Job Performance Measure
Worksheet

Facility: Pilgrim | Task No: 201-04-01-003

Task Title: CRD Weekly Exercises | No: 1

K/A Reference: 201002 A3.03 3.2/3.2 | Position: RO/SRO

Examinee: | NRC Examiner:

Date:

Method of testing:
Simulated Performance | Actual Performance ✓

Classroom | Simulator ✓ | Plant

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- The Reactor is at 100% power.
- A Control Rod Exercise is to be performed IAW PNPS 8.3.2.
- PNPS 8.3.2 is partially complete. Rod 14-31 was the last rod complete.
- Reactor Engineering is present in the Control Room.
- An operator has been assigned to verify control rod withdrawal.
- A 3D Monicore control rod position log is available.

Task Standard: Control rod exercise will be performed IAW all precautions and limitations described in PNPS 8.3.2. When an uncoupled rod is discovered, the rod will be recoupled IAW off-normal procedure 2.4.11. There shall be no failure of critical elements. Critical steps must be performed in order; other steps may be performed out of sequence.

Required Materials: Marked up copy of PNPS 8.3.2
PNPS 2.4.11.

General References: PNPS 2.4.11, Rev. 26
PNPS 8.3.2, Rev. 40

Initiating Cue: "[Candidate's name], commence the control rod exercise with rod 18-31".

Time Critical Task: NO

Validation Time: 13 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable section of the procedure.

Standard: Candidate reviews PNPS 8.3.2 and signs Step 7.0[4].

Comment:
- All controls associated with this JPM are located on C905.
- Role-play as necessary to answer any questions the candidate may have during the procedure review. Possible questions that might be asked are:

  1. Is the fuel within the preconditioned envelope? Yes. The subsequent recirc flow increase will require soft ramp rates.

  2. Are we within 2% of any limit? No. We will have >2% margin to all thermal limits throughout the rod withdrawal.

✓ **Performance Step 2:** Insert control rod.

Standard: Candidate selects next rod (18-31 / 38-31) on the rod select matrix and inserts to notch position 46 by momentarily turning the ROD CONTROL switch to the IN position.

Comment: Rod 18-31 is selected the first time through this portion of the JPM. Steps 2-5 are also repeated with rod 38-31.

_____ **Performance Step 3:** Verify rod insertion and latching.

Standard: Candidate verifies that rod stops at notch position 46

Comment: Role-play as verifier, and verify the rod is at the proper position. (Note: Agree with whatever the candidate says.)

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** Withdraw rod to position 48.

Standard: Rod withdrawn to notch position 48 by momentarily turning the ROD CONTROL switch to the NOTCH OUTposition.

Comment:

✓ **Performance Step 5:** Candidate performs coupling check when each control rod reaches position 48.

Standard: Candidate applies a notch override and rod out signal when each drive reaches 48 and confirms:

(1) alarm (C905L-B3), rod overtravel, does not annunciate
(2) position indication on four rod display goes BLACK/BLACK, then returns to 48
(3) FULL OUT on full core display goes off, then back on

Comment: When fault occurs for rod 38-31, skip to step 7. Otherwise, continue to step 6.

_____ **Performance Step 6:** Candidate initials completion of exercising rod 18-31

Standard: Candidate initials CRD matrices on Attachments 3 and 5.

Comment: After exercising rod 18-31, repeat steps 2-5 for rod 38-31. This step will not be performed for rod 38-31 because of the fault

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** Respond to rod 38-31 overtravel condition.

Standard: Candidate terminates withdrawal of additional control rods and investigates overtravel and rod drift alarms.

Comment: Candidate suspends additional rod withdrawal.

_____ **Performance Step 8:** Announces overtravel and rod drift alarms and refers to ARPs.

Standard: Candidate announces overtravel and rod drift alarms and refers to ARPs.

Comment:

_____ **Performance Step 9:** Review rod overtravel ARP (C905L-B3) and determines rod is uncoupled.

Standard: Candidate reviews rod overtravel ARP (C905L-B3) and determines rod is uncoupled.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 10:** Enter and execute off-normal procedure 2.4.11.

Standard: Candidate enters and executes off-normal procedure 2.4.11.

Comment:

_____ **Performance Step 11:** Consult with Reactor Engineering prior to attempting to recouple the rod.

Standard: Candidate consults with Reactor Engineering prior to attempting to recouple the rod.

Comment: As Reactor Engineering, cue the candidate that, "I recommend continuing with off-normal procedure".

✓ **Performance Step 12:** Insert control rod two notches.

Standard: Candidate inserts control rod to notch position 44 by turning the ROD CONTROL switch to the IN position twice, pausing in between operations to verify rod movement.

Comment: Control Rod inserted to position 44.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 13:** Withdraw rod to position 48 by notching the rod out.

Standard: Candidate notch withdraws rod to position 48 by notching the rod out by turning ROD CONTROL switch to the NOTCH OUTposition twice, pausing in between to verify rod motion.

Comment:

✓ **Performance Step 14:** Perform another coupling check by applying a notch override and rod out signal and confirm that alarm (C905L-B3) rod overtravel, does not annunciate.

Standard: Candidate performs another coupling check by applying a notch override and rod out signal and confirms:

(1) alarm (C905L-B3), rod overtravel, does not annunciate
(2) position indication on four rod display goes BLACK/BLACK, then returns to 48
(3) FULL OUT on full core display goes off, then back on

Comment:

____ **Performance Step 15:** Determine rod is re-coupled.

Standard: Candidate determines rod is re-coupled.

Comment:

Terminating Cue: When rod 38-31 is recoupled, the examiner should inform the candidate that the JPM is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- The Reactor is at 100% power.
- A Control Rod Exercise is to be performed IAW PNPS 8.3.2.
- PNPS 8.3.2 is partially complete. Rod 14-31 was the last rod complete.
- Reactor Engineering is present in the Control Room.
- An operator has been assigned to verify control rod withdrawal.
- A 3D Monicore control rod position log is available.

Initiating Cue: "[Candidate's name], commence the control rod exercise with rod 18-31".

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 204-01-01-004

Task Title: Restart Reactor Water Cleanup Following Auto Isolation

No: 2

K/A Reference: 204000 A2.13 3.4/3.4

Position: RO/SRO

Examinee:

NRC Examiner:

Date:

Method of testing:
Simulated Performance

Actual Performance ✓

Classroom

Simulator ✓ Plant

Read to the Examinee:
"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied".

Initial Conditions: Plant conditions are as follows:

- The Reactor is at pressure.
- RWCU system has automatically isolated.
- The GP VI isolation signal was initiated by a faulty temperature switch, which has since been repaired and post work tested.
- All prerequisites for restoring RWCU have been met.
- It is estimated that Chemistry requirements will be violated in less than 12 hours without RWCU.
- CAVS is in service

Initiating Cue: "[Candidate's name], reset the Group VI isolation and restore RWCU to service per 2.2.125.1 with both filter demins in service".

Task Standard: Reset the Group 6 isolation and restore RWCU to operation IAW 2.2.125.1. There shall be no failure of critical elements. Critical steps must be performed in order; other steps may be performed out of sequence.

Required Materials: None

General References: PNPS 2.2.125.1, Rev. 14 and PNPS 2.2.83, Rev. 75

Time Critical Task: NO
Validation Time: 13 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Candidate reviews the applicable section of the procedure.

Standard: Applicable section of the procedure reviewed.

Comment:
- All critical steps must be performed in the order written unless otherwise noted.
- All components are located on panel C-904 in the control room unless otherwise noted.
- Radwaste personnel are standing by at RWCU 1279 panel.

✓ **Performance Step 2:** When the cause of the isolation has been corrected, then reset the PCIS Group 2, 3, 6 Isolation Reset Switch on panel C-905.

Standard: Candidate rotates switch both clockwise and counterclockwise to "INBOARD" and "OUTBOARD" positions.

Comment:

_____ **Performance Step 3:** If CAVS is in service, then isolate flow to CAVS by closing AO-220-44, Inboard Isolation Valve.

Standard: Candidate rotates switch for AO-220-44 to the CLOSED position notes green CLOSED light lit, red OPEN light not illuminated.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 4:** If CAVS is in service, then isolate flow to CAVS by closing AO-220-45, Outboard Isolation Valve.

Standard: Candidate rotates switch for AO-220-45 to the CLOSED position and notes green CLOSED light lit, red OPEN light not illuminated.

Comment:

✓ **Performance Step 5:** Open MO-1201-5.

Standard: Candidate rotates the MO-1201-5 switch clockwise and releases.

Comment: .

✓ **Performance Step 6:** Throttle MO-1201-80 slightly open.

Standard: Candidate rotates the MO-1201-80 switch clockwise momentarily and releases.

Comment:

_____ **Performance Step 7:** Candidate notes Caution: **CAUTION:** Do not leave MO-1201-2 in a throttled position.

Standard: Candidate notes caution prior to step 4b.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 8:** Slowly jog open MO-1201-2 to full open position.

Standard: Candidate momentarily rotates switch for MO-1201-2 clockwise.

Comment: MO-1201-2 does not respond.

_____ **Performance Step 9:** Perform attachment 11 of PNPS 2.2.83.

Standard: Candidate obtains and reviews Attachment 11 of PNPS 2.2.83.

Comment:

_____ **Performance Step 10:** Test vessel temperature is determined to be greater than or equal to 450 degrees.

Standard: Candidate asks Chemistry about test vessel temperature.

Comment: Cue candidate that chemistry informs him that test vessel temperature is 500 degrees F.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 11:** Verify AO-220-44 and AO-220-45 are closed.

Standard: Candidate verifies green lights for AO-220-44 and AO-220-45 are lit and red light are not illuminated

Comment:

✓ **Performance Step 12:** Close 2-HO-135, CAVS Supply Upstream Block Valve.

Standard: Candidate instructs 2-HO-135 to be closed locally.

Comment: Inform candidate that 2-HO-135 is closed.
(**Note:** Simulator booth operator closes 1201-47 on RWCU schematic)

✓ **Performance Step 13:** Open AO-220-44 and AO-220-45

Standard: Candidate rotates switch for AO-220-44 and AO-220-45 counterclockwise and verifies that red lights are lit and green lights are out.

Comment:

✓ **Performance Step 14:** Slowly open 2-HO-135

Standard: Candidate instructs that 2-HO-135 be slowly opened locally.

Comment: Simulator booth operator slowly opens 1201-47.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 15:** When pressure indicated on PI-1290-9 stops increasing slowly jog open MO-1201-2, Inboard Isolation Valve.

Standard: Candidate notes pressure stabilized on PI-1290-9 then slowly jogs MO-1201-2 switch in the clockwise direction until fully open.

Comment:

____ **Performance Step 16:** Place CAVS in desired configuration according to PNPS 10.2.8.

Standard: Candidate informs chemistry to place CAVS in service per PNPS 10.2.8.

Comment:

Terminating Cue: When the candidate calls chemistry to place CAVS in service, the examiner should inform the candidate that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- The Reactor is at pressure.
- RWCU system has automatically isolated.
- The GP VI isolation signal was initiated by a faulty temperature switch, which has since been repaired and post work tested.
- All prerequisites for restoring RWCU have been met.
- It is estimated that Chemistry requirements will be violated in less than 12 hours without RWCU.
- CAVS is in service

Initiating Cue: "[Candidate's name], reset the Group VI isolation and restore RWCU to service per 2.2.125.1 with both filter demins in service".

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 248-01-01-011

Task Title: Transfer from MPR to EPR

JPM No: 3

K/A Reference: 241000 A4.02 4.1/4.1

Position: RO/SRO

Examinee:

NRC Examiner:

Date:

Method of testing:

Simulated Performance

Actual Performance ✓

Classroom

Simulator ✓ Plant

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- The Reactor is at 100% rated power.
- Due to maintenance on the EPR, control was transferred to the MPR.
- The maintenance is complete and it is desired to place EPR back in operation.
- The EPR has been energized for 10 minutes.

Task Standard: Transfer from MPR to EPR per PNPS 2.2.99, Section 7.4.4. The procedure shall be followed without failure of critical steps. Critical steps must be performed in order; other steps may be performed out of sequence.

Required Materials: None

General References: PNPS 2.2.99, Rev. 35

Initiating Cue: "[Candidate's name], transfer from MPR to EPR per PNPS 2.2.99, Section 7.4.4.

Time Critical Task: NO

Validation Time: 5 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Candidate reviews PNPS 2.2.99, Section 7.4.4.

Standard: PNPS 2.2.99, Section 7.4.4 reviewed.

Comment:

_____ **Performance Step 2:** Candidate reviews the following note: When the EPR is initially energized the pressure setpoint will ramp to maximum pressure prior to placing EPR in control and energizing the operators setpoint control switch. (EPR setpoint) This will take approximately 5 minutes.

Standard: Note is reviewed.

Comment: EPR should be fully ramped at this time.

_____ **Performance Step 3:** Candidate reviews caution to adjust pressure regulators slowly to avoid pressure transients.

Standard: Candidate makes pressure adjustments in a slow and controlled manner.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 4:** Place/verify EPR power switch to "NORM" at Panel C2.

Standard: Verifies EPR power switch in "NORM".

Comment:

_____ **Performance Step 5:** Wait 1 minute from the time EPR setpoint indicator ZI- 3013 reaches its maximum setpoint of 1010 psig.

Standard: Not needed since JPM initial conditions stated EPR was energized for 10 minutes but candidate may wait anyway.

Comment: Examiner may cue the candidate that, "1 minute has elapsed".

_____ **Performance Step 6:** Candidate reviews note prior to Step 3: Once the EPR takes control, the red pressure control light over the EPR setpoint switch on panel C2 will come on and the EPR control position indicator ZI-3014 will rapidly increase to the setpoint indicating EPR has control. The red pressure control light above the MPR SETPT switch will go off and the green NOT IN CONTROL light will come on. This rapid increase is an instrument response and will not result in a pressure transient.

Standard: Candidate reviews note.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** RESTORE the EPR to control slowly by placing the EPR SETPT C/S to "LOWER" until the EPR takes control from the MPR (red PRESS CONTROL light above EPR SETPT C/S comes on).

Standard: EPR SETPT C/S taken to lower until red pressure control light above EPR SETPT C/S comes on.

Comment:

✓ **Performance Step 8:** ADJUST MPR SETPT C/S so that MPR CONTROL POSITION Indicator ZI-3020 is set approximately 11 to 13% lower than EPR CONTROL POSITION Indicator ZI-3014.

Standard: ZI-3020 indicates 11 to 13% lower than ZI-3014.

Comment:

✓ **Performance Step 9:** Set EPR SETPT to maintain PI-640-25A, REACTOR PRESSURE for CH A, and PI-640-25B, REACTOR PRESSURE for CH B, on Panel C905 at less than or equal to 1035 psig.

Standard: PI-640-25A/B indicates less than or equal to 1035 psig.

Comment:

PERFORMANCE INFORMATION

(Critical steps denoted with a check mark)

Terminating Cue: When candidate has adjusted EPR setpoint to maintain reactor pressure on PI-640 25A(B), inform him/her that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

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4. Include the following, as applicable:

   a. ✓ Initial conditions

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      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- The Reactor is at 100% rated power.
- Due to maintenance on the EPR, control was transferred to the MPR.
- The maintenance is complete and it is desired to place EPR back in operation.
- The EPR has been energized for 10 minutes.

Initiating Cue: "[Candidate's name], transfer from MPR to EPR per PNPS 2.2.99, Section 7.4.4.

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 205-05-01-031

Task Title: Manual Initiation of LPCI While In Shutdown Cooling

No: 4

K/A Reference: 203000 A4.05 4.3/4.1

Position: RO/SRO

Examinee:

NRC Examiner:

Date:

Method of testing:
Simulated Performance

Actual Performance ✓

Classroom

Simulator ✓ Plant

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- Reactor is shutdown with both 'A' loop RHR pumps in shutdown cooling.
- A small leak in the vessel has occurred and LPCI is needed for injection.

Task Standard: The RHR System is aligned for LPCI injection and injecting. There shall be no failure of critical elements. All critical steps must be performed in the order written unless otherwise noted.

Required Materials: Tagout sheet for RHR loop 'A' in shutdown cooling.

General References: PNPS 2.2.19, Rev. 83

Initiating Cue: "[Candidate's name], align RHR for LPCI injection and inject into both recirc loops with all RHR pumps IAW PNPS procedure 2.2.19, Section 7.3.2".

Time Critical Task: NO

Validation Time: 20 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable section of the procedure.

Standard: Candidate reviews the applicable section of the procedure.

Comment:
All tags outside the Main Control Room are removed and independently checked when required. The examiner will provide independent verification in the Main Control Room as required.

All RHR components operated in this JPM are on Panel C903 horizontal section.

_____ **Performance Step 2:** Review caution about closure time of MO-1001-43 valves.

Standard: Candidate reviews caution.

Comment:

_____ **Performance Step 3:** Verify RHR pumps 'B' and 'D' are tripped.

Standard: Candidate verifies that RHR pump 'B' and 'D' are tripped.

Comment: Performance Steps 3 and 4 can be performed in any order.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** Trip RHR pumps 'A' and 'C'.

Standard: Candidate rotates RHR pump 'A' and 'C' control switches to the "STOP" position in any order.

Comment: Performance Steps 3 and 4 can be performed in any order.

✓ **Performance Step 5:** Verify closed or close MO-1001-47 and MO-1001-50.

Standard: Candidate closes "SHUTDOWN COOL OUTBD ISOL VLV, MO-1001-47" and "SHUTDOWN COOL INBD ISOL VLV, MO-1001-50".

Comment:

✓ **Performance Step 6:** Close MO-1001-43A and C pump suction valves.

Standard: Candidate rotates "PUMP A SUCT VLV MO-1001-43A" and "PUMP C SUCT VLV, MO-1001-43C" control switches to the "CLOSE" position.

Comment: Steps 6 and 7 can be performed in any order.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 7:** Verify closed MO-1001-43B and D pump suction valves.

Standard: Candidate verifies that "PUMP B SUCT VLV MO-1001-43B" and "PUMP D SUCT VLV MO-1001-43D" are "CLOSED".

Comment: Verification will be performed by using tagout sheet, valve indicating lights not illuminated, valve control switch in the "CLOSE" position and local verification of the valve power supply breaker open.

Steps 6 and 7 can be performed in any order

✓ **Performance Step 8:** Remove tag and close breaker for MO-1001-18A.

Standard: Candidate contacts outside operator and directs the removal of danger tag and the closure of breaker B1754 for valve MO-1001-18A at Panel B17.

Comment: If candidate requests CRS assistance, then CUE: "Contact the outside operator to remove the DANGER TAG and shut the breaker for MO-1001-18A at panel B17."

NOTE: I/F Operator: "Remove overrides on RED and GREEN INDICATING LIGHTS, and the valve control switch, contact candidate and report that the danger tag is removed and the breaker is closed for MO-1001-18A."

_____ **Performance Step 9:** Remove tag from MO-1001-18A control switch.

Standard: Candidate removes DANGER TAG from "MO-1001-18A PUMP MIN FLOW VLV" control switch.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 10:** Open MO-1001-18A.

Standard: Candidate rotates "PUMP MIN FLOW VLV MO-1001-18A" control switch to the "OPEN" position.

Comment: Performance Steps 10 and 11 can be performed in any order.

_____ **Performance Step 11:** Verify MO-1001-18B is open.

Standard: Candidate verifies "PUMP MIN FLOW VLV MO-1001-18B" is in the "OPEN" position.

Comment:

✓ **Performance Step 12:** Remove tags and close breakers for 'A' and 'C' torus suction valves.

Standard: Candidate contacts outside operator and directs removal of DANGER TAGS and breaker closing for MO-1001-7A and MO-1001-7C" valves at Panel B17.

Comment: If candidate requests CRS assistance, then CUE: "Contact the outside operator to remove the DANGER TAGS and close the breakers for MO-1001-7A and C valves at B17."

NOTE: I/F Operator: "Remove overrides on RED and GREEN INDICATING LIGHTS, for MO-1001-7A and C valves and contact candidate to report that the DANGER TAGS are removed and the breakers are closed for MO-1001-7A and C."

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 13:** Remove tags on MO-1001-7A and MO-1001-7C pump torus suction valves.

Standard: Candidate removes danger tags from "MO-1001-7A TORUS SUCTION VALVE PUMP A" and "MO-1001-7C TORUS SUCTION VALVE PUMP C" control switches.

Comment:

✓ **Performance Step 14:** Open MO-1001-7A and 7C.

Standard: Candidate rotates "TORUS SUCTION VALVE MO-1001-7A PUMP A" and "TORUS SUCTION VALVE MO-1001-7C PUMP C" control switches to the "OPEN" position.

Comment: Step 14 and 15 can be performed in any order.

_____ **Performance Step 15:** Verify MO-1001-7B and 7D are open.

Standard: Candidate verifies "TORUS SUCTION VALVE MO-1001-7B PUMP B" and "TORUS SUCTION VALVE MO-1001-7D PUMP D" are in the "OPEN" position.

Comment: Step 14 and 15 can be performed in any order.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 16:** Remove tag and close breaker B2041

Standard: Candidate directs outside operator to remove Danger Tags and close the breaker for "MO-1001-19 LOOP X-TIE" valve at B-20.

Comment: If candidate requests CRS assistance, then CUE: "Contact the outside operator to remove the DANGER TAG and close the breaker for MO-1001-19 at B20."

NOTE: I/F Operator: "Remove overrides on red and green indicating lights for MO-1001-19 and contact candidate that danger tag is removed and the breaker is closed for MO-1001-19."

_____ **Performance Step 17:** Verify MO-1001-53 is open.

Standard: Candidate verifies "RHR DISCHARGE HEADER CROSSTIE VALVE, MO-1001-53" is in the "OPEN" position.

Comment: Operator may know that 1001-53 is open when RHR 'A' is in Shutdown Cooling, or may dispatch an operator to verify the valve is open.

_____ **Performance Step 18:** Remove tag on MO-1001-19, LOOP X-TIE valve.

Standard: Candidate removes DANGER TAG from "MO-1001-19, LOOP X-TIE valve control switch.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 19:** Open MO-1001-19, LOOP X-TIE VALVE.

Standard: Candidate rotates "MO-1001-19 LOOP X-TIE" valve control switch to the "OPEN" position.

Comment:

_____ **Performance Step 20:** Verify MO-1001-16A and 16B are open.

Standard: Candidate verifies "RHR HX BYP VLV, MO-1001-16A" RHR HX BYP VLV MO-1001-16B" are in the "OPEN" position.

Comment:

_____ **Performance Step 21:** Reset isolation logic by depressing the Loop A and Loop B LPCI Loop Select Logic pushbuttons.

Standard: Candidate may recognize that no isolation is in effect or may actually depress the Loop 'A' and Loop 'B' LPCI Loop Select Logic pushbuttons

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 22:** Open MO-1001-29B, LPCI INJ VLV #2.

Standard: Candidate rotates "LPCI INJ VLV #1 MO-1001-29B" control switch to the "OPEN" position.

Comment: Performance Steps 22 and 23 can be performed in any order.

_____ **Performance Step 23:** Verify MO-1001-29A, LPCI INJ VLV #2 is OPEN.

Standard: Candidate verifies "LPCI INJ VLV #2 MO-1001-29A" is OPEN.

Comment: Performance Steps 22 and 23 can be performed in any order.

✓ **Performance Step 24:** Start RHR pumps A, B, C and D.

Standard: Candidate rotates "RHR PUMP A, B, C AND D control switches to the "START" position.

Comment:

Terminating Cue: When all 4 RHR pumps are started and both loops are injecting, the examiner should inform the candidate that the JPM is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- Reactor is shutdown with both 'A' loop RHR pumps in shutdown cooling.
- A small leak in the vessel has occurred and LPCI is needed for injection.

Initiating Cue: "[Candidate's name], align RHR for LPCI injection and inject into both recirc loops with all RHR pumps IAW PNPS procedure 2.2.19, Section 7.3.2".

Job Performance Measure
Worksheet

Facility: Pilgrim | Task No: 259-01-01-003

Task Title: Starting a 3rd Reactor Feed Pump | JPM No: 5

K/A Reference: 259001 A4.02 3.9/3.7 | Position: RO

Examinee: | NRC Examiner:

Date:

Method of testing:

Simulated Performance | Actual Performance ✓

Classroom | Simulator ✓ | Plant

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- Reactor power is 60%.
- Power ascension to 100% is in progress following a week long shutdown.
- 'A' and 'B' reactor feed pumps are running.

Task Standard: Third feed pump will be started with no loss of level control (>+9" and <+48"). The system procedure shall be followed without failure of critical tasks. All critical steps must be performed in order written unless otherwise noted.

Required Materials: Marked up copy of 2.2.96, Attachment 15.

General References: PNPS 2.2.96, Rev. 72

Initiating Cue: "[Candidate's name], startup the third reactor feed pump IAW PNPS procedure 2.2.96 Section 2.4 and place the RFP TRIP SEQUENCE SELECTOR SWITCH in the 'ABC' position."

Time Critical Task: NO

Validation Time: 17 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable sections of the procedure.

Standard: Candidate reviews the precautions of 2.2.96.

Comment:

_____ **Performance Step 2:** Review 'Note' at beginning of Section 2.4.

Standard: Note is reviewed.

Comment:

_____ **Performance Step 3:** Record the RFP to be started.

Standard: Candidate records 'C' in blank space.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** Start the 'C' RFP Auxiliary Oil Pump.

Standard: Candidate calls field operator to start the 'C' RFP Auxiliary Oil Pump **OR** candidate takes the RFP 'C' control switch to START momentarily.

Comment: Report from field operator if requested to start Aux Oil Pump locally: "'C' RFP Auxiliary Oil Pump is started."

_____ **Performance Step 5:** Run Auxiliary Oil Pump for 5 minutes.

Standard: Candidate waits 5 minutes before proceeding.

Comment: Cue candidate, "5 minutes have elapsed."

_____ **Performance Step 6:** Verify adequate lubrication and local indication.

Standard: Candidate calls field operator to verify adequate lubrication and status of 'C' RFP Auxiliary Oil Pump running indicator light.

Comment: Report from field operator: "Oil pressure and lubrication for 'C' RFP are satisfactory. The 'C' RFP Auxiliary Oil Pump running light is on."

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 7:** Verify Auxiliary Oil Pump running light is on at C1.

Standard: Candidate verifies that 'C' RFP Auxiliary Oil Pump running light is on at C1.

Comment:

_____ **Performance Step 8:** Adjust 'C' RFP lube oil cooler TBCCW outlet valves to maintain 90° to 110°F oil temperature.

Standard: Candidate calls field operator to align TBCCW to the lube oil coolers to maintain 90° to 110°F oil temperature IAW 2.2.96, Attachment 15, Section 2.4, Step [3]c.

Comment: Report from field operator: "TBCCW lineup is complete to maintain 90° to 110°F oil temperature

_____ **Performance Step 9:** Reduce hydrogen flow to less than 17 SCFM.

Standard: Candidate calls Chemistry to reduce hydrogen flow to less than 17 SCFM IAW PNPS 10.2.4, Section 7.9.

Comment: Report from Chemistry. "Hydrogen flow is less than 17 SCFM."

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 10:** Verify hydrogen is secured to 'C' RFP.

Standard: Candidate calls field operator to align ETS for 'C' RFP IAW 2.2.96, Attachment 15, Section 2.4, Step [5](c).

Comment: Report from field operator: "73-HO-8052C is closed, and SW619 is in the CLOSE position."

_____ **Performance Step 11:** Vent 'C' RFP inbd and outbd mechanical seals.

Standard: Candidate orders NLNPO to vent 'C' RFP inbd and outbd mech seals IAW PNPS 2.2.96, Attachment 15, Section 2.4, Step [6].

Comment: "'C' RFP inboard and outboard mechanical seals have been vented."

_____ **Performance Step 12:** Verify RFP suction pressure is at least 250 psig.

Standard: Candidate verifies at least 250 psig indicated on PI-3429 (C-1).

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 13:** Open the 'C' RFP recirc valve.

Standard: Control switch for FV-3437 (C-1) to OPEN.

Comment:

_____ **Performance Step 14:** Review note about minimum flow line.

Standard: Candidate reviews note.

Comment:

_____ **Performance Step 15:** Verify or place RFP trip sequence selector switch is in OFF.

Standard: Candidate checks/places RFP trip sequence selector switch (C-1) in OFF.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 16:** Start 'C' RFP.

Standard: Candidate places control switch for 'C' RFP (C-1) to START.

Comment:

_____ **Performance Step 17:** Check RPV water level.

Standard: Candidate verifies RPV water level in proper band (approx 30") and being controlled by FWLC (C-905).

Comment:

_____ **Performance Step 18:** Check total feedwater flow.

Standard: Candidate verifies feed flow indication stable.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 19:** Place 'C' RFP recirc valve in AUTO.

Standard: Control switch for 'C' RFP recirc valve (FV-3437) to AUTO (C-1).

Comment:

_____ **Performance Step 20:** Check RFP suction and discharge pressures, and motor current.

Standard: Suction pressure >200 psig and discharge pressure normal (PI-3429 and 3468 on C-1), and motor current <650 amps.

Comment:

_____ **Performance Step 21:** Check 'C' RFP aux oil pump auto shutdown occurred.

Standard: Green OFF light on for 'C' RFP aux oil pump at C-1.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 22:** Verify 'C' RFP lube oil cooler TBCCW lineup.

Standard: Candidate calls field operator to verify TBCCW lineup IAW PNPS 2.2.96, Attachment 15, Section 2.4, Step [16](c).

Comment: Report from field operator: "TBCCW lineup verified IAW PNPS 2.2.96, Attachment 15, Section 2.4, Step [16](c)."

✓ **Performance Step 23:** Place RFP TRIP SEQUENCE SELECT switch in 'ABC' position.

Standard: Candidate verifies or places RFP TRIP SEQUENCE SELECT switch in 'ABC' position.

Comment:

✓ **Performance Step 24:** Place RFP trip sequence enable switch to ON.

Standard: Candidate places RFP trip sequence selector switch (C-1) to ON.

Comment:

Terminating Cue: When the RFP trip sequence enable switch is ON, h/she should inform the examiner that the JPM is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- Reactor power is 60%.
- Power ascension to 100% is in progress following a week long shutdown.
- 'A' and 'B' reactor feed pumps are running.

Initiating Cue: "[Candidate's name], startup the third reactor feed pump IAW PNPS procedure 2.2.96 Section 2.4 and place the RFP TRIP SEQUENCE SELECTOR SWITCH in the 'ABC' position."

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 264-02-01-006

Task Title: Manually Start and Load an Emergency Diesel Gen. (for Monthly Surveillance)

JPM No: 6

K/A Reference: 264000 A4.04 3.7/3.7

Position: RO/SRO

Examinee: _____

NRC Examiner: _____

Date: _____

Method of testing:

Simulated Performance _____

Actual Performance ✓

Classroom _____

Simulator ✓ Plant _____

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- Monthly surveillance of the 'A' Emergency Diesel Generator is in progress.
- Diesel is running, and has been paralleled with A5.

Task Standard: Manually start and load an Emergency Diesel Generator IAW 8.9.1. The system procedure shall be followed without failure of critical tasks. All critical steps must be performed in order unless otherwise noted.

Required Materials: Marked up copy of 8.9.1.

General References: PNPS 8.9.1, Rev. 77

Initiating Cue: "[Candidate's name], perform the monthly surveillance of the 'A' Emergency Diesel Generator IAW PNPS procedure 8.9.1."

Time Critical Task: NO

Validation Time: 28 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable sections of the procedure.

Standard: Candidate reviews the applicable section of the procedure.

Comment: All components are located on Panel C3 in the Control Room unless otherwise noted.

Cue Candidate to continue with Attachment 1, Section 1.4, step [6].

✓ **Performance Step 2:** **AFTER** the diesel has run for at least 8 minutes, **INCREASE** load to 1000 kW (950 to 1050 kW) using the DIESEL GEN 'A' GOVERNOR SPEED CONTROL.

Standard: Candidate rotates DG 'A' Governor Speed control Switch clockwise to increase load to 1000 kW.

Comment:

✓ **Performance Step 3:** **INCREASE** reactive load to 500 kVAR (450 to 550 kVAR) using the DIESEL GEN 'A' VOLTAGE REGULATOR SETPOINT ADJUSTER and record time.

Standard: Candidate rotates DG 'A' voltage regulator setpoint adjuster clockwise to increase load to 500 kVAR and records time.

Comment: Eight minutes have elapsed.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** **AFTER** the diesel has run for at least 8 minutes, **INCREASE** load to 1800 kW (1750 to 1850 kW) using the DIESEL GEN 'A' GOVERNOR SPEED CONTROL.

Standard: Candidate rotates DG 'A' Governor Speed control Switch clockwise to increase load to 18000 kW.

Comment:

✓ **Performance Step 5:** **INCREASE** reactive load to 750 kVAR (700 to 800 kVAR) using the DIESEL GEN 'A' VOLTAGE REGULATOR SETPOINT ADJUSTER and record time.

Standard: Candidate rotates DG 'A' voltage regulator setpoint adjuster clockwise to increase load to 750 kVAR and records time.

Comment: Eight minutes have elapsed.

✓ **Performance Step 6:** **AFTER** the diesel has run for at least 8 minutes, LOAD diesel for 60-minute run by **INCREASING** load to 2600 kW (2550 to 2650 kW) using the DIESEL GEN 'A' GOVERNOR SPEED CONTROL.

Standard: Candidate rotates DG 'A' Governor Speed Control Switch clockwise to increase load to 2600 kW.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** **INCREASE** reactive load to 1250 kVAR (1200 to 1300 kVAR) using the DIESEL GEN 'A' VOLTAGE REGULATOR SETPOINT ADJUSTER and record time.

Standard: Candidate rotates DG 'A' voltage regulator setpoint adjuster counterclockwise to increase reactive load to 1250 kVAR and records time.

Comment:

_____ **Performance Step 8:** Begin logging full load data on Attachments 1B and 1C.

Standard: Candidate reports the 60 minute run has begun, begins log taking on Attachment 1C and notifies operator at diesel to begin taking full load data on Attachment 1B.

Comment:

_____ **Performance Step 9:** At breaker 152-509, **RECORD** the phase current for each phase below and on Attachment 1D (maximum 451 amps).

Standard: Candidate requests data from field operator.

Comment: After appropriate time delay, report field operator results: "Current on phase A & C are 425 amps, Current on B phase indicates 0 amps."

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 10:** IF any phase current indicator reads 0, IMMEDIATELY UNLOAD the diesel AND OPEN breaker A509 at Panel C-3.

Standard: Candidate unloads diesel by taking the DG 'A' Governor Speed Control Switch counterclockwise.

Comment:

✓ **Performance Step 11:** Open breaker A509 at Panel C3.

Standard: Candidate opens breaker A509 by turning the breaker control switch on Panel C3 counterclockwise.

Comment:

Terminating Cue: When the candidate has opened breaker E509, inform him/her that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- Monthly surveillance of the 'A' Emergency Diesel Generator is scheduled.
- Preparations are complete for performance.
- The prerequisites of 8.9.1 are complete.
- Attachment 1A is filled out and local pre-start checks are complete.

Initiating Cue: "[Candidate's name], perform the monthly surveillance of the 'A' Emergency Diesel Generator IAW PNPS procedure 8.9.1."

Job Performance Measure
Worksheet

Facility: Pilgrim | Task No: 215-04-01-001

Task Title: LPRM Failure | No: 7

K/A Reference: 215005 A4.04 3.4/3.4 | Position: RO/SRO

Examinee: | NRC Examiner:

Date:

Method of testing:
Simulated Performance | Actual Performance ✓

Classroom | Simulator ✓ | Plant

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- The Reactor is at 100% power.
- LPRM 12-37A has failed.
- 2.4.38, LPRM Failure procedure is being executed
- LPRM 12-37A needs to be bypassed.

Task Standard: Bypassing the failed LPRM will be performed IAW all precautions and limitations described in PNPS 2.2.66. There shall be no failure of critical elements. Critical steps must be performed in order; other steps may be performed out of sequence.

Required Materials: None

General References: PNPS 2.2.66, Rev. 16

Initiating Cue: "[Candidate's name], bypass LPRM 12-37A IAW PNPS 2.2.66".

Time Critical Task: NO

Validation Time: 10 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable section of the procedure.

Standard: Candidate reviews PNPS 2.2.66 precautions and limitations

Comment:

_____ **Performance Step 2:** Record the LPRM to be bypassed.

Standard: Candidate records "12-37A " in the blank provided on Attachment 4 of 2.2.66

Comment:

_____ **Performance Step 3:** Obtain permission from the SM to bypass the LPRM.

Standard: Candidate receives permission to bypass LPRM 12-37A.

Comment: Cue the candidate as the Shift Manager: "You have permission to bypass LPRM 12-37A".

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 4:** If the LPRM inputs to an APRM, **THEN VERIFY** there are sufficient LPRM inputs to meet Tech Spec 3.1.1.

Standard: Candidate determines number of valid LPRM inputs to APRM B and asks CRS to ensure there are a sufficient number of inputs to meet Tech Spec 3.1.1

Comment: LPRM 12-37A inputs to APRM Channel B. Cue the candidate: "Tech Spec 3.1.1 is still met".

✓ **Performance Step 5:** Bypass the APRM channel in which the LPRM inputs.

Standard: APRM BYPASS switch on C905 is moved into the CH B position

Comment:

_____ **Performance Step 6:** Verify the APRM channel bypass light is ON at C905 and C937.

Standard: Candidate verifies that the APRM B BYPASSED light is on at C905 and the APRM CH B BYPASS light is on at C937.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** At panel C937, **BYPASS** the LPRM by placing the control or thumb switch (S-I) to the "BY" position.

Standard: Candidate takes the S-1 switch for LPRM 12-37A at panel C937 to the "BY" position

Comment:

_____ **Performance Step 8:** Ensure Tech Spec Table 3.1.1 Note 13 is satisfied.

Standard: TS Table 3.1.1 Note 13 is met.

Comment: Cue the Candidate that you as CRS will verify that TS Table 3.1.1 Note 13 is met.

_____ **Performance Step 9:** Record the number of operable detectors for each APRM and LPRM page using 2.1.15 Attachment 2 Daily Log Test 36 and Attach it to this procedure.

Standard: Number of operable detectors recorded.

Comment: Cue the candidate that you will complete 2.1.15 Attachment 2 Daily Log Test 36

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 10:** Demand a 3D Monicore Core Power and Flow Log in accordance with 2.6.5

Standard: 3D Monicore Core Power and Flow Log obtained.

Comment: Cue the candidate that you will obtain the 3D Monicore Core Power and Flow Log.

_____ **Performance Step 11:** Demand an official monitoring case in accordance with 2.6.5.

Standard: Official Monitoring Case obtained.

Comment: Cue the Candidate that you will obtain the Official Monitoring Case.

_____ **Performance Step 12:** Review the 3D Monicore Core Power and Flow Log and the official monitoring case to ensure the following are within acceptable limits:
$0.87 \leq$ APRM AGAFs ≤ 1.00
MFLPD ≤ 1.0
MFLCPR ≤ 1.0
MAPRAT ≤ 1.0

Standard: Thermal limits and APRM AGAFs are within limits

Comment: Cue the candidate that you have verified that thermal limits and APRM AGAFs are within acceptable limits.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 13:** If required, recalibrate APRM AGAFs in accordance with 9.1

Standard: APRM AGAFs adjusted as required..

Comment: If necessary cue the candidate that APRM AGAFs are acceptable. (The candidate may pass by this step without and cueing since they were told in the previous step that APRM AGAFs were acceptable.)

✓ **Performance Step 14:** When the APRM AGAF is within acceptable limits, place the APRM channel back in service.

Standard: APRM Bypass switch moved from the Channel B position to the center neutral position.

MFLPD $\leq$1.0
MFLCPR $\leq$ 1.0
MAPRAT $\leq$ 1.0

Terminating Cue: When the candidate moves the APRM bypass switch from Channel B to the center neutral position, the examiner should inform the candidate that the JPM is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

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      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- The Reactor is at 100% power.
- LPRM 12-37A has failed.
- 2.4.38, LPRM Failure procedure is being executed
- LPRM 12-37A needs to be bypassed.

Initiating Cue: "[Candidate's name], bypass LPRM 12-37A IAW PNPS 2.2.66".

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 223-04-01-001

Task Title: Manually Start SGBT and Vent the Torus

JPM No: 8

K/A Reference: 261000 A404 3.3/3.4

Position: RO/SRO

Examinee: _____

NRC Examiner: _____

Date: _____

Method of testing:

Simulated Performance _____

Actual Performance ✓

Classroom _____

Simulator ✓ Plant _____

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- The plant is at power with the mode switch in "RUN."
- It is desired to vent the torus to raise DW to torus D/P.

Task Standard: The torus is initially aligned correctly for the torus venting evolution. The candidate recognizes the alarms/indications associated with a leak in the drywell and takes action to secure the torus venting lineup. The primary containment atmosphere control and standby gas treatment systems shall be operated in accordance with all applicable system precautions and limitations. The system procedure shall be followed without failure of critical tasks. Critical steps must be performed in order. Other steps may be performed out of sequence.

Required Materials: None

General References: PNPS 2.2.70, Rev. 82

Initiating Cue: "[Candidate's name], vent the torus using the 'B' train of Standby Gas Treatment in accordance with PNPS 2.2.70, Section 7.3 and 7.3.3. Inform me when the task is complete."

Time Critical Task: NO

Validation Time: 15 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Candidate reviews PNPS 2.2.70, Section 7.3 and Section 7.3.3.

Standard: PNPS 2.2.70, Section 7.3 and 7.3.3 reviewed.

Comment:

_____ **Performance Step 2:** Refers to Technical Specifications 3.7.A.1.k.

Standard: Candidate references T.S. Section 3.7.A.1.k.

NOTE: T.S. 3.7.A.1.k – The differential pressure may be reduced to less than 1.17 psid for a maximum of four (4) hours for maintenance activities on the differential pressure control system and during required operability testing of the HPCI system, the relief valves, the RCIC system and the drywell suppression chamber vacuum breakers.

Comment:

_____ **Performance Step 3:** Candidate reviews Step [2] to determine conditions that may indicate a leak in containment and require securing venting.

Standard: Candidate reads the step.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** Open "AO-5041A, Torus Normal Exhaust Isolation Valve".

Standard: AO-5041A keylock switch is taken to OPEN and has red light on, green light off.

Comment:

✓ **Performance Step 5:** Open "AO-5041B, Torus Normal Exhaust Isolation Valve".

Standard: AO-5041B keylock switch is taken to OPEN and has red light on, green light off.

Comment:

✓ **Performance Step 6:** Open "AO-N-98, Contaminated Exhaust Plenum Damper".

Standard: AO-N-98 switch is taken to OPEN and has red light on, green light off.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** Open "AO-N-101, Refuel Floor Exhaust to SGTS Inlet Plenum".

Standard: AO-N-101 switch is taken to OPEN and has red light on, green light off.

Comment:

✓ **Performance Step 8:** Open "AO-N-112, Train 'B' Outlet Damper".

Standard: AO-N-112 switch is taken to OPEN and has red light on, green light off.

Comment:

____ **Performance Step 9:** Verify "VEX-210A, Standby Gas Fan 'A', control switch in "AUTO" position.

Standard: VEX-210A control switch is verified in "AUTO".

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 10:** Open "AO-N-106, Train 'B' Inlet Damper".

Standard: AO-N-106 switch is taken to OPEN and has red light on, green light off. Fan VEX-210B starts and has red light on, green light off.

Comment:

_____ **Performance Step 11:** Candidate proceeds to the main control room to report start time to CRS for recording in the CRS log.

Standard: Candidate reports VEX-210B start time to CRS.

Comment: IF Operator: When the candidate goes to report the start time, insert the malfunction that brings in the alarms.

_____ **Performance Step 12:** Acknowledge annunciators C7L-C5 & C6 and C904LC-B3.

Standard: Candidate references ARP for alarms received after pressing alarm acknowledge PB on C7 and C904.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 13:** Report receipt of annunciators to CRS.

Standard: Candidate reports alarming conditions and ARP actions for C904LC-B3 and C7L-C5 & C6.

Comment:

_____ **Performance Step 14:** Exit procedure 2.2.70, Section 7.3.3 and enters Section 7.10.

Standard: Candidate exits Section 7.3.3 and enters Section 7.10.

Comment:

_____ **Performance Step 15:** Verify "SV-5030A, N_2 Makeup Supply Block Valve" CLOSED.

Standard: SV-5030A switch is verified in CLOSE and has green light on, red light off.

Comment:

_____ **Performance Step 16:** Verify "AO-5035A, Drywell Purge Supply Isolation Valve" closed.

Standard: AO-5035A switch is verified in CLOSE and has green light on, red light off.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 17:** Verify "AO-5036A, Torus Purge Supply Isolation Valve" is closed.

Standard: AO-5036A switch is verified in CLOSE and has green light on, red light off.

Comment:

✓ **Performance Step 18:** Rotate "AO-5041A, Torus Normal Exhaust Isolation Valve", control switch to the "CLOSE" position.

Standard: AO-5041A keylock switch is taken to CLOSE and has green light on, red light off.

Comment:

✓ **Performance Step 19:** Rotate "AO-5041B, Torus Normal Exhaust Isolation Valve", control switch to the "CLOSE" position.

Standard: AO-5041B keylock switch is taken to CLOSE and has green light on, red light off.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 20:** Verify "AO-5042A, Torus Purge Exhaust Isolation Valve", is closed.

Standard: AO-5042A switch is verified in CLOSE and has green light on, red light off.

Comment:

_____ **Performance Step 21:** Verify "AO-5042B, Torus Purge Exhaust Isolation Valve" is closed.

Standard: AO-5042B switch is verified in CLOSE and has green light on, red light off.

Comment:

_____ **Performance Step 22:** Verify "AO-5043A, Drywell Normal Exhaust Isolation Valve", is closed.

Standard: AO-5043A keylock switch is verified in CLOSE and has green light on, red light off.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 23:** Verify "AO-5043B, Drywell Normal Exhaust Isolation Valve", is closed.

Standard: AO-5043B keylock switch is verified in CLOSE and has green light on, red light off.

Comment:

_____ **Performance Step 24:** Verify "AO-5044A, Drywell Purge Exhaust Isolation Valve", is closed.

Standard: AO-5044A switch is verified in CLOSE and has green light on, red light off.

Comment:

_____ **Performance Step 25:** Verify "AO-5044B, Drywell Purge Exhaust Isolation Valve", is closed.

Standard: AO-5044B switch is verified in CLOSE and has green light on, red light off.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 26:** Rotate "AO-N-106, Train 'B' Inlet Damper", control switch to the "AUTO" position.

Standard: AO-N-106 switch is taken to AUTO and has green light on, red light off.

Comment:

_____ **Performance Step 27:** Verify "AO-N-99, Train 'A' Inlet Damper", control switch in the "AUTO" position.

Standard: AO-N-99 switch is verified in AUTO and has green light on, red light off.

Comment:

_____ **Performance Step 28:** Verify "AO-N-108, Train 'A' Outlet Damper", control switch in the "AUTO" position.

Standard: AO-N-108 switch is verified in AUTO and has green light on, red light off.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 29:** Rotate "AO-N-112, Train 'B' Outlet Damper", control switch to the "AUTO" position.

Standard: AO-N-112 switch is taken to AUTO and has green light on, red light off.

Comment: Procedurally, AO-N-98, Contaminated Exhaust to SGTS Inlet Plenum, and AO-N-101, Refuel Floor Exhaust to SGTS Inlet Plenum, are not required to be closed. However, if the candidate asks permission to close these valves give direction to do so.

Terminating Cue: When 'B' SBGT has been started and subsequently secured due to the drywell leak, the examiner should inform the candidate that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- The plant is at power with the mode switch in "RUN."
- It is desired to vent the torus to raise DW to torus D/P.

Initiating Cue: Vent the torus using the 'B' train of Standby Gas Treatment in accordance with PNPS 2.2.70, Section 7.3 and 7.3.3. Inform me when the task is complete."

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 200-05-01-014

Task Title: MSIV Closure from Outside the Control Room

JPM No: 9

K/A Reference: 295016 A1.08 4.0/4.0

Position: RO/SRO

Examinee:

NRC Examiner:

Date:

Method of testing:

Simulated Performance ✓

Actual Performance

Classroom

Simulator

Plant ✓

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- A fire in the Main Control Room has required that it be abandoned.
- The reactor is shut down.
- The steam bypass and pressure regulation system is inoperable.
- MSIV's must be closed from outside the Control Room.

Task Standard: All MSIVs are shut. The MSIVs shall be operated IAW all applicable system precautions and limitations. The system procedure shall be followed without failure of critical tasks. All critical steps must be performed in order unless otherwise noted.

Required Materials: Fuse pullers.

General References: PNPS 2.4.143, Rev. 29

Initiating Cue: "[Candidate's name], close MSIVs IAW PNPS 2.4.143, Section 4.0, Step [10]."

Time Critical Task: NO

Validation Time: 5 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable sections of the procedure.

Standard: Candidate reviews the applicable section of the procedure.

Comment: All components are located in the Cable Spreading Room, fuses may be pulled in any order.

Candidate obtains fuse puller.

_____ **Performance Step 2:** Locate Panel C941.

Standard: Candidate locates Panel C941.

Comment: Panel located in Cable Spreading Room

✓ **Performance Step 3:** Remove fuse 16A-F10A.

Standard: Fuse 16A-F10A is removed.

Comment:

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** Remove fuse 16A-F11A.

Standard: Fuse 16A-F11A is removed.

Comment:

✓ **Performance Step 5:** Remove fuse 16A-F12A.

Standard: Fuse 16A-F12A is removed.

Comment:

_____ **Performance Step 6:** Locate Panel C942.

Standard: Candidate locates Panel C942.

Comment: Panel located in Cable Spreading Room

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** Removes fuse 16A-F10B.

Standard: Fuse 16A-F10B is removed.

Comment:

✓ **Performance Step 8:** Removes fuse 16A-F11B.

Standard: Fuse 16A-F11B is removed.

Comment:

✓ **Performance Step 9:** Removes fuse 16A-F12B.

Standard: Fuse 16A-F12B is removed.

Comment:

Terminating Cue: When candidate has pulled all fuses for MSIVs, h/she should inform the examiner that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- A fire in the Main Control Room has required that it be abandoned.
- The reactor is shut down.
- The steam bypass and pressure regulation system is inoperable.
- MSIV's must be closed from outside the Control Room.

Initiating Cue: "[Candidate's name], close MSIVs IAW PNPS 2.4.143, Section 4.0, Step [10]."

Job Performance Measure
Worksheet

Facility: Pilgrim

Task No: 262-04-04-004

Task Title: Open Breakers for the RB Floor & Equipment Drain Sump Pumps

JPM No: 10

K/A Reference: 295016 A1.08

Position: RO/SRO

Examinee: _____

NRC Examiner: _____

Date: _____

Method of testing:

Simulated Performance _____

Actual Performance ✓

Classroom _____

Simulator _____ Plant ✓

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- Reactor was at 100% power when a DBA LOCA occurred.
- CHARMS are reading 15R/hr and increasing.
- To support secondary containment control, the breakers for the RB floor and Equipment Drain Sump Pumps need to be opened.

Task Standard: The opening of the RB floor and Equipment Drain Sump Pump breakers shall be accomplished IAW all system precautions and limitations. The override statement shall be followed without failure of critical tasks. All critical steps must be performed in order unless otherwise noted.

Required Materials:

General References: EOP-04

Initiating Cue: "[Candidate's name], open the RB Floor and Equipment Drain Sump Pump breakers 52-13113, 52-13114, 52-13111 and 52-13112

Time Critical Task: NO

Validation Time: 10 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 1:** Open breakers 52-13113, 52-13114, 52-13111 and 52-13112.

Breaker	Bus	Location	Position
52-13113	B13	RB El. 3' Cond. Storage Pump Area	OPEN
52-13114	B13	RB El. 3' Cond. Storage Pump Area	OPEN
52-13111	B13	RB El. 3' Cond. Storage Pump Area	OPEN
52-13112	B13	RB El. 3' Cond. Storage Pump Area	OPEN

Standard: Candidate simulates opening breakers 52-13113, 52-13114, 52-13111 and 52-13112 by moving the breaker in the down direction.

Comment: This task is covered in the override statement in EOP-04.

When the candidate has simulated moving the breakers in the down direction, cue the candidate that the breaker clicks in the down position.

_____ **Performance Step 2:** Inform Control Room that RB floor and Equipment Drain Sump Pump breakers are open.

Standard: Candidate informs CRS that RB Floor and Equipment Sump Pump breakers are open.

Comment: Informed Control Room.

Terminating Cue: When candidate has informed the Control Room of the breakers being open, s/he should inform the examiner that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- Reactor was at 100% power when a DBA LOCA occurred.
- CHARMS are reading 15R/hr and increasing.
- To support secondary containment control, the breakers for the RB floor and Equipment Drain Sump Pumps need to be opened.

Initiating Cue: "[Candidate's name], open the RB Floor and Equipment Drain Sump Pump breakers 52-13113, 52-13114, 52-13111 and 52-13112

Job Performance Measure
Worksheet

Facility: Pilgrim | Task No: 200-05-04-075

Task Title: Cross-Tie RBCCW Cooling Loops | JPM No: 11

K/A Reference: 295018 A1.01 3.3/3.4 | Position: RO/SRO

Examinee: | NRC Examiner:

Date:

Method of testing:

Simulated Performance ✓ | Actual Performance

Classroom | Simulator | Plant ✓

Read to the Examinee:

"I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied."

Initial Conditions: Plant conditions are as follows:

- The Reactor was operating at power when a loss of offsite power occurred.
- Bus A5 has locked out due to a ground fault and is unavailable
- All three 'B' side RBCCW pumps are in service.
- The reactor Building Operator has been directed to isolate the 'A' RBCCW Surge Tank.

Task Standard: The 'A' and 'B' Reactor Building Closed Cooling Water loops are cross-tied. The Reactor Building Closed Cooling Water system shall be operated in accordance with all applicable system precautions and limitations. The system procedure shall be followed without failure of critical elements

Required Materials: None

General References: PNPS 2.4.42, Rev 22

Initiating Cue: "[Candidate's name], cross-tie RBCCW with 'B' side supplying IAW PNPS 2.4.42, Attachment 1"

Time Critical Task: NO

Validation Time: 5 minutes

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

_____ **Performance Step 1:** Review the applicable sections of the procedure.

Standard: Candidate reviews applicable sections of the procedure.

Comment: Reference procedure 2.4.42, Attachment 1. All components are located on east wall of Turbine Building, Aux Bay, 3' Elevation

_____ **Performance Step 2:** Review Caution about torus water temperature.

Standard: Caution is reviewed.

Comment: If asked about Torus water temperature, cue candidate that torus temperature is 78 degrees.

✓ **Performance Step 3:** Place/verify sufficient RBCCW pumps in service.

Standard: Candidate determines a sufficient number of pumps are in service.

Comment: As given in the initial conditions, cue candidate that all 3 'B' loop pumps are running if asked.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 4:** Open manual suction valve 30-HO-114, RBCCW loop A & B suction cross-tie block valve.

Standard: Candidate simulates rotating the handwheel to the open position for 30-HO-114 valve.

Comment: Performance Steps 4-7 may be performed in any order.

✓ **Performance Step 5:** Open manual suction valve 30-HO-115, RBCCW loop A & B suction cross-tie block valve.

Standard: Candidate simulates rotating the handwheel to the open position for 30-HO-115 valve.

Comment: Performance Steps 4-7 may be performed in any order.

✓ **Performance Step 6:** Open manual suction valve 30-HO-192, RBCCW loop A & B discharge cross-tie block valve.

Standard: Candidate simulates rotating the handwheel to the open position for 30-HO-192 valve.

Comment: Performance Steps 4-7 may be performed in any order.

PERFORMANCE INFORMATION
(Critical steps denoted with a check mark)

✓ **Performance Step 7:** Open manual suction valve 30-HO-193, RBCCW loop A & B discharge cross-tie block valve.

Standard: Candidate simulates rotating the handwheel to the open position for 30-HO-192 valve.

Comment: Performance Steps 4-7 may be performed in any order.

_____ **Performance Step 8:** Report that RBCCW loops are cross-tied with 'B' loop supplying.

Standard: Candidate reports to the Control Room that the RBCCW loops are cross-tied with 'B' loop ssupllying.

Comment:

Terminating Cue: When candidate simulated opening all 4 cross-tie valves, he should inform the examiner that the task is complete.

VERIFICATION OF COMPLETION

JPM No.: _____

Examinee's Name: _____

Examiner's Name: _____

Date performed: _____

Number of attempts: _____

Time to complete: _____

Question Documentation:

Question: _____

_____

_____

Response: _____

_____

_____

Result: **SAT** or **UNSAT**

Examiner's signature and date: _____ _____

Job Performance Measure
Quality Checklist

Every JPM should:

1. ✓ Be supported by facility licensee's job task analysis.

2. ✓ Be operationally important (meets NRC K/A Catalog threshold criterion of 2.5 (3 for requalification exams) or as determined by the facility and agreed to by the NRC).

3. ✓ Be designed as either SRO only, RO/SRO or AO/RO/SRO.

4. Include the following, as applicable:

   a. ✓ Initial conditions

   b. ✓ Initiating cues

   c. ✓ References and tools, including associated procedures

   d. ✓ Validated time limits (average time allowed for completion) and specific designation of those JPMs that are deemed to be time-critical by the facility operations department

   e. ✓ Specific performance criteria that include:

      (1) ✓ Expected actions with exact control and indication nomenclature and criteria (switch position, meter reading), even if these criteria are not specified in the procedural step

      (2) ✓ System response and other cues that are complete and correct so that the examiner can properly cue the examinee, if asked

      (3) ✓ Statements describing important observations that should be made by the examinee

      (4) ✓ Criteria for successful completion of the task

      (5) ✓ Identification of those steps that are considered critical

      (6) ✓ Restrictions on the sequence of steps

Information Provided to Candidate

Initial Conditions: Plant conditions are as follows:

- The Reactor was operating at power when a loss of offsite power occurred.
- Bus A5 has locked out due to a ground fault and is unavailable
- All three 'B' side RBCCW pumps are in service.
- The reactor Building Operator has been directed to isolate the 'A' RBCCW Surge Tank.

Initiating Cue: "[Candidate's name], cross-tie RBCCW with 'B' side supplying IAW PNPS 2.4.42, Attachment 1"