

SEG# 2K21 NRC-05 Rev ; 0

Facility: Millstone 3 Scenario No.: 2K21 NRC-05 (Rev 0) Op-Test No.: 2K21  
 Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Initial Conditions: IC-99, 100% Power, Beginning of life, Equilibrium Xe

Turnover: 'B' RHR Pump is tagged out of service.

Critical Tasks: 1. Manually close the 'B' PORV Block Valve by the completion of E-0 Step 12.(CT-10).  
 2. Reduce AFW flow to 100 gpm per SG (to minimize cooldown).

Event No.	Malf. No	Event Type*	Event Description
1	MB8B-B08	US TS	Breaker trips for 3DAS-P10, containment drain unidentified sump pump
2	RX09C	US I,TS RO I	Controlling channel of pressurizer pressure fails high causing the pressurizer spray valves to open.
3	FW01	US C RO R BOP C	Loss of condenser vacuum requiring use of AOP 3559 and subsequent rapid downpower.
4	TC01 RP10A RP10B RP09A	US C BOP C	Main Turbine trips on rising condenser vacuum with an automatic reactor trip failure. MB7 Reactor trip is successful.
5	MS07A MS07B MS07C MS07D	ALL M	Loss of secondary heat removal transient causes both PORV's and S/G Safeties to open. The low set safeties on all four S/G's fail to reseal. Four Faulted SG's (E-0, E-2, ECA-2.1).
6	RC18B	US C RO C	'B' PORV fails to re-close and requires manual action to close the associated block valve.
7	SG02A	US C BOP C	'A' SG Blowdown Isolation Valve sticks open requiring dispatch and manual closure of alternate valve.

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

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**Transient and Event Checklist** (used to complete NRC Form ES-301-5)

	<b>US (target)</b>
<b>RX</b>	0 (0)
<b>NOR</b>	0 (1*)
<b>I/C</b>	5 (2)
<b>MAJ</b>	1 (1)
<b>TS</b>	2 (2)
<b># of CT's</b>	2

\* For an Exam Set, the RO's and Instant SRO's are required one Normal evolution. However, reactivity and normal evolutions may be replaced w/ additional I/C malfunctions on a one-for-one basis.

**Simulator Scenario Quality Checklist** (used to complete NRC Form ES-301-4)

<b>Target Quantitative Attributes (Per Scenario; See NUREG 1021 Appendix D)</b>	<b>Actual</b>
1. Malfunctions after EOP entry (1–2)	2
2. Abnormal events (2–4) (typically before major event)	3
3. Major transients (1–2)	1
4. EOPs entered/requiring substantive actions (1–2) (exclude E-0)	1
5. EOP contingencies requiring substantive actions (≥ 1 per scenario set)	1
6. Pre-identified critical tasks (≥ 2)	2

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**Critical Tasks**

TASK DESCRIPTION	TASK #	K/A	BASIS OF SELECTION
Manually close the 'B' PORV Block Valve by the completion of E-0 Step 12.	CT-10	EPE 009-EA1.15 (3.9 / 4.1)	Source: Westinghouse PWROG-14043-NP "ERG Rev. 3 Based Critical Tasks"  “”
Reduce AFW flow to 100 gpm per SG by completion of step 2 of ECA-2.1.	--	AFW 061 A3.02 (4.0 / 4.0)	Failure to control AFW flow rate to the SGs leads to an unnecessary and avoidable challenge to RCS integrity.  “

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<b>SITE:</b>	<b>Millstone Power Station</b>	
<b>PROGRAM:</b>	<b>Unit 3 ILT</b>	
<b>COURSE:</b>	<b>N/A</b>	
<b>EXAM TITLE:</b>	<b>NRC SIM EXAM 5</b>	<b>EXAM #: 2K21 NRC-05</b>
<b>Total Time</b>	<b>90 Minutes</b>	

Prepared by:	<u>W.M. Forrestt</u>	<u>Signature on file</u>	<u>12/8/2021</u>
	Printed Name	Developer Signature	Date
Reviewed by:	<u>J. Go</u>	<u>Signature on file</u>	<u>12/9/2021</u>
	Printed Name	Operations Supervisor Signature	Date
Approved by:	<u>A. Leone</u>	<u>Signature on file</u>	<u>12/13/2021</u>
	Printed Name	Facility Review Signature	Date

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SUMMARY OF CHANGES

DATE	DESCRIPTION	REV/CHANGE
12/2/21	Original issue for re-examination.	0 / 0

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SECTIONS LISTED IN ORDER

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3. Exam Overview and Forms
  
4. Exam Guide

Attachment:

- Shift Turnover Report

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## SECTION 3 EXAM OVERVIEW

Title: **Four Faulted SG's**

1. The crew takes the shift with the plant at 100% power and at beginning of core life. The 'B' Residual Heat Removal (RHR) Pump is tagged out service for an emergent motor oil leak.

**Event 1: Breaker trips for 3DAS-P10, containment drain unidentified sump pump.**

A Main Board annunciator for loss of control power to 480 Motor Control Centers alarms. The US implements the ARP actions and determines that 3DAS-P10 breaker has tripped. This pump is credited in TS for RCS leakage detection. The US enters the appropriate TS.

**Event 2: Controlling channel of pressurizer pressure fails high causing the pressurizer spray valves to open.**

RCS\*P457 fails high. The RO performs immediate actions per AOP 3581, *Immediate Operator Actions*. The US transitions to AOP 3571, *Instrument Failure Response*, to remove the failed channel, place an alternate channel in service, and address Tech Specs.

**Event 3: Loss of Condenser Vacuum / Rapid Downpower**

A loss of condenser vacuum occurs (consistent with a condenser vacuum boot issue). The US implements AOP 3559, *Loss of Condenser Vacuum*. The leak worsens and the crew is forced to perform an emergency load reduction per AOP 3575, *Rapid Downpower*.

**Event 4: Main Turbine trips with an automatic reactor trip failure.**

Automatic Reactor trip is defeated and there is a failure of the MB4 Rx Trip Switch. The BOP Operators will trip the Reactor using the MB7 Rx Trip Switch.

**Event 5: Loss of secondary heat removal transient causes both PORV's and S/G Safeties to open. Four Faulted SG's.**

The turbine trip (without automatic Rx trip) causes both the PORV's & S/G Safeties to lift. The low set safeties on all four SG's will not re-close (100% failure is inserted on the RX Trip). This ultimately requires the crew to implement ECA-2.1, *Uncontrolled Depressurization Of All Steam Generators*. While in ECA-2.1, the crew reduces auxiliary feed flow to 100 gpm per SG (**Critical Task**).

**Event 6: The 'B' PORV fails to re-close.**

The US directs closure of the 'B' PORV block valve using the guidance of E-0 (**Critical Task**).

**Event 7: 'A' SG Blowdown Isolation Valve sticks open.**

US utilizes ECA-2.1 Attachment 'B' guidance to close an alternate Blowdown isolation valve.

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## SECTION 4

### EXAM GUIDE

All Control Room Conduct, Operations and Communications shall be in accordance with OP-AA-100, Conduct of Operations.

"Review the Simulator Operating Limits (design limits of plant) and the Simulator Modeling Limitations and Anomalous Response List prior to performing this exam scenario on the simulator. The evaluators should be aware if any of these limitations may be exceeded." (NSEM 6.06)



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**INPUT SUMMARY**

**RESET SIMULATOR TO IC-99**

Ensure the following is loaded into IC-99

ID	Description	Event Trigger	Delay Time	Ramp Time	Delete Time	Severity Or Value
<b>MALFUNCTIONS</b>						
MB8B-B08	MCC LOSS OF CNTRL POWER	1				ON
RX09C	PZR PT457 FAIL	2		30 sec.		2500 psia
FW01	LOWERING CONDENSER VACUUM	3		20 sec.		1000 cfm
TC01	TURBINE TRIP	4	30 sec.			
TU02F	TURBINE HIGH VIB BRG #6	4				8 mils
TU02G	TURBINE HIGH VIB BRG #7	4				7 mils
TU02H	TURBINE HIGH VIB BRG #8	4				6 mils
RP10A	AUTOMATIC REACTOR TRIP TRAIN A FAIL					
RP10B	AUTOMATIC REACTOR TRIP TRAIN B FAIL					
MS07A	MS SAFETY VALVE RV22A FAIL	30				100%
MS07B	MS SAFETY VALVE RV22B FAIL	30				100%
MS07C	MS SAFETY VALVE RV22C FAIL	30				100%
MS07D	MS SAFETY VALVE RV22D FAIL	30				100%
RC18B	PORV PCV455B FAILS IN OPEN					

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**INPUT SUMMARY**

**RESET SIMULATOR TO IC-99**

Ensure the following is loaded into IC-99

ID	Description	Event Trigger	Delay Time	Ramp Time	Delete Time	Severity Or Value
RP09A	REACTOR MANUAL TRIP SWITCH MB4 FAIL					
SG02A	SG BLOWDOWN ISOL (3BDG*CTV22A) FAILS IN POSITION					
MB5D-C07	32-2M ROD CNTL AREA EL 45-6	1				ON
<b>REMOTE FUNCTIONS</b>						
WDR04	3DAS P10 CONTROL SWITCH					OFF
<b>OVERRIDES</b>						

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<ul style="list-style-type: none"> <li><input type="checkbox"/> COMPLETE Simulator Setup and Readiness Checklist.</li> <li><input type="checkbox"/> SELECT appropriate IC: <b>IC-99 (Password: “hickory”)</b>, 100% power, BOL.</li> <li><input type="checkbox"/> LOAD and RUN applicable Schedule, <b>N/A (part of IC-99)</b></li> <li><input type="checkbox"/> LOAD event file <b>N/A</b></li> <li><input type="checkbox"/> As necessary, VERIFY the following Initial Malfunctions / I/Os / Remote Functions, as specified on previous ‘<b>Input Summary</b>’ page.</li> <li><input type="checkbox"/> When the simulator is ready, PLACE to Run and VERIFY the simulator reflects the Initial Conditions for the scenario and is stable.</li> <li><input type="checkbox"/> As necessary, REMOVE the following Equipment from service and tag accordingly:                             <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>3RHS*P1B “B RHR Pp” 1. Ensure in PTL 2. Place a YCT on Control Switch</b></li> </ul> </li> </ul>		N/A
<ul style="list-style-type: none"> <li><input type="checkbox"/> CONDUCT briefing with evaluators.</li> </ul>	<b>PRE-SCENARIO:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> BRIEF the crew initial plant conditions and provide a shift turnover.</li> </ul>	
		(All) Walk down control boards and conduct shift briefing.
<b>EVENT 1: Breaker trips for 3DAS-P10, containment drain unidentified sump pump US (TS)</b>		
<b>General Note(s):</b> 1.) MB8B 2-8 “MCC LOSS OF CNTL PWR” alarms. The US implements the ARP and determines that 3DAS-P10 breaker has tripped. This pump is credited in TS for RCS leakage detection. The US enters the appropriate TS. 2.) If the PEO is requested to reset and close the breaker for DAS-P10, the breaker will immediately trip again.		
<b>T= Directed by the Lead Examiner: Trigger 1 (MB8B-B08)</b>		BOP acknowledges MB8B 2-8, MCC Loss of CNTL Pwr. US enters ARP.

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<b>OP 3353.MB8B, "MCC LOSS OF CNTL PWR" (Rev. 13)</b>		
<p><b>As PEO, acknowledge dispatch to MCC 32-2M.</b></p> <p><b>Two minutes later, REPORT</b> "The breaker for 3DAS-P10, Containment Drain Unidentified Sump Pump, is in the tripped position. There is no bypass switch for the alarm."</p>	<p>BOP goes to MB5 Rear and determines effected MCC is 32-2M.</p> <p>PEO is dispatched to AB – 45 ft.</p>	<p>1. DETERMINE motor control center supplying component with loss of control power by checking the following indications:</p> <ul style="list-style-type: none"> <li>• Annunciator panel MB 5D</li> <li>• Plant computer</li> </ul>
		<p>2. Refer To the following and DETERMINE loads causing loss of control power alarm:</p>
	<p>There is no alarm bypass switch for the load.</p>	<p>3. IF component causing alarm is known and, IF desired, PLACE affected relay switch to "BYPASS" to reset loss of control power relay alarm.</p>
<p>If dispatched to the LWS panel, report there are no lights for DAS-P10.</p>		<p>4. IF no components have lost indicating lights AND no other means of determining the faulty component exists, SEND Operator to perform the following in coordination with Control Room:</p>
	<p>There is no alarm bypass switch for the load.</p>	<p>5. WHEN cause of loss of control power alarm is fixed, RESTORE affected relay switch to appropriate position:</p>
	<p>US determines these Tech Specs are not applicable. However, the US should recall that the RCS leakage detection TS is effected (see following)</p>	<p>6. Refer To the following Technical Specifications and DETERMINE Limiting Condition for Operation:</p> <ul style="list-style-type: none"> <li>• T/S 3.8.1.1, "A.C. Sources --- Operating"</li> <li>• T/S 3.8.1.2, "A.C. Sources --- Shutdown"</li> <li>• T/S 3.8.3.1, "Onsite Power Distribution --- Operating"</li> <li>• T/S 3.8.3.2, "Onsite Power Distribution --- Shutdown"</li> </ul>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	<p>This condition should prompt the US to enter the Tech Spec for RCS leakage detection.</p> <p>Give the US 5 minutes to enter the following TS.</p> <ul style="list-style-type: none"> <li>• <b>T/S 3.4.6.1b Action b</b></li> </ul> <p><b>After 5 minutes (or completion of TS entry), move onto Event 2.</b></p>	
<b>EVENT 2: Controlling channel of pressurizer pressure fails high causing the pressurizer spray valves to open. US (TS, I) / RO (I)</b>		
<p><b>General Note(s):</b></p> <p>1. <u>Controlling channel of pressurizer pressure fails high causing the pressurizer spray valves to open.</u> RCS*P457 fails high. The RO performs immediate actions per AOP 3581. The US transitions to AOP 3571, <i>Instrument Failure Response</i>, to remove the failed channel, place an alternate channel in service, and address Tech Specs.</p>		
<p><b>T= Directed by the Lead Examiner: Trigger 2 (RX09C)</b></p>		<p>RO begins immediate operator actions while US maintains oversight</p>
		<p><b>RO Performs Immediate Operator Actions:</b></p> <ol style="list-style-type: none"> <li>1. Announces "Taking my IA for PZR Spray Valve(s) Open"</li> <li>2. Announces actions taken as he / she is manually adjusting the Master Pressure Controller.</li> <li>3. Announces "IA are complete"</li> </ol>
		<p>US Focus Brief entry into AOP 3581</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<b>AOP 3581, Immediate Actions (Rev 7)</b>		
		<b>1. Using Appropriate Attachment, PERFORM Immediate Actions – Attachment E “Pressurizer Spray Valve Open”</b>
	RO adjusts Master Pressure Controller to ~58% to close the spray valves and energize the PZR heaters.	<b>E. 1. Terminate Pressurizer Spray</b> <b>a. CHECK</b> pressurizer spray valves -BOTH CLOSED (3RCS*PCV455B & 455C)  <b>RNO: IF</b> Pressurizer Pressure is less than 2270 psia, <b>THEN PLACE</b> Master Pressure Controller in <b>MAN AND ADJUST</b> to <b>GREATER THAN OR EQUAL TO</b> 50% output to maintain Pressurizer Pressure between 2225 psia and 2280 psia.
	RCS pressure will be rising under the RO’s control.	<b>E.2 Check Pressurizer Spray TERMINATED</b> <b>a. CHECK</b> Pressurizer Pressure STABLE OR INCREASING
		<b>E.3 CHECK</b> Initiating Event <b>INSTRUMENT FAILURE</b>
	US briefs transition to AOP 3571.	<b>E.4 GO TO AOP 3571, Instrument Failure Response</b>
<b>AOP 3571, Instrument Failure Response (Rev. 17)</b>		
	US proceeds to Attachment B.	<b>1. PROCEED TO the Appropriate Attachment, AND PERFORM</b> Corrective Actions
	The Master Pressure Controller has already been placed in manual.	<b>B.1 CHECK PZR PRES (3RCS-PK455A) - IN MAN</b>
	US directs selecting Channel 1 for PZR Press Control and recording.	<b>B.2 DEFEAT Failed Channel Input (RCS-PS455F, 455G, &amp; TS411E)</b>
		<b>B.3 CHECK PZR Pressure - 2250 psia</b>
		<b>B.4 PLACE PZR PRES (3RCS-PK455A) Controller In - AUTOMATIC</b>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
If WW Coordinator is contacted for I&C support, acknowledge request. However, bistables will not be tripped as part of this scenario.	US marks Channel 3 for bistables.	<b>B.5 Trip Associated Reactor Protection System Bistable(s)</b> a. Using Table B.1, <b>PLACE</b> a check mark in the box above the channel required to be tripped
<b>Allow Examinee ~5 minutes to evaluate Tech Specs BEFORE proceeding with the scenario.</b>	<b>US enters Tech Specs:</b> 1. <b>TS 3.3.1</b> (Rx Trip INSTRU) <b>FU7, FU9, FU10</b> . All are <b>Action 6A</b> . 2. <b>TS 3.3.2.b</b> (ESFAS INSTRU) <b>FU1d</b> . <b>Action 20A</b> . 3. <b>TS 3.3.2.b</b> (ESFAS INSTRU) <b>FU11</b> . <b>Action 20</b> . 4. <b>TRM 3.3.2.1</b> (ESFAS INSTRU) <b>Action 27a &amp; 27c</b> 5. <b>TS 3.2.5.b</b> (DNB – most limiting TS the 2 hr Action Statement) ( <b>CONDITIONAL:</b> Applicable IF RCS pressure lowered below 2204 psia)	<b>b. REFER TO</b> the following Tech Specs for required actions • TS 3.3.1, Reactor Trip System Instrumentation • TS 3.3.2, Engineered Safety Features Actuation System Instrumentation • TS 3.3.3.5, Remote Shutdown Instrumentation  <b>c. REFER TO</b> the following Technical Requirement for required actions • TRM 3.3.2.1, Engineered Safety Features Actuation System Instrumentation
	Yes a Rx trip will not occur when bistables are tripped.	<b>d. CHECK</b> existing bistable status to ensure a Reactor trip will <b>NOT</b> occur when the failed channel is tripped
	Yes RCS*PI457 is not normal.	<b>e. CHECK</b> affected channel indication - <b>NOT NORMAL</b>
If WW Coordinator is contacted for I&C support, acknowledge request. However, bistables will not be tripped as part of this scenario. <b>At the direction of the Lead Examiner, proceed to the next event.</b>		<b>f. REQUEST</b> I&C use Table B.1 and <b>ATTACHMENT S</b> to perform the following: 1. <b>PLACE</b> selected Master Test switch in TEST 2. <b>PLACE</b> selected Bistable Switches in TEST

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<b>EVENT 3: Loss of Condenser Vacuum / Rapid Downpower US (C) / RO (R) / BOP (C)</b>		
<p><b>General Note(s):</b>                      1. This event will cause loss of condenser vacuum of varying amounts (cause will not be disclosed to the crew.. but postulated as condenser vacuum boot issue). At first, the booth operator will hold vacuum under 5 in HgA to allow performing actions in AOP 3559. After the Lead Examiner is satisfied, vacuum will degrade to force the crew to downpower the unit.</p>		
<p><b>T = Lead Examiner Cue</b>  <b>Trigger 3 (FW01 @ 1000 cfm)</b></p> <p><b>After</b> condenser backpressure reaches <b>~4.4 in Hga, Reduce FW01 (~740 TO 720 cfm) to maintain</b> condenser backpressure <b>below 5 in HgA.</b></p>		<p><b>BOP notes rising condenser back pressure.</b>  <b>US enters AOP 3559.</b></p>
<b>AOP 3559, Loss of Condenser Vacuum (Rev. 13)</b>		
<p>If PEO's are dispatched to the Turbine Building, a cause for the degraded vacuum will NOT be given to the crew.</p>	<p>Condenser backpressure is expected to still be below 5 in. HgA. US proceeds to step 3.</p>	<p><b>1. Check if the Reactor Should Be Tripped</b>  <b>a. CHECK</b> Reactor Power GREATER THAN 3%  <b>b. CHECK</b> Condenser backpressure LESS THAN 7.5 inches Hg Absolute  <b>c. CHECK</b> Condenser backpressure LESS THAN 5 inches Hg Absolute  <b>d. PROCEED TO</b> step 3</p>



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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	US will have to balance efforts to identify / resolve cause of backpressure issue with requirements to downpower the unit.	<b>NOTE:</b> When directed, AOP 3559 is implemented in parallel with AOP 3575, Rapid Downpower. The actions of AOP 3559 are <b>NOT</b> to distract from plant control during AOP 3575.
<p><b>If called as OMOC</b> (for direction on a downpower), <b>state “Absent a turbine vibration issue, don’t downpower until condenser back pressure reaches 5 in HgA.”</b></p> <p>Maintain condenser backpressure below 5 in. HgA until directed by the Lead Examiner. <b>When directed, increase FW01 to 750 cfm (or more) and maintain condenser backpressure between 5 and 6.5 in.HgA.</b></p>	<p>Step 3 is a Continuous Action Step that either drives a unit downpower if either condenser backpressure exceeds 5 in. HgA or Management discretion.</p> <p>Backpressure will be held below 5 in. HgA to allow the crew to implement AOP 3559. Once the Lead Examiner is satisfied, condenser back pressure will be increased greater than 5 in HgA. to have the crew exercise AOP 3575, Rapid Downpower.</p>	<p><b>3. Check If Turbine Load Should Be Reduced</b></p> <p><b>a. CHECK</b> Condenser backpressure <b>GREATER THAN</b> 5 inches Hg Absolute <b>AND CHECK</b> Main Generator output <b>GREATER THAN</b> 389 Mwe RNO: <b>PROCEED TO</b> Note prior to step 4 <b>AND IF US/SM DETERMINE</b> a turbine load reduction is needed to stabilize vacuum, <b>THEN RETURN TO</b> step 3.b.</p> <p><b>b. PERFORM</b> both of the following:  <b>GO TO</b> AOP 3575, Rapid Downpower, and <b>LOWER</b> Turbine load <b>AND PROCEED TO</b> the Note prior to Step 4  <b>AND</b>  <b>WHEN</b> one of the following occurs:  <ul style="list-style-type: none"> <li>• Backpressure <b>LESS THAN OR EQUAL TO</b> 5 inches Hg Absolute</li> <li><b>OR</b></li> <li>• Main Generator output <b>LESS THAN OR EQUAL TO</b> 389 Mwe</li> </ul> <b>THEN PERFORM</b> Step 3.c</p>
		<b>NOTE:</b> Steps 4 through 11 may be performed in any order.

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
Cause of loss of vacuum will not be found.	Circ Water alignment / conditions are found to be normal.	<p><b>4. Check Circulating Water System Operation</b></p> <p>a. <b>CHECK</b> Circulating Water Pumps AT LEAST ONE PER CONDENSER RUNNING</p> <p>b. <b>CHECK</b> Water Box Outlet Isolation valves for In-Service Water Boxes OPEN</p> <p>c. <b>CHECK</b> all Circulating Water pumps – RUNNING</p> <p>d. <b>CHECK</b> the Traveling Screen differential pressure - LESS THAN 12 inches H2O</p>
	3ASS-AOV22 is Open.	<p><b>5. Check Condenser Air Removal Alignment</b></p> <p>a. <b>CHECK</b> STEAM JET AIR EJECTOR AUXILIARY STEAM SUPPLY valve (3ASS-AOV22) - OPEN</p>
<p><b>When requested as PEO, wait 4 minutes and REPORT</b></p> <p>1) Both ejectors in service</p> <p>2) Two first stage jets in service on each ejector</p> <p>3) Ejectors not backfiring</p>		<p><b>5b.</b> Using OP 3329, Condenser Air Removal, locally <b>PERFORM</b> the following:</p> <p>1. <b>CHECK</b> BOTH sets of Steam Jet Air Ejectors - IN SERVICE</p> <p>2. <b>CHECK</b> TWO First Stage Jets IN SERVICE ON EACH AIR EJECTOR</p> <p>3. <b>CHECK</b> Air Ejectors <b>NOT</b> BACKFIRING</p> <p>4. <b>MAINTAIN</b> Condenser backpressure in the prescribed band determined by the procedure in effect</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
		<b>5c. CHECK</b> Gaseous Waste to Millstone Stack Isolation Dampers (3GWS*AOD78A and 3GWS*AOD78B) - OPEN
<b>When requested as PEO, wait 4 minutes and REPORT:</b> "3GWS-FN1A is running."		<b>5d. At Gas Waste Panel</b> (3GWS-PNL01), <b>CHECK</b> Process Vent fans - ONE RUNNING <ul style="list-style-type: none"> <li>• 3GWS-FN1A <b>OR</b></li> <li>• 3GWS-FN1B</li> </ul>
<b>When requested as PEO, wait 3 minutes and REPORT:</b> "Both 3ARC-AOV36A/B are open."		<b>5e. Locally, at Turbine Bldg</b> 38' southwest, <b>CHECK</b> Steam Jet Air Ejector Exhaust valves – OPEN <ul style="list-style-type: none"> <li>• 3ARC-AOV36A <b>AND</b></li> <li>• 3ARC-AOV36B</li> </ul>
		<b>6. CHECK Gland Seal Pressure BETWEEN 3 AND 5 PSIG</b>
		<b>7. Check Auxiliary Steam Pressure In Required Band</b> <b>a. CHECK</b> Auxiliary Steam Header Pressure (3ASS-PIC20)(MB6) 140 TO 155 PSIG
		<b>8. CHECK Condensate Surge Tank Level</b> <ul style="list-style-type: none"> <li>• GREATER THAN 21,000 gal</li> <li>• <b>NOT DECREASING</b> IN AN UNEXPECTED MANNER</li> </ul>
		<b>9. CHECK Exhaust Hood Temperature (175°F) Annunciators - NOT LIT</b>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<p><b>When requested as PEO, wait 4 minutes and REPORT:</b>                      "Water is visible in each Vacuum Breaker."</p>		<p><b>10. Check For Condenser In-Leakage</b>                      a. <b>CHECK</b> Condenser Vacuum Breakers (MB7) (VAC BKRS 3ARC-MOV20A-B-C) –CLOSED                      b. At Turbine Bldg 60 west, locally <b>CHECK</b> Vacuum Breaker Loop Seals – FILLED                      c. Locally <b>CHECK</b> for <b>NO</b> unusual noises indicative of air in-leakage                      d. <b>CHECK</b> Seal Water Supply Pressure Annunciator EXT STM NRV SEAL PRES LO (30 psig) (MB6A 3-6B) - NOT LIT                      e. <b>CONTACT</b> Engineering to assist in locally checking condenser penetrations for air in-leakage</p>
<p><b>If requested as OMOC, REPORT:</b>                      "Downpower the unit to 75% power at 3% / min."</p>		<p><b>Crew recognizes Condenser backpressure exceeds 5 inHgA.</b>  <b>US implements Step 3 to initiate a downpower.</b></p>
AOP 3575, Rapid Downpower (Rev. 28)		
	<p>US works with crew (&amp; OMOC) to determine downpower to 75% at 3% / min. using a canned Rx plan (RE-H-07). Attachment H yields a final desired MWE of 933 MW with a Load Set indicated Mwe setting of 1070 MWe.</p>	<p><b>1. Determine The Following:</b>  <b>REFER</b> to ATTACHMENT H to determine the following:                      Final desired MWE: _____                      Load Set Indicated MWe Setting: _____                      Final desired Rx Pwr: _____</p>
		<p><b>2. CHECK Rod Control - IN AUTO</b></p>
<p><b>Continue to Modify FW01 to maintain backpressure between 5-6.5 in HgA.</b></p>	<p>BOP aligns for Load Set.</p>	<p><b>3. Align EHC Panel</b>                      a. <b>CHECK</b> Load reduction using Load Set – DESIRED                      b. Using ATTACHMENT E, <b>ALIGN</b> EHC Panel for Load Set operation</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	OMOC recommended 3% per min.	<p><b>4. Determine Power Reduction Rate (% / min)</b></p> <p><b>a. CHECK</b> power reduction rate - 3%/min or 5%/min</p>
	RO initiates rapid boration.	<p><b>5. Initiate Rapid Boration</b></p> <p><b>g. CHECK</b> RCS Makeup System in – AUTO</p> <p><b>h. START ONE</b> Boric Acid Transfer Pump</p> <ul style="list-style-type: none"> <li>• BA PP A</li> <li>• BA PP B</li> </ul> <p><b>i. OPEN</b> Emergency Boration Valve, (3CHS*MV8104)</p> <p><b>j. CHECK</b> direct Boric Acid flow (3CHS-FI183A) – INDICATED</p>
		<p><b>5k. RECORD</b> time boration started</p> <p><b>5l. ADJUST</b> Charging Line Flow Control Valve, as necessary, to establish net charging flow matched or exceeding Boric Acid flow</p>
		<p><b>5m. RNO: PROCEED TO</b> step 7 <b>AND WHEN</b> boration has been performed for the calculated time, <b>THEN</b> using ATTACHMENT G, <b>STOP</b> boration</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	Rapid boration is in progress. BOP selects 3% minute and adjusts load set to 1070 MWe.	<p><b>7. Initiate Load Reduction</b></p> <p><b>a. CHECK</b> Turbine OPERATING MODE – MANUAL</p> <p><b>b. CHECK</b> load reduction- USING LOAD SET</p> <p><b>c. SELECT</b> LOAD RATE LIMIT %/MIN (1%/MIN, 3%/MIN, or 5%/MIN)</p> <p><b>d. CHECK</b> Lowering Turbine Load - IMMEDIATELY REQUIRED</p> <p><b>e. REFER</b> to ATTACHMENT H <b>AND</b> Using the LOAD SELECTOR pushbuttons, <b>ADJUST</b> LOAD SET to Load Set Indicated MWe setting recorded in step 1</p>
<b>Examiner Note:</b> When Lead Examiner is satisfied with downpower, cue Booth to move onto Event 4.		<p><b>7f. ENERGIZE</b> ALL PZR Heaters</p> <p><b>7g. ADJUST</b> PZR Spray Valves to 50% setpoint</p> <ul style="list-style-type: none"> <li>▪ 3RCS-PK 455B</li> <li>▪ 3RCS-PK 455C</li> </ul>
		<b>7h. MAINTAIN</b> plant parameters values as listed in ATTACHMENT C <b>OR</b> as directed by Operations Management
Acknowledge ISO-NE communication and request MP3 maintain 100 MVAR's out (+/- 20 MVAR's)	Yes.	<p><b>7i. CHECK</b> power reduction - ISO-NE REQUESTED</p> <p><b>RNO: NOTIFY</b> ISO-NE of load reduction rate (MWe/min) and final MWe level.</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
		<p><b>7 j. CHECK</b> using either of the following to reduce turbine load:</p> <ul style="list-style-type: none"> <li>• Load Limit</li> <li>• Standby Load Set</li> </ul>
	US determines rods are above RIL	<b>8. Check Rod Position Above RIL</b>
<p><b>Examiner Note:</b> When Lead Examiner is satisfied with downpower, cue Booth to move onto Event 4.</p>		<p><b>(US)</b></p> <p><b>9. Monitor Downpower</b></p> <p><b>a. CHECK</b> the following- REMAINS UNCHANGED</p> <ul style="list-style-type: none"> <li>• Final desired MWe load</li> <li>• Final desired target power level</li> <li>• Boron injection path</li> </ul> <p><b>b. PROCEED TO</b> step 9</p>
<p><b>EVENT 4: Main Turbine trips with an automatic reactor trip failure. US (C) / BOP (C)</b></p> <p><b>EVENT 5: Loss of secondary heat removal transient causes both PORV's and S/G Safeties to open. Four Faulted SG's. ALL (M)</b></p> <p><b>EVENT 6: 'B' PORV Fails to Re-Close US (C) / RO (C)</b></p>		
<p><b>General Note(s):</b></p> <p>1.) <u>Trigger 4 will cause high turbine vibrations followed by a Main Turbine trip (30 seconds later).</u> Automatic Rx trip is defeated and there is a failure of the MB4 Rx Trip Switch. The MB7 Rx Trip Switch will work. <b>(Event 4)</b></p> <p>2.) <u>The turbine trip (without an automatic Rx trip) causes both the PORV's &amp; S/G Safeties to lift.</u> The low set safeties on all four SG's will not re-close (100% failure will be inputted on the RX Trip). <b>(Event 5)</b></p> <p>3.) <u>The 'B' PORV will fail to re-close.</u> This will require manual closure of the 'B' PORV Block Valve. <b>(Critical Task) (Event 6).</b></p>		
<p><b>T = Lead Examiner Cue</b> <b>Trigger 4</b> (TC01,TU02F, TU02G, TU02H)</p>	Event 4.	<p>Crew recognizes the Main Turbine has tripped without an automatic Rx Trip.</p> <p>BOP successfully trips the Rx from MB7.</p> <p>US enters E-0.</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<b>E-0, REACTOR TRIP OR SAFETY INJECTION (Rev. 35)</b>		
	BOP has tripped the RX from MB7.	<b>1 * Check Reactor Trip</b> <ul style="list-style-type: none"> <li>• <b>CHECK</b> Reactor Trip and Bypass Breakers – OPEN</li> <li>• <b>CHECK</b> Rod Bottom lights – LIT</li> <li>• <b>CHECK</b> Neutron Flux - DECREASING</li> </ul>
		<b>2 * Check Turbine Trip</b> <b>a. CHECK</b> all Turbine Stop Valves – CLOSED
	Power source is normal – offsite.	<b>3 * Check Power To AC Emergency Busses</b> <b>3a. CHECK</b> AC Emergency Busses 34C and 34D - BOTH ENERGIZED <b>3b. Open Phase Condition (OPC) NONE Exists</b> <b>3c. PROCEED TO step 4.</b>
<b>BOOTH NOTE:</b> Monitor for 'B' PORV opening. Provided there is a slight delay (5 sec.) with tripping the Rx (from when the turbine tripped), the 'B' PORV will automatically open (& fail to close – RC18B). In the unlikely case that the 'B' PORV doesn't open, manually INSERT: 1.) Remote: RCLO0063 to ON 2.) Malfn RC07B to 80.0 * When 'B' PORV Block Valve is closed later, remove RC07B.	SI has auto actuated on low Pressurizer Pressure ('B' PORV fails to re-close once opened automatically – RC18B).  At step 4 pause, RO identifies RCP Trip Criteria is met and US directs stopping RCP's.	<b>4 * Check If SI Is Actuated</b> <b>4a. CHECK</b> SAFETY INJECTION ACTUATION annunciators, (MB4D 1-6 or MB2B 5-9) – LIT  <b>4b.</b> By observation of ESF Group 2 Status Panel lights, <b>CHECK</b> both trains of SI – ACTUATED



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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	CTMT is NOT adverse.	<p><b>5. DETERMINE IF ADVERSE CTMT CONDITIONS EXIST</b></p> <ul style="list-style-type: none"> <li>• Cmtt temperature - GREATER THAN 180°F</li> <li style="text-align: center;"><u>OR</u></li> <li>• Cmtt radiation - GREATER THAN 10<sup>5</sup> R/ hr</li> </ul> <p><b>RNO: DO NOT USE ADVERSE CTMT parameters</b></p>
	RO performs Attachment B.	<p><b>6. Using ATTACHMENT B, Actuation Signal Verification, CHECK Equipment Alignment</b></p>
	All three AFW pumps are running normally.	<p><b>7. Check AFW Pumps Running</b></p> <p><b>7a. CHECK MD Pumps – RUNNING</b></p> <p><b>RNO: START</b> pump(s).</p> <p><b>7b. CHECK Turbine-Driven Pump – RUNNING IF NECESSARY</b></p>
		<p><b>8. CHECK AFW Valve Alignment – PROPER EMERGENCY ALIGNMENT</b></p>
		<p><b>9. Check Adequate Heat Sink</b></p> <p><b>9a. CHECK NR level in at least one SG – GREATER THAN 8% (42% ADVERSE CTMT)</b></p> <p><b>RNO: PROCEED TO</b> step 9.d</p> <p><b>9d. CHECK Total AFW Flow – GREATER THAN 530 gpm</b></p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	BOP throttles AFW to between 530 - 600 gpm.	<p><b>10. Check RCS Temperature</b></p> <p>a. Using GA-26, <b>DUMP</b> steam to control No-Load RCS Temperature - AT 557°F</p> <p>b. <b>CHECK</b> RCS Temperature – AT NO-LOAD VALUE:</p> <p>d. <b>MAINTAIN</b> total feed flow BETWEEN 530 to 600 gpm until NR Level is GREATER THAN 8% (42% ADVERSE CTMT) in at least one SG</p>
		<p><b>11. Check Power To SBO Diesel Auxiliaries</b></p> <p>a. <b>CHECK</b> any SBO Bus Tie Breaker - CLOSED TO AN ENERGIZED BUS</p> <ul style="list-style-type: none"> <li>• Bus 34A: 34A1-2</li> <li>• Bus 34B: 34B1-2</li> <li>• Bus 24E: A505 (Unit 2)</li> </ul>
	Event 6: 'B' PORV is failed open. US directs closure of 'B' PORV Block Valve. <b>(Critical Task)</b>	<p><b>12. Check PZR Valves</b></p> <p><b>12a. CHECK</b> PORVs – CLOSED</p> <p><b>RNO: IF</b> PZR Pressure LESS THAN 2350 psia, <b>THEN CLOSE</b> PORVs.</p> <p><b>IF</b> any PORV <b>CANNOT</b> be closed, <b>THEN CLOSE</b> its Block Valve.</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
		<p><b>12b. CHECK</b> normal PZR Spray Valves – CLOSED</p> <p><b>12c. CHECK</b> PORV Block Valves - AT LEAST ONE ENERGIZED VALVE OPEN</p> <p><b>RNO: IF NOT</b> closed to isolate an open PORV(s) in step 12.a RNO, <b>THEN OPEN</b> one Block Valve.</p> <p><b>12d. CHECK</b> PORV Block Valves - ALL ENERGIZED VALVES OPEN</p> <p><b>12e. CHECK</b> PZR Safety Valves – CLOSED</p>
	<p>If RCP's weren't tripped previously (Foldout Page criteria), RCP's will be likely stopped here (based on expectant RCS pressure).</p>	<p><b>13. Check If RCPs Should Be Stopped</b></p> <p><b>a. CHECK</b> RCPs - ANY RUNNING</p> <p><b>b. CHECK</b> RCS Pressure - LESS THAN 1500 psia (1800 psia ADVERSE CTMT)</p> <p><b>c. CHECK</b> required CHS OR SI line-up</p> <p><b>d. STOP</b> all RCPs</p>
	<p>All four S/G safeties failed to re-close. US transitions to E-2 based on 4 faulted S/G's.</p>	<p><b>14. Check If SG Secondary Boundaries Are Intact</b></p> <p><b>14a. CHECK</b> pressure in all SGs:</p> <ul style="list-style-type: none"> <li>• <b>NO</b> SG PRESSURE LOWERING IN AN UNCONTROLLED MANNER</li> <li>• <b>NO</b> SG COMPLETELY DEPRESSURIZED</li> </ul> <p><b>RNO: INITIATE</b> monitoring of CSF Status Trees <b>AND GO TO</b> E-2, Faulted Steam Generator Isolation.</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
<b>E-2, Faulted Steam Generator Isolation (Rev. 15)</b>		
	MSIV and Bypass valves are closed.	<b>1. CHECK</b> Main Steam Isolation And Bypass Valves - CLOSED
	4 faulted SG's. US transitions to ECA-2.1.	<b>2. Check</b> At Least One SG Secondary Boundary Intact <b>a. CHECK</b> pressures in all SGs AT LEAST ONE STABLE OR RISING <b>AND NOT</b> COMPLETELY DEPRESSURIZED  RNO: <b>IF</b> all SG pressures lowering in an uncontrolled manner, <b>THEN GO TO</b> ECA-2.1, Uncontrolled Depressurization of All Steam Generators.
<b>ECA-2.1, Uncontrolled Depressurization Of All Steam Generators (Rev. 21)</b>		
<b>CAUTION:</b> If the capability (e.g, open throttled valves or start TD AFW pump stopped in step 1.b) to feed SGs at GREATER THAN 530 gpm is <b>NOT</b> available and Heat Sink status is RED, then the Heat Sink Status color of RED is valid.		
<b>CAUTION:</b> If the TD AFW pump is the only available source of feed flow to <b>ANY</b> SG, a steam supply to the TD AFW pump must be maintained from at least one SG.		
		<b>1. Check Secondary Pressure Boundary</b> <b>a. CHECK</b> MSIVs and MSIV Bypass Valves - CLOSED

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	Event 7: 'A' SG Blowdown Isolation Valve failed to isolate (embedded failure – SGO2A). US utilizes RNO (& Attachment 'B') dispatching a PEO to manually close 3BDG-V939.	<p><b>1b. CHECK</b> SG isolation:</p> <ul style="list-style-type: none"> <li>• SG Feed Regulating Valves -CLOSED</li> <li>• SG Feed Regulating BypassValves - CLOSED</li> <li>• FW Isolation Trip Valves -CLOSED</li> <li>• SG Atmospheric Relief and Bypass Valves - CLOSED</li> <li>• SG Blowdown Isolation Valves -CLOSED</li> <li>• SG Blowdown Sample Isolation Valves - CLOSED</li> <li>• SG Chemical Feed Isolation Valves - CLOSED</li> <li>• Using table, <b>CHECK</b> main steam line drains upstream of MSIVs and TD AFW pump – CLOSED</li> </ul> <p><b>RNO: CLOSE</b> Valves or Isolation Valves.</p> <p><b>IF</b> a flow path <b>CANNOT</b> be isolated, <b>THEN</b> using ATTACHMENT B, locally <b>CLOSE</b> valves, one SG at a time.</p>
		<p><b>1c. CHECK</b> MDAFW Pumps:</p> <ul style="list-style-type: none"> <li>• A MDAFW - SUPPLYING AFW TO A AND D SGs</li> <li>• B MDAFW - SUPPLYING AFW TO B AND C SGs</li> </ul>
		<p><b>1d. CLOSE</b> Steam Supply Valves to TDAFW pump:</p> <ul style="list-style-type: none"> <li>• 3MSS*MOV17A</li> <li>• 3MSS*MOV17B</li> <li>• 3MSS*MOV17D</li> </ul>
		<p><b>CAUTION:</b> A minimum feed flow of 100 gpm must be maintained to each SG with a NR level LESS THAN 8% (42% ADVERSE CTMT).</p>

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	<b>Critical Task</b> Crew reduces feed flow to 100 gpm to each SG.	<b>2. Control Feed Flow To Minimize RCS Cooldown</b> a. <b>CHECK</b> cooldown rate in RCS Cold Legs - LESS THAN 80°F/hr  <b>RNO: REDUCE</b> feed flow to 100 gpm to each SG <b>AND PROCEED TO</b> step 2.c.
		<b>2c. CHECK</b> RCS Hot Leg WR temperatures - STABLE OR LOWERING
	RCP's have already been stopped.	<b>3. Check Stopping RCPs</b>
	No change is needed in PORV or block valve configuration.	<b>4. Check PZR PORVs And BLOCK Valves</b>
When called as Chemistry, acknowledge chemistry sample request.	RO aligns SG sampling.	<b>5. Check Secondary Radiation</b> a. Using GA-30, <b>ALIGN</b> RPCCW for RCS and SG sampling
		<b>5b. CHECK</b> trend history and alarm status of radiation monitors Main Steam Line - NORMAL Condenser Air Ejector - NORMAL SG Blowdown – NORMAL
		<b>5c. CHECK</b> SG chemistry activity sample results – AVAILABLE <b>RNO: PROCEED TO</b> step 6 <b>AND IF</b> SG sample results indicate Abnormal Radiation, <b>THEN GO TO</b> E-3, Steam Generator Tube Rupture.

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
	Conditions are met to stop RHR. The crew resets SI and stops 'A' RHR Pp ('B' is RTO). RCS pressure is rising towards PORV setpoint.	<b>6. Check Stopping RHR Pumps</b> a. <b>CHECK</b> RHR pumps – ANY RUNNING IN SI MODE b. <b>CHECK</b> RCS pressure GREATER THAN 300 psia (500 psia ADVERSE CTMT) c. <b>CHECK</b> RCS pressure – STABLE OR RISING d. <b>IF</b> actuated, <b>THEN RESET</b> the following:SI / CDA / LOP e. <b>STOP</b> RHR pumps and <b>PLACE</b> in AUTO f. <b>CHECK</b> RCS pressure – STABLE OR RISING
	CTMT Spray pumps are NOT running.	<b>7. Check Stopping Containment Spray</b>
		<b>8. CHECK RWST Level – GREATER THAN 520,000 gal</b>
As PEO, acknowledge request to implement GA-7. No further action needed (session will end before PEO actions are completed).		<b>9. Check Isolating Accumulators</b> a. <b>CHECK</b> at least two RCS Hot Leg WR temperatures – LESS THAN 440°F b. Using GA-7, <b>ISOLATE</b> SI accumulators
	Conditions will be met to reduce ECCS flow.	<b>10. Check If ECCS Flow Should Be Reduced</b>
	Only CIA requires RESET.	<b>11. Reset Actuated ESF Actuation Signals</b> a. <b>RESET</b> SI b. <b>RESET</b> the following: <ul style="list-style-type: none"> <li>• CDA</li> <li>• LOP</li> <li>• CIA</li> <li>• CIB</li> </ul>
As PEO, acknowledge request to implement GA-1. No further action needed (session will end before PEO actions are completed).		<b>12. Restore MCC 32-3T</b> a. <b>CHECK</b> Emergency Bus 34C ENERGIZED b. Using GA-1, <b>ENERGIZE</b> MCC 32-3T

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SCENARIO TIME LINE		
BOOTH INSTRUCTOR	EXPECTED RESPONSE	PROCEDURE INSTRUCTION
		<b>13. Establish Instrument Air To Ctmt</b> <b>a. CHECK</b> Instrument Air Compressors - AT LEAST ONE RUNNING <b>b. OPEN</b> Instrument Air CTMT Isolation Valves
<b>Upon direction of Lead Examiner, PLACE Simulator in FREEZE</b>	Crew stops one Charging Pump.	<b>14. STOP All But One Charging Pump AND PLACE In AUTO</b>



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SHIFT TURNOVER REPORT					
DATE-TIME		PREPARED BY		SHIFT	
Today 0515		Unit Supervisor / "NIGHT" Shift		18:00 - 06:00	
<b>PLANT STATUS:</b>					
Mode:	1	Rx Power:	100 %		
Megawatts:	Thermal: 3641 MWTH	PZR Pressure:	2250 psia		
	Electric: 1278 MWe	RCS T-AVE:	587 deg F		
RCS Leakage:	Identified: 0.015 gpm	Core Burnup:	150 MWD/MTU		
	Unidentified: 0.036 gpm	Protected Train/Facility:	<b>A (Orange)</b>		
Date/Time:	Today 0015	Intake:	<b>Green</b>		
<b>Active Tracking Records and Action Statements</b>					
<b>Equipment/Reason</b>					
LCO	Action	Date	Time in LCO	Action Requirement	Time Left
<b>'B' RHR is tagged out</b>					
TS 3.5.2.d	a	today	1 hour	Restore	71 hrs
<b>OD Compensatory Actions / Temp Logs</b>					
Open Date	Class Reason	Reason			Watch Position
<b>PLANT SYSTEMS APC</b>					
System	Notes				
RHS	3RHS*P1B, 'B' RHR Pump, is tagged out of service for an emergent motor oil leak.				
<b>CROSS UNIT SYSTEM STATUS</b>					
<b>SURVEILLANCES / EVOLUTIONS IN PROGRESS</b>					
Steady State Operation					
I&C has just completed RAKSET 1 Testing - SAT					
<b>REACTIVITY BRIEFING (SEE REACTIVITY THUMBRULES / SPREAD SHEET FOR ADDITIONAL INFO)</b>					
<b>Current Rod Height</b>		216			
<b>Xenon Trend</b>		Stable			
<b>Current Boron</b>		1504			
<b>Boron Pot Setting / Blend Ratio</b>		4.27 / 17.1 gpm			
<b>Plant Risk</b>		LERF 1.06 ACT: 1 year		CDF 4.15 ACT: 46.9 days	

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<b>REFERENCE MATERIAL</b>		
<b>Session No.: NRC-05</b>		
<b>Reference No.</b>	<b>Revision</b>	<b># Copies</b>
<b>ARP's</b>		
MB1C 4-3	Rev. 16	1
MB4A 3-4, 4-3, 4-4	Rev. 8	1
MB4C 6-5	Rev. 22	1
MB5A 4-4	Rev. 12	1
MB6A 4-4, 4-5, 4-6	Rev. 18	1
MB6B 4-2	Rev. 6	1
MB8B 2-8	Rev. 13	1
<b>OTHER – RO Station</b>		
E-0, ATT. B	Rev. 35	N/A
<b>OTHER– BOP Station</b>		
GA-1	Rev. 5	N/A
GA-26	Rev. 3	N/A
<b>US Desk Procedures</b>		
AOP 3559	Rev. 13	N/A
AOP 3571	Rev. 17	N/A
AOP 3575	Rev. 28	N/A
AOP 3581	Rev. 7	N/A
E-0	Rev. 35	N/A
E-2	Rev. 15	N/A
ECA-2.1	Rev. 21	N/A