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 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:

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

Schedule File :

```
<!-- This file contains a Thunder Simulations Schedule -->
<SCHEDULE>

    <ITEM row = 1>
        <TIME>0</TIME>
        <ACTION>Insert malfunction XMT-RRP010B to -12</ACTION>
        <DESCRIPTION>RRC-SE-1B FIXED BIAS SPEED ELEMENT RRC-P-
1B</DESCRIPTION>
    </ITEM>

    <ITEM row = 3>
        <TIME>0</TIME>
        <EVENT>29</EVENT>
        <ACTION>Insert override IND-RRP015A to 12. on event 29</ACTION>
        <DESCRIPTION>RRC-XI-R670B RECIRC. MOTOR FREQ. METER METER
SIGNAL</DESCRIPTION>
    </ITEM>
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<ITEM row = 4>
<EVENT>29</EVENT>
<ACTION>Insert override OVR-RFC030D to 10. on event 29</ACTION>
<DESCRIPTION>RRC-M/A-676B ASD LOOP B FLOW CONTROL STATION ACT HZ MTR D</DESCRIPTION>
</ITEM>

<ITEM row = 6>
<TIME>0</TIME>
<ACTION>Event Events/JPM a&b.evt</ACTION>
<DESCRIPTION></DESCRIPTION>
</ITEM>

</SCHEDULE>

Event File: <!-- This file contains a Thunder Simulations Event -->
<EVENT>

<TRIGGER id="29" description="X02O133R &gt 0">X02O133R &gt 0</TRIGGER>

</EVENT>

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

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: REACTOR FEED PUMP QUICK RESTART (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	LR000131	Rev. No.	5
Exam PQD Code		Rev. No.	

DIVISION TITLE: Nuclear Training

DEPARTMENT: Operations Training

PREPARED BY: Ken Elliott DATE: 10/03/95

REVISED BY: Ron Hayden DATE: 8/20/07

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:

Post scram IC where both RFP's have tripped at 54.5" and current RPV level will allow the RFP to be reset (LT +54.5").

Special Setup Instructions:

None

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-0371

Validation Time: 16 Minutes

Prerequisite Training: None

Time Critical: No

PPM Reference: SOP-RFW-RESTART-QC Rev. 1

Location: Simulator

NUREG 1123 Ref: 259001A4.02 (3.9/3.7)

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:	A reactor scram was inserted as part of a controlled shutdown. RPV level increased to GT 54.5" and both RFP's tripped.
INITIATING CUE:	You have been directed by the CRS to perform a quick restart of the "A" RFW Pump using SOP-RFT-RESTART-QC. Inform the CRS when the A RFW pump's speed is GT 800 rpm and the speed controller has been transferred to MDEM.

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
RECORD START TIME: _____			
Controller is on P603 not P840	If desired, then transfer RPV level control to RFW-FCV-10A/10B per SOP-RFW-FCV-QC concurrently with this procedure.	N/A	N/A
	If performing this section following a reactor scram, then verify RFW-V-112A and RFW-V-112B have started to close. Otherwise N/A	Takes control switch for RFW-V-112A ands RFW-V-112B momentarily to the closed position	S / U *
	Verify MSIVs are open	Observes all MSIVs are open	S / U
	Verify at least two high level seal ins are reset (H13-P603)	Depresses at least two of the High Level Seal In P/B's	S / U *
	Verify RFW-SC-601A(B) is in MDVP at 0% (Speed Controller) (H13-P840)	Depresses the MDVP pushbutton on RFW-SC-601A	S / U *
	Hold the trip/reset switch to reset until the HP and LP stop valves indicate full open (H13-P840)	Places Turbine Emergency Trip/Reset switch to the Reset position until Turbine LP and HP Stop valves indicate full open, then release the Trip/Reset switch	S / U *

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
	Raise Turbine speed using RFW-SC-601A(B) in MDVP (Turbine will roll on Main Steam at approximately 60% GV position)	In MDVP, depresses increase arrow as necessary to raise GV position to GT 60% and then to increase turbine speed to raise GT 800 rpm	S / U *
	Transfer RFW-SC-601A(B) to MDEM as soon as practical (GT 800 rpm)	With speed GT 800 rpm, transfers RFW-SC-601A to MDEM by depressing the MDEM pushbutton	S / U *
Termination Criteria: Student informs CRS that A RFW pumps speed is GT 800 rpm and the speed controller has been transferred to MDEM.			
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:
REACTOR FEED PUMP QUICK RESTART

Examinee (Please Print): _____

Evaluator (Please Print): _____

Task Standard: RFP "A" is started, rpm is GT 800 and the speed controller is in MDEM.

Overall Evaluation	Exam Code
SAT / UNSAT (Circle One)	

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

COMMENTS:

Evaluator's Signature: _____ Date: _____

STUDENT JPM INFORMATION CARD

Initial Conditions:

A reactor scram was inserted as part of a controlled shutdown. RPV level increased to GT 54.5" and both RFP's tripped.

Cue:

You have been directed by the CRS to perform a quick restart of the "A" RFW Pump using SOP-RFT-RESTART-QC.

Inform the CRS when the A RFW pump's speed is GT 800 rpm and the speed controller has been transferred to MDEM.

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

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. Make the following schedule and event files:

This Event file is named: JPM c&d.evt:

```
<!-- This file contains a Thunder Simulations Event -->
<EVENT>
<TRIGGER id="10" description="On Manual Check position">X8CI259R &gt 0</TRIGGER>
</EVENT>
```

This Event file is named: JPM c&d1.evt:

```
<!-- This file contains a Thunder Simulations Event -->
<EVENT>
<TRIGGER id="1" description="On Manual Check position">X8CI259R &lt 1</TRIGGER>
</EVENT>
```

This schedule file is named: JPM c&d.sch:

```
<!-- This file contains a Thunder Simulations Schedule -->
<SCHEDULE>
<ITEM row = 1>
<TIME>1</TIME>
<EVENT>10</EVENT>
<ACTION>Insert override IND-SYN014 to 4.2 on event 10</ACTION>
<DESCRIPTION>SM-7 SYNC VOLTAGE RUNNING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
<ITEM row = 2>
<TIME>1</TIME>
<EVENT>10</EVENT>
<ACTION>Insert override IND-SYN013 to 4.1 on event 10</ACTION>
<DESCRIPTION>VM-INC BUS 7 SYNC VOLTAGE INCOMING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
<ITEM row = 3>
<TIME>1</TIME>
<ACTION>Event Events/JPM c&d.evt</ACTION>
<DESCRIPTION></DESCRIPTION>
</ITEM>
</SCHEDULE>
```

This schedule file is named JPM c&d1.sch:

```
<!-- This file contains a Thunder Simulations Schedule -->
<SCHEDULE>
<ITEM row = 7>
<TIME>1</TIME>
<ACTION>Event Events/JPM c&d1.evt</ACTION>
```

<DESCRIPTION></DESCRIPTION>
</ITEM>
<ITEM row = 8>
<EVENT>1</EVENT>
<ACTION>Delete override IND-SYN014</ACTION>
<DESCRIPTION>VM-RUN BUS 7 SYNC VOLTAGE RUNNING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
<ITEM row = 9>
<EVENT>1</EVENT>
<ACTION>Delete override IND-SYN013</ACTION>
<DESCRIPTION>VM-INC BUS 7 SYNC VOLTAGE INCOMING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
</SCHEDULE>

Special Setup Instructions:

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

Put all schedule and event files in appropriate M drive folders. Open and Run schedule file jpm c&d.sch. During JPM, when CB-DG1/7 is taken to MAN CHK position and trigger 10 activates, open and run jpm c&d1.sch file. (The first schedule and event file overrides the incoming and running voltage readings. The second schedule and event files, removes the first overrides when the MAN CHK switch is returned to the OFF position.

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-1/7 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 **(SEE ROLEPLAY FOR b)**	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: 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

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. Make the following schedule and event files:

This Event file is named: JPM c&d.evt:

```
<!-- This file contains a Thunder Simulations Event -->
<EVENT>
<TRIGGER id="10" description="On Manual Check position">X8CI259R &gt 0</TRIGGER>
</EVENT>
```

This Event file is named: JPM c&d1.evt:

```
<!-- This file contains a Thunder Simulations Event -->
<EVENT>
<TRIGGER id="1" description="On Manual Check position">X8CI259R &lt 1</TRIGGER>
</EVENT>
```

This schedule file is named: JPM c&d.sch:

```
<!-- This file contains a Thunder Simulations Schedule -->
<SCHEDULE>
<ITEM row = 1>
<TIME>1</TIME>
<EVENT>10</EVENT>
<ACTION>Insert override IND-SYN014 to 4.2 on event 10</ACTION>
<DESCRIPTION>SM-7 SYNC VOLTAGE RUNNING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
<ITEM row = 2>
<TIME>1</TIME>
<EVENT>10</EVENT>
<ACTION>Insert override IND-SYN013 to 4.1 on event 10</ACTION>
<DESCRIPTION>VM-INC BUS 7 SYNC VOLTAGE INCOMING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
<ITEM row = 3>
<TIME>1</TIME>
<ACTION>Event Events/JPM c&d.evt</ACTION>
<DESCRIPTION></DESCRIPTION>
</ITEM>
</SCHEDULE>
```

This schedule file is named JPM c&d1.sch:

```
<!-- This file contains a Thunder Simulations Schedule -->
<SCHEDULE>
<ITEM row = 7>
<TIME>1</TIME>
<ACTION>Event Events/JPM c&d1.evt</ACTION>
```

<DESCRIPTION></DESCRIPTION>
</ITEM>
<ITEM row = 8>
<EVENT>1</EVENT>
<ACTION>Delete override IND-SYN014</ACTION>
<DESCRIPTION>VM-RUN BUS 7 SYNC VOLTAGE RUNNING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
<ITEM row = 9>
<EVENT>1</EVENT>
<ACTION>Delete override IND-SYN013</ACTION>
<DESCRIPTION>VM-INC BUS 7 SYNC VOLTAGE INCOMING METER SIGNAL (M)</DESCRIPTION>
</ITEM>
</SCHEDULE>

Special Setup Instructions:

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

Put all schedule and event files in appropriate M drive folders. Open and Run schedule file jpm c&d.sch. During JPM, when CB-DG1/7 is taken to MAN CHK position and trigger 10 activates, open and run jpm c&d1.sch file. (The first schedule and event file overrides the incoming and running voltage readings. The second schedule and event files, removes the first overrides when the MAN CHK switch is returned to the OFF position.

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-1/7 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 **(SEE ROLEPLAY FOR b)**	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

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

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

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.			

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

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 RC-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 *
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

*** Items are Critical Steps**

Comments	Element	Standard	Sat/Unsat
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