THE SS AND URO THAT THE INSTRUMENT POWER FUSES FOR N42 HAVE BEEN REMOVED AND ENTER IN THE SS AND URO LOG	S U Comments:
12. SLIDE OUT THE APPROPRIATE "A" DRAWER ON IT'S TRACK, REMOVE THE BOTTOM SHIELD PLATE, INSTALL P-10 JUMPER, REPLACE SHIELD PLATE, AND SLIDE DRAWER BACK IN	I&C TECHS HAVE COMPLETED INSTALLATION OF P-10 JUMPER FOR N42	OPERATOR SHOULD DIRECT I&C TECHS TO SLIDE OUT THE APPROPRIATE "A" DRAWER ON IT'S TRACK, REMOVE THE BOTTOM SHIELD PLATE, INSTALL P-10 JUMPER, REPLACE SHIELD PLATE, AND SLIDE DRAWER BACK IN INSERT REMOTE SES010 INSTALLED	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
13. VERIFY ON SB069 THAT THE PR P-10 NC_M PARTIAL TRIP LIGHT FOR N42 IS NOT LIT	PR P-10 NC_M PARTIAL TRIP LIGHT FOR N42 IS NOT LIT	OPERATOR SHOULD VERIFY ON SB069 THAT THE PR P-10 NC_M PARTIAL TRIP LIGHT FOR N42 IS NOT LIT	<p style="text-align: center;">S U</p> <p>Comments:</p>
14. PLACE THE CHANNEL JUMPED IN THE EOSL AND ATTACH THIS COMPLETED ATTACHMENT TO THE EOSL	OS/STA WILL GENERATE AN EOSL AND ATTACH THE COMPLETED ATTACHMENT TO THE EOSL	OPERATOR SHOULD INFORM THE OS/STA OF THE NEED TO GENERATE AN EOSL FOR THE JUMPED CHANNEL AND ATTACH THE COMPLETED ATTACHMENT WITH THE EOSL	<p style="text-align: center;">S U</p> <p>Comments:</p>
15. IF THIS ATTACHMENT WAS PERFORMED IN CONJUNCTION WITH ATTACHMENT 1-4, RETURN TO THE APPROPRIATE ATTACHMENT		OPERATOR SHOULD RETURN TO ATTACHMENT 2	<p style="text-align: center;">S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
16. IN SB042, ON CHANNEL TEST CARD TS/421C/D (8-22), PLACE BS-3 AND BS-4 IN THE TEST POSITION	BS-3 AND BS-4 IN SB042, ON CHANNEL TEST CARD TS/421C/D (8-22) ARE IN THE TEST POSITION	OPERATOR SHOULD DIRECT I&C TECHS TO PLACE BS-3 AND BS-4 IN THE TEST POSITION IN SB042, ON CHANNEL TEST CARD TS/421C/D (8-22) USE BATCH FILE BAT SE022.TXT	S U Comments:
17. VERIFY ON SB069 THAT THE FOLLOWING STATUS LIGHTS ARE LIT: OTAT L2 TB421C PR HI SETPT NC42R PR HI FLUX NC42U PR LO SETPT NC42P	OTAT L2 TB421C PR HI SETPT NC42R PR HI FLUX NC42U PR LO SETPT NC42P STATUS LIGHTS ARE LIT ON SB069	OPERATOR SHOULD VERIFY ON SB069 THAT THE FOLLOWING STATUS LIGHTS ARE LIT: OTAT L2 TB421C PR HI SETPT NC42R PR HI FLUX NC42U PR LO SETPT NC42P	S U Comments:
18. VERIFY ON SC066W THAT THE FOLLOWING STATUS LIGHTS ARE LIT: CHAN II INPUT TO C-3 AND N42 BYP C-2 OVER PWR ROD STOP	CHAN II INPUT TO C-3 AND N42 BYP C-2 OVER PWR ROD STOP STATUS LIGHTS ARE LIT ON SC066W	OPERATOR SHOULD VERIFY ON SC066W THAT THE FOLLOWING STATUS LIGHTS ARE LIT: CHAN II INPUT TO C-3 AND N42 BYP C-2 OVER PWR ROD STOP	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
19. INFORM THE CONTROL ROOM SUPERVISOR YOU HAVE VERIFIED THE PROPER BISTABLE LIGHTS ARE LIT ON SC066W	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETED	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR HE HAS VERIFIED THE PROPER BISTABLE LIGHTS ARE LIT ON SC066W	S U Comments:
20.	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 3. 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 (BOP REACTOR OPERATOR) TO PERFORM POWER RANGE CHANNEL N42 TRIP INITIATION USING ATTACHMENT 2 OF OTO-SE-00003, POWER RANGE NUCLEAR CHANNEL FAILURE. INFORM THE CONTROL ROOM SUPERVISOR WHEN YOU HAVE VERIFIED THE PROPER BISTABLE LIGHTS ARE LIT ON SC066W.

CALLAWAY PLANT JOB PERFORMANCE MEASURE

JPM NO:	ILE-2002-S6	K/A NO:	008A4.01
COMPLETION TIME:	12 MINUTES	K/A RATING:	3.3/3.1
JOB TITLE:	URO/SRO	REVISION:	APRIL 29, 2002
DUTY:	COMPONENT COOLING WATER SYSTEM		
TASK TITLE:	RESTORATION OF CCW FROM INADVERTENT CIS B		

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-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY, REVISION 2

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 3. THE PLANT HAS EXPERIENCED AN INADVERTENT CIS B ISOLATION. THE CREW IS RESPONDING PER OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY. ALL CCW CONTAINMENT BYPASS ISOLATION VALVES HAVE BEEN SUCCESSFULLY OPENED. THE CAUSE OF THE INADVERTENT CIS B ISOLATION HAS BEEN CORRECTED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (BOP REACTOR OPERATOR) TO RESTORE NORMAL CCW FLOW ALIGNMENT TO/FROM CONTAINMENT BY PERFORMING STEPS 6.3 THROUGH 6.5.1.1 OF OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

ASK IF THE OPERATOR UNDERSTANDS THE INITIATING CUES.

Notes: USE IC-166.
OPEN ALL CCW CTMT BYPASS VALVES, THEN ACTUATE CIS B
ENSURE THE STATUS BOARD REFLECTS THE CCW CTMT BYPASS VALVES ARE OPEN.

Task Standard: UPON COMPLETION OF THIS JPM, NORMAL CCW FLOW ALIGNMENT TO/FROM CONTAINMENT WILL HAVE BEEN ESTABLISHED PER OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY.

START TIME: _____

STOP TIME: _____

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
1. OBTAIN A COPY OF OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY	PROVIDE OPERATOR WITH PROCEDURE COPY (GREEN SHEETS)	OPERATOR SHOULD OBTAIN A COPY OF OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY	S U Comments:
*2. RESET CIS B USING SB HS-52 AND SB HS-55 ON RL018 STEP 6.3	SB HS-52 AND SB HS-55 HAVE BEEN RESET	OPERATOR SHOULD RESET CIS B USING SB HS-52 AND SB HS-55 ON RL018	S U Comments:
3. VERIFY THAT ANNUNCIATOR 59B IS NOT LIT STEP 6.3.1	ANNUNCIATOR 59B IS NOT LIT	OPERATOR SHOULD VERIFY THAT ANNUNCIATOR 59B IS NOT LIT	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
4. RESTORE NORMAL CCW FLOW ALIGNMENT TO/FROM CONTAINMENT BY PERFORMING THE FOLLOWING VALVE ALIGNMENT IN SEQUENCE: STEP 6.4	NOTE: CCW FLOW FROM RCPs WILL AUTO CLOSE DURING THESE RESTORATION STEPS, THE SIMULATOR OPERATOR WILL ACKNOWLEDGE THESE ALARMS AND TAKE THE APPROPRIATE ACTIONS	OPERATOR SHOULD PERFORM THE FOLLOWING VALVE ALIGNMENTS:	S U Comments:
*5. OPEN CTMT SUPPLY EG HIS-58 ON RL019 STEP 6.4	EG HIS-58 RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD OPEN CTMT SUPPLY EG HIS-58 ON RL019	S U Comments:
*6. OPEN CTMT RETURN EG HIS-59 ON RL019 STEP 6.4	EG HIS-59 RED LIGHT IS LIT AND GREEN LIGHT IS OUT	OPERATOR SHOULD OPEN CTMT RETURN EG HIS-59 ON RL019	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*7. OPEN THERMAL BARRIER EG HIS-61 ON RL019</p> <p>STEP 6.4</p>	<p>EG HIS-61 RED LIGHT IS LIT AND GREEN LIGHT IS OUT</p>	<p>OPERATOR SHOULD OPEN THERMAL BARRIER EG HIS-61 ON RL019</p>	<p>S U</p> <p>Comments:</p>
<p>*8. OPEN CTMT RETURN EG HIS-60 ON RL019</p> <p>STEP 6.4</p>	<p>EG HIS-60 RED LIGHT IS LIT AND GREEN LIGHT IS OUT</p>	<p>OPERATOR SHOULD OPEN CTMT RETURN EG HIS-60 ON RL019</p>	<p>S U</p> <p>Comments:</p>
<p>*9. OPEN THERMAL BARRIER EG HIS-62 ON RL019</p> <p>STEP 6.4</p>	<p>EG HIS-62 RED LIGHT IS LIT AND GREEN LIGHT IS OUT</p>	<p>OPERATOR SHOULD OPEN THERMAL BARRIER EG HIS-62 ON RL019</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*10. OPEN CTMT SUPPLY EG HIS-71 ON RL019</p> <p>STEP 6.4</p>	<p>EG HIS-71 RED LIGHT IS LIT AND GREEN LIGHT IS OUT</p>	<p>OPERATOR SHOULD OPEN CTMT SUPPLY EG HIS-71 ON RL019</p>	<p>S U</p> <p>Comments:</p>
<p>11. <u>CAUTION</u>: IF ANY CCW CONTAINMENT ISOLATION VALVE FAILED TO OPEN IN STEP 6.4, THEN THE RESPECTIVE CCW CONTAINMENT BYPASS ISOLATION VALVE MUST REMAIN OPEN</p>		<p>OPERATOR SHOULD REVIEW CAUTION</p>	<p>S U</p> <p>Comments:</p>
<p>12. CLOSE THE CCW CTMT BYPASS ISOLATION VALVES AND PLACE THE POWER LOCKOUT SWITCHES IN ISO, UNLESS THE VALVE(S) ARE OPEN DUE TO A FAILURE IN STEP 6.4</p> <p>STEP 6.5</p>		<p>OPERATOR SHOULD PERFORM THE FOLLOWING VALVE ALIGNMENTS:</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*13. CLOSE EGHV0071 BYPASS USING EG HIS-126 ON RL020</p> <p>STEP 6.5</p> <p>STEPS 13, 15, 17, 19, 21, & 23 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-126 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD CLOSE EGHV0071 BYPASS USING EG HIS-126 ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>14. PLACE THE POWER LOCKOUT SWITCH EG HIS-126A IN THE ISO POSITION ON RL020</p> <p>STEP 6.5</p> <p>STEPS 14, 16, 18, 20, 22, & 24 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-126A IS IN THE ISO POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER LOCKOUT SWITCH EG HIS-126A IN THE ISO POSITION ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>*15. CLOSE EGHV0058 BYPASS USING EG HIS-127 ON RL020</p> <p>STEP 6.5</p> <p>STEPS 13, 15, 17, 19, 21, & 23 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-127 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD CLOSE EGHV0058 BYPASS USING EG HIS-127 ON RL020</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>16. PLACE THE POWER LOCKOUT SWITCH EG HIS-127A IN THE ISO POSITION ON RL020</p> <p>STEP 6.5</p> <p>STEPS 14, 16, 18, 20, 22, & 24 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-127A IS IN THE ISO POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER LOCKOUT SWITCH EG HIS-127A IN THE ISO POSITION ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>*17. CLOSE EGHV0060 BYPASS USING EG HIS-130 ON RL020</p> <p>STEP 6.5</p> <p>STEPS 13, 15, 17, 19, 21, & 23 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-130 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD CLOSE EGHV0060 BYPASS USING EG HIS-130 ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>18. PLACE THE POWER LOCKOUT SWITCH EG HIS-130A IN THE ISO POSITION ON RL020</p> <p>STEP 6.5</p> <p>STEPS 14, 16, 18, 20, 22, & 24 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-130A IS IN THE ISO POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER LOCKOUT SWITCH EG HIS-130A IN THE ISO POSITION ON RL020</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>*19. CLOSE EGHV0059 BYPASS USING EG HIS-131 ON RL020</p> <p>STEP 6.5</p> <p>STEPS 13, 15, 17, 19, 21, & 23 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-131 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD CLOSE EGHV0059 BYPASS USING EG HIS-131 ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>20. PLACE THE POWER LOCKOUT SWITCH EG HIS-131A IN THE ISO POSITION ON RL020</p> <p>STEP 6.5</p> <p>STEPS 14, 16, 18, 20, 22, & 24 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-131A IS IN THE ISO POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER LOCKOUT SWITCH EG HIS-131A IN THE ISO POSITION ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>*21. CLOSE EGHV0062 BYPASS USING EG HIS-132 ON RL020</p> <p>STEP 6.5</p> <p>STEPS 13, 15, 17, 19, 21, & 23 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-132 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD CLOSE EGHV0062 BYPASS USING EG HIS-132 ON RL020</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
<p>22. PLACE THE POWER LOCKOUT SWITCH EG HIS-132A IN THE ISO POSITION ON RL020</p> <p>STEP 6.5</p> <p>STEPS 14, 16, 18, 20, 22, & 24 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-132A IS IN THE ISO POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER LOCKOUT SWITCH EG HIS-132A IN THE ISO POSITION ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>*23. CLOSE EGHV0061 BYPASS USING EG HIS-133 ON RL020</p> <p>STEP 6.5</p> <p>STEPS 13, 15, 17, 19, 21, & 23 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-133 GREEN LIGHT IS LIT AND RED LIGHT IS OUT</p>	<p>OPERATOR SHOULD CLOSE EGHV0061 BYPASS USING EG HIS-133 ON RL020</p>	<p>S U</p> <p>Comments:</p>
<p>24. PLACE THE POWER LOCKOUT SWITCH EG HIS-133A IN THE ISO POSITION ON RL020</p> <p>STEP 6.5</p> <p>STEPS 14, 16, 18, 20, 22, & 24 MAY BE PERFORMED IN ANY ORDER</p>	<p>EG HIS-133A IS IN THE ISO POSITION</p>	<p>OPERATOR SHOULD PLACE THE POWER LOCKOUT SWITCH EG HIS-133A IN THE ISO POSITION ON RL020</p>	<p>S U</p> <p>Comments:</p>

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
25. IF ANY CCW CONTAINMENT BYPASS ISOLATION VALVE(S) IS OPEN, ENSURE THE APPROPRIATE ADMINISTRATIVE CONTROLS ARE IMPLEMENTED IN THE CAUTIONS PRIOR TO STEP 6.5 STEP 6.5.1		ALL CCW CONTAINMENT BYPASS ISOLATION VALVES SHOULD BE CLOSED	S U Comments:
26. THE CONTROL ROOM OPERATOR IS ALSO REQUIRED TO UPDATE THE CONTROL ROOM STATUS BOARD AS TO THE POSITION OF THE VALVES STEP 6.5.1.1		OPERATOR SHOULD UPDATE THE STATUS BOARD	S U Comments:
27. INFORM THE CONTROL ROOM SUPERVISOR THAT NORMAL CCW FLOW ALIGNMENT TO/FROM CONTAINMENT HAS BEEN RESTORED	THE CONTROL ROOM SUPERVISOR ACKNOWLEDGES THE TASK IS COMPLETE	OPERATOR SHOULD INFORM THE CONTROL ROOM SUPERVISOR THAT NORMAL CCW FLOW ALIGNMENT TO/FROM CONTAINMENT HAS BEEN RESTORED	S U Comments:

* CRITICAL STEP

TASK NUMBER - ELEMENT	CUE	STANDARD	SCORE
28.	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 3. THE PLANT HAS EXPERIENCED AN INADVERTENT CIS B ISOLATION. THE CREW IS RESPONDING PER OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY. ALL CCW CONTAINMENT BYPASS ISOLATION VALVES HAVE BEEN SUCCESSFULLY OPENED. THE CAUSE OF THE INADVERTENT CIS B ISOLATION HAS BEEN CORRECTED.

Initiating Cues: THE CONTROL ROOM SUPERVISOR HAS DIRECTED YOU (BOP REACTOR OPERATOR) TO RESTORE NORMAL CCW FLOW ALIGNMENT TO/FROM CONTAINMENT BY PERFORMING STEPS 6.3 THROUGH 6.5.1.1 OF OTO-SA-00002, SPURIOUS CONTAINMENT SPRAY AND CONTAINMENT PHASE B ISOLATION RECOVERY. INFORM THE CONTROL ROOM SUPERVISOR WHEN COMPLETE.

CALLAWAY PLANT TRAINING DEPARTMENT

DYNAMIC SIMULATOR SCENARIO

SIMULATOR SCENARIO: ILE2002DS1

REVISION NUMBER: REV. 0

REVISION DATE: April 5, 2002

SCENARIO TITLE: LARGE BREAK LOCA	EXAM #: ILE2002DS1
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INITIAL CONDITIONS:

The plant is operating at 100% steady state power with 'B' RHR Pump tagged out.

Event - TITLE	KSA #	(RATING)
A) Increase Letdown Flow From 75 GPM to 120 GPM	004A4.06	3.6/3.1
B) 'B' S/G Level Channel 529 Fails High	016K3.12	3.4/3.6
C) VCT Level Channel 149 Fails High	004A2.18	3.1/3.1
D) 'B' Circulating Water Pump Trip	075A2.02	2.5/2.7
E) Turbine Setback to 75% Power	045K4.12	3.3/3.6
F) Hotwell Instrumentation Leak – Loss of Feed	054AA2.01	4.3/4.4
G) Turbine Automatic Trip Failure	007EA1.07	4.3/4.3
H) Large Break LOCA	011EK3.12	4.4/4.6
I) ESF Bus NB01 Lockout (IPE/PRA)	062A2.04	3.1/3.4

SCENARIO LENGTH:

Approximately 65 minutes.

SCENARIO COMPLETION CRITERIA:

This scenario is complete when the crew transitions to ECA-1.1, Loss of Emergency Coolant Recirculation.

SCENARIO OVERVIEW	EXAM #: ILE2002DS1
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The plant is at 100% steady state power with the 'B' RHR Pump tagged out for a breaker inspection. The 'B' RHR Pump should be returned to service in 8 hours. This is a 'B' train week for maintenance.

The crew will be directed to increase CVCS letdown flow from 75 gpm to 120 gpm for chemistry control.

Steam Generator Level Channel AE LT-529 fails high. The crew should respond per OTO-AE-00003, "Steam Generator Level Channel Failure" and stabilize 'B' S/G level. Technical Specifications 3.3.1 and 3.3.2 actions should be applied.

VCT Level Channel BG LT-149 fails high causing CVCS Letdown to be diverted to the Recycle Holdup Tank. The crew should respond per OTO-BG-00004, "VCT Level Channel Failure", and redirect letdown to the Volume Control Tank to terminate the RCS inventory loss.

A lockout on 'B' Circulating Water Pump initiates a Turbine Setback. The crew should respond per OTO-MA-00007, "Turbine Setback", to reduce Tavg and stabilize the plant.

A leak on the Condenser Hotwell Level Indicator causes indicated level to fail low. This results in a trip of all Condensate Pumps and both Main Feedwater Pumps. The reactor will trip on S/G Low Low Level unless the crew manually initiates a reactor trip. The crew should respond per E-0, Reactor Trip or Safety Injection. The main turbine fails to automatically trip and must be manually tripped by the Balance of Plant Operator.

A large break LOCA develops on the 'B' RCS Hot Leg. A lockout occurs on 4160V bus NB01 when the 'A' RHR Pump attempts to start. The crew should perform the required actions of E-0 then transition to E-1, "Loss of Reactor or Secondary Coolant". At step 12 of E-1, the crew should transition to ECA-1.1, "Loss of Emergency Coolant Recirculation".

- 1) Initialize at IC-20, 100% steady state power, BOL. (For 2002 ILE, this will be IC-167 and the password is 'gary')
- 2) Run Batch File DS1ILE.TXT.
 - Runs Batch File EJ01B. TXT ('B' RHR OOS)
 - Preloads Events B, C, D, F-I
 - This will prevent auto turbine trip.
imf tur08b
- 3) Set Conditionals for Triggers.
 - Trigger 5 - sac.le.100 (when turbine load is < 100 MWe)
 - Trigger 6 - x17o154r (when 'A' RHR Pump attempts to start)
- 4) Ensure letdown flow rate is 75 gpm.
- 5) Ensure the Immediate Boration Timer is reset.
- 6) Ensure NIS indicates 100% power.
- 7) Ensure step counters for Control Bank 'D' are set to 215 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 "B" 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” 1015 ppm, 5 days ago

“B” 1050 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) Hold Off Tag on ‘B’ RHR Pump 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".

SCENARIO SEQUENCE OF EVENTS GUIDE

EXAM #:
ILE2002DS1

INSERT

<u>TIME</u>	<u>EVENT</u>	<u>MALF</u>	<u>DESCRIPTION</u>
N/A	A	n/a	Increase Letdown Flow
10	B	fwm02b (1) 100 20	S/G Level Channel Failure
20	C	cvc22 (2) 100	VCT Level Channel Failure
25	D,E	cnd04b (3)	Circ Pump Trip – Turbine Setback
35	F	adl003 (4,15) 0	Hotwell Instrumentation Leak - Loss of Feed
P	G	tur08b	Turbine Auto Trip Failure
P	H	rcs05b (5) 2000 30	Large Break LOCA
P	I	nbs004 (6) trip	ESF Bus NB01 Lockout

EVENT INITIATING CUE (Instructor enters times ACTUATED)

START	_____	Time	Completion Of Shift Turnover
A	_____	Time	Increase Letdown Flow
B	_____	Time	S/G Level Channel Failure
C	_____	Time	VCT Level Channel Failure
D,E	_____	Time	Circ Pump Trip – Turbine Setback
F	_____	Time	Hotwell Instrumentation Leak - Loss of Feed
End	_____	Time	Completion Of Scenario

INSTRUCTOR TURNOVER INFORMATION	EXAM #: ILE2002DS1
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PRESENT CONDITIONS:

Mode 1
100% BOL
Bank 'D' @ 215 steps
C_B= 996 ppm
MWe= 1215
Circ Water pump setback - Enabled
Cooling Tower B/D = 1K
AEHV0038 ≈ 22% open (3650 klbm/hr)

POWER HISTORY:

Steady state for 87 days.

EQUIPMENT STATUS:

'B' RHR Pump OOS for breaker inspection (8 hour duration remaining)
T/S LCO 3.5.2 Condition A (72 hours)

ABNORMAL CONDITIONS:

None

SURVEILLANCES DUE/IN PROGRESS:

None

ADDITIONAL INSTRUCTIONS:

Chemistry requests that we increase CVCS letdown flow to 120 gpm.

EVENT

ADDITIONAL INFORMATION

- B Respond as I&C to troubleshoot failed channel.
 To trip S/G Level Channel Bistables
 bat ae03_07.txt
 bat doorshut.txt

- C Respond as I&C to troubleshoot failed channel

- D Respond as Electrical Maintenance to troubleshoot Circ Pump Trip

- F Respond as Secondary Operator and report pipe break on Condenser Hotwell Instrument Tree.

- I Report lockout on bus NB01 with overcurrent relays actuated and a smell of burnt insulation.

 If requested to secure the 'A' Emergency DG (NE01), use the following:
 Remote kjs001 Local/Manual
 Remote kjs007 Stop

 If requested to secure the 'B' Emergency DG (NE02), use the following:
 Remote kjs002 Local/Manual
 Remote kjs008 Stop
 If secured from the MCB respond as the SEO and report the amber Exciter Shutdown light extinguished after 130 seconds.

 If asked to close bkrs per E-1 att. 4 the following information is for repeat-back to the caller;
 BGHIS8104 =>NG04CPF2
 'B' BAT Pump =>NG02AAF4
 'B' CRDM Cooling Fan =>NG02BJF5

COMMENTS:

EVENT: **A**

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: **Increase Letdown Flow**

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

NONE

- 1) Increase CVCS Letdown Flow to 120 gpm IAW
OTN-BG-00001, "Chemical and Volume Control System".
- Inform Chemistry _____

 - Place BG PK-131 in MANUAL and set to control
pressure at 190 psig _____

 - Open BG HV-8149AA _____

 - Manually control BG PK-131 at approximately 350 psig _____

 - When flow and pressure have stabilized, place BG PK-
131 in AUTO _____

 - Monitor BG TI-130 to control Letdown HX Disch Temp
at 95 - 115°F _____

 - Close BG HV-8109 _____

 - Ensure charging flow is maintaining PZR level _____

COMMENTS:

* Denotes Critical Task

EVENT: B

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: S/G Level Channel Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

S/G 'B' LEV DEV	109C
S/G 'B' FLOW MISMATCH	109D
REACTOR PARTIAL TRIP	83C

- 1) Implement OTO-AE-00003, "S/G Level Channel Failure".
 - Identify AE LT-529 as the failed channel
 - Select the alternate level channel
 - Stabilize 'B' S/G level
- 2) Refer to Technical Specification
 - T/S 3.3.1 Condition E 6 hours
 - T/S 3.3.2 Condition D, I 6 hours
 - (T/S 3.3.3 Min Channels SAT INFO only EOSL)
- 3) Contact I&C to troubleshoot and trip bistables.
- 4) Notify the EDO of entry into an Off-Normal Procedure.

COMMENTS:

* Denotes Critical Task

EVENT: C

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: VCT Level Channel Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

VCT LEVEL HI LO 42B
VCT DIVERT TO RHT 42D

- 1) Implement OTO-BG-00004, "VCT Level Channel Failure". _____
 - Identify BGLT0149 as the failure _____
 - Determine BGLT0149 has failed HIGH _____
- 2) Place BG HIS-112 in the VCT position _____
 - Contact I&C to troubleshoot. _____
- 3) Notify EDO of entry into an Off-Normal Procedure. _____

COMMENTS:

* Denotes Critical Task

EVENT: D/E

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: Circ Pump Trip – Turbine Setback

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

CIRC WTR PMP LOCKOUT 13A

1) Implement OTO-MA-00007, “Turbine Setback”.

- Verify Generator Load decreasing _____
- Verify that a Circ Water Pump tripped _____
- Drive Control Rods IN using manual control _____
- When ANN 65E is received, shift Rod Control to AUTO _____
- Ensure Control Rods stepping IN at 72 steps/min. _____
- Initiate Immediate Boration as required _____
- Verify S/G levels are returning to 50% _____
- Ensure Tav_g is being reduced to match T_{ref} _____
- Ensure PZR Pressure and Level are returning to normal programmed values _____
- When Tav_g is restored to program value, reset the steam dump arming signal _____

COMMENTS:

* Denotes Critical Task

EVENT: D/E

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: Circ Pump Trip – Turbine Setback

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

- Adjust RCS boron to maintain Control Rods within their insertion / withdrawal limits.
- Notify Chemistry and Health Physics of power change > 15%.
- Reset the load limiter.

2) Notify EDO of entry into an Off-Normal Procedure.

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

COND HOTWELL LEV LO

106B

S/G LEV LO LO

108-111A

1) Implement E-0, "Reactor Trip or Safety Injection".

- Verify Reactor Trip

- Verify Turbine Trip

* **Identify failure of the main turbine to trip and manually trip the turbine before a severe challenge develops to either the Subcriticality or the Integrity CSF or before transition to ECA-2.1.**

- Verify Power to NB01 AND NB02

Identify lockout on NB01 and investigate

- Check if SI is actuated

Verify SI is actuated and continue in E-0.

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

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

Assign an RO to perform Attachment 12 _____

- Ensure ESW pumps are running. _____
- Ensure at least One CCW pump running in each train _____
- Ensure Feedwater Isolation _____
- Ensure CISA _____
- Ensure AFW Actuation _____
- Ensure SI initiation. _____
- Check CTMT Coolers _____
- Ensure CPIS _____
- Check if Main Steam lines should be isolated _____
- Check if CTMT Spray is required _____
- Ensure CRVIS _____

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H/I

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

- Notify the CRS that 'A' Train ECCS equipment failed to actuate as a result of the NB01 Lockout

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

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

Continue in E-0 _____

- Ensure ECCS flow _____
- Ensure total AFW flow greater than 300,000 lbm/hr _____
- Ensure AFW valve alignment _____
- Ensure SI valve alignment. _____
- Check RCS Temperatures _____
- Check PZR PORV and PZR 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 in intact _____

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H/I

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

Transition to E-1, "Loss of Reactor or Secondary Coolant".

- Implement CSF-1, "Critical Safety Function Status Trees".

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

2) Implement E-1, "Loss of Reactor or Secondary Coolant".

• Check if RCPs should be stopped

a. at least one ECCS pump is running

b. RCS press less than 1400 psig

*

c. Stop all RCP's. This critical task could be accomplished earlier at either of the following:

E-0 - Foldout Page

E-0 - Step 12.c

• Check if S/Gs are NOT faulted

• Check Intact S/G levels

• Check Secondary Radiation normal

• Check PZR PORV and PZR PORV Block Valve

• Check if SI flow should be reduced

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H/I

EXAM #

ILE2002DS1

BRIEF DESCRIPTION: Hotwell Instrumentation Leak -Loss of Feed / Reactor Trip / Turbine Auto Trip Failure / Large Break LOCA / NB01 Bus Lockout

EXPECTED OPERATOR / PLANT RESPONSE	RO	BOP	CRS
• Check if CTMT Spray should be stopped	_____	_____	_____
• Check if RHR pumps should be stopped	_____	_____	_____
• Check RCS and S/G pressures	_____	_____	_____
• Check if Diesel Generators should be stopped	_____	_____	_____
• Initiate evaluation of plant status	_____	_____	_____
Verify cold recirculation capability does NOT exist per Attachment 5, Verifying Cold Leg Recirculation Capability	_____	_____	_____
Transition to ECA-1.1, "Loss of Emergency Coolant Recirculation".			_____

COMMENTS:

* Denotes Critical Task

CALLAWAY PLANT TRAINING DEPARTMENT

DYNAMIC SIMULATOR SCENARIO

SIMULATOR SCENARIO: ILE2002DS2

REVISION NUMBER: REV. 0

REVISION DATE: April 5, 2002

SCENARIO TITLE:
FAULTED/RUPTURED STEAM GENERATOR

EXAM #: ILE2002DS2

INITIAL CONDITIONS:

The plant is stable at 30% reactor power ready to increase load at 3%/hr with 'B' RHR Pump tagged out.

Event TITLE	KSA #	(RATING)
A) Swap Charging From NCP To CCP	004A4.08	3.8 / 3.4
B) Pressurizer Pressure Channel 455 Fails High	027AA2.15	3.7 / 4.0
C) Steam Flow Channel 542 Fails High On 'D' S/G	059A2.11	3.0 / 3.3
D) Steam Generator Tube Leak On 'D' S/G	037AK3.05	3.7 / 4.0
E) Plant Shutdown Due To S/G Tube Leak	004A4.01	3.8 / 3.9
F) Steam Generator Tube Rupture On 'D' S/G	038EA2.02	4.5 / 4.8
G) Failure Of 'D' FWIV To Automatically Close	013A4.01	4.5 / 4.8
H) S/G Safety Stuck Open On 'D' S/G	035A2.01	4.5 / 4.6

SCENARIO LENGTH:

Approximately 85 minutes.

SCENARIO COMPLETION CRITERIA:

This scenario is complete when the crew transitions to ECA-3.1, "SGTR With Loss of Reactor Coolant Subcooled Recovery Desired" or FR-P.1, "Response to Imminent Pressurized Thermal Shock Condition".

The plant is stable at 30% power ready to increase load at 3%/hr with the 'B' RHR Pump tagged out for a breaker inspection. The 'B' RHR Pump should be returned to service in 8 hours. This is a 'B' train week for maintenance.

The NCP is required to be tagged out for an oil change. The crew will start the 'B' CCP and secure the NCP.

Pressurizer Pressure Channel BB PT-455 fails high, causing spray valves to open and pressurizer heaters to turn off. The crew should respond per OTO-BB-00006, "Pressurizer Pressure Channel Failure", and stabilize pressurizer pressure.

Controlling Steam Flow Channel AB FT-542 fails high, causing a level perturbation on 'D' S/G and an increase in the speed of the MFP in automatic. This will also cause a steam generator tube leak to develop. The crew should respond per OTO-AB-00002, "Steam Flow Channel Failure", and stabilize 'D' S/G level.

A 5 gpm steam generator tube leak develops on 'D' S/G. This will place the crew in Action Level 3 in APA-ZZ-01023, "Primary to Secondary Leakage Program", and enter OTO-BB-00001, "Steam Generator Tube Leak". The crew should commence a controlled shutdown to Mode 3 at a rate to be in Mode 3 within 3 hours.

Once the crew has commenced the power reduction, the steam generator tube leak in 'D' S/G will increase to 150 gpm. This will cause a reactor trip and safety injection. The crew should enter E-0, "Reactor Trip or Safety Injection".

'D' Feedwater Isolation Valve, AE HV-42, fails to close on the FWIS. The crew must fast close feedwater isolation valves with push-button AE HS-80 or AE HS-81.

When steam pressure increases Safety Valve, ABV045, on 'D' S/G will open and remain open causing a faulted/ruptured steam generator.

The crew should enter E-2, "Faulted Steam Generator Isolation", then transition to E-3, "Steam Generator Tube Rupture".

The scenario is complete with the transition to ECA-3.1, "SGTR With Loss of Reactor Coolant Subcooled Recovery Desired" or FR-P.1, "Response to Imminent Pressurized Thermal Shock Condition".

- 1) Initialize at IC-16, 30% power ready to increase power at 3%/hr, BOL. (For 2002 ILE, this will be IC-168 and the password is 'gary')
- 2) Run Batch File DS2ILE.TXT.
 - Runs Batch File EJ01B.TXT ('B' RHR Pump OOS).
 - Preloads Events B, C, D, F-H
 - **VERIFY REMOTE SAS010d FAIL IS ACTIVE**
- 3) Set Conditionals for Triggers.
 - Trigger 4 - "0"
mmf rcs02d 150 30 15 (manual trigger to start SGTR)
 - Trigger 5 - "sac.le.100" (fails open S/G safety after the turbine trip)
- 4) Ensure the Immediate Boration Timer is reset.
- 5) Ensure NIS indicates 30% power.
- 6) Check Rx Trip Switch has a RED Flag.
- 7) Ensure step counters for Control Bank 'D' are set to 130 steps and all other steps counters are at 228 steps.
- 8) Ensure the digital display is selected to PZR Pressure and Auctioneered HI Tave.
- 9) Place Hold Off Tag on 'B' RHR Pump Handswitch and place in PTL.
- 10) Ensure 'B' Train CCW is in service.
- 11) Ensure Decrease Loading Rate Button is "ON".

12) Update status board to a 'B' Train Week.

13) Update Status Board T/S LCO 3.5.2, Condition A (72 hours).

14) Update status board to show CCP suction boron concentration:

- 'A' 1204 ppm, 5 days ago
- 'B' 1200 ppm, 2 weeks ago (ensure this is within 300 ppm of BCMS)

15) 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/%

16) Ensure alarm printer is "ON".

17) Ensure RM-11 is on the Training System.

18) Turnover sheets and log sheets are on the desks.

19) Ensure chart recorders are "rolled forward".

SCENARIO SEQUENCE OF EVENTS GUIDE

EXAM #: ILE2002DS2

INSERT

<u>TIME</u>	<u>EVENT</u>	<u>MALF</u>	<u>DESCRIPTION</u>
N/A	A	n/a	Swap Charging From NCP To CCP
10	B	prs01a (1) 2500 5	Pressurizer Pressure Channel 455 Fails High
20	C	mss02d (2) 4.8 20	Steam Flow Channel 542 Fails High On 'D' S/G
25	D	rcs02d (3) 5 1800 0	Steam Generator Tube Leak On 'D' S/G
25	E	n/a	Plant Shutdown Due To S/G Tube Leak
40	F	rcs02d (4) 150 30 15	Steam Generator Tube Rupture On 'D' S/G
P	G	sas010d fail	Failure Of 'D' FWIV To Automatically Close
42	H	mss14d (5) 200 30	S/G Safety Stuck Open On 'D' S/G

EVENT INITIATING CUE (Instructor enters times ACTUATED)

Start	_____	Time	Completion Of Shift Turnover
A	_____	Time	Swap Charging From NCP To CCP
B	_____	Time	Pressurizer Pressure Channel 455 Fails High
C	_____	Time	Steam Flow Channel 542 Fails High On 'D' S/G
D / E	_____	Time	Steam Generator Tube Leak On 'D' S/G / Plant Shutdown Due To S/G Tube Leak
F	_____	Time	Steam Generator Tube Rupture On 'D' S/G
H	_____	Time	S/G Safety Stuck Open On 'D' S/G
End	_____	Time	Completion Of Scenario

PRESENT CONDITIONS:

Mode 1
30% BOL stable, ready to increase power at 3%/hr
Bank 'D' @ 130 steps
C_B= 1195 ppm
MWe= 360
At Step 5.1.7 of OTG-ZZ-00004, Power Operations
AEHIS0038 closed (0% open)

POWER HISTORY:

30% following a reactor startup from an unexpected plant trip due to loss of off site power.

EQUIPMENT STATUS:

'B' RHR Pump OOS for breaker inspection (8 hour duration remaining)
T/S LCO 3.5.2 Condition A (72 hours)

ABNORMAL CONDITIONS:

None.

SURVEILLANCES DUE/IN PROGRESS:

None.

ADDITIONAL INSTRUCTIONS:

Maintenance request to have NCP removed from service for oil change.
Place the 'B' CCP in service.

EVENT

ADDITIONAL INFORMATION

A When contacted as HP, acknowledge that 'B' CCP is to be started.

NOTE: Time Compression - Inform the RO that 'B' CCP Aux L. O. Pump has run for 5 minutes.

B Act as I&C, acknowledge the failure of BB PT-455 and trip bistables if requested:

BAT dooropen.txt
BAT bb012.txt
BAT doorshut.txt

Inform crew that troubleshooting/repair will be pursued.

C Act as I&C, acknowledge the failure of AB FT-542, and inform the crew that the troubleshooting/repair will begin.

D / E Act as Chemistry and begin to sample steam generators. Open Blowdown Sample Valves using Remote Mode to open BMHV5-8.

REMOTE
BMHV5 = BMV020
BMHV6 = BMV021
BMHV7 = BMV022
BMHV8 = BMV023

45 minutes later inform the crew that 'D' S/G has a leak indication of 8 gpm.

Act as HP and acknowledge direction to survey main steam lines and inform operator later that 'D' steam line is much higher (15 mr on contact).

Act as EDO and inform the CRS to shutdown the plant as per the most conservative action in OTO-BB-00001. Call back if necessary.

Act as Power Supervisor and acknowledge plant shutdown.

F Act as Chemistry and inform crew you will take more S/G samples.

H Act as Insides Equipment Operator and inform crew steam is coming from Area 5

roof.

Act as Primary Equipment Operator and inform crew 'D' S/G Safety ABV045 has failed open and you cannot close it.

EVENT: A

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Swap Charging From NCP To CCP

EXPECTED OPERATOR / PLANT RESPONSE RO BOP CRS

ANNUNCIATORS:

NONE

1) Refer to OTN-BG-00001, "Chemical and Volume Control System", and perform the following:

- Notify HP of which CCP is to be started. _____
- Verify CCW is aligned to the 'B' CCP. _____
- Place CCP Flow Controller, BG FK-121 in manual and set to minimum. _____
- Ensure 'B' CCP Recirc Valve, BG HIS-8111 is open. _____
- Place 'B' CCP Aux L. O. Pump HS, BG HIS-2AX in AUTO and verify the Run Light is lit. _____
NOTE: Time Compression - The RO will be informed that 'B' CCP Aux L. O. Pump has run for 5 minutes.
- Start 'B' CCP with BG HIS-2A. _____
- Verify the 'B' CCP Aux L. O. Pump stops. _____
- Place NCP Flow Controller, BG FK-124 in manual. _____

COMMENTS:

* Denotes Critical Task

EVENT: C

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Flow Channel 542 Fails High On 'D' S/G

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

ANNUNCIATORS:

SG D LEV DEV	111C
SG D FLOW MISMATCH	111D

- 1) Implement OTO-AB-00002, "Steam Flow Channel Failure".
 - Identify the failed channel. (Channel F542) _____
 - Select the alternate steam flow channel. (Channel F543) _____
 - Stabilize S/G level at 50%. _____
- 2) Contact I&C to troubleshoot/repair channel. _____
- 3) Notify EDO of OTO procedure entry. _____

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Steam Generator Tube Leak On 'D' S/G, Plant Shutdown Due To S/G Tube Leak

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

6) If required, reduce letdown flow to 75 gpm.

- Contact HP to survey the Main Steam Lines.

7) If leakage rate is > 75 gpd and primary to secondary leakage rate of change is \geq to 30 gpd/hr, go to Attachment 1 and commence a rapid load decrease to 50% in one hour, followed by a controlled shutdown to Mode 3 within the next 2 hours.

Note: After crew has reduced power by at least 2%, initiate Event F, Steam Generator Tube Rupture On 'D' S/G.

- Shutdown plant to be in Mode 3 in 3 hours.

8) Refer to APA-ZZ-01023, "S/G Tube Leak Contingency Guidelines".

9) Refer to Technical Specification LCO 3.4.13.

10) Attachment 1

- Discuss shutdown with EDO.
- Notify Power Supervisor of plant S/D.
- Perform OTG-ZZ-00004, "Power Operations", may use Attachment 1 for rapid shutdown.

COMMENTS:

* Denotes Critical Task

EVENT: D/E

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Leak On 'D' S/G, Plant Shutdown Due To S/G Tube Leak

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

Attachment 1 for rapid shutdown.

COMMENTS:

*** Denotes Critical Task**

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

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

ANNUNCIATORS:

PROCESS RAD HIHI	61A
PROCESS RAD HI	61B

- | | | | |
|--|-------|-------|-------|
| 1) Identify S/G Tube Leak exceeds 50 gpm and trip reactor per OTO-BB-00001, "Steam Generator Tube Leak", Attachment 2. | _____ | _____ | _____ |
| 2) Implement E-0, "Reactor Trip or Safety Injection". | | | _____ |
| • Verify Reactor Trip. | _____ | | _____ |
| • Verify Turbine Trip. | | _____ | _____ |
| • Verify Power to NB01 AND NB02. | _____ | | _____ |
| • Check if SI is actuated. | _____ | _____ | _____ |
| Verify SI is actuated and continue in E-0. | | | _____ |

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

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

Assign an RO to perform Attachment 12. _____

- Ensure ESW pumps are running. _____
- Ensure at least One CCW pump running in each train. _____
- Ensure Feedwater Isolation. _____

* **Identify failure of 'D' FWIV to close and fast close FWIV with AE-HS-80 or AE-HS-81 before a transition to ECA-3.1 occurs.** _____

- Ensure CISA. _____
- Ensure AFW Actuation. _____
- Ensure SI initiation. _____
- Check CTMT Coolers. _____
- Ensure CPIS. _____
- Check if main steam lines should be isolated. _____

COMMENTS: * Denotes Critical Task

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

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

- Check if CTMT Spray is required. _____
- Ensure CRVIS. _____
- Notify the CRS that 'D' FWIV failed to close and was fast closed (if applicable) per Attachment 12. _____

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

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

- | | | | |
|--|-------|-------|-------|
| Continue in E-0. | | | _____ |
| • Ensure ECCS flow. | _____ | _____ | _____ |
| • Ensure total AFW flow greater than 300,000 lbm/hr. | _____ | _____ | _____ |
| • Ensure AFW valve alignment. | _____ | _____ | _____ |
| • Ensure SI valve alignment. | _____ | _____ | _____ |
| • Check RCS Temperatures. (Crew may fast close MSIV's per RNO) | _____ | _____ | _____ |
| • Check PZR PORV and PZR Spray valves. | _____ | _____ | _____ |
| • Check if RCPs should be stopped. | _____ | _____ | _____ |
| • Check if S/Gs are NOT faulted. | _____ | _____ | _____ |
| • Crew should determine a S/G is faulted and transition to E-2, "Faulted Steam Generator Isolation". | _____ | _____ | _____ |
| • Implement CSF-1, "Critical Safety Function Status Trees". | | | _____ |

COMMENTS: * Denotes Critical Task

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

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

3) Implement E-2, "Faulted Steam Generator Isolation". _____

- Check MSIVs and MSIV Bypass Valves closed. _____
- Check if any S/G is intact. _____
- Identify Faulted S/G. _____
- Isolate Faulted S/G. _____

* **AFW should be isolated to the 'D' S/G before transition out of E-2.** _____

- Check CST Level greater than 18%. _____
- Check Secondary Radiation normal. _____
- Transition to E-3, "Steam Generator Tube Rupture". _____

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

4) Implement E-3, "Steam Generator Tube Rupture".

- Check if RCPs should be stopped. _____
- Identify ruptured S/G. _____
- Isolate flow from ruptured S/G. _____
- Check ruptured S/G level. _____
- Check PZR PORV and PZR PORV block valves. _____
- Check if S/Gs are not faulted. _____
- Check intact S/G levels. _____
- Reset SI. _____
- Reset CIS 'A'. _____
- Establish Instrument Air to Containment. _____
- Verify All AC Service Buses energized by OFFSITE power. _____

COMMENTS:

* Denotes Critical Task

EVENT: F/G/H

EXAM # ILE2002DS2

BRIEF DESCRIPTION: Steam Generator Tube Rupture on 'D' S/G, Failure Of 'D' FWIV To Automatically Close, and S/G Safety Stuck Open on 'D' S/G

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

power.

- Check if RHR pumps should be stopped. _____
- Check ruptured S/G pressure > 430 psig. _____
- 5) Transition to ECA-3.1, "SGTR With Loss of Reactor Coolant Subcooled Recovery Desired" or FR-P.1, "Response to Imminent Pressurized Thermal Shock Condition" if required per the CSF Status Trees. _____

COMMENTS:

* Denotes Critical Task

CALLAWAY PLANT TRAINING DEPARTMENT

DYNAMIC SIMULATOR SCENARIO

SIMULATOR SCENARIO:	ILE2002DSBU
REVISION NUMBER:	REV. 0
REVISION DATE:	April 19, 2002

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

EXAM #: ILE2002DSBU

INITIAL CONDITIONS:

The plant is operating at 80% steady state power with 'B' RHR pump tagged out.

Event TITLE	KSA #	(RATING)
A) Pressurizer Level Channel 459 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 PORV 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 SGs to 220 PSIG.

The plant is at 80% power with 'B' RHR Pump tagged out for a breaker inspection. The 'B' RHR Pump should be returned to service in 8 hours. This is a 'B' train week for maintenance.

Pressurizer Level Channel BB LT-459 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 just over 15 mils on the shaft. The crew should reduce reactor power in preparation for securing the 'A' RCP.

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

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 to 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 SGs to 220 PSIG.

- 1) Initialize at IC-19, 80% steady state power, BOL. (For 2002 ILE, this will be IC-169 and the password is 'gary')
- 2) Run Batch File DSBUILE.TXT.
 - Runs batch file EJ01B.txt ('B' RHR pump OOS)
 - Preloads events A, B, D, F-G
 - **VERIFY REMOTE SBI006 INHIBIT IS ACTIVE**
- 3) Set Conditionals for Triggers.
 - Trigger 2 - Event Action - 0
Command - SET CRCPV2(1)=17
- 3) Ensure that an easel is set up around back of the simulator with the following information:
 - 'A' RCP Shaft Vibration 15.1 mils
 - 'A' RCP Frame Vibration 1.5 mils
 - 'A' RCP Shaft Vibration is ↑ @ 1.8 mils/hr.
 - 'A' RCP Frame Vibration is ↑ @ .2 mils/hr.
 - 'B', 'C', & 'D' RCP Shaft Vibration is 1.4 mils
 - 'B', 'C', & 'D' RCP Frame Vibration is .5 mils
- 4) Ensure the Immediate Boration Timer is reset.
- 4) Ensure NIS indicates 80% power.
- 5) Ensure step counters for Control Bank 'D' are set to 180 steps and all other steps counters are at 228 steps.
- 6) Check Rx Trip Switch has a RED Flag.
- 7) Ensure the digital display is selected to PZR Pressure and Auctioneered HI Tave.

- 8) Ensure Decrease Loading Rate Button is "ON".
- 9) Update status board to a "B" Train Week.
- 10) Update Status Board T/S LCO 3.5.2, Condition A (72 hours).
- 11) Update status board to show CCP suction boron concentration:
 - "A" 1042 ppm, 5 days ago
 - "B" 1046 ppm, 2 weeks ago
- 12) 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/%

- 13) Hold Off Tag on 'B' RHR Pump Handswitch and place in PTL.
- 14) Turnover sheets and log sheets are on the desks.
- 15) Ensure RM-11 is on the Training System.
- 16) Ensure chart recorders are "rolled forward".
- 17) Ensure alarm printer is "ON".

INSERT

<u>TIME</u>	<u>EVENT</u>	<u>MALF</u>	<u>DESCRIPTION</u>
0	A	prs02a (1) 0 10	PZR Level Channel Failure
N/A	B	bghis459_IC (1 5) ON bghis459_IO (1 5) OFF	LTDN Iso Vlv 459 Fails Closed
20	D	Trigger 2	'A' RCP High Vibration
35	F	mss07a (3) 100 10	S/G PORV Failure
40	G	Seismic EPS03	Loss of Off-Site Power and NB02
P	H	crf13 0	RX Auto Trip Failure
P	I	sbi006 inhibit	TDAFW Pump Auto Start Failure
P	J	eps06a (5)	NE01 Failure

EVENT INITIATING CUE (Instructor enters times ACTUATED)

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

PRESENT CONDITIONS:

Mode 1
80% BOL
Bank 'D' @ 180 steps
 $C_B = 1041$ ppm
 $MWe = 972$
Circ Water pump setback - Enabled
Cooling Tower B/D = 1K
AEHV0038 \approx 20% open (2615 klbm/hr)

POWER HISTORY:

80% following an outage to repair a leak in Main Generator Stator Cooling Water.

EQUIPMENT STATUS:

'B' RHR Pump OOS for breaker inspection (8 hour duration remaining)
T/S LCO 3.5.2 Condition A (72 hours)

ABNORMAL CONDITIONS:

None.

SURVEILLANCES DUE/IN PROGRESS:

None.

ADDITIONAL INSTRUCTIONS:

None.

EVENT

ADDITIONAL INFORMATION

- A Respond as I&C to trip bistables
- BAT dooropen.txt
BAT bb052.txt
BAT doorclosed.txt
- If contacted as EDO acknowledge the OTO entry
- B Respond as Work Control if requested to investigate the failure of BGLV0459.
- 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.

EVENT: A

EXAM # ILE2002DSBU

BRIEF DESCRIPTION: Pressurizer Level Channel Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

- Contact I&C to have the instrument failure investigated, and request tripping of bistables. _____
- 3) Notify EDO upon entering off-normal procedure. _____

COMMENTS:

* Denotes Critical Task

EVENT: B/C

EXAM # ILE2002DSBU

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

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

ANNUNCIATORS:

NONE

- | | | | |
|--|-------|--|-------|
| 1) When attempts to restore normal letdown are unsuccessful, place excess letdown in service per OTN-BG-00001. | | | _____ |
| • Inform H.P. that excess letdown is to be placed in service. | _____ | | _____ |
| • Inform Chemistry that excess letdown is to be placed in service. | _____ | | _____ |
| • Notify Radwaste that excess letdown is being directed to the RCDT. | _____ | | _____ |
| • Verify that the Excess Letdown Heat Exchanger is supplied with CCW. | _____ | | _____ |
| • Ensure BG HC-123, the Excess Letdown HX Outlet Flow Hand Switch, is in the closed position. | _____ | | _____ |
| • Place BG HIS-8143, in the RCDT position. | _____ | | _____ |
| • Open either set of Reactor Coolant To Excess Letdown HX valves with the applicable control switches:
Train A BG HIS-8153A & BG HIS-8154A
Train B BG HIS-8153B & BG HIS-8154B | _____ | | _____ |

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
• Slowly turn BG HC-123, "EX LTDN EX OUT FLOW 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.	_____	_____	_____

COMMENTS:

* Denotes Critical Task

EVENT: **B/C**

EXAM # **ILE2002DSBU**

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

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

- | | | | |
|---|-------|--|-------|
| <ul style="list-style-type: none">• 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. | _____ | | _____ |
| <ul style="list-style-type: none">• Notify H.P. that excess letdown is in service. Identify the flowpath for excess letdown so that H.P. can monitor rooms and components in the flowpath for increased radiation levels. | _____ | | _____ |

COMMENTS:

* Denotes Critical Task

EVENT: D/E

EXAM # ILE2002DSBU

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.

Maintain Tav_g with Tref with control rods and/or boron concentration adjustments.

2) Notify EDO of OTO procedure entry.

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

COMMENTS:

* Denotes Critical Task

EVENT: F

EXAM # ILE2002DSBU

BRIEF DESCRIPTION: 'A' S/G PORV 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.
- If at high load, ensure reactor power is less than 3565 MWth.

3) Ensure rod control is in manual to prevent rod movement

- Notify the Count Room Tech of the valve opening and provide open/close times.
- For an inoperable Atmospheric Steam Dump refer to Technical Specification 3.7.4
- Contact I&C to have the failure investigated and or repaired.

4) Notify EDO of OTO procedure entry.

COMMENTS:

* Denotes Critical Task

EVENT: G/H/I

EXAM # ILE2002DSBU

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 SGs to obtain greater than 300,000 LBM/HR (manually start the TDAFP)			
Recognize NE01 failure and transition to ECA-0.0, "Loss Of All AC Power".			_____

COMMENTS:

* Denotes Critical Task

BRIEF DESCRIPTION: Loss of All AC due to NE01 Failure

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

ANNUNCIATORS:

NB01 BUS UV	18B
DG NE01 TROUBLE	20D

- | | | | |
|---|--|--|--|
| 1) Recognize NE01 failure and implement ECA-0.0, "Loss Of All AC Power". | | | |
| • Ensure reactor trip | | | |
| • Verify turbine trip | | | |
| • Check if RCS is isolated | | | |
| Isolate Excess Letdown | | | |
| • Ensure AFW flow greater than 300,000 lbm/hr | | | |
| * Manually start the TDAFP | | | |
| • Try to restore power to either NB01 or NB02 | | | |
| • Place Following Equipment in pull-to-lock position | | | |
| • Dispatch personnel to locally restore AC power using Attachment 9, Restoration of Offsite Power | | | |
| • Dispatch personnel to locally open breakers and close valves to isolate RCP seals | | | |
| • Check CST isolated from Hotwell | | | |
| • Check S/G status | | | |
| • Check if S/Gs are not faulted | | | |
| • Check if S/G tubes are not ruptured | | | |

COMMENTS:

* Denotes Critical Task

EVENT: J

EXAM # ILE2002DSBU

BRIEF DESCRIPTION: Loss of All AC due to NE01 Failure

EXPECTED OPERATOR / PLANT RESPONSE

RO

BOP

CRS

- Check intact S/G levels _____
- Check DC bus loads _____
- Check CST to AFP suction header pressure - Greater than 7 PSIG _____
- Depressurize Intact SGs to 220 PSIG _____

COMMENTS:

*** Denotes Critical Task**
