Appendix C		Job Performar Works	ice Measure heet	Form ES-C-1
Facility:	PILGRIM		Task No.:	
Task Title:	<u>Operation C</u> <u>RPV</u>	of RCIC To Inject To	The JPM No.:	2007 NRC JPM RO/SRO S-2
K/A Reference:	A2.01	3.8 / 3.7	A3.01	3.5 / 3.5
Examinee:			NRC Examine	
Facility Evaluator:			Date:	•
Method of testing:				
Simulated Performa	ance:	_	Actual Perforn	nance: X
Classro	oom	Simulator X	Plant	

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.

The reactor is operating at 50% CTP and RCIC is being returned to Initial Conditions: service after a system outage to repair instrumentation controls. PWT requires you to inject with RCIC at 400 gpm IAW 2.2.22.5. ATT 1. Task Standard: RCIC will inject into the vessel with the controller in automatic. The procedure should be followed with no failure of critical elements. **Required Materials:** NONE General References: PNPS 5.3.35.1, Revision 1 PNPS 2.2.22.5, Revision 12 Inject with RCIC IAW PNPS 2.2.22.5, Att. 1, maintain reactor level +20 Initiating Cue: to +40. Another operator will monitor the 905 panel. CUE - IF asked injection to vessel is required due to some other work on the check valve 1301 CK -50 was performed when RCIC was out of service. RE has been advised that this may affect power and has approved the test. NO Time Critical Task: Validation Time: 8 minutes

Form ES-C-1

SIMULATOR SETUP

1. Initialize simulator to a 50% power IC.

- 2. Insert the following remote malfunctions:
 - a. TAB21361 on page gc0652
 - b. TAB21362 on page gc0652
 - c. TAB21361 delete when A904_A1_S14_3
 - d. TAB21362 delete when A904_A1_S85_3
 - e. H_A904_A1_DS146_1
 - f. H A904 A1 DS280 1
 - g. H_A904_A1_DS146_1 delete when A904_A1_S14_3
 - h. H A904 A1 DS280 1 delete when A904_A1_S85_3

3. Pend the following malfunctions:

- a. TVV80712 to 1
- b. TVV80711 to 1 with a 3 sec delay tied to (a)
- c. TVV80712 delete
- d. TVV80711 delete tied to (c)

This setup will be for JPM S3 also.

2007 NRC JPM RO/SRO S-2

Page 3 of 8 PERFORMANCE INFORMATION

(D	enote Critical Steps with	h a check mark)
S 1	ART TIME:	
		RCIC Injection – Manual Push Button Checklist (Reference PNPS 2.2.22.5 Attachment 1)
	Caution:	Do not operate RCIC System at less than 100 GPM.
V	Performance Step: 1	Momentarily Depress the RCIC System Injection Mode push button.
	Standard:	Operator depresses the RCIC System Injection pushbutton.
	Comment:	
	Performance Step: 2	Verify the MANUAL START SEQUENCE indicating light is ILLUMINATED.
	Standard:	Operator verifies that light is illuminated.
	Comment:	
√	Performance Step: 3	Verify the following automatic actions occur:
		 MO-1301-61, TURBINE SUPPLY VLV, has OPENED.
	Standard:	Operator determines MO-1401-61 did NOT OPEN. Places control switch to OPEN. Final configuration is FULL OPEN with RED light ON, GREEN light OFF.
	Evaluator's Cue:	As CRS, "Continue to take actions as required to inject with RCIC. A WRT will be written to address the valve issue."
	Comment:	

Appendix C	Page 4 of 8	Form ES-C-1
	PERFORMANCE INFORMATION	
Performance Step: 4	MO-1301-49, INJ VLV #2, has OPENED.	
Standard:	Operator verifies MO-1301-49 by observin configuration is full open with RED light Ol	g valve opening. Final N, GREEN light OFF.
Comment:		
Performance Step: 5	MO-1301-60, PUMP MIN FLOW VLV, CLO discharge flow is greater than or equal to	DSES when pump 100GPM.
Standard:	Operator verifies MO-1301-60 by observin configuration is full closed with RED light (g valve closing. Final DFF, GREEN light ON.
Evaluator's Note:	Valve will initially OPEN and then go Cl sufficient flow has developed.	OSED after
Comment:		
Performance Step: 6	• AO-1301-34 and AO-1301-35, STEAI	I LINE DRN VLVs,
	 CLOSE. AO-1301-12 and AO-1301-13, BARO VLVs, CLOSE. 	METRIC CONDR DRN
	Operator verifies drain valve position by o	oserving the RED

Appendix C	Page 5 of 8	Form ES-C-1
	PERFORMANCE INFORMATION	
Performance Step: 7	• MO-1301-62, COOLING WTR SUPP	LY VLV, OPENS.
	• P-222, VACUUM PUMP, STARTS.	
Standard:	Operator determines MO-1301-62 valve of control switches to OPEN. Final configura OPEN and vacuum pump running as verif RED indicting lights being ON and the GF being OFF.	lid NOT OPEN. Places ation is MO-1301-62 fied by observing the REEN indicating lights
Comment:		
Evaluator Note:	If the candidate does not follow through w the MO-1301-62 is open, the IF operator steps 2 minutes from the time the MO-130	vith the actions to verify will trigger pending 01-61 is opened.
Performance Step: 7A	IF valve has not been already opened the alarm 904L -F1 and G1.	n operator responds to
√ Standard:	Operator determines MO-1301-62 valve of control switches to OPEN. Final configura OPEN and vacuum pump running as verif RED indicting lights being ON and the GF being OFF.	lid NOT OPEN. Places ation is MO-1301-62 fied by observing the REEN indicating lights
Comment:	CUE - Dummy in alarm after 2 minutes taken by the operator.	if no action has been

Appendix C	Page 6 of 8	Form ES-C-	
	PERFORMANCE INFORMATION		
Performance Step: 8	RCIC flow levels OFF and stays at 400 G 1340-1, INJECTING FLOW CONTROL, h speed.	PM, indicating that FIC as control of turbine	
Standard:	Operator determines that system is comir	ng up to rated flow.	
Evaluator's Note:			
Comment:			
Terminating Cue:	This JPM is complete.		
	TIME CRITICAL STOP T	ME	

Appendi	хC
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Page 7 of 8 VERIFICATION OF COMPLETION

Form ES-C-1

	Job Performance Measure No.:	2007 NRC JPM	RO/SRO S-2		
	Examinee's Name:				
	Date Performed:				
	Facility Evaluator:				
	Number of Attempts:	<u>.</u>			
	Time to Complete:				
	Question Documentation:				
	Question:				
d.	Response:				
	Result:	SAT	UNSAT		
	Examiner's Signature:			Date:	

Appendix C	Page 8 of 8 JPM CUE SHEET	Form ES-C-1
INITIAL CONDITIONS:	The reactor is operating at 50% CTP and to service after a system outage to repair i PWT requires you to inject with RCIC at 40 ATT 1.	RCIC is being returned instrumentation controls. 00 gpm IAW 2.2.22.5.
INITIATING CUE:	Inject with RCIC IAW PNPS 2.2.22.5, Att. +20 to +40. Another operator will monitor	1, maintain reactor level the 905 panel.

Appendix C	Job Performance Measure Worksheet			Form ES-C-1
Facility:	PILGRIM		Task No.:	262-001-04-01
Task Title:	Transfer Butter	is A5 to the UAT From Generator	ם JPM No.:	2007 NRC JPM RO/SRO S3
K/A Reference:	A4.04	3.7 / 3.7		IC 6
Examinee:			NRC Examine	er:
Facility Evaluator:			Date:	
Method of testing:				
Simulated Performa	ance:	_	Actual Perform	mance: X
Classroom		Simulator X	Plant	

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 degraded grid voltage condition requiring placing A5 and A6 on their associated diesels 20 minutes ago. The condition has since been cleared and A6 has been returned to the UAT. The 'B' EDG has been secured.

- Task Standard:Bus A5 is being carried by the UAT with the "A" EDG output breaker
open. The transfer shall be accomplished in accordance with all
applicable system precautions and limitations. The procedure shall be
followed without failure of any critical elements.
- Required Materials: Syncro Switch Control Handle
 - Key for "A" EDG "NORMAL/TEST" keylock switch on C3.

General References: 2.4.144, Revision 37

Appendix C	Job Performance Measure	Form ES-C-1	
	Worksheet		
Initiating Cue:	You are to return bus A5 to the unit auxiliary transfo with Attachment 1, step 8 of procedure 2.4.144. Inf have completed this task.	ormer in accordance form me when you	
	Grid Voltage is stable.		
	ISO New England can ensure that 342 will be availa following a PNPS trip.	able at the SUT	
	The reactor shutdown has been terminated.		
Time Critical Task:	NO		
Validation Time:	10 minutes		

SIMULATOR SETUP

- Reset the simulator to 50% CTP with the 4160V buses on the UAT.
- Start and parallel the "A" EDG to A5 and open the UAT feeder to A5.
- Return the DG test switch to "NORMAL" and the Governor Mode Selector to "ISOCHRONOUS".
- Acknowledge alarms.
- Place the A5 auto xfer selector switch to "OFF".
- Turn off the "A" EDG sync switch.
- Remove the sync switch from the panel and place it in the horizontal section of C3.
- Depress the Scoop tube lock-up pushbuttons for both Recircs.

This setup will be used in conjunction with JPM S2 setup.

Page 3 of 10 PERFORMANCE INFORMATION

(Denote	Critical	Stens	with a	check	mark)
Denote	Unitar	Oleps	with a	CHECK	manny

START TIME:

Performance Step: 1	Review the applicable sections of the procedure.
Evaluator's Note:	This task is covered in 2.4.144, Attachment 1, Step (8).
Evaluator's Note:	All controls are located on control room panels C3 unless noted.
Evaluator's Note:	All critical steps must be performed in order written unless otherwise noted.
Standard:	Operator reviews the applicable section of the procedure.
	Operator turns to Attachment 1 of 2.4.144 and looks at the procedure.

Comment:

Caution: When transferring the EDG(s) to isochronous mode, changes to the safety bus (A5/A6) frequency may occur and may cause the vital MG set output voltage to change. This output voltage change may cause a step change in recirc scoop tube position.

Performance Step: 2 VERIFY OR MANUALLY INITIATE a Scoop Tube Positioner Lockup on both Recirculation Pump MG Sets A and B. (Refer to PNPS 2.2.84, Attachment 1, step 8.b.)

Standard:Operator initiates Scoop Tube Positioner Lockup on
Recirculation Pump MG Set A and B using the pushbuttons on
Panel C904.

Evaluator's Note: Operator verifies lockup on C904 for Recirc MG Sets A and B. They will have been locked up from the transfer of bus A6 back to the UAT.

Comment:

Appendix C		Page 4 of 10	Form ES-C
		PERFORMANCE INFORMATION	
	Performance Step: 3	TRANSFER the DIESEL GENERATOR "A" 1 " "TEST".	test switch to
1	Standard:	Operator inserts key and rotates "DIESEL G to the "TEST" position.	EN "A" TEST" swi
	Evaluator's Note:	Operation of test switch requires a key – with key when requested.	provide operator
	Standard:	DIESEL GEN "A" TEST switch positioned to	TEST.
	Comment:		
	Performance Step: 4	TRANSFER the DIESEL GENERATOR "A" SELECTOR SWITCH to "DROOP".	GOVERNOR MO
√	Standard:	Operator rotates "DIESEL GEN "A" GOVER SELECTOR SWITCH" to the "DROOP" posi	NOR MODE tion.
	Standard:	Diesel Gen "A" Governor Mode Switch posit	ioned to DROOP.
	Comment:		
	Performance Step: 5	POSITION the UNIT AUX XFMR TO BUS A to "ON".	5 sycroscope swi
	Standard:	Operator inserts and rotates "UNIT AUX XM synchroscope switch to the "ON" position.	FR TO BUS A5"
	Standard:	The UNIT AUX XFMR TO BUS A5 sycrosco	pe switch is "ON"
	Comment:		

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	PERFORMANCE INFORMATION	
Performance Step: 6	ADJUST DIESEL GENERATOR "A" VOLTA SETPOINT ADJUSTER so that "RUNNING" is the same as "INCOMING" VOLTAGE pote	GE REGULATOR VOLTAGE potentia
Standard:	Operator rotates "DIESEL GEN "A" VOLTAG SETPOINT ADJUSTER" to the "RAISE" and positions as necessary until "INCOMING VC equal to "RUNING VOLTAGE" meter.	GE REGULATOR I/or "LOWER" DLTAGE" meter is
Standard:	Running and incoming voltage potentials are	e matched.
Comment:		
Performance Step: 7	ADJUST DIESEL GENERATOR "A" GOVER CONTROL so that synchroscope rotation is direction.	RNOR SPEED slow in the fast
Standard:	Operator rotates "DIESEL GEN "A" GOVER CONTROL" switch to "RAISE" – or – "LOWE rotating slowly in the "FAST" direction on "A SYNCHCHROSCOPE".	NOR SPEED R" until pointer is uxiliary SYSTEM
Standard:	"AUXILIARY SYSTEM SYNCHROSCOPE" the "FAST" direction.	is rotating slowly in
Comment:		
Performance Step: 8	WHEN the synchroscope is at five degrees THEN CLOSE the unit auxiliary transformer breaker UNIT AUX XFMR TO BUS A5.	before twelve o'cloo to safety bus
√ Standard:	Operator rotates "UNIT AUX XFMR TO BUS switch to the "CLOSE" position when "AUXII SYNCHROSCOPE" position is approximate 12 o'clock.	S A5" breaker contr _IARY SYSTEM ly "5" degrees befo
Standard:	Bkr A505 closes and breaker A509 did not t	rip open.

Appendix C	Page 6 of 10 PERFORMANCE INFORMATION	Form ES-0
Performance Step: 9	Position the Unit Aux XFMR to Bus A5 synch	nroscope switch t
	OFF.	·
Standard:	Unit Aux XFMR to Bus A-5 Sync switch in O	FF.
Comment:		
Note:	Following EDG operation at low loads (<6 than one hour, the EDG should be run at a a minimum of 1 hour prior to securing.	50kW) for great > 50% (1300kW)
	In this case, however, the diesel has been only 20minutes as is stated in the initial c	on the bus for onditions.
Performance Step: 10	UNLOAD the diesel as follows:	
	 LOWER reactive load to 0 kVAR using t setpoint adjuster. 	he voltage regula
	LOWER real load to between 50 and 15 governor speed control.	0kW using the
	• OPEN diesel generator output breaker of to bus A5.	liesel generator "
Standard:	Operator rotates "DIESEL GEN "A" VOLTAG SETPOINT ADJUSTER" to the "RAISE" and positions as necessary until reactive load is (E REGULATOR /or "LOWER") kVAR.
Standard:	DG "A" Voltage Regulator Setpoint Adjuster achieve 0 kVAR reactive load.	manipulated to
Standard:	Operator rotates "DIESEL GEN "A"GOVERN CONTROL" switch to "LOWER" until real loa 150kW.	IOR SPEED d is between 50
Standard:	Operator observes UAT amperage increasin	g
Standard:	Operator rotates "DIESEL GEN "A" TO BUS switch to the "TRIP" position.	A5 breaker contr
√ Standard:	A509 breaker control switch positioned mom	entarily to TRIP.
Comment:		

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Appendix C	Page 7 of 10	Form ES
	PERFORMANCE INFORMATION	
Performance Step: 11	Adjust Diesel Generator output voltage to 42 GEN "A" VOLTAGE REGULATOR SETPOI	200V using DIES NT ADJUSTER.
Standard:	Operator rotates "DIESEL GEN "A" VOLTAG SETPOINT ADJUSTER" to the "RAISE" and positions as necessary until output voltage i	GE REGULATO I/or "LOWER" s 4200V.
Standard:	Operator adjusts voltage to 4200V.	
Comment:		
Performance Step: 12	RAISE DG speed to 61 Hz using Diesel Ger	nerator "A" gove
Standard:	Operator rotates "DIESEL GEN "A"GOVERI CONTROL to "RAISE" and/or "LOWER" pos until frequency is 61 Hz.	NOR SPEED sitions as neces
Standard:	Operator adjusts frequency to 61 Hz.	
Comment:		
Performance Step: 13	TRANSFER DIESEL GEN A GOVERNOR N switch to "ISOCH".	NODE SELECT
Standard:	Operator rotates "DIESEL GEN "A" GOVER SELECTOR switch to "ISOCH".	NOR MODE
Standard:	Operator moves the DG "A" mode selector s	switch to "ISOCI
Comment:		
Performance Step: 14	TRANSFER the DIESEL GEN "A" TEST sw	itch to "NORM".
Standard:	Operator rotates "DIESEL GEN "A" TEST sv	witch to "NORM
Standard:	Operator moves the DG "A" test switch to "N	IORM".
Comment:		

2007 NRC JPM RO/SRO S3

Appendix C	Page 8 of 10	Form ES-C
	PERFORMANCE INFORMATION	
Performance Step: 15	VERIFY Diesel Generator is running at 60 4200V.	Hz and approximate
Standard:	Operator verifies "DIESEL GEN "A" is at 60) Hz and about 420
Standard:	Operator verifies DG "A" is at 60 Hz and 42	200V.
Comment:		
Performance Step: 16	Allow the Diesel Generator to run for 3 min temperatures.	utes to equalize
Standard:	Operator waits 3 minutes before proceeding	g.
Standard:	Operator waits 3 minutes.	
Evaluator's Cue:	Instructor may cue, "3 minutes elapsed'	" .
Comment:		
Terminating Cue:	This JPM is complete.	
Terminating Cue:	This JPM is complete.	

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Form ES-C-1

Job Performance Measure No.:	2007 NRC JPM RO/SRO S3	
Examinee's Name:		
Date Performed:		
Facility Evaluator:		
Number of Attempts:		
Time to Complete:		
Question Documentation:		
Question:		
Response:		
Result:	SAT UNSAT	
Examiner's Signature:	Date:	

2007 NRC JPM RO/SRO S3

Appendix C	Page 10 of 10	Form ES-C-1
	JPM CUE SHEET	
INITIAL CONDITIONS:	A degraded grid voltage condition requiring their associated diesels 20 minutes ago. been cleared and A^ has been returned to the second state of	ng placing A5 and A6 on The condition has since o the UAT. The 'B' EDG
	has been secured.	
INITIATING CUE:	You are to return bus A5 to the unit auxili accordance with Attachment 1, step 8 of Inform me when you have completed this	ary transformer in procedure 2.4.144. s task.
	Grid Voltage is stable.	
	ISO New England can ensure that 342 w SUT following a PNPS trip.	ill be available at the
	The reactor shutdown has been terminat	ad

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Appendix C		Job Performanc	e Measure	Form ES-C-1
<u>.</u>		Worksh	eet	
Facility:	PILGRIM		Task No.:	206-04-01-002
Task Title:	Operation C Control	Of HPCI For Pressure	JPM No.:	2007 NRC JPM RO/SRO S4
K/A Reference:	A2.14	3.3 / 3.4		10-6
Examinee:			NRC Examine	r:
Facility Evaluator:			Date:	
Method of testing:				
Simulated Performa	ance:		Actual Perform	nance: X
Classro	oom	Simulator X	Plant	

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 reactor has scrammed due to a Loss of Offsite Power. EOP-1 is being used to control RPV parameters.
Task Standard:	HPCI operating in pressure control the vessel with the controller in manual. The procedure should be followed with no failure of critical elements.
Required Materials:	NONE
General References:	PNPS 2.2.21.5, Revision 13
Initiating Cue:	Place HPCI in service for pressure control using PNPS 2.2.21.5, Attachment 2.
Time Critical Task:	NO
Validation Time:	5 minutes

SIMULATOR SETUP

- 1. Initialize simulator to a full power IC.
- 2. Insert the following malfunctions:
 - a. ED06 Loss of SUT and SDT
 - b. TFP87403 Spurious trip of ACB 104&105
- 3. Depress the RCIC initiation pushbutton
- 4. Insert HP-04 HPCI controller fails low.
- 5. Acknowledge all alarms.

2007 NRC JPM RO/SRO S4

Ap	opendix C	Page 3 of 7 PERFORMANCE INFORMATION	Form ES-C-
(D	enote Critical Steps with	a check mark)	
SI	TART TIME:		
	Performance Step: 1	Verify Flow Controller FIC-2340-1, Injection Flo AUTO and set for 4250 gpm.	w Control, is in
	Standard:	Operator checks FIC-2340-1 is in auto and veri 4250 gpm.	ifies setpoint is
	Comment:		
	Performance Step: 2	Start P-223, Gland Seal Condenser Blower.	
	Standard:	Operator places control switch for P-223 to star Gland Seal Condenser Blower is RUNNING by RED indicating light LIT.	t and verifies observing the
	Comment:		
	Performance Step: 3	OPEN MO-2301-15, HPCI/RCIC Test return Va	alve.
√	Standard:	Operator places MO-2301-15 control switch to RED light ON, GREEN light OFF.	OPEN. Verifies
	Comment:		
	Performance Step: 4	JOG OPEN MO-2301-10, HPCI full flow test va seconds.	lve, for 7
1	Standard:	Operator holds MO-2301-10 control switch to C seconds. Verifies RED light and GREEN light (PEN for seven DN.
	Comment:		
200	07 NRC JPM RO/SRO S4	NUREG	1021. Revision

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A	ppendix C	Page 4 of 7	Form ES-C-1
		PERFORMANCE INFORMATION	<u> </u>
	Performance Step: 5	Perform the following steps in close sequence	ce:
		OPEN MO-2301-3, Turbine Supply Valv	
,	Otomo do volo	As MO-2301-3 begins its stroke, start P	229, AUX OII PUMP.
٧	Standard:	Operator places MO-2301-3 control swit	CONTO OPEN.
		 When MO-2301-3 RED light comes ON immediately places P-229 control switch 	, operator i to START.
	Comment:		
	Performance Step: 6	Observe that flow increase and stabilizes at	4250 GPM.
√	Standard:	Operator observes that HPCI flow stabilizes	at ~ 1000 gpm.
	Evaluator's Cue:	(as required) Take action to place HPCI in maximizing energy removed from the rea vessel.	n pressure control ctor pressure
	Comment:		
	Performance Step: 7	Place the selector switch to the "BAL" position	on.
	Standard:	Controller selector switch placed in Balance	position.
	Evaluator's Note:	This step and the following steps were ex section 2.0 of attachment 2 that addresse of the controller. This procedure is base shift to manual. As a result this step may	tracted from s manual operation d on a controlled not be performed.
	Comment:		

pendix C	Page 5 of 7 Form E
	PERFORMANCE INFORMATION
Performance Step: 8	Adjust the potentiometer until the deviation is removed (nee green band).
Standard:	Operator adjusts the potentiometer until the deviation is in t green band on the controller.
Evaluator's Note:	This step was extracted from section 2 of attachment 2 addresses manual operation of the controller. This procedure is based on a controlled shift to manual. As result this step may not be performed.
Comment:	
Performance Step: 9	Place the selector switch to the "MAN" position.
Standard:	Controller selector switch placed in MANUAL position.
Comment:	
Performance Step: 10	Use potentiometer to control turbine speed to obtain desire rate.
Standard:	Operator maintains HPCI Turbine parameters.
	Turbine speed >1000 rpm
	Turbine speed < trip overspeed setpoint 5000 rpm
	Restores/Maintain Pressure in desired band – 900 to 1050
Comment:	
rminating Cue:	This JPM is complete.
	Performance Step: 8 Standard: Evaluator's Note: Comment: Performance Step: 9 Standard: Comment: Performance Step: 10 Standard:

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Page 6 of 7 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.:	2007 NRC JPM	RO/SRO S4		
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 7 of 7	Form ES-C-
	JPM CUE SHEET	<u></u>
	The reactor has coronymod due to a Loss	
INTIAL CONDITIONS.	1 is being used to control RPV parameter	s of Offisite Power. EOP rs.

Appendix C		Job Perform Worl	ance M ksheet	leasure	Form ES-C-1
Facility:	PILGRIM			Task No.:	200-05-01-021
Task Title:	Recover RB Elevated Dr	CCW Loop "B" Wi well Temperature	<u>th an</u>	JPM No.:	2007 NRC JPM RO/SRO S5
K/A Reference:	AA1.02	3.8 / 3.8			
Examinee:			N	RC Examiner	••••••••••••••••••••••••••••••••••••••
Facility Evaluator:			Da	ate:	
Method of testing:					
Simulated Perform	ance:	_	A	ctual Perform	ance: X
Classr	oom	Simulator 🛛 🔿		ant	

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 loss of B14 has occurred resulting in a loss of "B" loop RBCCW • pumps. RBCCW could not be cross-tied due to the inability to open a cross connect valve. The reactor was scrammed. EOP-03 has been entered on high drywell temperature. The fault on B-14 has been cleared. "B" Loop RBCCW pumps are in PTL in preparation for restoring B14 IAW 2.4.42. Drywell temperature has exceeded 250 degrees. Task Standard: The RBCCW Loop "B" will be restored without causing condensationinduced water hammer due to elevated drywell temperature. When indication of a break in the drywell occur, RBCCW Loop "B" will be isolated. Procedure 2.4.42 shall be carried out without failure of any critical elements. NONE Required Materials:

General References: PNPS 2.4.42, Revision 27

2007 NRC JPM RO/SRO S5

Appendix C	Job Performance Measure Worksheet	Form ES-C-
Initiating Cue:	B14 has been re-energized. Restore RBCCW Loop PNPS 2.4.42.	"B" IAW
Time Critical Task:	NO	
Validation Time:	20 minutes	

Worksheet

SIMULATOR SETUP

- 1. Initialize to 100% power IC.
- Insert a loss of B-14 (power supply to "B" Loop RBCCW pumps). 2.
- Place all Loop "B" RBCCW Pumps in PTL. 3.
- Wait for Rx scram. 4.
- 5. Re-energize B-14.
- Stabilize RPV Pressure and Level. 6.
- Allow Drywell Temperature to rise to greater than 250 degrees. 7.
- Remove Caution Tags from Drywell Cooler Potentiometers. 8.
- 9. Insert the following malfunctions:
 - a. KG32 @ 0 page gc0552 surge tank make-up closed
 - b. CW15 @100% p. gc0552 RBCCW leak in drywell when MO-4009A/B C/S to open (A1_A1_S35_3 or A1_A1_S50_3)

Appendix C	Page 4 of 11	Form ES-C-1
······································	PERFORMANCE INFORMATION	
(Denote Critical Steps with	a check mark)	
START TIME:		
Notes:	This task is covered in 2.4.42, Section 4. must be performed in order written unles	2. All critical steps ss otherwise noted.
Performance Step: 1	Recovery of RBCCW Loop "B" with an eleve temperature [NRC GL96-06].	ated drywell
Caution:	If Drywell temperatures exceed 250°F an "B" pumps are not running, it is possible occur in the Drywell Coolers that may re condensation-induced water hammer wh Pumps are started or the loops are cross RBCCW nonessential block valves are c [NRC-96-06]	d the RBCCW Loop e for boiling to sult in a nen the RBCCW s-tied, unless the losed first.
	 IF indications of a major LOCA exist, T Step 2. 	HEN EXECUTE
	 IF NO indications of a major LOCA exists Step 3. 	st, THEN EXECUTE
Standard:	Operator enters Step 3 of the procedure.	
Evaluator's Note: Comment:	Initial Conditions described Non-LOCA o	conditions.

	PERFORMANCE INFORMATION
Performance Step: 2	IF ALL of the following conditions exist:
	NO indications of a major LOCA inside Primary containmer
	 Drywell temperature has been ≥ 250°F;
	• RBCCW flow has been lost to the Drywell for \geq 6 minutes;
	THEN RECOVER RBCCW Loop "B" as directed in the following steps:
Note:	"Drywell Temperature" as stated in this section of PNPS 2.4.42 shall be determined by the direction provided according to PNPS 2.1.27, "Drywell Temperature Indication This is the same direction given for Drywell temperature
	CLOSE the following RBCCW Loop "B" Nonessential Isolation Valves at Panel C1:
	MO-4009A, RBCCW Loop "B" Nonessential Loop Inlet Val
	 MO-4009B, RBCCW Loop "B" Nonessential Loop Outlet Valve
√ Standard:	Operator closes MO-4009A & B. Both valves indicate closed a evidenced by RED light OFF and GREEN light ON.
Evaluator Note:	Drywell cooler leak is dependent on the MO-4009A/B red light OFF and green light ON
Comment:	
Caution:	The RBCCW loops shall not be cross-tied when the Suppression Pool temperature is ≥ 130°F and only one loo of containment cooling is operable.
Performance Step: 3	START one "B" RBCCW loop pump OR CROSS-TIE RBCCW loops in accordance with Attachment 5.
√ Standard:	Operator starts one RBCCW pump. RED light ON and GREEN

Appendix C	Pag	e 6 of 11	Form ES-
	PERFORMAN	CE INFORMATION	
Performance Step: 4	IF Maximized Toru LPCI Injection with MAXIMIZE RBCCV Attachment 1 AND mode in accordance 6.	s Cooling, Torus Spray Maximized Cooling mo N Cooling in accordance ALIGN the RHR Syste ce with PNPS 2.2.19.5	y, Drywell Spray, OF ode is required, THE ce with PNPS 2.2.19 em for the required Attachment 3, 4, 5,
Standard:	Operator questions maximized cooling	s CRS as to need to ali	gn systems for
Evaluator's Cue:	The ECCS operat service using loo "B" loop RBCCW	or has placed RBCCV p "A" systems. Conti	V and torus cooling inue restoration of
Comment:			
Note:	Drywell Co	ooler Motor Operated	Supply Valves
Note:	Drywell Co MO-4038A	ooler Motor Operated MO-4039A	Supply Valves MO-4040/
Note:	Drywell Co MO-4038A MO-4038B	ooler Motor Operated MO-4039A MO-4039B	Supply Valves MO-4040/ MO-4040I
Note:	Drywell Co MO-4038A MO-4038B MO-4038C	ooler Motor Operated MO-4039A MO-4039B MO-4039C	Supply Valves MO-4040/ MO-4040I MO-4041/
Note:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-4041/
Note:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-4041/
Note:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-4041/
Note: Performance Step: 5	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position.	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F CE all Drywell cooler mo directly above) to appro	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-4041I
Note: Performance Step: 5	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position. All 16 Motor operation	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F CE all Drywell cooler mo directly above) to appro-	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-4041/ botor operated supply oximately the 10%
Note: Performance Step: 5 √ Standard:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position. All 16 Motor operation	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F CE all Drywell cooler mo directly above) to appro- ted valves are opened MO-4039A	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-4041/ botor operated suppl oximately the 10% to 10%. MO-4040A
Note: Performance Step: 5 √ Standard:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position. All 16 Motor operation MO-4038A	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E DO-4039F CE all Drywell cooler mo directly above) to appro- ted valves are opened MO-4039A MO-4039B	Supply Valves MO-4040/ MO-4040/ MO-4041/ MO-40411 botor operated suppl oximately the 10% to 10%. MO-4040A MO-4040B
Note: Performance Step: 5 √ Standard:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position. All 16 Motor operation MO-4038A MO-4038B	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F CE all Drywell cooler mo directly above) to appro ted valves are opened MO-4039A MO-4039B	Supply Valves MO-4040/ MO-40401/ MO-40411/ MO-40411/ otor operated suppl oximately the 10% to 10%. MO-4040A MO-4040B MO-4041A
Note: Performance Step: 5 √ Standard:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position. All 16 Motor operation. All 16 Motor operation. MO-4038A MO-4038B	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F CE all Drywell cooler mo directly above) to appro- ted valves are opened MO-4039A MO-4039B MO-4039D	Supply Valves MO-4040, MO-4040, MO-4041, MO-4041, botor operated supple oximately the 10% to 10%. MO-4040A MO-4040B MO-4041A MO-4041B
Note: Performance Step: 5 √ Standard:	Drywell Co MO-4038A MO-4038B MO-4038C MO-4038D MO-4038E MO-4038F At Panel C7, PLAC valves (SEE Note of OPEN position. All 16 Motor operation. MO-4038A MO-4038B MO-4038D	ooler Motor Operated MO-4039A MO-4039B MO-4039C MO-4039D MO-4039E MO-4039F CE all Drywell cooler mo directly above) to approv ted valves are opened MO-4039A MO-4039B MO-4039D MO-4039E	Supply Valves MO-40400 MO-40401 MO-40411 MO-40411 botor operated suppl botor to 10%. MO-4040A MO-4040B MO-4041A MO-4041B

Ар	pendix C	Page 7 of 11	Form ES-C-1
	· · · · · · · · · · · · · · · · · · ·	PERFORMANCE INFORMATION	
V	Performance Step: 6	OPEN the following RBCCW Loop "B" None Valves at Panel C1:	essential Isolation
		MO-4009A, RBCCW Loop "B" Nonesse	ntial Loop Inlet Valve
		 MO-4009B, RBCCW Loop "B" Nonesse Valve 	ntial Loop Outlet
	Standard:	MO-4009A and B are opened. RED light Ol OFF.	N / GREEN light
	Evaluator's NOTE:	The leak path in the drywell is present wi	nen the operator
		opens the MO-4009A and B. A short time tank level alarm will annunciate (C1R- C5	later, the low surge)
	Comment:		

Appendix C Performance Step: 7 Standard:	Pag	e 8 of 11	Form ES-C
	PERFORMAN	CE INFORMATION	
	OPEN all Drywell o	cooler supply MOVs [SEE	Note above Step
	All 16 motor opera	ted valves are taken to the	e full open position
	MO-4038A	MO-4039A	MO-4040A
	MO-4038B	MO-4039B	MO-4040B
	MO-4038C MO-4039C	MO-4039C	MO-4041A
	MO-4038D	MO-4039D	MO-4041B
	MO-4038E	MO-4039E	

Evaluator's NOTE:

If RBCCW surge tank alarm comes in while applicant is around back. Inform them that the alarm is in.

Comment:

Appendix C			Page 9 of 11	Form ES-C-1
		PERFORMANCE INFORMATION		
V	Performance Step: 8	IF co by	plant conditions indicate a breach in the I oling piping, THEN ISOLATE the RBCCW closing:	Drywell RBCCW / flow to the Drywell
		٠	MO-4009A, RBCCW Loop "B" Nonesse	ential Loop Inlet Valv
		•	MO-4009B, RBCCW Loop "B" Nonesse Valve	ential Loop Outlet
	Standard:	Or pir M for	perator determines that there is a break in bing in D/W. Operator places control swite D-4009B to close. Checks RED lights OF both valves.	RBCCW cooling ch for MO-4009A an F, GREEN lights on
	Evaluator's Cue:	Ro re the	ble play as required the Rx Bldg operat quested, "makeup to the "B" surge tan e level indicator reads zero percent."	or to say when k is full open and
	Evaluator's Cue:	Ro "B fie co	le play as required to provide indication " has been breached if operator reque Id. When MO-4009A / 4009B are close ncludes the JPM.	on that RBCCW loo st information from d, cue "this
	Evaluator's Note:	Th ine ine su ste	e operator can make this determinatio cluding the following: Operator can us dication on RBCCW loop "B" and / or F rge tank alarm and/or request field op eady surge tank level.	n in several ways, se steady pressure RBCCW loop "B" erator to verify
	Comment:			
Те	erminating Cue:	Th	is JPM is complete.	

STOP TIME:

TIME CRITICAL STOP TIME:

APPENDIX C

Page 10 of 11 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.:	2007 NRC JPM RO/SRC	<u>O S5</u>	
Examinee's Name:			
Date Performed:			
Facility Evaluator:			
Number of Attempts:			
Time to Complete:			
Question Documentation:			
Question:			
Response:		- -	
Result:	SAT UNSA	т	
Examiner's Signature:		Date:	

Appendix C	Page 11 of 11	Form E					
	JPM CUE SHEET						
INITIAL CONDITIONS:	 A loss of B14 has occurred resulting in a RBCCW pumps. 	a loss of "B" loo					
	 RBCCW could not be cross-tied due to cross connect valve. 	the inability to o					
	• The reactor was scrammed.						
	EOP-03 has been entered on high dryw	ell temperature					
	• The fault on B-14 has been cleared.						
	 "B" Loop RBCCW pumps are in PTL in prestoring B14 IAW 2.4.42. 	preparation for					
	Drywell temperature has exceeded 250	dearees.					
Appendix C		Job Perfo W	ormanc /orksh	e Measure eet		Form ES-	C-1
-----------------------------	------------------------------	----------------	------------------	-------------------------	-----------------	-------------------	-----
Facility:	PILGRIM			Task No.:	200-05	5-01-003	
Task Title:	<u>Reopen MSI</u> Closure	Vs Following a	n MSI	/ JPM No.:	2007 N RO/SF	NRC JPM RO S-6	. 1
K/A Reference:	A2.03	4.0 / 4.2				IC	64
Examinee:				NRC Examine	r:	•	
Facility Evaluator:				Date:			
Method of testing:							
Simulated Perform Classr	ance: oom	Simulator	x	Actual Perform Plant	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 operating at 50%
- The operator is required to reopen the outboard and inboard "D" MSIVs following MSIV closure
- Task Standard: MSIVs shall be opened without causing inadvertent actuations and shall be accomplished in accordance with all system precautions and limitations. 2.2.92 shall be followed without failure of any critical elements.

Required Materials: N/A

General References: Procedure 2.2.92, Revision 51

Initiating Cue: The "D" outboard MSIV inadvertently closed early on the previous shift due to a broken airline which has since been repaired. You are to reopen the outboard and inboard "D" MSIVs IAW PNPS 2.2.92 Section 7.2 beginning at step [5]

Time Critical Task: NO

2007 NRC JPM RO/SRO S-6

Appendix C	Job Performance M	easure	Form ES-C-
·····	Worksheet		
Validation Time:	10 minutes		

SIMULATOR SETUP

IC:

Any 50% IC with all MSIVs open

- Initialize the simulator.
- Close Main Steam Line D Outboard and Inboard MSIVs.
- Open MO-220-3 and jog open MO-220-4.

This JPM will be performed in conjunction with JPM S-7

Appendix C	Page 4 of 8 PERFORMANCE INFORMATION	Form ES-C-1
(Denote Critical Steps wit	h an X mark)	
START TIME:		
Performance Step: 1	Operator determines Main Steam line has be M0-220-3 and MO-220-4 for greater than 15	een drained through minutes.
Evaluator's Note:	Initiating cue states the MSIV closed on t	he previous shift.
Comment:		
Performance Step: 2	Operator CLOSES MO-220-4 AND MO-220-	-3
	Operator looks at indicating lights for M	D-220-3 and 4.
√ Standard:	Operator observes green indicating lights extinguished for MO-220-3, and MO-220-4 board or apron section of C904.	s lit and red lights on the PCIS status
Comment:		
Performance Step: 3	OPEN MO-220-1 AND MO-220-2	
	Operator looks at indicating lights for M	D-220- 1 and 2.
√ Standard:	Operator observes green indicating lights extinguished for MO-220-1, and MO-220-2 board or apron section of C904.	s lit and red lights on the PCIS status
Comment:		

Ap	opendix C	Page 5 of 8 PERFORMANCE INFORMATION	Form ES-C-1
			<u> </u>
	Performance Step: 4	Slowly jog FULLOPEN MO-220-4, Drain M	SL for 10 minutes.
		 Operator jogs open and verifies MO-220 position. 	0-4 in the OPEN
\checkmark	Standard:	Operator observes RED light LIT and GREE EXTINGUISHED for MO-220-4.	N light
	Comment:	CUE - the main steam line has been drain	ning for 10 minutes
	Performance Step: 5	Open MSL "D" Outboard MSIV	
\checkmark	Standard:	AO-203-2D control switch in OPEN. Operate indicating light OFF, RED indicating light LIT	or observes GREEN
	Comment:		
	Performance Step: 6	Open MO-220-3. Wait 10 minutes.	
\checkmark	Standard:	MO-220-3 control switch placed in OPEN. C GREEN indicating light OFF, RED indicating	perator observes glight LIT.
	Comment:	CUE - MO-220-3 has been open for 10 min	nutes
	Performance Step: 7	Close MO-220-3	
\checkmark	Standard:	MO-220-3 control switch in CLOSE. Operate indicating light LIT, RED indicating light OFF	or observes GREEN
	Comment:		

••	endix C	Page 6 of 8 PERFORMANCE INFORMATION	Form ES-C
	<u> </u>		· · · · · · · · · · · · · · · · · · ·
F	Performance Step: 8	OPEN MSL "D" INBOARD MSIV	
√ \$	Standard:	AO-203-1D control switch placed in OPEN. GREEN indicating light OFF, RED indicatin	Operator observes g light LIT.
(Comment:		
F	Performance Step: 9	CLOSE the following valves	
		- MO-220-4	
		- MO-220-1 - MO-220-2	
ę	Standard:	MO-220-4, M)-220-2 and MO-220-1 control CLOSE. Operator observes GREEN indicating lights OFF.	switches placed in ting lights LIT, RED
C	Comment:		
Tern	ninating Cue:	This JPM is complete.	

2007 NRC JPM RO/SRO S-6

Appen	dix	С
		-

Page 7 of 8 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.:	2007 NRC JPM RO/SRO S-	<u>6</u>
Examinee's Name:		
Date Performed:		
Facility Evaluator:		
Number of Attempts:		
Time to Complete:		
Question Documentation:		
Question:		
Response:		
Result:	SAT UNSAT	
Examiner's Signature:		Date:

2007 NRC JPM RO/SRO S-6

Page 8 of 8	Form ES-C-1
JPM CUE SHEET	
The plant is operating at 50%	
"D" Inboard and Outboard MSIVs are	closed.
The "D" outboard MSIV inadvertently close shift due to a broken airline which has sind are to reopen the outboard and inboard "D	ed early on the previous ce been repaired. You " MSIVs IAW PNPS
	JPM CUE SHEET The plant is operating at 50% "D" Inboard and Outboard MSIVs are The "D" outboard MSIV inadvertently close shift due to a broken airline which has sind are to reopen the outboard and inboard "D

2007 NRC JPM RO/SRO S-6

Appendix C		Job Performa Works	nce Measure sheet	Form ES-C-1
Facility:	PILGRIM		Task No.:	288-01-01-015
Task Title:	Resetting Se Following Ar	econdary Containment	ent JPM No.:	2007 NRC JPM RO/SRO S7
K/A Reference:	A4.03	3.6 / 3.5		IC-61
Examinee:			NRC Examine	₽ r:
Facility Evaluator:			Date:	
Method of testing:				
Simulated Performa	ance:	_	Actual Perform	nance: X
Classro	oom	Simulator X	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:	Following an isolation that occurred 15 minutes ago due to a planned transfer of Y2, the operator is required to reset the RBIS and to restore the reactor building ventilation system dampers on C-7.
Task Standard:	The secondary containment isolation signal is reset and the reactor building normal ventilation system is restored to the normal lineup. The system shall be operated in accordance with all applicable precautions and limitations. The procedure shall be followed without failure of critical elements.
Required Materials:	Reset Keys for RBIS
General References:	PNPS 2.2.125.1, Revision 16
Initiating Cue:	Reset the Group II and Reactor Building isolations and restore secondary containment ventilation to normal IAW PNPS 2.2.125.1.
Time Critical Task:	NO
Validation Time:	15 minutes

Job Performance Measure Worksheet Form ES-C-1

SIMULATOR SETUP

- 1. Reset simulator to a 50% CTP IC.
- 2. Insert an RBIS by taking the RBIS TEST LOGIC/TRIP keylocks to ISOLATE. Return the keylocks to standby.

Page 3 of 15 PERFORMANCE INFORMATION

Form ES-C-1

(Denote Critical Steps wit	(Denote Critical Steps with a check mark)				
START TIME:					
NOTE:	If a Secondary Containment damper gives a dual indication, this is a symptom of a damper stuck in mid-position. When these dampers are in the mid-position, there is both a red (open) light and a green (closed) light illuminated. Operator action may be necessary to manually close dampers. (PR94, 9358.01)				
CAUTION:	The NRC requires that all safety related equipment receiving a containment isolation signal remain in the safe position when containment isolation logic is reset. If the below listed components are not aligned as required below, the components will reposition when the isolation logic is reset.				
CUE	STEP 1 is performed in the field.				
Performance Step: 1	When Secondary Containment isolation signal clears, THEN PLACE OR VERIFY that the following control switches are in the safe position as follows:				
	• At Panel C61:				
	 PLACE OR VERIFY the control switch for VSF-201A in the OFF position. 				
	 PLACE OR VERIFY the control switch for VSF-201B in the OFF position. 				
	 PLACE OR VERIFY the control switch for VSF-202A in the OFF position. 				
	 PLACE OR VERIFY the control switch for VSF-202B in the OFF position. 				
	 PLACE OR VERIFY the control switch for VSF-203A in the OFF position. 				
	 PLACE OR VERIFY the control switch for VSF-203B in the OFF position. 				
	 PLACE OR VERIFY the control switch for VEX-201A in the OFF position. 				
	 PLACE OR VERIFY the control switch for VEX-201B in the OFF position. 				
/	 PLACE OR VERIFY the control switch for VEX-202A in the OFF position. 				

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Appendix C	Page 4 of 15 Form ES-C-1
	PERFORMANCE INFORMATION
	 PLACE OR VERIFY the control switch for VEX-202B in the OFF position.
	 PLACE OR VERIFY the control switch for VEX-203A in the OFF position.
	 PLACE OR VERIFY the control switch for VEX-203B in the OFF position.
	 PLACE OR VERIFY the control switch for VEX-206 in the STOP position.
Standard:	Operator contacts field operator to place reactor building supply and exhaust fans in the off position (VEX-206 placed in stop).
Evaluator's Cue:	"All reactor building supply and exhaust fans have been placed in OFF with the exception of VEX-206 which is placed in the STOP position."
Comment:	
√ Performance Step: 2	At Panel C7 PLACE OR VERIFY the control switch for damper
Standard:	Control switch for AO-N-97 rotated to the CLOSE position.
0	
Comment:	
Performance Step: 3	이유 PLACE 무선 VERIFY the control switch for damper AO-N-96 in the CLOSE position.
Standard:	Control switch for AO-N-96 rotated to the CLOSE position.
Comment:	
Performance Step: 4	PLACE OR VERIFY the control switch for damper AO-N-91 in the CLOSE position.
Standard:	Control switch for AO-N-91 rotated to the CLOSE position.
Comment:	
2007 NRC JPM RO/SRO S7	NUREG 1021, Revision 9

Appendix C		Page 5 of 15 Form PERFORMANCE INFORMATION	
\checkmark	Performance Step: 5	PLACE OR VERIFY the control switch for dar the CLOSE position.	nper AO-N-90 in
	Standard:	Control switch for AO-N-90 rotated to the CLC	SE position.
	Comment:		
\checkmark	Performance Step: 6	PLACE OR VERIFY the control switch for dar the CLOSE position.	nper AO-N-93 in
	Standard:	Control switch for AO-N-93 rotated to the CLC	SE position.
	Comment:		
\checkmark	Performance Step: 7	PLACE OR VERIFY the control switch for dar the CLOSE position.	nper AO-N-92 in
	Standard:	Control switch for AO-N-92 rotated to the CLC	SE position.
	Comment:		
\checkmark	Performance Step: 8	PLACE OR VERIFY the control switch for dan the CLOSE position.	nper AO-N-94 in
	Standard:	Control switch for AO-N-94 rotated to the CLC	SE position.
	Comment:		
\checkmark	Performance Step: 9	PLACE OR VERIFY the control switch for dan the CLOSE position.	nper AO-N-95 in
	Standard:	Control switch for AO-N-95 rotated to the CLC	SE position.
	Comment:		
20	07 NRC JPM RO/SRO S7	NURE	G 1021, Revisior

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Ap	opendix C	Page 6 of 15	Form ES-C
		PERFORMANCE INFORMATION	
V	Performance Step: 10	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-114 ir
	Standard:	Control switch for AO-N-114 rotated to the C	CLOSE position.
	Comment:		
1	Performance Step: 11	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-115 i
	Standard:	Control switch for AO-N-115 rotated to the C	CLOSE position.
	Comment:		
\checkmark	Performance Step: 12	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-116 i
	Standard:	Control switch for AO-N-116 rotated to the C	CLOSE position.
	Comment:		
V	Performance Step: 13	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-117 i
	Standard:	Control switch for AO-N-117 rotated to the C	CLOSE position.
	Comment:		
1	Performance Step: 14	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-79 in
	Standard:	Control switch for AO-N-79 rotated to the C	LOSE position.
	Comment:		• •
20	07 NRC JPM RO/SRO S7	NUR	EG 1021. Revisio

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Ap	pendix C	Page 7 of 15 PERFORMANCE INFORMATION	Form ES-C
V	Performance Step: 15	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-78 in
	Standard:	Control switch for AO-N-78 rotated to the C	LOSE position.
	Comment:		
\checkmark	Performance Step: 16	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-81 in
	Standard:	Control switch for AO-N-81 rotated to the C	LOSE position.
	Comment:		
√	Performance Step: 17	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-80 in
	Standard:	Control switch for AO-N-80 rotated to the C	LOSE position.
	Comment:		
\checkmark	Performance Step: 18	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-83 in
	Standard:	Control switch for AO-N-83 rotated to the C	LOSE position.
	Comment:		
\checkmark	Performance Step: 19	PLACE OR VERIFY the control switch for d the CLOSE position.	amper AO-N-82 in
	Standard:	Control switch for AO-N-82 rotated to the C	LOSE position.
	Comment:		
200	7 NRC JPM RO/SRO S7	NUR	EG 1021, Revisior

Ар	pendix C	Page 8 of 15 PERFORMANCE INFORMATION	Form ES-C
V	Performance Step: 20	PLACE OR VERIFY the control switch for date the OPEN position.	amper AO-N-101 ir
	Standard:	Control switch for AO-N-101 rotated to the C Damper positioning RED light ON, Damper light OFF.	DPEN position. positioning GREEN
	Comment:		
	Performance Step: 21	PLACE OR VERIFY the control switch for date the OPEN position.	amper AO-N-100 ii
	Standard:	Control switch for AO-N-100 is already in the Damper positioning RED light ON, Damper light OFF.	e OPEN position. positioning GREEN
	Evaluator's Note: Comment:	Normal position is OPEN.	
	Performance Step: 22	PLACE OR VERIFY the control switch for date the OPEN position.	amper AO-N-98 in
	Standard:	Control switch for AO-N-98 rotated to the Ol Damper positioning RED light ON, Damper light OFF.	PEN position. positioning GREEN
	Comment:		
	Performance Step: 23	PLACE OR VERIFY the control switch for date the OPEN position.	amper AO-N-138 i
	Standard:	Control switch for AO-N-138 rotated to the C Damper positioning RED light ON, Damper light OFF.	DPEN position. positioning GREEN
	Evaluator's Note: Comment:	Normal position is OPEN.	
20		NUR	FG 1021 Revisior

2007 NRC JPM RO/SRO S7

PERFORMANCE INFORMATION PLACE OR VERIFY the control switch for damper AO-N-137 the OPEN position. Control switch for AO-N-137 rotated to the OPEN position. Damper positioning RED light ON, Damper positioning GREE light OFF. Normal position is OPEN.
PLACE OR VERIFY the control switch for damper AO-N-137 the OPEN position. Control switch for AO-N-137 rotated to the OPEN position. Damper positioning RED light ON, Damper positioning GREE light OFF. Normal position is OPEN.
the OPEN position. Control switch for AO-N-137 rotated to the OPEN position. Damper positioning RED light ON, Damper positioning GREE light OFF. Normal position is OPEN.
Control switch for AO-N-137 rotated to the OPEN position. Damper positioning RED light ON, Damper positioning GREE light OFF. Normal position is OPEN.
Normal position is OPEN.
PLACE OR VERIFY the control switch for damper AO-N-99 i the OPEN position.
Control switch for AO-N-99 rotated to the OPEN position. Damper positioning RED light ON, Damper positioning GREE light OFF.
Standby Gas Train Fan B (VEX-210B), which is normally STANDBY, will start and its Train B outlet damper
step.
PLACE OR VERIFY the control switch for damper AO-N-106 the OPEN position.
Control switch for AO-N-106 rotated to the OPEN position "B" SBGT starts.

Appendix C	Page 10 of 15	Form ES-C-
	PERFORMANCE INFORMATION	
Performance Step: 27	PLACE OR VERIFY the control switch for date the OPEN position.	amper AO-N-108 in
Standard:	Control switch for AO-N-108 rotated to the O	PEN position.
Comment:		
Performance Step: 28	PLACE OR VERIFY the control switch for date the OPEN position.	amper AO-N-112 in
Standard:	Control switch for AO-N-112 rotated to the O	PEN position.
Comment:		
Performance Step: 29	PLACE OR VERIFY the control switch for ST A. VEX-210A, in the RUN position.	TANDBY GAS FAN
Standard:	Control switch for SBGT Fan VEX-210A place	ed in RUN positior
Comment:		
Performance Step: 30	PLACE OR VERIFY the control switch for ST B, VEX-210B, in the STANDBY position.	ANDBY GAS FAN
Standard:	Control switch for SBGT Fan VEX-210 is ve Standby position.	erified to be in the

Appendix C			
	PERFORMANCE INFO		
NOTES:	 Refer to Attachment 2 for the PCAC values that have electrical interlock with the RBIS isolation logic. Thi interlock requires that all the control switches for th PCAC values affected by RBIS signal be in the CLOS position before these logics will reset. 		
	• A high dP condition the Torus will overrid AO-5040A and AO-50 Containment from ex	between the Reactor Building a de the isolation signal and oper 04B in order to protect the Prim ccessive negative pressure.	
Performance Step: 31	PLACE OR VERIFY PLAC	ED the following control switches	
	Panel C7:		
	AO-5044A CLOSE	AO-5040A AUTO/CLOSE	
	• AO-5044B CLOSE	AO-5040B AUTO/CLOSE	
	• AO-5043A CLOSE	AO-5035A CLOSE	
	• AO-5043B CLOSE	AO-5035B CLOSE	
	• AO-5042A CLOSE	AO-5036A CLOSE	
	• AO-5042A CLOSE	AO-5036B CLOSE	
	• AO-5041A CLOSE	AO-5033A CLOSE	
	• AO-5041B CLOSE	AO-5033B CLOSE	
		AO-5033C CLOSE	
Standard:	Operator verifies that the f CLOSE position or AUTO/	ollowing control switches are in th CLOSE position.	
	AO-5044A CLOSE	AO-5040A AUTO/CLOSE	
	AO-5044B CLOSE	AO-5040B AUTO/CLOSE	
	AO-5043A CLOSE	AO-5035A CLOSE	
	AO-5043B CLOSE	AO-5035B CLOSE	
	AO-5042A CLOSE	AO-5036A CLOSE	
	AO-5042BA CLOSE _	AO-5036B CLOSE	
	AO-5041A CLOSE	AO-5033A CLOSE	
	 AO-5041B CLOSE 	AO-5033B CLOSE	
	• AO-5033C CLOSE	_	
Evaluator's Note:	All valves were closed.		

	pendix C	Page 12 of 15	Form ES-C-
-	·	PERFORMANCE INFORMATION	
	Performance Step: 32	IF applicable, REFER TO PNPS 2.2.155 to re Floor Radiation Monitor Trip Units on Panel (eset the Refuel 910.
	Standard:	Operator determines that this step is not nec proceeds to the next step.	essary and
	Evaluator's Cue:	If the operator starts toward the C910 panel, refuel floor rad monitors have been reset.	tell him that the
	Evaluator's Notes:	Initial conditions stated that the cause of t transfer of Y2, in addition, if operator look indicate normal.	he isolation was s, rad monitors
	Comment:		
V	Performance Step: 33	RESET the Secondary Containment isolation using switch "PCIS GROUP 2, 3, 6 ISOL RES	at Panel C905 by SET".
	Standard:	PCIS Group 2, 3, 6 ISOL Reset switch on C9 inboard and outboard positions.	05 rotated to BOT
	Comment:		
V	Performance Step: 34	OBTAIN the keys from the SM AND RESET Containment isolation (RBIS) logic by momen RBIS TRIP RESET keylock reset switches (2 Channel B to "RESET" at Panel C7, then bac	Secondary ntarily taking the) Channel A and k to "NORMAL".
	Evaluator's Note:	The isolation is now reset.	
	Standard:	Channel A RBIS Trip Reset Keylock switch p Channel B RBIS Trip Reset Keylock switch p	laced in RESET. laced in RESET.
	Evaluator's Cue:	When the operator identifies the need for RBIS, and where to obtain them, provide t the two keys.	keys to reset the he operator with
	Evaluator's Note:	No dampers should reposition on C7 pane were performed correctly. If a damper rep	l if previous step ositions then a
		previous step was onlined.	

Appendix C	Page 13 of 15	Form ES-C-1
	PERFORMANCE INFORMATION	
Terminating Cue:	This JPM is complete.	

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Appendix C	Page 14 of 15 VERIFICATION OF COMPLET	Form ES-C-1
Job Performance Measure No.:	2007 NRC JPM RO/SRO S7	
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:	Following an isolation that occurred 15 mi planned transfer of Y2, you are required to restore the reactor building ventilation systems	nutes ago due to a o reset the RBIS and to stem dampers on C-7.
INITIATING CUE:	Reset the Group Hand Reactor Building i secondary containment ventilation to norr	solations and restore nal IAW PNPS

Appendix C	Job Performanc Worksh	e Measure eet	Form ES-C-1
Facility:	PILGRIM	Task No.:	200-05-01-062
Task Title:	Operate the Direct Torus Vent to Maintain Primary Containment Pressure Below the PCPL	JPM No.:	2007 NRC JPM RO S8
K/A Reference:	295024 EA1.14 3.4 / 3.5		
Examinee:		NRC Examiner	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performa Classro	ance: oom SimulatorX	Actual Perform Plant	ance: <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:

- A leak in the drywell has caused a Rx Scram.
- EOP-01 and EOP-03 are being used to mitigate the event.
- Drywell pressure is >35 psig and rising slowly.
- The torus is currently being vented via the 2" torus vent valves and the 1" CAD Containment Atmosphere Dilution) valves IAW procedure 5.4.6.
- Although the RPV has been depressurized, containment pressure is still rising.
- Torus level is 136 inches.
- The reactor building has been evacuated due to the potential for rupturing of duct work.
- I & C personnel have been briefed and are standing by with the required fuses and/or jumpers in hand"
- Solicit and answer any questions the operator may have.

Task Standard:

Required Materials: • Simulator Key for AO-5025

General References: Procedure 5.4.6 Rev. 39

2007 NRC JPM RO S8

Appendix C	Job Performance Measure	Form ES-C-1
	Worksheet	
Initiating Cue:	"[Operator's name], vent the torus via the I Procedure 5.4.6, Attachment I, Section [2](Direct Torus Vent IAW (c)."
Time Critical Task:	NO	
Validation Time:	15 minutes	

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SIMULATOR SETUP

- 1. Initialize to a full power IC.
- 2. Insert Safety Valve fails open.
- 3. Depressurize the RPV by opening all 4 SRVs.
- 4. Insert SRV Tailpipe leak as required to raise Torus airspace pressure to >35 psig.
- 5. Stabilize RPV level between -30" and +40".
- 6. Place the 2" torus vents in service by placing their control switches in Emergency Open.
- 7. Open the CAD valves(all four).
- 8. Stabilize plant conditions to provide for a slowly rising containment pressure.

Page 4 of 10 PERFORMANCE INFORMATION

Form ES-C-1

(Denote Critical Steps with	(Denote Critical Steps with a check mark)		
START TIME:			
Performance Step: 1	Review applicable section of the procedure.		
Standard:	The procedure steps are reviewed.		
Comment:			
Performance Step: 2	NOTE The following steps will place the Direct Torus Vent in service. Torus air space pressure must be \geq 30 psig in order to break the rupture disc associated with this vent path.		
	 (c) IF additional venting capacity is required, THEN PREPARE for Direct Torus Vent as follows: (1) PLACE OR VERIFY PLACED the control switch for AO- 5042B, TORUS PURGE EXHAUST ISOL VLV, in the "CLOSE" position. 		
Standard:	Operator verifies the control switch on Panel C7 in the "CLOSE" position.		

Comment:

Ap	ppendix C		Form ES-C-1
	<u> </u>	PERFORMANCE INFORMATION	<u></u>
	Performance Step: 3	DEFEAT the isolation signal as necessary TORUS PURGE EXHAUST ISOL VLV, in a PNPS 5.3.21, <i>"Bypassing Selected Interloc</i>	for AO-5042B, accordance with ks", Attachment 17.
√	Standard:	Operator requests I&C personnel to defeat AO-5042B.	the isolation signal for
	Evaluator's Note:	The isolation signal will need to be defeated drywell pressure condition. Operator shoul the case. If required, prompt operator to ca	d due to the high d realize that this is all I&C.
		Simulator Operator: When requested, de AO-5042B utilizing the remote function. Re when the isolation has been defeated.	feat the isolation for port to the operator
V	Performance Step: 4	NOTE The fuse holders for the two 3-amp fuses a in Panel C7. The fuse block is accessible fi in the back of Panel C7. The fuse block can the large yellow label plates attached to the	re designated "UQQ" rom the rightmost door n be readily located by e fuse plugs.
	Standard:	(2) INSTALL two 3-amp fuses for valve TORUS VENT VLV, in the back of f be obtained from the EOP Support Tool Box or the Control Room "Q" F Operator requests I&C personnel to install	AO-5025, DIRECT Panel C7 (fuses can Jumper/Lifted Lead use Box). fuses for AO-5025.
	Evaluator's Note:	The procedure describes the location of the The fuse holders for the two 3-amp fuses a in Panel C7. The fuse block is accessible t door in the back of Panel C7. The fuse blo located by the large yellow label plates atta plugs. If required, prompt operator to call I action.	e fuses as follows: re designated "UQQ" from the rightmost ck can be readily iched to the fuse &C to perform this
		Simulator Operator: When requested, ins fuses using the remote function. Report to fuses have been installed.	stall the control power the operator when the
	Comment:		

Ap	opendix C	Page 6 of 10	Form ES-C-1
		PERFORMANCE INFORMATION	
	Performance Step: 5	OBTAIN key CR-W in preparation for opening DIRECT TORUS VENT VLV.	AO-5025,
\checkmark	Standard:	Operator obtains key.	
	Evaluator's Cue:	When the operator has identified that he/she n the operator where he/she would obtain the ke	eeds a key, ask ey.
		Once the operator has correctly identified whe the key (CR Annex or the SM's office), hand h key.	re he would obtain im/her the required
	Performance Step: 6	NOTIFY the Shift Manager that Direct Torus V commence.	enting is about to
	Standard:	Operator verbalizes notifying the Shift Manage	er.
	Evaluator's Cue:	Role Play as the Shift Manager and acknowled	lge the report.

Appendix C	Page 7 of 10	Form ES-C-1
	PERFORMANCE INFORMATION	<u>.</u>
Performance Step: 7	NOTE	
	The following steps will secure any existing initiate Direct Torus Vent. These steps sh expeditious manner so as not to delay the vent path.	ng vent paths and hould be performed in an e establishment of a
	INITIATE Direct Torus Vent as follows:	
	CLOSE OR VERIFY CLOSED the followi	ng valves:
	 SV-5083A, TORUS ISOLATION VAL SV-5084A, TORUS ISOLATION VAL SV-5083B, TORUS ISOLATION VAL SV-5084B, TORUS ISOLATION VAL AO-5042A, TORUS PURGE EXHAU AO-5041A, TORUS NORMAL EXHA AO-5041B, TORUS NORMAL EXHA 	VE (C170) VE (C170) VE (C171) VE (C171) ST ISOL VLV (C7) UST ISOL VLV (C7) UST ISOL VLV (C7)
√ Standard:	All (7) switches are taken to the closed po	osition.
Evaluator's Note:	The procedure contains the following not will secure any existing vent paths and in These steps should be performed in an e as not to delay the establishment of a ver	e: The following steps itiate Direct Torus Vent. expeditious manner so nt path.
	The operator should make continuous pro establishing the direct torus vent path.	ogress towards
Performance Step: 8	PLACE the fan control switches for SGTS 210A and VEX-210B to "OFF".	S Exhaust Fans VEX-
√ Standard:	Control switches for VEX-210A and VEX- "OFF" position.	-210B are taken to
Performance Step: 9	VERIFY the following valves have closed	:
Standard:	 AO-N-112, SGTS TRAIN B OUTL DN AO-N-108, SGTS TRAIN A OUTL DN Operator verifies AO-N-112 and AO-N-10 closed. 	MPR MPR 08 damper valves have
Comment:		

Ap	opendix C	Page 8 of 10	Form ES-C-1
		PERFORMANCE INFORMATION	
	Performance Step: 10	OPEN AO-5025, DIRECT TORUS VENT VLV	/.
V	Standard:	Key inserted and control switch for AO-5025, Valve, placed in OPEN position. Operator reports that venting via the direct tor progress.	Direct Torus Vent rus vent is in
	Performance Step: 11	OPEN AO-5042B, TORUS PURGE EXHAUS	T ISOL VLV.
√	Standard:	Control switch for AO-5042B torus purge exhance is placed in open position.	aust isolation valve
Те	rminating Cue:	This JPM is complete.	
ST	OP TIME:	TIME CRITICAL STOP TIME	

Appendix C	Page 9 of 10 VERIFICATION OF COMPLET	Form ES-C
Job Performance Measure No.:	2007 NRC JPM RO S8	
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 10 of 10	Form ES-C-
	JPM CUE SHEET	
INITIAL CONDITIONS:	 A leak in the drywell has caused a F EOP-01 and EOP-03 are being use Drywell pressure is >35 psig and ris The torus is currently being vented valves, and the 1" CAD Containment 	Rx Scram. d to mitigate the event ing slowly. via the 2" torus vent at Atmosphere Dilution
	valves and the CAD containing valves IAW procedure 5.4.6.	
	 Although the RPV has been depres pressure is still rising. 	surized, containment
	 Torus level is 136 inches. The reactor building has been evace potential for rupturing of duct work. 	uated due to the
	 I & C personnel have been briefed a the required fuses and jumpers in h 	and are standing by w and"
INITIATING CUE:	"[Operator's name], vent the torus	via the Direct Torus

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Appendix C	an dia di	Job Performanc	e Measure	Form ES-C-1
		Workshe	eet	
Facility:	PILGRIM		Task No.:	200-05-01-014
Task Title:	Reactor Scra the Control R	m and From Outside oom	JPM No.:	2007 NRC JPM RO/SRO P1
K/A Reference:	AA1.01	3.8 / 3.9	AA1.06	4.0 / 4.1
Examinee:			NRC Examine	r:
Facility Evaluator:			Date:	
Method of testing:				
Simulated Perform	ance: X		Actual Perform	ance:
Classr	room	Simulator	Plant 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 was operating at 50% power. The main control room has been evacuated due to a fire, a scram will be performed from outside the control room, and RFPs 'A' and 'C' must be tripped.
Task Standard:	A reactor scram from outside of the control room shall be completed without causing inadvertent actuations. The scram and RFP trips shall be accomplished in accordance with all system precautions and limitations. PNPS 2.4.143 shall be followed without failure of any critical elements.
Required Materials:	"S" key for panel C-511 (CR-50)
General References:	Procedure 2.4.143, Revision 36
Initiating Cue:	Scram the reactor and trip reactor feed pumps 'A' and 'C' from outside the control room using procedure 2.4.143. Inform me when you have completed the task.
Time Critical Task:	NO
Validation Time:	15 minutes

2007 NRC JPM RO/SRO P1

Job Performance Measure Worksheet

SIMULATOR SETUP

N/A

2007 NRC JPM RO/SRO P1

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Page 3 of 6 PERFORMANCE INFORMATION

S	TART TIME:	
	Performance Step: 1	Review the applicable sections of the procedure.
	Standard:	Operator reviews the applicable section of the procedure.
	Evaluator's Note:	This task is covered in 2.4.143 Section 4.0[10](a), (b), and
	Evaluator's Note:	All manipulations are performed from the RPS panel loca on the West wall of the RPS MG set room and at 4160VA0 bus A1 in the upper switchgear room.
	Evaluator's Note:	All critical steps must be performed in order unless otherwise noted.
	Comment:	
	Performance Step: 2	SCRAM the Reactor by opening the following breakers on RI power panel C511 (23' RPS MG Room):
		• PRNM Bus A, Bkr A4 (red)
		PRNM Bus B, Bkr B4 (red)
	Standard:	Operator locates, unlocks and opens panel C511.
	Evaluator's Note:	Panel C511 is open.
V	Standard:	Operator locates PRNM Bus A, Bkr A4 on RPS power panel C511 and pushes the handle down to the OFF position.
	Evaluator's Cue:	"PRNM -Bus A, Breaker A4 has snapped into the OFF position."
\checkmark	Standard:	Operator locates PRNM –Bus B, Bkr B4 on RPS power pane C511 and pushes the bandle down to the OFF position
		corrand publice the handle defin to the orrapolation.

Comment:
Ap	pendix C	Page 4 of 6 PERFORMANCE INFORMATION	Form E
			·····
	Performance Step: 3	CLOSE the PRNM breakers on RPS Power	Panel C511:
		• PRNM -Bus A, Bkr A4 (red)	
		• PRNM -Bus B, Bkr B4 (red)	
	Standard:	Operator locates PRNM -Bus A, Bkr A4 on C511 and pushes the handle up to the ON	RPS power pan position.
	Evaluator's Cue:	"PRNM -Bus A, Breaker A4 has snapped position."	into the ON
	Standard:	Operator locates PRNM -Bus B, Bkr B4 on C511 and pushes the handle up to the ON	RPS power pan position.
	Evaluator's Cue:	"PRNM -Bus B, Breaker B4 has snapped position."	into the ON
	Comment:		
	Performance Step: 4	TRIP the Reactor Feed Pumps at their 416) VAC breakers
		• RFP A – Bkr 152 – 101, Bus A1.	
		• RFP C – Bkr 152 – 102, Bus A1	
	Evaluator Note:	If the operator goes to don protective clothin he says that he has to open the breaker cal breaker, tell him to simulate the action of op door and explain what actions he would be cabinet. This is an acceptable path as he c RFP breakers from this location. The prefe however, is with the control switch on the br	ng, ask why. W binet door to trip bening the break performing insic an, indeed, trip rred method, reaker front.
V	Standard:	Operator locates breaker 152-101 on bus A breaker.	1 and locally trip
1	Standard:	Operator locates breaker 152-102 at bus A ² breaker.	1 and locally trip
	Standard:	Operator reports that the assigned tasks are	e complete.
	Comment:		
Ter	minating Cue:	This JPM is complete.	

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Page 5 of 6 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.: <u>2007 NRC JPM RO/SRO P1</u>

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result:

SAT UNSAT

Examiner's Signature:

Date:

2007 NRC JPM RO/SRO P1

Appendix C	Page 6 of 6	
	JPM CUE SHEET	
INITIAL CONDITIONS:	The plant was operating at 50% power. T has been evacuated due to a fire, a scran outside the control room, and RFPs 'A' ar	he main control room n will be performed from nd 'C' must be tripped.
INITIATING CUE:	Scram the reactor and trip reactor feed pu outside the control room using procedure when you have completed the task.	Imps 'A' and 'C' from 2.4.143. Inform me

2007 NRC JPM RO/SRO P1

Appendix C	Job Performan Works	Job Performance Measure Worksheet	
Facility:	PILGRIM	Task No.:	200-05-04-077
Task Title:	Defeat MSIV Isolation Signals	JPM No.:	2007 NRC JPM RO/SRO P2
K/A Reference:	223002 K4.08 3.3 / 3.7		
Examinee:		NRC Examine	r:
Facility Evaluator:		Date:	
Method of testing:			
Simulated Perform	ance: X	Actual Perform	nance:
Classr	oom Simulator	_ PlantX	

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:	Containment flooding is in progress.
	 The MSIV's need to be opened to establish a vent path, but there are MSIV isolation signals present.
	• To open the MSIV's, all isolation signals must be bypassed.
Task Standard:	MSIV isolation interlocks bypassed with jumpers installed in proper locations in control room panels C915 and C917, and the MSIV isolation signal reset in accordance with Attachment 14 of procedure 5.3.21. The procedure shall be followed without failure of any critical elements.
Required Materials:	• Key CR-X
	• Four (4) Jumpers
General References:	Procedure 5.3.21, Revision 26
Initiating Cue:	You are to bypass the MSIV isolation signals IAW Att. 14 of procedure 5.3.21. Inform me when I can have the C905 operator reset the Group I isolation.

Appendix C		Job Performance Measure	Form ES-C-1
		Worksheet	
Time Critical Task: NO			

15 minutes

2007 NRC JPM RO/SRO P2

Validation Time:

Job Performance Measure Worksheet

Form ES-C-1

SIMULATOR SETUP

N/A

2007 NRC JPM RO/SRO P2

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Page 4 of 11 PERFORMANCE INFORMATION

Form ES-C-1

ART TIME:	
Performance Step: 1	Review applicable section of the procedure.
Evaluator's Note:	All jumpers are installed in control room panels C915 and C917.
Evaluator's Note:	All critical steps must be performed in order written unle otherwise noted.
	Operator reviews the applicable sections of the procedure.
Standard:	Applicable sections of the procedure have been reviewed.
Comment:	
Performance Step: 2	OBTAIN permission from the SM before placing jumpers or lif leads.
	Operator obtains permission from SM to install jumpers per 5.3.21, Attachment 14.
Standard:	Permission obtained.
Evaluator's Cue:	(As SM) "You have permission to defeat the MSIV isolation signals "

Appendix C	Page 5 of 11	Form ES-C-1	
····	PERFORMANCE INFORMATION		
Performance Sten: 3	OBTAIN the tool kit for jumpers and lifted l	eads from the SM's	
r enormance otep. 5	office (key CR-X).		
	Operator obtains key from SM's office.		
√ Standard:	Key in operator's possession.		
Evaluator's Note:	The Evaluator may check out the key pr performance of this JPM and provide it the correct key is identified in the proce	ior to the to the Operator whe dure.	
	Operator obtains correct bag of jumpers fro	om tool box.	
√ Standard:	Correct bag of jumpers identified.		
Evaluator's Note:	Once the box is opened and the correct identified, reclose and lock box.	jumpers are	
Evaluator's Cue:	"You have the jumpers."		
Comment:			
Performance Step: 4	PLACE jumpers OR LIFT leads of locations Attachment for the interlock or isolation sig	s identified on specific nal to be bypassed.	
Evaluator's Note:	Since this part of the procedure is in a " sequence of installing the jumpers can any order since it is not specified.	chart form", the be accomplished in	
Standard:	Operator refers to Attachment 14.		
Comment:			

Appendix C	Page 6 of 11	Form ES-C-1
	PERFORMANCE INFORMATION	
Performance Step: 5	Place a jumper from location EE-3 to EE-4 a panel C917.	at Main control Room
	Operator identifies jumper locations EE-3 au C917.	nd EE-4 at panel
Standard:	Jumper locations EE-3 and EE-4 at panel C identified.	917 correctly
	Operator requests second verifier concurrent	nce with location.
Standard:	Second verification requested.	
Evaluator's Cue:	"I agree that is the proper location."	
	Operator places jumper at location EE-3 to	EE-4.
√ Standard:	Jumper installed at location EE-3 to EE-4.	
Evaluator's Cue:	"The jumper is installed."	
	Operator requests second individual to condidentification.	cur with locations
Standard:	Second individual is requested to verify loca	ation.
Evaluator's Cue:	"I concur that the jumper is installed at lo EE-4".	ocation EE-3 to

Ap	opendix C	Page 7 of 11	Form ES-C-
		PERFORMANCE INFORMATION	
	Performance Step: 6	Place a jumper form location DD-22 to DD- Room panel C915.	23 at Main Control
		Operator identifies jumper locations DD-22 C915.	and DD-23 at panel
	Standard:	Jumper locations DD-22 and DD-23 at panelidentified.	el C915 correctly
		Operator requests second verifier concurre	nce with location.
	Standard:	Second verification requested.	
	Evaluator's Cue:	"I agree that is the proper location."	
		Operator places jumper at location DD-22 to	o DD-23.
\checkmark	Standard:	Jumper installed at location DD-22 to DD-2	3.
		Operator requests second individual to con- identification.	cur with locations
	Standard:	Second individual is requested to verify loca	ation.
	Evaluator's Cue:	"I concur that the jumper is installed at I DD-23.	ocation DD-22 to

Appendix C		Page 8 of 11	Form ES-C-	
	-	PERFORMANCE INFORMATION		
	Performance Step: 7	Place a jumper from location AA-3 to AA-4 a panel C917.	at Main Control Roor	
		Operator identifies jumper locations AA-3 ar C917.	nd AA-4 at panel	
	Standard:	Jumper locations AA-3 and AA-4 at panel C identified.	917 correctly	
		Operator requests second verifier concurrer	nce with location.	
	Standard:	Second verification requested.		
	Evaluator's Cue:	"I agree that is the proper location."		
		Operator places jumper at location AA-3 to	AA-4.	
\checkmark	Standard:	Jumper installed at location AA-3 to AA-4.		
	Evaluator's Cue:	"The jumper is installed."		
		Operator requests second individual to conc identification.	cur with locations	
	Standard:	Second individual is requested to verify loca	ition.	
	Evaluator's Cue:	"I concur that the jumper is installed at lo AA-4."	ocation AA-3 to	

	PERFORMANCE INFORMATION	
Performance Step: 8	Place a jumper from location BB-22 to BB-23 Room panel C915.	3 at Main Control
	Operator identifies jumper locations BB-22 a C917.	nd BB-23 at pane
Standard:	Jumper locations BB-22 and BB-23 at panel identified.	C915 correctly
	Operator requests second verifier concurren	ce with location.
Standard:	Second verification requested.	
Evaluator's Cue:	"I agree that is the proper location."	
	Operator places jumper at location BB-22 to	BB-23.
√ Standard:	Jumper installed at location BB-22 to BB-23.	
Evaluator's Cue:	"The jumper is installed."	
	Operator requests second individual to conci identification.	ur with locations
Standard:	Second individual requested to verify location	า.
Evaluator's Cue:	"I concur that the jumper is installed at lo BB-23."	cation BB-22 to
Comment:		
Performance Step: 9 Standard:	Inform the supervisor that the GP 1 isolation Operator informs supervisor that the GP 1 lo	logic can be rese gic can be reset
Comment:		
Terminating Cue:	This JPM is complete.	

Appendix C	С	ix	nd	be	pr	A	
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Page 10 of 11 VERIFICATION OF COMPLETION

Form ES-C-1

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Job Performance Measure No.:	2007 NRC JPM RO/SRO F	<u>22</u>
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 11 of 11	Form ES-C-	
	JPM CUE SHEET		
INITIAL CONDITIONS:	Containment flooding is in progress.		
	 The MSIV's need to be opened to establish a vent path, but there are MSIV isolation signals present. 		
	• To open the MSIV's, all isolation signation	als must be bypassed.	
INITIATING CUE:	You are to bypass the MSIV isolation signa procedure 5.3.21. Inform me when I can h reset the Group I isolation.	als IAW Att. 14 of ave the C905 operato	

Appendix C		Job Performan	ce Measure	Form ES-C-1
		Worksl	neet	
Facility:	PILGRIM		Task No.:	201-01-04-012
Task Title:	<u>Shift CRD F</u>	low control Valves	JPM No.:	2007 NRC JPM RO/SRO P3
K/A Reference:	A2.07	3.2 / 3.1		
Examinee:			NRC Examiner	Ţ. ¹ .
Facility Evaluator:			Date:	
Method of testing:				
Simulated Performa	ance: X	- ·	Actual Perform	ance:
Classro	oom	Simulator	_ Plant <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 reactor is operating at power. The in-service CRD Flow Control Valve, FCV-302-6A has failed CLOSED.
Task Standard:	The "B" CRD Flow Control Valve will be placed into service in accordance with procedure 2.2.87. The valve shall be placed in service without causing inadvertent actuations, in accordance with all system precautions and limitations and without failure of any critical elements.
Required Materials:	NONE
General References:	PNPS 2.2.87, Revision 114
Initiating Cue:	You are to changeover to the "B" CRD Flow control Valve in accordance with 2.2.87. Inform me when the task is complete.
Time Critical Task:	NO
Validation Time:	12 minutes

Appendix C

Job Performance Measure Worksheet

Form ES-C-1

SIMULATOR SETUP

N/A

2007 NRC JPM RO/SRO P3

(Denote Critical Steps with a check mark) START TIME:	Appendix C	Page 3 of 7 PERFORMANCE INFORMATION	Form ES-
START TIME: Notes: This task is covered in 2.2.87, Section 7.7.5, Steps 1 – 9 All controls are located on the Reactor Building CRD mezzanine. HEARING PROTECTION IS REQUIRED. All critical steps must be performed in order written un otherwise noted. Performance Step: 1 Changeover of Flow control Valves ESTABLISH communications between Control Room and the master control station. Standard: Verifies communications between Control Room and the master control station. Comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Verifies Opens 301-40B, Standby Flow control Valve B Inlet Valve.	(Denote Critical Steps with	h a check mark)	
Notes: This task is covered in 2.2.87, Section 7.7.5, Steps 1 – 9 All controls are located on the Reactor Building CRD mezzanine. HEARING PROTECTION IS REQUIRED. All critical steps must be performed in order written un otherwise noted. Performance Step: 1 Changeover of Flow control Valves ESTABLISH communications between Control Room and the master control station. Standard: Verifies communications between Control Room and the m control station. Comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Vering Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve.	START TIME:	·	
All controls are located on the Reactor Building CRD mezzanine. HEARING PROTECTION IS REQUIRED. All critical steps must be performed in order written un otherwise noted. Performance Step: 1 Changeover of Flow control Valves ESTABLISH communications between Control Room and to master control station. Standard: Verifies communications between Control Room and the m control station. Comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM. Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. V Opens 301-40B, Standby Flow control Valve B Inlet Valve.	Notes:	This task is covered in 2.2.87, Section 7	7.7.5, Steps 1 – 9.
All critical steps must be performed in order written un otherwise noted. Performance Step: 1 Changeover of Flow control Valves ESTABLISH communications between Control Room and to master control station. Standard: Verifies communications between Control Room and the m control station. Comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Verifice: Comment:		All controls are located on the Reactor mezzanine. HEARING PROTECTION IS	Building CRD REQUIRED.
Performance Step: 1 Changeover of Flow control Valves ESTABLISH communications between Control Room and t master control station. Standard: Verifies communications between Control Room and the m comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Veriformance Step: 3 SLOWLY OPEN 301-40B, Standby Flow control Valve B Inlet Valve. Comment: Opens 301-40B, Standby Flow control Valve B Inlet Valve.		All critical steps must be performed in otherwise noted.	order written unle
ESTABLISH communications between Control Room and t master control station. Standard: Verifies communications between Control Room and the m comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Veriformance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Comment: Opens 301-40B, Standby Flow control Valve B Inlet Valve.	Performance Step: 1	Changeover of Flow control Valves	
Standard: Verifies communications between Control Room and the m control station. Comment: At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM. Comment: SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve.		ESTABLISH communications between Communications between Communication.	ontrol Room and the
Comment: Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Value (B) Inlet Value. V Opens 301-40B, Standby Flow control Value B Inlet Value.	Standard:	Verifies communications between Control control station.	Room and the mas
Performance Step: 2 At Panel C905, PLACE FIC-340-1, CRD FLOW CONTROL setpoint to 0 GPM (controller may be left on automatic). Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment:	Comment:		
Standard: Contacts control room, requests FIC-340-1, CRD FLOW CONTROL, setpoint set to 0 GPM. Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. V Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment:	Performance Step: 2	At Panel C905, PLACE FIC-340-1, CRD F setpoint to 0 GPM (controller may be left o	FLOW CONTROL, on automatic).
Evaluator Cue: FIC-340-1, CRD FLOW CONTROL, setpoint is 0 GPM Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment:	Standard:	Contacts control room, requests FIC-340- CONTROL, setpoint set to 0 GPM.	1, CRD FLOW
Comment: Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment: Comment:	Evaluator Cue:	FIC-340-1, CRD FLOW CONTROL, setpe	oint is 0 GPM
Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. ✓ Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment: Comment:	Comment:		
Performance Step: 3 SLOWLY OPEN 301-40A (B), Standby Flow control Valve (B) Inlet Valve. √ Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment: Comment:			
 ✓ Standard: Opens 301-40B, Standby Flow control Valve B Inlet Valve. Comment: 	Performance Step: 3	SLOWLY OPEN 301-40A (B), Standby Flo B) Inlet Valve.	ow control Valve (A
Comment:	√ Standard:	Opens 301-40B, Standby Flow control Val	lve B Inlet Valve.
	Comment:		

PERFORMANCE INFORMATION Performance Step: 4 SLOWLY OPENS 301-41A (B), Outlet Valve from standby Flow control Valve. ✓ Standard: Opens 301-41B, Outlet Valve from standby Flow control Valve. Comment: Performance Step: 5 CLOSE 301-41A (B), Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve form in-service Flow control Valve. Comment: Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE (A) to STANDBY(B) valve position.	Ap	pendix C	Page 4 of 7	Form ES-C-1
Performance Step: 4 SLOWLY OPENS 301-41A (B), Outlet Valve from standby Flow control Valve. ✓ Standard: Opens 301-41B, Outlet Valve from standby Flow control Valve. Comment: Performance Step: 5 CLOSE 301-41A (B), Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve. Comment: Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position.			PERFORMANCE INFORMATION	
√ Standard: Opens 301-41B, Outlet Valve from standby Flow control Valve. Comment: Performance Step: 5 CLOSE 301-41A (B), Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve. Comment: Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. √ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. Comment: Comment: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE (A) to STANDBY(B) valve position.		Performance Step: 4	SLOWLY OPENS 301-41A (B), Outlet Valv control Valve.	e from standby Flow
Comment: Performance Step: 5 CLOSE 301-41A (B), Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve. Comment: Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE (A) to STANDBY(B) valve position.	V	Standard:	Opens 301-41B, Outlet Valve from standby	Flow control Valve.
Performance Step: 5 CLOSE 301-41A (B), Outlet Valve from in-service Flow control Valve. Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve Comment: Performance Step: 6 Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position. Comment: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position.		Comment:		
Standard: Closes 301-41A, Outlet Valve from in-service Flow control Valve Comment: Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position. Comment: Comment: Comment:		Performance Step: 5	CLOSE 301-41A (B), Outlet Valve from in-s Valve.	service Flow control
Comment: Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE (A) to STANDBY(B) valve position. Comment: Comment: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position.		Standard:	Closes 301-41A, Outlet Valve from in-servio	ce Flow control Valve
Performance Step: 6 CLOSE 301-40A (B), Inlet Valve for the previously in-service Flow control Valve. Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. Comment: Comment: Comment:		Comment:		
Standard: Closes 301-40A, Inlet Valve for the previously in-service Flow control Valve. Comment: Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. √ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position. √ Standard: Comment:		Performance Step: 6	CLOSE 301-40A (B), Inlet Valve for the pre Flow control Valve.	viously in-service
Comment: Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. √ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position. Comment: Comment:		Standard:	Closes 301-40A, Inlet Valve for the previous control Valve.	sly in-service Flow
Performance Step: 7 On local valve control panel, SWAP Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE to STANDBY valve position. √ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position. Comment: Comment:		Comment:		
 ✓ Standard: Swaps Selector Switch 3B-S1, for electrical signal to E/P unit, from valve IN-SERVICE(A) to STANDBY(B) valve position. Comment: 		Performance Step: 7	On local valve control panel, SWAP Selector electrical signal to E/P unit, from valve IN-S STANDBY valve position.	or Switch 3B-S1, for ERVICE to
Comment:	√	Standard:	Swaps Selector Switch 3B-S1, for electrical from valve IN-SERVICE(A) to STANDBY(B	l signal to E/P unit,) valve position.
		Comment:		

Appendix C		Page 5 of 7	Form ES-C-1
		PERFORMANCE INFORMATION	,,
Pe	rformance Step: 8	SWAP valve 3-HO-301-29, CRD Air Dive Flow Control Valve, from valve IN-SERV STANDBY valve (FCV-302-6A, Position Position 2)	ersion Valve to Selected ICE position to that of 1; FCV-302-6B,
Standard:		Swaps valve 3-HO-301-29, CRD Air Dive Flow Control Valve, from valve IN-SERV STANDBY valve FCV-302-6B, Position 2	ersion Valve to Selected ICE position to that of 2.
Co	mment:		
Pe	rformance Step: 9	NOTIFY Control Room that flow control "swapped over" locally.	valves have been
Sta	andard:	Notifies control Room that flow control va swapped over locally.	alves have been
Co	mment:		
Termiı	nating Cue:	This JPM is complete.	
STOP	TIME.		TIME.

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Appendi	ix C
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Page 6 of 7 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.: 2007 NRC JPM RO/SRO P3

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result:

UNSAT

SAT

Examiner's Signature:

Date:

2007 NRC JPM RO/SRO P3

Appendix C	Page 7 of 7 JPM CUE SHEET	Form ES-C-	
INITIAL CONDITIONS:	• The reactor is operating at power.		
	 The in-service CRD Flow Control Valve, FCV-302-6A has failed CLOSED. 		
INITIATING CUE:	You are to changeover to the "B" CRD Fl accordance with 2.2.87. Inform me when	ow control Valve in the task is complete.	

2007 NRC JPM RO/SRO P3

Appendix C		Job Performance Measure		Form ES-C-1
		VVorks	sheet	
Facility:	PILGRIM		Task No.	.: 201-04-01-003
Task Title:	<u>React to a</u> Reactor St	<u>Stuck Control Rod D</u> artup	uring JPM No.	: <u>2007 NRC JPM</u> <u>RO/SRO S-1</u>
K/A Reference:	A2.01	3.4 / 3.6		
Examinee:			NRC Examir	ner:
Facility Evaluator:			Date:	
Method of testing:				
Simulated Perform	ance:	_	Actual Perfo	rmance: X
Classr	room	SimulatorX	_ 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:	The plant is starting up following a forced outage. The reactor is subcritical. The operator is required to continue the reactor startup withdrawing control rods and performing CRDM coupling checks.
Task Standard:	The reactor startup shall continue without causing inadvertent actuations. The reactor startup shall be accomplished in accordance with all system precautions and limitations. The station startup procedures shall be followed without failure of any critical tasks.
Required Materials:	 Current revision of pull sheets filled in up to current rod pull step. Watercolor pen for marking pull sheets.
General References:	
Initiating Cue:	Continue reactor startup in accordance with procedure 2.1.4. Notch override may be used at your discretion. Coupling checks are required.
Time Critical Task:	NO
Validation Time:	20 minutes

Appendix C

SIMULATOR SETUP

A reactor startup sequence has commenced. The reactor is subcritical in the middle of life. The IC utilized should provide flexibility in control rod movements. The SRM recorder and the IRM recorders are selected to fast speed. Insert malfunction RD-09, Stuck Rod, on control rod 18-23. When initial conditions are established, freeze the simulator for turnover to the operator.

2007 NRC JPM RO/SRO S-1

Appendix	С
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Page 3 of 8 PERFORMANCE INFORMATION

Form ES-C-1

Denote Critical Steps with a check mark)				
START TIME:				
Performance Step: 1	Review the applicable sections of Procedure 2.1.4.			
Evaluator's Note:	All critical steps must be performed in order unless otherwise noted.			
Standard:	Operator reviews the applicable sections of Procedure 2.1.4.			
Evaluator's Note:	This task is covered by PNPS 2.1.4, Section 7. Provide operator with a copy of PNPS 2.1.4, completed through step 7.0[3].			
Standard:	Operator compares pull sheet to rod position indication and current control rod selection.			
Evaluator's Note:	This information is provided by the pull sheet, Form RE.12.			
Comment:				
Performance Step: 2	Withdraw Control Rods in the sequence specified on Form RE 12. BEGINS WITH ROD 18-23 at Position "12"			
Evaluator's Note:	Steps 2.a-2.d are to be evaluated "SAT" after being correctly applied to all control rod movements.			
Standard:	Operator determines correct control rod selection form the control rod sequence pull sheet (Form RE 12). Uses OUT NOTCH to move rod.			
Evaluator's Note:	Nuclear instrument discernable response checks are NOT required.			
Comment:	ROs - cue procedure 2.4.11.1, SROs expected. (ATT.1 degraded control rod motion step 4			

Performance Step: 3		
Performance Step: 3		
	that control rod is stuck.	and determines
Evaluator's	Note:	
√ Standard: SRO	Operator notes that rod is stuck and enters appropriate procedure for degraded control rod motion	opriate
Evaluator's	Note:	
Comment:	ROs - cue procedure 2.4.11.1, (ATT.1 degrade motion step 4 SROs - DO NOT CUE PROCEDURE Critical S	d control rod Step for SRO
Performance Step: 4	Per PNPS 2.4.11.1, Att.1 "Degraded Control Rod [1] Attempt to move control rod one notch in the o specified by the procedure in use when the degra motion was identified	Motion", step direction aded control rod
Evaluator's N	Note:	
√ Standard:	Attempts to move control rod 18-23 one notch an doesn't move.	d notes rod
Evaluator's N	lote:	
Comment:	CUE - If told by applicant that there is no rod r applicant to continue in procedure.	motion, tell the
Performance Step: 5	PNPS 2.4.11.1, Att.1 steps [2] and [3]	
Evaluator's N	lote:	
Standard:	These steps do not apply to this situation - There	fore N/A
Evaluator's N	lote:	
Comment:		

Appe	endix C	Page 5 of 8	Form ES-C-1
		PERFORMANCE INFORMATION	
	Performance Step: 6	PNPS 2.4.11.1 Att.1 step [4] If drive motion degraded due to excessive friction, then S drive water pressure in approx. 50 psi incremove the drive after each increment.	is assumed to be STEP (a) - Increase nents attempting to
	Evaluator's Cue:	CUE - If asked - inform operator that the excessive friction.	rod is stuck due to
V	Standard:	Operator increases drive pressure in 50 psi attempting to move drive at each increment, when drive pressure is increased to 400 psi.	increments The drive will move
	Evaluator's Note:		
	Comment:	CUE - If asked - inform operator that the excessive friction.	rod is stuck due to
		CUE - continue with procedure once con	trol rod is unstuck
	Performance Step: 7	Once rod has become unstuck and has mov continue at step 2.4.111 Att.1 Step (12) - F water pressure to normal (approx. 250 psi a	red, operator will Return the drive bove reactor press.)
	Evaluator's Note:		
\checkmark	Standard:	Operator restores drive pressure to 250 psi a pressure.	above reactor
	Evaluator's Note:		
	Comment:	CUE - If asked, after drive pressure is res tell operator to continue with rod withdra	tored to 250 psi, wal.

Appendix C		Page 6 of 8	Form ES-C-1
		PERFORMANCE INFORMATION	
	Performance Step: 8	Control rod 18-23 is now at position 16, op position 18	perator moves rod to
	Evaluator's Note:		
\checkmark	Standard:	Operator moves control rod 18-23 with Ol position "18".	JT NOTCH control, to
	Evaluator's Note:		
	Comment:		
Terminating Cue:		JPM is complete when the Control Rod	is at Position 18.
STO	P TIME:	TIME CRITICAL STOP TI	ME:

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Form ES-C-1

Ĵ	Job Performance Measure No.: <u>2</u>	007 NRC JPM RO/SRO S-1	
	Examinee's Name:		
	Date Performed:		
	Facility Evaluator:		
	Number of Attempts:		
	Time to Complete:		
	Question Documentation:		
	Question:		
	Response:		
	Result: SA	T UNSAT	
	Examiner's Signature:		Date:

Appendix C	Page 8 of 8 JPM CUE SHEET	Form ES-C-1
INITIAL CONDITIONS:	The plant is starting up following a forced subcritical. The operator is required to co startup withdrawing control rods and perfo	outage. The reactor is ntinue the reactor prming checks.
INITIATING CUE:	Continue reactor startup in accordance wi Notch override may be used at your discre are required.	th procedure 2.1.4. etion. Coupling checks