INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: LICENSED OPERATOR/STA REQUALIFICATION TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: SHUTDOWN DG-2; FAILURE TO STOP; TRIP DG-2 USING MECHANICAL OVERSPEED TRIP (Plant, Faulted)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.
Simulator Guide PQD Code		Rev. No.
JPM PQD Code	LR001663	Rev. No. 3
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 11/2/05

REVISED BY: Ron Hayden DATE: 6/10/08

TECHNICAL REVIEW BY _____ DATE _____

INSTRUCTIONAL REVIEW BY _____ DATE _____

APPROVED BY _____ DATE _____

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use.

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

N/A

Special Setup Instructions:

N/A

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: PPE

Task Number: RO-0429; 1297 EO-0671; 2091

Validation Time: 15 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-DG2-SHUTDOWN Section 5.1 Rev. 15

Location: PLANT – DG-2 Room

NUREG 1123 Ref: 264000A4.04 (3.7 3.7)

Performance Method: Simulate

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	DG-2 was started as part of an engineering test procedure. There are no ECCS Signals present. Munro Control Center has been informed of the intent to remove DG-2 from service. DG-2 is not required to be operable.
INITIATING CUE:	The CRS has directed you to locally shutdown DG-2 per SOP-DG2-SHUTDOWN. Inform the CRS when DG-2 has been shutdown. The performance of this JPM will be simulated. Control manipulations will not be performed.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
CUE: Cue response of simulated actions based on procedure and student actions.			
Step 5.1.1	VERIFY there are no ECCS signals present (Annunciator 4.800.C5-1.2 clear)	Given in Initial Conditions	N / A
Step 5.1.2	Notify the Munro Control Center, Mead, WA, of the intent to remove the diesel generator from the distribution system	Given in Initial Conditions	N / A
Step 5.1.3	If shutting down from the Control Room…..	Diesel Room Shutdown - N / A	N / A
Step 5.1.4a	IF shutting down from the DIESEL ROOM, THEN PERFORM the following: Otherwise, N/A VERIFY the Diesel Engine Control Selector is in the LOCAL position (E-CP-DG/RP2)	Observes the Diesel Engine Control Selector is in the LOCAL position	S / U
CUE: When checked - the Diesel Engine Control Selector is in the Control Room position.			
		Simulates placing the Diesel Engine Control Selector in the LOCAL position	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.1.4b	PLACE CB-DG2/8 Mode Selector switch in the LOCAL position (H13-P800)	Simulates contacting the Control Room and requests they place CB-DG2/8 Mode Selector switch in the LOCAL position	S / U
CUE: When checked inform the student the mode selector switch is in the Local position.			
CUE: When checked DG-W-DG2/L indicates 400 KW.			
Step 5.1.4c	REDUCE DG-2 output to 200 KW using Diesel Gen 2 Governor control switch	Simulates lowering output to 200 KW using the governor control switch	S / U *
CUE: If lowered properly inform student DG-W-DG2/L now indicates 200 KW.			
CUE: When checked DG-VARM-DG2/LOC indicates 300 KVAR.			
Step 5.1.4d	REDUCE reactive load to 200 KVAR using Diesel Gen 2 Voltage Regulator control switch	Simulates lowering reactive load to 200 KVAR using Voltage Regulator control switch	S / U *
CUE: If lowered properly inform student DG-VARM-DG2/LOC now indicates 200 KVAR.			
Step 5.1.5	OPEN CB-DG2/8, Diesel Gen 2 output breaker (at the controlling location)	Simulates opening CB-DG2/8 by turning E-CB-DG2/8 local control switch to the TRIP position (CCW)	S / U *
Step 5.1.6	Verify E-CB-DG2/8 close permit light is illuminated	Simulates contacting the Control Room and verifies the close permit light is illuminated on E-CB-DG2/8	S / U
CUE: When checked – inform the student the close permit light is illuminated.			
Step 5.1.7	If E-CB-DG2/8 close permit light is illuminated, then enter DG-2 as operable in the Plant Logging System	Contacts Control Room to inform them DG-2 is operable and to enter it in Plant Logging System	S / U
CUE: When checked output voltage indicates 4300 volts.			
Step 5.1.8	ADJUST the generator output voltage to 4200 volts using Diesel Gen 2 Voltage Regulator	Simulates adjusting output voltage to 4200 volts using the Voltage Regulator	S / U *
CUE: If lowered properly inform student output voltage now indicates 4200 volts.			
CUE: When checked frequency indicates 62 Hz.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.1.9	ADJUST frequency to 60 Hz using Diesel Gen 2 Governor control switch	Simulates adjusting frequency to 60 Hz using the Governor control switch	S / U *
CUE: If lowered properly inform student frequency now indicates 60 Hz.			
Step 5.1.10	PLACE Engine Speed Selector switch to IDLE	Simulates placing the Engine Speed Selector to IDLE	S / U *
Step 5.1.11	LOG the time in the DG Log in the Plant Logging System	Simulates contacting the Control Room to log time	S / U
Step 5.1.12	VERIFY DG-2 speed at 375-425 RPM on DG-SI-DG2 (E-CP-DG/RP2)	Verifies speed is between 375 and 425	S / U
CUE: When checked engine speed is 400 rpm.			
Step 5.1.13	ALLOW the diesel to idle for at least 15 minutes	Verbalizes intention to wait 15 minutes	S / U
CUE: TIME COMPRESSION - Inform student 15 minutes has elapsed.			
Step 5.1.14	STOP DG-2 by one of the following methods: N/A the other. • IF DG-2 is being operated from the Control Room, THEN PLACE the Diesel Gen 2 control switch to STOP • IF DG-2 is being operated from E-CP-DG/RP2, THEN DEPRESS the Diesel Engine 1B1/1B2 Stop pushbutton	Simulates depressing the green 1B1/1B2 stop pushbutton	S / U *
CUE: Inform the student that DG2 continues to operate.			
CUE: If the Control Room is contacted, acknowledge the report and as the CRS, direct the student to trip DG2 utilizing the Mechanical Overspeed Trip and hand him section 5.3.			
Step 5.3.1	LOCATE the mechanical overspeed trip mechanism on engine 1B2, preferred (engine 1B1, alternate)	Locates overspeed trip mechanism on engine 1B2	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.3.2	UNLATCH the engine overspeed trip reset lever by pushing it down onto the overspeed trip limit switch. HOLD the reset lever in this downward unlatched position	Simulates unlatching the engine overspeed trip reset lever by pushing it down onto the overspeed trip limit switch and holds it in this position	S / U *
Step 5.3.3	While holding the reset lever in the unlatched position, PUSH/ROTATE the small trip lever away from the solenoid trip mechanism. The trip lever must be rotated in the CW direction when looking at it from the governor actuator's position	Simulates holding the reset lever in the unlatched position and pushing/rotating the small trip lever away from the solenoid trip mechanism. Verbalizes that the lever is rotated in the clockwise direction when looking at it from the governor actuator's position	S / U *
Step 5.3.4	RELEASE the reset lever and it should rotate to the TRIPPED position	Simulates releasing the reset lever and verbalizes that it should rotate to the TRIPPED position	S / U *
Step 5.3.5	VERIFY both engines trip. If engine 1B1 (1B2) fails to trip, MECHANICALLY TRIP the engine using the method described above	Verifies both engines tripped	S / U *
Cue: If checked inform student that both engines are tripped.			
Step 5.3.6	VERIFY both engines coast down, and eventually stop rotating	Verifies both engines coast down and eventually stop	S / U
Termination Criteria: Student informs CRS that DG-2 has been tripped utilizing the mechanical overspeed trip mechanism. **Inform the student that the termination point of the JPM has been reached.**			
RECORD TERMINATION TIME: _____			
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:

SHUTDOWN DG-2; FAILURE TO STOP; TRIP DG-2 USING MECHANICAL OVERSPEED TRIP

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: DG-2 is tripped utilizing the mechanical overspeed trip mechanism per SOP-DG2-SHUTDOWN.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	15 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

DG-2 was started as part of an engineering test procedure.

There are no ECCS signals present.

Munro Control Center has been informed of the intent to remove DG-2 from service.

DG-2 is not required to be operable.

Cue:

The CRS has directed you to locally shutdown DG-2 per SOP-DG2-SHUTDOWN.

Inform the CRS when DG-2 has been shutdown.

THE PERFORMANCE OF THIS JPM WILL BE SIMULATED.

CONTROL MANIPULATIONS WILL NOT BE PERFORMED.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: RESTART OF RPS-MG-1 AND REPOWER RPS BUS (FAULTED) (PLT)

LESSON LENGTH: .5 HRS MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.
Simulator Guide PQD Code		Rev. No.
JPM PQD Code	LO001641	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Donald Hughes DATE: 06/10/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use.

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

None

Special Setup Instructions:

None

JPM Instructions:

Verify the current procedure against the JPM. If the procedure is a different revision than listed in the JPM, ensure the critical steps still match. If the critical steps have changed, the JPM should be revised.

Evaluator and student shall use the current procedure. The instructor should mark off steps as they are completed, note comments, and transfer the comments to the results of JPM page.

Tools/Equipment: None.

Safety Items: None

Task Number: RO-0248

Validation Time: 12 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: PPM 2.7.6 Section 5.1 Rev. 25

Location: Plant

NUREG 1123 Ref: 212000A2.01 (3.7/3.9)

Performance Method: Simulate

JPM CHECKLIST

PROCEDURE VALIDATION	Verify the revision number of procedure copies for evaluator and student. If the procedure revision is different from that listed on the JPM, the critical tasks must be verified. The evaluator copy may be used for marking step completion and comments.
INITIAL CONDITIONS:	RPS Division A has been de-energized due to a fault. The fault has been identified and corrected. The RPS-MG-1 supply breaker (RPS-DISC-7A1B) on MC-7A is closed.
INITIATING CUE:	The CRS has directed you to restart RPS-MG-1 and repower the Division 1 RPS bus in accordance with PPM 2.7.6 section 5.1 and 5.3. Inform the CRS when the RPS bus has been re-powered. The performance of this JPM is simulated. Control manipulations will not be performed.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
CUE: Cue response of simulated actions based on procedure and operator actions			
Step 5.1.1	Verify RPS-D1SC-7A1B is CLOSED (RPS Bus Mtr Gen MG-1 Supply Bkr) (E-MC-7A)	Given in initial conditions	N / A
Step 5.1.2a	Perform the following at E-CP-C72/S001A (RPS- MG-1 Control Panel): Verify the MOTOR OFF (green) indicating light illuminated	Observes the green MOTOR OFF indicating light is illuminated	S / U
Step 5.1.2b	Verify RPS-CB-MG1 is open (Generator Output Breaker)	Observes RPS-CB-MG1 is open with lever in OFF position	S / U
Step 5.1.2c	Hold RPS-RMS-MG1/ START, MOTOR ON pushbutton depressed	Simulates holding RPS-RMS-MG1/ START, MOTOR ON pushbutton depressed	S / U *
Step 5.1.2d	Verify the MOTOR OFF (green) indicating light extinguishes and the MOTOR ON (red) indicating light illuminates	Observes the green MOTOR OFF indicating light extinguishes and the red MOTOR ON indicating light is illuminated	S / U
CUE: If asked, the RPS MG set is up to speed (should take LT 5 seconds)			
Step 5.1.2e	When RPS-MG-1 has come up to speed, then release RPS-RMS-	Simulates releasing the MOTOR ON pushbutton when cued that	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	MG1/START, MOTOR ON pushbutton	RPS-MG-1 is up to speed	
Step 5.1.2f	If voltage is not indicated at rated speed, then momentarily depress RPS-RMS-MG1/START, MOTOR ON pushbutton to reset the overvoltage trip	Verbalizes that voltage indication would be expected	S / U *
Cue: When the operator checks voltage, cue that no voltage is indicated.			
Step 5.1.2f	If voltage is not indicated at rated speed, then momentarily depress RPS-RMS-MG1/START, MOTOR ON pushbutton to reset the overvoltage trip	Simulates momentarily depressing the RPS-RMS-MG1/START, MOTOR ON pushbutton	S / U *
Cue: When the operator checks voltage, cue that voltage is now indicated on RPS-VM-MG1A.			
Step 5.1.2g	Verify RPS-VM-MG1A voltage stabilizes at (about) 120 VAC	Observes voltage stabilizes at 120 VAC	S / U
Cue: When the operator checks voltage, cue that voltage is stable at 120 VAC on RPS-VM-MG1A.			
Step 5.1.2h	Close RPS-CB-MG1 (Generator Output Breaker)	Simulates closing RPS-CB-MG1 by pushing up on lever to ON	S / U *
Step 5.1.3	CONTINUE in Section 5.3	Performs section 5.3 as follows:	S / U
Step 5.3.1	VERIFY Section 5.1 completed	Section 5.1 just completed	S / U
Step 5.3.2	Obtain EPA breaker keys.	Obtains breaker key# 166 and #168 from CR key locker	S / U *
NOTE: The student does not have to go to the control room to obtain keys. Ask where the keys are kept – student should verbalize the keys are in the key locker outside the Shift Manages office.			
Step 5.3.3a	CLOSE RPS-EPA-3A as follows (EPA Breaker) (RPS-MG2 Room): VERIFY breaker keylock switch S1 in the NORMAL position	Observes switch S1 on RPS-EPA-3A is in NORMAL	S / U
Step 5.3.3b	VERIFY breaker keylock switch S2 in the OPER position	Observes switch S2 on RPS-EPA-3A is in OPER	S / U
Step 5.3.3c	VERIFY the POWER IN indicator illuminated	Observes POWER IN light illuminated	S / U

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
CUE: When checked, the undervoltage and under frequency lights are illuminated.			
Step 5.3.3d	IF any of the following indicators are not extinguished, THEN ROTATE keylock switch S2 to the RESET position, AND RETURN to OPER: • OVER VOLTAGE • UNDER VOLTAGE • UNDER FREQUENCY • POWER OUT	Rotates the breaker key lock S2 switch to RESET Rotates S2 back to OPER	S / U *
CUE: When checked, the undervoltage and under frequency lights are not illuminated.			
Step 5.3.3e	VERIFY the following indicators extinguished: • OVER VOLTAGE • UNDER VOLTAGE • UNDER FREQUENCY • POWER OUT	Observes all lights extinguished	S / U
Step 5.3.3f	OPEN RPS-EPA-3A fully to reset it (EPA Breaker)	Resets RPS-EPA-3A by pushes lever fully downward	S / U *
Step 5.3.3g	Close RPS-EPA-3A (EPA breaker)	Closes RPS-EPA-3A by pulling up on lever	S / U *
CUE: When checked, the POWER OUT indicator is illuminated.			
Step 5.3.3h	VERIFY POWER OUT indicator illuminated	Observes POWER OUT light illuminated	S / U
Step 5.3.3i	IF the UNDERVOLTAGE light is illuminated and the breaker is closed, THEN INITIATE a work request to evaluate	Observes UNDER VOLTAGE light out	S / U
CUE: When checked, the undervoltage and under frequency lights are illuminated for RPS-EPA-3C			
Step 5.3.4a	CLOSE RPS-EPA-3C as follows (EPA Breaker) (RPS-MG2 Room): VERIFY breaker keylock switch S1 in the NORMAL position	Observes switch S1 on RPS-EPA-3C is in NORMAL	S / U
Step 5.3.4b	VERIFY breaker keylock switch S2 in the OPER position	Observes switch S2 on RPS-EPA-3C is in OPER	S / U
CUE: When checked, the POWER IN indicator is illuminated.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.3.4c	VERIFY the POWER IN indicator illuminated	Observes POWER IN light illuminated	S / U
CUE: When checked, the undervoltage and under frequency lights are illuminated.			
Step 5.3.4d	IF any of the following indicators are not extinguished, THEN ROTATE keylock switch S2 to the RESET position, AND RETURN to OPER: • OVER VOLTAGE • UNDER VOLTAGE • UNDER FREQUENCY • POWER OUT	Rotates the breaker key lock S2 switch to RESET Rotates S2 back to OPER	S / U *
CUE: When checked, the undervoltage and under frequency lights are not illuminated.			
Step 5.3.4e	VERIFY the following indicators extinguished: • OVER VOLTAGE • UNDER VOLTAGE • UNDER FREQUENCY • POWER OUT	Observes all lights extinguished	S / U
Step 5.3.4f	OPEN RPS-EPA-3C fully to reset it (EPA Breaker)	Resets RPS-EPA-3C by pushes lever fully downward	S / U *
Step 5.3.4g	Close RPS-EPA-3C (EPA breaker)	Closes RPS-EPA-3C by pulling up on lever	S / U *
CUE: When checked, the POWER OUT indicator is illuminated.			
Step 5.3.4h	VERIFY POWER OUT indicator illuminated	Observes POWER OUT light illuminated	S / U
Step 5.3.4i	IF the UNDERVOLTAGE light is illuminated and the breaker is closed, THEN INITIATE a work request to evaluate	Observes UNDER VOLTAGE light out	S / U
CUE: When verbalized, inform the student that the breakers in Attachment 6.1 are closed.			
Step 5.3.5	CHECK the breakers listed in Attachment 6.1 CLOSED	Observes breakers closed	S / U
Termination Criteria: Student informs the CRS that RPS-MG-1 is running and Division 1(A) RPS bus is powered.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD TERMINATION TIME: _____			
Transfer to JPM Results Page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time. Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM
RESTART RPS MG-1 AND REPOWER THE RPS BUS

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RPS-MG-1 is running and RPS Bus has been re-energized per PPM 2.7.6.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial box)	Validation/Critical Time	JPM Completion Time
	12 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ **Date:** _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

RPS Division A has been de-energized due to a fault

The fault has been identified and corrected

The RPS-MG-1 supply breaker (RPS-DISC-7A1B) on MC-7A is closed.

Cue:

The CRS has directed you to restart RPS-MG-1 and repower the RPS bus in accordance with PPM 2.7.6 section 5.1 and 5.3.

Inform the CRS when the RPS bus has been re-powered.

THE PERFORMANCE OF THIS JPM IS SIMULATED.

CONTROL MANIPULATIONS <u>WILL NOT</u> BE PERFORMED.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: START SW-P-1A ON A CONTROL ROOM EVACUATION (Plant)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.
Simulator Guide PQD Code		Rev. No.
JPM PQD Code	LO001640	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/10/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

N/A

Special Setup Instructions:

N/A

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: Hardhat, Safety Glasses

Task Number: RO-1057

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: ABN-CR-EVAC Section 7.13 Rev. 11

Location: Plant

NUREG 1123 Ref: 400000 A4.01 (3.1 / 3.0)

Performance Method: Simulate

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	The Control Room has been evacuated. Only the immediate actions of ABN-CR-EVAC were completed.
INITIATING CUE:	You have been directed to start SW-P-1A per ABN-CR-EVAC attachment 7.13. Inform the CRS when Attachment 7.13 is completed. Control manipulations will not be performed. All actions and steps will be simulated.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
CUE: Cue response of simulated actions based on procedure and student actions			
Step 7.13.1	DETERMINE the discharge pressure of SW-P-1A (SW-PI-32AR)	Observes SW-P-1A discharge pressure on SW-PI-32AR	S / U *
CUE: When checked inform student the is no pressure indicated on SW-PI-32AR			
Step 7.13.2	IF SW-P-1A is already operating, THEN PLACE SW-P-1A control switch to START	Determines SW-P-1A is NOT operating and does NOT turn control switch	S / U *
Step 7.13.3	PLACE the following power transfer switches in the EMERG position: • 46 • 56 • 57 • 58	Simulates turning power transfer switch labeled • 46 • 56 • 57 • 58 to the EMERG position	S / U * S / U * S / U * S / U *
CUE: When checked inform student that SW-V-2A is closed.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 7.13.4a	IF SW-P-1A is not operating, THEN START SW-P-1A as follows: If SW-V-2A is open, THEN CLOSE SW-V-2A.	Does not turn switch as valve is closed	S / U
Step 7.13.4b	PLACE the control switch for SW-P-1A in START.	Turns control switch for SW-P-1A clockwise to the START position	S / U *
Step 7.13.4c	PLACE the control switch for SW-V-12A to the OPEN position.	Turns control switch for SW-V-12A clockwise to the OPEN position	S / U *
CUE: When checked inform student that SW-V-12A indicates mid-position and SW-P-1A starts.			
Step 7.13.4d	VERIFY SW-P-1A STARTS (when SW-V-12A indicates intermediate position).	Observes red light illuminates and green light extinguishes for SW-P-1A	S / U
Step 7.13.4e	PLACE the control switch for SW-V-2A in the OPEN position	Turns control switch for SW-V-2A clockwise to the OPEN position	S / U *
CUE: When checked inform student that SW-V-2A indicates mid-position. To simulate timing sequence, wait a minute and then inform student that SW-V-2As green light has gone out. If asked, pump discharge pressure is slowly rising as SW-V-2A goes full open. End pressure will be 180 psig.			
Step 7.13.4f	ENSURE SW-V-2A FULLY OPENS (after timing sequence)	Ensures SW-V-2A green light goes out	S / U
Step 7.13.4g	ENSURE adequate discharge pressure on SW-PI-32AR.	Observes discharge pressure on SW-PI-32AR indicates normal.	S / U
CUE: When checked inform student that discharge pressure on SW-PI-32AR indicates 180 psig.			
Termination Criteria: Student informs CRS that Attachment 7.13 is complete and SW-P-1A is running.			
RECORD TERMINATION TIME: _____			
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
START SW-P-1A ON CONTROL ROOM EVACUATION

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: SW-P-1A is started per Attachment 7.13 of ABN-CR-EVAC.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	10 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

The Control Room has been evacuated.

Only the immediate actions of ABN-CR-EVAC were completed.

Cue:

You have been directed to start SW-P-1A per ABN-CR-EVAC attachment 7.13.

Inform the CRS when Attachment 7.13 is completed.

Control manipulations will NOT be performed.

All actions and steps will be simulated.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: Restore ASD Channel; Inadvertent RRC Flow Increase (Faulted) (Sim)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.	
Simulator Guide PQD Code		Rev. No.	
JPM PQD Code	LO001634	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/03/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Insert a fault on RRC-P-1B channel 1B1 and then delete the fault.
Turn OFF the lower pushbutton for individual Loop B controller
Load the following into the IC set: IOR OVR-RFC030P (1) ON; TRGSET 1 "X02I137T.GT.0" which depresses the RAISE P/B for RRC-P-1B when the START P/B is depressed to start channel 1B1.
Could also use TRGSET 1 "X02O130R.GT.0" which is red light for ASD channel running.
Insert malfunction to have the ASD 15 second P/B Stuck overridden off – IMF MAL-RFC016E TRUE

Special Setup Instructions:

Reset to an IC where power is about 50% and RRC pump speed is LT 35Hz.

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: None

Task Number: RO-1162; RO-0083

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-RRC-ASD Rev. 5; ABN-POWER Rev. 9

Location: Simulator

NUREG 1123 Ref: 202001 A2.05 (3.8 / 4.0)

Performance Method: Perform

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	Columbia was operating at full power when ASD Drive Channel 1B1 tripped. The channel has been repaired and is ready to be returned to service. A downpower has been performed and power is approximately 50%. SOP-RRC-ASD Section 5.6.4 steps a thru g have been completed by OPS2 who is standing by in the ASD building.
INITIATING CUE:	The CRS has directed you to restore ASD Channel 1B1 to service. Inform the CRS when both ASD channels for RRC-P-1B are running.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
CUE: Cue response of simulated actions based on procedure and student actions			
Step 5.6.4h	Verify the READY lamp for ASD Drive Channel 1B1 is illuminated (H13-P602)	Observes white ready light on P602 is illuminated for channel 1B1	S / U
Step 5.6.4i	Verify the frequency of ASD Drive Channel 1B2 is LE 35 Hz (H13-P602)	Observes the Actual Hz for RRC-P-1B on Individual Loop B Control RRC-M/A-R676B is LE 35 Hz	S / U
Step 5.6.4j	Depress the ASD Start button for ASD Drive Channel 1B1 (H13-P602)	Depress the ASD Start button for ASD Drive 1B1	S / U *
Step 5.6.4k	Verify the run lamp is illuminated for ASD Drive Channel 1B1	Observes the red lamp for ASD Drive Channel 1B1 (NO.1) is illuminated	S / U
Fault occurs when channel Start button is depressed	Acknowledges various alarms and notes that the speed for RRC-P-1B is going up without operator demand Informs CRS that RRC-P-1B speed is rising without demand		S / U * S / U
CUE: If CRS is informed of the rise in RRC-P-1B speed, only repeat back the communication – do not give any direction.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
ABN-POWER step 3.2.1	Per immediate actions of ABN-POWER, If RRC pump speed is rising for one pump and cannot be controlled, then stop the affected pump.	May attempt to stop the rising pump speed by depressing the lower button for RRC-P-1B but notes that this does not stop pump speed increase. Depresses the STOP pushbutton for RRC-P-1B and verifies it stops.	S / U S / U *
Termination Criteria: When the student informs the CRS that RRC-P-1B was tripped due to speed rising without operator action inform the student that the termination point of the JPM has been reached.			
RECORD TERMINATION TIME: _____			
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
RESTORE ASD CHANNEL; INADVERTENT RRC FLOW INCREASE

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: ASD Channel 1B1 is started per SOP-RRC-ASD and RRC-P-1B is stopped per immediate actions of ABN-POWER.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	10 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

Columbia was operating at full power when ASD Drive Channel 1B1 tripped. The channel has been repaired and is ready to be returned to service.

A downpower has been performed and power is approximately 50%.

SOP-RRC-ASD Section 5.6.4 steps a thru g have been completed by OPS2 who is standing by in the ASD building.

Cue:

The CRS has directed you to restore ASD Channel 1B1 to service.

Inform the CRS when both ASD channels for RRC-P-1B are running.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: BYPASS CONTROL RODS IN RSCS (SIM)

LESSON LENGTH: .5 HRS MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.	
Simulator Guide PQD Code		Rev. No.	
JPM PQD Code	LO001639	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/09/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Setup the simulator to have RSCS card bypass light illuminate when the switch is taken to bypass position.

Special Setup Instructions:

Ensure Sequence B and Rods Full In are selected on Rod Sequence Controller on P603.

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: None

Task Number: RO-0134

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-RSCS-OPS Rev. 1

Location: Simulator

NUREG 1123 Ref: 201004 A4.01 (3.4/3.5)

Performance Method: PERFORM

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	The SRO has verified bypassing control rod 42-15 is in compliance with Technical Specifications. The Control Room Supervisor has given permission to bypass this control rod.
INITIATING CUE:	The CRS has directed you to bypass control rod 42-15 in the RSCS cabinet per SOP-RSCS-OPS. Inform the CRS when you have bypassed control rod 42-15 and the bypassed rod identifier cabinet has been locked back up.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
CUE: Cue response of simulated actions based on procedure and student actions			
Step 5.1.1	OBTAIN the Control Room Supervisor's permission to bypass a control rod	Permission given in initiating cue	N / A
Step 5.1.2	IDENTIFY the binary equivalent locations from Attachment 6.1	Identifies binary equivalent locations from Attachment 6.1 42 = 00110 (X0 – X4) 15 = 10100 (X0 – X4)	S / U
Step 5.1.3	DEPRESS the Rod Display Control Pushbutton on the RSCS display to illuminate the Bypass light (H13-P603)	Depresses the Rod Display Control Pushbutton on the RSCS display to illuminate the Bypass light	S / U
Step 5.1.4	IDENTIFY the current sequence illuminated on the Seq A/Seq B Pushbutton (H13-P603)	Identifies the current sequence as being Sequence B	S / U
Step 5.1.5	IDENTIFY the control rods presently bypassed (RSCS Display)	Notes that there are no other control rods bypassed.	S / U

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.1.6	CIRCLE the control cell for each bypassed rod on a copy of Attachment 6.2 (SEQUENCE A) or Attachment 6.3 (SEQUENCE B)	No control rods are bypassed – Does NOT circle any control cells on Attachment 6.3	S / U
Step 5.1.7	UNLOCK the bypassed rod identifier cabinet (Key 81 or 82) (H13-P659)	Gets keys 81 and/or 82 from lockbox and at H13-P659, unlocks the bypassed rod identifier cabinet	S / U *
Step 5.1.8	VERIFY that the control rods presently bypassed are the same rods recorded above on Attachment 6.2 or Attachment 6.3	No rods are bypassed	S / U
Step 5.1.9	CIRCLE the control rod to be bypassed on the same copy of Attachment 6.2 or Attachment 6.3	Circles control rod 42-15 on Attachment 6.3	S / U
Step 5.1.10	IDENTIFY the RSCS binary equivalent X and Y coordinates from Attachment 6.1, Control Rod Location Equivalents. •X_4 ____ Y_4 ____ •X_3 ____ Y_3 ____ •X_2 ____ Y_2 ____ •X_1 ____ Y_1 ____ •X_0 ____ Y_0 ____	Identifies binary equivalent X and Y coordinates and records them on procedure 42 = 00110 (X0 – X4) 15 = 10100 (X0 – X4)	S / U
Step 5.1.11	SELECT a card currently not in use to bypass a control rod (H13-659)	Selects a card not currently in use	S / U *
CUE: If student starts to use a card other than the one on the left, cue student to the first bypass card on the left.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.1.12	PERFORM the following for the card selected to bypass the control rod: • VERIFY the BYPASSED/NOT BYPASSED Toggle Switch at the top of the card is in the NOT BYPASSED position • VERIFY the red light just below the Toggle Switch is OFF	Verifies the BYPASSED/NOT BYPASSED Toggle Switch at the top of the card is in the NOT BYPASSED position VERIFY the red light just below the Toggle Switch is OFF	S / U S / U
Step 5.1.13	PLACE the X_4 through X_o, and Y_4 through Y_o Switches in the 0 or 1 position consistent with the desired rod's binary equivalent as identified in step 5.1.10	Places toggle switches as follows: •X_4 0 Y_4 0 •X_3 1 Y_3 0 •X_2 1 Y_2 1 •X_1 0 Y_1 0 •X_0 0 Y_0 1	S / U * S / U *
Step 5.1.14	OBTAIN an independent verification of the Rod Toggle Switch positions from a second licensed operator or technically qualified individual	Student may verbalize intent of obtaining an independent verification	S / U
CUE: If required, inform student that independent verification is complete			
Step 5.1.15	PLACE the BYPASSED/NOT BYPASSED Toggle Switch at the top of the card in the BYPASSED position	Places the bypassed/not bypassed Toggle Switch at the top of the card in the BYPASSED position	S / U *
Step 5.1.16	VERIFY the red light just under the switch is illuminated	Verifies the red light just under the switch is illuminated	S / U
Step 5.1.17	LOCK the bypassed rod identifier cabinet (H13-P659)	Locks the bypassed rod identifier cabinet	S / U
Termination Criteria: Student informs CRS that control rod 42-15 is bypassed.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
		RECORD TERMINATION TIME: _____	
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:

BYPASS A CONTROL RODS IN RSCS

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Control Rod 42-15 is bypassed per SOP-RSCS-OPS.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	10 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ **Date:** _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

The SRO has verified bypassing control rod 42-15 is in compliance with Technical Specifications.

The Control Room Supervisor has given permission to bypass this control rod.

Cue:

The CRS has directed you to bypass control rod 42-15 in the RSCS cabinet per SOP-RSCS-OPS.

Inform the CRS when you have bypassed control rod 42-15 and the bypassed rod identifier cabinet has been locked back up.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: RE-ESTABLISH SECONDARY CONTAINMENT/START RB HVAC (Sim)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.	
Simulator Guide PQD Code		Rev. No.	
JPM PQD Code	LR001637	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/03/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

None

Special Setup Instructions:

Reset to any IC. Turn off both ROA and REA fans. Acknowledge the annunciator for high RB dP.

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: None

Task Number: RO-0497

Validation Time: 8 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-RB HVAC-RESTART-QC Rev. 0

Location: Simulator

NUREG 1123 Ref: 290001 A4.01 (3.3 / 3.4)

Performance Method: Perform

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	A series of events occurred that resulted in no running Reactor Building Supply or Exhaust fan. EOP PPM 5.2.1 was entered due to Reactor Building dP high. Prior to starting Standby Gas Treatment, the Control Room received information that Reactor Building HVAC could be restarted.
INITIATING CUE:	The Control Room Supervisor has directed you to restart RB HVAC by starting ROA-FN-1A and REA-FN-1A per SOP-RBHVAC-QC. Inform the CRS when Secondary Containment may be declared operable.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 2.1	PLACE REA-DPIC-1A(1B) (ΔP Control RX Bldg/Outside) in MANUAL	Places toggle for REA-DPIC-1A to Manual position	S / U *
Step 2.2	SET REA-DPIC-1A(1B) output signal at approximately 60% of scale	Depresses closed pushbutton to have red indicator at approximately 60% of scale	S / U *
Step 2.3	PLACE the control switch for the following fans in PULL-TO-LOCK: • ROA-FN-1A (Reactor Bldg Supply Fan) • ROA-FN-1B (Reactor Bldg Supply Fan) • REA-FN-1A (Reactor Building Exhaust Fan) • REA-FN-1B (Reactor Building Exhaust Fan)	Turns the black handles counter-clockwise and pulls out to engage the Pull-To-Lock position for: ROA-FN-1A ROA-FN-1B REA-FN-1A REA-FN-1B	S / U * S / U * S / U * S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 2.4	VERIFY the following valves are OPEN: • ROA-V-1 (RB Supply Outboard Isolation) • ROA-V-2 (RB Supply Inboard Iso) • REA-V-1 (RB Exhaust Inboard Iso) • REA-V-2 (RB Exhaust Outboard Isol)	Observes the red light illuminated and green light out for: ROA-V-1 ROA-V-2 REA-V-1 REA-V-2	 S / U * S / U * S / U * S / U *
Step 2.5 – 2 handed operation is authorized/expected	SIMULTANEOUSLY START REA-FN-1A(1B) and ROA-FN-1A(1B)	Depresses black handles and allows switches to go to neutral position. Simultaneously turns the black handled control switches for ROA-FN-1A and REA-FN-1A clockwise to the START position and then releases them	S / U *
Step 2.6	MANUALLY ADJUST REA-DPIC-1A(1B) controller output until Reactor Building pressure on REA-DPR-1A(1B) is approximately -0.6″ W.G.	Adjusts REA-DPIC-1A to achieve approximately -0.6”W.G.. on REA-DPR-1A	S / U *
Step 2.7	NULL REA-DPIC-1A (1B), AND PLACE it in AUTO	Turns thumbwheel until REA-DPIC-1A is nulled or waits until red arrow lines up with green band and then moves lever to AUTO position	S / U *
Step 2.8	PLACE the control switch for the following non-running fans in the NORMAL-after- STOP position. • ROA-FN-1B(1A) • REA-FN-1B(1A)	Turns the black handled switches for: ROA-FN-1B REA-FN-1B counter-clockwise to STOP and then releases the switch to the neutral position and observes the green flag visible	 S / U S / U
Termination Criteria: Student informs CRS that Secondary Containment may be declared operable.			
RECORD TERMINATION TIME: _____			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
RESTART RB HVAC TO ESTABLISH SECONDARY CONTAINMENT

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RB HVAC has been restarted per SOP-RBHVAC-RESTART-QC.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	8 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

A series of events occurred that resulted in no running Reactor Building Supply or Exhaust fan.

EOP PPM 5.2.1 was entered due to Reactor Building dP high.

Prior to starting Standby Gas Treatment, the Control Room received information that Reactor Building HVAC could be restarted.

Cue:

The Control Room Supervisor has directed you to restart RB HVAC by starting ROA-FN-1A and REA-FN-1A per SOP-RBHVAC-QC.

Inform the CRS when Secondary Containment may be declared operable.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: LOWER RPV PRESSURE USING DEH (Simulator)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.	
Simulator Guide PQD Code		Rev. No.	
JPM PQD Code	LR001827	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 9/05/07

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Reset to IC with Reactor scrammed and level is stable on the Startup Flow Control Valves.

Special Setup Instructions:

N/A

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: None

Task Number: RO-0348

Validation Time: 10 minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-DEH-OPS Rev. 4

Location: Simulator

NUREG 1123 Ref: 241000A4.02 4.1/4.1

Performance Method: Perform

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	Columbia has just experienced a reactor scram due to a control rod drifting out of the core. Efforts are underway to secure the Reactor Feed Pumps.
INITIATING CUE:	The Control Room Supervisor has directed you to lower RPV pressure to 800 psig at 100 psig per minute with bypass valves. Inform the CRS when RPV pressure is 800 psig.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
	Initiate Pressure setpoint change as follows (Menu Turbine Start Up): a. Verify AUTO mode is illuminated in Throttle Pressure section	On Turbine Start Up screen, verifies that AUTO mode is illuminated in the Throttle Pressure selection	S / U
	b. Select Press Target	Selects Pressure Target	S / U *
	c. Enter desired pressure	Enters “8, 0, 0” psig	S / U *
	d. Select OK	Selects OK	S / U *
	e. Verify entered target pressure in Press Target window	Verifies 800 is displayed in the Press Target window	S / U
	f. Verify Hold illuminated	Verifies the green Hold illuminated	S / U
	g. Select Pressure Rate	Selects Pressure Rate	S / U *
	h. Enter desired Pressure rate	Enters “1, 0, 0” psig	S / U *
	i. Select OK	Selects OK	S / U *
	j. Verify entered pressure rate appears in Press Rate window	Verifies 100 psig is displayed in the Pressure Rate window	S / U
	k. Select GO	Selects GO	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	l. Select YES	Selects YES	S / U *
	m. Verify GO illuminated	Verifies the green GO is illuminated	S / U
	n. Verify Press Demand and Throttle Press change at the entered rate.	Verifies Press Demand and Throttle Press change at 100 psig per minute	S / U
	o. When the Pressure Target is reached, then verify GO extinguishes	When RPV pressure is 800 psig, verifies the green GO extinguishes	S / U
	p. When the Pressure and Pressure Demand are approximately equal	Verifies Throttle Pressure and Pressure Demand are approximately equal	S / U
Termination Criteria: Student informs CRS that RPV pressure has been lowered to 800 psig.			
RECORD TERMINATION TIME: _____			
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
LOWER RPV PRESSURE USING DEH

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RPV pressure has been lowered to 800 psig at 100 psig per minute.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	12 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ **Date:** _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

Columbia has just experienced a reactor scram due to a control rod drifting out of the core.

Efforts are underway to secure the Reactor Feed Pumps.

Cue:

The Control Room Supervisor has directed you to lower RPV pressure to 800 psig at 100 psig per minute with bypass valves.

Inform the CRS when RPV pressure is 800 psig.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: INITIATE RCIC FOR RPV INJECTION - ARM AND DEPRESS (FAULTED)(SIM)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.	
Simulator Guide PQD Code		Rev. No.	
JPM PQD Code	LR000302	Rev. No.	9
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Staff DATE: 1997

REVISED BY: Ron Hayden DATE: 06/05/08

TECHNICAL REVIEW _____ DATE _____

INSTRUCTIONAL _____ DATE _____

APPROVED BY _____ DATE _____

Operations Training Manager

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Any low power IC in which RCIC will NOT cause a reactor scram from a turbine trip

Special Setup Instructions:

Insert the following malfunction prior to starting the JPM:
RCIC CONTROLLER AUTO OUTPUT FAILURE
IMF CNH-RCI002E 50

JPM Instructions:

Verify the current procedure against the JPM. If the procedure is a different revision than listed in the JPM, ensure the critical steps still match. If the critical steps have changed, the JPM should be revised.

The evaluator and student shall use the current procedure. The instructor should mark off steps as they are completed, note comments, and transfer the comments to the results of JPM page.

Tools/Equipment: None

Safety Items: None

Task Number: RO-0268**;** RO-0656

Validation Time: 6 min.

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-RCIC-INJECTION-QC Rev. 2

Location: SIMULATOR

NUREG 1123 Ref: 217000A2.10(3.1/3.1)
217000A2.11(3.1/3.2)

Performance Method: PERFORM

JPM CHECKLIST

PROCEDURE VALIDATION	Regarding procedure copies for evaluator and student, if the procedure revision is different from that listed on the JPM, verify that the critical task steps are the same. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	Columbia was scrammed due to an electrical problem associated with the Main Generator. PPM 5.1.1, RPV Level Control has been entered due to low RPV Level. As RPV level started to recover, both Reactor Feed Pumps tripped.
INITIATING CUE:	The CRS has directed you to initiate the RCIC system for RPV injection. Return RPV level to a +13 inch to +54" level band. Inform the CRS when you have established injection flow of 600 gpm.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			

Step 2.1.1	IF not already operating, THEN ARM and DEPRESS the RCIC MANUAL INITIATION pushbutton.	RCIC-RMS-S36 to ARM and then depresses the initiation pushbutton	S / U *
	Note: When RCIC initiates the following occurs:	Verifies:	
	RCIC-V-45 (Steam to Turbine) opens	RCIC-V-45 opens (red light on, green light out)	S / U
	RCIC-V-46 (Lube Oil Cooler Water Supply) opens	RCIC-V-46 opens (red light on, green light out)	S / U
	RCIC-P-2 (Barometric Condsr Vacuum Pump) starts	RCIC-P-2 starts (red light on, green light out)	S / U
	RCIC-V-13 (RPV Injection) opens	RCIC-V-13 opens (red light on, green light out)	S / U
	RCIC-V-25 and RCIC-V-26 (Steam Line Warmup Drains to Mai n Condenser) close	RCIC-V-25 and RCIC-V-26 close (green light on, red light out)	S / U
	RCIC-V-4 and RCIC-V-5 (Cond Pump Discharge to EDR) close	RCIC-V-4 and RCIC-V-5 close (red light on, green light out)	S / U
	SW-P-1B starts (20 second time delay)	SW-P-1B starts (red light on, green light out)	S / U

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	Recognizes failure of RCIC to deliver water to the RPV	Notes no flow has started to RPV. Diagnoses problem is associated with the flow controller that will not rise above 50% scale in AUTO	S / U *
Cue: If operator informs CRS of controller failure, cue as CRS: Understand you have a controller problem. Take actions as necessary to deliver 600 gpm to the RPV.			
	Manually adjusts RCIC system flow.	Places RCIC-FIC-600 in MANUAL and increases system flow to 600 gpm using controllers open pushbutton	S / U *

Termination Criteria: Operator informs the CRS when RCIC injection flow is established at 600 gpm.
RECORD TERMINATION TIME: _____
Transfer the following information to the "Results of JPM" page: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time. The marked up procedure and remaining JPM pages may be discarded.

RESULTS OF JPM:
INITIATE RCIC FOR RPV INJECTION - ARM AND DEPRESS

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RCIC is initiated and is injecting at 600 gpm per SOP-RCIC-INJECTION-QC.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM	Validation/Critical Time	JPM Completion Time
	6 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

Columbia was scrammed due to an electrical problem associated with the Main Generator.

PPM 5.1.1, RPV Level Control has been entered due to low RPV Level.

As RPV level started to recover, both Reactor Feed Pumps tripped.

Cue:

The CRS has directed you to initiate the RCIC system for RPV injection.

Return RPV level to a +13 inch to +54" level band.

Inform the CRS when you have established injection flow of 600 gpm.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: START B SGT FOR CONTAINMENT VENTING (FAULTED) (SIM)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.
Simulator Guide PQD Code		Rev. No.
JPM PQD Code	LO001636	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/05/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Any IC

Special Setup Instructions:

Shutdown RB HVAC
Close SGT-V-2B
Silence annunciators on panels not used.

JPM Instructions:

Verify the current procedure against the JPM. If the procedure is a different revision than listed in the JPM, ensure the critical steps still match. If the critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: None

Task Number: R0-0287

Validation Time: 8 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: SOP-CN-CONT-VENT, Rev. 12; SOP-SGT-START Rev. 3

Location: SIMULATOR

NUREG 1123 Ref: 261000 A4.07 (3.1, 3.2)

Performance Method: PERFORM

JPM CHECKLIST

PROCEDURE VALIDATION	Regarding procedure copies for evaluator and student, if the procedure revision is different from that listed on the JPM, verify that the critical task steps are the same. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	Columbia is entering a refueling outage and is in Mode 4. Purging per SOP-CN-CONT-VENT Section 5.3 has been completed (Section 5.3 has been completed). Reactor Building HVAC is shutdown.
INITIATING CUE:	You have been directed by the CRS to ventilate containment with SGT per SOP-CN-CONT-VENT section 5.7. You are directed to start SGT "B" Lead Fan (at the subsystem level). Inform the CRS when you are ready to close SGT-V-2B.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
SOP-CN-CONT-VENT Step 5.7.1	VERIFY the following: • Drywell has been purged through SGT for GT 24 hours • Wetwell has been purged through SGT for GT 24 hours • Reactor is in Modes 4 or 5	Given in Initial Conditions	N / A
Step 5.7.2	VERIFY purge shutdown, per Section 5.3	Given in Initial Conditions	N / A
Step 5.7.3	START one train of SGT per SOP-SGT-START	Refers to SOP-SGT-START section 5.2.1 then section 5.2.5	S / U *
SOP-SGT-START Step 5.2.1 **(FAULTED)**	VERIFY there are no paint fumes, chemical fumes or combustion products (welding, cutting, fire, etc.) in the areas that communicate with SGT	Verbalizes that this step needs to be performed.	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
CUE: When student verbalizes that this step needs to be performed, inform him that there is welding ongoing in the Reactor Building 572' on the North East wall on a fire-protection line. **Student should inform the CRS of the ongoing welding activities and NOT continue with the procedure.**			
CUE: When student informs the CRS of condition, inform him that time compression has occurred and the welding activities have been secured. Permission is given to continue with SOP-CN-CONT-VENT procedure.			
Step 5.2.5a **(FAULTED)**	VERIFY SGT-V-2B is OPEN (Inlet from Reactor Building)	Notes green light illuminated as valve is closed. Turns black handle switch in the clockwise direction to OPEN. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.2.5b	MOMENTARILY TURN SGT-FN-1B2 fan control switch from AUTO to PTL SYS. START	Turns black handle for SGT-FN-1B2 clockwise from AUTO, past START, to the PTL SYS START position	S / U *
Step 5.2.5c	VERIFY the following: • Main Heaters ENERGIZE as indicated by Main Heater ON light and B2 amp meters • SGT-V-5B2 OPENS (Exhaust to Stack). • SGT-FN-1B2 STARTS (within 10 seconds)	Observes blue heater ON lights illuminate for SGT-EHC-1B-2 and amps indicated on the three amp meters (bottom left) Observes red light illuminates and green light out for SGT-V-5B2 Observes red light illuminates and green light out for SGT-FN-1B2 starts within 10 seconds	S / U S / U S / U
Step 5.2.5d	IF required to operate in manual flow control, THEN PERFORM the following. Otherwise, N/A	Determines that Manual flow control not required as Auto flow control works	N / A

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
SOP-CN-CONT-VENT Step 5.7.4	OPEN CEP-V-1A (Upper DW Exhaust Valve) (H13-P813)	On H13-P813, turns control switch for CEP-V-1A clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.7.5	OPEN CEP-V-2A (Upper DW Exhaust Valve) (H13-P813)	On H13-P813, turns control switch for CEP-V-2A clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.7.6	IF SGT-SYS-A is running, THEN PERFORM the following…..	SGT-B is running – step is N / A	N / A
Step 5.7.7	IF SGT-SYS-B is running, THEN PERFORM the following: a. OPEN SGT-V-1B (Inlet from Containment Building) (H13-P811). b. CLOSE SGT-V-2B (Inlet from Reactor Building) (H13-P811)	Turns black handle switch for SGT-V-1B clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Termination Criteria: Student informs CRS that he is ready to close SGT-V-2B. Inform the student that the termination point of the JPM has been reached.			
RECORD TERMINATION TIME: _____			
Transfer the following information to the "Results of JPM" page: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time. The marked up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
START B SGT FOR CONTAINMENT VENTING

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: SGT train B is running and lined up for venting the Containment per SOP-CN-CONT-VENT up to closing SGT-V-2B.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	8 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

Columbia is entering a refueling outage and is in Mode 4.

Purging per SOP-CN-CONT-VENT Section 5.3 has been completed (Section 5.3 has been completed).

Reactor Building HVAC is shutdown.

Cue:

You have been directed by the CRS to ventilate containment with SGT per SOP-CN-CONT-VENT section 5.7.

You are directed to start SGT "B" Lead Fan (at the subsystem level).

Inform the CRS when you are ready to close SGT-V-2B.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: LICENSED OPERATOR/STA REQUALIFICATION TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: OPEN INBOARD MSIVs TO RE-ESTABLISH THE MAIN CONDENSER AS A HEAT SINK (SIM)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.
Simulator Guide PQD Code		Rev. No.
JPM PQD Code	LO001638	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/05/08

REVISED BY: DATE:

TECHNICAL REVIEW DATE:

INSTRUCTIONAL DATE:

APPROVED BY DATE:

Operations Training Manager

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Any IC with the reactor at rated pressure
Ensure Stopwatch is available if timing is desired

Special Setup Instructions:

Post scram. Close the Inboard MSIVs (MS-V-22A –D) and

JPM Instructions:

Verify the current procedure against the JPM. If the procedure is a different revision than listed in the JPM, ensure the critical steps still match. If the critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: Stopwatch

Safety Items: None

Task Number: RO-0311

Validation Time: 7 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: SOP-MSIV-OPS Rev. 9

Location: SIMULATOR

NUREG 1123 Ref: 239001A4.01 (4.2/4.0)

Performance Method: PERFORM

JPM CHECKLIST

PROCEDURE VALIDATION	Regarding procedure copies for evaluator and student, if the procedure revision is different from that listed on the JPM, verify that the critical task steps are the same. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	A loss of CIA pressure caused the CRS to direct a manual scram. The inboard MSIVs went closed due to low CIA pressure. CIA pressure has been restored. TDAS not available. Health Physics has been notified of this evolution.
INITIATING CUE:	The CRS has directed you to equalize around and open the Inboard MSIVs per SOP-MSIV-OPS Section 5.2. Do NOT record the stroke time using Attachment 6.1. You have permission to N/A those steps. Notify the CRS when all of the MSIVs are open.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
Step 5.2.1	IF not in Modes 1 or 2, THEN VERIFY DEH pressure setpoint is GT RPV pressure prior to opening MSIVs	Observes RPV pressure on MS-PR-1C (or other recorder) Observes DEH touch screen and notes DEH pressure setpoint Verifies DEH setpoint is GT RPV Pressure	S / U *
Step 5.2.2	NOTIFY Health Physics the equalizing/opening of the MSIV's has the potential of changing radiological conditions	Given in Initial Conditions as being completed	N / A
Step 5.2.3	VERIFY the applicable MSIV control switch is CLOSED	Observes all switches for the Inboard MSIVs are in the closed position	S / U
Step 5.2.4	IF TDAS is available…	TDAS not available, given in initial conditions	N / A

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.2.5	VERIFY the differential pressure across the MSIV is LT 50 psid.	Observes pressure on MS-LR/PR-623A/B on P601 and MS-PR-1C on P820 and verifies LT 50 psid	S / U *
Step 5.2.6	IF the reactor is in Mode 1 or 2,	Not in MODE 1 or 2	N / A
Step 5.2.7	RESET the isolation logic as follows: DEPRESS MS-RMS-S33 (Channel A and B Isolation Reset Pushbutton) (H13-P601). DEPRESS MS-RMS-S32 (Channel C and D Isolation Reset Pushbutton) (H13-P601)	Depresses both Channel A and B, and Channel C and D Isolation Reset Pushbuttons	S / U*
Step 5.2.8	PERFORM the following to OPEN the OUTBOARD MSIV: N/A those not opened.	All Outboard MSIVs are opened	N / A

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.2.9	PERFORM the following to OPEN the INBOARD MSIV: N/A those not opened. a. PLACE MS-V-22A control switch in AUTO 1) VERIFY MS-V-22A OPENS 2) RECORD open time on Attachment 6.1 b. PLACE MS-V-22B control switch in AUTO 1) VERIFY MS-V-22B OPENS 2) RECORD open time on Attachment 6.1	Turns the control switches for each Inboard MSIV to the AUTO position: MS-V-22A MS-V-22B MS-V-22C MS-V-22D	S / U * S / U * S / U * S / U *
Step 5.2.9 Continued	c. PLACE MS-V-22C control switch in AUTO 1) VERIFY MS-V-22C OPENS 2) RECORD open time on Attachment 6.1. d. PLACE MS-V-22D control switch in AUTO 1) VERIFY MS-V-22D OPENS 2) RECORD open time on Attachment 6.1	Verifies each valve opens by observing the red light illuminates and the green light extinguishes: MS-V-22A MS-V-22B MS-V-22C MS-V-22D	S / U S / U S / U S / U
Termination Criteria: Student informs CRS that all MSIVs are open.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
		RECORD TERMINATION TIME: _____	
Transfer the following information to the "Results of JPM" page: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time. The marked up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
OPEN INBOARD MSIVs TO RE-ESTABLISH MAIN CONDENSER AS A HEAT SINK

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Open the Inboard MSIVs in accordance with SOP-MSIV-OPS

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	7 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

A loss of CIA pressure caused the CRS to direct a manual scram.

The inboard MSIVs went closed due to low CIA pressure.

CIA pressure has been restored.

TDAS not available.

Health Physics has been notified of this evolution.

Cue:

The CRS has directed you to equalize around and open the Inboard MSIVs per SOP-MSIV-OPS Section 5.2.

Do NOT take and record the stroke times. You have permission to N/A those steps.

Notify the CRS when all of the MSIVs are open.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: TRANSFER SM-8 FROM SM-3 TO TR-B (Sim)

LESSON LENGTH: .5 HRS

MAXIMUM STUDENTS: 1

INSTRUCTIONAL MATERIALS INCLUDED

Lesson Plan PQD Code		Rev. No.	
Simulator Guide PQD Code		Rev. No.	
JPM PQD Code	LO001635	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/03/08

REVISED BY: DATE:

TECHNICAL REVIEW BY: DATE:

INSTRUCTIONAL REVIEW BY: DATE:

APPROVED BY: DATE:

Operations Training Manager

Verify materials current IAW SWP-TQS-01 prior to use

MINOR REVISION RECORD

Minor Rev Number	Description of Revision	Affected Pages	Entered By	Effective Date	Manager Approval

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

N/A

Special Setup Instructions:

Reset to any IC where SM-8 is powered from SM-3 and TR-B is available.
Ensure Syn Selector switch is in the DG2 slot.

JPM Instructions:

Verify Current Procedure against JPM and ensure procedure critical steps match if procedure is different revision than listed in JPM. If critical steps have changed, the JPM should be revised.

The evaluator and student shall use current procedure. The evaluator should mark off steps as they are completed, note comments, and transfer the comments to the "Results of JPM" page.

Tools/Equipment: None

Safety Items: None

Task Number: RO-1244

Validation Time: 7 Minutes

Prerequisite Training: N / A

Time Critical: No

PPM Reference: SOP-ELEC-4160V-OPS Section 5.8 Rev. 1

Location: Simulator

NUREG 1123 Ref: 262001 A4.01 (3.4/ 3.7)

Performance Method: Perform

JPM CHECKLIST

PROCEDURE VALIDATION	Procedure copies for evaluator and student, if procedure revision is different from that listed on JPM, critical tasks reverified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	To facilitate maintenance on Bus 3 and 8 tie breaker, CB-3/8, SM-8 needs to be transferred to Backup Transformer.
INITIATING CUE:	The Control Room Supervisor has directed you to transfer SM-8 from SM-3 to TR-B. Inform the CRS when SM-8 is being powered from TR-B.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 5.8.1	VERIFY CB-TRB CLOSED	Observes red light illuminated and red flag visible for CB-TRB	S / U
Step 5.8.2	VERIFY the following: • TR-B voltage GE 115 KV • SM-7 is not being supplied from TR-B	Observes TR-B voltage on meter to be GT 115 KV Observes the B-7 breaker open	S / U S / U
Step 5.8.3	VERIFY CB-B8 white LOCKOUT CIRCUIT AVAIL light illuminated	Observes white lockout circuit available light illuminated above CB-B8 control switch	S / U
Step 5.8.4	VERIFY CB-B8 READY TO XFR light illuminated	Observes Ready to transfer light above Lockout Circuit available light is illuminated	S / U
Step 5.8.5	VERIFY CB-B8 green light illuminated and green flag displayed	Observes green light illuminated and green flag displayed for CB-B8	S / U
Step 5.8.6	VERIFY CB-8/3 white LOCKOUT CIRCUIT AVAIL light illuminated	Observes white Lockout Circuit Avail light illuminated for CB-8/3	S / U
Step 5.8.7	VERIFY CB-8/3 red light illuminated	Observes red light illuminated for CB-8/3	S / U

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.8.8	PLACE CB-B8 Sync Selector switch in MANUAL	Turns black handled CB-B8 SYNC Selector switch to the MAN position by turning it counter-clockwise	S / U *
Step 5.8.9	VERIFY voltage present on both incoming and running buses	Observes voltage reading on both incoming and running bus meters located above the Diesel Generator 2 plackard	S / U
Step 5.8.10	CLOSE CB-B8	Turns black handled control switch for CB-B8 clockwise to the CLOSE position	S / U *
Step 5.8.11	VERIFY CB-8/3 auto trips	Observes CB-8/3 breakers green light illuminates and red light goes out	S / U
Step 5.8.12	PLACE CB-8/3 control switch in TRIP	Turns the black handled control switch for CB-8/3 counter-clockwise to the Trip position and releases the switch	S / U
Step 5.8.13	VERIFY CB-8/3 green light illuminated and green flag displayed	Observes the green light illuminated and green flag displayed for CB-8/3	S / U
Step 5.8.14	PLACE CB-B8 Sync Selector switch in OFF	Turns black handled CB-B8 SYNC Selector switch to the OFF position by turning it clockwise	S / U
Termination Criteria: Student informs CRS that SM-8 has been transfer and is now being powered from the backup transformer.			
RECORD TERMINATION TIME: _____			
Transfer to "Results of JPM" page the following information: Procedures validated prior to use; Comments from marked up evaluator's procedure copy; Unsatisfactory critical tasks; Total JPM time; Marked Up procedure and remaining JPM pages may be discarded.			

RESULTS OF JPM:
TRANSFER SM-8 FROM SM-3 TO TR-B

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: SM-8 has been transferred from SM-3 to the Backup Transformer per SOP-ELEC-4160V-OPS.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	8 Minutes / NA	

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

To facilitate maintenance on Bus 3 and 8 tie breaker, CB-3/8, SM-8 needs to be transferred to Backup Transformer.

Cue:

The Control Room Supervisor has directed you to transfer SM-8 from SM-3 to TR-B.

Inform the CRS when SM-8 is being powered from TR-B.