

INITIAL SUBMISSION OF THE WALKTHROUGH JPMS

FOR THE PALISADES EXAMINATION - DECEMBER 2001

Facility: PALISADES		Date of Examination: DEC 2001	
Exam Level: RO		Operating Test No.: 1	
B.1 Control Room Systems			
System / JPM Title		Type Code*	Safety Function
a.	Rotate Instrument Air Compressors	NSA	8
b.	Synch to Grid	MSL	4
c.	Emergency Borate	MSA	1
d.	Raise SIT Pressure (IPE)	MSA	2
e.	Raise RIA-0707 High Rad Trip Setpoint	DS	7
f.	Open PZR PORV Isolation Valves	NS	3
g.	Transfer Bus 1C from D/G to S/G Transformer	MS	6
B.2 Facility Walk-Through			
a.	Manually Start P-9A	NLA	8
b.	Secure from WGDT Release	NR	9
c.	Restore Power to D-11A from Sta. Battery #1	DL	6
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA			

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.1-1

TITLE: Rotate Instrument Air Compressors

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Rotate Instrument Air Compressors

Alternate Path: When Instrument Air compressors are rotated, the jacket service water outlet temperature TI-0806 will be out-of-spec high. This will require alternate actions to be directed (adjust Jacket Cooling Water Bypass Valve MV-SW128) to ensure adequate cooling to the compressor which has just been placed in-service.

Facility JPM #: NEW

K/A: 078K4.01 Importance: SRO: 2.9 RO: 2.7

K/A Statement: Knowledge of IAS design features/interlocks which provide for manual/automatic transfers of control.

Task Standard: Instrument Air System pressure is restored to normal.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: SOP-19, Instrument Air System
ONP-7.1, Loss of Instrument Air

Validation Time: 18 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT UNSAT

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is at full power. Instrument Air Compressor C-2B is in service. C-2A and C-2C are in AUTO.

INITIATING CUES:

You have been directed to rotate Instrument Air Compressors by placing C-2A and C-2C in service, and securing C-2B and placing it in AUTO, per SOP-19.

START TIME: _____

STEP / STANDARD		Grading
<p>Step 1: Obtains current procedure.</p> <p>Standard: Obtains copy of SOP-19 and refers to Section 7.2.4.b</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>	
<p>Step 2: Start C-2A per Section 7.2.1.i</p> <p>Standard: Places handswitch for C-2A to HAND. Observes RED light ON and GREEN light OFF.</p> <p>Notes: CRITICAL STEP to start air compressor.</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>	
<p>Step 3: Verify Cooling Water Solenoid Valve opens</p> <p>Standard: Directs AO to check for cooling water flow by observing Cooling Water Flow Indicator FI-0801 for C-2A.</p> <p>Notes: Cue: AO reports FI-0801 indicates cooling water flow. CRITICAL STEP to ensure cooling water flow.</p> <p>Comments: This step may be done AFTER C-2C is started.</p>	<p>S____</p> <p>U____</p>	

STEP / STANDARD		Grading
<p>Step 4: Observe for unusual noise or temperature</p> <p>Standard: Directs AO to observe C-2A for any unusual noise or temperature.</p> <p>Notes: Cue: AO reports no unusual noise or temperature for C-2A.</p> <p>Comments: <i>This step may be done AFTER C-2C is started.</i></p>	<p>S____</p> <p>U____</p>	
<p>Step 5: Ensure prescribed jacket service water outlet temperature.</p> <p>Standard: Directs AO to verify jacket service water outlet temperature TI-0806 is between 110°F and 130°F.</p> <p>Notes: Cue: (After approx. one minute) AO reports C-2A jacket service water outlet temperature indicates 112°F.</p> <p>Comments: <i>This step may be done AFTER C-2C is started.</i></p>	<p>S____</p> <p>U____</p>	
<p>Step 6: Start C-2C per Section 7.2.1.</p> <p>Standard: Places handswitch for C-2C to HAND. Observes RED light ON and GREEN light OFF.</p> <p>Notes: <i>CRITICAL STEP to start air compressor.</i></p> <p>Comments:</p>	<p>S____</p> <p>U____</p>	

STEP / STANDARD		Grading
<p>Step 7: Verify Cooling Water Solenoid Valve opens</p> <p>Standard: Directs AO to check for cooling water flow by observing Cooling Water Flow Indicator FI-0803 for C-2c.</p> <p>Notes: Cue: AO reports FI-0803 indicates cooling water flow.</p> <p><i>CRITICAL STEP to ensure cooling water flow.</i></p>	<p>S ____</p> <p>U ____</p>	
<p>Step 8: Observe for unusual noise or temperature</p> <p>Standard: Directs AO to observe C-2C for any unusual noise or temperature.</p> <p>Notes: Cue: AO reports no unusual noise or temperature for C-2C.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 9: Ensure prescribed jacket service water outlet temperature.</p> <p>Standard: Directs AO to verify jacket service water outlet temperature TI-0808 is between 110°F and 130°F.</p> <p>Notes: Cue: (After ~ one minute) AO reports C-2C jacket service water outlet temperature indicates 132°F.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD	Grading
<p>Step 11: Ensures adequate cooling to compressor C-2C.</p> <p>Standard: Directs AO to adjust MV-SW130 to obtain adequate cooling to C-2C per step h and I.</p> <p>Notes: Cue: (After one minute) AO reports that MV-SW130 was adjusted and that TI-0808 now indicates 116°F.</p> <p>Comments: <i>CRITICAL STEP to ensure compressor has adequate cooling.</i></p>	<p>S _____</p> <p>U _____</p>
<p>Step 12: Stop C-2B.</p> <p>Standard: Places C-2B handswitch to OFF and observes RED light OFF and GREEN light ON.</p> <p>Notes:</p> <p>Comments:</p>	<p>S _____</p> <p>U _____</p>
<p>Step 13: Restore C-2B controls to AUTO.</p> <p>Standard: Places C-2B control switch to AUTO.</p> <p>Notes:</p> <p>Comments: <i>CRITICAL STEP to ensure compressor will auto start, if needed.</i></p>	<p>S _____</p> <p>U _____</p>

STEP / STANDARD	Grading
<p>Step 14: Informs Control Room Supervisor of completion.</p> <p>Standard: Informs Control Room Supervisor that C-2A and C-2C are inservice, and that C-2B has been secured and placed in AUTO.</p> <p>Notes:</p> <p>Comments:</p> <p style="text-align: center;">END OF TASK</p>	<p>S _____</p> <p>U _____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is at full power. Instrument Air Compressor C-2B is in service. C-2A and C-2C are in AUTO.

INITIATING CUES:

You have been directed to rotate Instrument Air Compressors by placing C-2A and C-2C in service, and securing C-2B and placing it in AUTO, per SOP-19.

SIMULATOR OPERATOR INSTRUCTIONS

- Reset to any full power IC (e.g., IC-17).
- Place C-2B in service. Secure C-2A and C-2C and place their handswitches in AUTO.
- Ensure instrument air pressure is normal prior to FREEZE.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.1-2

**TITLE: Synchronize Main Turbine Generator
to Grid**

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Synchronize the Turbine/Generator with output grid to minimum load

Alternate Path: NONE

Facility JPM #: ASKC-03

K/A: 045A4.02 Importance: SRO: 2.6 RO: 2.7

K/A Statement: Ability to manually operate and/or monitor in the control room: T/G controls, including breakers.

Task Standard: Turbine/Generator has been synchronized to the grid, with both generator breakers closed.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: SOP-8, Main Turbine and Generating Systems
GOP-4, MODE 2 to MODE 1

Validation Time: 28 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT UNSAT

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is in MODE 2 and a Turbine/Generator startup is in progress. Main Turbine speed is 1800 RPM. All pre-op testing has been completed. The Voltage Regulator AC Adjuster has been placed in service.

SOP-8, Main Turbine and Generating Systems steps up to, and including SOP-8, Section 7.1.3.c have been completed.

INITIATING CUES:

The Control Room Supervisor has directed you to synchronize the Main Generator to the grid, in accordance with SOP-8, Section 7.1.3.d, e, and f.

START TIME: _____

STEP / STANDARD	Grading
<p>Step 1: Obtain current procedure.</p> <p>Standard: Obtains copy of SOP-8 and refers to Section 7.1.3.d.</p> <p>Notes:</p> <p>Comments:</p>	
<p>Step 2: Turn Sync Scope for 25F7 to ON.</p> <p>Standard: Locates removable sync switch handle and inserts in sync scope for Main Generator breaker 25F7.</p> <p>Notes: <i>Critical step.</i></p> <p>Comments:</p>	
<p>Step 3: Adjust "Incoming" voltage to match "Running" voltage.</p> <p>Standard: Uses AC Adjuster to raise or lower generator voltage such that "Incoming" voltage and "Running" voltage are closely matched. Monitors Main Generator terminal voltage to ensure it does not reach 23.1 kV.</p> <p>Notes: <i>Critical step.</i></p> <p>Comments:</p>	

STEP / STANDARD		Grading
<p>Step 4: Verify all three phases are closely matched.</p> <p>Standard: Uses Voltage Select Switch to check that each of the three phase voltages differ by less than 1 kV.</p> <p>Notes:</p> <p>Comments:</p>		
<p>Step 5: Request Area Power Control permission to synchronize to the grid.</p> <p>Standard: Verifies with Area Power Control that permission is given to synchronize to the grid. <i>(Note: It is acceptable if candidate obtains this information from the Control Room Supervisor.)</i></p> <p>Notes: Cue: Area Power Control has given permission to synchronize to the grid.</p> <p>Comments:</p>		
<p>Step 6: Ensure OPEN 25F7 and 25H9.</p> <p>Standard: Checks 25F7 and 25H9 GREEN lights ON and RED lights OFF on panel C-01.</p> <p>Notes: <i>(Candidate may also check indication on panel C-07, but this is NOT required.)</i></p> <p>Comments:</p>		

STEP / STANDARD	Grading
<p>Step 7: Ensure CLOSED MOD 26H5.</p> <p>Standard: Checks 26H5 RED light ON and GREEN light OFF.</p> <p>Notes:</p> <p>Comments:</p>	
<p>Step 8: Ensure the Reactor Operator is ready to raise load.</p> <p>Standard: Checks with Reactor Operator to ensure ready to raise load.</p> <p>Notes: <i>A surrogate operator or instructor will function as the Reactor Operator.</i></p> <p>Comments:</p>	
<p>Step 9: Adjust Turbine Speed to get Sync Scope turning slowly in the clockwise direction.</p> <p>Standard: Speed is raised or lowered using DEH Setter. Sync Scope is turning slowly in the clockwise direction.</p> <p>Notes: <i>(Adjustment in Turbine Speed may not be necessary.)</i></p> <p>Comments:</p>	

STEP / STANDARD	Grading
<p>Step 10: Ensure Valve Position Limiter is at approximately 10%.</p> <p>Standard: Checks DEH screen Valve Position Limiter indication at approximately 10%.</p> <p>Notes: <i>Critical step to ensure GVs do not open excessively.</i></p> <p>Comments:</p>	
<p>Step 11: Ensure Turbine Bypass Controller is in AUTO with a setpoint of 900 psi.</p> <p>Standard: Checks Turbine Bypass Controller in AUTO with setpoint at 900 psi.</p> <p>Notes:</p> <p>Comments:</p>	
<p>Step 12: Establish the following parameters (Reactor Operator):</p> <ul style="list-style-type: none"> ● Reactor Power less than or equal to 13% power (highest of deltaT or NI power). ● Tave less than or equal to 540°F ● PIC-0511, Turbine Bypass Controller output signal greater than 60%. <p>Standard: Checks with Reactor Operator to ensure the above parameters are met before synchronizing.</p> <p>Notes: <i>Critical step.</i></p> <p>Comments:</p>	

STEP / STANDARD	Grading
<p>Step 13: Close 25F7 as Sync Scope nears "1200" hours.</p> <p>Standard: 25F7 closed.</p> <p>Notes: <i>Critical step.</i></p> <p>Comments:</p>	
<p>Step 14: Verify closed 25F7 and turn sync scope to OFF.</p> <p>Standard: Checks 25F7 RED light ON, and GREEN light OFF. Sync scope for 25F7 turned to OFF.</p> <p>Notes:</p> <p>Comments:</p>	
<p>Step 15: Verify the Generator has picked up a minimum of 20MW</p> <p>Standard: Checks DEH screen indications or panel C-01 Power meter indication and verifies load at least 20 MW.</p> <p>Notes:</p> <p>Comments:</p>	
<p>Step 16: Verify Turbine Bypass Valve CV-0511 is closing.</p> <p>Standard: Checks CV-0511 controller to verify valve closing.</p> <p>Notes: <i>(Also acceptable to ask Reactor Operator if CV-0511 is closing.)</i></p> <p>Comments:</p>	

STEP / STANDARD	Grading
<p>Step 17: Turn Sync Scope for 25H9 to ON.</p> <p>Standard: Locates removable sync switch handle and inserts in sync scope for Main Generator breaker 25H9.</p> <p>Notes: Critical step.</p> <p>Comments:</p>	
<p>Step 18: Close 25H9 breaker.</p> <p>Standard: 25H9 closed.</p> <p>Notes: Critical step.</p> <p>Comments:</p>	
<p>Step 19: Verify closed 25H9 and turn sync scope to OFF.</p> <p>Standard: Checks 25H9 RED light ON, and GREEN light OFF. Sync scope for 25H9 turned to OFF.</p> <p>Notes:</p> <p>Comments:</p>	
<p>Step 20: Inform Control Room Supervisor of completion.</p> <p>Standard: Informs Control Room Supervisor that Main Turbine/Generator has been synchronized to the grid at minimum load.</p> <p>Notes: Terminate after step f complete.</p> <p>Comments:</p> <p style="text-align: center;">END OF TASK</p>	

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is in MODE 2 and a Turbine/Generator startup is in progress. Main Turbine speed is 1800 RPM. All pre-op testing has been completed. The Voltage Regulator AC Adjuster has been placed in service.

SOP-8, Main Turbine and Generating Systems steps up to, and including SOP-8, Section 7.1.3.c have been completed.

INITIATING CUES:

The Control Room Supervisor has directed you to synchronize the Main Generator to the grid, in accordance with SOP-8, Section 7.1.3.d, e, and f.

SIMULATOR OPERATOR INSTRUCTIONS

- Reset to IC with the turbine off-line and rolling at 1800 rpm.
- Ensure the following:
 - * Both Main Generator breakers are OPEN (25F7 and 25H9)
 - * Main Generator Voltage Regulator AC Adjuster is in service.
 - * DEH Valve Position Limiter set at 10%.
 - * MOD 26H5 CLOSED
 - * All steps of SOP-8 up to and including 7.1.3.c completed.

**REGION III
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE**

JPM RO-B.1-03

Emergency Borate

CANDIDATE: _____

EXAMINER: _____

REGION III
INITIAL LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: Emergency Borate

Alternate Path: Operable Boric Acid Pump trips when started, requiring Gravity Feed flow path.

Facility JPM #: ASFA 01A (Modified)

K/A Rating: 004A4.18 Importance: SRO 4.1 RO 4.3

K/A Statement: Ability to manually operate and/or monitor in the control room: Emergency borate valve

Task Standard: Emergency boration is established using Gravity Feed.

Preferred Evaluation Location: Simulator X In Plant _____

Preferred Evaluation Method: Perform X Simulate _____

References: SOP-2A, Chemical and Volume Control System

Validation Time: 5 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments: _____

Examiner: _____
Signature

Date: _____

Tools/Equipment/Procedures Needed:

SIMULATOR OPERATOR INSTRUCTIONS:

- IC-12; manually trip the reactor
- Perform actions for EOP-1.0 (close FRVs, FRBVs, etc.)
- Rack out breaker for Boric Acid Pump P-56A using REMOTE CV35 RACKOUT and hang caution tag on hand switch
- Override hand switch for Boric Acid Pump P-56B to prevent starting using OVRD DI P-56B-1 TRIP ON and OVRD DI P-56B-4 CLOSE OFF

READ TO OPERATOR

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

A reactor trip has occurred.

INITIATING CUES:

The Shift Supervisor has directed you to Emergency Borate, using the Pumped Feed method.

START TIME: _____

<p>STEP 1: Obtains current procedure or references control board</p> <p>STANDARD: Obtains copy of SOP-2A, referring to Section 7.5.2, or refers to placard on control board</p> <p>NOTES:</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 2: Ensure charging flow greater than 33 gpm</p> <p>STANDARD: Determines charging flow indicates greater than 33 gpm on C-02</p> <p>NOTES:</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 3: OPEN MO-2140, Boric Acid Pump Feed Isol</p> <p>STANDARD: Places hand switch in OPEN and verifies red light LIT and green light OFF</p> <p>NOTES: <i>NOTE: May perform Step 3 or Step 4 in either order. If Step 4 performed first, this step will NOT likely be performed.</i></p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>

<p>STEP 4: Start P-56B, Boric Acid Pump</p> <p>STANDARD: Places hand switch in START and determines that pump failed to start</p> <p>NOTES: NOTE: May perform Step 3 or Step 4 in either order. If Step 4 performed first, Step 3 will NOT likely be performed.</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 5: Notifies Shift Supervisor of failure of pump</p> <p>STANDARD: Notifies Shift Supervisor</p> <p>NOTES: Cue: If notified, Shift Supervisor directs candidate to establish emergency boration using gravity feed.</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 6: CLOSE MO-2140, Boric Acid Pump Feed Isol</p> <p>STANDARD: If opened previously, places hand switch for valve in CLOSE and verifies red light OFF and green light LIT</p> <p>NOTES: NOTE: No effect on system operation if left open.</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>

<p>STEP 7: OPEN MO-2169, Boric Acid Tank Gravity Feed Isol Valve</p> <p>STANDARD: Places hand switch for valve in OPEN and verifies red light LIT and green light OFF</p> <p>NOTES: <i>Critical step to establish flow path.</i></p> <p>COMMENTS:</p>	<p style="text-align: center;">CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 8: OPEN MO-2170, Boric Acid Tank Gravity Feed Isol Valve</p> <p>STANDARD: Places hand switch for valve in OPEN and verifies red light LIT and green light OFF</p> <p>NOTES: <i>Critical step to establish flow path.</i></p> <p>COMMENTS:</p>	<p style="text-align: center;">CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 9: Verify CLOSED CV-2155, Boric Acid Blender Outlet Control Valve</p> <p>STANDARD: Verifies hand switch for valve in CLOSE and verifies red light OFF and green light LIT</p> <p>NOTES:</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>

<p>STEP 10: CLOSE MO-2087, VCT Outlet Isol Valve</p> <p>STANDARD: Places hand switch for valve in CLOSE and verifies red light OFF and green light LIT</p> <p>NOTES: <i>Critical step to establish flow path.</i></p> <p>COMMENTS:</p>	<p style="text-align: center;">CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 11: Ensure CLOSED MO-2160, SIRW Tank to Charging Pumps Isol</p> <p>STANDARD: Verifies closed by observing red light OFF and green light LIT.</p> <p>NOTES:</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 12: Notify Shift Supervisor that Emergency Boration has been started using Gravity Feed</p> <p>STANDARD: Notifies Shift Supervisor</p> <p>NOTES:</p> <p>COMMENTS:</p> <p style="text-align: center;">END OF TASK</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

A reactor trip has occurred.

INITIATING CUES:

The Shift Supervisor has directed you to Emergency Borate, using the Pumped Feed method.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.1-4

RAISE SAFETY INJECTION TANK PRESSURE

SAME AS SRO - B.1-4

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.1-5

**TITLE: Adjust RIA-0707 High Radiation Trip
 Setpoint**

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Raise RIA-0707 Trip Setpoint

Alternate Path: NONE

Facility JPM #: TBAF-02

K/A: 073A4.02 Importance: SRO: 3.7 RO: 3.7

K/A Statement: Ability to manually operate and/or monitor in the control room:
Radiation monitoring system control panel.

Task Standard: RIA-0707 setpoint raised per EOP Supplement 15.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: EOP-5.0, Steam Generator Tube Rupture Recovery
EOP Supplement 15, Jumpering S/G Blowdown Valves

Validation Time: 10 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT UNSAT

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

EOP Supplement 15, Section 1.0 has been completed through Step 2.

INITIATING CUES:

During the performance of EOP 5.0, the CRS directs you to raise RIA-0707 High Radiation Trip set point to 9.99E6 using EOP Supp 15 Section 1.0 through step 8.

START TIME:

STEP / STANDARD	Grading
<p>Step 1: Read the current High Alarm set point on RIA-0707.</p> <p>Standard: Push HIGH ALARM push button on the front of RIA-0707 and record the current High Alarm trip set point.</p> <p>Notes: Should be 2.00E4</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 2: Pull RIA-0707 out from panel approximately six inches (6") to access the control buttons.</p> <p>Standard: RIA-0707 pulled out from panel.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S____</p> <p>U____</p>
<p>Step 3: Press ENTER button to display the trip set point.</p> <p>Standard: ENTER button pressed with trip setpoint displayed.</p> <p>Notes: 2.00E4</p> <p>Comments: Critical step.</p>	<p>S____</p> <p>U____</p>
<p>Step 4: Adjust the trip set point to the desired value.</p> <p>Standard: Uses DIGIT and VALUE pushbuttons to display desired trip value. (9.99E6)</p> <p>Notes: CUE: If requested, as CRS, direct trip set point be adjusted to a value of 9.99E6.</p> <p>Comments: Critical step.</p>	<p>S____</p> <p>U____</p>

STEP / STANDARD	Grading
<p>Step 5: Enter new trip set point by pressing the ENTER push button.</p> <p>Standard: ENTER button pressed.</p> <p>Notes:</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>
<p>Step 6: Push monitor back into panel.</p> <p>Standard: RIA-0707 monitor back in panel.</p> <p>Notes: <i>If requested, Examiner may sign as verifier.</i></p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 7: Verify RIA-0707 trip setpoint.</p> <p>Standard: HIGH ALARM push button pressed on front of RIA-0707 and trip set point verified to be at maximum setting of 9.99E6.</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 8: Record new setpoint.</p> <p>Standard: Enters new setpoint on EOP Supp. 15</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>

<p>Step 9: Press ALARM ACK push button on the RIA-0707 to clear any RIA-0707 High Alarms that may have come in.</p> <p>Standard: Alarms clear.</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 9: Inform Control Room Supervisor of completion.</p> <p>Standard: Notifies Control Room Supervisor that RIA-0707 High Alarm setpoint has been raised to the maximum setting of 9.99E6</p> <p>Notes:</p> <p>Comments:</p> <p style="text-align: center;">END OF TASK</p>	<p>S ____</p> <p>U ____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

EOP Supplement 15, Section 1.0 has been completed through Step 2.

INITIATING CUES:

During the performance of EOP 5.0, the CRS directs you to raise RIA-0707 High Radiation Trip set point to 9.99E6 using EOP Supp 15 Section 1.0 through step 8.

SIMULATOR OPERATOR INSTRUCTIONS

1. Reset to any power IC.
2. Close all S/G B/D valves.
3. Prepare an EOP Supplement 15 with steps 1 and 2 already signed off.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.1-6

**TITLE: Open Pressurizer PORV Isolation
 Valves**

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Open Pressurizer PORV Isolation Valves

Alternate Path: NONE

Facility JPM #: NEW

K/A: 010A4.03 Importance: SRO: 3.8 RO: 4.0

K/A Statement: Ability to manually operate and/or monitor PORV and block valves

Task Standard: MO-1043A is open with PORV PRV-1043B closed

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: SOP-1, Primary Coolant System, Attachment 7

Validation Time: 15 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT UNSAT

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is in MODE 3 with a cooldown in progress.

INITIATING CUES:

You are directed to open PORV PRV-1043B isolation valve MO-1043A in accordance with SOP-1, Attachment 7.

START TIME: _____

STEP / STANDARD	Grading
<p>Step 1: Obtains current procedure.</p> <p>Standard: Refers to SOP-1, Attachment 7</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 2: Ensure PRV-1043B handswitch in CLOSE position</p> <p>Standard: Verifies PRV-1043B handswitch rotated to CLOSE position</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 3: Ensure MO-1043A closed</p> <p>Standard: Verifies MO-1043A CLOSED by noting GREEN light lit and RED light not lit</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 4: Ensure PZR pressure being maintained between 2010 to 2100 psia</p> <p>Standard: Verifies pressure being maintained between 2010 psia and 2100 psia by noting indication on any of several pressure indications on Panel C-02.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>

STEP / STANDARD		Grading
<p>Step 5: Cycle PORV PRV-1043B open and then closed</p> <p>Standard: Places handswitch for PRV-1043B to OPEN for approximately 15 seconds, verifies GREEN light not lit, and then places PRV-1043B handswitch to CLOSE; leaves handswitch in CLOSE position</p> <p>Notes: Red light may NOT light.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 6: Intermittently open PORV isolation valve until MO-1043A indicates RED and GREEN, or PORV PRV-1043B opens.</p> <p>Standard: Operates handswitch for MO-1043A intermittently to the OPEN position until MO-1043A RED light lights (GREEN light will also be on) or PORV PRV-1043B opens</p> <p>Notes: <i>Critical step to establish condition to ensure PORV is not open prior to fully opening isolation.</i></p> <p>Both RED and GREEN lights will be lighted at this point.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 7: Open PORV isolation MO-1043A fully.</p> <p>Standard: Rotates MO-1043A to OPEN after verifying RED light and GREEN lights lit and PORV PRV-1043B is verified closed (GREEN light lit)</p> <p>Notes: <i>Critical step to establish completed alignment.</i></p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD	Grading
<p>Step 8: Verify MO-1043A full open</p> <p>Standard: Verifies MO-1043A RED light lit and GREEN light not lit</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 9: Informs Control Room Supervisor of completion.</p> <p>Standard: Notifies Control Room Supervisor that PORV PRV-1043B isolation valve is open.</p> <p>Notes:</p> <p>Comments:</p> <p style="text-align: center;">END OF TASK</p>	<p>S ____</p> <p>U ____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is in MODE 3 with a cooldown in progress.

INITIATING CUES:

You are directed to open PORV PRV-1043B isolation valve MO-1043A in accordance with SOP-1, Attachment 7.

SIMULATOR OPERATOR INSTRUCTIONS

- Reset to a MODE 3 IC.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.1-7

**TITLE: Transfer Bus 1C from D/G to
Safeguards Transformer**

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Transfer Bus 1C from D/G to Safeguards Transformer

Alternate Path: NONE

Facility JPM #: TBAQ-04

K/A: 064A4.09 Importance: SRO: 3.3 RO: 3.2

K/A Statement: Ability to manually operate and/or monitor in the control room establishing power from the ring bus (to relieve ED/G).

Task Standard: Bus 1C transferred from D/G power to Safeguards Transformer.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: ONP-2.1, section 4.17
SOP-22, 7.5.6

Validation Time: 20 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is at full power. Breaker 152-105 (Bus 1C Station Power Incoming Breaker) spuriously tripped. D/G 1-1 started and sequenced on loads as designed. Maintenance has replaced breaker 152-105 with a spare breaker. It has been determined that the spare breaker is fully operable and ready to be closed.

INITIATING CUES

During performance of ONP 2.1, "Loss of AC Power", the Control Room Supervisor directs you to transfer Bus 1C power supply from D/G 1-1 to Safeguards power using Step 4.17, and to allow the D/G 1-1 to remain running unloaded for diagnostics (perform SOP-22, 7.5.6 up to and including step c). NO other load restorations are required. Performance of SOP-22, Attachment 6, "Diesel Generator Log Sheet" is NOT required as it will be performed later in the shift.

START TIME: _____

STEP / STANDARD	Grading
<p>Step 1: Obtains current procedure.</p> <p>Standard: Refers to ONP-2.1, section 4.17.</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 2: Ensure closed Safeguards Supply Breaker 152-401.</p> <p>Standard: 152-401 closed</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 3: Place "Unit-Parallel" switch for D/G 1-1 to PARALLEL position and check frequency 58-62 hertz. Adjust governor setpoint if necessary.</p> <p>Standard: Unit-Parallel switch for D/G 1-1 in PARALLEL position with frequency 58-62 hertz.</p> <p>Notes:</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>

STEP / STANDARD		Grading
<p>Step 4: TURN ON Synchroscope for the applicable Incoming Breaker.</p> <p>Standard: Sync scope for breaker 152-105 turned on.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 5: ADJUST RUNNING voltage (D/G) to match INCOMING voltage (Offsite Power Source) by adjusting voltage with Field Rheostat Raise-Lower switch.</p> <p>Standard: Field Rheostat Raise-Lower switch operated such that D/G 1-1 voltage matches F Bus voltage.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 6: ADJUST generator speed with Governor Setpoint switch until Synchroscope turns slowly in the counterclockwise (SLOW) direction.</p> <p>Standard: Sync scope turning slowly in the counterclockwise direction.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD		Grading
<p>Step 7: WHEN synchroscope nears "1200" hours on meter, THEN CLOSE the Safeguards/Station Power Incoming Breaker:</p> <p style="text-align: center;"><u>Bus 1C</u> 152-105</p> <p>Standard: 152-105 closed with D/G 1-1 and Safeguards Transformer in Parallel.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 8: TURN OFF Synchroscope.</p> <p>Standard: Sync scope for breaker 152-105 turned off.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 9: Momentarily PLACE Sequencer Control Reset Keyswitch (Key #376) on Control Panel C-13 to "RESET" for bus being transferred: Left Channel = KS-34L</p> <p>Standard: Sequencer reset using KS-34L. Alarm EK-1121 "SEQUENCER CONTROL ENERGIZED" is cleared.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD	Grading
<p>Step 10: Ensure D/G 1-1 loading < 2500 KW.</p> <p>Standard: Checks that D/G 1-1 loading < 2500 KW.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 11: UNLOADs Diesel Generator 1-1, using Governor Setpoint switch.</p> <p>Standard: D/G 1-1 is loaded to approximately 50 Kw.</p> <p>Notes: <i>Cue: Logging requirements in SOP-22, Attachment 6 are NOT required for this evolution.</i></p> <p>Comments: <i>Critical step.</i></p>	<p>S____</p> <p>U____</p>
<p>Step 12: Open the D/G output breaker.</p> <p>Standard: Breaker 152-107 is open.</p> <p>Notes:</p> <p>Comments: <i>Critical step.</i></p> <p style="text-align: center;">END OF TASK</p>	<p>S____</p> <p>U____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is at full power. Breaker 152-105 (Bus 1C Station Power Incoming Breaker) spuriously tripped. D/G 1-1 started and sequenced on loads as designed. Maintenance has replaced breaker 152-105 with a spare breaker. It has been determined that the spare breaker is fully operable and ready to be closed.

INITIATING CUES

During performance of ONP 2.1, "Loss of AC Power", the Control Room Supervisor directs you to transfer Bus 1C power supply from D/G 1-1 to Safeguards power using Step 4.17, and to allow the D/G 1-1 to remain running unloaded for diagnostics (perform SOP-22, 7.5.6 up to and including step c). NO other load restorations are required. Performance of SOP-22, Attachment 6, "Diesel Generator Log Sheet" is NOT required as it will be performed later in the shift.

SIMULATOR OPERATOR INSTRUCTIONS

- * From full power IC, open 152-105 (Bus 1C power from Safeguards Xfmr)
- * Acknowledge all alarms
- * Ensure D/G 1-1 sequences loads on.
- * Ensure Control Room lighting is restored.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.2-8

MANUALLY START P-9A

SAME AS SRO - B.2-8

REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM RO - B.2-9

SECURE FROM WGDT RELEASE

SAME AS SRO - B.2-9

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM RO - B.2-10

TITLE: Restore Power to D-11A

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Restore Power to D-11A from Station Battery #1

Alternate Path: NONE

Facility JPM #: TBAQ-02

K/A: 063K4.02 Importance: SRO: 3.2 RO: 2.9

K/A Statement: Knowledge of DC electrical system design feature(s) and/or interlocks(s) which provide for the following: Breaker interlocks, permissives, bypasses, and cross-ties.

Task Standard: D-11A energized from Station Battery #1

Preferred Evaluation Location: Simulator _____ In Plant X

Preferred Evaluation Method: Perform _____ Simulate X

References: ONP-2.3, Loss of DC Power

Validation Time: 10 minutes Time Critical:

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. Any required communications must be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

Concurrent with a Plant trip, a fault occurred on DC Bus D-11A which caused the 300A fuses to blow. The fault has been repaired. Bus 1D is energized from the Safeguards transformer. Only D/G 1-2 is running. Bus 1C is de-energized. All other DC panels remain energized and all immediate actions have been completed.

INITIATING CUES:

During performance of ONP 2.3, the Control Room Supervisor directs you to restore power to D-11A from Station Battery #1, per Section 4.6.1.

START TIME: _____

STEP / STANDARD		Grading
<p>Step 1: Obtains current procedure.</p> <p>Standard: Obtains copy of ONP-2.3, Section 4.6.1</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 2: Mechanically trip all breakers on Bus 1C.</p> <p>Standard: All breakers on Bus 1C tripped using the mechanical trip plunger located bottom center of the breaker inside the cubicle.</p> <p>Notes: Cue: As each breaker is opened, cue candidate that the breaker position flag reads OPEN.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>	
<p>Step 3: Open all breakers on panel D-11A.</p> <p>Standard: All breakers on D-11A open.</p> <p>Notes: Cue: As each breaker is opened, cue operator that the breaker indicates OFF.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD		Grading
<p>Step 4: Notify electricians to replace the 300 AMP fuses to panel D-11A.</p> <p>Standard: Electricians replace the 300 AMP fuses to panel D-11A.</p> <p>Notes: Cue: The 300 AMP fuses to panel D-11A have been replaced.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>	
<p>Step 5: Close all breakers on D-11A except 72-301, 72-302 and 72-307.</p> <p>Standard: All breakers on D-11A closed except: 72-301, 72-302, 72-307</p> <p>Notes: Cue As each breaker is closed, cue operator that the breaker indicates ON.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>	
<p>Step 6: Close breaker 72-302 on D-11A.</p> <p>Standard: Breaker 72-302 on D-11A closed.</p> <p>Notes: Cue: Breaker indicates ON.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD	Grading
<p>Step 7: Close breaker 72-301 on D-11A.</p> <p>Standard: Breaker 72-301 on D-11A closed.</p> <p>Notes: Cue: Breaker indicates ON.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>
<p>Step 8: Close breaker 72-307 on D-11A.</p> <p>Standard: Breaker 72-307 on D-11A closed.</p> <p>Notes: Cue: Breaker indicates ON.</p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>
<p>Step 9: Notify CRS of completion.</p> <p>Standard: Informs CRS that power to D-11A has been restored.</p> <p>Notes: If asked whether Bus 1C is energized, provide CUE that Bus 1C is now energized and that load restoration is NOT required.</p> <p>Comments:</p> <p style="text-align: center;"><i>END OF TASK</i></p>	<p>S ____</p> <p>U ____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

Concurrent with a Plant trip, a fault occurred on DC Bus D-11A which caused the 300A fuses to blow. The fault has been repaired. Bus 1D is energized from the Safeguards transformer. Only D/G 1-2 is running. Bus 1C is de-energized. All other DC panels remain energized and all immediate actions have been completed.

INITIATING CUES:

During performance of ONP 2.3, the Control Room Supervisor directs you to restore power to D-11A from Station Battery #1, per Section 4.6.1.

Facility: **PALISADES**
Exam Level: **SRO**

Date of Examination: **DEC 2001**
Operating Test No.: **1**

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. Rotate Instrument Air Compressors	NSA	8
b. Synch to Grid	MSL	4
c. Manually Initiate Safety Injection	NSA	1
d. Raise SIT Pressure (IPE)	MSA	2
e. Raise RIA-0707 High Rad Trip Setpoint	DS	7
f. Open PZR PORV Isolation Valves	NS	3
g. Transfer Bus 1C from D/G to S/G Transformer	MS	6

B.2 Facility Walk-Through

a. Manually Start P-9A	NLA	8
b. Secure from WGDT Release	NR	9
c. Restore Power to D-11A from Sta. Battery #1	DL	6

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-1

ROTATE INSTRUMENT AIR COMPRESSORS

SAME AS RO - B.1-1

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-2

SYNCH TO GRID

SAME AS RO - B.1-2

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-3

TITLE: Manually Initiate Safety Injection

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Manually initiate Safety Injection.

Alternate Path: Left channel of Safety Injection will work properly. Right channel will NOT actuate, and candidate must operate individual pumps and valves to ensure right channel Safety Injection equipment is operating.

Facility JPM #: NEW

K/A: 013A4.01 Importance: SRO: 4.8 RO:

K/A Statement: Ability to manually operate and/or monitor in the control room ESFAS-initiated equipment which fails to actuate.

Task Standard: All HPSI and LPSI pumps operating with all loop isolation valves open.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: EOP-1.0, sect. 4.5.2

Validation Time: 10 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments:

Examiner: _____
Signature

Date: _____

Special Instructions (Examiner explains to candidate): A surrogate operator will address all alarms not directly associated with your task.

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

During the performance of EOP-1.0, Pressurizer pressure lowers to ~1400 psia. Safety Injection has NOT automatically actuated.

INITIATING CUES:

You are required to manually initiate BOTH channels of Safety Injection to provide injection flow to the core.

START TIME: _____

STEP / STANDARD	Grading
<p>Step 1: Obtain current procedure.</p> <p>Standard: Refers to EOP-1.0, section 4.5.2.</p> <p>Notes: Reference to procedure may occur, but is NOT required, since these are Immediate Actions.</p> <p>Comments:</p>	
<p>Step 2: Verify SIAS initiated ("SAFETY INJ INITIATED" EK-1342 in alarm) OR push left and right INJECTION INITIATE pushbuttons on EC-13.</p> <ul style="list-style-type: none"> • PB1-1 • PB1-2 <p>Standard: Right channel Safety Injection initiated. (Left channel has failed.)</p> <p>Notes: Verification of EK-1342 alarm may be performed, but is NOT required, since these conditions were already given at beginning of task.</p> <p>Comments: Critical step to manually initiate SIAS.</p>	<p>S _____</p> <p>U _____</p>
<p>Step 3: Verify ALL available HPSI and LPSI pumps operating with the associated loop isolation valves open.</p> <p>Standard: Verifies P-67A (LPSI) is operating with associated Right Channel loop injection valves OPEN.</p> <p>Notes:</p> <p>Comments:</p>	<p>S _____</p> <p>U _____</p>

<p>Step 4: Note P-66A (HPSI) FAILED to start.</p> <p>Standard: Manually starts P-66A (HPSI) using handswitch on panel C-03.</p> <p>Notes:</p> <p>Comments: <i>Critical step.</i></p>	<p>S____</p> <p>U____</p>
<p>Step 5: Note Left Channel SIS equipment NOT actuated.</p> <p>Standard: Verifies that P-66B (HPSI) and P-67B (LPSI) are NOT operating and that associated Left Channel injection valves are CLOSED.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 6: Ensure ALL available HPSI and LPSI pumps operating with the associated loop isolation valves open.</p> <p>Standard: Using handswitch on C-03, starts P-66B (HPSI).</p> <p>Notes: <i>Steps 5, 6, and 7 may be performed in any order.</i></p> <p>Comments: <i>Critical step.</i></p>	<p>S____</p> <p>U____</p>
<p>Step 7: Ensure ALL available HPSI and LPSI pumps operating with the associated loop isolation valves open.</p> <p>Standard: Using handswitch on C-03, starts P-67B (LPSI). Opens left channel loop isolation valves.</p> <p>Notes: <i>Steps 5,6, and 7 may be performed in any order.</i></p> <p>Comments: <i>Critical step.</i></p>	<p>S____</p> <p>U____</p>

<p>Step 8: Ensure all available HPSI and LPSI pumps operating with the associated loop isolation valves open.</p> <p>Standard: Left channel loop isolation valves are OPEN.</p> <p>Notes: <i>Steps 5, 6, and 7 may be performed in any order.</i></p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 9: Report completion to supervisor.</p> <p>Standard: Candidate reports that both channels of Safety Injection have been manually initiated.</p> <p>Notes: <i>Report MAY include that left channel did not actuate per the pushbutton PB1-1, but this is NOT required.</i></p> <p>Comments:</p> <p style="text-align: center;">END OF TASK</p>	<p>S ____</p> <p>U ____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

During the performance of EOP-1.0, Pressurizer pressure lowers to ~1400 psia. Safety Injection has NOT automatically actuated.

INITIATING CUES:

You are required to manually initiate BOTH channels of Safety Injection to provide injection flow to the core.

SIMULATOR OPERATOR INSTRUCTIONS

1. Reset to any full power IC.
2. Insert the following MFs to be ACTIVE at setup:
ED13A
SI07A
3. Manually trip the Reactor.
4. Do NOT ramp down Main Feed Pumps speed or adjust FRVs/FRV bypasses.
5. When PCS pressure is ~ 1600 psia, trip BOTH MFPs. NOTE: Do not allow PCS pressure to fall below 1300 psia.
6. Allow PCS pressure to reduce to ~1400 psia - 1550 psia.
7. FREEZE the Simulator.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-4

TITLE: Raise Safety Injection Tank Pressure

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Raise Safety Injection Tank pressure.

Alternate Path: When Nitrogen header is valved in to the Safety Injection Tank (SIT), pressure will NOT rise as expected. Through a short procedurally-driven diagnosis, it will be discovered that a valve in the Nitrogen lineup was left open, precluding full pressure to the SIT. Candidate will direct the open valve to be closed (per procedure), and pressure in SIT will rise.

Facility JPM #: ASHA-05

K/A: 006A1.13 Importance: SRO: 3.7 RO:

K/A Statement: Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the ECCS controls including Accumulator pressure.

Task Standard: SIT T-82A pressure is at approximately 220 psig.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References:

Validation Time: 25 minutes Time Critical:

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT UNSAT

Comments:

Examiner: _____ Date: _____
Signature

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is at full power. Safety Injection Tank (SIT) T-82A pressure is low.

INITIATING CUES:

The next shift is to perform SIT sampling. To support this sampling, you have been directed to raise pressure in T-82A to approximately 220 psig, per SOP-3, section 7.5.6.

START TIME: _____

STEP / STANDARD	Grading
<p>Step 1: Obtain current procedure.</p> <p>Standard: Refers to SOP-3, section 7.5.6.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 2: Ensure SIT Vent Valve closed.</p> <p>Standard: On Panel C-03 checks HS-3067 in "CLOSE" with GREEN light ON and RED light OFF.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 3: Ensure Nitrogen to the Quench Tank valve closed.</p> <p>Standard: On Panel C-02 checks HS-0150 in "CLOSE" with GREEN light ON and RED light OFF.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>
<p>Step 4: Open Nitrogen valve to Containment.</p> <p>Standard: Selects HS-1358 to "OPEN" and verifies GREEN light OFF and RED light ON.</p> <p>Notes:</p> <p>Comments: <i>Critical step.</i></p>	<p>S____</p> <p>U____</p>

<p>Step 5: Open affected SIT Nitrogen valve.</p> <p>Standard: Selects HS-3040 to "OPEN" and verifies GREEN light OFF and RED light ON.</p> <p>Notes: <i>Candidate may check CV-3044, CV-3048, and CV-3050 closed, but this is NOT required.</i></p> <p>Comments: <i>Critical step.</i></p>	<p>S ____</p> <p>U ____</p>
<p>Step 6: Monitor T-82A pressure.</p> <p>Standard: Candidate notes that T-82A pressure is NOT rising.</p> <p>Notes: <i>For time expediency, and at Examiner discretion, provide a CUE that T-82A pressure is NOT rising.</i></p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>
<p>Step 7: Contact Radwaste Auxiliary Operator to check closed the nitrogen valves listed in section 7.5.6.e.</p> <p>Standard: Calls or pages Radwaste Auxiliary Operator to proceed to Radwaste Panel C-40 and check closed the following valves:</p> <p style="padding-left: 40px;">CV-1056 CV-1062 CV-1058 CV-1063 CV-1060</p> <p>Notes: <i>Examiner may act as the Auxiliary Operator. After several minutes report valve status as follows:</i></p> <p style="padding-left: 40px;"><i>CV-1056 is CLOSED CV-1062 is CLOSED</i> <i>CV-1058 is CLOSED CV-1063 is CLOSED</i> <i>CV-1060 is OPEN.</i></p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>

<p>Step 8: Check status of Bulk Nitrogen System.</p> <p>Standard: Candidate may dispatch an Auxiliary Operator to check for abnormal conditions on the Bulk Nitrogen System.</p> <p>Notes: <i>This step is NOT required.</i></p> <p>Comments: <i>CUE: Status of Bulk Nitrogen System is as follows:</i></p> <ul style="list-style-type: none"> • No icing • Bulk N2 Tank level normal • Local N2 pressure gauge reads 230 psig. 	<p>S____</p> <p>U____</p>
<p>Step 9: Close CV-1060.</p> <p>Standard: Candidate directs AO to close CV-1060 at Panel C-40.</p> <p>Notes: <i>After a moment, report as the AO that Nitrogen to the Primary System Drain Tank (PSDT) CV-1060 is CLOSED.</i></p> <p>Comments: <i>Critical step.</i></p>	<p>S____</p> <p>U____</p>
<p>Step 10: Monitor SIT T-82A pressure</p> <p>Standard: Candidate monitors T-82A pressure by observing PIA-0363 on Panel C-13.</p> <p>Notes:</p> <p>Comments:</p>	<p>S____</p> <p>U____</p>

<p>Step 11: Secure nitrogen when tank is at desired pressure.</p> <p>Standard: Notes when T-82A pressure is at approximately 220 psig and then closes CV-3040 by operating HS-3040 to the "CLOSE" position, noting GREEN light ON and RED light OFF.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S____</p> <p>U____</p>
<p>Step 12: Close CV-1358.</p> <p>Standard: Closes Nitrogen to Containment CV-1358 by operating HS-1358 to "CLOSE" position, noting GREEN light ON and RED light OFF.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S____</p> <p>U____</p>
<p>Step 13: Notify supervisor of completion.</p> <p>Standard: Candidate notifies Control Room Supervisor that T-82A pressure has been raised to approximately 220 psig.</p> <p>Notes:</p> <p>Comments:</p> <p style="text-align: center;">END OF TASK</p>	<p>S____</p> <p>U____</p>

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is at full power. Safety Injection Tank (SIT) T-82A pressure is low.

INITIATING CUES:

The next shift is to perform SIT sampling. To support this sampling, you have been directed to raise pressure in T-82A to approximately 220 psig, per SOP-3, section 7.5.6.

SIMULATOR OPERATOR INSTRUCTIONS

1. Reset to IC-17 (or similar full power IC)
2. Ensure T-82A pressure is approximately 210 psig. This may require addition of nitrogen or venting.
3. Enter OVERRIDE for HS for CV-3040 to OFF. Ensure GREEN light is ON.
4. When candidate opens CV-3040 to initiate Nitrogen to T-82A, perform the following:
 - ENTER OVERRIDE for RED light ON, and GREEN light OFF.
4. When candidate receives report from the AO that CV-1060 has been closed, then perform the following:
 - DELETE OVERRIDE for CV-3040 HS OFF. Observe carefully and delete the OVERRIDE for the RED light ON and GREEN light OFF when candidate operates CV-3040 handswitch to OFF.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-5

RAISE RIA-0707 TO HIGH RAD TRIP SETPOINT

SAME AS RO - B.1-5

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-6

OPEN PZR PORV ISOLATION VALVES

SAME AS RO - B.1-6

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.1-7

**TRANSFER BUS 1C FROM D/G TO S/G
TRANSFORMER**

SAME AS RO - B.1-7

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.2-8

TITLE: Manually Start P-9A Fire Pump

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Manually start P-9A Fire Pump

Alternate Path: When attempting to manually P-9A at the local control panel, it does not start via the pushbutton, requiring the use of an alternate method of starting (Manual Operator "T" handle).

Facility JPM #: NEW

K/A: 086A3.01 Importance: SRO: 3.3 RO: 2.9

K/A Statement: Ability to monitor automatic operation of the Fire Protection System including starting mechanisms of fire water pumps.

Task Standard: P-9A running.

Preferred Evaluation Location: Simulator _____ In Plant X

Preferred Evaluation Method: Perform _____ Simulate X

References: SOP-21, 7.2.1

Validation Time: 10 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. Any required communications must be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is at full power with Fire System Jockey Pump P-13 tagged out of service for pump repacking. Service Water Booster Pump P-25A is in service maintaining pressure on the plant fire header.

INITIATING CUES:

The Control Room Supervisor has directed you to manually start Electric Fire Pump P-9A for flow testing per SOP-21, section 7.2.1.

START TIME: _____

STEP / STANDARD		Grading
<p>Step 1: Locate procedure book containing SOP-21, section 7.2.1</p> <p>Standard: Candidate may locate any procedure book containing the above section.</p> <p>Notes: Examiner may provide candidate a Working Copy of the procedure section.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 2: Locate local control panel for Electric Fire Pump P-9A.</p> <p>Standard: Candidate is standing at local control panel for P-9A.</p> <p>Notes:</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 3: Press START pushbutton on Local Control Panel</p> <p>Standard: Candidate locates and presses START for P-9A.</p> <p>Notes: CUE: P-9A is NOT running. Critical step.</p> <p><i>If required, provide CUE: The CRS directs you to start P-9A.</i></p>	<p>S ____</p> <p>U ____</p>	
<p>Step 4: Pull the Manual Operator "T" handle all the way out to start mechanically.</p> <p>Standard: Candidate locates and operates "T" handle for P-9A to start the pump.</p> <p>Notes: CUE: P-9A is running. Critical step.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD		Grading
Step 5:	Stop P-25A.	S ____
Standard:	N/A (See below.)	U ____
Notes:	<i>If candidate starts to secure P-25A OR asks, provide CUE: Candidate is NOT expected to secure P-25A since it is to be left running and used later in the shift.</i>	
Comments:		
END OF TASK		

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is at full power with Jockey Pump P-13 out of service. P-25A Service Water Booster Pump is in service maintaining pressure on the plant fire header.

INITIATING CUES:

The Control Room Supervisor has directed you to manually start P-9A Fire Pump for flow testing per SOP-21, section 7.2.1.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.2-9

TITLE: Secure from Waste Gas Release

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Secure from Waste Gas Release

Alternate Path: N/A

Facility JPM #: NEW

K/A: 071K4.04 Importance: SRO: 3.4 RO: 2.9

K/A Statement: Knowledge of design feature(s) and/or interlock(s) which provide for the following: Isolation of waste gas release tanks.

Task Standard: T-68B Waste Gas Decay Tank release secured.

Preferred Evaluation Location: Simulator _____ In Plant X

Preferred Evaluation Method: Perform _____ Simulate X

References: SOP-18A, 7.5, kk

Validation Time: 15 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments:

Examiner: _____
Signature

Date: _____

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. Any required communications must be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant is at 48% power. T-68B Waste Gas Decay Tank batch release is in progress. It has been determined that the batch release must be secured.

INITIATING CUES:

The Shift Supervisor has directed you to secure from the batch release of T-68B, per SOP-18A, Section 7.5, Step kk.

START TIME: _____

STEP / STANDARD		Grading
<p>Step 1: Obtain SOP-18A and reference section 7.5.kk.</p> <p>Standard: Candidate locates SOP-18A and turns to section 7.5.kk.</p> <p>Notes: Examiner provides a Working Copy of procedure.</p> <p>Comments:</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 2: CLOSE MV-WG719, T-68B Outlet Isolation.</p> <p>Standard: Candidate locates and closes MV-WG719.</p> <p>Notes:</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 3: CLOSE Discharge Control Valve CV-1123, WGDT Discharge, as follows:</p> <p>a. Place in CLOSE HS-1123 (C-40)</p> <p>b. Set HIC-1123 to 0 psi</p> <p>Standard: HS-1123 in CLOSE and HIC-1123 indicating 0 psi.</p> <p>Notes: CUE: HIC-1123 indicates 0 psi.</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	
<p>Step 4: OPEN T-68B Drain Valve, CV-1120B for one minute.</p> <p>Standard: CV-1120B opened for one minute.</p> <p>Notes: If asked provide CUE that one minute has elapsed.</p> <p>Comments: Critical step.</p>	<p>S ____</p> <p>U ____</p>	

STEP / STANDARD		Grading
Step 5:	CLOSE CV-1120B.	S _____
Standard:	CV-1120B closed.	U _____
Notes:	CUE: Documentation on Form HP 6.6-3 is NOT required at this time.	
Comments:	<i>Critical step.</i>	
END OF TASK		

STOP TIME: _____

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant is at 58% power. T-68B Waste Gas Decay Tank batch release is in progress. It has been determined that the batch release must be secured.

INITIATING CUES:

The Shift Supervisor has directed you to secure from the batch release of T-68B, per SOP-18A, Section 7.5, Step kk.

REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM SRO - B.2-10

RESTORE POWER TO D-11A FROM STA. BATTERY #1

SAME AS RO - B.2-10