ES-301

Administrative Topics Outline

Form ES-301-1

E3-301	Aumin				
	1	Draft			
Facility: HB ROBINSO	N	Date of Examination: <u>2008 NRC</u>			
Examination Level (circle o	ne): RO / S	SRO Operating Test Number:			
Administrative Topic (see Note)	Type Code*	Describe activity to be performed			
Conduct of Operations	Ν	G2.2.1 (3.9); 001 A4.10 (3.5)			
Conduct of Operations		Given a set of conditions and applicable references, perform a Manual Estimated Critical Condition Calculation.			
Conduct of Operations	М	015 A1.04 (3.5)			
Conduct of Operations		Given a set of conditions, perform a Manual Quadrant Power Tilt Calculation.			
Equipment Control	N	G2.2.12 (3.7)			
Equipment Control		Given a set of conditions, perform the Administrative Daily Checks to determine potentiometer settings for FCV-113A, Boric Acid Flow and HFC-114, Primary Water Flow Auto Mode.			
Padiation Control	N	G2.3.7 (3.5)			
naulation control		Given an RWP and a Survey Map, fill out a Radiation Worker RCA Card (ALARA Card).			
Emergency Plan		Not selected for RO.			
NOTE: All items (5 tota they are retakin	l) are require g only the ad	ed for SROs. RO applicants require only 4 items unless Iministrative topics, when 5 are required.			
*Type Codes & Criteria:	(C)ontrol ro (D)irect from (N)ew or (M (P)revious 2 (S)imulator	bom m bank (≤ 3 for ROs; ≤ for SROs & RO retakes) vI)odified from bank (> 1) 2 exams (≤ 1; randomly selected) r			

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Administrative Topics Outline

Form ES-301-1

		Draft	
Facility: HB ROBINSC	N	Date of Examination: <u>2008 NRC</u>	
Examination Level (circle o	one): RO /	SRO Operating Test Number:	
	1		
Administrative Topic (see Note)	Type Code*	Describe activity to be performed	
Conduct of Operations	N	G2.2.1 (4.2); 001 A4.10 (3.9)	
		Given a set of conditions and applicable references, perform a Manual Estimated Critical Condition Calculation.	
Conduct of Operations	М	015 A1.04 (3.7)	
Conduct of Operations		Given a set of conditions, perform a Manual Quadrant Power Tilt Calculation.	
Equipment Control	N	G2.2.12 (4.1)	
Equipment Control		Given a set of conditions, perform the Administrative Daily Checks to determine potentiometer settings for FCV-113A, Boric Acid Flow and HFC-114, Primary Water Flow Auto Mode.	
De distis a Osustas l	N	G2.3.7 (3.6)	
Radiation Control		Given an RWP and a Survey Map, fill out a Radiation Worker RCA Card (ALARA Card).	
Emorgonov Plan	N	G2.4.41 (4.6); G2.4.44 (4.4)	
Emergency Flan		Given a set of conditions, classify the event IAW the Emergency Action Level Matrices.	
NOTE: All items (5 tota they are retakin	I) are require g only the ad	d for SROs. RO applicants require only 4 items unless ministrative topics, when 5 are required.	
*Type Codes & Criteria:	(C)ontrol ro (D)irect fror (N)ew or (M (P)revious 2 (S)imulator	om n bank (≤ 3 for ROs; ≤ for SROs & RO retakes) 1)odified from bank (> 1) 2 exams (≤ 1; randomly selected)	

ES-301

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Control Room/In-Plant Systems Outline

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Fac	ility: HB ROBINSON	Date	of Exam	ination:	2008 NRC
Exa	m Level (circle one): RO / SRO(I) / SRO (L	l) Oper	ating Te	st No.:	
Con	trol Room Systems $^{ heta}$ (8 for RO; 7 for SRO-I; 2 or	3 for SRO-U, i	ncluding	1 ESF)	
	System / JPM Title			Type Code*	Safety Function
a.	(IRPI/014): Perform Rod Control Exercise an per OST-011. (S8)	d IRPI Surveill	ance	A, M, S	1
b.	(ECCS/006): Fill a Safety Injection Accumulator Level Alarm. (S1)	r to clear the Lo	W	D, S	2
c.	(RCS/002): Start a RCP per OP-101. (S4)			D, L, S	4P
d.	(CSS/026): Reactor Trip/Safety Injection respon Containment Spray to Actuate. (S5)	nse with Failure	of	A, N, S	5
e.	e. (AC DIST/062): Restore Control Power to ECCS Valves. (S2).			A, D, S	6
f.	f. (NIS/015): Remove N-44 from service. (S6)			D, S	7
g.	. (RMS/072): Respond to a Loss of Circulating Water Pump. (S7)		A, D, S,	8	
h.	h. (SW/076): Limit Radiation Exposure in response to a Radiation alarm. (S3) (SRO-I do not perform).			D, S	9
In-P	lant Systems [@] (3 for RO; 3 for SRO-I; 3 or 2 for \mathbb{S}	SRO-U)			
i.	i. (Rod Control/001): Trip the Reactor as Inside AO. (IP2)		D, E, R	1	
j.	 j. (PZR Pressure/010): Energize PZR Heaters from Emergency busses using EPP-21. (IP3) 		;y	D, E	3
k.	(EDG/064): Manually start EDG using Air Sta	rt Solenoids. (IP1)	A, E, N, R	6
@	All RO and SRO-I control room (and in-plant safety functions; all 5 SRO-U systems must functions may overlap those tested in the co) systems must serve different s ntrol room.	be diffe safety fu	rent and serve di nctions; in-plant	fferent systems and
	* Type Codes	Crite	əria for F	RO / SRO-I / SRC)-U
(A)Iternate path (C)ontrol room (D)irect from bank (E)mergency or abnormal in-plant (L)ow-Power / Shutdown (N)ew or (M)odified from bank including 1(A) (P)revious 2 exams $4-6/4-6/2-3$ $\leq 9/\leq 8/\leq 4$ $\geq 1/\geq 1/\geq 1$ $\geq 1/\geq 1/\geq 1$ $\leq 2/\geq 2/\geq 1$ $\leq 3/\leq 3/\leq 2$ (randomly selected) $\geq 1/\geq 1/\geq 1$ (R)CA (S)imulator $\leq 3/\leq 3/\leq 2$ (randomly selected) $\geq 1/\geq 1/\geq 1$		ted)			

Appendix C	Job Performanc	e Measure	Form ES-C-1
	Workshe	eet	
Facility:	HB ROBINSON	Task No.:	01006100101
Task Title:	Manually Calculate an Estimated Critical Condition	JPM No.:	2008 NRC JPM A1
K/A Reference:	G2.1.25 (3.9/4.2)		
Examinee:		NRC Examiner	:
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performa Classro	ance: oomX Simulator	Actual Performa	ance: X

READ TO THE EXAMINEE

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

Initial Conditions:

- The plant is in Mode 3 with T_{AVG} at 547 degrees F following a unit trip.
- The trip occurred from equilibrium conditions following a 78 day run at full power conditions.
- Critical Data Stamp initiated 1 hour prior to trip lists the following conditions at time of trip:
 - o 602 ppm Boron
 - o Control rods at 218 steps on CB "D"
 - Power at 100% RTP
 - Burnup is at 333.01 EFPD (11668.5 MWD/MTU)
- Projected return to criticality is 15 hours from the trip, at Boron Concentration of 602 ppm.
- The next Criticality number is 501.
- You have been directed to perform a Manual Estimated Critical Conditions calculation for the given conditions.

Appendix C	Job Performance Measure Worksheet	Form ES-C-
Task Standard:	Calculate Estimated Critical Condition within +/- 250 PC Engineering validated condition.	M of Reactor
Required Materials:	Calculator	
	GP-003, Attachment 10.1	
	Applicable Plant Curve Book curves: Section 1, Section	2
General References:	GP- 003, NORMAL PLANT STARTUP FROM HOT SHU CRITICAL Station Curve Book	JTDOWN TO
Handouts:	GP-003, Attachment 10.1	
	Applicable Plant Curve Book curves: Section 1, Section	2
Initiating Cue:	Perform a Manual Estimated Critical Condition Calculati Attachment 10.1 for a projected Critical condition time of trip.	on IAW GP-003 f 15 hours from
Time Critical Task:	NO	
Validation Time:	75 minutes	

Appendix C	Page 4 of 15	Form ES-C-7
	PERFORMANCE INFORMATION	
(Denote Critical Steps with a	an asterisk)	
	Start Time:	
Performance Step: 1	Enter Attachment 10.1 pre-trip data (Steps 1.7	l, 1.2, 1.3)
Standard:	Enters Criticality number as 501.	
	Correctly enters CB "D" at 218 steps (Step 1.1	I).
	Power Level at 100% (Step 1.2)	
	Boron Concentration at 602 (Step 1.3.1)	
	Number of days since last Critical Data Stamp 0. (Step 1.3.2)	and shutdown as
Examiner's Note:		
Comment:		

Performance Step: 2	Transitions to Step 1.3.6 IAW Step 1.3.3, Records Current Critical Boron Concentration.
Standard:	Enters 602 ppm in Step 1.3.6.
Examiner's Note:	

ppendix C	Page 5 of 15	Form ES-C-1
	PERFORMANCE INFORMATION	
Performance Step: 3	Using Integral Boron Worth Curve 1.13, ento	er Integral Boron
Standard:	Using Integral Boron Worth Curve 1.13, ent	ers Integral Boron
	Worth as 5166 pcm in Step 1.4.	oro mogra Doron
Examiner's Note:	Interpolated data: BOL Value = 5500, EOI	_ value 4500, .66%
	interpolation BOL-EOL, 4500 + .66% of de 5166.	elta = 4500 + 666 =
	Acceptable ranges/tolerances for curves	are NOT given for
	this JPM. Final PCM change has an acce	ptable range of +/-
	250 pcm, which includes all individual cu	rve and math
	tolerances.	
Commont:		
Comment.		
Performance Step: 4	Using Xenon Worth Curve 2.1, enter Xenon	Worth at time of trip.
Standard:	Using Xenon Worth Curve 2.1, enters Xenor	n Worth at time of trip
	as 2720 pcm, in Step 1.5.	
Examiner's Note:	Interpolated data: BOL value = 2560, EOL	. value = 2800.
	Interpolating EOL-BOL, = 240 x .66 = 160	+ 2560 = 2720.

Performance Step: 5 Using Power Defect Curve 1.3, enter Power Defect at time of trip. Standard: Using Power Defect Curve 1.3, enters Power Defect at time of trip as 2115 pcm, in Step 1.6. Examiner's Note: Power Defect Curves 1.3B (MOL) and 1.3C (EOL) should be used to interpolate power defect for 100% power, Boron concentration of 602 ppm. Interpolate EOL – MOL = 500 pcm x .33 = 165 (MOL-EOL delta). 1950 + 165 = 2115 pcm. Comment: Performance Step: 6 Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip as 915 pcm in Step 1.7. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 = 125. 790 + 125 = 915.	Appendix C	Page 6 of 15	
Performance Step: 5 Using Power Defect Curve 1.3, enter Power Defect at time of trip. Standard: Using Power Defect Curve 1.3, enters Power Defect at time of trip as 2115 pcm, in Step 1.6. Examiner's Note: Power Defect Curves 1.3B (MOL) and 1.3C (EOL) should be used to interpolate power defect for 100% power, Boron concentration of 602 ppm. Interpolated data: MOL = 1950 pcm, EOL = 2450 pcm. Interpolate EOL – MOL = 500 pcm x33 = 165 (MOL-EOL delta). 1950 + 165 = 2115 pcm. Comment: Vorth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 = 125. 790 + 125 = 915. Comment: Comment:			F01111 E2-C-1
Performance Step: 5 Using Power Defect Curve 1.3, enter Power Defect at time of trip. Standard: Using Power Defect Curve 1.3, enters Power Defect at time of trip as 2115 pcm, in Step 1.6. Examiner's Note: Power Defect Curves 1.3B (MOL) and 1.3C (EOL) should be used to interpolate power defect for 100% power, Boron concentration of 602 ppm. Interpolated data: MOL = 1950 pcm, EOL = 2450 pcm. Interpolate data: MOL = 1950 pcm, EOL = 2450 pcm. Interpolate EOL – MOL = 500 pcm x .33 = 165 (MOL-EOL delta). 1950 + 165 = 2115 pcm. Comment: Performance Step: 6 Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip as 915 pcm in Step 1.7. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 = 125. 790 + 125 = 915.		FERFORMANCE INFORMATION	
Performance Step: 5 Using Power Defect Curve 1.3, enter Power Defect at time of trip. Standard: Using Power Defect Curve 1.3, enters Power Defect at time of trip as 2115 pcm, in Step 1.6. Examiner's Note: Power Defect Curves 1.3B (MOL) and 1.3C (EOL) should be used to interpolate power defect for 100% power, Boron concentration of 602 ppm. Interpolate data: MOL = 1950 pcm, EOL = 2450 pcm. Interpolate EOL – MOL = 500 pcm x .33 = 165 (MOL-EOL delta). 1950 + 165 = 2115 pcm. Comment: Performance Step: 6 Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip as 915 pcm in Step 1.7. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 = 125. 790 + 125 = 915. Comment: Comment:			
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Examiner's Note: Power Defect Curves 1.3B (MOL) and 1.3C (EOL) should be used to interpolate power defect for 100% power, Boron concentration of 602 ppm. Interpolated data: MOL = 1950 pcm, EOL = 2450 pcm. Interpolate EOL - MOL = 500 pcm x .33 = 165 (MOL-EOL delta). 1950 + 165 = 2115 pcm. Comment: Comment: Performance Step: 6 Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip as 915 pcm in Step 1.7. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL - BOL = 190 x .66 = 125. 790 + 125 = 915. Comment:	Standard:	Using Power Defect Curve 1.3, enters Po trip as 2115 pcm, in Step 1.6.	ower Defect at time of
Comment: Performance Step: 6 Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip as 915 pcm in Step 1.7. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL - BOL = 190 x .66 = 125. 790 + 125 = 915. Comment: Vorther the second secon	Examiner's Note:	Power Defect Curves 1.3B (MOL) and used to interpolate power defect for 10 concentration of 602 ppm. Interpolate pcm, EOL = 2450 pcm. Interpolate EO .33 = 165 (MOL-EOL delta). 1950 + 165	1.3C (EOL) should be 00% power, Boron ed data: MOL = 1950 L – MOL = 500 pcm x 5 = 2115 pcm.
Performance Step: 6 Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enter Samarium Worth at time of trip. Standard: Using Samarium Worth Curves 2.4A, 2.4B, 2.5, enters Samarium Worth at time of trip as 915 pcm in Step 1.7. Examiner's Note: Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip. Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 = 125. 790 + 125 = 915. Comment:	Comment:		
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Examiner's Note:Per Note #2, should use Curves 2.4A and 2.4B for Equilibrium Samarium conditions at time of trip.Interpolated data:BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 = 125. 790 + 125 = 915.Comment:	Standard:	Using Samarium Worth Curves 2.4A, 2.4 Worth at time of trip as 915 pcm in Step 1	B, 2.5, enters Samarium 1.7.
Interpolated data: BOL from Curve 2.4A = 790, EOL from Curve 2.4B = 980. EOL – BOL = 190 x .66 =125. 790 + 125 = 915. Comment:	Examiner's Note:	Per Note #2, should use Curves 2.4A a Equilibrium Samarium conditions at ti	nd 2.4B for me of trip.
Comment:		Interpolated data: BOL from Curve 2.4 Curve 2.4B = 980. EOL – BOL = 190 x 915.	A = 790, EOL from .66 =125. 790 + 125 =
	Comment:		

PERFORMANCE INFORMATION	
Using Inserted Rod Worth curve 1.6, 1.8 enter Inse Worth at time of trip.	erted Rod
Using Inserted Rod Worth curve 1.6, 1.8 enters In Worth at time of trip as 0 pcm in Step 1.8.	serted Rod
Should use Curve 1.6 per Note #3.	
Enter Projected Boron Concentration, temperature since shutdown.	e, and time
Enters Projected Boron Concentration and temper ppm, 547 deg. F., 15 hours in Steps 2.1, 2.2, 2.3.	ature as 602
	PERFORMANCE INFORMATION Using Inserted Rod Worth curve 1.6, 1.8 enter Inservent at time of trip. Using Inserted Rod Worth curve 1.6, 1.8 enters In Worth at time of trip as 0 pcm in Step 1.8. Should use Curve 1.6 per Note #3. Enter Projected Boron Concentration, temperature since shutdown. Enters Projected Boron Concentration and temper ppm, 547 deg. F., 15 hours in Steps 2.1, 2.2, 2.3.

Ap	pendix	С
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Form ES-C-1

Performance Step: 9	Enter Integral Boron Worth.
Standard:	Enters Integral Boron Worth as 5166 pcm in Step 2.4.
Examiner's Note:	Should enter same value as Step 1.4, above.
Comment:	

Performance Step: 10	Enter Projected Xenon Worth at Startup.	
Standard:	Enters Projected Xenon Worth at Startup as 3928 pcm in Step 2.5.	
Examiner's Note:	Interpolated data from BOL Curve 2.3A (3400 pcm @ 15 hours) and EOL Curve 2.3B (4200 pcm @ 15 hours).	
	Interpolating 4200 – 3400 = 800 x .66 = 528. 3400 + 528 = 3928 pcm.	

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Performance Step: 11	Enter Samarium Worth at Startup.
Standard:	Enters Samarium Worth at Startup as 1000 pcm in Step 2.6.
Examiner's Note:	Interpolated data: BOL Curve 2.4A = 865, EOL Curve 2.4.B = 1070. 205 x .66 = 135 + 865 = 1000 pcm.

Comment:	
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Performance Step: 12	Enter Samarium change before equilibrium.	
Standard:	Enters Samarium change before equilibrium as 0 pcm.	
Examiner Cue:		
Comment:		

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	PERFORMANCE INFORMATION	
Performance Step: 13	Enter determined values, perform calculation pe determine calculated change in Reactivity.	r Step 3.2 to
Standard:	Enter determined values, perform calculation pe determine calculated change in Reactivity. Calc Reactivity = 822 pcm +/- 250 pcm (572-1072 pc	r Step 3.2 to ulate Change in m).
Examiner's Note:		
Comment:		
*Performance Step: 14	Calculate and enter New Controlling Rod Worth	per Step 4.1.
Standard:	Step 4.1: 0 pcm (from Step 1.8) + 822 pcm (from 822 pcm. (acceptable range = $572 - 1072$ pcm)	n Step 3.2.5) =)
Examiner's Note:	AT Step 4.2, inform candidate: "Reactor Engi calculation is the same as yours."	neer's
Comment:		

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*Performance Step: 15	Determine new Critical Rod Position associated with the integral
	worth in Step 4.1 using Curve 1.8.

Standard: Determines new Critical Rod Position associated with the integral worth in Step 4.1 using Curve 1.8. as listed in the table below.

Candidate value from step 4.2.	Allowable Tolerance Band.	
<u>≥</u> 572 – 672 pcm	95 steps	168 steps
<u>≥</u> 672 – 772 pcm	80 steps	155 steps
<u>≥</u> 772 – 872 pcm	70 steps	128 steps
<u>></u> 872 – 972 pcm	58 steps	90 steps
<u>></u> 972 – 1072 pcm	50 steps	82 steps

Examiner's Note:

Tolerance Bands vary by pcm calculated and are calculated based on $\pm \frac{1}{2}$ of the range between the EOL and MOL curves on Curve 1.8 for the pcm band.

Comment:

i .1 .

Standard: Enters Estimated Critical Condition data in Step 5.1 (77 steps on CB "D", 602 ppm boron, 547 °F T_{AVG}).

Examiner's Note:

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Performance Step: 17 Answers questions in Steps 5.2 and 5.3.

Standard: Answers questions in Steps 5.2 and 5.3 as "YES".

Examiner's Note:

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	PERFORMANCE INFORMATION	
Performance Step: 18	Calculate the tolerance band of plus OR minus 500 pcm from the ECP in Steps 6.1.1 and 6.1.2.	
Standard:	Calculates the tolerance band of plus OR minus 500 pcm from the ECP as 5 steps to 200 steps on Bank "D".	
Examiner's Note:		
Comment:		
Performance Step: 19	Record ECP completion time.	
Standard:	Candidate records the present time that the EC completed.	P calculation was
Examiner's Note:	To allow use of this ECP, criticality must be 4 hours of the completion time recorded. Th compliance with ITS SR 3.1.6.1.	achieved within is will ensure
Comment:		
	END OF TASK	
Terminating Cue:	GP-003, Attachment 10.1 completed.	
STOP TIME:		

Appendix C	Page 14 of 15	Form ES-C-
	VERIFICATION OF COMPLETION	
Job Performance Measure No.:	2008 NRC JPM A1	
Examinee's Name:		
Date Performed:		
Facility Evaluator:		
Number of Attempts:		
Time to Complete:		
Question Documentation:		
Question:		
Response:		
Result:	SAT UNSAT	
Examiner's Signature:	Date:	

Appendix C	Page 15 of 15	Form ES-C-1
	JPM CUE SHEET	
Initial Conditions:	 The plant is in Mode 3 with T_{AVG} at 547 deg trip. 	grees F following a unit
	 The trip occurred from equilibrium condition at full power conditions. 	ns following a 78 day run
	 Critical Data Stamp initiated 1 hour prior to conditions at time of trip: 	trip lists the following
	 602 ppm Boron 	
	 Control rods at 218 steps on CB " 	D"
	 Power at 100% RTP 	
	 Burnup is at 333.01 EFPD (11668 	.5 MWD/MTU)
	 Projected return to criticality is 15 hours fro Concentration of 602 ppm. 	om the trip, at Boron
	• The next Criticality number is 501.	
	 You have been directed to perform a Manu Conditions calculation for the given condition 	al Estimated Critical
Initiating Cue:	Perform a Manual Estimated Critical Condition Attachment 10.1 for a projected Critical Condit	Calculation IAW GP-03, ion time of 15 hours

Appenaix C	Job Pe	Form ES-C-	
Facility:	HB ROBINSON	Task No.	: 01015100402
Task Title:	Perform a Manual QPTR C	Calculation JPM No.:	2008 NRC JPM A2
K/A Reference:	015 A1.04 (3.5/3.7)		
Examinee:		NRC Examin	er:
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performa	ance:	Actual Perfor	mance: X
Class	room X Simulator	Plant	
READ TO THE EX	AMINEE tial conditions, which steps to s	simulate or discuss, and p	rovide initiating cues. When
READ TO THE EX	AMINEE tial conditions, which steps to s ask successfully, the objective	simulate or discuss, and p for this Job Performance	rovide initiating cues. When Measure will be satisfied.
READ TO THE EX I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6	simulate or discuss, and p for this Job Performance 0% RTP.	rovide initiating cues. When Measure will be satisfied.
READ TO THE EXA I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply.	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup • APP-005-F4, PF illuminated.	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup • APP-005-F4, PF illuminated. • ERFIS is inoperative	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX able.	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup • APP-005-F4, PF illuminated. • ERFIS is inopera • Detector Curren	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX able. ts are as follows:	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup • APP-005-F4, PF illuminated. • ERFIS is inopera • Detector Curren • N41: U	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX able. ts are as follows: oper – 63 Normalizing	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is g – 123
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup • APP-005-F4, PF illuminated. • ERFIS is inopera • Detector Curren • N41: U • N41: Lo	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX able. ts are as follows: oper – 63 Normalizing	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is 9 – 123 9 – 120
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective • The plant is at 6 • Power Range N failed power sup • APP-005-F4, PF illuminated. • ERFIS is inoper • Detector Curren • N41: U • N41: Lo • N43: U	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX able. ts are as follows: oper – 63 Normalizing ower – 55 Normalizing	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is 9 – 123 9 – 120 9 – 104
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	 AMINEE tial conditions, which steps to sask successfully, the objective The plant is at 6 Power Range N failed power sup APP-005-F4, PF illuminated. ERFIS is inoperative Detector Curren N41: Up N41: Lo N43: Up N43: Lo 	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRN oply. R LOWER CH HI FLUX able. ts are as follows: oper – 63 Normalizing ower – 55 Normalizing oper – 50 Normalizing	rovide initiating cues. When Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is 9 – 123 9 – 120 9 – 104 9 – 99
READ TO THE EX. I will explain the init you complete the ta Initial Conditions:	AMINEE tial conditions, which steps to s ask successfully, the objective The plant is at 6 Power Range N failed power sup APP-005-F4, PF illuminated. ERFIS is inopera Detector Curren N41: Up N41: Lo N43: Lo N43: Lo N44: Up	simulate or discuss, and p for this Job Performance 0% RTP. uclear Instrument PRNI oply. R LOWER CH HI FLUX able. ts are as follows: oper – 63 Normalizing ower – 55 Normalizing ower – 50 Normalizing ower – 45 Normalizing	rovide initiating cues. Wher Measure will be satisfied. -42 is inoperable due to a DEV/AUTO DEFEAT is J – 123 J – 120 J – 104 J – 99 J – 97

Task Standard:Perform a MANUAL QPTR calculation IAW FMP-007, QUADRANT
POWER TILT with an accuracy of +/- 0.5%.

Required Materials:

FMP-007, QUADRANT POWER TILT

Calculator

Appendix C	Job Performance Measure	Form ES-C-1
	WORSheet	
General References:	FMP-007, QUADRANT POWER TILT, Section 8.2.4, Manual C Calculations.	QPTR
	FMP-007 Attachment 10.2, MANUAL QPTR CALCULATIONS	
Handoute		
nanuouis.	FMF-007, QUADRANT POWER HET.	
Initiating Cue:	Perform a MANUAL QPTR calculation IAW FMP-007, QI POWER TILT, section 8.2.4.	UADRANT
Time Critical Task:	NO	
Validation Time:	15 minutes	

Appendix C	Job Performance Measure	Form ES-C-1
	Worksheet	
INITIAL CONDITIONS:	• The plant is at 60% RTP.	
	 Power Range Nuclear Instrument PRNI-42 failed power supply. 	is inoperable due to a
	 APP-005-F4, PR LOWER CH HI FLUX DE illuminated. 	EV/AUTO DEFEAT is
	ERFIS is inoperable	
	 FMP-007, Attachment 10.2 Manual QPTR initiated, with Indicated Detector Currents a Currents recorded. 	Calculations has been and Normalizing Detecto
INITIATING CUE:	TILT.	UADRANT POWER

Appendix C	Page 4 of 10	Form ES-C-1
	PERFORMANCE INFORMATION	
(Denote Critical Steps with a	n asterisk)	
	Start Time:	
Performance Step: 1	Enter each Indicated and Normalizing Detec Attachment 10.2	otor Current in
Standard:	Enters detector currents as given in initiating boxes of Attachment 10.2.	g cue in correct
Examiner's Note:		
Comment:		

Appendix C	Page 5 of	10	Form ES-C-1
	PERFORMANCE IN	IFORMATION	
Performance Step: 2	2 Divide each Indicated D Normalizing Detector Cu Normalized Detector Ra	etector Current by its corr irrent and record the resu tio on Attachment 10.2.	esponding It as the
Standard:	Divides each Indicated I Normalizing Detector Cu Normalized Detector Ra	Detector Current by its cor Irrent and records the res tio on Attachment 10.2:	responding ult as the
	Upper N41 = 0.5122	Lower N41 = 0.4583	
	Upper N42 = 0	Lower N42 = 0	
	Upper N43 = 0.4808	Lower N43 = 0.4545	
	Upper N44 = 0.4948	Lower N44 = 0.4737	
Examiner's Note:	Calculated values rour	ided to 4th decimal plac	е.
Comment:			
Performance Step: 3	Average the Upper Norn result as the Average No column on Attachment 1	nalized Detector Ratios ar ormalized Detector Ratio i 0.2.	nd record the n the Upper
	Average the Lower Norn result as the Average No column on Attachment 1	nalized Detector Ratios ar ormalized Detector Ratio i 0.2.	nd records the n the Lower
Standard:	Upper Average Normaliz	ed Detector Ratio = 0.498	59
	Lower Average Normaliz	ed Detector Ratio = 0.462	21
Examiner's Note:	Calculated values roun	ded to 4 th decimal place)_
	Candidate should NOT Channel.	include data from the fa	ailed NI
Comment:			

Appendix C	Page 6 of 10	Form ES-C-1
	PERFORMANCE INFORMATION	
*Performance Step: 4	Determine the maximum Upper Normalized divide it by the Average Upper Normalized I Performance Step 2 and record the resulting Attachment 10.2.	Detector Ratio and Detector Ratio from g Upper QPTR on
Standard:	Determines the maximum Upper Normalized divides it by the Average Upper Normalized Performance Step 2 and records the resultin Attachment 10.2.	d Detector Ratio and Detector Ratio from ng Upper QPTR on
	Upper QPTR = 0.5122 / 0.4959 = 1.0329	
Examiner's Note:	Calculated values rounded to 4 th decimal	place.
Comment:		
*Performance Step: 5	Determine the maximum Lower Normalized divide it by the Average Lower Normalized I record the resulting Lower QPTR on Attach	Detector Ratio and Detector Ratio and ment 10.2.
Standard:	Determines the maximum Lower Normalized divides it by the Average Lower Normalized records the resulting Lower QPTR on Attack	d Detector Ratio and Detector Ratio and nment 10.2.
	Lower QPTR = 0.4737 /0.4621 = 1.0251	
Examiner's Note:	Calculated values rounded to 4 th decimal	place.
Comment:		

Appendix C	Page 7 of 10	Form ES-C-1
······································	PERFORMANCE INFORMATION	
*Performance Step: 6	Record the larger of the Upper QPTR or the Lo Maximum QPTR on Attachment 10.2 along with power and any comments.	ower QPTR as the th the reactor
Standard:	Records the larger of the Upper QPTR or the I the Maximum QPTR on Attachment 10.2 along power and any comments.	Lower QPTR as 9 with the reactor
	Records the Maximum QPTR as 1.0329, Powe	er Level as 60%.
Examiner's Note:	Correct Calculated Maximum QPTR is 1.032	29
	Acceptable range is +/- 0.5% (1.0277 to 1.03	80)
Comment:		
Performance Step: 7	Enter appropriate comments regarding the Ma Calculation.	nual QPTR
Standard:	Enters comment that the Calculated Maximum allowable Tech Spec limit of \leq 1.02 or enters 9 Power limit.	QPTR exceeds 0.4% as Reactor
Examiner's Note:	Calculated values rounded to 4 th decimal pl	ace.
Comment:		
	END OF TASK	
Terminating Cue	Manual OPTR has been completed	
STOP TIME:		
2008 NRC JPM A2	NUREG 1021, Revisio	n 9, Supplement 1

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Page 8 of 10 VERIFICATION OF COMPLETION

Job Performance Measure No.:	2008 NRC JPM A2	
Examinee's Name:		
Date Performed:		
Facility Evaluator:		
Number of Attempts:		
Time to Complete:		
Question Documentation:		
Question:		
Response:		
Result:	SAT UNSAT _	
Examiner's Signature:		Date:

Appendix C		Job Performanc	e Measure	Form ES-C-1
		Worksho	eet	
Facility:	HB ROBINSO	N	Task No.:	
Task Title:	Determine If ReMet.	equired Shift Manning	ls JPM No.:	2008 NRC ADM SRO b
K/A Reference:	2.1.4			
Examinee:			NRC Examiner:	
Facility Evaluator:			Date:	
Method of testing:				
Simulated Performa	nce:		Actual Performa	ance: X
Classre	oom <u>X</u>	Simulator	Plant	

READ TO THE EXAMINEE

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

Initial Conditions:

You are the CRSS.

Unit 2 is operating at 100% RTP.

The following operators are available at the beginning of the shift:

$(\sqrt{} = PRESENT)$

	Qualifications and/or License held						
Name	SSO	CRSS	RO	AO	FPAO	WCC SRO	STA
Auten	\checkmark						
Bailes					\checkmark		
Blair			\checkmark				
Brown		\checkmark					
Ellis						\checkmark	
Grant							
Harbin							\checkmark
Hinds			\checkmark				
Horton				\checkmark			
Hunt							

Task Standard:

Determine that proper shift manning is NOT met.

Required Materials: OMM-001-2, SHIFT ROUTINES AND OPERATING PRACTICES.

2008 NRC ADM SRO b

NUREG 1021, Revision 9, Supplement 1

Appendix C	Job Performance Measure Worksheet	Form ES-C-1
General References:	OMM-001-2, SHIFT ROUTINES AND OPERATING PRACT	ICES.
Initiating Cue:	Determine whether the shift complement requirements are a	net.
Time Critical Task:	NO	
Validation Time:	10 minutes	

Page 3 of 6 PERFORMANCE INFORMATION

Examiner Note: The required reference for this JPM is OMM-001-2, Section 8.1.3.

*	Performance Step: 1	Determine whether the MIMIMUM shift complement is met
	Standard:	Candidate determines that the shift complement is one individual less than required.
	Examiner Note:	
	Comment:	
*	Performance Step: 2	Determine what additional resources, by qualification, are required.
	Standard:	Candidate determines that the additional individual needed can be an SCO, CO or AO as specified in OMM-001-2, Section 8.1.3.4.a.

Examiner's Note:

Examiner's Cue:

Appendix C	Page 4 of 6	Form ES-C-1
	PERFORMANCE INFORMATION	
* Performance Step: 3	Candidate Question – What allowances a to be one less than the minimum requirem	re provided for the shift nent?
Standard:	The shift complement may be one less the requirement for a period NOT to exceed 2 accommodate unexpected absence of on provided immediate action is taken to rest complement to within the minimum require	an the minimum hours in order to duty shift members ore the shift ements.
	This provision does NOT permit any shift unmanned upon shift change due to an or being late or absent.	member position to be ncoming shift member
Examiner's Note:	OMM-001-2, Section 8.1.2.1 is reference	e to the question.
Examiner's Cue:		
Comment:		

Termination: When the minimum shift manning has been determined and the question responded to.

STOP TIME:

Ap	pen	dix	С
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Page 5 of 6 VERIFICATION OF COMPLETION

Job Performance Measure No.:	2008 NRC ADM SRO b	
Examinee's Name:		
Examiner's Name:		
Date Performed:		
Facility Evaluator:		
Number of Attempts:		
Time to Complete:		
Question Documentation:		
Question:		
Response:		
Result:	SAT UNSAT	
Examiner's Signature:	Date:	

Page 6 of 6 JPM CUE SHEET

INITIAL CONDITIONS:

You are the CRSS.

Unit 2 is operating at 100% RTP.

The following operators are available at the beginning of the shift:

($\sqrt{1}$ = **PRESENT**)

	Qualifications and/or License held						
Name	SSO	CRSS	RO	AO	FPAO	WCC SRO	STA
Auten	\checkmark						
Bailes					\checkmark		
Blair			\checkmark				
Brown		\checkmark					
Ellis						\checkmark	
Grant							
Harbin							\checkmark
Hinds			\checkmark				
Horton				\checkmark			
Hunt							

INITIATING CUE:

Determine whether the shift complement requirements are met.

Appendix C	Job Perfc W	ormance Measure Vorksheet	Form ES-C-1
Facility:	HB ROBINSON	Task No.:	
Task Title:	Evaluate the Radiological c for two situations below, an Questions #1 and #2	onditions JPM No.: 20 d answer	008 NRC JPM A3
K/A Reference:	2.3.12 (3.2/3.7)		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Perform	ance:	Actual Performanc	e: <u>X</u>
Classro	oom <u>X</u> Simulator	Plant	

READ TO THE EXAMINEE

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

Initial Conditions (A):

- An accident has resulted in the declaration of a Site Area Emergency (SAE).
- There is no release in progress, but fuel damage has resulted in increased radiation levels in the RCA.
- The operating crew/TSC has determined it is necessary to reposition two manual valves in a 17 R/hr field to ensure continued operation of available ECCS components.
- The Radiological Control Director has authorized an annual dose extension of up to the "Repair and Re-entry Limit" for each of the two operators who will operate the valves.
- The work plan specifies that both operators must enter, work, and leave the area at the same time.
- Operator A has 31 mRem this quarter and 174 mRem for the year.
- Operator B has 75 mRem this quarter and 203 mRem for the year.

Considering only the radiation levels in the area of work, what is the maximum stay time?

Appendix C	Job Performance Measure	Form ES-C-1
	Worksheet	
Initial Conditions (B):	 A manual isolation value in the Excess Letdown line was closed for maintenance. 	n HX discharge
	 The valve was re-opened by an AO who received 22 mRem while doing so. 	
	What is the acceptable method for performing veri position on this valve?	fication of
Task Standard:	Correctly answer the questions associated with the two	o situations.
Required Materials:	Calculator	
General References:	None	
Initiating Cue:	Answer the questions associated with the two situation	IS.
Time Critical Task:	NO	
Validation Time:	12 min.	

Appendix C	Page 3 of 5	Form ES-C-
	VERIFICATION OF COMPLETION	
Start Time:		
* Performance Step: 1	 Answer Condition "A": Repair and re-entry Limit is 10 RI Most limiting person is Operator " Operator "B": 10,000 mRem – 20 mRem left for the year. (9797 mRem)(1hour/17,000 mRem mins/hour) = 34.577 minutes. 	EM. Ɓ" 3 mRem = 9797 m) = (.576 hrs.)(60
Standard:	Calculates a stay time of 33.0 -34.6 minutes	
Examiner Note:		
Comment:		
* Performance Step: 2	Answer Condition "B":	
	Answers that FUNCTIONAL VERIFICATION method for verifying position. (Also acceptal verifying position via flow verification, temper tank level change.)	I is the acceptable ble; concludes that rature monitor, or
Standard:		
Examiner Note:		
Comment:	Per OPS-NGGC-1303, 10 mRem is consider for INDEPENDENT/CONCURRENT VERIFIC FUNCTIONAL VERIFICATION is the accept this case it would involve verifying flow in the meter, temperature monitor, tank level chang thereof.	red to be excessive CATION. able alternative. In line via a flow ge or a combinatior
	END OF TASK	
Terminating Cue:	Questions for conditions "A" and "B" hav	e been answered

А	pp	end	lix	С
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Page 4 of 5 VERIFICATION OF COMPLETION

Job Performance Measure No.:	2008 NRC JPM A3
Examinee's Name:	
Examiner's Name:	
Date Performed:	
Facility Evaluator:	
Number of Attempts:	
Time to Complete:	
Question Documentation:	
Question:	
Response:	
Result:	SAT UNSAT
Examiner's Signature:	Date:

Appendix C	Page 5 of 5	Form ES-C-1
·····	JPM CUE SHEET	
Initial Conditions (A):	 An accident has resulted in the declaration of Emergency (SAE) 	a Site Area
	 There is no release in progress, but fuel dama increased radiation levels in the RCA. 	age has resulted in
	 The operating crew/TSC has determined it is position two manual valves in a 17 R/hr field t operation of available ECCS components. 	necessary to re- o ensure continued
	 The Radiological Control Director has authorize extension of up to the "Repair and Re-entry L two operators who will operate the valves. 	zed an annual dose imit" for each of the
	 The work plan specifies that both operators m and leave the area at the same time. Operator A has 31 mRem this quarter 	ust enter, work, arter and 174
	 mRem for the year. Operator B has 75 mRem this qua mRem for the year. 	arter and 203
	Considering only the radiation levels in the area of the maximum stay time?	of work, what is
Initial Conditions (B):	 A manual isolation value in the excess Letdow line was closed for maintenance. 	n HX discharge
	 The valve was re-opened by an AO who receip doing so. 	ved 22mRem while
	What is the acceptable method for performing ver position on this valve?	rification of

Appendix C	Job Performa	Job Performance Measure	
	Works	sheet	
Facility:	HB ROBINSON	Task No.:	02344100403
Task Title:	Declare an Emergency Event	JPM No.:	2008 NRC JPM A5
K/A Reference:	G2.4.41 (2.9/4.6)		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performan Classro	om X Simulator	Actual Performar Plant	nce: <u>X</u>

READ TO THE EXAMINEE

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

Initial Conditions:

- The plant was operating at 100% RTP with a CV Pressure Relief in progress when a Large Break LOCA occurred.
- The crew is progressing through PATH-1.
- R-32A, CV High Range Monitor, is reading 6.4 Rem/hr.
- CV Pressure Relief Valves V12-10 and V12-11 did not close.
- Core Exit thermocouples currently read 685 degrees F and are slowly trending down.
- Reactor Engineering has reported that NO substantial core damage has occurred.
- Full Range RVLIS is reading 44% and is stable.
- Weather conditions: Wind direction from 100 degrees, Wind Speed is 3 MPH, Stability Class is D, Precipitation is Zero.
- You are the SSO.
- Task Standard: Identifies event as a SITE AREA EMERGENCY, per FS 1.1.

Required Materials: EPCLA-01, EMERGENCY CONTROL, Revision 23 EPCLA-04, EMERGENCY ACTION LEVEL TECHNICAL BASES DOCUMENT EAL Matrices

Appendix C	Job Performance Measure	Form ES-C-1
	Worksheet	
General References:	EPCLA-01, EMERGENCY CONTROL, Revision 23 EPCLA-04, EMERGENCY ACTION LEVEL TECHNIC DOCUMENT EAL Matrices	AL BASES
Handouts:	EPCLA-01, EMERGENCY CONTROL, Revision 23 EPCLA-04, EMERGENCY ACTION LEVEL TECHNIC/ DOCUMENT EAL Matrices	AL BASES
Initiating Cue:	Classify the event IAW the EAL matrices. Refer to EPC guidance on the EAL classification. Provide the selecter the Examiner within 15 minutes.	CLA-01 for ed classification to
Time Critical Task:	YES (Emergency classification is a 15 minute time criti	cal task)
Validation Time:	12 minutes	

Appendix C	Page 3 of 7	Form ES-C-1
	PERFORMANCE INFORMATION	
(Denote Critical Steps with a	n asterisk)	
START TIME:	CRITICAL TASK START TIME:	
Performance Step: 1	Confirms that an off-normal condition exist	s.
Standard:	Candidate concludes that an off-normal co and obtains a copy of the EAL matrices.	ndition is observed
Examiner's Note:	Provide the candidate with a copy of the E	AL matrices.
Comment:		
Performance Step: 2	Refers to EPCLA-01, EMERGENCY CON	TROL.
Standard:	Candidate obtains a copy of EPCLA-01, El CONTROL.	MERGENCY
Examiner's Note:	Provide the candidate with a copy of EPCL	A-01.
Comment:		

Page 4 of 7 PERFORMANCE INFORMATION

* Performance Step: 3	Evaluate ALL CONDITIONS Matrix per EPCLA-01 (Step 8.3.1).
Standard:	Candidate reviews and evaluates ALL CONDITIONS Matrix.
Examiner's Note:	
Comment:	
* Performance Step: 4	Evaluate HOT CONDITIONS Matrix per EPCLA-01 (Step 8.3.2).
Standard:	Candidate reviews and evaluates HOT CONDITIONS Matrix.
Examiner's Note:	
Comment:	

Page 5 of 7 PERFORMANCE INFORMATION

* Performance Step: 5	Select EAL condition conforming to the available information.
Standard:	Candidate selects SITE AREA EMERGENCY.
Examiner's Note:	Site Area Emergency based on the following:
	HOT CONDITIONS – EAL Matrix (Sheet 2 of 3)
	F, Fission Product Barriers; Applicable in Modes 1, 2, 3 & 4.
	FS1.1, Loss or Potential Loss of any two barriers. (Table F-1)
	 Reactor Coolant System Barrier – Loss 1 (Containment High Range Radiation Monitor R-32A or R-32B > 5 Rem/hr).
	 Containment Barrier – Loss 5 (Containment isolation valve(s) not closed after Containment isolation AND Downstream pathway to the environment exists.
Comment:	
END	OF TASK
Terminating Cue:	EAL classification has been determined.
STOP TIME:	CRITICAL TASK STOP TIME:

Appendix C	Page 6 of 7 VERIFICATION OF COMPLE	Form ES-C-1 ETION
Job Performance Measure No.:	2008 NRC JPM A5	
Examinee's Name:		
Date Performed:		
Facility Evaluator:		
Number of Attempts:		
Time to Complete:		
Question Documentation:		
Question:		
Response:		
Result:	SAT UNSAT	
Examiner's Signature:		_ Date:

m ES-C-1	Form ES	Page 7 of 7	Appendix C
		JPM CUE SHEET	
	·····		*****

INITIAL CONDITIONS:

- The plant was operating at 100% RTP with a CV Pressure Relief in progress when a Large Break LOCA occurred.
- The crew is progressing through PATH-1.
- R-32A, CV High Range Monitor, is reading 6.4 Rem/hr.
- CV Pressure Relief Valves V12-10 and V12-11 did not close.
- Core Exit thermocouples currently read 685 degrees F and are slowly trending down.
- Reactor Engineering has reported that NO substantial core damage has occurred.
- Full Range RVLIS is reading 44% and is stable.
- Weather conditions: Wind direction from 100 degrees, Wind Speed is 3 MPH, Stability Class is D, and Precipitation is Zero.
- You are the SSO.

INITIATING CUE:

Classify the event IAW the EAL matrices. Refer to EPCLA-01 for guidance on the EAL classification. Provide the selected classification to the Examiner within 15 minutes.