

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	Licensed Operator Requalification	<b>CODE #:</b>	PLOR-301CA
<b>COURSE:</b>	Licensed Operator Requalification	<b>REV #:</b>	008
<b>AUTHOR:</b>	M. J. Kelly	<b>TYPIST:</b>	Mda
<b>TITLE:</b>	Inject Boron into RPV (Alternate Path – RWCU Fails to Isolate)		

**APPROVALS:**

	Signature / Title	Date

**APPROVED FOR USE:**

	Signature / Title	Date
--	-------------------	------

**EFFECTIVE DATE:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

<b>NAME:</b> _____ Last                      First                      M.I.	<b>ISSUE DATE:</b> _____
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>    	
<b>Training Review for Completeness:</b>  _____	<b>PIMS CODE:</b> _____
Signature/Date	<b>PIMS ENTRY:</b> _____

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-301CA

REV. NO.: 008

TITLE: Inject Boron into RPV (Alternate Path – RWCU Fails to Isolate)

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

PECO NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2001100501 / PLOR-301CA

K/A: 295037EA1.04

URO: 4.5 SRO: 4.5

TASK DESCRIPTION: Inject Boron into RPV (Alternate Path – RWCU Fails to Isolate)

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. Key for SBLC System keylock switch on Control Room panel C005A.

C. REFERENCES

1. RRC 11.1-2, Rev. 0, "Standby Liquid System Initiation During a Plant Event"
2. SO 11.1.B-2, Rev. 3, "Standby Liquid Control System Initiation"

D. TASK STANDARD

1. Satisfactory task completion is indicated when a SBLC pump is running, boron is injecting into the Reactor vessel and RWCU system flow is secured.
2. Estimated time to complete: 4 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to inject boron into the Reactor vessel using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. SBLC injection is required by T-101, "RPV Control".

G. INITIATING CUE

The Control Room Supervisor directs you to inject boron into the Reactor vessel from the Control Room using Rapid Response Card RRC11.1-2, "Standby Liquid System Initiation During a Plant Event".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Verify AO-2-02-039, Recirc Sample Inboard Isol valve, is closed.  (Cue: AO-2-02-039 green light is on, red light is off.)	P	AO-2-02-039 green light verified ON at panel 20C004A.
2	Verify AO-2-02-040, Recirc Sample Inboard Isol valve, is closed.  (Cue: AO-2-02-040 green light is on, red light is off.)	P	AO-2-02-040 green light verified ON at panel 20C004A.
3	Verify key is inserted into 2(A)BP040 keylock switch.  (Cue: Key is in keylock switch.)	P	Key verified inserted into 2(A)BP040 keylock switch at panel 20C005A.
*4	Turn keylock switch to start "Sys A(B)".  (Cue: Acknowledge keylock switch operation.)	P	Keylock switch turned to the "START SYS A(B)" position at panel 20C005A.
5	Verify RWCU System isolated.  (Cue: MO-15, MO-18, and MO-68 red lights are on, green lights are off.)	P	RWCU failure to isolate is recognized.
6	Trip all running RWCU pumps.  (Cue: Acknowledge control switch operations.)	P	All running RWCU Pump control switches are momentarily placed in the STOP position at panel 20C004A.
7	Verify all RWCU pumps are secured.  (Cue: A and B RWCU Pumps green lights are on, red lights are off.)	P	A, B, and C RWCU pump green lights verified ON and flow decreases to 0 on FI-2-12-141A and FI-2-12-141B at panel 20C004A.
*8	Close MO-2-12-15, RWCU Inboard Isolation valve.  (Cue: Acknowledge control switch operation.)	P	MO-2-12-15 control switch momentarily placed in the CLOSE position at panel 20C004A.

STEP NO	STEP	ACT	STANDARD
*9	Close MO-2-12-18, RWCU Outboard Isolation valve.  (Cue: Acknowledge control switch operation.)	P	MO-2-12-18 control switch momentarily placed in the CLOSE position at panel 20C004A.
*10	Close MO-2-12-68, RWCU Outlet valve.  (Cue: Acknowledge control switch operation.)	P	MO-2-12-68 control switch momentarily placed in the CLOSE position at panel 20C004A.
11	Verify MO-2-12-15, MO-2-12-18 and MO-2-12-68 are closed.  (Cue: MO-15, MO-18, and MO-68 green lights are on, red lights are off.)	P	MO-2-12-15, <u>AND/OR</u> MO-2-12-18, <u>AND/OR</u> MO-2-12-68 green light(s) verified ON at panel 20C004A.
12	Acknowledge the "CLEAN-UP FILTER/DEMIN SYSTEM TROUBLE" annunciator.  (Cue: Annunciators 215 C-3 is lit solid.)	P	The annunciator "ACKNOWLEDGE" pushbutton is depressed on panel 20C012.
13	Verify SBLC Pump A(B) starts and injects.  (Cue: SBLC Pump A(B) red light is on, green light is off; PI-065 reads approximately 100 psi greater than Reactor pressure; LI-66 indication is slowly lowering; Reactor power is slowly lowering.)	P	SBLC Pump A(B) red light is verified ON.  SBLC Pump discharge pressure verified approximately 100 psi > reactor pressure on PI-2-11-065.  Lowering Reactor power verified.  All at panel 20C005A.
14	Inform Control Room Supervisor of task completion.  (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.
15	As an evaluator ensure that you have positive control of all exam material provide to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

I. TERMINATING CUE

When a SBLC pump is running and boron is injecting into the Reactor vessel with RWCU flow secured, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. SBLC injection is required by T-101, "RPV Control".**

## **INITIATING CUE**

**The Control Room Supervisor directs you to inject boron into the Reactor vessel from the Control Room using Rapid Response Card RRC11.1-2, "Standby Liquid System Initiation During a Plant Event".**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	Licensed Operator Requalification	<b>CODE #:</b>	PLOR-300CA
<b>COURSE:</b>	Licensed Operator Requalification	<b>REV #:</b>	012
<b>AUTHOR:</b>	M. J. Kelly	<b>TYPIST:</b>	Mda
<b>TITLE:</b>	Manually Initiate HPCI (Alternate Path – Manual Initiation Pushbutton Fails to Operate)		

**APPROVALS:**

	Signature / Title	Date

**APPROVED FOR USE:**

	Signature / Title	Date
--	-------------------	------

**EFFECTIVE DATE:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

<b>NAME:</b> _____ Last                      First                      M.I.	<b>ISSUE DATE:</b> _____
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>     	
<b>Training Review for Completeness:</b>  _____	<b>PIMS CODE:</b> _____
Signature/Date	<b>PIMS ENTRY:</b> _____

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-300CA

REV. NO.: 012

TITLE: Manually Initiate HPCI (Alternate Path – Manual Initiation Pushbutton Fails to Operate)

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2060050101 / PLOR-300CA K/A: 295031EA1.02

URO: 4.5 SRO: 4.5

TASK DESCRIPTION: Manually Initiate HPCI (Alternate Path – Manual Initiation Pushbutton Fails to Operate)

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. None

C. REFERENCES

1. RRC 23.1-2, Rev. 4, "HPCI System Operation During a Plant Event"

D. TASK STANDARD

1. Satisfactory task completion is indicated when HPCI is injecting to the RPV at 5000 gpm.
2. Estimated time to complete: 5 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to manually initiate the HPCI system and inject to the Reactor vessel at a flow rate of 5000 gpm using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. RPV Level is -25 inches and lowering.

G. INITIATING CUE

The Control Room Supervisor directs you to initiate the HPCI system using the HPCI Manual Initiation pushbutton and inject to the Reactor vessel at 5000 gpm using RRC 23.1-2, "HPCI System Operation During a Plant Event".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain copy of RRC 23.1-2 "HPCI Operation During a Plant Event".	P	References Section A of RRC "HPCI Injection Using Manual Initiation PB".
2	Arm and depress the HPCI Manual Initiation Pushbutton.  (Cue: Acknowledge pushbutton operation.)	P	HPCI Manual Initiation Pushbutton collar is rotated clockwise to the ARMED position and then the pushbutton is momentarily DEPRESSED at panel 20C004B.
*3	Recognize that the Manual Initiation pushbutton did not function.  (Cue: HPCI discharge pressure, flow and speed indicate zero. Aux oil pump green light is on, red light is off.)	P	Manual Initiation pushbutton failure to function is recognized. Examinee should now refer to Section B of RRC, "HPCI Injection by Manual Component Operation".
<p>**** NOTE ****</p> <p><b>If notified as the Control Room Supervisor that the HPCI Manual Initiation Pushbutton did not function, cue the examinee to initiate HPCI and inject to the reactor vessel at 5000 gpm.</b></p>			
*4	Simultaneously start the Auxiliary Oil Pump, 20P026 and open MO-2-23-014 "Supply" valve.  (Cue: Acknowledge control switch operation.)	P	Auxiliary oil pump control switch is placed in the START position while simultaneously placing MO-2-23-014 "Supply" control switch momentarily in the "OPEN" position at panel 20C004B.
5	Verify the Auxiliary Oil Pump started.  (Cue: Auxiliary Oil pump red light is on green light is off and annunciator 222 D-5 is alarming, "HPCI AUXILIARY OIL PUMP RUNNING", Turbine Stop and Control valve red lights are on.)	P	Verify the Auxiliary Oil pump red light is ON at panel 20C004B or annunciator 222 D-5 is alarming at panel 20C204C.
6	Verify MO-2-23-014, "Supply" valve is open.  (Cue: MO-14 red light is on, green light is off, HPCI discharge pressure and speed rise.)	P	MO-2-23-14 red light verified ON, HPCI discharge pressure (PI-2-23-109) and HPCI speed (SPI-4505) rising at panel 20C004B.

STEP NO	STEP	ACT	STANDARD
*7	Open MO-2-23-019, "To Feed Line" valve. (Cue: Acknowledge control switch operation.)	P	MO-2-23-019 control switch is momentarily placed in the OPEN position at panel 20C004B.
8	Verify MO-2-23-019, "To Feed Line" valve is open. (Cue: MO-19 red light is on, green light is off, HPCI flow rise.)	P	MO-2-23-019 red light is verified ON and flow (FI-2-23-108) rising at panel 20C004B.
9	Start the HPCI Gland Seal Condenser Vacuum pump, 20K002. (Cue: Vac pump red light is on, green light is off.)	P	HPCI Gland Seal Condenser Vacuum Pump control switch is placed in the START position at panel 20C004B.
10	Verify pump flowrate of 5000 gpm. (Cue: FI-2-23-108 indicates 5000 gpm.)	P	A HPCI flowrate of approximately 5000 gpm is verified on FI-2-23-108 at panel 20C004B.
11	Inform Control Room Supervisor that HPCI was manually started and is injecting into the RPV. (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.
12	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

#### I. TERMINATING CUE

When HPCI is injecting into the Reactor vessel at a flow rate of 5000 gpm, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. RPV Level is -25 inches and lowering.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to initiate the HPCI system using the HPCI Manual Initiation pushbutton and inject to the Reactor vessel at 5000 gpm using RRC 23.1-2, "HPCI System Operation During a Plant Event".**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR REQUALIFICATION	<b>CODE #:</b>	PLOR-023C
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	007
<b>AUTHOR:</b>	M. J. Kelly	<b>TYPIST:</b>	Mda
<b>TITLE:</b>	ADS RESET FOLLOWING BLOWDOWN		
<b>APPROVALS:</b>			
		Signature / Title	Date
		Signature / Title	Date
		Signature / Title	Date
		Signature / Title	Date
<b>APPROVED FOR USE:</b>			
		Signature / Title	Date
<b>EFFECTIVE DATE:</b> ____ / ____ / ____			

<b>NAME:</b> _____	<b>ISSUE DATE:</b> _____
Last                      First                      M.I.	
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>	
<b>Training Review for Completeness:</b>	<b>PIMS CODE:</b>
Signature/Date	<b>PIMS ENTRY:</b>

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-023C

REV. NO.: 007

TITLE: ADS RESET FOLLOWING BLOWDOWN

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2180040101 / PLOR-023C

K/A: 218000A4.03

RO: 4.2 SRO: 4.2

TASK DESCRIPTION: ADS RESET FOLLOWING BLOWDOWN

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

Procedure SO 1G.7.C-2, Rev. 9, "Automatic Depressurization System Reset Following Blowdown" (R)

D. TASK STANDARD

1. Satisfactory task completion is indicated when ADS logic reset, Vacuum breaker position indication reset, and ADS relief valve position indication reset.
2. Estimated time to complete: 7 minutes (A.5) Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to reset the ADS system using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. RPV water level is greater than -160" and the capability exists to maintain level above -160".
2. The following annunciators have been reset:
  - a. "System I ECCS REAC VESSEL LO-LO-LO LEVEL", panel 227 D-2.
  - b. "System II ECCS REAC VESSEL LO-LO-LO LEVEL", panel 228 C-2.
3. Blowdown of the RPV is complete by evidence of SRVs closed due to lack of pressure to keep them open.
4. Reactor pressure is 0 psig.
5. Drywell pressure is 0.25 psig.

G. INITIATING CUE

The Control Room Supervisor directs you to reset the ADS logic in accordance with SO 1G.7.C-2, "Automatic Depressurization System Reset Following Blowdown", Section 4.1.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
*1	Depress the "A" ADS LOGIC RESET-TIMER pushbutton, 2E-S2A.  (Cue: Acknowledge pushbutton operation.)	P	The "A" ADS LOGIC TIMER RESET pushbutton, 2E-S2A, is momentarily depressed at panel 20C003-01.
*2	Depress the "B" ADS LOGIC RESET-TIMER pushbutton, 2E-S2B.  (Cue: Acknowledge pushbutton operation.)	P	The "B" ADS LOGIC TIMER RESET pushbutton, 2E-S2B, is momentarily depressed at panel 20C003-01.
<p>**** NOTE ****</p> <p><b>The "BLOWDOWN RELIEF VALVES HIGH TEMP" annunciator will not reset unless all of the temperatures are below the alarm setpoint.</b></p>			
3	Reset the following annunciators:  a. "BLOWDOWN AUX RELAYS ENERGIZED RHR OR CS".  b. "BLOWDOWN RELIEF VALVES HIGH TEMP".  (Cue: Acknowledge pushbutton operation.)	P	The alarm "RESET" Pushbutton is momentarily depressed on panel 20C003.
4	Verify "BLOWDOWN AUX RELAYS ENERGIZED RHR OR CS" and "BLOWDOWN RELIEF VALVES HIGH TEMP" annunciators are clear.  (Cue: Annunciators 227 E-4 and 227 B-4 are not lit.)	P	"BLOWDOWN AUX RELAYS ENERGIZED RHR OR CS" and "BLOWDOWN RELIEF VALVES HIGH TEMP" annunciators are verified clear on alarm panels 227 E-4 and 227 B-4.
5	Verify "BLOWDOWN TIMERS INITIATED" annunciator reset.  (Cue: Annunciator 227 D-4 is not lit.)	P	"BLOWDOWN TIMERS INITIATED" annunciator is verified clear on alarm panel 227 D-4.
6	Verify "SAFETY RELIEF VALVE OPEN" annunciator reset.  (Cue: Annunciator 210 D-2 is not lit.)	P	"SAFETY RELIEF VALVE OPEN" annunciator is verified clear on alarm panel 210 D-2.

STEP NO	STEP	ACT	STANDARD
7	Verify the ADS valves indicate closed. (Cue: RV-2-02-71A, B, C, G, & K green lights are on, red lights are off.)	P	RV-2-02-71A, B, C, G, & K green lights verified ON at panel 20C003-01.
8	Monitor temperature recorder TR-2-02-103 to ensure each valve has reseated. (Cue: TR-2-02-103 points TE-2-2-113A, B, C, G, & K read 200°F and decreasing slowly.)	P	TR-2-02-103 monitored at panel 20C003-01 to ensure each ADS valve has reseated, as indicated by each point reading less than 200°F and decreasing.
*9	Depress the "A" ADS LOGIC RESET - DRYWELL HIGH PRESS pushbutton, 2E-S3A. (Cue: Acknowledge pushbutton operation.)	P	The "A" ADS DRYWELL HIGH PRESSURE LOGIC RESET pushbutton, 2A-S3A, is momentarily depressed at panel 20C003-01.
*10	Depress the "B" ADS LOGIC RESET DRYWELL HIGH PRESS pushbutton 2E-S3B. (Cue: Acknowledge pushbutton operation.)	P	The "B" ADS DRYWELL HIGH PRESS LOGIC RESET pushbutton, 2E-S3B, is momentarily depressed at panel 20C003-01.
11	Reset the following annunciators: a. "DRYWELL HI PRESS SIGNAL SEALED IN". b. "HIGH DRYWELL PRESSURE BYPASS TIMERS INITIATED". (Cue: Acknowledge pushbutton operation.)	P	The alarm "RESET" pushbutton is momentarily depressed on panel 20C003.
12	Verify "DRYWELL HI PRESS SIGNAL SEALED IN" and "HIGH DRYWELL PRESSURE BYPASS TIMERS INITIATED" annunciators are clear. (Cue: Annunciators 227 A-4 and 227 A-3 are not lit.)	P	"DRYWELL HI PRESS SIGNAL SEALED IN" and "HIGH DRYWELL PRESSURE BYPASS TIMERS INITIATED" annunciators are verified clear on alarm panels 227 A-4 and 227 A-3.

STEP NO	STEP	ACT	STANDARD
13	Inform the Control Room Supervisor of task completion.  (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.
14	As an evaluator, ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

I. TERMINATING CUE

When the ADS logic has been reset, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. RPV water level is greater than -160 inches and the capability exists to maintain level above -160 inches.**
- 2. The following annunciators have been reset:**
  - a. "System I ECCS REAC VESSEL LO-LO-LO LEVEL", panel 227 D-2.**
  - b. "System II ECCS REAC VESSEL LO-LO-LO LEVEL", panel 228 C-2.**
- 3. Blowdown of the RPV is complete by evidence of SRVs closed due to lack of pressure to keep them open.**
- 4. Reactor pressure is 0 psig.**
- 5. Drywell pressure is 0.25 psig.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to reset the ADS logic in accordance with SO 1G.7.C-2, "Automatic Depressurization System Reset Following Blowdown", Section 4.1.**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-NEW1CA
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	000
<b>AUTHOR:</b>	F. J. Bruns	<b>TYPIST:</b>	fjb
<b>TITLE:</b>	PERFORM CORE SPRAY B PUMP CAPACITY TEST FOR IST (ALTERNATE PATH – PUMP MINIMUM FLOW VALVE FAILS TO OPEN)		

**APPROVALS:**

	Signature / Title	Date

**APPROVED FOR USE:**

	Signature / Title	Date
--	-------------------	------

**EFFECTIVE DATE:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

<b>NAME:</b> _____ Last                      First                      M.I.	<b>ISSUE DATE:</b> _____
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____

**COMMENTS:**

  
  
  

<b>Training Review for Completeness:</b>	<b>PIMS CODE:</b>	
	<b>PIMS ENTRY:</b>	
Signature/Date		

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-NEW1CA

REV. NO.: 000

TITLE: PERFORM CORE SPRAY B PUMP CAPACITY TEST FOR IST (ALTERNATE PATH – PUMP MINIMUM FLOW VALVE FAILS TO OPEN)

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2090140101 / PLOR-NEW1CA K/A: 209001A4.04

URO: 2.9 SRO: 2.9

TASK DESCRIPTION: Perform Core Spray B Pump Capacity Test For IST (Alternate Path – Pump Minimum Flow Valve Fails To Open)

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1.

C. REFERENCES

1. ST-O-014-212-2, Rev. 1, "Core Spray B Pump Capacity Test For IST".

D. TASK STANDARD

1. Satisfactory task completion is indicated when Core Spray pump 2B minimum flow valve is determined to have failed to open and 2B Core Spray pump is shutdown.
2. Estimated time to complete: 10 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to perform Core Spray 2B pump capacity test for IST using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. The plant is operating at 100% power.
2. An Equipment Operator is standing by in the 2B Core Spray Pump Room.
3. Communications are available between the Control Room, 2B Core Spray Pump Room, B and D Core Spray Pump Triangle Room, and Cable Spreading Room.
4. Core Spray pump 2B oil level is between the minimum and maximum lines on the sightglass.
5. Core Spray pump 2B static pump suction pressure is 6 psig.

G. INITIATING CUE

The Control Room Supervisor directs you to perform Core Spray 2B pump capacity test for IST in accordance with ST-O-014-212-2 (provided).

Provide examinee a copy of ST-O-014-212-2 with the following items completed:

- Section 1 of the cover page
- Procedure section 2.0, "Test Equipment"
- Procedure section 3.0, "Prerequisites"

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	<p>CLOSE MO-2-14-011B "Core Spray Outboard Disch".</p> <p>(Cue: Acknowledge control switch operation. MO-2-14-011B green light is ON; red light is OFF.)</p>	P	<p>MO-2-14-011B control switch is momentarily placed in "CLOSE" at Panel 20C003.</p> <p>MO-2-14-011B green light is verified ON; red light is verified OFF at Panel 20C003.</p>
*2	<p>START 2BP037 "Core Spray B Pump".</p> <p>(Cue: Acknowledge control switch operation.)</p>	P	<p>"Starting 2B Core Spray pump" is announced on plant page prior to starting Core Spray pump 2B.</p> <p>2B Core Spray pump control switch is momentarily placed in the "START" position at Panel 20C003.</p>
3	<p>VERIFY Core Spray 2B Pump STARTS and is RUNNING by observing motor current on 14A-M1B and discharge pressure on PI-2-14-048B "Core Spray Disch P".</p> <p>(Cue: Ammeter 14A-M1B indicates 40 amps, PI-2-14-048B indicates 350 psig.)</p>	P	<p>2B Core Spray pump green light is verified OFF, red light verified ON, pump motor amps on ammeter 14A-M1B and discharge pressure on PI-2-14-048B are verified rising at Panel 20C003.</p>
*4	<p>VERIFY MO-2-14-005B "Core Spray B Min Flow" automatically OPENS.</p> <p>(Cue: MO-2-14-005B green light is ON; red light is OFF.)</p>	P	<p>Recognized Min Flow Valve MO-2-14-005B did <u>NOT</u> open as indicated by green light ON, red light OFF, and FI-2-14-050B indicating "0" gpm at Panel 20C003.</p>
*5	<p>Report to CRS 2B Core Spray pump minimum flow valve failed to open.</p> <p>(Cue: Acknowledge report that 2B Core Spray pump minimum flow valve failed to open.)</p>	P	<p>2B Core Spray pump minimum flow valve MO-2-014-005B failed to open reported to CRS.</p>
*6	<p>Stop 2BP037 "Core Spray B Pump".</p> <p>(Cue: Acknowledge control switch operation.)</p>	P	<p>2B Core Spray pump control switch is momentarily placed in the "STOP" position at Panel 20C003.</p>

STEP NO	STEP	ACT	STANDARD
7	Verify Core Spray 2B Pump stops.  (Cue: Ammeter 14A-M1B indicates 0 amps, PI-2-14-048B indicates 0 psig.)	P	2B Core Spray pump green light is verified ON, red light verified OFF, pump motor amps on ammeter 14A-M1B and discharge pressure on PI-2-14-048B are verified at "0" at Panel 20C003.
8	Open MO-2-14-011B "Core Spray Outboard Disch".  (Cue: Acknowledge control switch operation. MO-2-14-011B green light is OFF; red light is ON.)	P	MO-2-14-011B control switch is momentarily placed in "OPEN" at Panel 20C003.  MO-2-14-011B green light is verified OFF; red light is verified ON at Panel 20C003.
9	As an evaluator, ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

#### I. TERMINATING CUE

When Core Spray pump 2B minimum flow valve is determined to have failed to open, and Core Spray pump 2B is shutdown, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. The plant is operating at 100% power.**
- 2. An Equipment Operator is standing by in the 2B Core Spray Pump Room.**
- 3. Communications are available between the Control Room, 2B Core Spray Pump Room, B and D Core Spray Pump Triangle Room, and Cable Spreading Room.**
- 4. Core Spray pump 2B oil level is between the minimum and maximum lines on the sightglass.**
- 5. Core Spray pump 2B static pump suction pressure is 6 psig.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to perform Core Spray 2B pump capacity test for IST in accordance with ST-O-014-212-2 (provided).**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-081C
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	005
<b>AUTHOR:</b>	R. W. Long	<b>TYPIST:</b>	mda
<b>TITLE:</b>	HPSW INJECTION INTO THE TORUS		
<b>APPROVALS:</b>			
		Signature / Title	Date
		Signature / Title	Date
		Signature / Title	Date
		Signature / Title	Date
<b>APPROVED FOR USE:</b>			
		Signature / Title	Date
<b>EFFECTIVE DATE:</b> ____ / ____ / ____			

<b>NAME:</b> _____ Last                      First                      M.I.	<b>ISSUE DATE:</b> _____
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>   	
<b>Training Review for Completeness:</b>  _____	<b>PIMS CODE:</b> _____
Signature/Date	<b>PIMS ENTRY:</b> _____

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-081C

REV. NO.: 005

TITLE: HPSW Injection Into the Torus

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2004800501 / PLOR-081C

K/A: 219000A4.13

URO: 3.9 SRO: 3.8

TASK DESCRIPTION: HPSW Injection Into the Torus

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. Keys for MO-2-10-174 and MO-2-10-176

C. REFERENCES

1. T-231-2, Rev. 3, "HPSW Injection Into the Torus"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the "2B" HPSW Pump is injecting water into the Torus.
2. Estimated time to complete: 10 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to inject water into the Torus using the "2B" HPSW pump using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Use of this procedure has been directed by the T-100 procedures.
2. High Pressure Service Water Pumps are available.
3. A LOCA initiation signal has NOT occurred.
4. 4 KV Buses are receiving power from their respective startup feeds.

G. INITIATING CUE

The Control Room Supervisor directs you to perform T-231-2, "HPSW Injection into the Torus" in order to inject water into the Torus with the "2B" HPSW pump.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Verify RHR pump 2BP035 shutdown. (Cue: "B" RHR pump green light ON, red light OFF.)	P	"B" RHR pump green light verified ON at panel 20C003-02.
2	Verify RHR pump 2DP035 shutdown. (Cue: "D" RHR pump green light ON, red light OFF.)	P	"D" RHR pump green light verified ON at panel 20C003-02.
3	Close MO-2-10-154B, "Outboard Disch". (Cue: Acknowledge switch operation.)	P	MO-2-10-154B control switch is momentarily placed in the CLOSE position at panel 20C003-02.
4	Verify closed MO-2-10-154B, "Outboard Disch". (Cue: MO-154B green light ON, red light OFF.)	P	MO-154B green light verified ON, red light verified OFF on panel 20C003-02.
5	Verify HPSW 2BP042 pump shutdown. (Cue: "B" HPSW pump green light ON, red light OFF.)	P	"B" HPSW pump green light verified ON at panel 20C003-02.
6	Verify HPSW 2DP042 pump shutdown. (Cue: "D" HPSW pump green light ON, red light OFF.)	P	"D" HPSW pump green light verified ON at panel 20C003-02.
7	Verify closed MO-2-10-089B, "B HPSW Hx Out". (Cue: MO-089B green light ON, red light OFF.)	P	MO-089B green light verified ON, red light verified OFF at panel 20C003-02.
8	Verify closed MO-2-10-089D "D HPSW Hx Out". (Cue: MO-089D green light ON red light OFF.)	P	MO-089D green light verified ON, red light verified OFF at panel 20C003-02.

STEP NO	STEP	ACT	STANDARD
9	Verify closed MO-2-32-2344 (10-186), "HPSW Loop Cross Tie".  (Cue: MO-2344 (10-186) green light ON, red light OFF.)	P	MO-2344 (10-186) green light verified ON, red light verified OFF at panel 20C00-03.
*10	Open MO-2-10-174, "HPSW/RHR Em Inner Cross Tie".  (Cue: Acknowledge keylock switch operation.)	P	Key is obtained from the SSV keybox, inserted into MO-174 keylock switch and placed in the OPEN position at panel 20C003-03.  NOTE: MO-174 may be opened in parallel with MO-176.
11	Verify MO-2-10-174, "HPSW/RHR Em Inner Cross Tie" valve is opened.  (Cue: MO-174 red light is ON, green light is OFF.)	P	MO-174 red light verified on at panel 20C003-03.
*12	Open MO-2-10-176, "HPSW/RHR Em Outer Cross Tie".  (Cue: Acknowledge keylock switch operation.)	P	Key is obtained from the SSV keybox, inserted into MO-176 keylock switch and placed in the OPEN position at panel 20C003-03.  NOTE: MO-176 may be opened in parallel with MO-174.
13	Verify MO-2-10-176, "HPSW/RHR Em Outer Cross Tie" valve is opened.  (Cue: MO-176 red light is ON, green light is OFF.)	P	MO-176 red light verified on at panel 20C003-03.
*14	Open MO-2-10-039B, Torus Hdr valve.  (Cue: Acknowledge switch operation.)	P	MO-2-10-039B control switch is momentarily placed in the OPEN position at panel 20C003-02.
15	Verify MO-2-10-039B, Torus Hdr. valve is opened.  (Cue: MO-39B red light is on, green light is off.)	P	MO-2-10-039B red light verified ON at panel 20C003-02.

STEP NO	STEP	ACT	STANDARD
*16	Start the "B" HPSW pump.  (Cue: "B" HPSW pump red light is on, green light is off and annunciator 225 B-5 is alarming.)	P	"B" HPSW pump control switch is momentarily placed in the START position at panel 20C003-02.
17	Verify proper start of the "B" HPSW pump.  (Cue: 10A-A2B indicates 62 amps and PI-2330B indicates 430 psig.)	P	Pump amps and discharge pressure are verified stable after starting current decays.
18	Acknowledge the "RHR DISCH HDRS HI PRESS & SHUTDOWN SUCTION HDRS HI PRESS" annunciator.  (Cue: Annunciator 225 B-5 is lit solid.)	P	The annunciator "ACKNOWLEDGE" pushbutton is depressed on panel 20C003-04.
*19	Throttle open MO-2-10-034B, Full Flow Test valve to maintain HPSW flow less than 5300 gpm on FI-2-10-139B.  (Cue: FI-139B reads 5300 gpm.)	P	MO-2-10-034B control switch is momentarily placed in the OPEN position until 5000-5300 gpm is obtained on FI-2-10-139B, THEN the red stop travel pushbutton is depressed at panel 20C003-02.
20	Inform Shift Supervisor of task completion.  (Cue: Shift Supervisor acknowledges report.)	P	Task completion reported.
21	As an evaluator, ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

#### I. TERMINATING CUE

When the "B" HPSW pump is injecting into the Torus, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. Use of this procedure has been directed by the T-100 procedures.**
- 2. High Pressure Service Water Pumps are available.**
- 3. A LOCA initiation signal has NOT occurred.**
- 4. 4 KV Buses are receiving power from their respective startup feeds.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to perform T-231-2, "HPSW Injection into the Torus" in order to inject water into the Torus with the "2B" HPSW pump.**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

**Peach Bottom**
     
  **Limerick**
     
  **Common**

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-017C
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	009
<b>AUTHOR:</b>	M. J. Kelly	<b>TYPIST:</b>	mda
<b>TITLE:</b>	SYNCHRONIZE TURBINE GENERATOR OUTPUT WITH GRID AT MINIMUM LOAD		
<b>APPROVALS:</b>			
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
<b>APPROVED FOR USE:</b>			
	_____	Signature / Title	_____
			Date
<b>EFFECTIVE DATE:</b> ____ / ____ / ____			

<b>NAME:</b> _____	<b>ISSUE DATE:</b> _____
Last                      First                      M.I.	
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>	
<b>Training Review for Completeness:</b>	<b>PIMS CODE:</b>
_____	
Signature/Date	<b>PIMS ENTRY:</b>

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-017C

REV. NO.: 009

TITLE: SYNCHRONIZE TURBINE GENERATOR OUTPUT WITH GRID AT MINIMUM LOAD

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2370110101 / PLOR-017C

K/A: 262001A4.04

RO: 3.6      SRO: 3.7

TASK DESCRIPTION: SYNCHRONIZE TURBINE GENERATOR OUTPUT WITH GRID AT MINIMUM LOAD

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. Synchroscope key for breaker operation (R)
2. Key for synchro-check relay bypass key switch (R)

C. REFERENCES

Procedure SO 50.1.A-2 Rev. 11, Main Generator Synchronizing and Loading (R)

D. TASK STANDARD

1. Satisfactory task completion is indicated when the Main Generator is synchronized to the grid and initial load is placed on the generator.
2. Estimated time to complete: 12 minutes (A.5) Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to synchronize the Main Generator to the grid and pickup load using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Plant startup in progress with reactor power approximately 16%.
2. All SO 50.1A-2, "Main Generator Synchronizing and Loading" prerequisites are met.
3. Generator terminal voltage is 22 KV with the voltage regulator in automatic mode.
4. Generator ready to be synchronized to grid.
5. Power System Director has been notified.

G. INITIATING CUE

The Control Room Supervisor directs you, the Plant Reactor Operator, to synchronize the Main Generator to the grid and pick up load in accordance with steps 4.11 through 4.24 of SO 50.1.A-2, "Main Generator Synchronizing and Loading".

Provide examinee with a copy of SO 50.1.A-2, completed up to, but not including, step 4.11.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain copy of SO 50.1.A-2.	P	Copy of SO 50.1.A-2 obtained.
*2	Turn on synchroscope for breaker 215 or 225.  (Cue: Synchroscope meter rotating and incoming voltmeters and sensing lights are activated.)	P	Synchroscope key obtained from Panel 00C024 inserted into selected breaker sync switch and placed in the "ON" position at Panel 00C024.
*3	Use turbine load selector pushbuttons to adjust generator speed.  (Cue: Synchroscope is rotating slowly in clockwise direction.)	P	Load selector pushbuttons are momentarily depressed to get synchroscope rotating slowly in the "FAST" direction at Panel 00C024.
4	Check both synchronizing lights for proper operations.  (Cue: Both lights lit brightly at the "6 o'clock position", both lights out at the "12 o'clock position".)	P	Sync lights verified ON at "6 o'clock position" OFF at "12 o'clock position" at Panel 00C024.
*5	Use the auto voltage regulator rheostat to adjust generator voltage so that incoming voltage is slightly higher than running voltage.  (Cue: Incoming voltage meter is reading slightly higher than running voltage.)	P	Auto voltage regulator rheostat adjusted to set incoming voltage slightly higher than running voltage while maintaining generator voltage between 20.9 and 23.1 KV at Panel 00C024.
6	Verify the sync scope is rotating slowly in the "FAST" direction.  (Cue: Sync scope is rotating slowly in the clockwise direction.)	P	Synchroscope verified for rotation - slowly in the "FAST" direction at Panel 00C024.
*7	When the synchroscope is within five degrees (green lines) of the "12 o'clock" position then close the selected breaker.  (Cue: Acknowledge control switch operation.)	P	215 (225) breaker control switch is taken to CLOSE when the synchroscope is within approximately 5 degrees of "12 o'clock" position at Panel 00C024.

STEP NO	STEP	ACT	STANDARD
8	Verify selected breaker is closed.  (Cue: Breaker closed - red light on/green light off, synchroscope stops rotating at the "12 o'clock" position.)	P	Selected breakers red indicating light is verified ON at Panel 00C024.
9	Verify synchroscope pointer at "12 o'clock" position.  (Cue: Synchroscope at "12 o'clock" position and lights off.)	P	Synchroscope pointer verified at "12 o'clock" position at Panel 00C024.
10	Turn off synchroscope for breaker 215 or 225.  (Cue: Acknowledge sync switch operation.)	P	Synchroscope placed in the "OFF" position for breaker 215 or 225 at Panel 00C024.
*11	Pick up load on the generator until all nine bypass valves are closed.  (Cue: All nine bypass valves red lights are off, green lights are on.)	P	The "RAISE" load selector pushbutton is depressed on Panel 00C024 until all nine bypass valve red lights are OFF at Panel 20C008B.
12	Place the remaining breaker's (225 or 215) sync switch to ON.  (Cue: Synchroscope is at the 12 o'clock position. Incoming and running voltages are equal.)	P	Synchroscope key obtained from Panel 00C024 inserted into selected breaker (225 or 215) sync switch and placed in the "ON" position at Panel 00C024.
13	Place the SYNC CHK RELAY BYPASS KEY switch in BYPASS.  (Cue: Acknowledge key switch operation.)	P	Key is obtained from CRS keybox, inserted into the SYNC CHK RELAY BYPASS switch and placed in the "BYPASS" position at Panel 00C024.
14	Verify incoming and running voltage are matched.  (Cue: Incoming and running voltages are equal.)	P	Incoming and running voltage are verified to be matched on the INCOMING and RUNNING voltage meters at Panel 00C024.

STEP NO	STEP	ACT	STANDARD
15	Verify the synchroscope within five degrees (green lines) of the "12 o'clock position".  (Cue: Synchroscope at "12 o'clock" position.)	P	The synchroscope is verified to be within 5 degrees of the "12 o'clock" position, inside the green lines on the meter face at Panel 00C024.
16	Close the selected breaker (225 or 215).  (Cue: Acknowledge breaker control switch operation.)	P	The selected breaker (225 or 215) control switch is placed in the "CLOSED" position.
17	Verify breaker 225 or 215 is closed.  (Cue: Breaker 225 or 215 red light on, green light off, the synchroscope needle is stopped at the 12 o'clock position and sync lights out.)	P	Breaker 225 or 215 red light on, sync scopes stopped at 12 o'clock position and sync lights "OFF" verified at Panel 00C024.
18	Place the 225 or 215 breaker sync switch to OFF.  (Cue: Breaker sync switch is placed in OFF and incoming and running voltage meters drop to 0 volts.)	P	Breaker 225 or 215 sync switch is placed in the OFF position at Panel 00C024.
19	Place the SYNC CHK RELAY BYPASS KEYSWITCH in NORM.  (Cue: Sync chk relay bypass keyswitch is in NORM.)	P	SYNC CHK RELAY BYPASS KEYSWITCH is placed in the NORMAL position at Panel 00C024 and the key is returned to the SSV keybox.
20	Inform the Control Room Supervisor of task completion.  (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.
21	As an evaluator, ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

#### I. TERMINATING CUE

When the Main Generator is synchronized to the grid and load is picked up in accordance with steps 4.11 through 4.24 of procedure SO 50.1.A-2, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. Plant startup in progress with reactor power approximately 16%.**
- 2. All SO 50.1A-2, "Main Generator Synchronizing and Loading" prerequisites are met.**
- 3. Generator terminal voltage is 22 KV with the voltage regulator in automatic mode.**
- 4. Generator ready to be synchronized to grid.**
- 5. Power System Director has been notified.**

## **INITIATING CUE**

**The Control Room Supervisor directs you, the Plant Reactor Operator, to synchronize the Main Generator to the grid and pick up load in accordance with steps 4.11 through 4.24 of SO 50.1.A-2, "Main Generator Synchronizing and Loading".**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>Peach Bottom</b>	<input type="checkbox"/> <b>Limerick</b>	<input type="checkbox"/> <b>Common</b>
---	--	--

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR REQUALIFICATION	<b>CODE #:</b>	PLOR-068C
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	009
<b>AUTHOR:</b>	B. Hennigan	<b>TYPIST:</b>	Mda
<b>TITLE:</b>	RESTORE TBCCW FOLLOWING A LOSS OF BOTH PUMPS		
<b>APPROVALS:</b>			
		Signature / Title	Date
		Signature / Title	Date
		Signature / Title	Date
		Signature / Title	Date
<b>APPROVED FOR USE:</b>			
		Signature / Title	Date
<b>EFFECTIVE DATE:</b> ____ / ____ / ____			

<b>NAME:</b> _____ Last                      First                      M.I.	<b>ISSUE DATE:</b> _____
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>   	
<b>Training Review for Completeness:</b>  _____	<b>PIMS CODE:</b> _____
Signature/Date	<b>PIMS ENTRY:</b> _____

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-068C

REV. NO.: 009

TITLE: Restore TBCCW Following a Loss of Both Pumps

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2740020101 / PLOR-068C

K/A: 2.1.23

URO: 3.9    SRO: 4.0

TASK DESCRIPTION: Restore TBCCW Following a Loss of Both Pumps

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. None

C. REFERENCES

1. SO 34.7.B-2, Rev. 2, "TBCCW System Restoration Following Loss of Both Pumps"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the "A" TBCCW Pump is in "RUN", the "B" TBCCW Pump is in "AUTO", and the RBCCW/TBCCW auto transfer valves reset.
2. Estimated time to complete: 14 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to restore the TBCCW System following a loss of both pumps using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Service Water System in operation supplying cooling water to the "A" TBCCW Heat Exchanger.
2. Both TBCCW pumps have tripped due to a loss of power. 480 VAC power has been restored to both pumps.
3. RBCCW/TBCCW automatic transfer occurred.
4. Sufficient tygon hoses are available to vent TBCCW pumps.

G. INITIATING CUE

The Control Room Supervisor directs you to start the "A" TBCCW pump, place the "B" pump in standby, and reset the system automatic "swapover" valves using SO 34.7.B-2, "TBCCW System Restoration Following Loss of Both Pumps".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure SO 34.7.B-2, "TBCCW System Restoration Following Loss of Both Pumps".	P	A copy of procedure SO 34.7.B-2 "TBCCW System Restoration Following Loss of Both Pumps" is obtained.
2	Direct an equipment operator to vent both TBCCW pump casings.  (Cue: Report that both TBCCW pumps have been vented.)	P	Floor operator directed to vent both TBCCW pump casings.
*3	Start the "A" TBCCW Pump.  (Cue: Acknowledge control switch operation.)	P	"A" TBCCW Pump control switch is placed in the RUN position at panel 20C012.
4	Verify proper start of the "A" TBCCW pump.  (Cue: "A" TBCCW pump red light is on, green light is off, discharge pressure is $\approx 85$ psig on PI-2229.)	P	"A" TBCCW pump red light is verified ON and discharge press is verified stable on PI-2229 at panel 20C012.
5	Direct an equipment operator to verify 60-90 psig discharge pressure.  (Cue: Report that discharge pressure is 88 psig on PI-2220A.)	P	Equipment operator is contacted to verify "A" TBCCW Pump discharge pressure is 60-90 psig on local PI-2220A.
<del>*6</del>	Place The "B" TBCCW pump in AUTO.  (Cue: Acknowledge control switch operation.)	P	"B" TBCCW pump control switch is placed in the "AUTO" position at panel 20C012.
7	Direct Chemistry to sample RBCCW system for activity.  (Cue: Report that activity in RBCCW is $1 \times 10^{-9}$ $\mu$ ci/ml.)	P	Chemistry is contacted to sample RBCCW system for activity.
*8	Reset transfer valves using the TBCCW RESET pushbutton.  (Cue: Acknowledge reset pushbutton operation.)	P	<u>After</u> verifying RBCCW system activity is $\leq 1 \times 10^{-7}$ $\mu$ ci/ml, "TBCCW RESET" pushbutton is momentarily DEPRESSED at panel 20C012.

STEP NO	STEP	ACT	STANDARD
9	Direct an equipment operator to verify AO-2-34-2352, TBCW Return to RBCW 3-Way Air Operated valve and AO-2-34-2354, Emergency Supply To TBCW Essential Loads valve transferred to the TBCCW position.  (Cue: Report that AO-2352 and AO-2354 have transferred to the TBCCW position on local panel N2117.)	S	Equipment operator is contacted to verify AO-2352 and AO-2354 transferred to the TBCCW position.
10	Inform Control Room Supervisor that A TBCCW pump is in service, B pump is in auto and transfer valves are reset.  (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.
11	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

I. TERMINATING CUE

When the "A" TBCCW Pump is in "RUN", the "B" TBCCW Pump is in "AUTO" and the TBCCW/RBCCW transfer valves are reset, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. Service Water System in operation supplying cooling water to the "A" TBCCW Heat Exchanger.**
- 2. Both TBCCW pumps have tripped due to a loss of power. 480 VAC power has been restored to both pumps.**
- 3. RBCCW/TBCCW automatic transfer occurred.**
- 4. Sufficient tygon hoses are available to vent TBCCW pumps.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to start the "A" TBCCW pump, place the "B" pump in standby, and reset the system automatic "swapover" valves using SO 34.7.B-2, "TBCCW System Restoration Following Loss of Both Pumps".**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-NEW2CA
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	000
<b>AUTHOR:</b>	F. J. Bruns	<b>TYPIST:</b>	fjb
<b>TITLE:</b>	PLANT REACTOR OPERATOR RESPONSE TO REACTOR SCRAM (ALTERNATE PATH – SGBT FAILS TO AUTOMATICALLY INITIATE)		

**APPROVALS:**

	Signature / Title	Date

**APPROVED FOR USE:**

	Signature / Title	Date
--	-------------------	------

**EFFECTIVE DATE:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

<b>NAME:</b> _____	<b>ISSUE DATE:</b> _____
Last                      First                      M.I.	
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>	
<b>Training Review for Completeness:</b>	<b>PIMS CODE:</b>
Signature/Date	<b>PIMS ENTRY:</b>

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-NEW2CA

REV. NO.: 000

TITLE: Plant Reactor Operator Response To Reactor Scram (Alternate Path – SBTG Fails To Automatically Initiate)

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2610050101 / PLOR-NEW2CA      K/A: 261000 A2.10  
RO: 3.1      RO: 3.2

TASK DESCRIPTION: Plant Reactor Operator Response to Reactor Scram (Alternate Path – SGBT Fails To Automatically Initiate)

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

1. RRC 94.2-2, Rev. 0, "Plant Reactor Operator Scram Actions"
2. RRC 94.2-2:1, Rev. 0, "PRO Scram Reports"
3. GP-4, Rev. 4, "Manual Reactor Scram"
4. GP-8B, Rev. 17, "PCIS Isolation – Groups II and III"
5. COL GP-8B, Rev. 17, "Groups II and III Isolation"
6. SO 9A.1.C, Rev. 9, "Response To Standby Gas Treatment System Automatic Start"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the trainee has performed all steps required by RRC 94.2-2, "Plant Reactor Operator Scram Actions", and RRC 94.2-2:1, "PRO Scram Reports".
2. Estimated time to complete: 10 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform Plant Reactor Operator scram actions in accordance with the Operations Manual. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. The plant was initially operating at full power when a plant transient occurred.
2. A GP-4 "Manual Reactor Scram" was performed.
3. 13KV House Loads were transferred to the Startup Feed Buses in accordance with RRC 53.1-2.

G. INITIATING CUE

The Control Room Supervisor directs you to perform the Plant Reactor Operator scram actions in accordance with the Rapid Response Procedures.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD																																																																																																						
1	Verify Main Turbine is tripped. (Cue: Tripped light is ON, Reset light is OFF; Master Trip Solenoid Test Lights A and B are OFF.)	P	Main Turbine Tripped light is verified ON and Reset light is verified OFF at Panel 20C80A; Master Trip Solenoid Test Lights A and B are verified OFF at Panel 20C08B.																																																																																																						
2	Verify Main Generator lockout. (Cue: Main Generator output breakers and Alt Exc Fld Bkr green lights are ON, red lights are OFF. Annunciators 220 B-1 and 220 B-2 are lit.)	P	Main Generator output breakers and Alt Exc Fld Bkr green lights are verified ON, red lights are verified OFF at Panel 00C009.																																																																																																						
*3	Verify Group I, II, and III isolations and SBGT initiation, as applicable. (Cue: All Group II and III isolation valves' green lights are ON, red lights are OFF at Panel 20C003. The following conditions exist at Panel 20C012:)  <table border="0" data-bbox="277 1081 826 1915"> <thead> <tr> <th><u>Damper / Fan</u></th> <th><u>Green</u></th> <th><u>Red</u></th> </tr> </thead> <tbody> <tr><td>PO-20465</td><td>ON</td><td>OFF</td></tr> <tr><td>PO-20466</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20469-1</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20469-2</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20470-1</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20470-2</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20453</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20461</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20462</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20452</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20458</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20463</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20464</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20457</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20467</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20468</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20475-1</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20475-2</td><td>ON</td><td>OFF</td></tr> <tr><td>AO-20476-1</td><td>OFF</td><td>ON</td></tr> <tr><td>AO-20476-2</td><td>OFF</td><td>ON</td></tr> <tr><td>SBGT Fan 'A'</td><td>ON</td><td>OFF</td></tr> <tr><td>SBGT Fan 'B'</td><td>OFF</td><td>ON</td></tr> </tbody> </table>	<u>Damper / Fan</u>	<u>Green</u>	<u>Red</u>	PO-20465	ON	OFF	PO-20466	OFF	ON	AO-20469-1	ON	OFF	AO-20469-2	OFF	ON	AO-20470-1	ON	OFF	AO-20470-2	OFF	ON	AO-20453	OFF	ON	AO-20461	OFF	ON	AO-20462	ON	OFF	AO-20452	ON	OFF	AO-20458	OFF	ON	AO-20463	OFF	ON	AO-20464	ON	OFF	AO-20457	ON	OFF	AO-20467	OFF	ON	AO-20468	ON	OFF	AO-20475-1	ON	OFF	AO-20475-2	ON	OFF	AO-20476-1	OFF	ON	AO-20476-2	OFF	ON	SBGT Fan 'A'	ON	OFF	SBGT Fan 'B'	OFF	ON	P	Determine Group II and III isolations should have occurred due to low RPV water level.  PCIS Group II and III isolation status is verified at panel 20C003-01, SBGT system status is verified at panel 20C012.  Recognize SBGT Fan 'A' failed to start and the following Reactor Building Ventilation dampers failed to reposition:  <table border="0" data-bbox="1015 1223 1585 1617"> <thead> <tr> <th><u>Damper / Fan</u></th> <th><u>Required</u></th> <th><u>Actual</u></th> </tr> </thead> <tbody> <tr><td>PO-20465</td><td>OPEN</td><td>CLOSED</td></tr> <tr><td>AO-20469-1</td><td>OPEN</td><td>CLOSED</td></tr> <tr><td>AO-20470-1</td><td>OPEN</td><td>CLOSED</td></tr> <tr><td>AO-20453</td><td>CLOSED</td><td>OPEN</td></tr> <tr><td>AO-20461</td><td>CLOSED</td><td>OPEN</td></tr> <tr><td>AO-20458</td><td>CLOSED</td><td>OPEN</td></tr> <tr><td>AO-20463</td><td>CLOSED</td><td>OPEN</td></tr> <tr><td>AO-20467</td><td>CLOSED</td><td>OPEN</td></tr> <tr><td>AO-20475-1</td><td>OPEN</td><td>CLOSED</td></tr> <tr><td>AO-20475-2</td><td>OPEN</td><td>CLOSED</td></tr> </tbody> </table>	<u>Damper / Fan</u>	<u>Required</u>	<u>Actual</u>	PO-20465	OPEN	CLOSED	AO-20469-1	OPEN	CLOSED	AO-20470-1	OPEN	CLOSED	AO-20453	CLOSED	OPEN	AO-20461	CLOSED	OPEN	AO-20458	CLOSED	OPEN	AO-20463	CLOSED	OPEN	AO-20467	CLOSED	OPEN	AO-20475-1	OPEN	CLOSED	AO-20475-2	OPEN	CLOSED
<u>Damper / Fan</u>	<u>Green</u>	<u>Red</u>																																																																																																							
PO-20465	ON	OFF																																																																																																							
PO-20466	OFF	ON																																																																																																							
AO-20469-1	ON	OFF																																																																																																							
AO-20469-2	OFF	ON																																																																																																							
AO-20470-1	ON	OFF																																																																																																							
AO-20470-2	OFF	ON																																																																																																							
AO-20453	OFF	ON																																																																																																							
AO-20461	OFF	ON																																																																																																							
AO-20462	ON	OFF																																																																																																							
AO-20452	ON	OFF																																																																																																							
AO-20458	OFF	ON																																																																																																							
AO-20463	OFF	ON																																																																																																							
AO-20464	ON	OFF																																																																																																							
AO-20457	ON	OFF																																																																																																							
AO-20467	OFF	ON																																																																																																							
AO-20468	ON	OFF																																																																																																							
AO-20475-1	ON	OFF																																																																																																							
AO-20475-2	ON	OFF																																																																																																							
AO-20476-1	OFF	ON																																																																																																							
AO-20476-2	OFF	ON																																																																																																							
SBGT Fan 'A'	ON	OFF																																																																																																							
SBGT Fan 'B'	OFF	ON																																																																																																							
<u>Damper / Fan</u>	<u>Required</u>	<u>Actual</u>																																																																																																							
PO-20465	OPEN	CLOSED																																																																																																							
AO-20469-1	OPEN	CLOSED																																																																																																							
AO-20470-1	OPEN	CLOSED																																																																																																							
AO-20453	CLOSED	OPEN																																																																																																							
AO-20461	CLOSED	OPEN																																																																																																							
AO-20458	CLOSED	OPEN																																																																																																							
AO-20463	CLOSED	OPEN																																																																																																							
AO-20467	CLOSED	OPEN																																																																																																							
AO-20475-1	OPEN	CLOSED																																																																																																							
AO-20475-2	OPEN	CLOSED																																																																																																							

STEP NO	STEP	ACT	STANDARD
<p>**** NOTE ****</p> <p><b>Examinee may obtain a copy of SO 9A.1.C to isolate Reactor Building Ventilation and place Standby Gas Treatment in service.</b></p>			
4	Open PO-20465, "Exh to Stby Gas Treat Equip Cell".  (Cue: PO-20465 green light is OFF, red light is ON.)	P	At Panel 20C012, PO-20465 control switch placed in OPEN, green light verified OFF and red light verified ON.
5	Open AO-20469-1, "D/W Rx Bldg Equip Exh".  (Cue: AO-20469-1 green light is OFF, red light is ON.)	P	At Panel 20C012, AO-20469-1 control switch placed in OPEN, green light verified OFF and red light verified ON.
6	Open AO-20470-1, "Refuel Flr. Exh".  (Cue: AO-20470-1 green light is OFF, red light is ON.)	P	At Panel 20C012, AO-20470-1 control switch placed in OPEN, green light verified OFF and red light verified ON.
*7	Close AO-20453, "Ventilation Supply Refuel".  (Cue: AO-20453 green light is ON, red light is OFF.)	P	At Panel 20C012, AO-20453 control switch placed in CLOSE, green light verified ON and red light verified OFF.
*8	Close AO-20461, "Ventilation Exhaust Refuel".  (Cue: AO-20461 green light is ON, red light is OFF.)	P	At Panel 20C012, AO-20461 control switch placed in CLOSE, green light verified ON and red light verified OFF.
*9	Close AO-20458, "Ventilation Supply Rx Bldg".  (Cue: AO-20458 green light is ON, red light is OFF.)	P	At Panel 20C012, AO-20458 control switch placed in CLOSE, green light verified ON and red light verified OFF.
*10	Close AO-20463, "Ventilation Exhaust Rx Bldg".  (Cue: AO-20463 green light is ON, red light is OFF.)	P	At Panel 20C012, AO-20463 control switch placed in CLOSE, green light verified ON and red light verified OFF.

STEP NO	STEP	ACT	STANDARD
*11	Close AO-20467, "Ventilation Exhaust Equip Cell".  (Cue: AO-20467 green light is ON, red light is OFF.)	P	At Panel 20C012, AO-20467 control switch placed in CLOSE, green light verified ON and red light verified OFF.
12	Open AO-00475-1, "Standby Gas Treatment A Filter Inlet".  (Cue: AO-00475-1 green light is OFF, red light is ON.)	P	At Panel 20C012, AO-00475-1 control switch placed in OPEN, green light verified OFF and red light verified ON.
13	Open AO-00475-2, "Standby Gas Treatment A Filter Outlet".  (Cue: AO-00475-2 green light is OFF, red light is ON.)	P	At Panel 20C012, AO-00475-2 control switch placed in OPEN, green light verified OFF and red light verified ON.
14	Start SBTG Fan 'A'.  (Cue: SBTG Fan 'A' green light is OFF, red light is ON.)	P	At Panel 20C012, SBTG Fan 'A' control switch placed in RUN, green light verified OFF and red light verified ON.
15	Verify scram discharge volume vents and drains are closed.  (Cue: SDV vent and drain green valve position lights are ON, red valve position lights are OFF.)	P	SDV vents and drains are verified closed as indicated at panel 20C005A or 20C003-01.
16	Verify Hydrogen Water Chemistry is isolated.  (Cue: FR-8629 flow is 0 scfm.)	P	Hydrogen flow is verified to be at 0 scfm on FR-8629 at panel 20C006A.
17	Verify both Recirc Pumps speed have runback to 30%.  (Cue: A and B Recirc MG set generator speed is 20% on SPI-2-02-184-016A and B.)	P	Due to the GP-4 Manual Scram, A and B Recirc MG set generator speed is verified to be 20% on SPI-2-02-184-016A and B at panel 20C004A.

STEP NO	STEP	ACT	STANDARD
18	Monitor Instrument Air header pressure and Drywell pressure.  (Cue: Drywell pressure is .3 psig, instrument air header pressure is 105 psig.)	P	Instrument Air header pressure on PI-2425A(B) at panel 20C012 is verified to be greater than Drywell pressure on PR-2508 at Panel 20C003-03, or computer point M026.
<b>**** NOTE ****</b>  <b>IF the examinee does <u>NOT</u> report scram actions, <u>THEN</u> inform the examinee that you (the CRS) are ready for his/her scram action report.</b>			
19	Report the following to the CRS: <ul style="list-style-type: none"> <li>• House loads transferred</li> <li>• Main Turbine is tripped</li> <li>• Main Generator is locked out</li> <li>• Group II and III isolations complete and SGTS is initiated; some Reactor Building ventilation dampers were manually aligned and SGBT Fan 'A' was manually started</li> <li>• SDV Vents and Drains are closed</li> <li>• Hydrogen Water Chemistry is isolated</li> <li>• Recirc pump speeds are 20%</li> <li>• Instrument Air header pressure is greater than Drywell pressure</li> </ul> (Cue: CRS is informed.)	P	CRS informed that: <ul style="list-style-type: none"> <li>• House loads transferred</li> <li>• Main Turbine is tripped</li> <li>• Main Generator is locked out</li> <li>• Group II and III isolations complete with SGTS in service; some Reactor Building ventilation dampers were manually aligned and SGBT Fan 'A' was manually started</li> <li>• SDV Vents and Drains are closed</li> <li>• Hydrogen Water Chemistry is isolated</li> <li>• Recirc pump speeds are 20%</li> <li>• Instrument Air header pressure is greater than Drywell pressure</li> </ul>
20	Inform Control Room Supervisor of task completion.  (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.
21	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

1. TERMINATING CUE

When all steps required by RRC 94.2-2, "Plant Reactor Operator Scram Actions", and RRC 94.2-2:1, "PRO Scram Reports", are complete, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. The plant was initially operating at full power when a plant transient occurred.**
- 2. A GP-4 "Manual Reactor Scram" was performed.**
- 3. 13KV House Loads were transferred to the Startup Feed Buses in accordance with RRC 53.1-2.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to perform the Plant Reactor Operator scram actions in accordance with the Rapid Response Procedures.**

**EXELON NUCLEAR**  
Nuclear Generation Group

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
-------------------------------------	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-316PA
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	003
<b>AUTHOR:</b>	R. W. Long	<b>TYPIST:</b>	gwz
<b>TITLE:</b>	LOW CRD SCRAM AIR HEADER PRESSURE - UNIT 3 (ALTERNATE PATH - STANDBY REGULATOR MUST BE PLACED IN SERVICE)		

**APPROVALS:**

	Signature / Title	Date

**APPROVED FOR USE:**

	Signature / Title	Date
--	-------------------	------

EFFECTIVE DATE: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

<b>NAME:</b> _____ <div style="display: flex; justify-content: space-between; font-size: small;"> <span>Last</span> <span>First</span> <span>M.I.</span> </div>	<b>ISSUE DATE:</b> _____				
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____				
<b>COMMENTS:</b>   					
<b>Training Review for Completeness:</b>  <hr style="width: 80%; margin-left: 0;"/> <p align="center">Signature/Date</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"><b>PIMS CODE:</b></td> <td style="width:50%;"></td> </tr> <tr> <td><b>PIMS ENTRY:</b></td> <td></td> </tr> </table>	<b>PIMS CODE:</b>		<b>PIMS ENTRY:</b>	
<b>PIMS CODE:</b>					
<b>PIMS ENTRY:</b>					

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-316PA

REV. NO.: 003

TITLE: Low CRD Scram Air Header Pressure - Unit 3 (Alternate Path - Standby Regulator Must be Placed In Service)

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2001500401/ PLOR-316PA K/A: 201001A2.09

URO: 3.2 SRO: 3.1

TASK DESCRIPTION: Low CRD Scram Air Header Pressure - Unit 3 (Alternate Path - Standby Regulator Must be Placed In Service)

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

Procedure ON-108, Rev. 6, "Low CRD Scram Air Header Pressure"

D. TASK STANDARD

1. Satisfactory task completion is indicated when Unit 3 scram air header PCV-5239A is in service and PCV-5239B has been removed from service.
2. Estimated time to complete: 14 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps of ON-108, "Low CRD Scram Air Header Pressure" procedure. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Unit 3 is operating at full power steady state conditions.
2. "SCRAM VALVE PILOT AIR HEADER PRESS HI-LO" annunciator is up on alarm panel 311 D-2.
3. The cause of low scram air header pressure condition is NOT caused by a loss of the Instrument Air system.
4. Scram air header PCV-5239B is presently in service.

G. INITIATING CUE

The Control Room Supervisor directs you to restore the Unit 3 CRD scram air header pressure to approximately 73 psig per procedure ON-108, "Low CRD Scram Air Header Pressure".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure ON-108.	S/P	A copy of procedure ON-108 is obtained.
2	Verify low scram air header pressure locally on PI-3-03-229 at CRD flow nest OR on PI-3-03-312 on Panel 30C124.  (Cue: PI-3-3-229 indicates 63 psig. If the control room is called, report that PI-3-03-312 indicates 63 psig.)	P	Scram air header pressure is monitored on PI-3-3-229 or PI-3-03-312.
3	Check normal operation of the in-service scram air header pressure control regulator by observing loading pressure of approximately 80 psig and control pressure of approximately 75 psig on PCR-3-03-31688B pressure control regulator for PCV-5239B.  (Cue: Loading pressure is approximately 80 psig, control pressure is 63 psig.)	P	Loading Pressure and control pressure is monitored on PCR-3-03-31688B.
*4	Adjust PCR knob (red knob) clockwise to raise scram air header pressure to 67 to 75 psig on PI-3-03-229.  (Cue: Red knob on PCR-3-03-31688B is turned (clockwise) until it will not turn further, PI-3-3-229 {PI-3-03-312} indicates 65 psig. If asked, Loading pressure is 80 psig and Control Pressure is 65 psig.)	S	PCR-3-03-31688B red knob is turned clockwise while observing PI-3-3-229 until the knob will not turn further.
<b>****NOTE****</b>  <b>If requested the evaluator will serve as the second equipment operator to monitor pressure.</b>			
*5	Open HV-3-3-31681A, Instr Air Inlet Block Vv to PCV-3-03-5239A.  (Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)	S	HV-3-3-31681A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.

STEP NO	STEP	ACT	STANDARD
*6	<p>Open HV-3-3-31682A, Instr Air Outlet Block Vv from PCV-3-03-5239A.</p> <p>(Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)</p>	S	HV-3-3-31682A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.
*7	<p>Open HV-3-3-31686A, Instr Air Back Pressure to PCV-5239A.</p> <p>(Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)</p>	S	HV-3-3-31686A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.
*8	<p>Open HV-3-3-31685A, Instrument Air Block Valve to PCV-5239A.</p> <p>(Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)</p> <p>(Cue: If asked for any of the following pressures, then give the respective following indication(s):</p> <p>PI-3-3-229 / PI-3-03-312 (Scram Air Header Pressure) indicates ~ 65 psig</p> <p>Loading pressure indicates ~ 80 psig</p> <p>Control pressure indicates ~ 63 psig)</p>	S	HV-3-3-31685A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.

STEP NO	STEP	ACT	STANDARD
*9	<p>Adjust scram air header pressure to between 67 and 75 psig using the red knob [turned Clockwise] on PCR-3-03-31688A.</p> <p>(Cue: Red knob on PCR-3-03-31688A is adjusted. If asked for any of the following pressures, then give the respective following indication:</p> <p>PI-3-3-229 / PI-3-03-312 {Scram Air Header Pressure} indicates {rising pressure as red knob is turned in the clockwise direction until} ~ 73 psig</p> <p>Loading pressure indicates ~ 80 psig</p> <p>Control pressure indicates {rising pressure as red knob is turned in the clockwise direction until} ~ 75 psig)</p>	S	PCR-3-03-31688A is manipulated [turned Clockwise] to adjust scram air header pressure monitored on PI-3-03-229.
10	<p>Close HV-3-3-31685B, Instrument Air Block Valve to PCV-5239B.</p> <p>(Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn.)</p>	S	HV-3-3-31685B handwheel is turned CLOCKWISE until resistance of valve seat is felt.
11	<p>Close HV-3-3-31686B, Instr Air Back Pressure to PCV-5239B.</p> <p>(Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn.)</p>	S	HV-3-3-31686B handwheel is turned CLOCKWISE until resistance of valve seat is felt.
12	<p>Close HV-3-3-31681B, Instr Air Inlet Block Vv to PCV-5239B.</p> <p>(Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn further.)</p>	S	HV-3-3-31681B handwheel is turned CLOCKWISE until resistance of valve seat is felt.

STEP NO	STEP	ACT	STANDARD
13	<p>Close HV-3-3-31682B, Instr Air Outlet Block Vv from PCV-5239B.</p> <p>(Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn.)</p>	S	HV-3-3-31682B handwheel is turned CLOCKWISE until resistance of valve seat is felt.
14	<p>Verify proper operation of the standby scram air header PCR, PCR-3-03-31688A "Pressure Control Regulator for PCV-5239A" by observing Loading Pressure of approximately 80 psig and Control Pressure of 75 psig.</p> <p>(Cue: Loading pressure is approximately 80 psig, Control Pressure is 75 psig.)</p>	P	Loading Pressure and Control Pressure is monitored on PCR-3-03-31688A.
15	<p>Verify scam air header pressure on PI-3-03-229 at the CRD flow nest OR on PI-3-03-312 on Panel 30C124 is satisfactory (67 to 75 psig).</p> <p>(Cue: Scram air header pressure is 73 psig on PI-3-03-229 / PI-3-03-312.)</p>	P	Scram air header pressure is monitored on PI-3-03-229 / PI-3-03-312.
16	<p>Inform Control Room of task completion.</p> <p>(Cue: Control Room acknowledges report.)</p>	S	Task completion reported using telephone, hand held radio or GAI-TRONICS page system.
17	<p>As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.</p>	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

I. TERMINATING CUE

When Unit 3 scram air header PCV-5239A is in service and PCV-5239B has been removed from service, the Control Room Supervisor should be informed. The evaluator may then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. Unit 3 is operating at full power steady state conditions.**
- 2. "SCRAM VALVE PILOT AIR HEADER PRESS HI-LO" annunciator is up on alarm panel 311 D-2.**
- 3. The cause of low scram air header pressure condition is NOT caused by a loss of the Instrument Air system.**
- 4. Scram air header PCV-5239B is presently in service.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to restore the Unit 3 CRD scram air header pressure to approximately 73 psig per procedure ON-108, "Low CRD Scram Air Header Pressure".**

**EXELON NUCLEAR**  
**Nuclear Generation Group**

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>Peach Bottom</b>	<input type="checkbox"/> <b>Limerick</b>	<input type="checkbox"/> <b>Common</b>
---	--	--

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-086P
<b>COURSE</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	011
<b>AUTHOR:</b>	R. W. Long	<b>TYPIST:</b>	Mda
<b>TITLE:</b>	DEFEATING RCIC LOW PRESSURE ISOLATIONS – UNIT 3		
<b>APPROVALS:</b>			
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
<b>APPROVED FOR USE:</b>	_____	Signature / Title	_____
			Date
<b>EFFECTIVE DATE:</b> ____ / ____ / ____			

<b>NAME:</b> _____	<b>SOC. SEC. NO.</b> _____
Last                      First                      M.I.	
<b>ISSUE DATE:</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>	
<b>PIMS CODE:</b>	
<b>PIMS ENTRY:</b>	

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-086P

REV. NO.: 011

TITLE: Defeating RCIC Low Pressure Isolations – Unit 3

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2004510599 / PLOR-086P

K/A: 295031EA1.05

URO: 4.3 SRO: 4.3

TASK DESCRIPTION: Defeating RCIC Low Pressure Isolation – Unit 3

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. T-225 Tool Package
2. EOP Tool Locker Key

C. REFERENCES

1. T-225-3, Rev. 3, "Defeating RCIC Low Pressure Isolation"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the RCIC low pressure isolation is defeated.
2. Estimated time to complete: 10 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to defeat the RCIC low pressure isolation, using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. A transient has occurred on Unit 3.
2. Use of this procedure has been directed by the T-100 procedures.

G. INITIATING CUE

The Control Room Supervisor directs you to perform steps 4.1 and 4.2 of T-225-3, "Defeating RCIC Low Pressure Isolation".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
*1	Obtain the key for the Emergency Operating Procedure Tool Locker.  (Cue: When examinee requests EOP Tool Locker key from WECS <u>OR</u> examinee identifies the location of the WECS key box and its associated key then evaluator should provide the EOP Tool Locker key.)	S	Emergency Operating Procedure Tool Locker Key requested from WECS <u>OR</u> examinee identifies the location of the WECS key box and its associated key.
*2	Open Emergency Operating Procedure Tool Locker and obtain T-225 Tool Kit.  (Cue: Equipment obtained.)	P	Tool Locker located on Radwaste Building El. 165' is unlocked, opened and T-225 Tool Kit is located.
<p><b>****NOTE****</b></p> <p><b>When examinee locates tool kit, inform him that he now has the tools to perform the procedure. Provide the examinee with a copy of the T-200 procedure which corresponds to the tool kit that has been chosen. <u>DO NOT</u> allow equipment to be removed from the locker. Relock the locker before leaving the area.</b></p>			
*3	Open panel 30C33 back panel doors.  (Cue: Panel 30C33 doors are open.)	P	Door handle turned, doors pulled outward to gain access to terminal strip BB at back of panel 30C33 in the Cable Spreading Room.
*4	Lift leads BG-13 and UV-C from terminal BB-45.  (Cue: Leads are lifted.)	S	Terminal screw is turned COUNTERCLOCKWISE until loose. The terminal screw is removed with a "CAPTURE" screwdriver, then the leads are removed.
5	Tape leads BG-13 and UV-C.  (Cue: Leads are taped.)	S	Tape is wrapped around end of each lead ensuring no metal is exposed.
6	Close panel 30C33 back panel doors.  (Cue: Panel 30C33 doors are closed and latched.)	P	Door closed and relatched using handle.
*7	Open panel 30C34 back panel doors.  (Cue: Panel 30C34 doors are open.)	P	Door handle turned, doors pulled outward to gain access to terminal strip BB at back of panel 30C34 in the Cable Spreading Room.

STEP NO	STEP	ACT	STANDARD
*8	Lift leads AA-59 and ACA-13 from terminal BB-69.  (Cue: Leads are lifted.)	S	Terminal screw is turned COUNTERCLOCKWISE until loose. The terminal screw is removed with a "CAPTURE" screwdriver, then the leads are removed.
9	Tape leads AA-59 and ACA-13.  (Cue: Leads are taped.)	S	Tape is wrapped around end of each lead ensuring no metal is exposed.
10	Close panel 30C34 back panel doors.  (Cue: Panel 30C34 doors are closed and latched.)	P	Doors are closed and relatched using handle.
11	Inform Control Room of task completion.  (Cue: Control Room acknowledges report.)	S	Task completion reported using telephone or GAI-TRONICS page system.  NOTE: Hand held radios are <u>NOT</u> to be used in the Cable Spreading Room.
12	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established.

Under "ACT" P - must perform  
S - must simulate

#### I. TERMINATING CUE

When the low pressure isolation for RCIC is defeated, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. A transient has occurred on Unit 3.**
- 2. Use of this procedure has been directed by the T-100 procedures.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to perform steps 4.1 and 4.2 of T-225-3, "Defeating RCIC Low Pressure Isolation".**

**EXELON NUCLEAR**  
**Nuclear Generation Group**

**OJT/TPE MATERIAL COVERSHEET**

<input checked="" type="checkbox"/> <b>X</b>	<b>Peach Bottom</b>	<input type="checkbox"/>	<b>Limerick</b>	<input type="checkbox"/>	<b>Common</b>
--	---------------------	--------------------------	-----------------	--------------------------	---------------

<b>TYPE:</b>	<input checked="" type="checkbox"/> JPM	<input type="checkbox"/> QUALIFICATION MANUAL	<input type="checkbox"/> OJT MODULE
<b>PROGRAM:</b>	LICENSED OPERATOR TRAINING	<b>CODE #:</b>	PLOR-049P
<b>COURSE:</b>	LICENSED OPERATOR REQUALIFICATION	<b>REV #:</b>	015
<b>AUTHOR:</b>	R. W. Long	<b>TYPIST:</b>	mda
<b>TITLE:</b>	DIESEL GENERATOR AIR START SOLENOID OVERRIDE		
<b>APPROVALS:</b>			
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
	_____	Signature / Title	_____
			Date
<b>APPROVED FOR USE:</b>			
	_____	Signature / Title	_____
			Date
<b>EFFECTIVE DATE:</b> ____ / ____ / ____			

<b>NAME:</b> _____	<b>ISSUE DATE:</b> _____
Last                      First                      M.I.	
<b>SOC. SEC. NO.</b> _____	<b>COMPLETION DATE:</b> _____
<b>COMMENTS:</b>	
<b>Training Review for Completeness:</b>	<b>PIMS CODE:</b>
_____	_____
Signature/Date	<b>PIMS ENTRY:</b>
	_____

TEMPORARY CHANGE FORM LOG

CODE NO.: PLOR-049P

REV. NO.: 015

TITLE: Diesel Generator Air Start Solenoid Override

TCF #	TCF DATE	CHANGED SECTION #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

EXELON NUCLEAR  
PEACH BOTTOM ATOMIC POWER STATION  
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2640010401/ PLOR-049P

K/A: 264000A2.10

URO: 3.9 SRO: 4.2

TASK DESCRIPTION: Diesel Generator Air Start Solenoid Override

A. NOTES TO EVALUATOR:

1. An asterisk (\*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.
2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.
3. JPM Performance
  - a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).
  - b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.
4. Satisfactory performance of this JPM is accomplished if:
  - a. The task standard is met.
  - b. JPM completion time requirement is met.
    - 1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.
    - 2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.
5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

Procedure AO 52A.2 Rev. 4, "Diesel Generator Air Start Solenoid Override"

D. TASK STANDARD

1. Satisfactory task completion is indicated when E-2 Diesel Generator has been started by overriding one of the air start solenoid valves.
2. Estimated time to complete: 15 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to start the E-2 Diesel Generator by overriding one of the air start solenoid valves using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. A loss of coolant accident has occurred.
2. E-2 Diesel Generator failed to start.
3. Investigation reveals that both E-2 Diesel Generator air start solenoid valve coils have failed.
4. The prerequisites of procedure AO 52A.2 "Diesel Generator Air Start Solenoid Override" have been met.

G. INITIATING CUE

The Control Room Supervisor directs you to perform AO 52A.2 "Diesel Generator Air Start Solenoid Override" up to and including step 4.4 for the E-2 Diesel Generator.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure AO 52A.2.	P	A copy of procedure AO 52A.2 is obtained.
*2	Reset the E-2 diesel generator control circuitry.  (Cue: RESET pushbutton has been depressed.)	S	"RESET" pushbutton is momentarily DEPRESSED at the E-2 diesel gauge panel.
3	Verify the E-2 D/G start failure lockout relay is reset.  (Cue: Annunciator C-2, "START FAILURE" on panel OBC097 is not lit.)	P	Annunciator C-2, "START FAILURE" is verified clear at panel OBC097.
*4	Override SV-0-52C-7233B <u>OR</u> SV-0-52C-7234B.  (Cue: Air flow is heard, EDG engine speed increases rapidly to a steady RPM, heat is felt coming from exhaust manifold.)	S	SV-0-52C-7233B Manual Override handle <u>OR</u> SV-0-52C-7234B Manual Override handle is turned clockwise to mechanical stop.
*5	Turn SV-0-52C-7233B <u>OR</u> SV-0-52C-7234B fully counter clockwise to the mechanical stop.  (Cue: Air flow heard in previous step stops.)	S	SV-0-52C-7233B <u>OR</u> SV-0-52C-7234B handle is turned counterclockwise to mechanical stop.
6	Request Control Room operator verify cooling water flow is started to E-2 Diesel Generator.  (Cue: "A" ESW pump is running with discharge pressure indication of 52 psig.)	S	Control Room operator is requested to verify cooling water flow is started to E-2 Diesel Generator using radio or GAI-TRONICS page system.
7	Inform the Control Room of task completion.  (Cue: Control Room acknowledges report.)	S	Task completion reported using hand held radio or GAI-TRONICS page system.

STEP NO	STEP	ACT	STANDARD
8	As an evaluator ensure you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) <u>AND</u> procedures.	P	Positive control established

Under "ACT" P - must perform  
S - must simulate

I. TERMINATING CUE

When AO 52A.2 has been completed up to and including Step 4.4, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

## **TASK CONDITIONS/PREREQUISITES**

- 1. A loss of coolant accident has occurred.**
- 2. E-2 Diesel Generator failed to start.**
- 3. Investigation reveals that both E-2 Diesel Generator air start solenoid valve coils have failed.**
- 4. The prerequisites of procedure AO 52A.2 "Diesel Generator Air Start Solenoid Override" have been met.**

## **INITIATING CUE**

**The Control Room Supervisor directs you to perform AO 52A.2 "Diesel Generator Air Start Solenoid Override" up to and including step 4.4 for the E-2 Diesel Generator.**