INITIAL SUBMITTAL OF THE WALKTHROUGH JPMS

FOR THE KEWAUNEE INITIAL EXAMINATION - AUG/SEP 2002

JPM XXXXXXX Revision 0 DRAFT Date

WITH A FIRE IN A DEDICATED ZONE, RESTORE RCS INVENTORY USING THE SI SYSTEM

K/A REFERENCE:	006.K5.06 (3.5/3.9)
(NUREG-1122)	006.A1.18 (4.0/4.3)
	006.A4.01 (4.1/3.9)
	006.A4.02 (4.0/3.8)
	006.A4.07 (4.4/4.4)
	006.A4.09 (4.1/4.2)

ALTERNATE PATH JPM _____ YES X NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

X	Procedure adequately addresses ta Enter identifier bare:	nsk elements. F-0-07 Rev P		
	Other document adequately descri Enter identifier here:	ibes necessary task elements.		
X	_ Task elements described as attache	ed.		
DESIR	ED MODE OF EVALUATION:		APPLICABLE	EVALUATION SETTING:
SIMUL	ATE/WALKTHROUGHDISC	CUSSION PERFORM _X	IN-PLANT	CONTROL ROOM
VALID	ATED TIME FOR COMPLETION:	15 MINUTES		

WITH A FIRE IN A DEDICATED ZONE, RESTORE RCS INVENTORY USING THE SI SYSTEM

EXAMINEE		_EVALUATOR	
START TIME		FINISH TIME	
PERFORMANCE	SAT 🗌 UNSAT		
JOB TITLE: 🗌 AC	OT 🗌 COT 🔲 SRO	STA	

TOOLS/EQUIPMENT/REFERENCES:

E-0-07, Fire In A Dedicated Fire Zone, Rev. P

TASK STANDARDS:

Pressurizer level is restored to the required band (20-50%) in accordance with E-0-07.

WITH A FIRE IN A DEDICATED ZONE, RESTORE RCS INVENTORY USING THE SI SYSTEM

SIMULATOR INFORMATION:

Initialize to JPM specific IC.

- NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.
- NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

READ AND PROVIDE TO THE EXAMINEE

THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are Control Operator A.

The plant was at 100% power before tripping due to a fire in a Dedicated Zone. E-0-07, Fire In A Dedicated Fire Zone, Rev. P, has been completed through step 11.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to perform E-0-07, Fire In A Dedicated Fire Zone, Rev. P, steps 12 through 14.b.

PERFORMANCE INFORMATION

START TIME	STEP/S	EQUENCE/	CRITICAL	SAT	
	1	1	Ν	UNSAT	
ELEMENT:	Refer to E-0-07, Fire In A	Dedicated F	ire Zone, Rev. P, step	os 12 through 14.b.	
STANDARD:	Control Operator A referen	nces steps 12	through 14.b of E-0	-07.	
CUE:					
COMMENTS:					
	STEP/S	EOUENCE/	CRITICAL	SAT	
	2	2	N	UNSAT	
ELEMENT:	CLOSE CVC-211/MV-32	124, RXCP S	Seal Water Return Ise		
ELEMENT: STANDARD:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig	124, RXCP 5 11/MV-3212 ght OFF.	Seal Water Return Iso 4, RXCP Seal Water	blation. Return Isolation, is positioned	to CLOS
ELEMENT: STANDARD: CUE:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig	124, RXCP \$ 11/MV-3212 ght OFF.	Seal Water Return Iso 4, RXCP Seal Water	blation. Return Isolation, is positioned	to CLOS
ELEMENT: STANDARD: CUE: COMMENTS:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig	124, RXCP S 11/MV-3212 ght OFF.	Seal Water Return Iso 4, RXCP Seal Water	plation. Return Isolation, is positioned	to CLOS
ELEMENT: STANDARD: CUE: COMMENTS:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig	124, RXCP \$ 11/MV-3212 ght OFF.	Seal Water Return Iso 4, RXCP Seal Water 7 CRITICAL	olation. Return Isolation, is positioned SAT	to CLOSI
ELEMENT: STANDARD: CUE: COMMENTS:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig STEP/S 3	124, RXCP \$ 11/MV-3212 ght OFF. EQUENCE/ 2	Seal Water Return Iso 4, RXCP Seal Water /CRITICAL N	SAT	to CLOSI
ELEMENT: STANDARD: CUE: COMMENTS: ELEMENT:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig STEP/S 3 CLOSE LD-3/CV-31104,	124, RXCP S 11/MV-3212 ght OFF. EQUENCE/ 2 Letdown Isol	Seal Water Return Iso 4, RXCP Seal Water 'CRITICAL N lation	SAT	to CLOS
ELEMENT: STANDARD: CUE: COMMENTS: ELEMENT: STANDARD:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig STEP/S 3 CLOSE LD-3/CV-31104, Control switch for LD-3/C light OFF	124, RXCP \$ 11/MV-3212 ght OFF. EQUENCE/ 2 Letdown Isol CV-31104, Le	Seal Water Return Iso 4, RXCP Seal Water 'CRITICAL N lation	SAT UNSAT	to CLOS
ELEMENT: STANDARD: CUE: COMMENTS: ELEMENT: STANDARD: CUE:	CLOSE CVC-211/MV-32 Control switch for CVC-2 GREEN light ON, RED lig STEP/S 3 CLOSE LD-3/CV-31104, Control switch for LD-3/C light OFF	124, RXCP \$ 11/MV-3212 ght OFF. EQUENCE/ 2 Letdown Isol EV-31104, Le	Seal Water Return Iso 4, RXCP Seal Water 'CRITICAL N lation	SAT	to CLOS

PERFORMANCE INFORMATION

		STEP/SE 4	QUENCE/CR 2	ITICAL N	SATUNSAT
ELEMENT:	CLOSE LD-300/	/CV-31236,	Excess Letdo	wn Isolation	
STANDARD:	Control switch for RED light OFF	or LD-300/C	CV32136, Exc	ess Letdown I	solation is verified in CLOSE, GREEN light ON,
CUE:					
COMMENTS:					
		STEP/SE	QUENCE/CR	ITICAL	SAT
		5	2	N	UNSAT
ELEMENT:	De-energize all F	Pressurizer H	Heaters and all	ow Przr Press	oure to decrease to 2150 psig.
STANDARD:	Control switch for Pressurizer Heate	or Pressurize er Banks pla	er Heater Bank aced in OFF.	C placed in C	OFF or PULLOUT, control switches for all other
CUE:					
COMMENTS:					
NOTE:	RCS Pressure sha Make-up.	all be mainta	ained below 22	200 psig, to al	llow use of Safety Injection Pump B for RCS
		STEP/SEC	QUENCE/CR	ITICAL	SAT
		6	2	Ν	UNSAT
ELEMENT:	Position Przr Lev	vel Control (Channel Select	tor switch to n	oormal 2-3.
STANDARD:	Przr Level Contro	ol Channel S	Selector switcl	n is verified to	be in normal position 2-3
CUE:					
COMMENTS:					

PERFORMANCE INFORMATION

NOTE: CR	ITICAL STEPS ARE D EM CONSTITUTES FA	DENOTED WITH	A "Y". FAILUF	RE TO MEET THE STANDARDS FOR THIS
	ST 7	EP/SEQUENCE/0 2	CRITICAL N	SATUNSAT
ELEMENT:	OPERATE Pressurize channel)	er Heater Group B	to maintain Przr	Pressure 2100-2200 psig on PI-430 (white
STANDARD:	Pressurizer Heater Gr channel)	oup B is started as	necessary to mai	ntain Przr Pressure 2100-2200 on PI-430 (white
CUE:				
COMMENTS:				
NOTE:	RCS Pressure shall be Make-up.	e maintained below	2200 psig, to all	ow use of Safety Injection Pump B for RCS
	STI 8	EP/SEQUENCE/0 2	CRITICAL N	SATUNSAT
ELEMENT:	OPEN SI-4B/MV-32	110, RWST Supply	y to SI Pumps.	
STANDARD:	SI-4B/MV-32110, RV	VST Supply To SI	Pumps is verified	d OPEN, RED light ON, GREEN light OFF.
CUE:				
COMMENTS:				
	STI 9	EP/SEQUENCE/(2	CRITICAL N	SATUNSAT
ELEMENT:	OPEN SI-5B/MV-321	108, SI Pump B Su	ction Isolation.	
STANDARD:	SI-5B/MV-32108, SI	Pump B Suction Is	solation is verified	d OPEN, RED light ON, GREEN light OFF.
CUE:				
COMMENTS:				

JPM XXXXXXX Revision 0 DRAFT Date

WITH A FIRE IN A DEDICATED ZONE, RESTORE RCS INVENTORY USING THE SI SYSTEM

PERFORMANCE INFORMATION

		STEP/SE(10	QUENCE/CRI 2	ITICAL N	SAT UNSAT				
ELEMENT:	OPEN SI-208/M	V-32131, SI	Recirculation	To RWST					
STANDARD:	SI-208/MV-3213	SI-208/MV-32131, SI Recirculation To RWST, is verified OPEN, RED light ON, GREEN light OFF.							
CUE:									
COMMENTS:									
		STEP/SE(11	QUENCE/CRI 2	TICAL N	SAT UNSAT				
ELEMENT:	OPEN SI-209/M	V-32130, SI	Recirculation	To RWST					
STANDARD:	SI-209/MV-3213	0, SI Recirc	ulation To RW	/ST, is verified OPEN.	NO indication (de-energized).				
CUE:	If local verificat	ion of SI-20	9 is requested,	inform examinee that t	he valve is OPEN.				
COMMENTS:									
NOTE:	Candidate may de is de-energized.	etermine tha	t valve is open	based on the fact that	it is normally open, it is an MOV, and it				
		STEP/SEQ	UENCE/CRI 2	TICAL Y	SAT UNSAT				
ELEMENT:	OPEN SI-15A/M	 [V-32093, S	afety Injection	To Reactor Vessel					
STANDARD:	Control switch for light ON, GREE	or SI-15A/M N light OFF.	V-32093, Safe	ty Injection To Reacto	r Vessel, is positioned to OPEN, RED				
CUE:									
COMMENTS:									

PERFORMANCE INFORMATION

		STEP/SI 13	EQUENCE 2	/CRITICAL N	SAT UNSAT	
ELEMENT:	OPEN SI-9B/M	V-32095, S	Safety Inject	ion To Reactor Ves	sel.	
STANDARD:	SI-9B/MV-3209 OFF.	95, Safety I	njection To	Reactor Vessel, is v	verified OPEN, RED light ON, GREEN ligh	ıt
CUE:						
COMMENTS:						
		STEP/SI 14	EQUENCE/ 3	/CRITICAL Y	SAT UNSAT	
ELEMENT:	START Safety 1 and LI-428	Injection Pu	imp B and r	un pump as necessa	ry to maintain Przr Level 20-50% on LI-42	7
STANDARD:	Control switch f 50% on LI-427 running).	for Safety In and 428. (re	njection Pun ed light lit/g	np B is positioned t reen light off/disch	o START and ran until pressurizer level is 2 arge pressure/pump amps when SI Pump is	20-
CUE:						
COMMENTS:						
NOTE:	When pressurize	er level is v	erified to be	rising and within t	ne band (20-50%), the JPM may be termina	ted.
TERMINATION	<u>N CUE</u> : THIS	COMPLET	TES THIS J	PM. CC	MPLETION TIME:	

SHIFT BUS 5 FROM TAT TO THE RAT

K/A REFERENCE:	062.K1.04 (3.7/4.2)
(NUREG-1122)	062.K4.05 (2.7/3.2)
	062.K5.03 (2.4/2.6)
	062.A4.01 (3.3/3.1)
	062.A4.03 (2.8/2.9)
	062.A4.07 (3.1/3.1)

ALTERNATE PATH JPM YES X NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

X Procedure adequately addresses task elements. Enter identifier here: N-EHV-39, Rev. 0

_____ Other document adequately describes necessary task elements. Enter identifier here:

X Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH ____ DISCUSSION ____ PERFORM _X_ IN-PLANT ____ CONTROL ROOM __ X_

VALIDATED TIME FOR COMPLETION: 10 MINUTES

JPM XXXXX Revision 0 DRAFT Date

SHIFT BUS 5 FROM TAT TO THE RAT

EXAMINEE		FVALUATOR
		EVALUATOR
START TIME		FINISH TIME
PERFORMANCE	SAT 🗌 UNSAT	
JOB TITLE: 🗌 AC	OT 🗌 COT 🔲 SF	RO 🗌 STA

TOOLS/EQUIPMENT/REFERENCES:

N-EHV-39, 4160V AC Supply and Distribution System Operation, Rev. O

TASK STANDARDS:

Shift Bus 5 from TAT to the RAT in accordance with step 4.2.1 of N-EHV-39, 4160V AC Supply and Distribution System Operation, Rev. O

SHIFT BUS 5 FROM TAT TO THE RAT

SIMULATOR INFORMATION:

Initialize to JPM specific IC.

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INITIAL CONDITIONS:

Breaker maintenance is required on Breaker 1-501, TAT to Bus 5.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to shift Bus 5 from the TAT to the RAT in accordance with step 4.2.1 of N-EHV-39, 4160V AC Supply and Distribution System Operation, Rev. O.

SHIFT BUS 5 FROM TAT TO THE RAT

PERFORMANCE INFORMATION

START TIME		STEP/SE	QUENCE/C	RITICAL N	SAT UNSAT		
ELEMENT:	VERIFY power	available fo	or incoming sc	ource.			
STANDARD:	Incoming power Winding A.	verified ava	ailable using t	he Power Mete	er for Reserve Auxiliary Transformer (RAT)	,	
CUE:							
COMMENTS:							
		STEP/SE	QUENCE/C	RITICAL	SAT		
		2	1	Ν	UNSAT		
ELEMENT:	Make plant anno	uncement v	via Gaitronics.				
STANDARD:	The following Gather of the fo	aitronics an rsonnel, shi	nouncement i fting 4160 Vo	s made: olt power suppl	ies. Stand clear of electrical bus work."		
CUE:							
COMMENTS:							
		STEP/SE	QUENCE/CI	RITICAL Y	SAT UNSAT		
ELEMENT:	Position 43 swite	ch to MAN.	for Bus 5, Bk	cr 1-503, and ve	erify proper alarms.		
STANDARD:	43 switch positioned to MAN. for Bus 5, Bkr 1-503. Annunciator "Bus 5 SOURCE BKR 43 SW IN MAN" (47093-H), verified IN ALARM.						
CUE:							
COMMENTS:							

JPM XXXXX Revision 0 DRAFT Date

SHIFT BUS 5 FROM TAT TO THE RAT

PERFORMANCE INFORMATION

		STEP/SEQUENCE/CRITICAL		SAT				
		4	2	Y	UNSAT			
ELEMENT:	Review precautions and position synchronizing switch to ON for incoming source breaker.							
STANDARD:	Precautions and Limitations 2.4 and 2.5 are reviewed. Synchronizing switch positioned to ON for incoming source breaker, Bus 5, Bkr 1-503.							
CUE:								
COMMENTS:								
NOTE:	Although expecte	ed to be per	formed, the r	eview of the P	&Ls for this JPM step is N	IOT considered critical.		
		STEP/SE	QUENCE/C	RITICAL N	SAT			
		C	Ũ					
ELEMENT:	Verify incoming	and running	g voltmeter ir	dications with	in 6 volts.			
STANDARD:	Incoming and run and Running AC	nning voltm Volts meter	eter indication r located belo	ons verified to ow syncroscop	be within 6 volts using Inc e.	oming AC Volts meter		
CUE:								
COMMENTS:								
		STEP/SEC	QUENCE/C 3	RITICAL Y	SAT UNSAT			
ELEMENT:	VERIFY synchro	scope indic	ator within 3	.33 minutes (2	:0°) of 12:00.			
STANDARD:	Synchroscope indicator is verified to be within 3.33 minutes (20°) of 12:00.							
CUE:								
COMMENTS:								

SHIFT BUS 5 FROM TAT TO THE RAT

PERFORMANCE INFORMATION

		STEP/SE(7	QUENCE/CRI 4	ITICAL Y	SATUNSAT	
ELEMENT:	<u>WHEN</u> sources a	are in sync, H	POSITION inc	oming control s	switch to CLOSE.	
STANDARD:	<u>WHEN</u> sources a CLOSE.	are in sync as	s indicated in p	previous step, co	ontrol switch for Bkr 1-503 is positioned	to
CUE:						
COMMENTS:						
NOTE:	Time Critical	To minimiz parallel sho	ze the conseque ould <u>NOT</u> exce	ences of fault cu ed 30 seconds.	urrent, the time that two transformers ope	rate in
		STEP/SEC	UENCE/CRI	TICAL	SAT	
		8	5	Ν	UNSAT	
ELEMENT:	VERIFY followi Incomin Increase	ng: 1g breaker re 2 on megawa	d light, ON. tt and kiloamp	indicators.		
STANDARD:	The following is Breaker Increase	verified for red light, O on Power a	Bkr 1-503: N. nd Current me	ters for RAT W	'inding A.	
CUE:						
COMMENTS:						

JPM XXXXX Revision 0 DRAFT Date

SHIFT BUS 5 FROM TAT TO THE RAT

PERFORMANCE INFORMATION

		STEP/SE	QUENCE/CI	RITICAL	SAT				
		9	5	Y	UNSAT				
ELEMENT:	POSITION runr	iing source b	preaker to TR	IP for Bus 5, 1	Bkr 1-501 and place in PULLOUT if required				
STANDARD:	Running sourceThe following isGreen lightDecrease or	 Running source breaker is positioned to TRIP for Bus 5, Bkr 1-501 and placed in PULLOUT. The following is verified: Green light ON. Decrease on Power and Current meters for the TAT 							
CUE:	If examinee asks pullout for main	if Bkr 1-50 tenance.	1 should be p	laced in Pullo	out, inform examinee that it should be placed in				
COMMENTS:									
NOTE:	Time Critical	To minimi parallel sho	ze the conseq ould <u>NOT</u> exc	uences of faul ceed 30 secon	It current, the time that two transformers operate in nds.				
		STEP/SEC	QUENCE/CF	RITICAL	SAT				
		10	6	Ν	UNSAT				
ELEMENT:	POSITION sync	hronizing sv	vitch to OFF.						
STANDARD:	Synchronizing sy	witch is posi	tioned to OFF	for Bkr 1-50)3.				
CUE:									
COMMENTS:									
		STEP/SEQ	UENCE/CR	RITICAL	SAT				
		11	7	Y	UNSAT				
ELEMENT:	Position 43 swite	h to AUTO	for Bus 5, Bk	r 1-503, and v	verify proper alarms.				
STANDARD:	43 switch POSIT Annunciator "Bu	TONED to A	AUTO for Bu E BKR 43 SV	s 5, Bkr 1-503 VITCH IN MA	3. AN" (47093-H), verified CLEAR.				
CUE:									
COMMENTS:									

SHIFT BUS 5 FROM TAT TO THE RAT

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

		STEP/SF	EQUENCE	/CRITICAL	SAT		
		12	8	N	UNSAT		
ELEMENT:	Perform Indepen	ndent Verifi	ication per l	NAD 3.9 on Sync Sv	vitch, 43 Switch, and Breaker Position.		
STANDARD:	Independent Ve	Independent Verification is requested.					
CUE:	Independent Ve	rification of	n Sync Swit	ch, 43 Switch, and I	Breaker Position is complete.		
COMMENTS:							
NOTE:							
		STEP/SH	EQUENCE	/CRITICAL	SAT UNSAT		
		13	9	Ν			
ELEMENT:	The Operator at	the Control	ls informs th	he CRS of system st	atus.		
STANDARD:	The CRS is info	rmed that B	Bus 5 is shift	ted from the TAT to	the RAT and Breaker 1-501 is in PULLOU		
CUE:	The CRS ackno	wledges you	ur report.				
COMMENTS:							

TERMINATION CUE: THIS COMPLETES THIS JPM.

COMPLETION TIME:

JPM XXXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

K/A REFERENCE:	001.K1.05 (4.5/4.4)
(NUREG-1122)	001.K4.03 (3.5/3.8)
	001.K5.10 (3.9/4.1)
	001.K5.65 (3.2/3.6)
	001.A1.06 (4.1/4.4)
	001.A1.07 (3.7/4.0)
	001.A2.11 (4.4/4.7)

ALTERNATE PATH JPM X YES NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

<u> </u>	Procedure adequately addresses tas Enter identifier here:	sk elements. E-CRD-49	B, Rev. H		
	Other document adequately describ Enter identifier here:	ces necessary	v task elements.		
<u>X</u>	Task elements described as attached	d.			
DESIRI	ED MODE OF EVALUATION:			APPLICABLE	E EVALUATION SETTING:
SIMUL	ATE/WALKTHROUGHDISC	USSION	PERFORM X	IN-PLANT	CONTROL ROOMX

VALIDATED TIME FOR COMPLETION: <u>5</u> MINUTES

JPM XXXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

EXAMINEE	EVALUATOR
START TIME	FINISH TIME
PERFORMANCE SAT UNSAT	
JOB TITLE: AOT COT SRO	STA STA
TOOLS/EQUIPMENT/REFERENCES:	

E-CRD-49B, Continuous Rod Withdrawal, Rev. H

TASK STANDARDS:

Continuous rod withdrawal is terminated by manually tripping the reactor.

PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

SIMULATOR INFORMATION:

IC-17 37% Steady State

A slightly low RCS temperature requires a two (2) step rod withdrawal for temperature control.

After completing the rod withdrawal for temperature control and returning the Control Rod Bank Selector Switch to AUTO, N-41 fails low causing an uncontrolled rod withdrawal.

Trigger 1

- 1. N-41 Failure (NI05A low)
- 2. Bank Selector Switch

MCB D1-46218	Auto	Control Rod Bank Sel.	ON
MCB D1-46218	Manual	Control Rod Bank Sel.	OFF
MCB D1-46218	CBA	Control Rod Bank Sel.	OFF
MCB D1-46218	CBB	Control Rod Bank Sel.	OFF
MCB D1-46218	CBC	Control Rod Bank Sel.	OFF
MCB D1-46218	CBD	Control Rod Bank Sel.	OFF
MCB D1-46218	SBA	Control Rod Bank Sel.	OFF
MCB D1-46218	SBB	Control Rod Bank Sel.	OFF

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PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

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For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are the Operator at the Controls. The unit is steady state at 37% power.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to withdraw rods two (2) steps for temperature control.

JPM XXXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

PERFORMANCE INFORMATION

START TIME	STEP/S	EQUENCE	/CRITICAL N	SAT	
ELEMENT:	Rod control is placed in m	anual.			
STANDARD:	The Control Rod Bank Se	lector Switch	is positioned to MA	ANUAL.	
CUE:					
COMMENTS:					
	STEP/S 2	EQUENCE/ 2	CRITICAL N	SAT UNSAT	
ELEMENT:	Control Bank D rods are v	vithdrawn tw	o (2) steps.		
STANDARD:	The IN-HOLD-OUT switc withdraw two (2) steps fro well as RCS temperature r	ch is moment om 149 steps response).	arily placed in the C to 151. (Bank Dema	UT position, Control Bank D is wind, IRPIs, and PPCS indications a	erified to vailable as
CUE:					
COMMENTS:					
	STEP/S 3	EQUENCE/ 3	CRITICAL N	SATUNSAT	
ELEMENT:	Return the Control Rod Ba	ank Selector (Switch to AUTO.		
STANDARD:	The Control Rod Bank Sel	lector Switch	is positioned to AU	TO.	
CUE:					
COMMENTS:					

PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

PERFORMANCE INFORMATION

		STEP/SEQUENCE/CRITICAL		/CRITICAL	SAT		
		4	4	Ν	UNSAT		
ELEMENT:	The Operator at	the Contro	ols informs t	he CRS of plant sta	tus.		
STANDARD:	The CRS is info has been returne	The CRS is informed that rods have been inserted two (2) steps for temperature control and rod control has been returned to AUTOMATIC					
CUE:	The CRS acknow	The CRS acknowledges your report.					
COMMENTS:							
NOTE:	After rod control is returned to Auto, the N-41 failure will occur causing Automatic rod motion.						
		STEP/SI	EQUENCE	/CRITICAL	SAT		
		5	5	Ŷ	UNSAT		
ELEMENT:	The Operator at of N-41 Power F	the Contro Range Instr	ols recognize rument.	es Automatic rod mo	ovement of Control Bank D, as well	as a failure	
STANDARD:	The withdrawal of Control Bank D is recognized and attributed to the N-41 failure.						
CUE:	f informed of the situation, the CRS acknowledges your report.						
		le situation	, the CRS as	cknowledges your re	eport.		

JPM XXXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS TO STOP A CONTINUOUS ROD WITHDRAWAL

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

		STEP/SEQUENCE/CRITICAL			SAT	
		6	6	Ν	UNSAT	
ELEMENT:	Rod control is p	placed in ma	inual.			
STANDARD:	The Control Ro	od Bank Sele	ector Switcl	h is positioned to MA	NUAL.	
CUE:						
COMMENTS:						
		STEP/SI	EQUENCE	/CRITICAL	SAT	
		7	7	Y	UNSAT	
ELEMENT:	The reactor is manually tripped due to continuing rod withdrawal					
STANDARD:	The reactor is manually tripped by depressing the manual reactor trip pushbutton.					
CUE:	If informed, the	e CRS ackno	wledges yo	our report.		
COMMENTS:						
					· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •

TERMINATION CUE: THIS COMPLETES THIS JPM. COMPLETION TIME:

K/A REFERENCE:	003.A4.01 (3.3/3.2)
(NUREG-1122)	003.A4.02 (2.9/2.9)
	003.A4.03 (2.8/2.5)
	003.A4.04 (3.1/3.0)
	003.A4.05 (3.1/3.0)
	003.A4.06 (2.9/2.9)
	003.A4.07 (2.6/2.6)
	003.A4.08 (3.2/2.9)

ALTERNATE PATH JPM YES X NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

X Procedure adequately addresses task elements. Enter identifier here: N-RC-36A, Rev. AA

_____ Other document adequately describes necessary task elements. Enter identifier here:

X Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH _____DISCUSSION ____ PERFORM X ___IN-PLANT ____ CONTROL ROOM ___ X

VALIDATED TIME FOR COMPLETION: 14 MINUTES

JPM XXXXXXX Revision 0 DRAFT Date

START A REACTOR COOLANT PUMP

EXAMINEE	_EVALUATOR
START TIME	FINISH TIME
PERFORMANCE 🗌 SAT 🗌 UNSAT	
JOB TITLE: AOT COT SRO	STA STA

TOOLS/EQUIPMENT/REFERENCES:

N-RC-36A, Reactor Coolant Pump Operation

TASK STANDARDS:

Reactor Coolant Pump A is started per N-RC-36A.

SIMULATOR INFORMATION:

Initialize to JPM specific IC or as below.

IC-5 Hot Shutdown BOL

Unfreeze the simulator Trip the reactor. Secure RXCP A Close Pressurizer Spray Valve A and place in MANUAL After the pump has coasted down, acknowledge all annunciators Freeze the simulator Snap a temporary IC if desired.

- NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.
- NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

READ AND PROVIDE TO THE EXAMINEE

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DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are the Operator at the Controls. The plant is in Hot Shutdown. RXCP B is running. RXCP A was secured 25 hours ago for breaker maintenance. RXCP A breaker maintenance is completed and the pump is now available for use. All Precautions and Limitations and Initial Conditions for pump start have been satisfied.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to start RXCP A in accordance with step 4.1 of N-RC-36A, Reactor Coolant Pump Operation, Rev. AA.

PERFORMANCE INFORMATION

NOTE:	CRITICAL STEPS ARE DENOTED WITH A "Y".	FAILURE TO MEET THE STANDARDS FOR THIS
	ITEM CONSTITUTES FAILURE.	

START TIME		SAT							
		1	1	Y	UNSAT				
ELEMENT:	Start RXCP A Oil Lift Pump, and verify red oil pressure indicating light, ON.								
STANDARD:	RXCP A Oil Li Red oil pressur	ift Pump is s e indicating	started by pl light verifie	lacing its control sw ed ON.	tch to START, red light ON, green	light OFF.			
CUE:									
COMMENTS:									
An and the second s									
		STEP/SI 2	EQUENCE 2	/CRITICAL N	SATUNSAT				
ELEMENT:	Operate Oil Lif	t Pump for	≥ two minut	tes before starting R	XCP A.				
STANDARD:	Oil Lift Pump is verified OPERATING \geq two minutes before starting RXCP A.								
CUE:	Oil Lift Pump has operated for \geq two minutes.								
COMMENTS:									
	····								
		STEP/SI	EQUENCE	/CRITICAL	SAT				
		3	2	14					
ELEMENT:	Verify start will	l <u>NOT</u> viola	ate RXCP du	uty cycle.					
STANDARD:	Based on the pr violate RXCP d	ovided initi luty cycle.	al condition	ns (pump secured 25	hours ago), pump start is determine	ed to <u>NOT</u>			

CUE:

COMMENTS:

PERFORMANCE INFORMATION

		STEP/SEC 4	QUENCE/C 2	RITICAL N	SAT UNSAT	
ELEMENT:	Verify RXCP Pu	mp start Ini	tial Condition	ns are satisfied		
STANDARD:	Base on the prov satisfied.	ided initial o	conditions, a	ll RXCP pump	start Initial Conditions are	e determined to be
CUE:	If required, infor	m examinee	that all initia	al conditions re	quired for pump start have	e been met.
COMMENTS:						
		STEP/SE(5	QUENCE/C	RITICAL N	SAT UNSAT	
ELEMENT:	To manually con MANUAL.	trol RCS pro	essure, POSI	TION LD-10/0	CV-31099, Letdown Press	ure Control to
STANDARD:	LD-10/CV-31099, Letdown Pressure Control controller AUTO/BAL/MAN selector switch is placed in AUTO/BAL. The MANUAL CONTROL potentiometer adjusted to null the controller deviation meter and then the LD-10 AUTO/BAL/MAN selector is switched to MAN.					
CUE:						
COMMENTS:						
		STEP/SE(QUENCE/C	RITICAL	SAT	
		6	2	N	UNSAT	
ELEMENT:	Verify Low Volta	age is <u>NOT</u>	present on Sa	afeguards Buse	s.	
STANDARD:	Low Voltage is v indications for ea	erified <u>NOT</u> ch Bus.	[present on S	Safeguards Bus	ses 5 and 6 voltage by obse	erving voltage meter
CUE:						
COMMENTS:						

PERFORMANCE INFORMATION

	S	TEP/SEQ 7	UENCE/CRI 3	TICAL Y	SATUNSAT	
ELEMENT:	Start Reactor Coola	int Pump A	۷.			
STANDARD:	RXCP A control switch is positioned to START. Available indications for pump start include motor amps, pump flow, and breaker indicating light status (red light ON, green light OFF).					
CUE:						
COMMENTS:						
<u> </u>	· · · · · · · · · · · · · · · · · · ·					
	S	TEP/SEQ	UENCE/CRI	FICAL	SAT	
		8	4	N		
ELEMENT:	Adjust LD-10 and C >200 psi.	Charging P	ump speed to	control RCS pressure a	1d maintain RXCP No. 1 Seal Delta-P	
STANDARD:	LD-10/CV-31099 Manual Potentiometer and/or Charging Pump Speed Manual Potentiometer ADJUSTED to control RCS pressure and maintain ≥200 psid on No. 1 Seal Delta P indicator, PI-173.					
CUE:						
COMMENTS:						
NOTE:	No adjustment shou	ild be nece	ssary.			
	S	TEP/SEQ	UENCE/CRI	ΓICAL	SAT	
		9	5	Ν	UNSAT	
ELEMENT:	When RCS pressure	e has stabil	ized, position	LD-10 to AUTO.		
STANDARD:	RCS pressure is verified to be stable using control board RCS pressure indicators. LD-10 AUTO/BAL/MAN selector switch is placed in MAN/BAL and MANUAL CONTROL potentiometer or setpoint dial ADJUSTED to null the controller deviation meter. LD-10 AUTO/BAL/MAN selector POSITIONED to AUTO.					
CUE:						
COMMENTS:						

PERFORMANCE INFORMATION

		STEP/SI 10	EQUENCE 5	/CRITICAL N	SAT UNSAT	
ELEMENT:	Stop RXCP A	Oil Lift Purr	np after one	minute of RXCP ope	eration.	
STANDARD:	After one minute of RXCP operation, RXCP A Oil Lift Pump control switch is positioned to STOP, GREEN light ON, RED light OFF. Red RXCP A Oil Lift Pressure light OFF.					
CUE:	If required, RX	KCP A has ru	in for greate	er than one minute.		
COMMENTS:						
		STEP/SI 11	EQUENCE 5	/CRITICAL N	SATUNSAT	
ELEMENT:	Verify proper • N • L • S • C	values per A Motor Curren Labyrinth Sea Seal Leakoff CCW Temper	ppendix A: t Il Differenti Flow rature	al Pressure		
STANDARD:	 Appendix A values verified: RXCP Motor A Current (41321) 600-750 amps. RXCP A Labyrinth Seal Delta P (PI-131B) at 40 to 60" H₂0. RXCP Seal Leakoff Flow within Normal Range of Figure 1 of N-RC-36A, as indicated by red pen on Low Range Flow indicator (42557) OR High Range Flow indicator (42558). Honeywell Computer Point T0621A, Comp Clg HX Out Loop T ≤ 105°F (also on trend recorder green pen #2). 					
CUE:						
COMMENTS:						

PERFORMANCE INFORMATION

		STEP/SI	EQUENCE	/CRITICAL	SAT		
		12	5	Ν	UNSAT		
ELEMENT:	If the RCS is so	olid, operate	first RXCP	for at least two m	inutes before starting second RXCP		
STANDARD:	Step determine	ed to be N/A for present conditions.					
CUE:							
COMMENTS:							
		STEP/SI	EQUENCE	/CRITICAL	SAT		
		13	6	Ν	UNSAT		
ELEMENT:	The Operator at the Controls informs the CRS of plant status.						
STANDARD:	The CRS is informed that RXCP A has been started and is operating normally.						
CUE:	The CRS acknowledges your report.						
COMMENTS:							
NOTE:							
TERMINATION	NCUE: THIS	COMPLE	TES THIS J	PM. C	OMPLETION TIME:		

REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

K/A REFERENCE:	015.K3.01 (3.9/4.3)
(NUREG-1122)	015.K4.05 (4.3/4.5)
	015.A3.01 (3.8/3.8)
	015.A3.02 (3.7/3.9)
	015.A4.01 (3.6/3.6)
	015.A4.02 (3.9/3.9)
	015.A4.03 (3.8/3.9)

ALTERNATE PATH JPM YES X NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)</u>

X Procedure adequately addresses task elements. Enter identifier here: A-MI-87, Rev. N

_____ Other document adequately describes necessary task elements. Enter identifier here:

X Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH _____DISCUSSION ____PERFORM X___IN-PLANT _____CONTROL ROOM _____

VALIDATED TIME FOR COMPLETION: 8 MINUTES
REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

EXAMINEE _				_EVALUATOR	
START TIME				_FINISH TIME	
PERFORMANC	E 🗌 SAT		T		
JOB TITLE:		🗌 сот	SRO	STA	

TOOLS/EQUIPMENT/REFERENCES:

A-MI-87, Bistable Tripping for Failed Reactor Protection or Safeguards Inst., Rev. N.

TASK STANDARDS:

Failed NI channel N-41 is removed from service per A-MI-87.

REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

SIMULATOR INFORMATION:

Initialize to JPM specific IC. (Must be <50%) TLA-8 Power Range Radial Tilt occurs a minute or so after going to run- wait until alarm comes in to snap.

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REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

READ AND PROVIDE TO THE EXAMINEE

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DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are the Operator at the Controls. The plant is at 48% power. N-41 Power Range Instrument has failed. The Control Rod Bank Selector switch is in MANUAL. A-NI-48, Abnormal Nuclear Instrumentation, has been referenced. SP-47-316A, Channel I (Red) Instrument Channel Test is NOT required.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to remove the failed instrument from service by performing Attachment I of A-MI-87 for N-41 Power Range Instrument.

REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

PERFORMANCE INFORMATION

START TIME	;	STEP/SE	QUENCE	/CRITICAL	SAT
		1	1	Ν	UNSAT
ELEMENT:	REFER to procedu	ure A-MI-	87, Bistabl	e Tripping for Faile	d Reactor Protection or Safeguards Inst.
STANDARD:	Procedure A-MI-8 pages 18-20 of A-1	7 is refere MI-87.	enced, appr	opriate pages for re	moving N-41 from service determined to b
CUE:					
COMMENTS:					
		STEP/SE	QUENCE/	CRITICAL	SAT
		2	2	Y	UNSAT
ELEMENT:	Position Upper Se	ction swit	ch on Dete	ctor Current Compa	rator to PRN41.
STANDARD:	Upper Section swi	tch on De	tector Curr	ent Comparator is F	POSITIONED to PRN41.
CUE:					
COMMENTS.					
COMMENTS:					
· · · · · · · · · · · · · · · · · · ·		STEP/SE	OUENCE	CRITICAL	SAT
		3	2	Y	UNSAT
ELEMENT:	Position Lower Se	ction swit	ch on Dete	ctor Current Compa	arator to PRN41.
STANDARD:	Lower Section swi	itch on De	etector Curr	ent Comparator pos	itioned to PRN41.
CUE:					

REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

PERFORMANCE INFORMATION

		STEP/SEQUENCE/CRITICAL		RITICAL	SAT
		4	2	Y	UNSAT
ELEMENT:	Position Rod Sto	p Bypass sv	witch on Mise	cellaneous Cor	ntrol and Indication Panel to BYPASS PRN41.
STANDARD:	Rod Stop Bypass	s switch on I	Miscellaneou	us Control and	Indication Panel is positioned to BYPASS PRN41.
CUE:					
COMMENTS:					
					C A T
		5 5	2	Y	UNSAT
ELEMENT:	Position Power M PRN41.	Aismatch By	ypass switch	on Miscellane	cous Control and Indication Panel to BYPASS
STANDARD:	Power Mismatch PRN41.	Bypass swi	itch on Misce	ellaneous Cont	trol and Indication Panel is positioned to BYPASS
CUE:					
COMMENTS:					
		STEP/SEC	QUENCE/C	RITICAL	SAT
		6	2	Y	UNSA I
ELEMENT:	Position Compar	ator Channe	el Defeat swi	tch on Compa	rator and Rate drawer to N41.
STANDARD:	Comparator Chai	nnel Defeat	switch on Co	omparator and	Rate drawer positoned to N41.
CUE:					
COMMENTS:					

REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

PERFORMANCE INFORMATION

		STEP/S	EQUENCE/	CRITICAL	SAT			
		7	2	Y	UNSAT			
ELEMENT:	Review CAU	FION concer	rning P-10 bi	stable.				
STANDARD:	CAUTION de reduction <10	CAUTION determined to NOT be of concern for present plant conditions (only a concern if a power reduction <10% is required AND another power range NI stays above 10%).						
CUE:	Inform examin power reduction	nee that supe on is require	ervision is aw d.	vare of the situation	and other NIs will be closely monitored i	if a		
COMMENTS:								
		STEP/S	EQUENCE	CRITICAL	SAT			
		8	2	Y				
ELEMENT:	Position N41A	Position N41A drawer Control Power breaker to OFF						
STANDARD:	N41A drawer	N41A drawer Control Power breaker is positioned to OFF.						
CUE:								
COMMENTS:								

JPM XXXXXXX Revision 0 DRAFT Date

REMOVE AN EXCORE NUCLEAR INSTRUMENT FROM SERVICE

PERFORMANCE INFORMATION

		STEP/SE 9	EQUENCE 2	/CRITICAL Y	SAT	
ELEMENT:	Request I&C to	o trip bistable	es for N41.			
STANDARD:	Request is made	e to I&C to	trip bistable	es for N41.		
CUE:	After request is and all associat	made to trip ed alarms ar	o bistables, nd status lig	inform examinee the hts are lit.	at all bistables have bee	en tripped and verified,
COMMENTS:						
		STEP/SE 10	EQUENCE 3	/CRITICAL N	SAT UNSAT	
ELEMENT:	When condition	ns permit, po	osition Cont	rol Rod Bank Selec	tor to AUTO.	
STANDARD:	Control Rod Ba	ank Selector	is positione	ed to AUTO.		
CUE:	The CRS directs Control Rod Bank Selector to be placed in AUTO.					
COMMENTS:						
TERMINATION	N CUE: THIS	COMPLET	TES THIS J	РМ. СС	OMPLETION TIME:	

JPM XXXXXXX Revision 0 DRAFT Date

LOSS OF COMPONENT COOLING DURING PUMP SWAP

K/A REFERENCE:	008.K1.02 (3.3/3.4)
(NUREG-1122)	008.K3.03 (4.1/4.2)
	008.K4.01 (3.1/3.3)
	008.A2.01 (3.3/3.6)

ALTERNATE PATH JPM X YES NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

X Procedure adequately addresses task elements. Enter identifier here: E-CC-31, Rev. L, ARP 47021-I

_____ Other document adequately describes necessary task elements. Enter identifier here:

X Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH _____ DISCUSSION ____ PERFORM X_IN-PLANT ____ CONTROL ROOM X____

VALIDATED TIME FOR COMPLETION: 8 MINUTES

JPM XXXXXXX Revision 0 DRAFT Date

LOSS OF COMPONENT COOLING DURING PUMP SWAP

EXAMINEE			_EVALUATOR
START TIME			_FINISH TIME
PERFORMANCE SA		АT	
JOB TITLE: 🗌 AOT	🗌 сот	SRO	STA
TOOLS/EQUIPMENT/REI	FERENCES:		

ARP 47021-I, RXCP CC Flow Low, Rev. B E-CC-31, Loss of Component Cooling, Rev. L N-CC-31, Component Cooling System Operation, Rev. U

TASK STANDARDS:

Respond to a loss of component cooling per E-CC-31 or ARP 47021-I.

LOSS OF COMPONENT COOLING DURING PUMP SWAP

SIMULATOR INFORMATION:

IC-12.

Trigger 1

7		
Trip of :	started pump (B)	
CC05B	- TIMED/INST OVERCURRENT CCPU	MP1B
STOP		
OVRD	MCCD1-46301 – STOPCCPUMPA	ON
	MCCD1-46301 – STARTCCPUMPA	OFF

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LOSS OF COMPONENT COOLING DURING PUMP SWAP

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DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are the Operator at the Controls. The plant is at 100% power.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to shift Component Cooling pumps in accordance with Step 4.2.2 of N-CC-31, Component Cooling System Operation, Rev. U.

JPM XXXXXXX Revision 0 DRAFT Date

LOSS OF COMPONENT COOLING DURING PUMP SWAP

PERFORMANCE INFORMATION

START TIME		STEP/S	EQUENCE	SAT		
		- 1	1	Ν	UNSAT	
ELEMENT:	(PER N-CC-31))				
	IF required, SH	IFT compo	onent cooling	; pumps as follows:		
	START Standb	y Compone	ent Cooling I	Pump B.		
STANDARD:	Component Coo green light OFF	oling Pump 7.	B is started	by placing its contr	ol switch to START, verifying r	ed light ON and
CUE:						
COMMENTS:						
		STEP/S	EQUENCE/	CRITICAL	SAT	
		2	2	N	UNSAT	
ELEMENT:	CLOSE CC-4A	for pump	to be stopped	1.		

- **STANDARD:** NAO is contacted to locally close CC-4A.
- CUE: The NAO reports that CC-4A discharge valve is CLOSED
- COMMENTS:

		STEP/SEQUENCE/CRITICAL			SAT		
		3	3	Ν	UNSAT		
ELEMENT:	STOP Compone	ent Cooling	; Pump A an	d POSITION sw	itch to AUTO.		
STANDARD:	Component Cooling Pump A control switch is placed in STOP and switch allowed to return to AUTO, green light verified ON and red light OFF.						
CUE:							
COMMENTS:							

LOSS OF COMPONENT COOLING DURING PUMP SWAP

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PERFORMANCE INFORMATION

		STEP/SEQ 4	UENCE/CRI 4	ГІСАL N	SAT UNSAT			
ELEMENT:	OPEN CC-4A dis	charge valv	e for stopped p	ump (CC Pump A).				
STANDARD:	AO is contacted to locally OPEN CC-4A.							
CUE:	The AO reports th	nat CC-4A v	alve is OPEN.					
COMMENTS:								
NOTE:	After notifying t	he AO to oj	pen CC-4A, C	C Pump B will trip w	ith failure of CC Pump A to start.			
		STEP/SEQ	UENCE/CRI	FICAL	SAT			
ELEMENT:	Examinee respond Annunciator 4702	ds to trip of 1-I (RXCP	running CC Pu CC Flow Low)	mp B with failure of C or A-RC-36C.	CC Pump A to auto-start per E-CC-31 or			
STANDARD:	An attempt to star	t CC Pump	A is made by p	lacing its control swit	ch to START (this is unsuccessful).			
CUE:	If examinee informs the CRS of the loss of CC, the following cue should be given: "Implement the required actions for a loss of CC." If an AO is called to investigate the CC Pumps, inform examinee that CC Pump B is NOT running and smells of burnt insulation, CC Pump A is NOT running and appears normal.							
COMMENTS:								

LOSS OF COMPONENT COOLING DURING PUMP SWAP

PERFORMANCE INFORMATION

		STEP/SF 6	EQUENCE 5	/CRITICAL Y	SAT UNSAT		
ELEMENT:	IF loss of comp Trip the reactor	oonent coolin r and turbine	ng to either	RXCP exceeds 2 m	inutes PERFORM the follow	ving:	
STANDARD:	When the loss of cannot be resto	of componer red), the rea	nt cooling to ctor is man	o either RXCP exce ually tripped by dep	eds 2 minutes (or examinee or examinee or examinee or examine the manual reactor tr	letermines that CC ip pushbutton.	
CUE:	After the reactor is manually tripped, inform examinee that the BOP operator has verified the turbine trip and power to the safeguards buses.						
COMMENTS:							
		STEP/SH	EQUENCE	/CRITICAL	SAT		
		7	6	Y	UNSAT		
ELEMENT:	STOP affected	RXCP(s).					
STANDARD:	RXCP A and B	control swi	tches are pl	aced to STOP, gree	n light verified ON and red l	ight OFF.	
CUE:							
COMMENTS:							

COMPLETION TIME:

LOSS OF COMPONENT COOLING DURING PUMP SWAP

TERMINATION CUE:

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

		STEP/SEQ 8	UENCE/CR 7	RITICAL N	ŚAT UNSAT
ELEMENT:	Close PS-1A(B),	Przr Spray,	in affected lo	op.	
STANDARD:	PS-1A and PS-11 and red light OFI	B, Przr Spray F.	y controllers,	are placed in	MANUAL and CLOSED, green light verified ON
CUE:					
COMMENTS:					
·					
		STEP/SEQ	UENCE/CR	ITICAL	SAT
		9	8	Ν	UNSAT
ELEMENT:	The Operator at t Rev. L (or ARP 4	the Controls 47021-I or A	informs the C -RC-36C) are	CRS that the a complete.	ctions for E-CC-31, Loss of Component Cooling,
STANDARD:	The CRS is infor	med.			
CUE:	The CRS acknow	vledges your	report.		
COMMENTS:					

THIS COMPLETES THIS JPM.

JPM XXXXXXX Revision 0 DRAFT Date

SECURE CONTAINMENT SPRAY PUMPS

K/A REFERENCE:026.A4.01 (4.5/4.3)(NUREG-1122)026.A4.05 (3.5/3.5)

ALTERNATE PATH JPM YES X NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

X	Procedure adequately addresses ta	sk elements.
	Enter identifier here:	E-1, Rev. (N)

_____ Other document adequately describes necessary task elements. Enter identifier here:

Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH _____DISCUSSION ____PERFORM X_IN-PLANT ____CONTROL ROOM X____

VALIDATED TIME FOR COMPLETION: 7 MINUTES

JPM XXXXXXX Revision 0 DRAFT Date

SECURE CONTAINMENT SPRAY PUMPS

EXAMINEE		_EVALUATOR	
START TIME		_FINISH TIME	
PERFORMANCE 🗌 SAT	UNSAT		
JOB TITLE: 🗌 AOT	COT SRO	STA	

TOOLS/EQUIPMENT/REFERENCES:

E-1, Loss of Reactor or Secondary Coolant, Rev. (N).

TASK STANDARDS:

Containment Spay Pumps secured in accordance with step 13 of E-1, Loss of Reactor or Secondary Coolant, Rev. (N).

JPM XXXXXXX Revision 0 DRAFT Date

SECURE CONTAINMENT SPRAY PUMPS

SIMULATOR INFORMATION:

Initialize to JPM specific IC.

- NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.
- NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

READ AND PROVIDE TO THE EXAMINEE

THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are the Operator at the Controls.

A Loss of Coolant accident has occurred.

The plant tripped and Safety Injection, Containment Isolation, and Containment Spray actuated 55 minutes ago. The crew entered E-0, Reactor Trip or Safety Injection and has transitioned to E-1, Loss of Reactor or Secondary Coolant. E-1 is completed through step 12.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to perform step 13 of E-1, Loss of Reactor or Secondary Coolant, Rev. (N).

PERFORMANCE INFORMATION

NOTE: CRI ITE	TICAL STEPS ARE DENO M CONSTITUTES FAILU	OTED WITH RE.	A "Y". FAILURE	TO MEET THE STANDARD	S FOR THI
START TIME	STEP/S	EQUENCE	/CRITICAL	SAT	
ELEMENT:	T Check If Containment Spr Check ICS Pumps – RUN	ay Should B NING	N e Stopped:		
STANDARD:	Both ICS pumps determin pressure, and pump flow).	ed to be rum	ning (indications are	red light ON, green light OFF,	discharge
CUE:					
COMMENTS:					
	STEP/S 2	EQUENCE 1	/CRITICAL N	SAT UNSAT	
ELEMENT:	Check ICS Pumps run tim	e – GREATI	ER THAN 50 MINU	TES	
STANDARD:	Run time determined to be	e >50 minute	s from Initial Condit	ions.	
CUE:					
COMMENTS:					
	STEP/S	EOUENCE	CRITICAL	SAT	
	3	1	N	UNSAT	
ELEMENT:	Check Containment pressu	ire – LESS T	THAN 4 PSIG		
STANDARD:	Containment pressure is d	etermined to	be <4 psig using cor	ntrol board meter indications.	
CUE:					
COMMENTS:					

PERFORMANCE INFORMATION

		STEP/SI	EQUENCE	/CRITICAL	SAT	
		4	2	Y	UNSAT	
ELEMENT:	Reset Containm	ent Spray S	lignal.			
STANDARD:	Containment Sp pushbuttons.	ray Signal :	is RESET b	y depressing both C	Containment Spray Train A an	d B Reset
CUE:						
COMMENTS:						
		STEP/SH	EQUENCE	CRITICAL	SAT	
		5	3	Y	UNSAT	····
ELEMENT:	Stop ICS Pumps	s <u>AND</u> plac	e in AUTO.			
STANDARD:	Both ICS Pump ON, RED lights	s A and B c OFF.	ontrol swite	hes positioned to S	TOP and then placed in AUT	O, GREEN lights
CUE:						
COMMENTS:						
		STEP/SE	QUENCE/	CRITICAL	SAT	
		6	4	Y	UNSAT	
ELEMENT:	Close ICS-5A a	nd B and IC	CS-6A and E	8, ICS Pump Discha	arge Valves	
STANDARD:	ICS-5A and B as RED light OFF.	nd ICS-6A (4 valves to	and B, ICS otal)	Pump Discharge Ise	olation Valves CLOSED, GR	EEN light ON,
CUE:						
COMMENTS:						

PERFORMANCE INFORMATION

FI EMENT.		STEP/SE		CRITICAL	SAT	
	Class CT 100 A	, 1 D. G				
ELENIEN I :	Close CI-100A an	id B, Caus	stic Additive	e To CNTMT Spray		
STANDARD:	CI-1001A and B,	Caustic A	dditive to C	NTMT Spray CLO	SED, GREEN lights ON, RED I	ights OFF.
CUE:						
COMMENTS:						
		STEP/SE	QUENCE/	CRITICAL	SAT	
		8	4	Ν	UNSAT	
ELEMENT:	<u>IF</u> RHR Pumps su Pump Supply To I	pplying C ICS Pump	Containment A and B, <u>A</u>	Sump recirculation <u>ND</u> adjust RHR flo	flow, <u>THEN</u> close RHR-400A a w using RHR-8A(B) as necessar	and B, RHR ry
STANDARD:	RHR determined t this step.	to NOT be	e supplying (Containment Sump	recirculation flow, NO actions p	performed fo
CUE:						
COMMENTS:						
COMMENTS:	H-11-1-					
COMMENTS:		STEP/SE	QUENCE/	CRITICAL	SAT	
COMMENTS:		STEP/SE 9	QUENCE/0 5	CRITICAL N	SAT UNSAT	
COMMENTS:	The Operator at th	STEP/SE 9 ne Control	QUENCE/0 5 s informs th	CRITICAL N e CRS of plant statu	SAT UNSAT IS.	
COMMENTS: ELEMENT: STANDARD:	The Operator at th The CRS is inform	STEP/SE 9 ne Control ned that st	QUENCE/0 5 s informs th ep 13 of E-1	CRITICAL N e CRS of plant statu l is complete, both (SAT UNSAT Is. Containment Spray pumps are se	ecured.
COMMENTS: ELEMENT: STANDARD: CUE:	The Operator at th The CRS is inform The CRS acknowl	STEP/SE 9 ne Control ned that st edges you	QUENCE/0 5 s informs the ep 13 of E-1 ur report.	CRITICAL N e CRS of plant statu l is complete, both (SAT UNSAT Is. Containment Spray pumps are se	ecured.
COMMENTS: ELEMENT: STANDARD: CUE: COMMENTS:	The Operator at th The CRS is inform The CRS acknowl	STEP/SE 9 ne Control ned that st edges you	QUENCE/0 5 s informs the ep 13 of E-1 ir report.	CRITICAL N e CRS of plant statu l is complete, both (SAT UNSAT Is. Containment Spray pumps are se	ecured.

JPM XXXXXXX Revision 0 DRAFT Date

LOCALLY OPERATE THE S/G PORV

K/A REFERENCE:	039.K1.02 (3.3/3.3)
(NUREG-1122)	039.K4.03 (2.3/2.5)
	039.A2.04 (3.4/3.7)
	039.A4.07 (2.8/2.9)

ALTERNATE PATH JPM X YES NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

<u>X</u>	Procedure adequately addresses	task elements.	
	Enter identifier here:	E-0-07, Rev. P	

_____ Other document adequately describes necessary task elements. Enter identifier here:

Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH	Х	DISCUSSION	ſ	PERFORM	I	N-PLANT	X	CONTROL ROOM	
		-				-			

VALIDATED TIME FOR COMPLETION: 10 MINUTES

Page 1 of 7

JPM XXXXXXX Revision 0 DRAFT Date

LOCALLY OPERATE THE S/G PORV

EXAMINEE				_EVALUATOR
START TIME	<u></u>			FINISH TIME
PERFORMANC	CE 🗌 SAT		AT	
JOB TITLE:	AOT	🗌 сот	SRO	STA

TOOLS/EQUIPMENT/REFERENCES:

E-0-07, Fire in Dedicated Fire Zone, Rev. P

TASK STANDARDS:

Local control of 1B S/G PORV is established per E-0-07.

JPM XXXXXXX Revision 0 DRAFT Date

LOCALLY OPERATE THE S/G PORV

SIMULATOR INFORMATION:

NONE - In-plant JPM.

- NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.
- NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

LOCALLY OPERATE THE S/G PORV

READ AND PROVIDE TO THE EXAMINEE

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For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

You are Control Operator B. The plant tripped due to a Fire In The Dedicated Zone. E-0-07, Fire In Dedicated Fire Zone, is being performed.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to locally close SD-3A/CV-31170 S/G A PORV per step 11.h of E-0-07, Fire In Dedicated Fire Zone, Rev. P.

NOTE: E-0-07, has been completed through step 11.g.

LOCALLY OPERATE THE S/G PORV

PERFORMANCE INFORMATION

START TIME		STEP/SEQ 1	QUENCE/CRI 1	TICAL N	SATUNSAT
ELEMENT:	Refer to step 11.h	of E-0-07,	Fire In Dedica	ted Fire Zone, Rev. P.	
STANDARD:	Step 11.h of E-0-0)7 is referer	nced.		
CUE:					
COMMENTS:					
		composition é			
		STEP/SEC 2	2 2	TICAL Y	SAT UNSAT
ELEMENT:	INSERT pin to en	gage SD-34	A handwheel.		
STANDARD:	Handwheel is rota handwheel.	ted such the	at the hole is A	LIGNED. Pin is then in	serted to engage the SD-3A manual
CUE:	Pin is inserted, has	ndwheel is	engaged.		
COMMENTS:					
		STEP/SEQ 3	QUENCE/CRI 3	TICAL Y	SATUNSAT
ELEMENT:	OPEN SD-3A Dia	phragm By	pass Valve.		
STANDARD:	Handwheel for SD	0-3A Diaph	ragm Bypass V	alve positioned fully co	unter-clockwise to open valve.
CUE:	SD-3A Diaphragn	n Bypass Va	alve is fully co	unter-clockwise, there is	s no further valve movement.
COMMENTS:					

LOCALLY OPERATE THE S/G PORV

PERFORMANCE INFORMATION

		STEP/SE 4	QUENCE/CI 4	RITICAL Y	SAT UNSAT	
ELEMENT:	Close NG-235, I	N ₂ Supply to	SD-3A.			
STANDARD:	Handwheel for 1	NG-225, N ₂	Supply to SD-	-3A, is position	ed fully clock-wise to close valve.	
CUE:	NG-235 is fully	clock-wise,	there is no fur	ther valve mov	ement.	
COMMENTS:		. ·				
		STEP/SE 5	QUENCE/CH 5	RITICAL Y	SAT UNSAT	
ELEMENT:	Close IA-470, IA	A to SD-3A.				
STANDARD:	Handwheel for I	A-470, IA to	o SD-3A is po	sitioned fully c	lock-wise to close valve.	
CUE:	IA-470 is fully c	clock-wise, th	here is no furt	her valve move	ement.	
COMMENTS:						
		STEP/SEC 6	QUENCE/CF 6	RITICAL N	SAT UNSAT	
ELEMENT:	Verify SD-3A C	LOSED.				
STANDARD:	SD-3A stem ind	icator is cheo	cked to detern	nine valve posi	tion <u>OR</u> handwheel is positioned fully clo	ockwise.
CUE:	SD-3A position manipulated.	indicator ind	licates CLOSI	ED <u>OR</u> there is	no further valve movement if handwheel	is
COMMENTS:						

LOCALLY OPERATE THE S/G PORV

PERFORMANCE INFORMATION

		STEP/SI 7	EQUENCE 7	/CRITICAL N	SAT UNSAT	
ELEMENT:	Control C	Operator B inform	s Control O	perator A/CRS	of plant status.	
STANDARD:	The Cont E-0-07.	rol Operator A/C	RS is inforn	ned that SD-3A	/CV-31170, S/G A POR`	V is closed per step 11.h of
CUE:	The Cont	rol Operator A/Cl	RS acknowl	edges your rep	ort.	
COMMENTS:						
NOTE:						
TERMINATION	I CUE:	THIS COMPLE	FES THIS J	PM.	COMPLETION TIM	E:

JPM XXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

K/A REFERENCE:	004.K1.01 (3.6/4.0)
(NUREG-1122)	004.K1.30 (2.9/3.1)
	004.K4.04 (3.2/3.1)
	004.K4.11 (3.1/3.6)

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ALTERNATE PATH JPM X YES NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)

<u> </u>	Procedure adequately addresses tas Enter identifier here:	k elements. E-0-06, Rev. O	
	Other document adequately describ Enter identifier here:	es necessary task elements.	
<u> </u>	_ Task elements described as attached	•	
DESIRI	ED MODE OF EVALUATION:		APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH X DISCUSSION PERFORM IN-PLANT X CONTROL ROOM

VALIDATED TIME FOR COMPLETION: 25 MINUTES

JPM XXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

EXAMINEE		_EVALUATOR _FINISH TIME	
PERFORMANCE 🗌 SAT	UNSAT		
JOB TITLE: 🗌 AOT	COT SRO	STA	

TOOLS/EQUIPMENT/REFERENCES:

E-0-06, Fire In Alternate Fire Zone, Rev. O

TASK STANDARDS:

Letdown is established per step 29 of E-0-06.

JPM XXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

SIMULATOR INFORMATION:

In-Plant JPM.	,	

- NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.
- NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM XXXXXXX Revision 0 DRAFT Date

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

READ AND PROVIDE TO THE EXAMINEE

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EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

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The plant was at 100% power with fire in an Alternate Fire Zone. You are Control Operator A. E-0-06, Fire In Alternate Fire Zone, Rev. O has been completed through step 28.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to establish letdown per step 29 of E-0-06, Fire In Alternate Fire Zone, Rev. O.

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

START TIME		STEP/SE	QUENCE/	SAT		
		1	1	N	UNSAT	****
ELEMENT:	Refer to step 29 c	of E-0-06, I	Fire In Alter	mate Fire Zone, Ro	ev. O.	
STANDARD:	Step 29 of E-0-06	5 is referen	ced.			
CUE:						
COMMENTS:						
NOTE:						
		STEP/SE 2	QUENCE/0 2	CRITICAL N	SAT UNSAT	· · · · · · · · · · · · · · · · · · ·
ELEMENT:	Verify Przr Cold	Cal Level,	>20%.			
STANDARD:	Przr Cold Cal Le	vel >20 %	is verified			
CUE:	Przr Cold Cal Le	vel (87227) indicates 3	80%.		
COMMENTS:						
		STEP/SE	QUENCE/	CRITICAL	SAT	
		3	2	Y	UNSAT	
ELEMENT:	Adjust CC-302/C	CV-31100, 1	Non-Rgn H	x Otlt Temp Cont.	to 50% OPEN.	
STANDARD:	CC-302/CV-3110 pushbutton is DE demand (OUTPU	00, Non-Rg PRESSED JT) is achie	gn Hx Otlt T 9. The MAN eved.	emp controller is UAL control level	verified in MANUAL <u>OR</u> is <u>THEN</u> positioned to the	the MANUAL right until a 50%
CUE:	CC-302/CV-3110	00, Non-Rg	gn Hx Otlt T	`emp Cont, is 50%	OPEN.	

COMMENTS:

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

		STEP/SEQ	UENCE/CH 2	RITICAL Y	S UNS	SAT SAT
ELEMENT:	Adjust LD-10/CV	7-31099, Lov	v Pressure L	etdown Lin	e PCV., to 50% OPI	EN.
STANDARD:	LD-10/CV31099 pushbutton is DE demand (OUTPL	, Low Pressu PRESSED. 7 IT) is achieve	re Letdown The MANUA ed.	Line PCV c AL control 1	controller is verified lever is <u>THEN</u> positi	in MANUAL <u>OR</u> the MANUAL ioned to the right until a 50%
CUE:	LD-10/CV-31099	9, Low Pressi	ire Letdown	Line PCV,	is 50% OPEN.	
COMMENTS:						

·		STEP/SEQUENCE/CRITICAL SAT				
		5	2	Ν	UNSAT	
ELEMENT:	Verify LD-27/CV	V-31096, Lto	dn Flow to H	Ildup/VC Tan	k 3-way CV, in DIVER	Γ.
STANDARD:	LD-27/CV-3109 indicating light b	LD-27/CV-31096, Ltdn Flow to Hldup/VC Tank 3-way CV is verified in DIVERT by red DIVERT indicating light being ON.				
CUE:	LD-27/CV-3109	6, Ltdn Flow	v to Hldup/V	C Tank 3-wa	y CV red DIVERT indic	ating light ON.
COMMENTS:						
						·
		STEP/SE(QUENCE/C	RITICAL	SAT	
		6	2	Ν	UNSAT	
ELEMENT:	Verify LD-14/CV	V-31098, Lto	dn Flow to I	Demin/VC Tar	ık 3-way CV , in V.C. T	NK.
STANDARD:	LD-14/CV-3109 indicating light b	8, Ltdn Flow eing ON.	v to Demin/	VC Tank 3-wa	y CV, is verified in V.C	. TNK by red V.C. TNK
CUE:	LD-14/CV-3109	8, Ltdn Flow	v to demin/V	C Tank 3-wa	y CV red V.C. TNK indi	cating light ON.
COMMENTS:						

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

NOTE: CRI ITE	TICAL STEPS ARE DENOTED WITH A "Y". M CONSTITUTES FAILURE.	FAILURE TO MEET T	"HE STANDARDS FOR THIS
	STEP/SEQUENCE/CRITIC 7 2 Y	AL UN	SAT
ELEMENT:	Locally insert fuses in SD-101 FUG-7 and FUG	6 (for LD-3 and LD-6).	
STANDARD:	Fuses inserted in SD-101 FUG-7 and FUG-6. RI	ED lights ON for ckt. 6 a	nd 7.
CUE:	Fuses have been inserted in SD-101 FUG-7 and	FUG-6 (for LD-3 and Ll	D-6).
COMMENTS:			
NOTE:	Fuses are obtained from the Appendix R Box.		
	STEP/SEQUENCE/CRITIC 8 3 Y	AL UN	SAT
ELEMENT:	Position LD-6/CV-31234, Letdown Flow to Ltd	n Hx Isol CV, key switch	to OPEN.
STANDARD:	LD-6/CV-31234, Letdown Flow to Ltrdn Hx Iso OPEN, LD-6 red light ON, green light OFF.	l CV key is INSERTED	into key switch and positioned to
CUE:	LD-6/CV-31234, Letdown Flow to Ltdn Hx Isol OFF.	CV, key switch is in OP	'EN, red light ON, green light
COMMENTS:			
NOTE:	Key to operate LD-6 is located in Dedicated Shu	tdown fuse box #1.	
	STEP/SEQUENCE/CRITIC 9 4 Y	AL UN	SAT
ELEMENT:	Open LD-2/CV-31108, Ltdn Line From LP-B C	old Leg RCS Isol Vlv.	
STANDARD:	LD-2/CV31108,Ltdn Line From LP-B Cold Leg red light ON, green light OFF.	RCs Isol Vlv control sw	itch is positioned to OPEN. LD-2
CUE:	LD-2/CV-31108, Ltdn Line From LP-B Cold Le green light OFF.	g RCS Isol VIv control s	witch is in OPEN, red light ON,
COMMENTS:			
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PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

NOTE: CRI ITE	TICAL STEPS A. M CONSTITUTE	RE DENOT ES FAILUR	ED WITH . E.	A "Y". FAIL	URE TO MEET THE STAN	DARDS FOR THIS
		STEP/SE	QUENCE/(CRITICAL	SAT	
		10	5	Y	UNSAT	· · · · · · · · · · · · · · · · · · ·
ELEMENT:	Position LD-3/C	2 V-31104 , L	tdn Line Fro	om LP-B Cold	Leg RCS Isol VIv, key switch	n to OPEN.
STANDARD:	LD-3/CV-31104 positioned to OF	Ltdn Line PEN, LD-3 r	From LP-B ed light ON	Cold Leg RCS , green light Ol	Isol Vlv. key is INSERTED FF.	into key switch and
CUE:	LD-3/CV-31104 green light OFF.	, Ltdn Line	From LP-B	Cold Leg RCS	Isol Vlv, key switch is in OF	PEN, red light ON,
COMMENTS:						
NOTE:	Key to operate L	.D-3 is locat	ed in Dedica	ated Shutdown	fuse box #1.	
		STEP/SE	QUENCE/C	CRITICAL N	SAT UNSAT	
ELEMENT:	LD-4A/CV-3123	31 <u>OR</u> LD-4	B/CV-3123	2, Regn Hx Ltd	In Othl Orif 1A/1B Isol CV a	are OPENED.
STANDARD:	LD-4A/CV-3123 positioned to OF	31 <u>AND</u> LD PEN.	-4B/CV-312	232, Regen Hx	Ltdn Otlt Orfi 1A/1B Isol CV	V control switches are
CUE:	LD-4A/CV-312 green light ON.	31 <u>AND</u> LD	9-4B/CV-31	232, Regn Hx	Ltdn Otltl Orif 1A/1B Isol	CV, red light is OFF,
COMMENTS:						
NOTE:	Intent of this sto red lights OFF	ep is that bo and green li	oth LD-4A : ights ON.)	and LD-4B fai	l to open. (i.e., control swite	ches are open with

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PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

NOTE:	CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS
	ITEM CONSTITUTES FAILURE.

		STEP/SE	QUENCE/0	CRITICAL	SAT			
		12	7	Y	UNSAT	·····		
ELEMENT:	Adjust Chg Pum OPEN LD-4C.	p 1C Speed	Control to l	MINIMUM. Whe	n Pzr Cold Cal Level reaches 70%,			
STANDARD:	Chg Pump 1C ha <u>WHEN</u> Pzr Cold ON, green light (Chg Pump 1C hand controller is adjusted to MINIMUM (ZERO). WHEN Pzr Cold Cal Level reaches 70 %, LD-4C control switch is positioned to OPEN, red light verified ON, green light OFF.						
CUE:	Chg Pump 1C Speed Control is set to MINIMUM (ZERO). After Chg Pump speed is at MINIMUM, Pzr Cold Cal Level indicates 70%. When LD-4C control switch is positioned to OPEN, red light is ON, green light OFF.							
COMMENTS:								
		STEP/SE	QUENCE/C	CRITICAL	SAT			
		13	8	Y	UNSAT			
ELEMENT:	Adjust LD-10 to	maintain Lt	dn Ht Xgh (Otlt Press at 250	psig and position controller to AUTO.			
STANDARD:	LD-10 AUTO se MANUAL contro pushbutton is the	etpoint is adj ol lever is ac n DEPRESS	usted using djusted until SED. LD-10	the setpoint cont l actual pressure a) control is verific	rol on the side of the meter to 250 psig as and the AUTO setpoint are matched. The ed STABLE.	nd the AUTO		
CUE	LD-10 controller	is at a setpo	oint of 250 p	osig and controlli	ng properly in AUTO.			
COMMENTS:								

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PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

		STEP/SEQUENCE/CRITICAL			SAT		
		14	8	N	UNSAT		
ELEMENT:	Adjust CC-302	to maintain	Ltdn Ht X	gh Otlt Temp at 120°	- 140°F and position controlle	er to AUTO.	
STANDARD:	CC-302 AUTO setpoint is adjusted using the setpoint control on the side of the meter to 120° - 140°F and the MANUAL control lever is adjusted until actual temperature and the AUTO setpoint are matched. The AUTO pushbutton is then DEPRESSED. CC-302 control is verified STABLE.						
CUE:	CC-302 control	ler is at a set	tpoint of 1	30°F and controlling	properly in AUTO.		
COMMENTS:							

		STEP/SI 15	EQUENCE 9	/CRITICAL N	SAT UNSAT	
ELEMENT:	Request Contro when necessary	ol Operator I	B monitor C	CVC Holdup Tank	on fill and ALIGN letc	lown to an empty tank
STANDARD:	Request is mad an empty tank	e to Control when necess	l Operator B ary.	to monitor the CV	VC Holdup Tank on fil	l and ALIGN letdown to
CUE:	Control Operat tanks as necess	or B acknov ary.	vledges you	r REQUEST and v	will monitor the CVC H	Ioldup Tanks and shift
COMMENTS:						
		STEP/SI	EQUENCE	/CRITICAL	SAT	
		16	9	N	UNSAT	
ELEMENT:	Adjust Chargin	g Pup 1C Sj	peed to main	ntain Pzr Cold Cal	Level, 20-50%	
STANDARD:	Charging Pump	1C Speed i	is adjusted a	is necessary to mai	ntain Pzr Cold Cal Lev	vel 20-50%.
CUE:	Charging Pump	speed is ad	justed to es	tablish a Pzr Cold	Cal Level band of 20-5	50%.
COMMENTS:						

PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (ESTABLISH LETDOWN)

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

		STEP/SEQUENCE/CRITICAL			SAT				
		16	10	Ν	UNSAT				
ELEMENT:	Control Operator	r A reports j	olant status t	to the CRS.					
STANDARD:	The CRS is infor	The CRS is informed that letdown is established in accordance with step 29 of E-0-06.							
CUE:	The CRS acknow	wledges you	r report.						
COMMENTS:									

TERMINATION CUE: THIS COMPLETES THIS JPM.

COMPLETION TIME:

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OPERATE THE DIESEL GENERATOR (LOCALLY)

K/A REFERENCE:	064.A2.05 (3.1/3.2)
(NUREG-1122)	064.A4.06 (3.9/3.9)
	064.A4.01 (4.0/4.3)

ALTERNATE PATH JPM YES X NO

PERFORMANCE CHECKLIST:

<u>SAT</u>ISFACTORY - Properly performed critical step(s) and/or in sequence (if applicable)</u>

<u>UNSAT</u>ISFACTORY - Improperly performed critical step(s) and/or out of sequence (if applicable)</u>

X Procedure adequately addresses task elements. Enter identifier here: A-DGM-10A, Rev. C

_____ Other document adequately describes necessary task elements. Enter identifier here:

X Task elements described as attached.

DESIRED MODE OF EVALUATION:

APPLICABLE EVALUATION SETTING:

SIMULATE/WALKTHROUGH <u>X</u> DISCUSSION <u>PERFORM</u> IN-PLANT <u>X</u> CONTROL ROOM ____

VALIDATED TIME FOR COMPLETION: 30 MINUTES

JPM XXXXXXX Revision 0 DRAFT Date

OPERATE THE DIESEL GENERATOR (LOCALLY)

EXAMINEE		EVALUATOR	
START TIME		FINISH TIME	
PERFORMANCE 🗌 SAT	UNSAT		
JOB TITLE: 🗌 AOT	COT SRO	STA	

TOOLS/EQUIPMENT/REFERENCES:

A-DGM-10A, Abnormal Diesel Generator A Operation, Rev. C.

TASK STANDARDS:

D/G 1A is successfully started and loaded to Bus 5 per A-DGM-10A.

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OPERATE THE DIESEL GENERATOR (LOCALLY)

SIMULATOR INFORMATION:

In-Plant JPM.

- NOTE: If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.
- NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

READ AND PROVIDE TO THE EXAMINEE

THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

The plant is in hot shutdown and has experienced a loss of off-site power as well as failure of Diesel Generator A to start. An attempt to manually start Diesel Generator A from the Control Room has been unsuccessful.

INITIATING CUES (IF APPLICABLE):

You are directed to locally start Diesel Generator A per Step 4.6 of A-DGM-10A, Abnormal Diesel Generator A Operation, Rev. C.

OPERATE THE DIESEL GENERATOR (LOCALLY)

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

START TIME	S	STEP/SEQ	UENCE/CR	ITICAL	SAT	
		1	1	Ν	UNSAT	
ELEMENT:	Refer to Step 4.6 o	f A-DGM-	10A, Abnorm	al Diesel Generato	r A Operation.	
STANDARD:	Step 4.6 of A-DGN	A-10A is r	eferenced.			
CUE:						
COMMENTS:						
	S	STEP/SEQ	UENCE/CR	ITICAL	SAT	
		2	2	N	UNSAT	
ELEMENT:	Verify BRA-104 (0	Circuit 10)	Control Powe	r to Diesel Engine	Control Panel is ON.	
STANDARD:	Inside the Battery I and breaker is verif	Room, BR fied in or p	A-104 (Circui positioned to the	t 10) Control Powe ne ON position.	er to Diesel Engine Contr	ol Panel is located
CUE:	BRA-104 (Circuit	10) is in th	e ON position	•		
COMMENTS:						
						····
	S	STEP/SEQ 3	UENCE/CR 2	ITICAL N	SAT UNSAT	
ELEMENT:	Verify BRA-104 (C	Circuit 7) (Control Power	to Bus 5 is ON.		
STANDARD:	Inside the Battery I or positioned to the	Room, BR. e ON posit	A-104 (Circui ion.	t 7) Control Power	to Bus 5 is located and b	reaker is verified in

CUE: BRA-104 (Circuit 7) is in the ON position.

COMMENTS:

PERFORMANCE INFORMATION

		STEP/SE(4	QUENCE/CF 3	RITICAL Y	SAT UNSAT	
ELEMENT:	Behind DR pane	ls, position t	he Diesel Eng	gine and Gove	rnor Local/Remote switch to LOCA	AL.
STANDARD:	Diesel Engine ar	nd Governor	Local/Remot	e switch is loc	ated and positioned to LOCAL.	
CUE:	The Diesel Engi	ne and Gove	rnor Local/Re	emote switch i	s in LOCAL.	
COMMENTS:						
		STEP/SE(QUENCE/CF	RITICAL	SAT	
		5	3	Y	UNSAT	
ELEMENT:	At Diesel Genera Local/Remote sv	ator Control witch to LOC	& Excitation CAL.	Cabinet, posi	tion the Diesel Generator Voltage C	Control
STANDARD:	Diesel Generator	r Voltage Co	ntrol Local/R	emote switch	is located and positioned to LOCA	Ĺ.
CUE:	Diesel Generator	r Voltage Co	ntrol Local/R	emote switch	is in LOCAL.	
COMMENTS:						
		STEP/SE(6	QUENCE/CF 4	RITICAL N	SATUNSAT	
ELEMENT:	At Diesel Engine	e Control Pa	nel, verify con	ntrol power av	ailable.	
STANDARD:	Diesel Engine C	ontrol Panel	"Power On"	green light is	verified ON.	
CUE:	Diesel Engine C	ontrol Panel	green "Powe	r On" light is l	it.	
COMMENTS:						

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OPERATE THE DIESEL GENERATOR (LOCALLY)

PERFORMANCE INFORMATION

		STEP/SF 7	EQUENCE/ 5	CRITICAL N	SAT UNSAT				
ELEMENT:	Verify Overspe	ed Trip is re	eset.						
STANDARD:	Overspeed trip	Overspeed trip mechanism is checked to determine if reset is required, reset is NOT required.							
CUE:	The Overspeed	The Overspeed trip mechanism is rotated down and is in contact with the limit switch.							
COMMENTS:									
NOTE:									
, <u>, , , , , , , , , , , , , , , , </u>		STEP/SE	EQUENCE/	CRITICAL	SAT				
		8	6	Y	UNSAT				
ELEMENT:	At Diesel Engir	ne Control P	anel, depres	s the Failure Reset p	bushbutton.				
STANDARD:	Failure reset pu	shbutton is	depressed an	d alarms checked c	lear.				
CUE:	All alarms are c	elear.							
COMMENTS:									

OPERATE THE DIESEL GENERATOR (LOCALLY)

PERFORMANCE INFORMATION

		STEP/SEQUENCE/CRITICAL		SAT		
		9	7	Y	UNSAT	······································
ELEMENT:	At Bus 5, open door: 1-511, Mai 1-510, Bus 1-509, Die: 1-508, Safe 1-507 <u>OR</u> 1-504, Aux 1-503, Rese 1-502, Rese 1-501, Tere	the followin n Aux Trans Tie Breaker sel Gen 1-A. ety Injection 1-506, Servi Erve Aux Trans idual Heat R tiary Aux Trans	g breakers of former. to 1-602. Pump 1-A. ce Water Po Pump A1. ansformer. emoval Pur ansformer.	using the Breaker (ump 1A2 <u>OR</u> 1A1 mp 1-A.	Control Switch on front of the	e breaker cubicle
STANDARD:	Green light veri to obtain open i	fied ON, rec ndication.	l light OFF,	, for breakers listed	d above or control switch pos	itioned as necessary
CUE:	Green light is C the green light (N, red light OFF, red ligh	is OFF for ht ON.	all breakers EXCE	EPT 1-506 Service Water Pur	np 1A1 which has
COMMENTS:						

		STEP/SEQUENCE/CRITICAL			SAT	
		10	8	Y	UNSAT	
ELEMENT:	Verify closing sp 1-509. 1-507. 1-506. 1-505, Stati	pring is cha on Service	urged for the Transf 1-51	following breakers	S:	
STANDARD:	Breakers located ALLOW EXAM	l, indication IINEE TO	n for closing OPEN CUI	g springs described BICLE DOORS).	(indication is inside brea	ker cubicles, DO NOT
CUE:	Closing springs	for the abo	ve listed bre	eakers are all charge	ed.	
COMMENTS:						

PERFORMANCE INFORMATION

		STEP/SE(11	QUENCE/CRI 9	TICAL Y	SATUNSAT		
ELEMENT:	Verify the follow • 1-506 <u>OR</u> 1 • 1-505.	ving breakers -507.	s CLOSED:				
STANDARD:	Green light verif	ied OFF, red	l light ON, for	breakers listed above.			
CUE:	Green light is Ol which has the gr	FF, red light een light ON	is ON for abov I, red light OFF	e listed breakers EXCE	PT 1-507 Service Water Pump 1A1		
COMMENTS:							
		STEP/SE(12	2UENCE/CRI 10	Y Y	UNSAT		
ELEMENT:	Position breaker	1-509 Local	Remote switcl	n to LOCAL.			
STANDARD:	Breaker 1-509 Local/Remote switch is positioned to LOCAL.						
CUE:	Breaker 1-509 Local/Remote switch is in LOCAL and all diesel alarms are clear.						
COMMENTS:							
		STEP/SE(QUENCE/CRI	TICAL	SAT		
		13	11	Ν	UNSAT		
ELEMENT:	Announce startin	g of Diesel (Generator A.				
STANDARD:	Announcement made using the plant Gaitronics that Diesel Generator A will be started.						
CUE:							
COMMENTS:							

PERFORMANCE INFORMATION

		STEP/SE 14	QUENCE/C 12	RITICAL Y	SAT UNSAT		
ELEMENT:	At Diesel Engine Control Panel, start Diesel Generator A.						
STANDARD:	Diesel Generato	or A is started	d by position	ing the 1A Dies	el Engine Control Switch to START.		
CUE:	Diesel Engine 1A Control Switch is in START, engine start noise is heard, engine RPM is rising.						
COMMENTS:							
NOTE:	Regarding the r A to Bus 5) mus	note concern st be closed y	ing Service V within 3 minu	Water Cooling p ates of Diesel sta	rior to this step – breaker 1-509 (Diesel Genera art.	ator	
		STEP/SE 15	QUENCE/C 13	RITICAL N	SAT UNSAT		
ELEMENT:	At Diesel Engine Control Panel, adjust Governor Control Switch to obtain 890-910 rpm.						
STANDARD:	Diesel Engine rpm is checked, Governor Control Switch adjusted as necessary to raise or lower rpm.						
CUE:	Diesel Engine A is at 900 rpm.						
COMMENTS:							
		STEP/SE	QUENCE/C	RITICAL	SAT		
		16	13	Ν	UNSAT		
ELEMENT:	At Diesel Gener	ator Control	& Excitation	n Cabinet, adjus	t the Voltage Control Switch to obtain 4160V.		
STANDARD:	Diesel Voltage is checked. Voltage Control Switch is adjusted as necessary to raise or lower voltage.						
CUE:	Diesel Engine A is at 4160V.						
COMMENTS:							

PERFORMANCE INFORMATION

		STEP/SEQUENCE/CRITICAL			SAT		
		17	13	N	UNSAT		
ELEMENT:	At Diesel Genera	ator Control	& Excitation C	abinet, adjust Governor	to obtain 60 Hz.		
STANDARD:	Diesel frequency is checked. Governor is adjusted as necessary to raise or lower frequency.						
CUE:	Diesel Engine A is at 60 Hz.						
COMMENTS:							
	••••						
		STEP/SE(18	UENCE/CRI 14	ГІCAL У	SAT		
ELEMENT:	Close breaker 1-	509.					
STANDARD:	At breaker 1-509 light OFF.	cubicle, the	Breaker Contr	ol Switch is positioned	to CLOSE, RED light ON, GREEN		
CUE:	The red light is ON, green light is OFF for breaker 1-509.						
COMMENTS:							
NOTE:	Breaker 1-509 m	ust be closed	d within 3 minu	tes of Diesel start.			

PERFORMANCE INFORMATION

NOTE: CRITICAL STEPS ARE DENOTED WITH A "Y". FAILURE TO MEET THE STANDARDS FOR THIS ITEM CONSTITUTES FAILURE.

		STEP/SEQ 19	QUENCE/CRI 15	TICAL N	SATUNSAT			
ELEMENT:	Verify Service Water Cooling to Diesel Engine by checking Service Water Pump running, Service Water Valve from Diesel is OPEN, and Diesel water temperature is in the normal range.							
STANDARD:	• Ammeter for Service Water Pump breaker 1-506, Service Water Pump 1A1 is checked for amperage (ammeter on breaker cubicle door).							
	• SW-301A/C OPEN by ob	• SW-301A/CV-31088, Service Water from Diesel Generator A Heat Exchanger, is locally checked OPEN by observing valve indicator.						
	• Diesel Engin	e water tem	perature is cheo	ked in the normal op	erating range (160-190°F).			
CUE:	• Breaker 1-506 ammeter is indicating approximately 35 amps.							
	• SW-301A valve position indication indicates open and service water flow can be heard.							
	• Diesel Engin	• Diesel Engine water temperature indicates 170°F.						
COMMENTS:					· ·			
		STEP/SEQ 20	UENCE/CRI	FICAL N	SAT			
ELEMENT:	Notify NCO that switchgear control	Diesel Gene ol power is C	rator A is avail DFF.	able to be loaded fro	m the Control Room or locally if			
STANDARD:	NCO is notified that Diesel Generator A is available.							
CUE:	The NCO acknowledges your report.							
COMMENTS:								

TERMINATION CUE: THIS COMPLETES THIS JPM.

COMPLETION TIME:

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