JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 000 **DATE:** _____

SYSTEM/DUTY AREA: Emergency Diesel Generator System

TASK: Return the AAC Diesel Engine to normal standby (following an overspeed trip).

JTA#: 206452001A4

KA VALUE **RO:** 4.0 **SRO:** 4.3 **KA REFERENCE:** 064 A4.01

APPROVED FOR ADMINISTRATION TO: **RO:** X **SRO:** X

TASK LOCATION: **INSIDE CR:** _____ **OUTSIDE CR:** X **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: Simulate **SIMULATOR:** _____ **LAB:** _____

POSITION EVALUATED: **RO:** _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: **SIMULATOR:** _____ **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: **SIMULATE:** _____ **PERFORM:** _____

APPROXIMATE COMPLETION TIME IN MINUTES: 14 Minutes

REFERENCE(S): ACA 2203.012Z Rev 001-04-0

EXAMINEE'S NAME: _____ **SSN:** _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

The following conditions exist.

The plant is at normal 100% power operating conditions.

The AAC diesel has tripped on overspeed.

TASK STANDARD:

The AAC Diesel has been returned to normal standby conditions

TASK PERFORMANCE AIDS:

ACA 2203.012Z (2K432-A1)

EXAMINER'S NOTE:

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Return the AAC Diesel to a normal standby condition using OP 2203.012Z (2K432-A1)."

CRITICAL ELEMENTS (C): 3, 4, 5, 6, 7, and 8

START TIME: _____

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Verify the engine is shutdown. POSITIVE CUES: On panel 2C-442 engine speed indicates 0 rpm. There is no noise in the AAC Generator building that would indicate the diesel is running. The engine crankshaft is at a stand still.	Verified the engine shutdown by EITHER: No diesel engine noise in the building OR On panel 2C-442, engine speed indicated 0 rpm OR Observed the engine crankshaft at a stand still locally.	N/A SAT UNSAT
	2.	Verify the generator output breaker is open. POSITIVE CUE: On 2A-1001 breaker cubicle door the green and white lamps are on; red lamp is off.	On cubicle 2A-1001 breaker door, observed the green lamp on and the red lamp off. OR On panel 2C440, observed green light on, red light off for AAC diesel output breaker. OR On the PLC, observed 2A-1001 indicating green (open).	N/A SAT UNSAT
EXAMINER'S NOTE: The engine overspeed reset switch is located INSIDE panel 2C-442. Its case is black, the button is black, and the word reset above the button is embossed in the black plastic.				
(C)	3.	Reset the Engine Overspeed Reset Switch. POSITIVE CUE: The green overspeed trip LED is NOT lit. NEGATIVE CUE: The green overspeed trip LED is lit.	Inside panel 2C-442 located the engine overspeed trip reset switch on the top of the engine speed switch. Pushed the engine overspeed reset.	N/A SAT UNSAT
(C)	4.	Reset the PLC. POSITIVE CUE: PLC shows reset.	The student pushed the "PLC RESET" button On the annunciator screen on the local computer for the AAC Generator	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
(C)	5.	Place the Annunciator Reset/Acknowledge Switch in RESET. POSITIVE CUE: 2K432-A1 "ENGINE OVERSPEED" is NOT lit or in slow flash. NEGATIVE CUE: 2K432-A1 "ENGINE OVERSPEED" is lit or in fast flash.	Rotated the annunciator reset switch CW to RESET and released the switch.	N/A SAT UNSAT
EXAMINER'S NOTE: The air damper operating shaft is located on top of the AAC diesel engine in the vicinity of the exhaust pipes. It is best accessed from the north-east side of the engine.				
(C)	6.	Reset the engine air damper. POSITIVE CUE: The operating shaft pin shows OPEN. NEGATIVE CUE: The operating shaft pin shows CLOSED.	Using a 3/4" or adjustable wrench, rotated the air damper operating shaft CCW until the indicating pin indicates "open"	N/A SAT UNSAT
(C)	7.	Reset the engine lockout relay. POSITIVE CUE: The engine lockout latches and locks in the reset position (straight up and down). NEGATIVE CUE: The engine lockout relay is tilted to the left.	On panel 2C-441, rotated the engine lockout switch handle CW. Observed the switch latched and locked in RESET (straight up).	N/A SAT UNSAT
(C)	8.	Reset the generator lockout relay. POSITIVE CUE: The generator lockout latches and locks in the reset position (straight up). NEGATIVE CUE: The generator lockout relay is tilted to the left.	On panel 2C-441, rotated the generator lockout switch CW. Observed the switch latched and locked in the reset position (straight up).	N/A SAT UNSAT
END				

STOP TIME: _____

JOB PERFORMANCE MEASURE

Question:

Answer:

JPM INITIAL TASK CONDITIONS:

The plant is at normal 100% power operating conditions. The AAC diesel has tripped on overspeed.

INITIATING CUE:

The SS/CRS directs, "Return the AAC Diesel to a normal standby condition using OP 2203.012Z (2K432-A1)."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 0 **DATE:** _____

SYSTEM/DUTY AREA: Auxiliary Feedwater

TASK: Steam Generator Feed Using AFW Pump 2P75

JTA#: 20065100601

KA VALUE RO: 3.4 **SRO:** 3.8 **KA REFERENCE:** 061 A2.04

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: X

____ **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ **SIMULATOR:** Perform **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: X **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** X

APPROXIMATE COMPLETION TIME IN MINUTES: 15 minutes

REFERENCE(S): OP 2106.006 Rev 050-00-0

EXAMINEE'S NAME: _____ **SSN:** ___-___-___

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: Plant is in Mode 3, Main Feed Pumps and EFW Pumps have just been secured

TASK STANDARD: Feed SGs through EFW Train B. When 2P7B Discharge Valve (2CV-1038-2) handswitch is taken to OPEN its breaker will trip. **THIS IS AN ALTERNATE SUCCESS PATH JPM.**

TASK PERFORMANCE AIDS: OP 2106.006

SIMULATOR INITIAL CONDITIONS:

Mode 3 with SG levels ~60 %.

Main Feed Pump tripped with Bypass Valves closed and recircs closed.

EFW pumps secured with all discharge MOVs closed.

2EFW-0706 and 2EFW-17 open.

Malf set for 2CV-1038-2 breaker trip when handswitch taken to OPEN

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Feed SGs at 200 gpm each with AFW pump 2P75 through EFW Train B using OP2106.006 starting at step 12.10. CRS waives local verifications for start of 2P225 and 2P75".

CRITICAL ELEMENTS (C): 3, 10, 12, 14, 15

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Start Auxiliary Lube Oil Pump (2P225).	On 2C02, placed handswitch 2HS-0766 to ON position. Observed red light ON and green light OFF.	N/A SAT UNSAT
	2.	Check amber light at (2P225) handswitch extinguished.	Checked amber light above handswitch 2HS-0766 extinguished	N/A SAT UNSAT
(C)	3.	Start AFW pump (2P75).	On 2C02, started 2P75 by taking handswitch 2HS-0763 to START. Observed red light ON and green light OFF.	N/A SAT UNSAT
	4.	Check 2P75 discharge pressure ~1450 psig.	On 2C02, observed discharge pressure ~ 1450 psig on 2PIS-0763.	N/A SAT UNSAT
	5.	Stop Auxiliary Lube Oil Pump 2P225.	On 2C02, placed handswitch 2HS-0766 to OFF position. Observed red light OFF and green light ON.	N/A SAT UNSAT
	6.	Place 2HS-0766 in AUTO.	On 2C02, placed handswitch 2HS-0766 to AUTO position.	N/A SAT UNSAT
	7.	Verify 2P7A and 2P7B are secured prior to feeding SGs with 2P75.	Observed green light ON above 2P7B handswitch 2HS-0710-A1 on 2C17. Observed green light ON for 2CV-0340-2 on 2C16.	N/A SAT UNSAT
	8.	If feeding SGs and EFAS occurs, Then immediately stop 2P75.	Stated that he will stop 2P75 if EFAS occurs.	N/A SAT UNSAT
	9.	Monitor flow and verify in limits of step 5.10. Do NOT exceed 1000 gpm.	Read limits and stated CRS requested 200 gpm to each SG and this flowrate will not exceed limits.	N/A SAT UNSAT
(C)	10.	Verify 2P7B Discharge Valves (2CV-1038-2) and (2CV-1036-2) are open.	On 2C02, placed handswitch for 2P7B Discharge Valve (2CV-1038-2) to OPEN. Observes green light OFF and red light OFF. Reports that breaker tripped.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
EXAMINEERS NOTE: **Cue examinee as CRS. "Feed SGs through EFW Train A."**				
(C)	11.	Verify 2P7A Discharge Valves (2CV-1037-1) and (2CV-1039-1) are open.	On 2C16, placed handswitch for 2P7A Discharge Valves (2CV-1037-1) and (2CV-1039-1) to OPEN. Observed green light OFF and red light ON.	N/A SAT UNSAT
(C)	12.	Crack open 2P75 to EFW Train A Flow Control Valve (2CV-0761).	On 2C02, placed handswitch for 2CV-0761 to OPEN until red and green light ON with valve position indicating ~10%.	N/A SAT UNSAT
	13.	Check the following to ensure 2P7A discharge stop-check valve is not leaking by: • 2P7A discharge pressure stable (2PIS-0713-2). • 2P7A Suct Press HI/LO alarm (2K05-E9) clear.	Checked 2P7A discharge pressure (2PIS-0713-2) on 2C16 stable. Checked alarm 2K05-E9 clear.	N/A SAT UNSAT
(C)	14.	Cycle 2P7A Discharge Valves (2CV-1026-2) and (2CV-1076-2) as desired to maintain SG levels.	On 2C16, placed handswitch for 2P7A Discharge Valves (2CV-1026-2) and (2CV-1076-2) to OPEN. Observed red light ON and green light OFF.	N/A SAT UNSAT
(C)	15.	Adjust 2CV-0761 as necessary to maintain desired SG levels and 2P75 discharge pressure.	Modulated open 2CV-0761 to establish ~200gpm flow to each SG. Observed 2FIS-0718-2 to A SG and 2FIS-0713-2 to B SG on 2C16.	N/A SAT UNSAT
END				

JOB PERFORMANCE MEASURE

QUESTION

ANSWER

JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

Plant is in Mode 3 and Main Feedwater Pumps and EFW Pumps have just been secured.

INITIATING CUE:

The SS/CRS directs, "Feed SGs at 200 gpm each with AFW pump 2P75 through EFW Train B using OP2106.006 starting at step 12.10. CRS waives local verifications for start of 2P225 and 2P75".

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 6 **DATE:** _____

SYSTEM/DUTY AREA: Pressurizer Level Control System

TASK: Shifting Lead Charging Pump

JTA#: 20045510401

KA VALUE RO: 3.5 **SRO:** 3.7 **KA REFERENCE:** 011 A2.04

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: X **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ **SIMULATOR:** Perform **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: X **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** X

APPROXIMATE COMPLETION TIME IN MINUTES: 5 Minutes

REFERENCE(S): OP 2104.002 Rev 038-01-0

EXAMINEE'S NAME: _____ **SSN:** _____-_____-_____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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:

JOB PERFORMANCE MEASURE

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: WCO has requested Charging Pump 2P36B be stopped to perform oil level check. **THIS IS AN ALTERNATE SUCCESS PATH JPM.**

TASK STANDARD: Shift lead charging pump.

TASK PERFORMANCE AIDS: OP 2104.002

SIMULATOR SETUP: Select "B" as lead charging pump and trigger 2P36C Plunger Break CVC2P36CBRK. 2P36C aligned to green bus.

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Shift lead charging pump to 2P36C using OP 2104.002 Section 8.1. Seal water pump has been running for 15 minutes."

CRITICAL ELEMENTS (C): 2, 4, 6, 9

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Place selected pump handswitch to START.	On 2C09, placed 2HS-4853-2 to START. Observed red light ON and green light OFF.	N/A SAT UNSAT
(C)	2.	Check Charging Flow goes up ~44 gpm.	On 2C09, checked Charging Flow (2FIS-4863) and reports flow indicates 60 gpm.	N/A SAT UNSAT
	3.	Did not get expected response, therefore secure 2P36C.	Placed 2HS-4853-2 to AUTO or STOP. Observed red light OFF and green light ON.	N/A SAT UNSAT
EXAMINEERS CUE: Act as CRS and direct examinee to select 2P36A as lead charging pump.				
(C)	4.	Place selected pump handswitch to START.	On 2C09, placed 2HS-4832-1 to START. Observed red light ON and green light OFF.	N/A SAT UNSAT
	5.	Check Charging Flow goes up ~44 gpm.	On 2C09, checks Charging Flow (2FIS-4863) flow indicates ~88 gpm.	N/A SAT UNSAT
(C)	6.	Place Charging Pump Select Switch (2HS-4868) to selected lead pump.	On 2C09, placed Charging Pump Select handswitch (2HS-4868) to PMP B&C position.	N/A SAT UNSAT
	7.	Verify previous lead pump stops.	Checked 2P36B stopped. Observed red light OFF and green light ON.	N/A SAT UNSAT
	8.	Check Charging Flow lowers ~44 gpm.	On 2C09, checks Charging Flow (2FIS-4863) flow indicates ~44 gpm.	N/A SAT UNSAT
(C)	9.	Place selected pump handswitch to AUTO.	On 2C09, placed 2HS-4832-1 to AUTO.	N/A SAT UNSAT
END				

JOB PERFORMANCE MEASURE

QUESTION

ANSWER

JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

WCO has requested Charging Pump 2P36B be stopped to perform oil level checks.

INITIATING CUE:

The SS/CRS directs, "Shift lead charging pump to 2P36C using OP 2104.002 Section 8.1. Seal water pump has been running for 15 minutes."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 0 **DATE:** _____

SYSTEM/DUTY AREA: Control Element Drive Mechanism Control System

TASK: Test a Reactor Trip Circuit Breaker.

JTA#: 20015320201

KA VALUE RO: 4.3 **SRO:** 4.3 **KA REFERENCE:** 012 A4.06

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: X **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: Simulate **SIMULATOR:** Perform **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** _____

APPROXIMATE COMPLETION TIME IN MINUTES: 8 minutes

REFERENCE(S): OP 2105.009 SUPP. 1 020-01-0

EXAMINEE'S NAME: _____ **SSN:** ___-___-___

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: Preparations for a Reactor startup are in progress. Mode 3. OP 2105.009 Supplement 1 Section 1.0 is completed. OP 1015.003B-26 is complete. An operator is standing by in the CEDM room.

TASK STANDARD: Reactor trip circuit breaker TCB-2 and TCB-6 operated in accordance with OP 2105.009 Supplement 1.

TASK PERFORMANCE AIDS: OP 2105.009 Supplement 1, Sections 2.1 and 2.2., TCB Close Key.

SIMULATOR SETUP: TCB 9 closed. TCB 6 is open. Mode 3 plant conditions.

JOB PERFORMANCE MEASURE

INITIATING CUE:
The SS/CRS directs, "Perform the Reactor Trip Circuit Breaker Test for TCB-6 only, using OP 2105.009 Supplement 1.0 Sections 2.1 and 2.2. Leave TCB-6 closed. "

CRITICAL ELEMENTS (C): 2, 3, 4, 8, 9, 10, 11, 14, 16

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Verify undervoltage (UV) trip device position for Reactor Trip Circuit Breakers TCB-6 . POSITIVE CUE: CEDM Room operator reports UV Trip Device armatures for TCB-6 are in contact with air gap adjusting screw.	Contacted operator in CEDM room. Requested verification of position of UV trip device armatures for TCB-6.	N/A SAT UNSAT
(C)	2.	Close TCB-6. POSITIVE CUE: TCB-2 and TCB-6 red lights ON. NEGATIVE CUE: TCB-6 green lights ON.	On panel 2C23, inserted key in ESF reset push button keylock. Placed key in UNLOCK position. Depress TCB-6 reset push button. On panel 2C23 or panel 2C14, verified red light ON for TCB-6. Placed key in LOCK position and removed key.	N/A SAT UNSAT
(C)	3.	Hold 6HS/TEST switch in UV Bypass position (for TCB-6). POSITIVE CUE: CEDM Room operator reports 6HS/TEST switch is in the Bypass Position.	Contacted operator in CEDM room. Requested 6HS/TEST switch be held in the Bypass position.	N/A SAT UNSAT
(C)	4.	Depress Manual Reactor Trip push button (2HS-9071-2).	On panel 2C03, depressed push button 2HS-9071-2.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST		STANDARDS	(Circle One)
	5.	Verify TCB-6 open. POSITIVE CUE: Green Lights ON for TCB-6 NEGATIVE CUE: Red lights ON for TCB-6	On panel 2C14, verified TCB-6 opens. Verified by green lights ON for TCB-6.	N/A SAT UNSAT
	6.	Verify annunciator 2K12-A10 actuates. POSITIVE CUE: 2K12-A10 is actuated.	On annunciator panel 2K12, acknowledged that 2K12-A10 actuated.	N/A SAT UNSAT
	7.	Verify undervoltage (UV) trip device position for Reactor Trip Circuit Breakers TCB-6 . POSITIVE CUE: CEDM Room operator reports UV Trip Device armatures for TCB-6 are in contact with air gap adjusting screw.	Contacted operator in CEDM room. Requested verification of position of UV trip device armatures for TCB-6.	N/A SAT UNSAT
(C)	8.	Contact CEDM Room operator to release 6HS/TEST switch. POSITIVE CUE: CEDM Room operator reports that 6HS/TEST switch is released	Contact CEDM Room operator to release 6HS/TEST switch.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
(C)	9.	Close TCB-6. POSITIVE CUE: Red lights ON for TCB-6 NEGATIVE CUE: Green lights ON for TCB-6	On panel 2C23, inserted key in ESF reset push button keylock. Placed key in UNLOCK position. Depress TCB-6 reset push button. On panel 2C23 or panel 2C14, verified red light ON for TCB-6. Placed key in LOCK position and removed key.	N/A SAT UNSAT
(C)	10.	Hold 6HS/TEST switch in Shunt Bypass position (for TCB-6). POSITIVE CUE: CEDM Room operator reports 6HX/TEST switch is in the Bypass Position.	Contacted operator in CEDM room. Requested 6HX/TEST switch be held in the Bypass position.	N/A SAT UNSAT
(C)	11.	Depress Manual Reactor Trip push button (2HS-9071-2).	On panel 2C03, depressed push button 2HS-9071-2.	N/A SAT UNSAT
	12.	Verify TCB-6 opens. POSITIVE CUE: Green Lights ON for TCB-6 NEGATIVE CUE: Red lights ON for TCB-6	On panel 2C14, verified TCB-6 opens. Verified by green lights ON for TCB-6.	N/A SAT UNSAT
	13.	Verify annunciator 2K12-A10 actuates. POSITIVE CUE: 2K12-A10 is actuated.	On annunciator panel 2K12, acknowledged that 2K12-A10 actuated.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
(C)	14.	Contact CEDM Room operator to release 6HS/TEST switch. POSITIVE CUE: CEDM Room operator reports that 6HS/TEST switch is released	Contact CEDM Room operator to release 6HS/TEST switch.	N/A SAT UNSAT
	15.	Verify undervoltage (UV) trip device position for Reactor Trip Circuit Breakers TCB-6. POSITIVE CUE: CEDM Room operator reports UV Trip Device armatures for TCB-6 are in contact with air gap adjusting screw.	Contacted operator in CEDM room. Requested verification of position of UV trip device armatures for TCB-6.	N/A SAT UNSAT
(C)	16.	Close TCB-6. POSITIVE CUE: Red lights ON for TCB-2 NEGATIVE CUE: Green lights ON for TCB-6	On panel 2C23, inserted key in ESF reset push button keylock. Placed key in UNLOCK position. Depress TCB-6 reset push button. On panel 2C23 or panel 2C14, verified red light ON for TCB-6. Placed key in LOCK position and removed key.	N/A SAT UNSAT
EVALUATORS NOTE: The simulator does not model K426. When the examinee attempts to open the door to 2C14, give them the positive cue below.				
	17.	Reset Reflash unit K426 in 2C14. POSITIVE CUE: Reflash unit K426 is reset	Opens back door to 2C14 to locate K426. Presses reset pushbutton on K426.	N/A SAT UNSAT
END				

JOB PERFORMANCE MEASURE

QUESTION:

ANSWER:

JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM TASK INITIAL CONDITIONS

Mode 3 conditions with preparations for a Reactor startup in progress.

OP 2105.009 Supplement 1 Section 1.0 is completed. OP 1015.003B-26 is complete.

An operator is standing by in the CEDM room.

INITIATING CUE:

The SS/CRS directs, "Perform the Reactor Trip Circuit Breaker Test for TCB-6 only, using OP 2105.009 Supplement 10.0 section 2.1 and 2.2. Leave TCB-6 closed."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 002 **DATE:** _____

SYSTEM/DUTY AREA: Chemical and Volume Control System

TASK: Perform Emergency Boration (Alternate Success Path)

JTA#: 20045060601

KA VALUE RO: 3.9 **SRO:** 3.7 **KA REFERENCE:** 004 A4.07

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: X **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ **SIMULATOR:** Perform **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** _____

APPROXIMATE COMPLETION TIME IN MINUTES: 7 Minutes

REFERENCE(S): OP 2203.032

EXAMINEE'S NAME: _____ **SSN:** _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

Mode 3, A Shutdown Margin is calculated following a reactor trip. Shutdown Margin is found to be less than required.

TASK STANDARD:

Greater than or equal to 40 gallons per minute boric acid solution being injected into the RCS using BAM Pumps via Emergency Borate Valve (2CV-4916-2). **This is an alternate success path JPM>**

TASK PERFORMANCE AIDS:

AOP 2203.032 Steps 2 through 6.

SIMULATOR SETUP:

A mode 3 IC will be set up for this JPM. Use case file JPM01.

The elements of this file are: Trigger 5 = 2CV-4873-1a = 75%. 2CV-4873-1a (VCT Outlet) malfunction set to 75%;

Then overrides 2HS-4873-2 are set to false and 2HS-4873-3 set to false to turn lights off.

This case file will simulate the VCT outlet valve tripping its output breaker due to a motor fault as it tries to shut.

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Initiate Emergency Boration using BAMT gravity feed to Charging Pump suction beginning with AOP 2203.032, Step 2."

CRITICAL ELEMENTS (C): 4, 5

PERFORMANCE CHECKLIST			STANDARD	(Circle One)
	1.	Verify at least one charging Pump (CCP) running with flow greater than 40 GPM. POSITIVE CUE: Red light(s) ON. Flow is greater than 40 gpm.	On panel 2C09, verified CCP(s) running. Observed red light ON; green light OFF above at least one of the following handswitch(es): 2HS-4832-1, "A" CCP 2HS-4852-1, "C" CCP (red) 2HS-4853-2, "C" CCP (green) 2HS-4842-2, "B" CCP Observed flow greater than 40 gpm on Charging Header Flow (2FIS-4863).	N/A SAT UNSAT
	2.	Align boric acid supply to CCP suction. POSITIVE CUE: Red light(s) ON. NEGATIVE CUE: Green light(s) ON.	On panel 2C09, opened BAMT gravity feed valves 2CV-4920-1 **and/or** 2CV-4921-1 Observed red light ON and green light OFF above handswitch(es): • 2HS-4920-1 for 2CV-4920-1 • 2HS-4921-1 for 2CV-4921-1	N/A SAT UNSAT
EXAMINER'S NOTE: In the following step the VCT outlet valve will NOT close requiring an alternate success path.				
	3.	Close volume control tank (VCT) outlet valve (2CV-4873-1). POSITIVE CUE: Green light OFF. Red light OFF. NEGATIVE CUE: Red light ON.	On panel 2C09, observed that 2CV-4873-1 did NOT go closed. Observed green light OFF; red light OFF above VCT Outlet valve handswitch (2HS-4873-1).	N/A SAT UNSAT
(C)	4.	Start at least ONE BAM pump. POSITIVE CUE: Red light ON. NEGATIVE CUE: Green light ON.	On panel 2C09, start 2P39A and/or 2P39B. Observed RED light ON above the BAM pump started, 2HS-4919-2 (2P39A) or 2HS-4910-2 (2P39B).	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARD	(Circle One)
(C)	5.	Open 2CV-4916-2, Emergency Borate From BAM Pumps Valve. POSITIVE CUE: Red light ON. NEGATIVE CUE: Green light ON.	On panel 2C09, opened 2CV-4916-2. Observed red light ON; green light OFF above Emergency borate valve, 2CV-4916-2.	N/A SAT UNSAT
	6.	Verify boric acid makeup flow control valve, 2CV-4926, closed. POSITIVE CUE: Green light ON. NEGATIVE CUE: Red light ON.	On panel 2C09, verified 2CV-4926 closed. Observed green light ON; red light OFF above Boric Acid Makeup Flow Controller (2FIC-4926).	N/A SAT UNSAT
	7.	Check Reactor Makeup Water Flow Control valve (2CV-4927) or 2CV 4941 closed. POSITIVE CUE: Green light ON. NEGATIVE CUE: Red light ON.	On panel 2C09, verified 2CV-4927 or 2CV-4941 closed. Observed green light ON; red light OFF above Reactor Makeup Water Flow Controller (2FIC-4927) or above 2CV-4941 handswitch.	N/A SAT UNSAT
	8.	Check charging header flow. POSITIVE CUE: Flow is: 44 gpm (1 CCP) 88 gpm (2 CCP) 132 gpm (3 CCP)	On panel 2C09 (upright portion), observed flow greater than 40 gpm on Charging Header Flow indicator (2FIS-4863).	N/A SAT UNSAT
END				

QUESTION:

ANSWER:

JPM INITIAL TASK CONDITIONS:

Mode 3. A Shutdown Margin is calculated following a reactor trip. Shutdown margin is found to be less than required.

INITIATING CUE:

The SS/CRS directs, "Initiate emergency boration using BAMT gravity feed to charging pump suction beginning with AOP 2203.032, Step 2."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 7 **DATE:** _____

SYSTEM/DUTY AREA: Hydrogen Recombiner and Purge System

TASK: Perform initial actions for hydrogen recombiner functional test (semi-annual on 2M55B)

JTA#: 20285050201

KA VALUE: RO: 4.0 **SRO:** 4.0 **KA REFERENCE:** 028 000 A4.01

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: X **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ **SIMULATOR:** Perform **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: X **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** X

APPROXIMATE COMPLETION TIME IN MINUTES: 20 minutes

REFERENCE(S): OP 2104.044-025-02-0

_____

EXAMINEE'S NAME: _____ **SSN:** - -

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: OP 2104.044 Supplement 2 is completed through step 2.1.

TASK STANDARD: OP 2104.044 Supplement 2 is completed through Step 2.9

TASK PERFORMANCE AIDS: OP 2104.044 Supplement 2, calculator

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Perform the Semi-Annual Hydrogen Recombiner Functional Test for 2M55B using OP 2104.044 Supplement 2 starting with Step 2.2."

CRITICAL ELEMENTS (C): 3, 9, 11, 13, 14

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Verify PWR AVAILABLE light ON.	On panel 2C184, observed PWR AVAILABLE light ON.	N/A SAT UNSAT
	2.	Verify PWR ADJ potentiometer set at zero.	On panel 2C184, observed PWR ADJ potentiometer set at 000 (digital readout at 000). OR On panel 2C184, turned potentiometer counter-clockwise to 000 (digital readout at 000).	N/A SAT UNSAT
(C)	3.	Close POWER OUT switch.	On panel 2C184, placed POWER OUT switch to ON.	N/A SAT UNSAT
	4.	Determine recombiner temperature indication correction factor.	Obtained recombiner temperature indication correction from Attachment C.	N/A SAT UNSAT
	5.	Determine containment temperature. **PROVIDE THE FOLLOWING IF PMS OR SPDS COMPUTER OOS ONLY:** POSITIVE CUE: From the PMS computer: T5605-5 = 121.46°F; T5606-6 = 128.19°F.	Obtained containment temperature data from PMS or SPDS computer temperature indication for T5605-5 and T5606-6. Data recorded. Average Containment Temperature calculated per Attachment C step 1.0. Source of data circled on data sheet.	N/A SAT UNSAT
	6.	Determine Control Room temperature. **PROVIDE THE FOLLOWING INFORMATION, WHEN ASKED:** POSITIVE CUE: Control Room temperature is 70°F and instrument number is DT034.	Obtained Control Room temperature and instrument number. Recorded Control Room temperature and instrument number on Attachment C.	N/A SAT UNSAT
	7.	Calculate recombiner temperature correction factor.	Calculated temperature correction factor per Attachment C Step 3.0.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	8.	Record temperature correction factor on data sheet.	Recorded temperature correction factor on data sheet.	N/A SAT UNSAT
(C)	9.	Record start time and turn potentiometer slowly clockwise until 48 KW is indicated.	Recorded start time and on panel 2C184, turned potentiometer clockwise until 48 KW indicated on KW meter.	N/A SAT UNSAT
	10.	Record data on Attachment C every 15 minutes.	Recorded data on Attachment C and calculated average temperature and average corrected temperature every 15 minutes.	N/A SAT UNSAT
EXAMINER'S NOTE For time compression, provide the following cues after first set of readings taken.				
(C)	11.	Positive Cue: After 45 minutes of operation, the following readings are taken: Channel 1 reads 741°F rising slowly. Channel 2 reads 739°F rising slowly. Channel 3 reads 735°F rising slowly. Calculate average of temperature reading indicated on Channels 1, 2, and 3 and subtract correct factor from average temperature to determine average corrected temperature above 700°F.	Calculated average of temperature readings indicated on Channels 1, 2, and 3. Subtracted correction factor from average temperature to determine average corrected temperature. (~706°F) Determined that average corrected temperature is above 700°F.	N/A SAT UNSAT
	12.	When corrected average temperature above 700°F, record time above 700°F in Steps 3.1 and 3.2.	Recorded time above 700°F in Steps 3.1 and 3.2	N/A SAT UNSAT
(C)	13.	Adjust potentiometer to maintain temperature between 800°F and 1000°F.	Adjusted potentiometer to maintain temperature between 800°F and 1000°F.	N/A SAT UNSAT
END				

JOB PERFORMANCE MEASURE

QUESTION:

ANSWER:

JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

OP 2104.044 Supplement 2 is completed through step 2.1.

INITIATING CUE:

The SS/CRS directs, "Perform the Semi-Annual Hydrogen Recombiner Functional Test for 2M55B using OP 2104.044 Supplement 2 starting with Step 2.2."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 000 **DATE:** _____

SYSTEM/DUTY AREA: Plant Service Systems

TASK: Isolate the instrument air supply to the MSIVs (locally)

JTA#: 24135180401

KA VALUE RO: 3.4 **SRO:** 3.5 **KA REFERENCE:** 078 K1.05

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: _____ **OUTSIDE CR:** X **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: Simulate **SIMULATOR:** _____ **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** _____

APPROXIMATE COMPLETION TIME IN MINUTES: 10 Minutes

REFERENCE(S): OP 2203.014 Rev 014-04-0

EXAMINEE'S NAME: _____ **SSN:** _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

A fire has occurred in the cable spreading room. Based on the loss of numerous indications and controls, the Shift Superintendent decides to evacuate the control room and perform an Alternate Plant Shutdown per AOP 2203.014.

TASK STANDARD:

Instrument air has been isolated to MSIVs

TASK PERFORMANCE AIDS:

OP 2203.014 Section 4, Step 4

EXAMINER'S NOTE:

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Isolate instrument air to the MSIVs in accordance with AOP 2203.014 Section 4 step 4."

CRITICAL ELEMENTS (C): 3, 6

START TIME: _____

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
EXAMINER'S NOTE: **All valves are located on the first platform above 2T-91.**				
	1.	Close the IA supply from 2T91 "2F-356 I/N" valve (2MS-540) POSITIVE CUE: 2MS-540 valve CW motion stops.	At the "A" MSIV actuator, closed 2MS-540 by rotating handwheel CW. Observed valve motion stopped when valve fully closed	N/A SAT UNSAT
	2.	Close IA supply "IA to 2CV-1010-1" valve" (2IA-166) POSITIVE CUE: 2IA-166 valve CW motion stops.	Just south of the "A" MSIV actuator, closed 2IA-166 by rotating its handwheel CW. Observed valve motion stopped when valve fully closed	N/A SAT UNSAT
(C)	3.	Open filter blow down valve on "A" MSIV point of use air filter (2F-356) POSITIVE CUE: Air bleeds off the actuator system and dies away. NEGATIVE CUE: Air is heard issuing from the filter drain and does NOT die away.	At the "A" MSIV actuator, opened 2F-356 blow down valve by turning valve CCW. Observed valve motion stopped when valve fully open.	N/A SAT UNSAT
	4.	Close IA supply from 2T91 "2F-357 I/N" valve, (2MS-539) POSITIVE CUE: 2MS-539 valve CW motion stops.	At the "B" MSIV actuator, closed 2MS-539 by rotating handwheel CW. Observed valve motion stopped when valve fully closed.	N/A SAT UNSAT
	5.	Close IA supply "2CV-1060-2 AIR ISOL" valve, (2IA-93) POSITIVE CUE: 2IA-93 valve CW motion stops.	Just south of the "A" MSIV actuator, closed 2IA-93 by rotating its handwheel CW. Observed valve motion stopped when valve fully closed.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
(C)	6.	Open filter blow down valve on "B" MSIV point of use air filter (2F-357) POSITIVE CUE: Air bleeds off the actuator system and dies away. NEGATIVE CUE: Air is heard issuing from the filter drain and does NOT die away.	At the "B" MSIV actuator, opened 2F-357 blow down valve by turning valve CCW. Observed valve motion stopped when valve fully open	N/A SAT UNSAT
	7.	Notify CRS that IA to MSIVs is isolated. POSITIVE CUE: CRS acknowledges IA isolated to the MSIVs	Using a hand held radio, the plant telephone system, or the Gaitronics system; notified CRS that IA to the MSIVs is isolated.	N/A SAT UNSAT
END				

STOP TIME: _____

JOB PERFORMANCE MEASURE

Question:

Answer:

JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

INITIAL TASK CONDITIONS:

A fire has occurred in the cable spreading room. Based on the loss of numerous indications and controls, the Shift Superintendent decides to evacuate the control room and perform an Alternate Plant Shutdown per AOP 2203.014.

INITIATING CUE:

The SS/CRS directs, "Isolate Instrument Air to the MSIVs in accordance with AOP 2203.014 Section 4 Step 4."

JOB PERFORMANCE MEASURE

SYSTEM/DUTY AREA: Liquid Radwaste/Boron Management System

TASK: Commence a liquid radwaste release of 2T21A

JTA #: 20685300101, 206853001W4

KA VALUE **RO:** 3.2 **SRO:** 3.1 **KA REFERENCE:** 068 A4.02

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: **INSIDE CR:** _____ **OUTSIDE CR:** X **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: Simulate **SIMULATOR:** _____ **LAB:** _____

POSITION EVALUATED: **RO:** _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: **SIMULATOR:** _____ **PLANT SITE:** X **LAB:** _____

TESTING METHOD: **SIMULATE:** X **PERFORM:** _____

APPROXIMATE COMPLETION TIME IN MINUTES: 10.0

REFERENCE(S): OP 2104.014, Rev. 32-00-0

EXAMINEE'S NAME (PRINT): _____

EVALUATOR'S NAME (PRINT): _____

Signature indicates this JPM has been compared to its applicable procedure by a qualified individual (not the Examinee) and is current with that revision.

SIGNED: _____ **DATE:** _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

PERFORMANCE CHECKLIST COMMENTS:

_____**Start Time** _____ **Stop Time** _____ **Total Time**

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: 2T21A is on short path recirculation with Waste Condensate Pump (2P53A). OP 2104.014, Supplement 1 is completed through step 5.0. 2CV-2330A has been tested in Supplement 1. 2RE-2330 is operable. Preliminary report flowrate is 50 gpm.

TASK STANDARD: 2T21A liquid release is established using 2P53A

TASK PERFORMANCE AIDS: OP 2104.014, Supplement 2

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Commence a Liquid Waste Release on Waste Condensate Tank 2T21A using OP 2104.014, Supplement 2."

CRITICAL ELEMENTS (C): 4, 7

START TIME: _____

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Verify Waste Condensate Tank Inlet Valve (2CV-2112) CLOSED and magnetic tag on handswitch POSITIVE CUE: Green light ON. Red magnetic hold card installed.	On panel 2C113, verified handswitch for 2CV-2112 in CLOSE. Observed green light ON, red light OFF above handswitch. Verified red magnetic hold card installed by handswitch for 2CV-2112.	N/A SAT UNSAT
	2.	Verify Waste Condensate Pump Discharge Valve (2CV-2122) is CLOSED and magnetic tag on handswitch. POSITIVE CUE: Green light ON. Red magnetic hold card installed.	On panel 2C113, verified handswitch for 2CV-2122 in CLOSE. Observed green light ON, red light OFF above handswitch. Observed red magnetic hold card installed by handswitch for 2CV-2122.	N/A SAT UNSAT
	3.	Verify Waste Condensate Pump (2P53A) running. POSITIVE CUE: Red light ON. Discharge pressure 50# on 2PI-2121 @ 2C113	On panel 2C113, verified 2P53A running. Observed red light ON, green light OFF above handswitch. AND/OR Verified discharge pressure of ≈ 50# on 2PI-2121 @ 2C113	N/A SAT UNSAT
(C)	4.	Remove tag and OPEN Waste Condensate Pump Discharge Valve (2CV-2122). POSITIVE CUE: Red light ON. NEGATIVE CUE: Green light ON.	On panel 2C113, removed red magnetic hold card from handswitch for 2CV-2122. Placed handswitch for 2CV-2122 to OPEN. Observed red light ON, green light OFF for 2CV-2122.	N/A SAT UNSAT

	5.	Verify 2CV-2330A is open. POSITIVE CUE: Red light ON. NEGATIVE CUE: Green light ON.	On panel 2C113, opened 2CV-2330A. Observed red light ON, green light OFF for 2CV-2330A.	N/A SAT UNSAT
	6.	Verify flow on 2FR/RR-2331. POSITIVE CUE: CBO reports 0 gpm indicated. NEGATIVE CUE: CBO reports 50 gpm indicated.	Using a plant telephone, Gaitronics, or plant radio; contacted control room personnel. Requested verification of ≈ 0 gpm indicated on 2FR/RR-2331.	N/A SAT UNSAT
TRANSITION NOTE: Go to 2T21A Tank Room.				
(C)	7.	Open Waste Condensate Discharge Isolation to Circ Water Flume (2LRW-13) POSITIVE CUE: Valve stem at full upward travel.	Opened 2LRW-13 by turning valve handwheel CCW until valve stem at full upward travel. Observed valve stem at full rise position.	N/A SAT UNSAT
(C)	8.	Throttle short path recirculation valve (2LRW-32A). POSITIVE CUE: Flow rate less than 50 gpm.	Throttled 2LRW-32A by turning valve handwheel CW to establish a flow rate of ≤ 50 gpm. Verified with Control Room that flow rate less than 50 gpm.	N/A SAT UNSAT
END				

STOP TIME: _____

Question:

Answer:

EXAMINEE'S COPY:

JPM INITIAL TASK CONDITIONS:

2T21A is on short path recirculation with Waste Condensate Pump (2P53A). OP 2104.014, Supplement 1 is completed through step 5.0. 2CV-2330A has been tested in Supplement 1. 2RE-2330 is operable. Preliminary report flowrate is 50 gpm

INITIATING CUE:

The SS/CRS directs, "Commence a Liquid Waste Release on Waste Condensate Tank 2T21A using OP 2104.014, Supplement 2."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 8 **DATE:** _____

SYSTEM/DUTY AREA: Pressurizer Pressure Control System

TASK: Equalize RCS and PZR Boron

JTA#: 20105030401

KA VALUE RO: 3.7 **SRO:** 3.5 **KA REFERENCE:** 010 A4.01

APPROVED FOR ADMINISTRATION TO: RO: X **SRO:** X

TASK LOCATION: INSIDE CR: X **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ **SIMULATOR:** Perform **LAB:**

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: X **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** X

APPROXIMATE COMPLETION TIME IN MINUTES: 6 Minutes

REFERENCE(S): OP 2103.005 Rev 027-02-0 and AOP 2203.028

EXAMINEE'S NAME: _____ **SSN:** _____ - _____ - _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN HIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: 100% Power Operation. A power escalation has been completed.

Chemistry reports that RCS boron is 800 PPM and PZR boron is 855 PPM.

TASK STANDARD: Spray Valve (2CV-4651)isolated. **THIS IS AN ALTERNATE SUCCESS PATH JPM.**

TASK PERFORMANCE AIDS: OP 2103.005 section 7.0 and AOP 2203.028.

SIMULATOR SETUP: Run CASE FILE JPM03. This will open 'A' spray valve 100% and trip the breaker when the valve indicates intermediate position.

The following malfunctions/overrides need to be triggered (case file JPM03 will do all of them):

Set T5 file to sprayvlv this will trigger T5 when 2CV-4651 red light is energized.

T5 2CV-4651 a value = 1.0

T5 2HS-4651-3 false (green light)

T5 2 HS-4651-5 false (red light)

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, " Equalize RCS and PZR boron concentration using OP 2103.005 step 7.1, RCP 'A' spray valve, 2CV-4651."

CRITICAL ELEMENTS (C): 2, 3, 4, 5

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Verify spray valve, 2CV-4651, isolation valves 2CV-4655 AND 2CV-4656 are OPEN.	On panel 2C04 verified red lights ON, green lights OFF for 2CV-4655 and 2CV-4656.	N/A SAT UNSAT
(C)	2.	Place RCP 'A' spray valve MAN/AUTO select switch (2HS-4651B) to MANUAL.	On panel 2C04, rotated 2HS-4651B in the CCW direction to MANUAL.	N/A SAT UNSAT
(C)	3.	Energize all available Backup Heaters.	On panel 2C04 placed the following handswitches to ON: Place 2HS-4643 to ON Place 2HS-4644 to ON Place 2HS-4645 to ON Place 2HS-4646 to ON **AND** Observed the red light ON and green light OFF above each of the above backup heater handswitches.	N/A SAT UNSAT
EXAMINER'S NOTE: When 2CV-4651 is taken to open, the valve will open 100% and then trip the breaker.				
(C)	4.	Open 2CV-4651, RCP 'A' spray valve partially.	On panel 2C04 WHEN RCS pressure starts increasing, throttled 2CV-4651 to the open position.	N/A SAT UNSAT
EXAMINER'S NOTE: The following step may be completed after entering the AOP 2203.028, but entering the AOP is NOT critical for successful completion of this JPM.				

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			**STANDARDS**	(Circle One)
(C)	5.	Close PZR Spray Block Valves.	On panel 2C04, placed handswitch for 2CV-4655 and 2CV-4656 to "CLOSE". Observed green lights ON, red lights OFF for 2CV-4655 and 2CV-4656.	N/A SAT UNSAT
	6.	Place necessary Backup Heater Banks to Auto.	Placed necessary Backup Heater Banks to Auto.	N/A SAT UNSAT
END				

JOB PERFORMANCE MEASURE

QUESTION:

ANSWER:

JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

100% Power Operation. A power escalation has been completed. Chemistry reports that RCS boron is 800 PPM and PZR boron is 855 PPM.

INITIATING CUE:

The SS/CRS directs, " Equalize RCS and PZR boron concentration using OP 2103.005 step 7.1, RCP 'A' spray valve, 2CV-4651."

JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 2 **DATE:** _____

SYSTEM/DUTY AREA: Abnormal/Emergency Operations

TASK: Restore component cooling water to reactor coolant pumps

JTA#: **20085180401**

KA VALUE RO: **3.2** **SRO:** **2.9** **KA REFERENCE:** **003 A4.08**

APPROVED FOR ADMINISTRATION TO: RO: **X** **SRO:** **X**

TASK LOCATION: INSIDE CR: **X** **OUTSIDE CR:** _____ **BOTH:** _____

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ **SIMULATOR:** **Perform** **LAB:** _____

POSITION EVALUATED: RO: _____ **SRO:** _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: **X** **PLANT SITE:** _____ **LAB:** _____

TESTING METHOD: SIMULATE: _____ **PERFORM:** **X**

APPROXIMATE COMPLETION TIME IN MINUTES: **15 minutes**

REFERENCE(S): **EOP 2202.010 Rev 005-01-0**

EXAMINEE'S NAME: _____ **SSN:** ___-___-____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ **UNSATISFACTORY:** _____

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.

JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS: 2A1, 2A2, are re-energized from SU#2 following a degraded power situation.

2202.010 ATT. 29 steps through 1.m have been completed. Power to CCW pumps has been restored. Seal temperatures are > 180°F and < 300°F.

TASK STANDARD: Controlled bleed off isolated to VCT and CBO relief valve isolated. **THIS IS AN ALTERNATE SUCCESS PATH JPM.**

TASK PERFORMANCE AIDS: EOP 2202.010 Attachment 21

SIMULATOR INITIAL CONDITIONS: Set up CCW valves per EOP 2202.010 Attachment 29 "STARTUP XFM # 2 USAGE" perform actions through step 1.m. Close RCP CCW RETURN valve, 2CV-5255-1, 2CV-5254-2 and 2CV-5236-1. NO SIAS actuation.

Run case file JPM07 This will do the following:

Set T4 = ccwrcp (this will trigger T4 when 2CV 5255 red light is energized).

When 2CV 5255-1 is taken to open position, it will trip the breaker

T4=2HS-5255-1 R false (override)

T4=2HS-5255-1 G false (override)

T4=2CV5255-1 a = 0.0% (component malfunction)

JOB PERFORMANCE MEASURE

INITIATING CUE:

The SS/CRS directs, "Restore CCW to the RCP's using EOP 2202.010 Attachment 21."

CRITICAL ELEMENTS (C): 5 , 6, 7, 11, 12

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Verify RCP bleedoff to VCT valves open.	On panel 2C16 verified 2CV-4847-2 red light on; control switch in OPEN. On panel 2C17, verified 2CV-4846-1 red light on; control switch in OPEN.	N/A SAT UNSAT
	2.	Verify RCP Bleedoff Relief Isolation to Quench Tank open.	On panel 2C09, verified 2CV-4856 red light on; keyswitch in LOCKED OPEN.	N/A SAT UNSAT
	3.	Determine RCP Seal temperature and status of Loop II CCW pump. POSITIVE CUE: RCP seal temperatures are > 180°F and one CCW pump is running on Loop II.	On panel 2C14 or on PMS computer, determined RCP seal temperatures. On 2C14, observed running indication for one Loop II CCW pump and Loop II flow.	N/A SAT UNSAT
	4.	Verify RCP CCW Return valve (2CV-5255-1) CLOSED.	On panel 2C17, verified 2CV-5255-1 closed. Observed green light ON; red light OFF above handswitch.	N/A SAT UNSAT
(C)	5.	Open RCP CCW Supply valve (2CV-5236-1).	On panel 2C17, placed handswitch for 2CV-5236-1 in “OPEN”. Observed green light OFF; red light ON.	N/A SAT UNSAT
(C)	6.	Open RCP CCW Return valve (2CV-5254-2).	On panel 2C16, placed handswitch for 2CV-5254-2 in "OPEN". Observed green light OFF; red light ON.	N/A SAT UNSAT

EXAMINER’S NOTE:

When 2CV-5255-1 is taken to OPEN, the breaker will trip and cannot be reset. The valve will be stuck closed.

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
(C)	7.	Modulate RCP CCW Return valve (2CV-5255-1) OPEN. POSITIVE CUES: If WCO sent to the valve; 2CV-5255-1 cannot be opened. If AO sent to the breaker, 2B53-G4; the breaker for 2CV-5255-1 cannot be reset.	On panel 2C17, took handswitch for 2CV-5255-1 to "OPEN" for one (1) second then released. Observed red and green lights OFF. EXAMINEE may ask to dispatch a NLO to the valve and or breaker.	N/A SAT UNSAT
EXAMINER'S NOTE: The examinee may elect to monitor RCP seal cooldown before making the decision that CCW cannot be restored. This monitoring of RCP seal cooldown may take 10 minutes to validate that 2CV-5255-1 did not open. The examinee should go to step 4 of Attachment 21.				
	8.	Verify ALL RCP's secured.	On panel 2C04, observed 2P32A, B, C, and D RCP handswitches in STOP or PTL. Observed handswitch is green flagged; green light ON and red light OFF.	N/A SAT UNSAT
	9.	Close 2CV-5254-2.	On panel 2C16, placed handswitch for 2CV-5254-2 to "CLOSE" Observed green light ON; red light OFF.	N/A SAT UNSAT
	10.	Close 2CV-5236-1.	On panel 2C17, placed handswitch for 2CV-5236-1 to "CLOSE" Observed green light ON; red light OFF.	N/A SAT UNSAT
(C)	11.	Close RCP bleedoff to VCT valves.	On panel 2C17, placed handswitch for 2CV-4846-1 to "CLOSE." On panel 2C16, placed handswitch for 2CV-4847-2 to "CLOSE." For each valve, observed green light ON; red light OFF.	N/A SAT UNSAT

JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			**STANDARDS**	(Circle One)
(C)	12.	Close RCP bleedoff relief isolation to quench tank valve (2CV-4856).	On panel 2C09, placed handswitch for 2CV-4856 to "CLOSE" Observed green light ON; red light OFF.	N/A SAT UNSAT
END				

JOB PERFORMANCE MEASURE

QUESTION:

ANSWER:

EXAMINEE'S COPY

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