

SIMULATOR EVALUATION GUIDE

Evaluators:

Senior Management Observer

Crew: _____

SM _____
CRS _____
CRO _____
BOP _____
STA _____

Scenario Template: _____

Template Title: TITLE

Critical Task Performance: SAT UNSAT
(Circle One)

Lead Evaluator: _____
Signature

Date Administered: _____

Activity Code: _____

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____

OPERATOR ACTIONS EVENT NUMBER 1

Crew Task Description:

Weekly Remote Testing of Turbine Oil Pumps per OP-4160.

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Direct Turbine Pump Performance IAW OP 4160 Section B.				
	BOP	Performs OP 4160 Section III. Steps 1.a thru 1.f				
EXAMINER'S NOTE: SEE ATTACHED COPY OF PROCEDURE FOR SPECIFIC STEP DETAIL.						

- NOTES:**
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OPERATOR ACTIONS EVENT NUMBER 2

Crew Task Description:

Power Ascension IAW OP 0105

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Directs Power Increase IAW OP-0105 With recirc flow				
	CRO	Increase recirc flow with "master recirc flow controller" @ 1% per 3 minutes				
	CRO	Monitors power, pressure, level.				
NOTE:						

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OPERATOR ACTIONS EVENT NUMBER 3 & 4

Crew Task Description:

Respond to a Loss of Bus 89B; Loss of Circ Water

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize a loss of Bus 89B power.				
	CRS	Enter and direct actions IAW OP 2143 and ARS.				
	CRS	Direct maintenance to investigate the loss of MCC 89B.				
	SM/CRS	Review Tech Specs and determine per 3.10.B.4 and 3.5.A.4 enter a 7-day LCO for "B" LPCI.				
	CRS	Direct AO to document indicating lights at RUPS 1B and MCC 89B per OP 2143.				
	CRS	Conduct a shift brief				
	CREW	Recognize a loss of Circ Water Pump 'B'.				
	BOP	Enter ARS 6-B-2 for loss of the pump.				
	CRS	Directs contacting maintenance due to pump trip and auxiliary operator to investigate locally.				
	CRS	Conduct a shift brief.				

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OPERATOR ACTIONS EVENT NUMBER 5

Crew Task Description:

CRD Pump A Trips (ON)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognizes Trip of 'A' CRD pump.				
	CRS	Directs actions ON 3145 -Step 2 immediately stop 'B' RWCU -Step 4 – start Alternate CRD pump -seal purge must be secured when >2 minutes Directs AO and maintenance to investigate.				
NOTE: SEE Attached copy of ON 3145 for specific steps.						
	CRO	References ON 3145 -Takes action to stop RWCU pump 'B'. - Starts 'B' CRD pump per ON 3145 - Takes action to isolate seal purge				
	CREW	Recognizes the following alarms are in due to excessive drywell cooling due to loss of RWCU heat loads: 5-G-1 – DW Pressure HI/LO 5-G-3 – DW Pressure Low				
NOTE: Operator will open 156-3 IAW ARS to clear alarms.						

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OPERATOR ACTIONS EVENT NUMBER 6

Crew Task Description:

Control Rod 18-31 Drifts Outward (OT)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Acknowledge/respond to Rod Drift annunciator (5-D-5); inform CRS.				
	CRO	Identify rod 18-31 as drifting rod; inform CRS.				
	CRS	<ul style="list-style-type: none"> Enter and direct actions IAW OT 3167 (Control Rod Drift): Observe drive water flow indication FI-3-305 Select rod 18-31 and attempt to insert ONCE to original position. 				
		When directed: <ul style="list-style-type: none"> Observe drive water flow indication FI-3-305 Select rod 18-31 and attempt to insert ONCE to original position Identify that rod continues to drift outward when insert signal removed; inform CRS 				

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
		Direct the following IAW OT 3167 and OT 3110 (Positive Reactivity Insertion): <ul style="list-style-type: none"> Manually scram rod 18-31. Reduce Recirc flow to 27.5 – 29 Mlb/hr at a rate not to exceed 10% / minute. Notify Reactor Engineering. Attempt to determine if cause of control rod drift is a stuck collet. Consult OT 3166 (Mispositioned Control Rod). 				
	BOP	When directed, manually scram rod 18-31.				
	CRO	When directed, reduce Recirc flow to 27.5 – 29 Mlb/hr at a rate not to exceed 10% / minute.				
	CREW	When directed, notify Reactor Engineering of Rod 18-31 drift.				
	CRS	Conduct a crew brief.				

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OPERATOR ACTIONS EVENT NUMBER 7

Crew Task Description:

Inadvertent HPCI Initiation (TS)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize and inform the CRS of a HPCI initiation.				
	CRS	Enters OT 3110 – Positive Reactivity Insertion, Step 2.F.				
NOTE: See Attached OT 3110.						
	BOP	Confirm no initiation signals present. (Two indications at least).				
	CRS	Directs that HPCI be tripped per Step 4. Directs opening SGT 1A & 1B due to auto start of SBGT.				
	BOP	Places Auto/Inhibit switch to Inhibit. Verify SBGT operation. Opens SGT 1A & 1B.				
	CRS	Consult Tech Specs and determine that a 14-day LCO condition has been met per 3.5.E.2. OT 3110 - Step 9. Contacts RE				
	CRS	Brief the crew.				

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OPERATOR ACTIONS**EVENT NUMBER 8****Crew Task Description:****Loss of Offsite Power**

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRO	Report reactor scram.				
	CREW	Recognize and inform CRS of Loss of Off Site Power. • Report power on buses 3, 4, 8, 9 from the Diesels.				
	CRO	Report feed and condensate are unavailable.				
	CRS	Enter and direct actions IAW OT 3122, LNP				
	CREW	Respond to LNP IAW OT 3122. • Verify both DGs start and power busses. • Verify SW pumps start. • Restart station AC A & B.				
	CRS	Enter and direct crew actions IAW OT 3100, Rx Scram and EOP-1, RPV Control.				
	CRO	• Verify all rods fully inserted. • When steam flow < 0.5 Mlbm/hr per steamline, place the mode switch in S/D.				
NOTE: THIS STEP IS AN Immediate Action, and may be performed without direction.						
	CRO	Insert IRMs and SRMs.				
	CRS	Direct reactor water level maintained 127" - 177" using RCIC initially/ then HPCI as needed (must take out of INHIBIT). Direct pressure maintained 800 – 1000 psig using SRVs/HPCI.				

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	BOP	Maintain RPV level as directed with RCIC initially. HPCI (must be taken out of inhibit).				
	CREW	Verify Table A: ECCS/PCIS actuations.				

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OPERATOR ACTIONS EVENT NUMBER 9, 10, & 11

Crew Task Description:

HPCI Flow Controller Failure; Recirc Loop Rupture (0.6% Over 600 Sec.); HPCI Trip; RPV-ED on Low Level; CS-12A and CS-12B Failure to Auto Open, RHR 27A Failure to Auto Open

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	BOP	Report HPCI trip.				
	CREW	Direct AO/ maintenance to investigate HPCI trip				
	CRS	Direct RPV level maintained between 6 inches (TAF) and 177 inches by maximizing CRD flow				
	CRO	Maximize available CRD flow				
	CREW	Report increasing drywell pressure.				
	CRS	Enter EOP-3 on High Drywell Pressure.				
	CRS	Direct BOP to restart drywell RRU's.				
	BOP	Restart drywell RRU's.				
	CRS	Before torus pressure reaches 10 psig, direct torus sprays				
	BOP	Spray the torus, as directed.				
	CRS	When torus pressure exceeds 10 psig: <ul style="list-style-type: none"> Verify drywell pressure and temperature in the safe region of the DWSIL graph. Verify drywell RRU's secured. Direct drywell sprays. 				
	BOP	Secure drywell RRU's.				
	BOP	Spray the drywell as directed.				
	CRS	When ADS timer initiated, direct ADS inhibited.				
	BOP	Inhibit ADS as directed.				

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Direct SLC for reactor water level control.				
	CRS	Direct RPV level maintained between 6 inches (TAF) and 177 inches				
	CRO	Inject SLC, as directed.				
	CREW	Report level approaching 6".				
	CRS	When RPV level cannot be maintained above 6", direct/verify at least 2 injection subsystems lined up for injection.				
	BOP/CRO	Lineup ECCS systems as directed.				
	*CREW EOP-1 CT-1	With the reactor shutdown and reactor pressure greater than the shutoff head of the low pressure systems, initiate RPV-ED BEFORE RPV level reaches -19 inches.				
		Standard:				
		Initiate RPV-ED (begin opening valves) BEFORE RPV level reaches - 48 inches				
	CREW	Inform CRS when level reaches 6".				
	CRS	Before level reaches - 19 inches, enter and direct crew actions IAW EOP-5 RPV-ED.				
	CRS	Direct all SRVs opened.				
	CRO/BOP	When directed, place all SRV control switches to open. Inform CRS that all SRVs are open.				

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	*CREW EOP-1 CT-2	<p>Action is taken to restore RPV water level above -19 inches by operating available low pressure ECCS system(s) when RPV pressure decreases below the shutoff head of the low pressure systems.</p> <p>Standard:</p> <ul style="list-style-type: none"> At least 2 ECCS pumps are lined up for injection and running prior to RPV pressure reaching the injection valve open permissive pressure. No pumps are secured until adequate core cooling is assured. Initiate manual opening of injection valves once valve open permissive pressure is reached. 				
	CREW	Continue to monitor and report RPV Level and Pressure decrease.				
	CREW	Report failure of RHR-27A, CS-12A and CS-12B to AUTO open.				
	CRS	Direct RHR and CS injection valves opened.				
	BOP	Manually open RHR-27A, CS-12A and CS-12B as directed.				
	CRS	Direct CRO/BOP to ensure adequate core cooling and restore water level to 127-177.				
	CREW	Verify adequate core cooling and level rising.				
EXAMINER'S NOTE: Adequate core cooling is reactor level > -19" or reactor level > -48" with CS 'A' or CS 'B' flow > 3250 gpm						
	CRS	As necessary, prevent injection from Core Spray and RHR Pumps not required to assure adequate core cooling.				
	BOP/CRO	When directed, prevent injection from Core Spray and RHR Pumps not required to assure adequate core cooling.				

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	BOP/CRO	When directed, prevent injection from Core Spray and RHR Pumps not required to assure adequate core cooling.				
EXAMINER'S NOTE: AT THIS POINT SCENARIO MAY BE TERMINATED AT EXAMINER'S DISCRETION.						
	SM/STA	Consult AP 3125 and determine an Alert EAL has been reached IAW AP 3125, A-3-a and/or A-3-b.				
						15 minute clock

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Crew: _____

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Senior Management Observer

Scenario Template: _____

Template Title: TITLE

Critical Task Performance: SAT UNSAT
(Circle One)

Lead Evaluator:

Signature

Date Administered:**Activity Code:**

Prepared by: _____

Date: _____

Reviewed by:_____

Date: _____

Approved by: _____

Date: _____

OPERATOR ACTIONS EVENT NUMBER 1

Crew Task Description:

Place CW in Closed Cycle for Chlorination

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Directs Placing CW in closed Cycle for chlorination.				
	BOP	Procedure OP 2180 Section F. Reviews procedure and checks prereqs.				
	BOP	Ensures all Circ Water & Circ Water Booster Pumps running.				
	BOP	Contacts Chemistry – Are we treating service water at the same time.				
EVALUATOR'S CUE: Report back - not treating SW simultaneously.						
	BOP	Opens Circ Water Recirc Gate >85% by taking "Circ Water Recirc Gate" switch to open, Observes indicator POI-104-3 >85% Observes weir level indicator LI-104-10-1 is < 225'				
	BOP	Calls field operator to throttle valve CW-7.				
EVALUATOR'S CUE: Already throttled.						
	BOP	Closes all intake gates by taking hand switches "Circ Water Intake Gate 1A (1B, 1C)" to close.				
	BOP	Monitors intake level and condenser backpressure.				

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OPERATOR ACTIONS EVENT NUMBER 2

Crew Task Description:

Power Reduction IAW OP 0105

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS CUE	Directs power reduction IAW OP-0105 USE provided power reduction memo.				
EVALUATOR'S CUE: USE provided power reduction memo.						
	CRO	Selects Rod 22-19 first Using "Rod Movement Control" switch, insert rod to "00" Monitors four-rod and full core display, monitors power indications , CRD parameters Continues with subsequent control rods.				
EVALUATOR'S NOTE: May receive alarm 5-E-6 "FW Control System trouble". Due to mismatch of level and setpoint during power reduction. The alarm is expected and will clear.						
		GO TO NEXT EVENT AT EXAMINER DISCRETION. DO NOT INSERT NEXT EVENT UNTIL LEVEL STABILIZES.				

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OPERATOR ACTIONS EVENT NUMBER 3

Crew Task Description:

Feedwater Regulating Valve Lockup (OT)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognizes "A" FRV Lockup.				
	CRO	Enters ARS 5-E-2				
	CRS	Directs field operator to check problem with "A" FRV. Contacts I&C.				
	CRS CRO	Directs FRV lockup reset per ARS. Attempts to reset FRV lockup by Performs steps 1.b. thru 1.f., Step 1.a.g and h. do not apply. Goes to step 2.				
EVALUATOR'S NOTE: May wait until I&C responds before attempting reset. IF SO,						
CUE: I&C requests reset to support troubleshooting.						
EVALUATOR'S NOTE: Reset doesn't work.						
	CRS	CREW Brief on FRV operation and level control per guidance in OTs and ARS				

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**OPERATOR ACTIONS
EVENT NUMBER 4****Crew Task Description:****APRM A Fails Downscale (TS)**

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognizes Alarm 5-M-4 annunciates APRM Downscale. Also, 5-D-3 for Rod Withdraw Block				
	CRS	Enters TS and Directs contacting I&C. TS Table 3.1.1 , Notes 2 and 3, - 12 hours to put in trip on "A" side.				
	CRO	Review ARS 5-D-3 and 5-M-4 direction: <ul style="list-style-type: none">• increased board monitoring• contacts I&C.				
	CRS	Crew Brief.				

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OPERATOR ACTIONS EVENT NUMBER 5

Crew Task Description:

EPR Oscillations (OT)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize oscillating reactor pressure Enters OT 3115.				
	CRO/BOP	Coordinate determination of EPR at fault; inform CRS.				
	CRS	Enter and direct actions IAW OT 3115 (Reactor Pressure Transients): <ul style="list-style-type: none"> Place the EPR in CUTOOUT Verify that the MPR has control Lower MPR setpoint as necessary 				
	BOP	When directed: Place the EPR in CUTOOUT at peak pressure <ul style="list-style-type: none"> Verify that the MPR has control Lower MPR setpoint as necessary. 				
	CRS	Direct BOP to restore pressure to the pre-transient pressure.				
	BOP	When directed, adjust MPR to adjust pressure to pre-transient level.				
	CRS	Direct Crew member to contact I&C to check and repair EPR.				
	CREW	When directed, contract I&C, inform them of EPR problem and request repair efforts begin.				
	CRS	Brief the Crew.				
	SM	Direct STA/Crew to begin work on a CR to ensure an Operability Determination is made.				

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OPERATOR ACTIONS EVENT NUMBER 6

Crew Task Description:

Loss of 480 Volt Bus 8, Failure of SBTG A to Auto Start

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize and inform CRS of a loss of 480 volt Bus 8.				
	CRO	Inform CRS of half scram. Report power, pressure, level				
	CREW	Recognize/respond to a Group III isolation and bus loss. Board walkdown to recognize equipment affected <ul style="list-style-type: none"> • B CS valves • B RHR valves • Drywell RRUs • alarm for seismic panel (in due to power loss, not an actual event) 				
	CRS	Direct the following actions: <ul style="list-style-type: none"> • Backup Group III isolation • Direct call to chemistry for sampling per T.S. 4.6.B.3.b • Direct crew to initiate an investigation into bus loss. 				
	BOP	When directed, backup Group III isolation <ul style="list-style-type: none"> • Recognize failure of the SBTG trains to auto start • Start/align SBTG "A" Inform CRS of failure to auto start.				
EVALUATOR'S NOTE: SBTG "B" powered from Bus 8.						
	BOP	When directed shut RWCU 18.				

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Consult Tech Specs and identify the following: <ul style="list-style-type: none"> • 24-hour S/D LCOs 3.10.A.3. (Bus Loss) AND • Core Spray and RHR due to loss of valve power 3.5.A.6. • 7 days - -3.7.B.3 (SBGT) 				
	CRS	Monitor and control DW pressure rise due to loss of Drywell RRUs and isolation. Direct start of all available Drywell RRUs per OT3111, "High Drywell Pressure". Enter EOP-3 as required due to High Drywell temperature.				
	BOP	When directed shut RWCU 18				
	BOP	Starts available Drywell RRUs.				
	CRS	Direct the CRO to begin preparations for a normal plant S/D per OP 0105.				
	CRS	Provide a crew brief on conditions and shutdown.				
	CRO	When directed, commence preparations to shutdown IAW OP-0105.				

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OPERATOR ACTIONS EVENT NUMBER 7

Crew Task Description:

SRV-71B Leak (OT) Leads to Rx Scram (100% over 600sec)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize the "B" SRV leaking. Enter OT 3121, Inadvertent Opening of SRV.				
	BOP	Using available indications, determine that SRV 71-B is leaking: inform CRS				
	CRS	Enter and direct actions IAW OT 3121 (Inadvertent Opening of a Relief Valve)				
EVALUATOR'S NOTE: SRV is part-way open and may be assessed as either OPEN or leaking.						
EVALUATOR'S NOTE: No actions to stop leak will be successful.						
		<ul style="list-style-type: none"> Confirm that an SRV is leaking Place torus cooling in service 				
EVALUATOR'S NOTE: Recognize can't place torus cooling in service.						
		<ul style="list-style-type: none"> Inform Operations Manager Inform System Engineering Commence plant shutdown IAW OP-0105 Determine that SRV has no known pilot valve leakage. Attempt to close valve by cycling control switch from AUTO to OPEN to AUTO (if valve is open enough to indicate it is open and not leaking). 				
EVALUATOR'S NOTE: (Only if assessed as OPEN.)						

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	BOP	Attempt to cycle "B" SRV; report valve failure to close.				
EVALUATOR'S NOTE: (Only if assessed as OPEN.)						
	CRS	IF the SRV remains OPEN, Place the ADS Appendix R Bypass Switch on CRP 9-3 to BYPASS.				
EVALUATOR'S NOTE: (Only if assessed as OPEN.)						
	BOP	When directed, place the ADS Appendix R Bypass Switch on CRP 9-3 to BYPASS.				
EVALUATOR'S NOTE: (Only if assessed as OPEN.)						
	CRS	If core flow is greater than 29 Mlbm/Hr then reduce reactor power $\leq 10\%$ RTP/min using recirc flow until core flow is 27.5 to 29 Mlbm/Hr.				
EVALUATOR'S NOTE: (Only if assessed as OPEN.)						
	CRO	When directed, reduce reactor power $\leq 10\%$ RTP/min using recirc flow until core flow is 27.5 to 29 Mlbm/Hr.				
EVALUATOR'S NOTE: (Only if assessed as OPEN.)						
	CRS	Direct the following actions: <ul style="list-style-type: none"> • Transfer station loads to the Startup Transformers (as time permits). • Reactor shutdown/cooldown as required by OT-3121. 				
	CRO/BOP	When directed, commence plant shutdown IAW OP 0105.				
	CREW	Recognize torus volume > 70,000 cu ft; inform CRS of EOP-3 entry condition				
	CRS	When torus volume exceeds 70,000 cu ft, enter and direct actions IAW EOP- 3 <ul style="list-style-type: none"> • Direct torus cooling. 				
EVALUATOR'S NOTE: Recognize can't place torus cooling in service.						

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STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Report Drywell pressure approaching 2.5 psig.				
		Enter/direct actions IAW OT-3111 (as time permits): <ul style="list-style-type: none"> • Reduce Recirc flow to 27.5 – 29 Mlbs/hr at a rate not to exceed 10 percent per minute • Above the MELLLA boundary, stop lowering core flow and reduce power using the rapid shutdown sequence in reverse order 				
EVALUATOR'S NOTE: May go above MELLLA for a short period of time during a transient.						
		<ul style="list-style-type: none"> • Transfer house loads to the Startup Transformers. • Start all available drywell RRUs. 				
	CRS	Direct manual scram/turbine trip prior to drywell pressure exceeding 2.3 psig.				
	CRO	When directed, insert a manual reactor scram.				

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OPERATOR ACTIONS EVENT NUMBER 8

Crew Task Description:

Failure of Manual Scram; ARI Required

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	*CREW EOP-2 CCT-1	With the reactor at power and a full auto scram signal, manually scram the reactor. Standard: Actuate the manual scram pushbuttons, place the mode switch in SHUTDOWN, or actuate the ARI-RPT pushbuttons within 1 minute of reaching the Limiting Safety System Setting				
	CRO	Initiate ARI/RPT and Trip the Drive Motor Breakers. Report Partial Rod Insertion.				
	CRO	When steam flow < 0.5 Mlbm/hr per steamline, place mode switch in SHUTDOWN. <ul style="list-style-type: none"> • Verify all rods inserted; inform CRS. • Insert IRMs and SRMs. 				
	CRS	Direct CRO to maintain level from 127" - 177".				
	CRO/BOP	Maintain reactor level as directed. <ul style="list-style-type: none"> • Determine HPCI not required for level control • HPCI tripped and inhibited 				
	CRS	Direct CRO/BOP to maintain reactor pressure 800 - 1000 psig using BPVs.				
	CRO / BOP	Maintain reactor pressure as directed.				

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 - 2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Direct crew to monitor the plant cooldown.				
	BOP	When directed monitor cooldown.				

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 9 & 10

Crew Task Description:

45% Hydraulic ATWS (A) 55% Hydraulic ATWS (8); SLC Pump A Trips; B SLC Squib Valve Fails to Fire

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRO	Recognize failure of control rods to insert; inform CRS.				
	*CREW EOP-2 CCT-2	<p>With reactor scram required and the reactor not shutdown, take action to reduce power by tripping the recirc pumps.</p> <p>Standard:</p> <p>Actuate the ARI/RPT logic AND ensure that the recirc drive motor breakers are tripped within 2 minutes of the scram failure (or within 1 minute of RPV pressure exceeding 1200 psig)</p>				
	CRO	<p>Attempt to initiate ARI/RPT and secure the Recirc pumps.</p> <ul style="list-style-type: none"> Report failure of ARI/RPT to CRS Trip Recirc pump drive motor breakers 				
EVALUATOR'S NOTE: With ARI/RPT failure, trip of drive motor breakers required to satisfy critical task.						
	CRS	When informed of the scram failure enter and direct crew actions IAW EOP-1 and EOP-2				
	STA	When directed, verify EOP-1 Table A automatic actions				
	CREW	Recognize/respond to high Drywell pressure and entry into EOP-3; inform CRS				
	CRS	<p>Enter/direct actions per EOP-3</p> <ul style="list-style-type: none"> Restart Drywell RRUs. 				
	BOP	<p>When directed:</p> <ul style="list-style-type: none"> Restart Drywell RRUs. 				

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	*CREW EOP-2 CCT-3	<p>With a reactor scram required and the reactor not shutdown, INHIBIT ADS to prevent an uncontrolled RPV depressurization to prevent causing a significant power excursion.</p> <p>Standard:</p> <p>Inhibit ADS prior to automatic initiation.</p>				
	CRS	<p>Direct per EOP-2:</p> <ul style="list-style-type: none"> • Inhibit ADS • Implement App P to keep the MSIVs Open • When steam flow <0.5lbm/hr per steamline, place Mode Switch in SHUTDOWN 				
EVALUATOR'S NOTE: This step is an Immediate Action, and may be performed without direction.						
		<ul style="list-style-type: none"> • Verify ARI/RPT initiated • Insert control rods with one or more appropriate appendices 				
EVALUATOR'S NOTE: Implement appendix F, BB or H of OE 3107.						
		<ul style="list-style-type: none"> • Stabilize pressure RPV pressure 800-1,000 psig with BPVs. 				
	BOP	<p>When directed:</p> <ul style="list-style-type: none"> • Inhibit ADS. • Implement App P to keep the MSIVs Open. • Stabilize pressure 800-1000 psig with BPVs. 				

NOTES:

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All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	*CREW EOP-2 CCT-4	During an ATWS with conditions met to perform power/level control TERMINATE AND PREVENT INJECTION into the RPV using appendix GG, until conditions are met to re-establish injection. Standard: Completion of Terminate and prevent injection IAW OE 3107 Appendix GG within 5 minutes of loss of forced circulation.				
	CRS	Inject SLC				
	CRS	Terminate/prevent injection per Appendix GG.				
	*CREW EOP-2 CCT-4	With a reactor scram required and the reactor not shutdown, TAKE ACTION TO REDUCE POWER by injecting boron and/or inserting control rods, to prevent exceeding the primary containment design limits. Standard: Actions taken within 10 minutes of the scram failure to implement appropriate appendices and/or inject SLC. Only one method needs to be used. The method must result in successful control rod insertion or SLC injection.				
	CRO	When steam flow <0.5lbm/hr per steamline, place Mode Switch in SHUTDOWN.				
EVALUATOR'S NOTE: This step is an Immediate Action, and may be performed without direction.						
		• Insert control rods using directed appendices.				
		• Start "A" SLC Pump. Recognize trip of SLC pp.				
EVALUATOR'S NOTE: After trip of SLC< control rod insertion becomes only means available to satisfy the critical task.						
		• When directed, terminate/prevent injection per Appendix GG.				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
EVALUATOR'S NOTE: B SQUIB VALVE fails.						
	BOP	When directed, terminate/prevent injection per Appendix GG.				
	*CREW EOP-2 CCT-5	<p>When conditions are met to re-establish injection, use available injection systems to RESTORE & MAINTAIN RPV water level above -19".</p> <p>Standard:</p> <p>Restore and maintain RPV level to between -19" and the level to which it was lowered AND no significant power excursion occurs.</p>				
	CRO	Recognize when power drops below 2 %; inform CRS				
	CRS	Direct RPV level maintained between -19 and 90 inches				
	CRO	Maintain RPV level between -19 and 90 inches				
	CRO/STA	Recognize all rods inserted; inform CRS				
	CRS	<p>When all control rods inserted, exit EOP-2 and enter/direct actions IAW EOP-1:</p> <ul style="list-style-type: none"> • Terminate boron injection • Verify Table A automatic actions • Restore / maintain RPV level 127 – 177 inches. • Commence cooldown at less than 100 degrees F per hour. 				
	BOP	When directed, commence cooldown at less than 100 degrees F per hour.				
	CRO	<p>Terminate boron injection:</p> <ul style="list-style-type: none"> • Restore / maintain RPV level 127 – 177 inches. 				

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	When all rods inserted, exit EOP-2, enter EOP-1, and direct RPV level restored and maintained 127 -177 inches.				
	SM/STA/ CRS	Classify the event as a Site Area Emergency IAW AP 3125 Appendix A (S-7-c).				
EVALUATOR'S NOTE: 15 minute clock.						

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

SIMULATOR EVALUATION GUIDE

Evaluators:

Senior Management Observer

Crew: _____

SM _____
CRS _____
CRO _____
BOP _____
STA _____

Scenario Template: _____

Template Title: TITLE

Critical Task Performance: SAT UNSAT
 (Circle One)

Lead Evaluator: _____
Signature

Date Administered: _____

Activity Code: _____

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____

OPERATOR ACTIONS EVENT NUMBER 1

Crew Task Description:

Perform Turbine Chest Warmup

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Directs Performing Turbine Chest Warmup IAW OP 0105 Phase 2.D. Step 1. Direct CRO to monitor Reactor Power, Pressure and Level during Turbine Chest Warm-up.				
	BOP	Enters OP 0105 Phase 2.D. Step 1. for Turbine Chest Warm-up and reviews Takes actions IAW OP 0105 for Turbine Chest Warmup				
	CRO	Maintains Reactor Power, Pressure and Level as Turbine Chest Warm-up is placed in service.	.			
EVALUATOR'S NOTE: OP 0105 Phase 2.D. Step 1. specific steps attached.						

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 2

Crew Task Description:

Pull Rods to Continue Power Ascension

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Directs power ascension per OP 0105 until 1 ½ bypass valves open				
	CRO	Withdraws control rods to increase power.				
	CREW	Monitors reactor parameters				
EVALUATOR'S NOTE: Specific guidance for rod pulls in OP 0105.						

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
 All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 3

Crew Task Description:

IRM A Fails Upscale (TS)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognizes IRM 'A' failed upscale Recognizes ½ scram ALARMS				
	CRS	Recognizes IRM 'A' upscale, references OP2131 section C. Directs confirmation of upscale . Directs I & C to investigate. Directs bypassing IRM 'A'. Directs reset of ½ scram. Consults Tech Specs – Table 3.1.1. – no restriction with one IRM inop.				
	CRO	Bypasses IRM Resets ½ scram per OP 2134 "RPS".				
	CRS	Crew Brief				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 4

Crew Task Description:

CRD Flow Control Valve Fails Closed (ON)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognizes abnormal CRD conditions. Control Rod won't move.				
	CRS	Enters ON 3145 – Loss of CRD Reg Function. Directs actions per ON 3145, Step 9 for placing flow controller in manual, and swapping controllers.				
	CRO	Takes steps described in Step 9. <ul style="list-style-type: none"> places in service flow controller in manual determines problem still exists swaps to alternate controller 				
EVALUATOR'S NOTE: See attached copy of ON 3145, Step 9. for specific steps.						
	CRS	Crew Brief.				

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 5

Crew Task Description:

Stuck Control Rod 26-27 (ON)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRO	Determines control rod 26-27 is stuck and notifies CRS				
	CRS	Enters ON 3143 – Stuck Control Rod and directs actions contained on ON 3143 flow chart.				
	CRO	Takes actions as directed to unstick control rod per ON 3143 flowchart <ul style="list-style-type: none"> • attempt one notch insert • attempt a single notch withdraw • determines drive water pressure • raises drive water pressure 10-50 psig • attempt to insert control rod one notch (successful) • attempt to withdraw one notch (successful) • insert 26-27 one notch • withdraw 26-27 one notch • return drive water press. to 250-275 • insert then withdraw 26-27 one notch (done twice) 				
EVALUATOR'S NOTE: See attached ON 3143 Flow Chart for specific actions.						
	CRO	<ul style="list-style-type: none"> • insert then withdraw 36-27 one notch (done twice). 				
	CRS	Crew Brief.				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
 All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 6

Crew Task Description:

Seismic Event; Trip of "A" TBCCW Pump with "B" TBCCW Pump Failing to Auto Start

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize and inform the CRS of indication of a seismic event				
	CRS	Enter and direct crew actions IAW OP 3127				
	CRS	Direct CRO/BOP to dispatch AO to check for damage to structures or equipment IAW OP 3127				
	CRO/BOP	When directed, dispatch AOs to check for damage to structures or equipment IAW OP 3127				
	CRS	Direct CRO/BOP to verify the seismic event by checking indications on the seismic monitor				
	CRO/BOP	When directed, check seismic monitor report valid indication of a seismic event				
	CRS	Direct CRO to check control rod display for rod drift				
	CRO	When directed, check control rod display. Report no drifts				
	Crew	Recognize and gross fail alarms and ½ scram alarms due to low level				
	CRS	Direct AO to check local level indications				
	CREW	Report other level indications are normal				
	CREW	Direct STA to check the seismic monitor to determine if OBE was exceeded				
	CREW	Report loss of "A" TBCCW Declares ALERT for seismic event A-5-c.				

- NOTES:**
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EVALUATOR'S NOTE:	CRO must be distracted to ensure ACRO gets credit for this malfunction.
	Ensure Sim Booth places a follow-up phone call from RB RO to CRO in regard to CRD flow control valve.

2) * = Critical Task/Step

**OPERATOR ACTIONS
EVENT NUMBER 7****Crew Task Description:****RCIC Steam Leak (TS); RCIC Fails to Auto Isolate**

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Responds to Annunciator 9-4-U-2 "RCIC Steam Line DP High"				
	CRS	May Enter ON 3158 "RX BLDG High Area Temp/Water Level" Directs/Verifies Isolating RCIC when it fails to auto isolate. Tech Specs 3.5.G.2. – 14 day LCO				
	BOP	Refers to Alarm Response Procedure for 9-4-U-2. Manually Isolates RCIC valves 15 & 16 due to failure to auto isolate. (Successful)				

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All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRO	Attempts to Isolate SDV valves (unsuccessful) Reports to CRS failure to isolate.				
	CRS	Enters OP 3127 "Natural Phenomena" due to alarm 7-M-7 – Seismic Monitor Alarm from aftershock.				
	CRS	Enters EOP-4 on Alarms 4-L-4 – Equip.drain N/S sump hi 4-M-4 – Floor drain N/S sump hi Due to increasing sump levels caused by SDV failure to isolate.				
	CREW	Maintains pressure/level as directed				
	BOP	Controls Pressure 800-1000 psig				
	CRO	Control RPV water level 127-177 with feedwater				

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 11

Crew Task Description:

Torus Leak at "A" RHR Suction (50% Over 900 Secs); PRV-ED on Low Torus Level

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Report high sump levels in reactor building.				
	CRS	Direct an AO to investigate.				
	CRS	When AO reports RHR suction line break, enter and direct actions per ON 3108, Loss of Containment Integrity Emergency Procedure and ON 3158, Hi Rx Building Temperature or Water Level.				
	CRS	Direct maintenance to attempt to restore primary containment integrity.				
	CREW	Respond to reactor building sump level alarm.				
	CRS	Re-enter EOP-4, Secondary Containment Control, due to high floor drain sump levels.				
	CRS	Verify all available sump pumps are running.				
	CRS	Enter EOP-3 on low torus volume				
	CRS	Direct CREW to initiate makeup to the torus IAW Table N (multiple systems should be used).				
	BOP	Initiates torus makeup, as directed.				
	*CREW CCT-2	When torus level cannot be maintained above 7 ft, perform RPV emergency depressurization. Standard: Initiate RPV-ED such that RPV pressure is < 50 psig when Torus level reaches 5.5 ft.				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
EVALUATOR'S NOTE: Once the CRS determines Torus Level can't be maintained > 7 feet then RPV-ED is warranted.						
	CRS	When torus level cannot be maintained above 7 ft, enter EOP-5 Inhibit HPCI and direct all 4 SRVs opened.				
	BOP	HPCI injection is terminated before Torus level falls below 6 ft. if HPCI is running.				
	BOP	Open SRVs as directed.				
	CRS	Direct CRO to restore and maintain level 6" - 177" using condensate and feed. EOP-1, Step RC/L-2				
	CRO	Maintain RPV level as directed.				
	CRO	Consult AP 3125 and determine an SAE EAL has been reached IAW Appendix S-5-c,				

- NOTES:**
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 - 2) * = Critical Task/Step

SIMULATOR EVALUATION GUIDE

Evaluators:

Crew: _____

SM

CRS

CRO

BOP

STA

Senior Management Observer

Scenario Template: _____

Template Title: TITLE

Critical Task Performance: SAT UNSAT
(Circle One)

Lead Evaluator:

Signature

Date Administered:

Activity Code:

Prepared by: _____

Date: _____

Reviewed by: _____

Date: _____

Approved by: _____

Date: _____

OPERATOR ACTIONS EVENT NUMBER 1

Crew Task Description:

Speed Load Changer Bypass Test OP 4160

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Direct Speed Load Changer Bypass IAW OP-4160				
	BOP	Reviews OP-4160, Section F – Speed Load Changer Bypass Test.				
	BOP	1. Slowly Operate the Speed Load Changer Bypass switch by going to LOWER until it is noted that there is a slight decrease in electrical output and the #1 bypass valve begins to open. 2. Slowly operate the Speed Load changer Bypass switch by going to RAISE until no further load decrease is noted (bypass valve closed). 3. Record required data.				
EVALUATOR'S NOTE: GO TO Next Event at Examiner discretion.						

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

**OPERATOR ACTIONS
EVENT NUMBER 2****Crew Task Description:****Power Ascension IAW OP-0105**

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Directs Power increase IAW OP-0105				
EVALUATOR'S NOTE: Provide RE guidance for return to 100% power.						
	CRO	Increases power using recirc flow control or control rods				
	CRO/ACRO	Monitors control board indications				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 3

Crew Task Description:

Loss of MCC-8A (TS)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize and respond to a loss of MCC. Directs Field operator to investigate alarm.				
EVALUATOR'S NOTE: Field operators report MCC-8A tripped.						
	CRO	Recognizes ½ scram on "A" side of RPS				
	BOP	Recognizes Bus 8 MCC trouble annunciator 8-J-8 Contacts field operator.				
	CREW	Recognize Group III isolation.				
	CRS	Reviews OP 2143 – MCC-8A Load List when informed feeder bkr tripped Directs electrical maintenance to investigate loss of MCC-8A.				
	CRS	Receives report that MCC-8A can be returned to service				
EVALUATOR'S NOTE: Report to CRS that MCC-8A can be restored to service. It was bumped into accidentally.						
		• Directs CRO to reset the ½ scram				
		• Directs backup and reset of PCIS group III.				
EVALUATOR'S NOTE: Entire evolution must be completed to facilitate event 9.						
	CRO	Resets Half scram by: Resets ½ scram				
EVALUATOR'S NOTE: Specific steps in attached copy of OP2134.						
	BOP	Backs up and resets Group III isolation per OP2115 Section L.				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
EVALUATOR'S NOTE: Specific steps in attached copy of OP 2115.						
	CRS	Evaluate Tech Specs, determines that 3.7.B.3 – 7day LCO applies Conduct a Shift Brief				

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 4

Crew Task Description:

Condensate Pump A Trips, Failure of RFP B to Trip (OT) (RP); Feedwater Pump B CD Trip Bypass Switch in Bypass

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize and inform CRS of the trip of the "A" condensate pump.				
EVALUATOR'S NOTE: Causes B Feedwater Pump trip.						
	CRO	Recognize and report B FW Pump has tripped as a result of the condensate pump trip				
	CRS	Enter and direct crew actions IAW OT 3113, Low Reactor Level <ul style="list-style-type: none"> Direct/verify manual runback of recirc pumps using the PB1 pushbuttons on both pump controllers Verify Reactor Vessel Level Master Controller setpoint sets down to 155 inches 				
	CRO	<ul style="list-style-type: none"> Manually runback recirc pumps using the PB1 pushbuttons on both pump controllers 2-184-16A(B) 				Immediate Operator Action OT3113
EVALUATOR'S NOTE: Immediate Operator Action OT 3113.						
		<ul style="list-style-type: none"> Verify Reactor Vessel Level Master Controller setpoint sets down to 155 inches 				
EVALUATOR'S NOTE: Immediate Operator Action.						

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Direct the CRO to begin reducing power to 70 to 75% <ul style="list-style-type: none"> Below the MELLLA boundary, reduce power using recirc flow When above the MELLLA boundary, stop lowering core flow and reduce power using the rapid shutdown sequence in reverse order 				
	CRO	Reduces power as directed.				
	CRS	Direct CRO/BOP to contact maintenance and/or AO to investigate cause of the pump issues.				
	CRO/BOP	When directed, contact maintenance and/or AO to investigate cause of the pump trip.				
	CRS	Brief the crew on plant conditions				

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 5

Crew Task Description:

Steam Flow Summer Fails Upscale (OT) (100% over 60 sec)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognizes steam flow summer fails upscale				
EVALUATOR'S NOTE: See attached copy of OT 3114 for specific actions.						
	CRS	References OT3114 – Rx High level and directs immediate actions				
	CRS	Directs CRO to: <ul style="list-style-type: none"> Place level control in single element once conditions stabilize (OT3114). Place Master Controller in Automatic Control 				
	CRO	Takes action to stop level increase. <ul style="list-style-type: none"> Takes Mater Feedwater level Controller to Manual and controls level prior to reaching Scram and Main Turbine trip setpoint. Places level control in single element once conditions stabilize (OT3114). Places Master Controller in Automatic Control 				
	CRO	Contact I&C Crew Brief				

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 6

Crew Task Description:

Recirc Leak (OT) (TS)

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CREW	Recognize and respond to Rising Drywell Pressure.				
EVALUATOR'S NOTE: This event is mainly for a CRS Tech Spec determination.						
	CRS	Directs Actions IAW OT 3111- Drywell pressure Hi/LO. <ul style="list-style-type: none"> • Reduce core flow • Close AC-20 N2 M/U • Start all available Drywell RRUs 				
	CRO	Reduces core flow as directed in OT3111				
	BOP	Closes AC-20 – N2 M/U Starts all available Drywell RRUs				
	CRS	Reviews TS and determines an LCO is required for 3.6.C.				
EVALUATOR'S NOTE: Ask TS question after scenario, otherwise it will take a little extra time during the scenario to assess and make a determination of an actual leak rate.						

- NOTES:**
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All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

OPERATOR ACTIONS EVENT NUMBER 7 & 8

Crew Task Description:

MS Line "A" Rupture in Drywell (10% over 1200 secs); AC-6 and AC-6B Fail to Auto Close.

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
EVALUATOR'S NOTE: The first few steps here do not apply. Did not find event for recirc leak.						
	CREW	Recognize rising Drywell pressure; inform CRS				
	CRS	Enter and direct actions IAW OT 3111 (High Drywell Pressure). <ul style="list-style-type: none"> Enter EOP-3 and EOP-1. Directs manual Scram. Enters OT 3100. 				
		Directs manual Scram Enters OT3100				
		Restart Drywell RRUs per EOP-3				
	CRO	When directed, insert a manual reactor scram <ul style="list-style-type: none"> Verifies all rods in. When steam flow < 0.5 Mlbm/hr per steamline, place mode switch in SHUTDOWN 				
EVALUATOR'S NOTE: This step is an Immediate Action, and may be performed without direction.						
	CRS	Enter and direct actions IAW OT 3100/ EOP-1: <ul style="list-style-type: none"> Verify Automatic Actions per Table A. 				
	CREW	When directed, verify Automatic Actions per Table A				

NOTES: 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.

2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Enter EOP-1, and direct the following: <ul style="list-style-type: none"> When steam flow < 0.5 Mlb / main steam line, place Mode Switch in SHUTDOWN Restore/maintain RPV level between 127-177 inches Maintain RPV pressure between 800-1000 psig using BPVs Insert IRMs and SRMs 				
	CRO	<ul style="list-style-type: none"> Insert IRMs and SRMs Restore/maintain RPV level 127 to 177 inches 				
	*CREW EOP-3 CCT-1	<p>When PCIS Group 3 fails to isolate valves AC-6 and AC-6B with a leak present, initiate PCIS Group manually</p> <p>Standard:</p> <p>Leak or release terminated within 10 minutes of receipt of the auto isolation signal</p>				
	BOP	Recognize containment isolation valves AC-6 and AC-6B still open; inform CRS.				
EVALUATOR'S NOTE: BOP may close valves and then inform CRS.						
	CRS	Direct isolation of AC-6 and AC-6B				
	BOP	Complete isolation of AC-6 and AC-6B s/initiations				
	BOP	When directed, maintain pressure 800 – 1000 psig using Bypass valves				
	CREW	Recognize Drywell pressure is still increasing; inform CRS				
	CRS	Enter and direct actions IAW OT 3111 (High Drywell Pressure) <ul style="list-style-type: none"> Start all available drywell RRUs. 				
	BOP	When directed, start all available drywell RRUs.				

- NOTES:**
- 1) S = Satisfactory; U - Unsatisfactory; N/O = Not Observed
All Unsatisfactory ratings require comments; a comment sheet is attached.
 - 2) * = Critical Task/Step

STEP	POS.	CANDIDATE ACTIONS/BEHAVIOR	S	U	N/O	COMMENTS
	CRS	Direct spraying the torus IAW EOP-3 BEFORE torus pressure reaches 10 psig				
	*CREW EOP-3 CT-2	When torus pressure exceeds 10 psig, initiate drywell spray while in the safe region of the drywell spray initiation limit. Standard: Spray the drywell within 10 minutes of exceeding 10 psig torus pressure				
	CRS	When drywell temperature cannot be maintained below 280 F or torus pressure exceeds 10 psig, direct the following IAW EOP-3: <ul style="list-style-type: none"> • Shutdown Drywell RRUs and recirc Pumps. • Initiate Drywell spray. 				
	BOP	(When directed) initiate Drywell spray <ul style="list-style-type: none"> • Shutdown Drywell RRUs and Recirc pumps. • Initiate Drywell spray 				
	CRS	Direct Drywell Spray using RHR				
	BOP	When directed, spray the Drywell using RHR				
	CREW	Recognize Drywell pressure lowering; inform CRS				
	SM/ STA / CRS	Classify event as a Alert IAW AP 0125 Appendix A (A-3-a or A-3-b).				
EVALUATOR'S NOTE: 15 minute clock.						
	SM/STA/ CRS	Crew Brief				

- NOTES:**
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