INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: PREVENT A RCIC HIGH EXHAUST PRESSURE TRIP (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	LR001505	Rev. No.	4
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 10/01/01

REVISED BY: Ron Hayden DATE: 06/15/09

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: None

Task Number: RO-0545, EO-1447

Validation Time: 4 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: PPM 5.6.1 Step 6.15 Rev. 17

Location: Plant

NUREG 1123 Ref: 295003 AA1.03 (4.4/4.4)

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:	Due to a series of events Columbia Generating Station has entered into a station blackout. PPM 5.6.1 is being performed.
INITIATING CUE:	The CRS has directed you to prevent a RCIC high exhaust pressure trip by performing PPM 5.6.1 Step 6.15. Inform the control Room when the trip has been prevented. 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 6.15.1	Close RCIC-V-756A (RCIC-PS-9A Instrument Isolation Valve)	Simulates turning handwheel in the clockwise direction to close RCIC-V-756A	S / U *
Step 6.15.2	Remove the pipe cap between RCIC-PS-9A and RCIC-V-756A	Indicates wrench to be used and that the pipe cap between RCIC-PS-9A and RCIC-V-756A would be turned counter-clockwise to remove it	S / U *
Step 6.15.3	Close RCIC-V-756B, (RCIC-PS-9B Instrument Isolation Valve)	Simulates turning handwheel in the clockwise direction to close RCIC-V-756B	S / U *
Step 6.15.4	Remove the pipe cap between RCIC-PS-9B and RCIC-V-756B	Indicates wrench to be used and that the pipe cap between RCIC-PS-9B and RCIC-V-756B would be turned counter-clockwise to remove it	S / U *
Termination Criteria: Student informs CRS that the RCIC high exhaust pressure trip has been prevented			
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:
PREVENT A RCIC HIGH EXHAUST PRESSURE TRIP

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: A RCIC high exhaust pressure trip has been prevented per PPM 5.6.1.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

Initial Conditions:

Due to a series of events Columbia Generating Station has entered into a station blackout.

PPM 5.6.1 is being performed.

Cue:

The CRS has directed you to prevent a RCIC high exhaust pressure trip by performing PPM 5.6.1 Step 6.15.

Inform the control Room when the trip has been prevented.

THE PERFORMANCE OF THIS JPM WILL BE SIMULATED.

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

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: RESPOND TO CONTROL ROOM HVAC HIGH RADIATION (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	LO001595	Rev. No.	1
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 2006

REVISED BY: Ron Hayden DATE: 6/16/09

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 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: RO-0114

Validation Time: 10 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: ABN-RAD-CR Rev. 5

Location: PLANT

NUREG 1123 Ref: 288000A2.02 (3.7/3.8)

Performance Method: SIMULATE

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 Reactor Building High Radiation signal is present. All automatic actions have been verified. The "B" Control Room Ventilation and Emergency Filtration systems have been secured and the "A" Control Room ventilation (WMA-FN-51A) and Emergency Filtration Fans (WMA-FN-54A) are operating. A Hi-Hi radiation alarm has been confirmed on the Northwest remote air intake (WOA-RIS-31A/B reads 5,000 CPM). No alarm is observed on the Southeast side (WOA-RIS-32A/B reads normal).
INITIATING CUE:	The CRS has directed you to isolate the Northwest Remote Air Intake per ABN-RAD-CR. Notify the CRS when actions per ABN-RAD-CR have been completed for the high radiation condition. 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: _____			
Step 7.1.1	Verify WOA-V-51B is open (SE #2) Remote intake outboard isolation	Checks the stem position indicator is pointed to OPEN	S / U
Cue: If candidate checks WOA-V-51B is open and independent verification of the step has been performed.			
Step 7.1.2	Verify WOA-V-52B is open (SE #2) Remote intake inboard isolation	Checks the stem position indicator is pointed to OPEN	S / U
Cue: If candidate checks WOA-V-52B is open and independent verification of the step has been performed.			
Step 7.1.3	Unlock and close WOA-V-51A, NW (#1) Remote Intake Outboard Isolation. If remote air intake #1 is isolated using only valve WOA-V-52A, then N/A this step and step 7.1.4	Observes that the valve is open and attempts to close it. See Cue below. This step should be N / A'ed	S / U *
Cue: When student attempts to close WOA-V-51A, inform the student that the operator is broken and the valve is danger tagged in the open position.			

Comments	Element	Standard	Sat/Unsat
Step 7.1.4	Verify WOA-V-51D Opens, NW (#1) Remote Intake Purge, (WOA-V-51A Closed)	Per Step 7.1.3, this step is N / A'ed	**N/A**
Step 7.1.5	Unlock and close WOA-V-52A, NW (#1) Remote Intake Inboard Isolation	Simulates using key to unlock the lock. Uses handwheel and closes WOA-V-52A.	S / U *
Step 7.1.6 E-CP-COHV/1 is labeled COHV-1. Cover for F4 is labeled with a 4 and door aid indicates TB-F4	If remote air intake #1 is isolated using only valve WOA-V-52A, then remove fuse F4 in Control, Cable Spreading and Critical Switchgear Rooms Control Panel E-CP-COHV/1 (RW 525) to open WOA-V-51D, NW (#1) Remote Intake Purge. Otherwise N/A	Simulates pulling fuse F4. Fuse is in the panel and is located in the upper left side of the panel	S / U *
Cue: If candidate checks, WOA-V-51D opens.			
Termination Criteria: Student informs CRS that the NW Remote Air Intake is isolated, only WOA-V-52A is closed, and Fuse F4 has been pulled.			
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:

RESPOND TO CONTROL ROOM HVAC HIGH RADIATION (ONE INTAKE)

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: The Northwest Remote Air Intake to the Control Room Ventilation System is isolated per ABN-RAD-CR.

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:

- A Reactor Building High Radiation signal is present
- All automatic actions have been verified
- The "B" Control Room Ventilation and Emergency Filtration systems have been secured and the "A" Control Room ventilation (WMA-FN-51A) and Emergency Filtration Fans (WMA-FN-54A) are operating
- A Hi-Hi radiation alarm has been confirmed on the Northwest remote air intake (WOA-RIS-31A/B reads 5,000 CPM)
- No alarm is observed on the Southeast side (WOA-RIS-32A/B reads normal)

Cue:

The CRS has directed you to isolate the Northwest Remote Air Intake per ABN-RAD-CR

Notify the CRS when actions per ABN-RAD-CR have been completed for the high radiation condition

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

ALL ACTIONS AND STEPS WILL BE SIMULATED

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. 1
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

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

REVISED BY: Ron Hayden DATE: 10/21/08

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:

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: SOP-RPS-START Section 5.1 and 5.3 Rev. 0

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 SOP-RPS-START 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 for steps without a separate cue			
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 indicating light illuminated (green)	Observes the green MOTOR OFF indicating light is illuminated	S / U
CUE: Green light is illuminated, red light is extinguished			
Step 5.1.2b	Verify RPS-CB-MG1 OPEN (Generator Output Breaker)	Observes RPS-CB-MG1 is open with lever in OFF position	S / U
CUE: The lever for RPS-CB-MG1 is in the OFF position			
Step 5.1.2c	DEPRESS and HOLD RPS-RMS-MG1/ START, pushbutton (MOTOR ON)	Simulates depressing and holding RPS-RMS- MG1/ START, MOTOR ON pushbutton depressed	S / U *
Step 5.1.2d	Verify the following: • MOTOR OFF indicating light extinguished (green) • MOTOR ON light illuminates (red)	Observes the green MOTOR OFF indicating light extinguishes and the red MOTOR ON indicating light is illuminated	S / U
CUE: Red light is illuminated, Green light is extinguished			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
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-MG1/START pushbutton	Simulates releasing the MOTOR ON pushbutton when cued that RPS-MG-1 is up to speed	S / U *
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 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	Simulates closing RPS-CB-MG1 by pushing up on lever to ON	S / U *
Step 5.1.3	PROCEED to 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 required EPA breaker keys from the control room key locker	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 NORMAL	Observes switch S1 on RPS-EPA-3A is in NORMAL	S / U
Step 5.3.3b	VERIFY breaker keylock switch S2 in OPER	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 step below (5.3.3d) is done, the under voltage 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 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 step below (5.3.3e) is done and if properly reset, the undervoltage and under frequency lights are not illuminated.			
Step 5.3.3e	VERIFY the following indicators extinguished: • OVERVOLTAGE • UNDERVOLTAGE • UNDERFREQUENCY • POWER OUT	Observes all lights extinguished	S / U
Step 5.3.3f	OPEN RPS-EPA-3A to reset it	Resets RPS-EPA-3A by pushes lever fully downward	S / U *
Step 5.3.3g	Close RPS-EPA-3A	Closes RPS-EPA-3A by lifting up on lever	S / U *
Step 5.3.3h	VERIFY POWER OUT indicator illuminated	Observes POWER OUT light illuminated	S / U
CUE: When checked, the POWER OUT indicator is illuminated.			
Step 5.3.4	IF the UNDERVOLTAGE light is illuminated and the breaker is closed, THEN INITIATE a work request	Observes UNDERVOLTAGE light out	S / U
Step 5.3.5a	CLOSE RPS-EPA-3C as follows (EPA Breaker) (RPS-MG2 Room): VERIFY breaker keylock switch S1 in NORMAL	Observes switch S1 on RPS-EPA-3C is in NORMAL	S / U
Step 5.3.5b	VERIFY breaker keylock switch S2 in OPER	Observes switch S2 on RPS-EPA-3C is in OPER	S / U
CUE: When checked, the POWER IN indicator is illuminated.			
Step 5.3.5c	VERIFY the POWER IN indicator illuminated	Observes POWER IN light illuminated	S / U
CUE: When checked, the undervoltage and under frequency lights are illuminated.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.3.5d	IF any of the following indicators are not extinguished, THEN ROTATE keylock switch S2 to the RESET AND RETURN to OPER: • OVERVOLTAGE • UNDERVOLTAGE • UNDERFREQUENCY • POWER OUT	Rotates the breaker key lock S2 switch to RESET Rotates S2 back to OPER	S / U *
CUE: If reset properly, the undervoltage and under frequency lights are not illuminated.			
Step 5.3.5e	VERIFY the following indicators extinguished: • OVERVOLTAGE • UNDERVOLTAGE • UNDERFREQUENCY • POWER OUT	Observes all lights extinguished	S / U
Step 5.3.5f	OPEN RPS-EPA-3C to reset it	Resets RPS-EPA-3C by pushes lever fully downward	S / U *
Step 5.3.5g	Close RPS-EPA-3C	Closes RPS-EPA-3C by lifting up on lever	S / U *
CUE: When checked, the POWER OUT indicator is illuminated.			
Step 5.3.5h	VERIFY the POWER OUT indicator illuminated	Observes POWER OUT light illuminated	S / U
Step 5.3.5i	IF the UNDERVOLTAGE light is illuminated and RPS-EPA-3C is CLOSED, THEN INITIATE a work request to evaluate	Observes UNDER VOLTAGE light out	S / U
Step 5.3.6	Verify Generator A Feed white power available indicating light illuminated (H13-P610)	Contacts the Control Room and asks if the light is illuminated	S / U
CUE: When checked, the power available light is illuminated.			
Termination Criteria: Student informs the CRS that Division 1(A) RPS bus is powered.			
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 SOP-RPS-START.

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 SOP-RPS-START 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 RRC-P-1B AT POWER (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	LO001681	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/10/09

REVISED BY: DATE:

TECHNICAL REVIEW: DATE:

INSTRUCTIONAL: DATE:

APPROVED BY: DATE:

Operations Training Manager

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

START RRC-P-1B AT POWER

MINOR REVISION RECORD

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

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

IC-14 or special IC created for JPM set.

XMT-RRP009B with a severity of –15.
Override Hz meter to 12 Hz on H13-P602 meter on an event (when 2nd channels red light illuminates)
Override Hz meter to 10 Hz on RRC-B individual controller (when 2nd channels red light illuminates)

Special Setup Instructions:

Stop RRC-P-1B, open breakers CB-RRB, CB-RPT4B, CB-RPT3B, and allow conditions to stabilize.
Ensure XMT-RRP009B is active with a severity of –15 in the snapped IC Set.
Ensure loop A flow is approximately 20,800 gpm.
Put a caution tag on the ASD video display

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: N/A

Safety Items: N/A

Task Number: RO-0061

Validation Time: 20 min

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: SOP-RRC-START Rev. 7

Location: Simulator

NUREG 1123 Ref: 202001A4.01 (3.7/3.7)

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 operating at rated power when RRC-P-1B tripped The cause has been corrected and RRC-P-1B is ready for a start The SNE is in the control room and has that core conditions are consistent with the requirements specified in the Reactivity Control Plan and RPV Inlet temperature is to the left of the Recirc Pump Start Curve in attachment 6.3 The reactor is below the 70% rod line Per SOP-RRC-SEAL, RRC seal purge injection has been in service GT 30 minutes No substitute value for single loop has been inserted for the B18 computer point The ASD Video Display, RRC-VD-R673, is Out of Service OPS 4 has been briefed and is standing by in the ASD Building
INITIATING CUE:	The CRS has directed you to start RRC-P-1B per SOP-RRC-START using both drive channels. Notify the CRS when RRC-P-1B has been started and is operating at 15 Hz.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 5.2.1	Verify SNE has …….	Given in Initial Conditions	N / A
Step 5.2.2	Lower and maintain the operating recirculation loop drive flow at ~20,800 gpm	Observes Loop A flow indication is at approximately 20,800 gpm	S / U
Step 5.2.3	Verify the Reactor is below the 70% rod line	Given in Initial Conditions	N / A
Step 5.2.4	Verify reactor water level is GT Level 4	Observes Narrow range meter and observes it is GT 31.5”	S / U
Step 5.2.5	Verify RRC seal purge injection has been in service for at least 30 minutes prior to the starting of an idle pump per SOP-RRC-SEAL	Given in Initial Conditions	N / A

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.2.6	Verify the following: RWCU-V-106 OPEN (RRC Loop A Suction (H13-P602) RRC-V-23B OPEN (Pump Suction) (H13-P602) RRC-V-67B OPEN (Pump Discharge valve) (H13-P602) RCC-V-17B OPEN (RCC Inlet to RRC-P-1B) (H13-P614)	Verfies the following red lights are illuminated and green lights are off for: RWCU-V-106 RRC-V-23B RRC-V-67B RCC-V-17B	S / U
	RRC-M/A-R676B in MANUAL (Loop "B" Manual/Auto Controller) (H13-P602) RRC-M/A-R676B is set at 15 hz demand RRC-M/A-R676B status lights extinguished Feed Pump Trip ΔT Cavitation Reactor Low Level	Verifies: RRC-M/A-R676B in MANUAL RRC-M/A-R676B is set at 15 hz demand RRC-M/A-R676B status lights are off Feed Pump Trip ΔT Cavitation Reactor Low Level	S / U S / U S / U
PROCEDURE NOTE: It is acceptable for the Thrust Monitor to be in alarm when the RRC pump is S/D			
	H13-P602.A6-2.8, RECIRC B SYSTEM VIB HIGH is clear H13-P602.A6.2-5, RECIRC B PUMP SEAL COOLING WATER FLOW LOW is clear H13-P602.A6.3-6, RECIRC B MOTOR WINDING COOLANT FLOW LOW is clear	H13-P602.A6-2.8, RECIRC B SYSTEM VIB HIGH is clear H13-P602.A6.2-5, RECIRC B PUMP SEAL COOLING WATER FLOW LOW is clear H13-P602.A6.3-6, RECIRC B MOTOR WINDING COOLANT FLOW LOW is clear	S / U S / U S / U
Step 5.2.7	CLOSE CB-RRB (RRC-P-1B Bus Tie breaker) (H13-P602)	Takes control switch for CB-RRB to the Close position and observes red light lit and green light out	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.2.8	CLOSE CB-RPT-4B (RRC-P-1B Motor Interlock Breaker) (H13-P602).	Takes control switch for CB-RPT-4B to the Close position and observes red light lit and green light out	S / U *
Step 5.2.9	CLOSE CB-RPT-3B (RRC-P-1B Motor Interlock Breaker) (H13-P602).	Takes control switch for CB-RPT-3B to the Close position and observes red light lit and green light out	S / U *
Step 5.2.10	NOTE: White Lights DS 6C and 6D may be pulsing at the rate of approximately once per second VERIFY following white lights DIMLY illuminated (RPT trip systems A): DS 6C (H13-P609) DS-6D (H13-P611)	Observes white lights dimly illuminated for: DS 6C on P609 DS 6D on P611	S / U
Step 5.2.11	DEPRESS the RESET pushbutton at the control and diagnostic panel for each drive	Contacts OPS4 and directs reset P/B's be depressed	S / U
ROLEPLAY – When asked, report the P/Bs have been depressed (no Simulator action is needed)			
Step 5.2.12	If starting an RRC pump on the master channel 1B1, then verify the following: Otherwise, N/A Channel Selector Switch for Channel 1B1 is ON Channel Selector Switch for Channel 1B2 is in OFF	Starting RRC-P-1B on both channels - N/A	N / A

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.2.13	If starting an RRC pump on the slave channel 1B2, then verify the following: Otherwise, N/A Channel Selector Switch for Channel 1B1 is OFF Channel Selector Switch for Channel 1B2 is ON	Starting RRC-P-1B on both channels - N/A	N / A
5.2.14	If starting an RRC pump on both drive channels, then verify both Channel Selector Switches for that drive are in the ON positions. Otherwise, N/A RRC-IMD-ASD1B/1 (Local Control and Diagnostics Panel) RRC-IMD-ASD1B/2 (Local Control and Diagnostics Panel)	Contacts OPS4 and directs both Channel Selector Switches for RRC-IMD-ASD1B/1 and RRC-IMD-ASD1B/2 are in the ON positions	S / U
ROLEPLAY: If directed report that both channel selector switches are in the ON position (No simulator action required)			
5.2.15	VERIFY temperature limitations within 15 minutes prior to starting an idle recirculation pump per OSP-RRC-C103	Verifies temperature limitations within 15 minutes prior to starting an idle recirculation pump per OSP-RRC-C103	S / U
ROLEPLAY: When step 5.2.15 is verbalized, inform the student that OSP-RRC-C103 has been performed and all temperatures are within limits to start RRC-P-1B			
CAUTION: Operation within the prohibited region of the Two Loop Recirculation Pump Speed Mismatch Operating Limits Curve, Attachment 6.4, will result in high vibration levels in the idle Jet Pumps			
5.2.16	If starting an idle pump with the other pump in operation, then verify the operating loop flow is LT 50% of rated loop flow (30 hz) within 15 minutes prior to pump start per OSP-RRC-C103. Otherwise, N/A	Verifies the operating loop flow is LT 50% of rated loop flow (30 hz)	S / U
ROLEPLAY: When step 5.2.16 is verbalized, inform the student that OSP-RRC-C103 has been performed and loop A flow is LT 50% of rated			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
5.2.17	If applicable, then remove the B18 computer substitute value for Single Loop Operation. Otherwise, N/A	Initial Conditions were no substitute value was used	N / A
5.2.18	Verify the ASD "READY" light for the drive channels to be started are lit	Observes the ASD "READY" light for drive channels 1B1 and 1B2 are illuminated	S / U
NOTE: A momentary "GTO FREEZE" alarm may be expected upon channel start. This alarm may be cleared by depressing the local reset pushbutton. An actual "GTO FREEZE" alarm will cause the channel to fault and trip NOTE: Frequency indication may be momentarily erratic during pump start NOTE: If the pump has been idle for an extended period of time, the expected start time of 30-50 seconds may be longer due to no oil film present under the thrust bearing			
5.2.19	Start RRC-P-1B by momentarily depressing the ASD START pushbutton	Starts RRC-P-1B by momentarily depressing the ASD START pushbutton	S / U *
5.2.20	Verify the RRC-P-1B starts and continues to operate at approximately 450 RPM (15 Hz)	Observes pump start (red light on green light off) Observes RRC-P-1B RPM does not reach 450 rpm Observes RRC-P-1B Hz indication does not reach 15 Hz	S / U *
5.2.21	If motor speed does not reach 15 Hz within approximately 50 seconds, then perform the following: Otherwise, N/A Stop the pump by depressing the ASD STOP pushbutton Notify the CRS and System Engineer the motor failed to start	Stops RRC-P-1B by depressing the ASD STOP pushbutton Notify the CRS and System Engineer that RRC-P-1B did not come up to required Hz nor RPM as required (notifications are not part of this critical step)	S / U * S / U
Termination Criteria: When student informs the CRS that RRC-P-1B has been stopped - 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:

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RRC-P-1B was started per SOP-RRC-START and was stopped when the pump fails to attain 15 hz.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

Columbia was operating at rated power when RRC-P-1B tripped

The cause has been corrected and RRC-P-1B is ready for a start

The SNE is in the control room and has that core conditions are consistent with the requirements specified in the Reactivity Control Plan and RPV Inlet temperature is to the left of the Recirc Pump Start Curve in attachment 6.3

The reactor is below the 70% rod line

Per SOP-RRC-SEAL, RRC seal purge injection has been in service GT 30 minutes

No substitute value for single loop has been inserted for the B18 computer point

The ASD Video Display, RRC-VD-R673, is Out of Service

OPS 4 has been briefed and is standing by in the ASD Building

Cue:

The CRS has directed you to start RRC-P-1B per SOP-RRC-START using both drive channels.

Notify the CRS when RRC-P-1B has been started and is operating at 15 Hz.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: CONTAINMENT DE-INERTING USING 'A' SGT (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	LO001682	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/10/09

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

START RRC-P-1B AT POWER

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:

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.

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: R0-0379

Validation Time: 10 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: SOP-CN-CONT-VENT, Rev. 15

Location: SIMULATOR

NUREG 1123 Ref: 223001 A4.05 (3.6, 3.6)

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 shutting down. The Primary Containment sample and analysis has been completed per PPM 16.11.3. Both trains of SGT are operable. Containment is aligned for venting through SGT. PRM-RE-1A is operable. CMS-RIS-12A is functional, activity levels have not increased and have been below alarm levels for the last hour.
INITIATING CUE:	You have been directed by the CRS to commence Containment De-Inerting using 'A' SGT by venting the Wetwell per SOP-CN-CONT-VENT section 5.1 starting at step 5.1.4. Steps 5.1.1 thru 5.1.3 are complete. Inform the CRS when you have commenced Wetwell venting.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 5.1.1 Step 5.1.2 Step 5.1.3	Given as complete in Initial Conditions		N / A
Step 5.1.4	Verify CEP-V-11 Closed	Observes CEP-V-11 has the green light lit and red light off	S / U
Step 5.1.5	If venting through SGT Train A, then perform the following (H13-P827):	Given in Initial Conditions to Use	S / U
Step 5.1.5a	Verify SGT-V-2A is OPEN (Inlet from Reactor Building)	Notes red light illuminated and green light extinguished for SGT-V-2A	S / U
Step 5.1.5b	Momentarily turn SGT-FN-1A1 fan control switch from AUTO to PTL SYS. START	Turns black handle for SGT-FN-1A1 clockwise from AUTO, past START, to the PTL SYS START position	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.1.5c	Verify the following: • Main Heaters ENERGIZE as indicated by Main Heater ON light and A1 amp meters • SGT-V-5A1 OPENS (Exhaust to Stack) • SGT-FN-1A1 STARTS (within 10 seconds)	Observes blue heater ON lights illuminate for SGT-EHC-A1 and amps indicated on the three amp meters (bottom left) Observes red light illuminates and green light out for SGT-V-5A1 Observes red light illuminates and green light out for SGT-FN-1A1 start	S / U S / U S / U
Step 5.1.5d	IF required to operate in manual flow control, then perform the following:	Determines that Manual flow control is not required as Auto flow control works	S / U
Step 5.1.5e	Open SGT-V-1A (Inlet from Containment) (H13-P827)	On H13-P827, turns control switch for SGT-V-1A clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.1.6	Step not performed as SGT A train is being used		
Step 5.1.7	Monitor SGT operation to minimize containment leakage potential	Monitors SGT operation in Auto	S / U
Step 5.1.8	Step not performed as direction is to vent the Wetwell		
Step 5.1.9a	Open CEP-V-3B (Wetwell Exhaust Outbd Isol Bypass) (H13-P813)	On H13-P813, turns control switch for CEP-V-3B clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.1.9b	Open CEP-V-4B (Wetwell Exhaust Inbd Isol Bypass) (H13-P813)	On H13-P813, turns control switch for CEP-V-4B clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Termination Criteria: Student informs CRS that Wetwell Venting has been started per SOP-CN-CONT-VENT.			

*** 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:
CONTAINMENT VENTING USING 'A' SGT

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: SGT train A is venting the Wetwell per SOP-CN-CONT-VENT

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 is entering a refueling outage and is shutting down

The Primary Containment sample and analysis has been completed per PPM 16.11.3

Both trains of SGT are operable

Containment is aligned for venting through SGT

PRM-RE-1A is operable

CMS-RIS-12A is functional, activity levels have not increased and have been below alarm levels for the last hour

Cue:

You have been directed by the CRS to commence Containment De-Inerting using 'A' SGT by venting the Wetwell per SOP-CN-CONT-VENT section 5.1 starting at step 5.1.4

Steps 5.1.1 thru 5.1.3 are complete

Inform the CRS when you have commenced Wetwell venting

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: CONTAINMENT DE-INERTING USING 'A' SGT (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	LO001682	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/10/09

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

START RRC-P-1B AT POWER

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:

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.

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: R0-0379

Validation Time: 10 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: SOP-CN-CONT-VENT, Rev. 15

Location: SIMULATOR

NUREG 1123 Ref: 223001 A4.05 (3.6, 3.6)

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 shutting down. The Primary Containment sample and analysis has been completed per PPM 16.11.3. Both trains of SGT are operable. Containment is aligned for venting through SGT. PRM-RE-1A is operable. CMS-RIS-12A is functional, activity levels have not increased and have been below alarm levels for the last hour.
INITIATING CUE:	You have been directed by the CRS to commence Containment De-Inerting using 'A' SGT by venting the Wetwell per SOP-CN-CONT-VENT section 5.1 starting at step 5.1.4. Steps 5.1.1 thru 5.1.3 are complete. Inform the CRS when you have commenced Wetwell venting.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 5.1.1 Step 5.1.2 Step 5.1.3	Given as complete in Initial Conditions		N / A
Step 5.1.4	Verify CEP-V-11 Closed	Observes CEP-V-11 has the green light lit and red light off	S / U
Step 5.1.5	If venting through SGT Train A, then perform the following (H13-P827):	Given in Initial Conditions to Use	S / U
Step 5.1.5a	Verify SGT-V-2A is OPEN (Inlet from Reactor Building)	Notes red light illuminated and green light extinguished for SGT-V-2A	S / U
Step 5.1.5b	Momentarily turn SGT-FN-1A1 fan control switch from AUTO to PTL SYS. START	Turns black handle for SGT-FN-1A1 clockwise from AUTO, past START, to the PTL SYS START position	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.1.5c	Verify the following: • Main Heaters ENERGIZE as indicated by Main Heater ON light and A1 amp meters • SGT-V-5A1 OPENS (Exhaust to Stack) • SGT-FN-1A1 STARTS (within 10 seconds)	Observes blue heater ON lights illuminate for SGT-EHC-A1 and amps indicated on the three amp meters (bottom left) Observes red light illuminates and green light out for SGT-V-5A1 Observes red light illuminates and green light out for SGT-FN-1A1 start	S / U S / U S / U
Step 5.1.5d	IF required to operate in manual flow control, then perform the following:	Determines that Manual flow control is not required as Auto flow control works	S / U
Step 5.1.5e	Open SGT-V-1A (Inlet from Containment) (H13-P827)	On H13-P827, turns control switch for SGT-V-1A clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.1.6	Step not performed as SGT A train is being used		
Step 5.1.7	Monitor SGT operation to minimize containment leakage potential	Monitors SGT operation in Auto	S / U
Step 5.1.8	Step not performed as direction is to vent the Wetwell		
Step 5.1.9a	Open CEP-V-3B (Wetwell Exhaust Outbd Isol Bypass) (H13-P813)	On H13-P813, turns control switch for CEP-V-3B clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Step 5.1.9b	Open CEP-V-4B (Wetwell Exhaust Inbd Isol Bypass) (H13-P813)	On H13-P813, turns control switch for CEP-V-4B clockwise to the OPEN position. Verifies red light illuminates and green light extinguishes	S / U *
Termination Criteria: Student informs CRS that Wetwell Venting has been started per SOP-CN-CONT-VENT.			

*** 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:
CONTAINMENT VENTING USING 'A' SGT

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: SGT train A is venting the Wetwell per SOP-CN-CONT-VENT

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 is entering a refueling outage and is shutting down

The Primary Containment sample and analysis has been completed per PPM 16.11.3

Both trains of SGT are operable

Containment is aligned for venting through SGT

PRM-RE-1A is operable

CMS-RIS-12A is functional, activity levels have not increased and have been below alarm levels for the last hour

Cue:

You have been directed by the CRS to commence Containment De-Inerting using 'A' SGT by venting the Wetwell per SOP-CN-CONT-VENT section 5.1 starting at step 5.1.4

Steps 5.1.1 thru 5.1.3 are complete

Inform the CRS when you have commenced Wetwell venting

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: PARALLEL DG-1 WITH SM-7; TRANSFER SM-7 TO TR-B (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	LO001684	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/11/09

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

START RRC-P-1B AT POWER

MINOR REVISION RECORD

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

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

An IC where the reactor is Shutdown and SM-7 is powered from SM-1 via TR-S, and SM-8 is NOT powered from TR-B

Special Setup Instructions:

Perform SOP-DG-1 START section 5.1 up thru step 5.1.34.

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-0421

Validation Time: 15 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-DG1-START Rev. 15
SOP-ELEC-4160V-OPS Rev. 2

Location: Simulator

NUREG 1123 Ref: 264000 A4.04 (3.7 / 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 re-verified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	The reactor has scrammed. There is a problem with the Startup Transformer and plans are to de-energize it. In preparation for that, DG-1 has been started. PDIS signals X301 (SM-7 voltage) and X251 (DG1 voltage) are not available.
INITIATING CUE:	You have been directed by the CRS to Parallel DG-1 with SM-7 from the Control Room per SOP-DG1-START. Steps 5.1.1 thru 5.1.34 have been completed. Start at step 5.1.35. Inform the CRS when DG-1 is paralleled with SM-7 and DG-1 has been loaded to 1100 KW.

*** 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 5.1.35	IF paralleling from the Control Room, then perform the following:	Continues with step 5.1.35	S / U
	PROCEDURE CAUTION: Synchronization of the DG with the Sync Selector Switch in manual may be performed only if the emergency operating mode of the DG is required and a seismic condition exists or there is a fire in the Control Room. The SM shall authorize manual sync of the diesel generator.		
	a. Place CB-DG1/7 Sync Selector switch to MAN CHECK (H13-P800)	a. Places the Sync Selector switch for CB-DG-1 to the MAN CHECK position	S / U *
	b. Verify the Diesel Engine Control Selector is in CONTROL RM (E-CP-DG/RP1)	b. Contacts OPS2 and verifies the Diesel Engine Control Selector is in the CONTROL RM position on E-CP-DG/RP1	S / U
	c. Place CB-DG1/7 Mode Selector switch in CR (H13-P800)	c. Places CB-DG1/7 Mode Selector switch in the CR position	S / U *
	d. Adjust DG-1 frequency using the Diesel Gen 1 Governor control switch until synchronizing scope is running slow in the fast (CW) direction.	d. Adjusts frequency using the Governor control switch until synch scope is running slow in the fast (Clockwise) direction	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
ROLEPLAY: As OPS2 report Diesel Engine Control Selector is in the CONTROL RM position			
	PROCEDURE NOTE: PDIS signals X301 (SM-7 voltage) and X251 (DG1 voltage) should be used to determine the incoming voltage is slightly higher than the running voltage as well as noting when an increase in generator output voltage is no longer observed		
Step 5.1.35 Continued	e. Adjust DG-1 voltage using the Diesel Gen 1 Voltage Regulator control switch until generator (incoming) bus voltage is slightly higher than bus (running) voltage	Adjusts DG-1 voltage using the Diesel Gen 1 Voltage Regulator control switch and attempts to raise generator (incoming) bus voltage slightly higher than bus (running) voltage	S / U *
	f. If DG-1 (incoming) Kilovolts cannot be raised at least equal to bus (running) Kilovolts, then perform the following: 1. Place CB-DG1/7 Sync Selector switch to OFF	Notes that incoming voltage cannot be raised slightly higher than bus voltage and performs step 5.1.35f: 1. Places CB-DG1/7 Sync Selector switch to the OFF position	S / U * S / U *
SIMULATOR OPERATOR: When Sync Selector is taken to OFF Activate Trigger 11 (Deletes overrides and indications)			
Step 5.1.35 f Continued	2. Place Engine Speed Selector switch to IDLE (E-CP-DG/RP1)	2. Contacts OPS2 and directs him to place the Engine Speed Selector switch to IDLE	S / U
SIMULATOR OPERATOR: Place the Engine Speed Selector switch is in IDLE for DG-1 open the director, select Remotes and use – LOA-DGN026 and position to IDLE			
ROLEPLAY: As OPS2 report the Engine Speed Selector switch is in IDLE			
Step 5.1.35 f Continued	3. Transfer SM-7 to TR-B per SOP-ELEC-4160V-OPS	Refers to SOP-ELEC-4160V-OPS to transfer SM-7 to TR-B	S / U
SOP-ELEC-4160V-OPS Section 5.7 Step 5.7.1	Verify CB-TRB Closed	Observes red light lit and green light out for CB-TR-B	S / U
Step 5.7.2	Verify the following: • TR-B voltage GE 115 KV • SM-8 is not being supplied from TR-B	Checks TR-B voltage GT 115 KV Verifies SM-8 is NOT powered from TR-B	S / U
Step 5.7.3	Verify CB-B7 white LOCKOUT CIRCUIT AVAIL light illuminated	Observes the white LOCKOUT CIRCUIT AVAIL light illuminated for CB-B7	S / U

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.7.4	Verify CB-B7 READY TO XFR light illuminated	Observes the READY TO XFR light illuminated for CB-B7	S / U
Step 5.7.5	Verify CB-B7 green light illuminated and green flag displayed	Observes green light illuminated and green flag displayed for CB-B7	S / U
Step 5.7.6	Verify CB-7/1 white LOCKOUT CIRCUIT AVAIL light illuminated	Observes the white LOCKOUT CIRCUIT AVAIL light illuminated on CB-7/1	S / U
Step 5.7.7	Verify CB-7/1 red light illuminated	Verify red light illuminated on CB-7/1	S / U
Step 5.7.8	Place CB-B7 Sync Selector switch in MANUAL	Places the CB-B7 Sync Selector switch in MANUAL	S / U *
Step 5.7.8	Verify voltage present on both incoming and running buses	Verify voltage present on both incoming and running buses	S / U
	NOTE: The blue Sync Permit light for CB-B7 is illuminated from initiation of breaker closure until closure actually occurs. NOTE: CB-7/1 should automatically trip when CB-B7 closes. NOTE: 4.800.C.1.1-7, BKR 7-1 TRIP will alarm when the next step is performed. NOTE: 4.800.C4.3-5 TR-B REV PWR RELAY may alarm when the following step is performed.		
Step 5.7.10	Close CB-B7	Places the control switch for CB-B7 in the closed position	S / U *
Step 5.7.11	Verify CB-7/1 auto trips	Observes CB-7/1 red light goes out and green light illuminates	S / U
Step 5.7.12	Place CB-7/1 control switch in TRIP	Places the control switch for CB-7/1 in the TRIP position	S / U
Step 5.7.13	Verify CB-7/1 green light illuminated and green flag displayed	Observes the green light illuminated and green flag displayed for CB-7/1	S / U
Step 5.7.14	Place CB-B7 Sync Selector switch in OFF	Place the Sync Selector switch in OFF for CB-B7	S / U
Termination Criteria: When SM-7 is powered from TR-B inform the student that the termination point of the JPM has been reached.			
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:
PARALLEL DG-1 WITH SM-7; TRANSFER SM-7 TO TR-B

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: SM-7 has been transferred to TR-B

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:

The reactor has scrammed

There is a problem with the Startup Transformer and plans are to de-energize it

In preparation for that, DG-1 has been started

PDIS signals X301 (SM-7 voltage) and X251 (DG1 voltage) are not available

Cue:

You have been directed by the CRS to Parallel DG-1 with SM-7 from the Control Room per SOP-DG1-START

Steps 5.1.1 thru 5.1.34 have been completed

Start at step 5.1.35

Inform the CRS when DG-1 is paralleled with SM-7 and DG-1 has been loaded to 1100 KW

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: PULL FUSES TO CLOSE AN OPEN SAFETY RELIEF VALVE (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	LO001683	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/11/09

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

START RRC-P-1B AT POWER

MINOR REVISION RECORD

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

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

A 100% power IC
Snap an IC with the following malfunction:

<ACTION>Insert override OVR-RRS023D to ON</ACTION>
<DESCRIPTION>MS-RV-1D SAFETY RELIEF OPEN</DESCRIPTION>

<ACTION>Insert override OVR-RRS023C to OFF</ACTION>
<DESCRIPTION>MS-RV-1D SAFETY RELIEF OFF</DESCRIPTION>

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: Safety glasses, fuse pullers

Task Number: RO-1063

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: N/A

PPM Reference: ABN-SRV Rev. 2

Location: Simulator

NUREG 1123 Ref: 239002 A2.03 (4.1 / 4.2)

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 re-verified. Evaluator copy may be used for marking step completion, and comments.
INITIAL CONDITIONS:	With Columbia operating at full power, Safety Relief Valve MS-RV-1D opened. Main Generator output has dropped by 75 MWe.
INITIATING CUE:	The CRS has directed you to perform the actions associated with ABN-SRV to close Safety Relief Valve, MS-RV-1D. Inform the CRS when the SRV is closed.

*** 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 4.1	Verify the SRV is open by one or more of the following: • Rising tail pipe temperature at MS-TR-614 on H13-P614 • Rising Supp. Pool temperature or level • Reduction in Main Gen. output (~70 MWe)	A reduction in Generator output was given in Initial Conditions	N / A
Step 4.2	If reactor power is LE 90%, then place the control switch for the open SRV to OFF. Otherwise, N/A	Observes Reactor Power at GT 90% Does not perform this step	S / U
Step 4.3	If reactor power is GT 90%, then perform the following: Otherwise, N/A a. Place control switch for the open SRV to OPEN b. Reduce reactor power to LE 90% with RRC flow per PPM 3.2.4 c. Place the control switch for the open SRV to OFF	a. Turns the control switch for MS-RV-1D to OPEN b. Reduce reactor power to LE 90% with RRC flow using Master Controller Lower P/B c. Turns the control switch for MS-RV-1D to OFF	S / U * S / U * S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	PROCEDURE NOTE: The following three steps may be performed in any order or simultaneously		
ROLEPLAY – When step 4.4 (the next step) is reached, inform the student that another operator will place RHR in Suppression Pool Cooling			
Step 4.4	PLACE one loop of RHR (B preferred) in Suppression Pool Cooling per SOP-RHR-SPC	Does not perform this step	S / U
Step 4.5	IF the open SRV is an ADS SRV, then verify the ADS SRV control switch is in AUTO on both of the following panels. Otherwise, N/A	Notes that the open SRV is NOT an ADS SRV Does not perform this step	S / U
	PROCEDURE NOTE: Division 1 (A) ADS SRV open demand signal is indicated by the SRV red light lit on H13-P628 and H13-P601 vertical section Division 2 (B) ADS SRV open demand signal is indicated by the SRV red light lit on H13-P631 and H13-P601 vertical section Actual SRV position from the SRV LVDT is indicated on H13-P601, horizontal section		
Step 4.6	IF the SRV remains open, then remove the fuse(s) listed on Attachment 7.1 for the open SRV. Otherwise, N/A	Refers to Attachment 7.1 and using fuse pullers, removes fuses associated with MS-RV-1D: Removes fuse BB-F37 in H13-P628 Removes fuse BB-F38 in H13-P628	 S / U * S / U *
Step 4.7	IF the SRV remains open, then reduce RRC flow to 60 Mlbm/hr per PPM 3.2.4, and SCRAM the reactor per PPM 3.3.1. Otherwise, N/A	Observes MS-RV-1D indication and notes the green light illuminated, the red light out and does not perform step 4.7	S / U
Termination Criteria: Student informs CRS that MS-RV-1D is closed			
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:
CLOSE STUCK OPEN SRV

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: MS-RV-1D has been closed in accordance with ABN-SRV

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:

With Columbia operating at full power, Safety Relief Valve MS-RV-1D opened

Main Generator output has dropped by 75 MWe

Cue:

The CRS has directed you to perform the actions associated with ABN-SRV to close Safety Relief Valve, MS-RV-1D

Inform the CRS when the SRV is closed

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: START RHR-A; SW-V-2A FAILS TO AUTO OPEN (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	LO001686	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/15/09

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

START RRC-P-1B AT POWER

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 where RHR-A and SW-A may be manually started

Special Setup Instructions:

Fail SW-V-2A to auto open

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-0463

Validation Time: 6 minutes

Prerequisite Training: None

Time Critical: N/A

PPM Reference: SOP-RHR-SPC-QC Rev. 2

Location: Simulator

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

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:	With Columbia operating at power, a Safety Relief Valve spuriously opened. Efforts are underway to close the SRV. The CRS has entered PPM 5.2.1, Primary Containment Control.
INITIATING CUE:	The CRS has directed you to start RHR-A in Suppression Pool Cooling using SOP-RHR-SPC-QC. Inform the CRS when you have maximized cooling of the Suppression Pool.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 2.1.1	Verify RHR-P-2A(B) running	Places the control switch for RHR-P-2A to the START position and verifies the pump starts with red light on and green light off	S / U
NOTE: If student wants to use SOP to start the RHR pump that is not running, direct him to use only the Quick Card			
Step 2.1.2	Verify SW-P-1A(B) running	After the time delay is timed out, verifies SW-P-1A red light on and green light out. Notes that there is no flow indication Notes that SW-V-12A is opening Notes that SW-V-2A is NOT opening	S / U *
		Takes the control switch for SW-V-2A to open and holds it there until valve is fully opened (red light on and green light out)	S / U *
	NOTE: RHR-V-48A(B) may be closed concurrently while opening RHR-V-24A(B)		
Step 2.1.3	Throttle open RHR-V-24A(B) to between 4500 and 7000 gpm	Turns RHR-V-24A control switch to open until between 4500 and 7000 gpm flow is observed for RHR-A system	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 2.1.4	Close RHR-V-48A(B)	Takes the control switch for RHR-V-48A to close until Red light goes out and only the green light is lit	S / U *
Step 2.1.5	If operating per the EOPs, then maximize cooling flow	RHR-V-24A is opened with RHR flow at approximately 7000 gpm RHR-V-48A is fully closed SW-P-1A is operating with SW-V-2A fully opened	S / U *
Termination Criteria: Student informs CRS that RHR A is running in Suppression Pool Cooling with cooling flow maximized			
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 RHR-A IN SPC; SW-V-2A FAILS TO AUTO OPEN

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RHR-A is running in Suppression Pool Cooling and cooling is maximized.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

With Columbia operating at power, a Safety Relief Valve spuriously opened.

Efforts are underway to close the SRV.

The CRS has entered PPM 5.2.1, Primary Containment Control.

Cue:

The CRS has directed you to start RHR-A in Suppression Pool Cooling using SOP-RHR-SPC-QC

Inform the CRS when you have <u>maximized</u> cooling of the Suppression Pool

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: RESPOND TO A HYDRAULIC ATWS AND INSTALL RPS JUMPERS PER PPM 5.5.11 (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	LO001685	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/11/09

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

START RRC-P-1B AT POWER

MINOR REVISION RECORD

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

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

A power IC with a Hydraulic ATWS inserted and scram signal still present.

Special Setup Instructions:

Start the second CRD Pump

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: Four jumpers for PPM 5.5.11

Safety Items: Safety glasses for going into back panels

Task Number: RO-0678

Validation Time: 6 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: PPM 5.5.11 Rev. 4

Location: Simulator

NUREG 1123 Ref: 212000 A4.01 (4.6 / 4.6)

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 plant has experienced a Hydraulic ATWS. PPM 5.1.1 was entered and exited to PPM 5.1.2 RPV Control, ATWS.
INITIATING CUE:	The CRS has directed you to insert control rods per PPM 5.5.11 Tab B. Inform the CRS when all control rods have been inserted.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
CUE: Cue response of simulated actions based on procedure and student actions			
	Refers to PPM 5.5.11 Tab B		S / U
Step Q-1	Place the SDV HIGH LEVEL TRIP control switch to BYPASS	Turns the SDV HIGH LEVEL TRIP control switch to the BYPASS position	S / U *
Step Q-2	Can the scram be reset	Depresses the scram reset pushbuttons and observes the scram lights still out and backup scram lights still on OR notes a scram signal alarm is in alarm Answer to question – NO	S / U
Step Q-3	Override RPS trip signals Attachment 6.1	Refers to Attachment 6.1 and: Performs the following at H13-P611:	S / U
Attachment 6.1 Step 1 sub step 1.1	Install one jumper between RPS-RLY-K9B, terminal stud 2, Turbine GV/TV Closure 30% Power Scram Bypass and RPS-RLY-K12F, Terminal stud 4, Neutron Monitoring System Scram	Install a jumper between RPS-RLY-K9B, terminal stud 2, and RPS-RLY-K12F, Terminal stud 4	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Attachment 6.1 Step 1 sub step 1.2	Install one jumper between RPS-RLY-K9D, terminal stud 2, Turbine GVC/TV Closure 30% Power Scram Bypass and RPS-RLY-K12H, Terminal stud 4, Neutron Monitoring System Scram	Install a jumper between RPS-RLY-K9D, terminal stud 2 and RPS-RLY-K12H, Terminal stud 4	S / U *
Attachment 6.1 Step 2	Perform the following at H13-P609	Performs the following at P609	S / U
Attachment 6.1 Step 2 sub step 1.1	Install one jumper between RPS-RLY-K9A, terminal stud 2, Turbine GV/TV Closure 30% Power Scram Bypass and RPS-RLY-K12E, Terminal stud 4, Neutron Monitoring System Scram	Install a jumper between RPS-RLY-K9A, terminal stud 2 and RPS-RLY-K12E, Terminal stud 4	S / U *
Attachment 6.1 Step 2 sub step 1.2	Install one jumper between RPS-RLY-K9C, terminal stud 2, Turbine GVC/TV Closure 30% Power Scram Bypass and RPS-RLY-K12G, Terminal stud 4, Neutron Monitoring System Scram	Install a jumper between RPS-RLY-K9C, terminal stud 2 and RPS-RLY-K12G, Terminal stud 4	S / U *
Attachment 6.1 Step 3	At H13-P603, reset the scram	Depresses the two scram reset pushbuttons on H13-P603	S / U *
Step Q-4	Reset Scram	Performed per Attachment 6.1 step 3	S / U
Step Q-5	When SDV drained more than 2 minutes…	Waits 2 minutes (minimum) after the drain valves have both Red and Green lights illuminates before proceeding to the next step	S / U *
ROLEPLAY: After the red and green lights illuminate for the SDV drain valves, inform the student that time compression has taken place and it is now three minutes since the SDV has started to drain			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step Q-6	Check rod density and initiate manual scram (Inform CRS of results)	Observes rod density on computer screen Depresses all four red scram pushbuttons Informs CRS of results	S / U *
Termination Criteria: After the CRS is updated with manual scram results, inform 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.			

START RRC-P-1B AT POWER

RESULTS OF JPM:

INSTALL RPS JUMPERS PER PPM 5.5.11

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: PPM 5.5.11 Tab B has been performed and one manual scram has been inserted.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

The plant has experienced a Hydraulic ATWS

PPM 5.1.1 was entered and exited to PPM 5.1.2 RPV Control, ATWS

Cue:

The CRS has directed you to insert control rods per PPM 5.5.11 Tab B

Inform the CRS when all control rods have been inserted

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: SECURE SGT A TRAIN FOLLOWING AUTO INITIATION WITH FAZ RESET (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	LR000222	Rev. No.	2
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: STAFF DATE: 1993

REVISED BY: Ron Hayden DATE: 6/15/09

TECHNICAL REVIEW BY _____ DATE _____

INSTRUCTIONAL REVIEW BY _____ DATE _____

APPROVED BY _____ DATE _____

Operations Training Manager

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

START RRC-P-1B AT POWER

MINOR REVISION RECORD

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

JPM SETUP

Simulator ICs; Malfunctions; Triggers; Overrides:

Set up an IC where A SGT is running per SOP-SGT-START Section 5.2

Special Setup Instructions:

Have SGT A auto initiate on FAZ and then clear the FAZ signal and reset RTC-1 And RC-2

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-0386

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-SGT-SHUTDOWN Sec. 5.2 Rev. 3

Location: Simulator

NUREG 1123 Ref: 261000 A4.03 (3.0/3.0)

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:	An automatic initiation of SGT occurred. The FAZ signal has been reset. The SGT system is not required to be operable.
INITIATING CUE:	The Control Room Supervisor has directed that you shutdown the 'A' SGT train. Inform the CRS when 'A' SGT is shutdown.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
Step 5.2.1	If SGT is required to be operable, then enter SGT train A(B) as inoperable in the Plant Logging System. Otherwise N/A	N/A	N/A
Step 5.2.2	Place SGT-DPIC-1A-1 (1B-2) or SGT-DPIC-1A-2 (1B-1) in Manual	Takes the switch for SGT-DPIC-1A-1 to M (Manual)	S / U *
Step 5.2.3	Adjust SGT-DPIC-1A-1 (1B-2) or SGT-DPIC-1A-2 (1B-1) output to minimum (100%)	If controller is not at minimum, depresses the close P/B until controller is at 100%	S / U (*)
Step 5.2.4	Place SGT-EHC-1A-1(1B-2) (Main Heater Control Switch) to OFF to stop the heater and fan	Takes SGT-EHC-1A-1 Main Heater Control Switch to OFF (turns switch to the left)	S / U *
Step 5.2.5	Verify SGT-EHC-1A-1 (1B-2) or SGT-EHC-1A-2 (1B-1) deenergizes and the associated fan stops	Observes the heater turns off (blue light off) and SGT-FN-1A-1 stops (green light on, red light off)	S / U
Step 5.2.6	Immediately close SGT-V-5A-1(5B-2) or SGT-V-5A-2(5B-1) (Exhaust to stack)	Takes switch for SGT-V-5A1 to the close position and observes the valve closes (green light on, red light off)	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Step 5.2.7	Verify SGT-EHC-1A-1(1B-2) (Main Heater Control Switch) is in AUTO	Observes that the switch for SGT-EHC-1A-1 is in AUTO	S / U
Step 5.2.8	Verify SGT-EHC-1A-2(1B-1) (Main Heater Control Switch) is in NORM	Verifies the switch for SGT-EHC-1A-2 is in NORM	S / U
Step 5.2.9	Place SGT-DPIC-1A-1 (1B-2) or SGT-DPIC-1A-2 (1B-1) in AUTO, and SET at –1.7”WC	Places SGT-DPIC-1A-1 in A (AUTO) Observes controller set at –1.7”WC	S / U * S / U
Step 5.2.10	Verify SGT System A(B) is in standby per SOP-SGT-STBY	Refers to SOP-SGT-STBY for the A SGT Train	S / U
TERMINATION CUE: When Student starts to refer to SOP-SGT-STBY, 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:
SECURE SGT TRAIN FOLLOWING AUTO INITIATION

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: The 'A' SGT Train has been shutdown per SOP-SGT-SHUTDOWN.

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:

An automatic initiation of SGT occurred

The FAZ signal has been reset

The SGT system is not required to be operable

Cue:

The Control Room Supervisor has directed that you shutdown the 'A' SGT train

Inform the CRS when 'A' SGT is shutdown

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: PERFORM CRO1 REVIEW OF RPV HEATUP SURVEILLANCE (ADMIN)

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	LO001688	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/17/09

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

START RRC-P-1B AT POWER

MINOR REVISION RECORD

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

JPM SETUP

Special Setup Instructions:

Fill out cover page. Fill in the data on Attachments 9.3 and 9.5 as follows:
Perform Instrument Channel check requirements and fill in data as follows: RRC-TR-650 (Pt 1 & 2) and RWCU-Ti-607 PT5) = 100°F; MS-PI-9, RFW-PI-605 and RCIC-PI-602 at zero psig. Place an double asterisk on RCIC-PI-2 and on from of surveillance indicate the asterisk indicates RCIC is isolated as RPV/P is LT 75 psig
100 °F readings = Temp is 101°F and pressures are 0 psig with double asterisk for RCIC
200°F readings = Temp 204 and 205 and pressures 2 and 3 psig. Zero for RCIC and double asterisk
300°F readings = Temp is 311, 313 and 314 and pressures are 67 and 68 (same for RCIC as above)
Heatup Log should start at time 0600 and a reading every 15 minutes. Last reading is done at 0915
Coolant Temp is from RRC-TR-650 (1) and enter starting at top as follows:101, 115, 127, 149, 167, 190, 205, 207, 226, 247, 259, 279, 290, 313
RPV Pressure is read on MS-PI-9 and data is: 0, 3, 1, 0, 3, 2, 3, 4, 4, 12, 22, 37, 41, 67
Saturation Temp is N/A for all times
15 Min dT data is: N/A, 14, 12, 22, 18, 23, 15, 8, 19, 21, 12, 20, 11 ,23
Projected Hourly data is: N/A, 56, 48, 88, 72, 92, 60, 32, 76, 84, 48, 80, 44, 92
Actual Hourly dT (from/To/°F) from top is: N/A / N/A / N/a (N/A the first 4 lines) and at 0700 data is: 0600-0700-66, 0615-0715-75, 0630-0730-78, 0645-0745-58, 0700-0800-59, 0715-0815-57, 0730-0839-54, 0745-0845-72, 0800-0900-64, 0815-0915-66
RPV Metal Temp is read on RWCU-TI-607 Pt. 5 and data from top is: 100, 116, 129, 152, 160, 193, 204, 207, 229, 241, 253, 271, 281, 303
Initial Data taker and CRO1 and use CRO1 initials for block records within limits
Initial appropriate steps in procedure as complete

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: N/A

Task Number: RO-0186

Validation Time: 15 minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: OSP-RCS-C101 Rev. 7

Location: Admin JPM

NUREG 1123 Ref: 2.1.25 (3.9 / 4.2)

Performance Method: Perform

START RRC-P-1B AT POWER

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 is starting up with a heatup in progress. Both RRC Pumps are running. RWCU-P-1A is running at 50 gpm CRO1 has requested that you perform a peer check of the results of the heatup surveillance that have been recorded so far.
INITIATING CUE:	Perform the requested peer check of the RPV Heatup Surveillance, OSP-RCS-C101. Indicate the result of your review on the JPM Answer Sheet. When you are done, hand the filled in JPM Answer Sheet and surveillance attachments to the examiner.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
CUE: Cue response of simulated actions based on procedure and student actions			
	The student is given a copy of surveillance OSP-RCS-C101 which is filled in with data and cued to perform the CRO1 review	Performs the review and determines that all data is within the acceptable heatup limits	S / U *
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:
PERFORM CRO1 REVIEW OF RPV HEATUP SURVEILLANCE

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: The JPM Answer Sheet is initialed indicating that all data is within limits

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 is starting up with a heatup in progress.
Both RRC Pumps are running

RWCU-P-1A is running at 50 gpm

CRO1 has requested that you perform a peer check of the results of the heatup surveillance that have been recorded so far

Cue:

Perform the requested peer check of the RPV Heatup Surveillance, OSP-RCS-C101

Indicate the result on the JPM Answer Sheet

When you are done, hand the filled in JPM Answer Sheet and surveillance attachments to the examiner

JPM ANSWER SHEET

If all data is within limits:

1. **Initial the line indicating all data is within limits.**

If all data is NOT within limits:

1. **Red circle the out-of-tolerance readings on the surveillance attachment**
2. **Initial the line indicating all data is not within limits**

All data entered on OSP-RCS-C101 is within limits

_____

Initials

All data entered on OSP-RCS-C101 is not within limits

_____

Initials

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: MAIN TURBINE CHANGE OF LOAD RATE DETERMINATION (ADMIN)

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	LO001573	Rev. No.	1
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 06/19/06

REVISED BY: Ron Hayden DATE: 06/17/09

TECHNICAL REVIEW BY: _____ DATE: _____

INSTRUCTIONAL REVIEW BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____

Operations Training Manager

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

START RRC-P-1B AT POWER

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: SOP-MT-START

Safety Items: None

Task Number: RO-0325

Validation Time: 7 Minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: SOP-MT-START Rev. 10

Location: Any

NUREG 1123 Ref: 245000 K5.07 (2.6 / 2.9)

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 is in the process of starting up. The Main Turbine is on the line and is currently 5% loaded per SOP-MT-START Attachment 6.1.
INITIATING CUE:	You have been directed to determine the time required to change load from Columbia's current load to a load of 95%. Assume a fatigue index of 15,000 cycles. Inform the CRS (Examiner) of your determination when complete by writing it and circling it on Attachment 6.1.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
		Refers to SOP-MT-START Attachment 6.1	S / U
		Correlates 5% load to a First Stage Steam Temperature of 50°F	S / U
		Correlates 95% load to a First Stage Steam Temperature of 285°F	S / U
		Calculates difference (285-50) to be 235°F	S / U *
		Plots First Stage Steam Temperature Change to Time to Change Load-Hours using the 15,000 cycles curve and determines time to change load is 3.25 hours (Accept a range of 3.0 hours to 3.5 hours)	S / U *
Termination Criteria: Student hands examiner Attachment 6.1 and has indicated that the time to change load from 5% to 95% based on a 15,000 cycle index is 3.25 hours.			
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:
MAIN TURBINE CHANGE OF LOAD RATE DETERMINATION

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: The Time to change Load has been calculated, written and circled on Attachment 6.1 of SOP-MT-START and is within the range allowed.

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:

Columbia is in the process of starting up.

The Main Turbine is on the line and is currently 5% loaded.

Cue:

You have been directed to determine the time required to change load from Columbia's current load to a load of 95% per SOP-MT-START Attachment 6.1.

Assume a fatigue index of 15,000 cycles.

Inform the CRS (Examiner) of your determination when complete by writing it and circling it on Attachment 6.1.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: LICENSED OPERATOR INITIAL TRAINING

COURSE TITLE: ADMIN JOB PERFORMANCE MEASURE

LESSON TITLE: DETERMINE CLEARANCE REQUIREMENTS FOR FPC-P-1A (ADMIN)

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	LO001644	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

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

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.

DETERMINE CLEARANCE REQUIREMENTS FOR FPC-P-1A

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

Setup Instructions:

Have the following drawings ready for candidate to reference:
M-526 Sheet 1
E-503 Sheet 7 and Sheet 12
EWD-38E-001
EWD-38E-021

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: N/A

Safety Items: N/A

Task Number: RO-1181

Validation Time: 15 minutes

Prerequisite Training: N/A

Time Critical: No

PPM Reference: PPM 1.3.64; SWP-OPS-3; M-526-1; E-503-7 E-503-12; EWD-38E-001; EWD-38E-021

Location: Simulator / Classroom

NUREG 1123 Ref: 2.2.13 4.1 / 4.3

Performance Method: Perform

DETERMINE CLEARANCE REQUIREMENTS FOR FPC-P-1A

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 is operating at full power. It is a Division 1 work week. Maintenance wants to replace the pipe coupling (3 inch to 6 inch) located at the discharge of FPC-P-1A.
INITIATING CUE:	You have been directed to determine the clearance order boundary component, required component position, and component tagging requirement necessary to perform work on the coupling downstream of FPC-P-1A.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
	Identifies boundary and valve position required to isolate coupling downstream of FPC-P-1A	References M-526-1 and determines the following valves should be closed to isolate FPC-P-1A: • FPC-V-114 • FPC-V-115A • FPC-V-116A • FPC-V-181A	S / U
	Determines tagging requirements	Determines the following valves should be danger tagged: • FPC-V-114 • FPC-V-115A • FPC-V-116A • FPC-V-181A	S / U *
	Identifies FPC-P-1A Vent and Drain valves	Refers to M-526-1 Detail 3 and determines vent and drain valves for FPC-P-1A: • FPC-V-187A (Vent) • FPC-V-150A (Drain)	S / U

DETERMINE CLEARANCE REQUIREMENTS FOR FPC-P-1A

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	Determines tagging requirements	Determines that either FPC-V-187A AND/OR FPC-V-150A should be danger tagged opened	S / U *
	Identifies breaker and position required to isolate FPC-P-1A electrically	References E-503 sheet 12 and determines breaker 9B on MC-7B-B should be open	S / U
	Determines tagging requirements	Determines that breaker 9B on MC-7B-B should be danger tagged	S / U *
	Identifies breaker and position required for FPC-V-181A	References E-503 sheet 7 and determines breaker 1C on MC-7B-A should be open	S / U *
	Determines tagging requirements	Determines that breaker 1C on MC-7B-A should be danger tagged	S / U *
	Identifies Control Switch requirements for FPC-P-1A	References EWD-38E-001 for FPC-P-1A and determines switch should be danger or blue tagged in AUTO or AUTO after STOP position	S / U *
	Identifies Control Switch requirements for FPC-V-181A	References EWD-38E-021 for FPC-V-181A and determines switch should be danger or blue tagged in the NORM or NORM after CLOSE position	S / U *
Termination Criteria: Student completes the attached answer sheet and hands it to the examiner.			
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.			

DETERMINE CLEARANCE REQUIREMENTS FOR FPC-P-1A

ANSWER KEY:

COMPONENT	REQUIRED POSITION	TYPE OF TAG (Blue/ Danger/Caution)
FPC-V-114	Closed	Danger
FPC-V-115A	Closed	Danger
FPC-V-116A	Closed	Danger
Breaker 9B for FPC-P-1A on MC-7B-B	Open	Danger
Breaker 1C for FPC-V-181A on MC-7B-A	Open	Danger
FPC-V-150A and / or FPC-V-187A	Open	Danger
Control Switch for FPC-P-1A	Auto or Auto after Stop	Danger or Blue
Control Switch for FPC-V-181A	Norm or Norm after Close	Danger or Blue

RESULTS OF JPM:

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Student correctly identifies the components, component position, and tagging requirements to mechanically and electrically isolate FPC-P-1A.

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:

Columbia is operating at full power.

It is a Division 1 work week.

Maintenance wants to replace the pipe coupling (3 inch to 6 inch) located at the discharge of FPC-P-1A.

Cue:

You have been directed to determine the clearance order boundary component, required component position, and component tagging requirement necessary to perform work on the coupling downstream of FPC-P-1A.

JPM ANSWER SHEET

The following is required to perform work on coupling downstream of FPC-P-1A:

COMPONENT	REQUIRED POSITION	TYPE OF TAG (BLUE/DANGER/CAUTION)

When completed, hand this sheet to the examiner.

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: DETERMINATION OF STAY TIME IN A HIGH RADIATION AREA (ADMIN)

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	LR001794	Rev. No. 2
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 10/24/06

REVISED BY: Ron Hayden DATE: 6/17/09

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:

Candidate needs access to a set of procedures that includes GEN-RPP-06.

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: N/A

Safety Items: N/A

Task Number: RO-0557; SRO-0026

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: GEN-RPP-06 Rev. 5;
GEN-RPP-11 Rev. 5

Location: Admin JPM

NUREG 1123 Ref: 2.3.4 (3.2 / 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:	You have been selected to work with maintenance on a valve in a High Radiation Area. The job is expected to take five hours. You have an accumulated dose of 1600 mrem for the calendar year. The work area dose rate is at the minimum value for the High Radiation Area.
INITIATING CUE:	Determine your personal maximum stay time for this job. Write your answer on the bottom of this page and hand it to the examiner.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
	Determines radiation Admin limit	Determines a 2 rem TEDE Admin limit is applicable	S / U *
	Determines the minimum High Radiation Area dose rate	Determines the minimum High Radiation Area dose rate is 100 mrem/hr	S / U *
	Calculates dose remaining to reach admin limit of 2 rem (2000 mrem) May also use a dose limit of 1800 mrem	Calculates 400 mrem (2000 – 1600 = 400) remains to reach limit Calculates 200 mrem (1800 – 1600 = 200) remains to reach limit	S / U *
	Calculates maximum stay time	Calculates stay time: 400 mrem divided by 100 mrem/hr equals 4 hrs Calculates stay time: 200 mrem divided by 100 mrem/hr equals 2.0 hrs	S / U *
	Documents maximum stay time	On Student Information Card documents maximum stay time of 4.0 hours if 2 rem used or a stay time of 2.0 hours is 1800 mrem was used	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
Termination Criteria: Candidate fills out bottom of cue sheet indicating his maximum stay time and hands it to examiner.			
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:

DETERMINATION OF MAXIMUM STAY TIME

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Candidate determines that 4.0 hours is his personal maximum stay time if 2 rem used and 2.0 hours if 1800 mrem used and that is indicated on the bottom of the cue sheet handed back to the examiner.

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:

You have been selected to work with maintenance on a valve in a High Radiation Area.

The job is expected to take five hours.

You have an accumulated dose of 1600 mrem for the calendar year.

The work area dose rate is at the minimum value for the High Radiation Area.

Cue:

Determine your personal <u>maximum</u> stay time for this job.

Write your answer on the bottom of this page and hand it to the examiner.

My MAXIMUM stay time for this job is: _____

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: DETERMINE IF VOLUNTARY ENTRY INTO AIA IS ALLOWABLE

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	LO001687	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/16/09

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:

Student should have access to SOPs and Volume 3 procedures

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: SRO-0122

Validation Time: 10 Minutes

Prerequisite Training: N/A

Time Critical: N/A

PPM Reference: PPM 3.2.1 Rev. 58

Location: Admin JPM

NUREG 1123 Ref: 2.1.25 (3.9 / 4.2)

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 Generating Station is shutting down. Reactor Power is 60%. Per the Reactivity Control Plan and CRS direction, Rod Line is 90%. RFW-TI-5 on H13-P840 is reading 340°F. Core Flow is 55 Mlbm/Hr. A planned entry into the Area Of Increased Awareness is scheduled for your shift
INITIATING CUE:	On the page provided indicate if you would or would not direct the planned AIA entry. Fill in all required information based on your answer.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
CUE: Cue response of simulated actions based on procedure and student actions			
	Refers to PPM 3.2.1 for Normal Plant Shutdown and notes Step 5.1.28 that states: Prior to a planned entry into the AIA (ie Single Loop Operation), then verify Reactor Feedwater temperature, as indicated on RFW-TI-5 (H13-P840), is within the Normal Operating Region Attachment 7.3		S / U S / U
	Refers to Attachment 7.3, plots the parameters given, and recognizes that the pant is currently in the 'Operation Prohibited' region.	Initials block for would not direct planned entry into AIA And fills in a reason similar to operation outside the Normal Operating Region of PPM 3.2.1 Attachment 7.3	S / U *
Termination Criteria: Student hands filled in form (Page 5 of 5) to the examiner.			
	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:
PLANNED ENTRY INTO AIA

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Student handout is initialed for would not direct entry into AIA and a reason similar to operation is currently in the 'Operation Prohibited' region of PPM 3.2.1 Attachment 7.3

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 Generating Station is shutting down

Reactor Power is 60%

Per the Reactivity Control Plan and CRS direction, Rod Line is 90%

RFW-TI-5 on H13-P840 is reading 340°F

Core Flow is 55 Mlbm/Hr

A planned entry into the Area Of Increased Awareness is scheduled for your shift

Cue:

On the page provided indicate if you would or would not direct the planned AIA entry

Fill in all required information based on your answer

JPM ANSWER SHEET

YES - I would direct the planned entry into the Area of Increased Awareness.

_____
Initials

NO – I would not direct the planned entry into the Area Of Increased Awareness for the following reason(s):

_____

_____

_____

_____

_____
Initials

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: LICENSED OPERATOR INITIAL TRAINING

COURSE TITLE: ADMIN JOB PERFORMANCE MEASURE

LESSON TITLE: DETERMINE COMPENSATORY MEASURES FOR INOPERABLE PREACTION SYSTEM AND ISSUE A FIRE PROTECTION SYSTEM IMPAIRMENT (ADMIN)

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	LO001686	Rev. No. 0
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/22/09

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

DETERMINE COMPENSATORY MEASURES FOR INOPERABLE PREACTION SYSTEM AND ISSUE A FIRE PROTECTION SYSTEM IMPAIRMENT

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

Setup Instructions:

Ensure candidate has access to a set of Volume One procedures and specifically to PPM 1.3.10B.
Ensure candidate has access to a LCS book.

Have a copy of the Fire Protection System Impairment Notification form ready to give to candidate after impairment is identified.

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: N/A

Safety Items: N/A

Task Number: SRO-0158

Validation Time: 20 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: PPM 1.3.10B Rev. 14;
LCS 1.10.2 and 1.10.6 and Bases

Location: Simulator/Plant/Table Top

NUREG 1123 Ref: 2.1.25 (2.8 / 3.1)

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:	As the Production SRO, you have been informed that during investigation into the cause of the inoperable fire detection system affecting the Reactor/Radwaste Corridor, elevation 441', a worker accidentally stepped onto the preaction sprinkler pipe for the Reactor/Radwaste Corridor, causing the pipe to break in half.
INITIATING CUE:	Based on the report provided, determine if compensatory actions are required. Initial the attachment indicating either actions are required or actions are not required. If actions are required fill in those actions on the JPM Answer Sheet. When you are done with your assessment and have filled in the required information, hand the JPM Answer Sheet to your examiner.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
	Refers to LCS 1.10.6 table 1.10.6-1 and determines that the inoperable fire detection system is associated with detection zone 66D. The note indicates that any one of the four zones being disabled, disables all four sub-zones. Refers to LCS 1.10.2 and determines the broke preaction pipe is also associated with System P66.		S / U
	Per LCS 1.10.2A, a Fire Protection System Impairment is required immediately AND establish a Continuous Fire Tour with backup fire suppression equipment within 1 hour.		S / U * S / U *
NOTE: The other possible compensatory measure is to manually flood the preaction sprinkler system piping and establish an hourly fire tour. This can not be accomplished as the cue indicates the preaction sprinkler pipe has been broke in half.			
The candidate should fill in the JPM Answer Sheet indicating: **1. A Fire Protection System Impairment is required immediately** **2. A Continuous Fire Tour with backup fire suppression equipment needs to be established within 1 hour.**			
CUE: Once the candidate informs the examiner that a FPSI Permit is required to be completed, provide the candidate with a blank form to fill out (Attachment 9.1 of PPM 1.3.10B) and inform the candidate that the Fire Marshall is not on site.			

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	The FPSI Permit is filled out with the following information: • System Impaired: Preaction is checked • Reason for Impairment: Inoperable Preaction Sprinkler System (Broken Pipe) • Building/Elevation: Reactor/Radwaste Corridor, 441' elevation • Compensatory Action Taken: Establish a Continuous Fire Tour with backup fire suppression equipment		S / U * S / U * S / U * S / U *
Termination Criteria: Student hands the examiner a completed FPSI permit.			
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:

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Candidate identifies that a Continuous Fire Tour needs to be established within 1 hour and an FPSI permit is required to be initiated and completes the form with the required information.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

As the Production SRO, you have been informed that during investigation into the cause of the inoperable fire detection system affecting the Reactor/Radwaste Corridor, elevation 441', a worker accidentally stepped onto the preaction sprinkler pipe for the Reactor/Radwaste Corridor, causing the pipe to break in half.

Cue:

Based on the report provided, determine if compensatory actions are required.

Initial the attachment indicating either actions are required or actions are not required.

If actions are required fill in those actions on the JPM Answer Sheet.

When you are done with your assessment and have filled in the required information, hand the JPM Answer Sheet to your examiner.

JPM ANSWER SHEET

INITIAL HERE IF NO ACTIONS ARE REQUIRED: _____

INITIAL HERE IF ACTIONS ARE REQUIRED:_____

IF ACTIONS ARE REQUIRED, THEY ARE: _____

_____

_____

_____

_____

_____

_____

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: OPERATIONS TRAINING

COURSE TITLE: JOB PERFORMANCE MEASURE

LESSON TITLE: VERIFY TAGOUT FOR RHR-P-2B (Admin)

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	LO001689	Rev. No.	0
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/17/09

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:

Ensure candidate has the following drawings: M 521-2; M521-3; E-503-8; EWD-9E-010

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: SRO-0434

Validation Time: 13 Minutes

Prerequisite Training: N / A

Time Critical: N / A

PPM Reference: PPM 1.3.64 Rev. 14

Location: Admin JPM

NUREG 1123 Ref: 2.2.15 (3.9 / 4.3)

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 is in a refueling outage. A tagout for RHR-P-3 is in process of being approved. As the Production SRO, the Shift Manager has directed you to perform the final approval before the tagout is hung.
INITIATING CUE:	Perform a review of the tagout for RHR-P-3. Indicate on the JPM answer sheet if you would approve this tagout as written, or not approve it because discrepancies were noted. Fill in the applicable information on the JPM Answer Sheet based upon your review. When completed hand the JPM Answer Sheet to your examiner.

*** Items are Critical Steps**

Comments	Standard	Sat/Unsat
	RECORD START TIME: _____	
	Reviews M521-2 and M521-3 to determine tagging boundary. Observes that RHR-V-85C has been left off of the tagout	S / U *
	Reviews E-503-8 and EWD 9E-010 and determines that RHR-P-3 is electrically isolated with a Disconnect and not a Circuit Breaker and the disconnect position is OFF not Racked Out	S / U *
	Reviews tagout and determines that RHR-V-737(V) required position is Closed but should be OPEN	S / U *
	Reviews tagout and determines that RHR-V-737(V) and RHR-V-738(D) have caution tags but should have danger tags	S / U *
Termination Criteria: Candidate hands the completed JPM answer sheet to the examiner		
	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.		

RHR-P-3 the Disconnect should be OFF not Racked Out
RHR-V-85C not included on tagout but should be danger tagged closed
RHR-V-737(V) is tagged closed but should be tagged open
RHR-V-737(V) is caution tagged but should be danger tagged
RHR-V-738(D) is caution tagged but should be danger tagged

RESULTS OF JPM:
REVIEW/APPROVE RHR-P-3 TAGOUT

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: The JPM Answer Sheet has been reviewed and the deficiencies have been identified.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

Columbia is in a refueling outage

A tagout for RHR-P-3 is in process of being approved

As the Production SRO, the Shift Manager has directed you to perform the final approval before the tagout is hung

Cue:

Perform a review of the tagout for RHR-P-3

Indicate on the JPM answer sheet if you would:
approve this tagout as written, or
not approve it because discrepancies were noted

Fill in the applicable information on the JPM Answer Sheet based upon your review

When completed hand the JPM Answer Sheet to your examiner

JPM ANSWER SHEET

EQUIPMENT ID	TAG TYPE	EQUIPMENT DESCRIPTION	PLACEMENT CONFIGURATION
RHR-RMS-P/3	Equipment Configuration	RHR WATER LEG PUMP - RHR-P-3	STOP
RHR-42-8B7A	Danger	RHR-P-3 DISCONNECT	RACKED OUT
RHR-V-85B	Danger	WATER LEG ISOLATION	CLOSED
RHR-V-210	Danger	WATER LEG MINIMUM FLOW	CLOSED
RHR-V-82	Danger	WATER LEG SUCTION	CLOSED
RHR-V-737(V)	Caution	SYSTEM VENT	CLOSED
RHR-V-738(D)	Caution	SYSTEM DRAIN	OPEN

I WOULD APPROVE TAGOUT AS WRITTEN: _____
Initials

I WOULD NOT APPROVE THIS TAGOUT. ALL DISCREPANCIES NOTED BELOW: _____
Initials

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: LICENSED OPERATOR INITIAL TRAINING

COURSE TITLE: ADMIN JOB PERFORMANCE MEASURE

LESSON TITLE: ESTIMATE MAIN CONDENSER AIR EJECTOR GROSS GAMMA ACTIVITY RATE AND DETERMINE ACTIONS (ADMIN)

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	LO001590	Rev. No. 1
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 2006

REVISED BY: Ron Hayden DATE: 6/21/09

TECHNICAL REVIEW BY _____ DATE _____

INSTRUCTIONAL REVIEW BY _____ DATE _____

APPROVED BY _____ DATE _____

Operations Training Manager

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

ESTIMATE MAIN CONDENSER AIR EJECTOR GROSS GAMMA ACTIVITY RATE AND DETERMINE ACTIONS

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

Setup Instructions:

Candidate needs a calculator and access to ABN-OG

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: N/A

Safety Items: N/A

Task Number: SRO-0658

Validation Time: 10 minutes

Prerequisite Training: N/A

Time Critical: NO

PPM Reference: ABN-OG Rev. 1

Location: Simulator/Table Top

NUREG 1123 Ref: 271000A2.04 (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 is operating at full power. Various alarms are locked in due to suspected fuel pin damage. Offgas system parameters are as follows: OFFGAS POST TREATMENT RADIATION MONITOR, OG-RIS-601A, is in alarm OFFGAS SYSTEM EXHAUST FLOW, OG-FR-620, is reading 43 SCFM SJAE CONDENSER OUTLET RADIATION MONITOR, OG-RR-604, is reading 7721 mr/hr
INITIATING CUE:	Based on the above, per ABN-OG, determine what action, if any, should be taken Fill in the result of your determination on the JPM Answer Sheet provided

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	RECORD START TIME: _____		
	Refers to ABN-OG and, using bases for step 4.1.2 calculates the following: Main Condenser Gross gamma activity = OG-RR-604 X OG-FR-620 divided by 1000		S / U
	Main Condenser Gross gamma activity = 7721 mr/hr times 43 SCFM divided by 1000 OR Main Condenser Gross gamma activity = 332.003 mCi/sec		S / U
	Based on a Main Condenser Gross gamma activity reading of 332 mCi/sec, candidate determines that a power reduction per PPM 3.2.4 to maintain Main Condenser Gross gamma activity LT 332 mCi/sec is required. Additionally, Technical Specification 3.7.5 should be referred to		S / U *
Termination Criteria: Student hands the JPM Answer Sheet to the examiner			
	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:

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Candidate fills out the attachment and has determined that a power reduction per PPM 3.2.4 is required to maintain Main Condenser Gross gamma activity LT 332 mCi/sec and that Technical Specification 3.7.5 should be referred to.

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 is operating at full power.

Various alarms are locked in due to suspected fuel pin damage.

Offgas system parameters are as follows:

OFFGAS POST TREATMENT RADIATION MONITOR, OG-RIS-601A, is in alarm

OFFGAS SYSTEM EXHAUST FLOW, OG-FR-620, is reading 43 SCFM

SJAE CONDENSER OUTLET RADIATION MONITOR, OG-RR-604, is reading 7721 mr/hr

Cue:

Based on the above, per ABN-OG, determine what action, if any, should be taken

Fill in the result of your determination on the JPM Answer Sheet provided

JPM ANSWER SHEET

INITIAL HERE IF NO ACTIONS ARE REQUIRED: _____

INITIAL HERE IF ACTIONS ARE REQUIRED:_____

ACTIONS IF REQUIRED: _____

_____

_____

_____

_____

_____

_____

_____

INSTRUCTIONAL COVER SHEET

PROGRAM TITLE: LICENSED OPERATOR INITIAL TRAINING

COURSE TITLE: ADMIN JOB PERFORMANCE MEASURE

LESSON TITLE: CLASSIFY THE EVENT AFTER DYNAMIC EXAM SCENARIO (TC) (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	LO001604	Rev. No. 1
Exam PQD Code		Rev. No.

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ron Hayden DATE: 6/17/06

REVISED BY: Ron Hayden DATE: 6/18/09

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 – Scenario completed per Scenario Guide.

Setup Instructions:

This JPM is designed to be performed after completion of a Dynamic Exam Scenario.

JPM Instructions:

This JPM is a 'Generic' JPM that may be used anytime a JPM is run after a simulator dynamic exam. The values that are filled in by the student are applicable to the scenario performed. Indicate the scenario PQD code this JPM was run against in the comment section of the results page.

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: N/A

Safety Items: N/A

Task Number: SRO-0529, SRO-0629

Validation Time: 15 minutes

Prerequisite Training: N/A

Time Critical: Yes 30 minutes

PPM Reference: PPM 13.1.1

Location: Simulator

NUREG 1123 Ref: 2.4.41 (2.9 / 4.6)

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:	You have just been relieved as the SRO following the scenario. It is not raining outside.
INITIATING CUE:	The Shift Manager has directed you to classify the event and initiate a CNF for the just completed scenario. This will be the initial classification for this scenario. Present a completed Classification Notification Form to the examiner. This is a time critical JPM and your time starts now.

*** Items are Critical Steps**

Comments	Standard	Sat/Unsat
	RECORD START TIME: _____	
	Fills in the following information:	
	1. Checks block 1a or 1b (Emergency or Drill)	1. S / U *
	2. Enters '1'	2. S / U
	3. Enters name and phone number	3. S / U *
	4. Checks block 4.a and enters date and time	4. S / U *
	5. Checks Block 5C for Site Area Emergency	5. S / U *
	6. Leaves Blank	6. S / U
	7. Enters Wind Speed of '8.2'; Wind Direction of '269'; Checks 'No' for precipitation; Enters 'C' for Stability Class	7. S / U *
	8. Checks No Release	8. S / U
	9. Checks N/A	9. N/A
	10. Checks N/A	10. N/A
	11. Checks No	11. S / U
	12. Enters EAL# 3.1.S.1; Enters description similar to: Drywell Pressure Response not consistent with LOCA conditions	12. S / U *
	13. Checks either block a, b, or d	13. S / U
Termination Criteria: Student hands the examiner the completed Classification Notification Form.		
	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:
CLASSIFY THE EVENT AFTER DYNAMIC EXAM SCENARIO

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: Candidate accurately completes a Classification Notification Form with the required information for the completed scenario.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

Verified Procedure #/Rev. Used for JPM (Initial Box)	Validation/Critical Time	JPM Completion Time
	15 Minutes / 30 minutes	

COMMENTS:

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

STUDENT JPM INFORMATION CARD

Initial Conditions:

You have just been relieved as the SRO following the scenario.

It is not raining outside.

Cue:

The Shift Manager has directed you to classify the event and initiate a Classification Notification Form for the just completed scenario

This will be the initial classification

Present the completed CNF to the examiner

THIS IS A TIME CRITICAL JPM AND YOUR TIME STARTS NOW