Facility: \_ANO UNIT 2

Date of Examination: 2/11/2002

Exam Level (circle one): RO / SRO(I) /(SRO(U))

Operating Test No.: \_1\_\_

## B.1 Control Room Systems

Type Code*	Safety Function
D/S/A/L	5 Containment Integrity
M/S/L	4 Heat Removal
D/A	6 Electrical
N/R	2 Inventory
D	7 Instrumentation
	D/S/A/L  M/S/L  D/A  N/R

 $<sup>^{\</sup>star}$  Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)Iternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

UNIT:	2	_		REV #:	000	_		DATE:		
SYSTEM/	DUTY	AREA:	Emergen	cy Diese	l Gen	erator Syst	em			
TASK:	Cont	rol AAC E	Diesel Engin	e Fuel O	il Day	/ Tank Leve	el Manuall	y (Alter	nate Succ	ess Path)
JTA#:	ANO	2AOAACD	GOFFNORM	<b>/124</b>						
KA VALU	ΙE	RO:	4.0	SRO:		4.3	KA REFER	RENCE:		064 A4.01
APPROV	ED FC	R ADMIN	ISTRATION	TO:	RO:	X	SRO:	X		
TASK LO	CATIO	ON:	INSIDE CI	R:		OUTSIDE	CR:	X	вотн:	
SUGGES	TED T	ESTING E	NVIRONME	NT AND	METH	OD (PERFC	RM OR SI	MULAT	E):	
PLANT S	ITE:	Sim	ulate	SIMULA	TOR:			LAB:		
POSITION	N EVA	LUATED:	RO:			SRO:				
ACTUAL	TEST	NG ENVIF	RONMENT:	SIMU	JLATO	OR:	PLAN	T SITE:		_ LAB:
TESTING	METH	HOD:	SIMULATE:		P	ERFORM:		_		
APPROX	IMATE	COMPLE	ETION TIME	IN MINU	TES:	13 N	linutes			
REFEREN	NCE(S)	: AOP	2203.012Z,	Rev. 01-0	06-0					
EXAMINE	E'S N	AME:					SSN	l:		
EVALUA7	TOR'S	NAME:								
		_	ORMANCE V ED TO BE:	VAS EVA	LUAT	ED AGAINS	ST THE ST	ANDAR	DS CONTA	AINED IN THIS
SATISFA	CTOR	Y:		UNSATIS	SFAC	TORY:				
PERFORI	PERFORMANCE CHECKLIST COMMENTS:									
Start Time			Stop Time		To	otal Time				
SIGNED:						DATE:				

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:
The examiner shall review the "Briefing Checklist - System Walkthrough" portion of 1064.023 Attachment 6
with the examinee.
JPM INITIAL TASK CONDITIONS:
The AAC Diesel is loaded to 4400 KW when the FUEL DAY TANK LEVEL LOW alarm annunciates in the
Control Room.
TASK STANDARD:
AAC diesel generator fuel oil day tank (2T-11) level has been raised to > 20%.
_(ALTERNATE SUCCESS PATH)
TASK PERFORMANCE AIDS:
OP 2203.012Z (2K432-E2)
SIMULATOR SETUP:
NONE
EXAMINER'S NOTES:

#### **INITIATING CUE:**

The SM/CRS directs, "Correct the cause of the FUEL DAY TANK LEVEL LOW alarm using 2203.012Z (2K432-E2)."

CRITICAL ELEMENTS (C): 3

	PERI	FORMANCE CHECKLIST	STANDARDS	(Circle One)		
	1.	Check local level for the AAC diesel generator day tank (2T-11).	In Engine Room, observed Fuel Oil Day Tank Level on 2LI-7201B shows < 20%.	N/A SAT UNSAT		
			<u>OR</u>			
		POSITIVE CUE:	On Panel 2C442, observed Fuel			
		The local tank level indicator (2LI-7201B) shows 15%.	Oil Day Tank Level (2LI-7201A) indicates < 20%.			
		OR	<u>OR</u>			
		On panel 2C442, 2LI-7201A shows 15%.	On Local Computer for L7201, observed Fuel Oil Day Tank Level shows < 20%.			
		<u>OR</u>	3110W3 \ 2070.			
		On the PLC for L7201, observed the fuel oil day tank level shows 15%.				
		EXA	MINER'S NOTE:			
All a	ttempts	to start the fuel oil transfer pump sh	ould fail. After each start attempt, pr	ovide the following cue		
<u>NEGA</u>	TIVE CL	JE:				
The fu	el oil tra	nsfer pump does NOT start.				
	2.	Control Fuel Oil Transfer Pump (2P-235) manually.	On Panel 2C-440, rotated 2HS-7106A to MANUAL.	N/A SAT UNSAT		
		NEGATIVE CUES: 2HS-7106A on 2C-440 is taken to MANUAL and Green light is	OR On 2B161, rotated 2HS-7106B to MANUAL.			

### TRANSITION NOTE:

ON and Red light is OFF.

If asked about tank level

level is 15 % and slowly

dropping.

2HS-7106B on 2B116 is taken to MANUAL and Green light is ON and Red light is OFF.

response, inform candidate that

Go to the AAC diesel generator engine room.

	PERI	FORMANCE CHECKLIST	STANDARDS	(Circle One)
(C)	3.	Open Fuel Oil Header 2T-11 Bypass (2AAC-17).	Located 2AAC-17 under day tank 2T-11.	N/A SAT UNSAT
		POSITIVE CUE:  2AAC-17 back seat is felt and the valve-operating handle will NOT turn further.	Turned 2AAC-17 operating handle CCW to full open position.  OR  Throttled 2AAC-17 to increase day tank level.	
	4.	Check Fuel Oil Day Tank (2T-11) level.	On 2LI-7201B at 2T-11, observed Fuel Oil Day Tank Level increasing.	N/A SAT UNSAT
		POSITIVE CUE:	<u>OR</u>	
		2T-11 level is observed to be increasing on 2LI-7201B.	On 2LI-7201A at 2C-442, observed 2T-11 level increasing.	
		<u>OR</u>		
		2T-11 level is observed to be increasing on 2LI-7201A.		
		<u>EXA</u>	MINER'S NOTE:	
	Fir	nal tank level is established at the di	scretion of the examinee providing le	evel is > 20%.
	5.	Throttle or close Fuel Oil Header 2T-11 Bypass (2AAC-17) to maintain Day tank Level >20%	WHEN 2T-11 level is > 20%, rotated 2AAC-17 CW to close.  OR  When 2T-11 level is >20%	N/A SAT UNSAT
		POSITIVE CUE:	throttled 2AAC-17 level to maintain level.	
		The 2AAC-17 shut seat is felt and valve-operating handle will NOT turn further.		
	6.	Depress Reset PLC touch-pad	At local computer touch screen depressed the RESET PLC touch-pad.	N/A SAT UNSAT
		POSITIVE CUE:		
		PLC touch-pad depressed		

### **EXAMINER'S COPY**

### JPM INITIAL TASK CONDITIONS:

The AAC Diesel is loaded to 4400 KW when the FUEL DAY TANK LEVEL LOW alarm annunciates in the Control Room.

### **INITIATING CUE:**

The SM/CRS directs, "Correct the cause of the FUEL DAY TANK LEVEL LOW alarm using 2203.012Z (2K432-E2)."

### **EXAMINEE'S COPY**

### JPM INITIAL TASK CONDITIONS:

The AAC Diesel is loaded to 4400 KW when the FUEL DAY TANK LEVEL LOW alarm annunciates in the Control Room.

### **INITIATING CUE:**

The SM/CRS directs, "Correct the cause of the FUEL DAY TANK LEVEL LOW alarm using 2203.012Z (2K432-E2)."

UNIT: _	2	-		REV #:	001	_		DATE:		
SYSTEM/	/DUTY	AREA:	Containm	ent Coc	oling S	ystem				
TASK:	Verif	y Containı	ment Coole	rs In En	nergen	cy Mode				
JTA#:	ANO	SROEOP	AOPEMER1	2/ANO2	ROEOF	PAOPEMER	G13			
KA VALU	JE	RO:	3.2	SRO:		3.2	KA REFER	RENCE:		022 A4.03
APPROV	ED FO	R ADMINI	STRATION	TO:	RO:	X	SRO:	X		
TASK LO	CATIC	ON:	INSIDE CF	R:	X	OUTSIDE	CR:		вотн:	
SUGGES	TED T	ESTING E	NVIRONME	NT AND	METH	OD (PERFO	ORM OR SI	MULAT	E):	
PLANT S	SITE:			SIMULA	TOR:	Peri	orm	LAB:		
POSITIO	N EVA	LUATED:	RO:			SRO:				
ACTUAL	TESTI	NG ENVIR	ONMENT:	SIM	ULATO	OR:	PLAN	T SITE:		LAB:
TESTING	METH	IOD:	SIMULATE:		P	ERFORM:		_		
APPROX	IMATE	COMPLE	TION TIME	IN MINU	JTES:	8 N	linutes			
REFEREN	NCE(S)	: <u>2203</u> .	003 Rev 005	5-01-0						
EXAMINE	EE'S N	AME: _					SSN	l:		
EVALUA <sup>-</sup>	TOR'S	NAME:								
		S PERFO	_	VAS EV	ALUAT	ED AGAINS	ST THE ST	ANDAR	DS CONTA	INED IN THIS
SATISFA	CTOR	Y:		UNSATI	ISFAC1	TORY:				
PERFOR	PERFORMANCE CHECKLIST COMMENTS:									
Start Time			top ime		To	tal Time				
SIGNED:						DATE:				

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:
The examiner shall review the "Briefing Checklist - System Walkthrough" portion of 1064.023 Attachment 6
with the examinee.
JPM INITIAL TASK CONDITIONS:
Reactor has tripped due to a LOCA. CCAS has failed to actuate automatically.
TASK STANDARD:
Containment Coolers have been placed in Emergency Mode.
This is an alternate success path JPM.
TASK PERFORMANCE AIDS:
2203.003 Rev 005-01-0, Loss of Coolant Accident, Section 1.0, Step 11.
SIMULATOR SETUP:
400 gpm LOCA, CCAS fails to actuate, 2UCD-8216-2 failed closed (ESFDAMP8216).
NOTE: When candidate places handswitch for 2UCD-8216-2 to open, then delete 2UCD-8216-2
Malfunction.
EXAMINER'S NOTES:

#### **INITIATING CUE:**

The SM/CRS directs, "Manually actuate CCAS per of EOP 2202.003 Section 1 Step 6, then verify CNTMT coolers in Emergency Mode per EOP 2202.003 Section 1 Step 11."

CRITICAL ELEMENTS (C): 1, 3, 5

	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)
(C)	1.	Manually actuate CCAS.	Depressed CCAS push buttons on 2C03 or 2C14.	N/A SAT UNSAT
			Observed CCAS actuated on PPS inserts on 2C03. Trip paths 1&2 if actuated from 2C03 OR trip paths 3&4 if actuated from 2C14.	
	2.	Verify CNTMT Cooling fans running.  • 2VSF-1A  • 2VSF-1B  • 2VSF-1C  • 2VSF-1D  POSITIVE CUE:  Red lights ON.  NEGATIVE CUE:	On panels 2C16 and 2C17, observed red light On and green light OFF for all four CNTMT cooling fans.	N/A SAT UNSAT
		Green lights ON.		
(C)	3.	Verify ALL CNTMT Cooling Bypass dampers open.  2UCD-8209-1 2UCD-8203-1 2UCD-8222-2 2UCD-8216-2 POSITIVE CUE: Red lights ON. NEGATIVE CUE: Green lights ON.	On panels 2C16 and 2C17, observed red lights ON for all dampers except 2UCD-8216-2.	N/A SAT UNSAT
	4.	Report to CRS that damper 2UCD-8216-2 failed to open.	Reported to CRS the failure of 2UCD-8216-2 to open.	N/A SAT UNSAT

	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)	
(C)	5.	Open damper 2UCD-8216-2	Placed handswitch on panel 2C16 for 2UCD-8216-2 to OPEN.	N/A SAT UNSAT	
			Observed red light ON and green light OFF above handswitch for 2UCD-8216-2.		
	6.	Verify BOTH SW Cooling Outlet valves open.	Observed red light ON and green light OFF for 2CV-1519-1 and	N/A SAT UNSAT	
		• 2CV-1519-1	2CV-1513-2 on panels 2C16 and 2C17.		
		• 2CV-1513-2			
		POSITIVE CUE:			
		Red lights ON.			
		NEGATIVE CUE:			
		Green lights ON.			
	8.	Verify BOTH SW Cooling Inlet valves open.	Observed red light ON and green light OFF for 2CV-1511-1 and	N/A SAT UNSAT	
		• 2CV-1511-1	2CV-1510-2 on panels 2C16 and 2C17.		
		• 2CV-1510-2			
		POSITIVE CUE:			
		Red lights ON.			
		NEGATIVE CUE:			
		Green lights ON.			
			END		

### **EXAMINER'S COPY**

### JPM INITIAL TASK CONDITIONS:

Reactor has tripped due to a LOCA. CCAS has failed to actuate automatically.

### **INITIATING CUE:**

The SM/CRS directs, "Manually actuate CCAS per 2202.003 Section 1 Step 6, then verify CNTMT coolers in Emergency Mode per 2202.003 Section 1 Step 11."

### **EXAMINEE'S COPY**

### JPM INITIAL TASK CONDITIONS:

Reactor has tripped due to a LOCA. CCAS has failed to actuate automatically.

### **INITIATING CUE:**

The SM/CRS directs, "Manually actuate CCAS per 2202.003 Section 1 Step 6, then verify CNTMT coolers in Emergency Mode per 2202.003 Section 1 Step 11."

UNIT:	2	ı	REV #:	000	_		DATE:		
SYSTEM/	DUTY AREA	: Emergend	y Feed	water	System				
TASK:	Shutdown	an EFW Train V	Vith an I	EFAS I	Present (2F	P7B Secu	ured)		
JTA#:	ANO2ROEF	WNORM19							
KA VALU	IE RO:	3.4	SRO:		3.5	KA REF	ERENCE:		061 A2.07
APPROV	ED FOR AD	MINISTRATION T	то:	RO:	Х	SRO:	X		
TASK LO	CATION:	INSIDE CR	l:	X	OUTSIDE	CR:	I	вотн:	,
SUGGES	TED TESTIN	G ENVIRONMEN	NT AND	METH	OD (PERFO	ORM OR	SIMULATE	≣):	
PLANT S	ITE:	;	SIMULA	TOR:	Perf	orm	LAB: _		
POSITION	N EVALUATI	ED: RO: _			SRO:				
ACTUAL	TESTING EN	NVIRONMENT:	SIM	ULATO	OR:	PLA	NT SITE:		LAB:
TESTING	METHOD:	SIMULATE:		P	ERFORM:				
APPROX	IMATE COM	PLETION TIME	IN MINU	ITES:	15 N	Minutes	_		
REFEREN	NCE(S): 2	106.006 rev. 053	-02-0						
EXAMINE	E'S NAME:					ss	SN:		
EVALUA	TOR'S NAME	i:							
		RFORMANCE WINED TO BE:	AS EVA	LUAT	ED AGAINS	ST THE S	TANDARE	OS CONTA	INED IN THIS
SATISFA	CTORY:		UNSATI	SFACT	ORY:				
PERFORI	MANCE CHE	CKLIST COMM	ENTS:						
Start Time		Stop Time		То	tal Time _				
SIGNED:					DATE:				

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:
The examiner shall review the "Briefing Checklist - System Walkthrough" portion of 1064.023 Attachment 6
with the examinee.
JPM INITIAL TASK CONDITIONS:
Mode 3, post reactor trip, EFAS #1 and #2 have actuated. Chemistry has been notified to sample Main
Steam to accommodate dose calculations.
TASK STANDARD:
EFW flow has been established to both S/G's using 2P7A and 2P7B has been secured.
TASK PERFORMANCE AIDS:
2202.006 Section 14.0.
SIMULATOR SETUP:
Mode 3, EFAS1 and EFAS2 actuated, S/G levels are ~40%, MFW pumps have been secured, and
Main Feed block valves are closed. Fail 2CV 1025-1 closed using component malfunction.
EXAMINER'S NOTES:

### **INITIATING CUE:**

The SS/CRS directs, "Secure 'B' Emergency Feedwater Pump (2P7B) due to failure of 2CV 1025-1 to open from the control room and establish EFW flow and restore both steam generator levels to 60% with EFW Pump 2P7A using 2106.006 Section 14.0."

CRITICAL ELEMENTS (C): <u>1, 2, 6, 7</u>

	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)
С	1.	Check 2P7A available.  POSITIVE CUES: Red light is ON above 2CV-0340-2.  Pump discharge pressure and	On Panel 2C17, observed that 2P7A is running. Checked that RED light above handswitch for 2CV-0340-2 is ON. AND Checked pump speed and discharge pressure are normal	N/A SAT UNSAT
		speed are normal values.	values.	
С	2.	Override handswitches to OPEN for 2P7A discharge valves.	On Panel 2C16, placed handswitches for 2CV-1037-1 and 2CV-1039-1 to OPEN and released.	N/A SAT UNSAT
		POSITIVE CUE: Green lights OFF; red lights ON.	Observed green light OFF; red light ON over handswitches for 2CV-1037-1 and 2CV-1039-1	
		NEGATIVE CUE: Green lights ON; red lights OFF.	AND On Panel 2C16, placed handswitches for 2CV-1026-2 and 2CV-1076-2 to OPEN and released.	
			Observed green light OFF; red light ON over handswitches for 2CV-1026-2 and 2CV-1076-2	
	3.	Verify feed flow established to 'A' and 'B' SGs.	On Panel 2C16, observed that 2FIS-0718-2 and 2FIS-0713-2 indicate flow.	N/A SAT UNSAT
		Note: flow rate is dependent on SG pressure.		
		POSITIVE CUE: Flow is indicated on 2FIS-0718- 2 and 2FIS-0713-2.		
		NEGATIVE CUE: Flow is NOT indicated on 2FIS-0718-2 and 2FIS-0713-2.		

	PERF	FORMANCE CHECKLIST	STANDARDS	(Circle One)				
	EXAMINER'S NOTE:							
be use	d to con		emperature and SG pressure. The 2P7 rate to the SGs or the discharge valve					
	4.	Control SG levels.	On Panel 2C16, cycled discharge valves 2CV- 1026-2 and 2CV-1076-2 to control SG levels.  OR  Reduced EFW Pump 2P7A speed using speed controller to control SG levels.	N/A SAT UNSAT				
	5.	Monitor RCS temperature and pressure during SG refill.  POSITIVE CUE: CBOR acknowledges request. Reports RCS temperature stable at ≈ 547°F.  AND PZR pressure controlling at ≈2200 psia.	Requested Control Board Operator to monitor for abnormal decrease in RCS temperature and PZR pressure using installed T <sub>c</sub> , T <sub>h</sub> and T <sub>ave</sub> meters.  OR  Used SPDS or Plant Computer to monitor RCS temperatures and PZR pressure.	N/A SAT UNSAT				
	I	•	MINER'S NOTE:					
	The	simulator only has Panel 2C40 hard	ware. The reset will be accomplished	in 2C40 only.				
(C)	6.	Reset EFAS lockout relays on 2C39 and 2C40.  POSITIVE CUE: Red lights ON above EFAS-1 and EFAS-2 pushbutton.	When SG levels above 25.0%, depressed reset pushbuttons for EFAS-1 and EFAS-2 on Panel 2C40.  AND Observed Red lights ON above the EFAS-1 and EFAS-2 pushbuttons.	N/A SAT UNSAT				
(C)	7.	Secure 2P7B.  POSITIVE CUE: Green light ON; red light OFF.  NEGATIVE CUE: Green light OFF; red light ON.	On Panel 2C17, turned handswitch for 2P7B to Normal-After-Stop.  OR  Placed handswitch for 2P7B in Pull-To-Lock.  Observed green light ON, red light OFF above handswitch for 2P7B.	N/A SAT UNSAT				

PER	FORMANCE CHECKLIST	STANDARDS	(Circle One)
8.	Verify 2CV-1036-2 and 2CV-1038-2 OPEN.	On Panel 2C17, placed handswitches for 2CV-1036-2 and 2CV-1038-2 to OPEN.	N/A SAT UNSAT
	POSITIVE CUE: Red light is ON and Green light is OFF above handswitches for 2CV-1036-2 and 2CV-1038-2.	On Panel 2C17, observed that Red light is ON and Green light is OFF above handswitches for 2CV-1036-2 and 2CV-1038-2.	
		NOTE:	
	by examinee, report as CRS that 2CV pen by the WCO and there is no need	V 1025-1 had previously been cycled ced to cycle it again.	ppen and closed with
9.	Verify 2CV-1075-1 OPEN.	On Panel 2C17, placed handswitch for 2CV-1075-1 to OPEN	N/A SAT UNSAT
	POSITIVE CUE:  Red light is ON and Green light is OFF above handswitch for 2CV-1075-1.	On Panel 2C17, observed that Red light is ON and Green light is OFF above handswitch for 2CV-1075-1.	
10.	Close 2CV-1075-1.	On Panel 2C17, placed handswitch for 2CV-1075-1 to CLOSE.	N/A SAT UNSAT
	POSITIVE CUE: Green light is ON and Red light is OFF above handswitch for 2CV-1075-1.	On Panel 2C17, observed that Green light is ON and Red light is OFF above handswitch for 2CV-1075-1.	
		END	

## **EXAMINER'S COPY**

### JPM INITIAL TASK CONDITIONS:

Mode 3, post reactor trip, EFAS #1 and #2 have actuated. Chemistry has been notified to sample Main Steam to accommodate dose calculations.

#### **INITIATING CUE:**

The SS/CRS directs, "Secure 'B' Emergency Feedwater Pump (2P7B) due to failure of 2CV-1025-1 to open from the control room and establish EFW flow and restore both steam generator's level to 60% with EFW Pump 2P7A using 2106.006 Section 14.0."

## **EXAMINEE'S COPY**

### JPM INITIAL TASK CONDITIONS:

Mode 3, post reactor trip, EFAS #1 and #2 have actuated. Chemistry has been notified to sample Main Steam to accommodate dose calculations.

#### **INITIATING CUE:**

The SS/CRS directs, "Secure 'B' Emergency Feedwater Pump (2P7B) due to failure of 2CV-1025-1 to open from the control room and establish EFW flow and restore both steam generator's level to 60% with EFW Pump 2P7A using 2106.006 Section 14.0."

UNIT:	2	<del>_</del>		REV #:	000	<u> </u>		DATE:			
SYSTEM	/DUTY	AREA:	Chemical	and Vol	ume (	Control Sys	stem				
TASK:	Oper	ate Charg	ing Pump 2	2P36B Lo	cally	During Alt	ernate Shi	utdown	1		
JTA#:	ANO	2ROCVCS	OFFNORM4	6							
KA VALU	JE	RO:	3.8	SRO:		3.4	KA REFER	ENCE:		004 A4.08	
APPROV	ED FC	R ADMINI	STRATION	TO:	RO:	X	SRO:	X			
TASK LC	CATIO	ON:	INSIDE CI	R:		OUTSIDE	CR:	X	вотн:		
SUGGES	STED T	ESTING E	NVIRONME	NT AND	METH	OD (PERFC	RM OR SI	MULAT	E):		
PLANT S	SITE:	Sim	ulate	SIMULA	ΓOR:			LAB:			
POSITIO	N EVA	LUATED:	RO:			SRO:					
ACTUAL	TEST	ING ENVIR	ONMENT:	SIMU	JLATO	OR:	PLAN	Γ SITE:			
TESTING	METH	HOD:	SIMULATE:		P	ERFORM:		_			
APPROX	IMATE	COMPLE	TION TIME	IN MINU	TES:	20 N	linutes				
REFERE	NCE(S	): <u>AOP</u>	2203.014, R	ev. 14-06	6-0						
EXAMINE	EE'S N	AME:					SSN	:			
EVALUA <sup>®</sup>	TOR'S	NAME:									
		E'S PERFO		VAS EVA	LUAT	ED AGAINS	ST THE STA	ANDAR	DS CONTA	AINED IN THIS	
SATISFA	CTOR	Y:		UNSATIS	SFAC	ΓORY:		_			
PERFORMANCE CHECKLIST COMMENTS:											
Start Time			itop ime		To	otal Time					
SIGNED:						DATE:					

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:
The examiner shall review the "Briefing Checklist - System Walkthrough" portion of 1064.023 Attachment 6
with the examinee.
JPM INITIAL TASK CONDITIONS:
The control room has been evacuated as required by 2203.014, "Alternate Shutdown". Simulate
obtaining keys, handheld radio and flashlight from the alternate shutdown locker. Enter controlled access, if
necessary, using normal ingress and egress methods and follow all normal procedural controls for
radiological, security and other concerns during the performance of this JPM.
TASK STANDARD:
Charging pump (2P36B) has been started from breaker 2B62-A5.
TASK PERFORMANCE AIDS:
2203.014, Alternate Shutdown Section 6, RO 2 Follow-up Actions. Mark through steps 1, 2, 3 and 4 to
indicate completion.
SIMULATOR SETUP:
None.
EXAMINER'S NOTES:
Sign in under RWP 2002-05 Task 1 - NRC RWP.

#### **INITIATING CUE:**

The SM/CRS directs, "Perform applicable steps of Alternate Shutdown AOP for RO2, Section 6. Steps 1 through 4 have been completed."

**CRITICAL ELEMENTS (C):** 4, 6, 8, 9, 10

PERFORMANCE CHECKLIST			STANDARDS (Circle One)			
NOTE: Examinee will enter RCA by normal means. The following actions are performed on the 354' elevation of the auxiliary building.						
	to 2CV-4840-2 and 2B62-F2,		At MCC 62, open breakers 2B62- E4, power to 2CV-4840-2 and 2B62-F2, power to 2CV 4950-2.	N/A SAT UNSAT		
		POSITIVE CUE				
		Breaker 2B62-E4 is open. Both red and green lights OFF.	Observed both red and green lights OFF for 2B62-E4, and			
		Breaker 2B62-F2 is open. Both red and green lights OFF.	2B62-F2.			
	2.	Inform RO 1 on radio that power has been removed from 2CV-4950-2.	Contacted RO 1 by radio and inform that RWT Suction To Charging Pumps valve 2CV-4950-2 is de-energized (RO1 step 6).	N/A SAT UNSAT		
		Give the following response when contacted as RO 1: "Understand RWT Suction To Charging Pumps Valve 2CV-4950-2 is de-energized (RO1 step 6)."	0).			
	<u> </u>		NOTE:			
Piping	The following actions are performed on the 354' elevation of the auxiliary building in the Upper South Piping Penetration Room (USPPR). Area around 2CV 4840-2 may be contaminated, so actions to verify valve closed may need to be done from a distance away from the valve.					
	3.	Verify 2CV-4840-2 is OPEN.	In the USPPR, verified 2CV-4840-2 is OPEN by one of the following methods:	N/A SAT UNSAT		
		POSITIVE CUE: 2CV 4840-2 is OPEN.	Verify that pointer on valve indicates open.			
			AND/OR			
			Screw threads on the valve stem are at the upper part of the gland packing area (the shiny part of the stem is exposed).			

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)			
			NOTE:				
	After transitioning out of USPPR, Give the following message: "RO 1 reports on the radio that the BAMT Gravity Feed Outlet valves, 2CV-4920-1 and 2CV-4921-1 are de-energized."						
The Exa	The Examinee will then transition to the 386' of the RCA to the Boric Acid Tank Room.						
С	4.	Verify 2CV-4920-1 and 2CV-4921-1 are OPEN.  INITIAL CUE:  2CV-4920-1 and 2CV-4921-1	In Boric Acid Tank Room under each Boric Acid Tank, verified 2CV-4920-1 and 2CV-4921-1 are OPEN by one of the following methods on each valve:	N/A SAT UNSAT			
	are CLOSED.		Manual engagement lever would be depressed and handwheel taken to the open direction until valve travel stopped.				
			AND/OR				
		Give after valve opening simulated:	Verify that pointer on valve indicates open.				
		POSITVE CUE:	AND/OR				
	2CV-4920-1 and 2CV-4921-1 are OPEN.		Screw threads on the valve stem are at the upper part of the gland packing area (the shiny part of the stem is exposed).				
	5.	Inform CRS on radio that BAM Tank Gravity Feed Outlet Valves are OPEN (CRS step 19).	Contact CRS on radio and inform that BAM Tank Gravity Feed Outlet Valves are OPEN (CRS	N/A SAT UNSAT			
		Give the following response when contacted as CRS: "Understand BAM Tank Gravity Feed Outlet Valves are OPEN (CRS step 19)."	step 19).				

#### NOTE:

Inform the examinee that steps 10 and 11 of section 6 will NOT be performed as part of this JPM.

Provide the following message: "CRS reports that the VCT outlet valve 2CV-4873-1 has been deenergized."

#### NOTE:

This valve, 2CV 4873-1 is located on 354' level of the RCA inside the VCT room and is in a locked high radiation area. DO NOT ALLOW ENTRY. Discuss how valve would be verified closed, if entry were made, when outside the room.

	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)
С	C 6. Verify VCT Outlet Valve 2CV-4873-1 is closed.		On 354' level inside VCT room, verified 2CV-4873-1 CLOSED by one of the following methods:	N/A SAT UNSAT
		POSITIVE CUE:	DISCUSS ONLY	
		2CV 4873-1 is CLOSED.	Manual engagement lever would be depressed and handwheel taken to the open direction until valve travel stopped.	
			AND/OR	
			Verify that pointer on valve indicates open.	
			AND/OR	
			Screw threads on the valve stem are at the upper part of the gland packing area (the shiny part of the stem is exposed).	
	7. Verify VCT Makeup Isolation Valve 2CV-4941-2 maintained CLOSED.		On 354' level outside VCT Room, verified 2CV-4941-2 is maintained CLOSED by:	N/A SAT UNSAT
		POSITIVE CUES:	Closing Instrument Air Supply	
		2CV-4941-2 is CLOSED.	valve.	
		Instrument Air Supply valve is CLOSED.	AND  Venting air pressure off supply	
		Air Pressure is VENTED.	regulator.	
			NOTE:	
Inform	the exa	aminee that Steps 14 and 15 of S	Section 6 will NOT be performed a	s part of this JPM.
		ated on 354' elevation of the RCA		
Provid	le the fo	llowing message when at MCC 6	62: "2P36B is not running, green li	ght is lit on 2B62-A5."
	8.	Inform TSC that 2P36B is not running.	At breaker 2B62-A5, observed Green light and informed the TSC Charging Pump 2P36B is NOT running.	N/A SAT UNSAT
		When TSC is contacted provide the following:		
		"Understand Charging Pump 2P36B is not running. Start Charging Pump 2P36B."		

	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)			
	NOTE:						
	If examinee requests Attachment E, Safe Shutdown Systems Checklist step 4.D, provide the following message:						
"Step	4.D stat	es PZR level maintained 29 to 80	%."				
С	9.	Place local/remote handswitch (2HS-4843-2) for 2P36B to LOCAL.  POSITIVE CUE: Local/remote handswitch in LOCAL.	At breaker 2B62-A5, rotated local/remote handswitch (2HS-4843-2) to LOCAL.	N/A SAT UNSAT			
С	10.	Start Charging Pump (2P36B).  POSITIVE CUE: Red light ON; green light OFF. NEGATIVE CUE: Green light ON; red light OFF.	At breaker 2B62-A5, rotated start/stop handswitch (2HS-4844-2) to START.  Observed red light ON, green light OFF.	N/A SAT UNSAT			
	I	1	END	I			

#### **EXAMINER'S COPY**

#### JPM INITIAL TASK CONDITIONS:

The control room has been evacuated as required by 2203.014, "Alternate Shutdown". Simulate obtaining keys, handheld radio and flashlight from the alternate shutdown locker. Enter controlled access, if necessary, using normal ingress and egress methods and follow all normal procedural controls for radiological, security and other concerns during the performance of this JPM.

#### **INITIATING CUE:**

The SM/CRS directs, "Perform applicable steps of Alternate Shutdown AOP for RO2, Section 6. Steps 1 through 4 have been completed."

#### **EXAMINEE'S COPY**

#### JPM INITIAL TASK CONDITIONS:

The control room has been evacuated as required by 2203.014, "Alternate Shutdown". Simulate obtaining keys, handheld radio and flashlight from the alternate shutdown locker. Enter controlled access, if necessary, using normal ingress and egress methods and follow all normal procedural controls for radiological, security and other concerns during the performance of this JPM.

#### **INITIATING CUE:**

The SM/CRS directs, "Perform applicable steps of Alternate Shutdown AOP for RO2, Section 6. Steps 1 through 4 have been completed."

UNIT:	2		REV #: 00	00	D	ATE:	
SYSTEM/	DUTY AREA	: CEDM Co	ontrol System	1			
TASK:	Test TCB2						
JTA#:	ANO2ROCE	EDMSURV15					
KA VALU	E RO:	4.3	SRO:	4.3	KA REFERE	NCE:	012 A4.06
APPROVI	ED FOR AD	MINISTRATION	TO: RO	: <u> </u>	SRO: X		
TASK LO	CATION:	INSIDE CI	R:	OUTSIDE	CR:	вотн:	<u>X</u>
SUGGES	TED TESTIN	G ENVIRONME	NT AND MET	THOD (PERF	ORM OR SIM	JLATE):	
PLANT S	ITE:	Simulate	SIMULATOR	k:	L	AB:	
POSITION	POSITION EVALUATED: RO: SRO:						
ACTUAL TESTING ENVIRONMENT: SIMULATOR: PLANT SITE: LAB:							
TESTING	METHOD:	SIMULATE:	:	PERFORM:			
APPROXI	MATE COM	PLETION TIME	IN MINUTES	S: <u>20</u>	Minutes		
REFEREN	ICE(S): 2	105.009, Rev. 0	20-07-0 and	2102.002 Rev	050-02-0		
EXAMINE	E'S NAME:				SSN:		
EVALUAT	TOR'S NAME	<b>:</b> :					
		RFORMANCE V IINED TO BE:	WAS EVALUA	ATED AGAIN	ST THE STAN	IDARDS CON	TAINED IN THIS
SATISFA	CTORY:		UNSATISFA	CTORY:		-	
PERFORMANCE CHECKLIST COMMENTS:							
Start Time		Stop Time	·	Total Time		-	
SIGNED:				DATE:			

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:
The examiner shall review the "Briefing Checklist - System Walkthrough" portion of 1064.023 Attachment 6
with the examinee.
JPM INITIAL TASK CONDITIONS:
The plant is in Mode 5 and preparations are being made for heatup. The Reactor Trip Circuit Breakers
(TCB's) are open. TCB 9 is closed. All reactor trip signals are clear. Both MG sets are running. The
requirements of TCB/CEDMCS Status Log (OPS-B26) are satisfied.
TASK STANDARD:
TCB 2 tested. (Complete 2105.009 Supplement 1 steps 2.1 & 2.2 for TCB 2)
TASK PERFORMANCE AIDS:
OP2105.009 Supplement 1 and 2102.002 Exhibit 1
SIMULATOR SETUP:
None.
EXAMINER'S NOTES:

### **INITIATING CUE:**

The SM/CRS directs, "Test TCB 2 using 2105.009 Supplement 1."

CRITICAL ELEMENTS (C): 1, 2, 5, 11

START	TIME: _			
	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)
		TRA	ANSITION NOTE	
Procee	ed to Rea	actor Trip Circuit Breaker Panel area	a on 404' elevation of the RAB.	
(C)	1.	Verify Undervoltage Trip Device Armature in contact with Air Gap Adjustment Screw for TCB 2.  POSITIVE CUE: Undervoltage Trip Device Armature is in contact with Air Gap Adjustment Screw for TCB 2.	Opens breaker door.  Using 2102.002 Exhibit 1, observed Undervoltage Trip Device Armature in contact with Air Gap Adjustment Screw for TCB 2.	N/A SAT UNSAT
candid room t	ate: I wil hat you	I act as the operator stationed in the	ed in the control room. Provide the force control room at 2C23 and will perform the control room.	
(C)	2.	Unlock PPS trip path reset keylock and close TCB 2 using pushbutton on 2C23.  POSITIVE CUE: Operator in control room acknowledges direction and reports that TCB 2 is closed.	Using proper communications techniques, directs Operator in Control Room to close TCB 2 from the control room.  (the following are details of required actions, if necessary: Obtains trip path reset key from Shift Manager.  Inserts key into trip path reset keylock.  Unlocks trip path.  Closes TCB 2 using pushbutton on 2C23.	N/A SAT UNSAT
			Observes TCB 2 indication on mimic panel above 2C-23 red light on and green light off.)	

	PERF	ORMANCE CHECKLIST	STANDARDS	(Circle One)
	3.	Lock PPS trip path reset and remove key.  POSITIVE CUE: Operator in control room acknowledges direction and reports that the Trip path reset is locked and key is removed.	Using proper communications techniques, directs Operator in Control Room to Lock the trip path and Remove key.	N/A SAT UNSAT
	ner's not		d from the Reactor Trip Circuit Break	er Panel area on 404'
	4.	Verify TCB 2 closed per step 2.1.  POSITIVE CUE: TCB 2 red light ON and green light OFF and / or Mechanical breaker position closed.	Observes TCB 2 local breaker position red light on and green light off  AND/OR  Mechanical breaker position closed.	N/A SAT UNSAT
(C)	5.	Hold 2HS/TEST in UV Bypass position.  POSITIVE CUE: 2HS/TEST in UV Bypass position.	Holds switch 2HS/TEST to the UV Bypass position.	N/A SAT UNSAT
		e: The following step is performed fraction.	rom the Control room. The candidate	should direct control
	6.	Momentarily depress Reactor Trip pushbutton (2HS-9071-2) on 2C03.  POSITIVE CUE: Operator in the Control Room acknowledges direction and reports that Reactor trip pushbutton has been pushed.	Using proper communications techniques, directs Operator in the Control Room to open TCB 2 by momentarily depressing Reactor Trip pushbutton (2HS-9071-2) on 2C03.	N/A SAT UNSAT

Examiner's note: The following step is performed from the Reactor Trip Circuit Breaker Panel area on 404' elevation of the RAB.

PERFORMANCE CHECKLIST		STANDARDS	(Circle One)
7.	Verify TCB opens.  POSITIVE CUE:  TCB 2 local breaker position red light OFF and green light ON and/or mechanical breaker position shows OPEN	Observes TCB 2 local breaker position red light OFF and green light ON and/or mechanical breaker position open.	N/A SAT UNSAT
	e: The following step is performed for the following step is perform this action.	rom the Control room. The candidate	should direct control
8.	Check 2K12-A10 alarm comes in or re-flashes.  POSITIVE CUE: Operator in the control room acknowledges direction and reports the alarm window 2K12-A10 indicates reflashed.	Using proper communications techniques, directs Operator in Control Room to check 2K12-A10 alarm comes in or re-flashes.	N/A SAT UNSAT
•			
ner's not on of the		rom the Reactor Trip Circuit Breaker	Panel area on 404'
9.	Release 2HS/TEST switch.	Releases switch 2HS/TEST to the auto position.	N/A SAT UNSAT
9.	Release 2HS/TEST switch.  POSITIVE CUE: 2HS/TEST in AUTO position.		N/A SAT UNSAT
ner's NO	POSITIVE CUE: 2HS/TEST in AUTO position.		
ner's NO	POSITIVE CUE:  2HS/TEST in AUTO position.  TE: The following step is performed	the auto position.	

Examiner's note: The following step is performed from the Reactor Trip Circuit Breaker Panel area on 404' elevation of the RAB.

PERFORMANCE CHECKLIST		ORMANCE CHECKLIST	STANDARDS	(Circle One)			
(C)	11.	Hold 2HS/TEST in Shunt Bypass position.  POSITIVE CUE:	Holds switch 2HS/TEST to the Shunt Bypass position.	N/A SAT UNSAT			
		2HS/TEST in Shunt Bypass position.					
		TE: The following step is performed rform this action.	I in the control room. The candidate s	should direct control room			
	12.	Momentarily depress Reactor Trip pushbutton (2HS-9071-2) on 2C03.  POSITIVE CUE: Operator in the Control Room acknowledges direction and reports that Reactor trip pushbutton has been pushed.	Using proper communications techniques, directs Operator in Control Room to open TCB 2 by momentarily depressing Reactor Trip pushbutton (2HS-9071-2) on 2C03.	N/A SAT UNSAT			
Examiner's note: The following step is performed from the Reactor Trip Circuit Breaker Panel area on 404' elevation of the RAB.							
	13.	Verify TCB opens.  POSITIVE CUE:  TCB 2 local breaker position red light OFF and green light ON and/or mechanical breaker position shows OPEN	Observes TCB 2 local breaker position red light OFF and green light ON and/or mechanical breaker position open.	N/A SAT UNSAT			
		TE: The following step is performed rform this action.	I in the control room. The candidate s	should direct control room			
	14.	14. Check 2K12-A10 alarm comes in or re-flashes.	Using proper communications techniques, directs Operator in Control Room to check 2K12-A10 alarm comes in or re-flashes.	N/A SAT UNSAT			
		POSITIVE CUE:					

Examiner's note: The following step is performed from the Reactor Trip Circuit Breaker Panel area on 404' elevation of the RAB.

	PERFORMANCE CHECKLIST		STANDARDS	(Circle One)	
	15.	Release 2HS/TEST switch.	Releases switch 2HS/TEST to AUTO position.	N/A SAT UNSAT	
		POSITIVE CUE: 2HS/TEST in AUTO position.			
END					

# **Examiner's Copy**

#### JPM INITIAL TASK CONDITIONS:

The plant is in Mode 5 and preparations are being made for heatup.

The Reactor Trip Circuit Breakers (TCB's) are open.

TCB 9 is closed.

All reactor trip signals are clear.

Both MG sets are running.

The requirements of TCB/CEDMCS Status Log (OPS-B26) are satisfied.

#### **INITIATING CUE:**

The SM/CRS directs, "Test TCB 2 using 2105.009 Supplement 1."

# **Examinee's Copy**

#### JPM INITIAL TASK CONDITIONS:

The plant is in Mode 5 and preparations are being made for heatup.

The Reactor Trip Circuit Breakers (TCB's) are open.

TCB 9 is closed.

All reactor trip signals are clear.

Both MG sets are running.

The requirements of TCB/CEDMCS Status Log (OPS-B26) are satisfied.

#### **INITIATING CUE:**

The SM/CRS directs, "Test TCB 2 using 2105.009 Supplement 1."