Facility:	Indian Point Unit 3	Task No.:	N/A
Task Title:	Withdraw Control RODS to 10^{-8} Amps	JPM No.:	2003 NRC S1
K/A Reference:	001 A2.03 (3.5/4.2)		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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:	A reactor startup is in progress. All precautions and limitations of POP-1.2 are met. Step 4.35 is complete. The reactor has just been declared critical.
Task Standard:	The reactor is tripped due to multiple dropped control rods.
Required Materials:	POP-1.2
General References:	POP-1.2
Handouts:	POP 1.2 with steps signed off up to 4.36 (and 4.38)
Initiating Cue:	The CRS directs you to establish a positive startup rate and raise power to 10^{-8} amps to record critical data IAW POP-1.2, steps 4.36 – 4.43.
Time Critical Task:	NO
Validation Time:	15 minutes

SIMULATOR SETUP

Reset to IC-29.

Start Audio Count Rate

(Denote Critical Steps with an asterisk)

Performance Step: 1 WHEN overlap of source range and intermediate range detectors occurs, THEN verify proper overlap of source range and intermediate range detectors per Graph NI-3A, Nuclear Instrumentation Detector Ranges, as power is increased.

Standard: Refer to NI-3A to determine that proper overlap exists.

Comment:

NOTE: If reactor power drops to less than the P-6 setpoint, re-blocking the source range high flux trips will be necessary to prevent a reactor trip when increasing power.

* **Performance Step: 2** WHEN Power Above P-6 light is illuminate, THEN BLOCK source range high flux trips using Source Range A (B) Logic Trip Block pushbuttons.

- VERIFY SOURCE RANGE LOSS OF DETECTOR VOLTAGE alarm annunciates.
- VERIFY both source range channels indicate zero.
- SWITCH NIS NR-45 recorder to read both intermediate range channels.

Standard:

- Pushes BOTH Source Range Trip Block pushbuttons.
- Verifies annunciator.
- Verifies Source Range indicates zero – switches recorder to IR.

Comment:

Performance Step: 3 WHEN Reactor is critical, THEN MAKE an announcement similar to the following twice:

- "Attention all personnel. Attention all personnel. The Reactor is now critical."

Standard: No action required. Already done

Comment:

* **Performance Step: 4** RAISE reactor power level to 10^{-8} amps.

Standard: Withdraws rods to establish a positive SUR.

Comment: **Note: If candidate establishes lower than .3 DPM startup rate due to conservatism, it is not a critical ommission**

Performance Step: 5 INITATE removal of the following equipment from service per SOP-NI-1, Excore Nuclear Instrumentation System Operation, while continuing with this procedure:

- Audio Count Rate Drawer
- Scaler Timer Drawer

Standard:

Comment: **CUE: Another operator will remove equipment from service.**

Performance Step: 6 DIRECT Chemistry to obtain an RCS Boron sample.

Standard:

Comment: **CUE: CRS will call Chemistry.**

* **Performance Step: 7** STABILIZE reactor power at approximately 10^{-8} amps on intermediate range indicators.

Standard: Inserts rods to stabilize power.

Comment: ***Booth Instructor: Insert the following command:***

FILE DROPCBD

* **Performance Step: 8** Determines multiple rods dropped.

Standard: Trips reactor.

Comment:

Terminating Cue: When reactor tripped, inform the candidate the evaluation for this JPM is complete.

VERIFICATION OF COMPLETION

Job Performance Measure No.: 2003 NRC S1

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: A reactor startup is in progress. All precautions and limitations of POP-1.2 are met. Step 4.35 is complete. The reactor has just been declared critical.

INITIATING CUE: The CRS directs you to establish a positive startup rate and raise power to 10^{-8} amps to record critical data IAW POP-1.2, steps 4.36 – 4.43.

Facility:	Indian Point Unit 3	Task No.:	020 001 01 01
Task Title:	Adjust Accumulator Level And/Or Pressure As Required To Maintain Parameters Within Specification	JPM No.:	2003 NRC S2
K/A Reference:	006 A1.13 3.5/3.7		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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:	The plant is at 100% power. 31 Accumulator has a low level.
Task Standard:	Accumulator is restored to operable condition with no alarms.
Required Materials:	SOP SI-1
General References:	SOP SI-1
Handouts:	NONE
Initiating Cue:	You are directed to fill the 31 Accumulator to 30% using 31 SI Pump, and clear all 31 Accumulator Alarms in accordance with SOP-SI-1, section 4.1.6 through step 18.
Time Critical Task:	NO
Validation Time:	20 Minutes

SIMULATOR SETUP

Reset to IC-34

(Denote Critical Steps with an asterisk)

Performance Step: 1 Obtain and review SOP SI-1.

Standard: Obtains and reviews SOP SI-1.

Comment:

Performance Step: 2 Verify RCS pressure > 1650 psig.

Standard: Observe RCS pressure > 1650 psig.

Comment:

Performance Step: 3 If the Refueling Water Purification Pump is in Service: STOP the pump in accordance with SOP SI-3. Ensure valve SI-841 is CLOSED, spent fuel pit demineralizer to RWST isolation.

Standard: Queries whether the Refueling Water Purification Pump is in service.

Comment: **CUE:** **This pump is normally secured.**

Refueling Water Purification Pump is NOT in service.

Performance Step: 4 Ensure SI-MOV-1810, RWST Outlet Isolation, is OPEN (SI Pump Room).

Standard: Observe valve position for SI-MOV-1810 OPEN can be verified by de-energized SI valve position white light or having NPO check it.

Comment: **CUE:** **NPO confirms that SI-MOV-1810 is OPEN.**

Performance Step: 5 Review Unit Log to ensure motor starting requirements of SOP EL-4A are SATISFIED for the Safety Injection Pump.

Standard: Queries Log Review.

Comment: **CUE:** **CRS has reviewed log and starting requirements are SATISFIED for starting 31 SI Pump.**

Performance Step: 6 If RCS temperature is GREATER THAN 350°F, then enter LCO 3.5.2 for #31 SI Pump.

Standard: CRS notified about entry into LCO.

Comment: **CUE: CRS acknowledges.**

Performance Step: 7 START 31 SI Pump and verify adequate discharge pressure.

Standard: Select START on switch for 31, red light ON, green light OFF. Observe discharge pressure on PI-922.

Comment:

Performance Step: 8 Verify recirculation flow is 25 gpm or GREATER on FI-950, SI Pump Recirculation Flow Indicator.

Standard: Call NPO to verify recirculation flow.

Comment: **CUE: NPO reports recirc flow is 30 gpm.**

Performance Step: 9 Ensure SI-1837 Accumulator Fill Line Isolation is OPEN.

Standard: Confirms SI-1837 OPEN by consulting last COL.

Comment: **CUE: Confirmation is obtained that SI-1837 is OPEN.**

* **Performance Step: 10** Vent the accumulator as necessary.

Standard: No pressure alarms on 31 Accumulator when JPM is complete. (Steps for venting listed at end of JPM.)

Comment:

* **Performance Step: 11** Fill the accumulator by OPENING SI-AOV-890A, 31 Accumulator Fill Isolation.

Standard: Take switch to OPEN on SI-AOV-890A; red light ON, green light OFF.

Comment:

* **Performance Step: 12** When desired level of 30% indicated level is reached, CLOSE fill isolation.

Standard: CLOSE SI-AOV-890A, when level approximately 30% BOTH HIGH and LOW level alarms must be CLEAR when JPM is complete.

Comment:

Performance Step: 13 When accumulator filling is complete, then STOP the running SI pump used for accumulator fill and position pump control switch per CRS.

Standard: Rotate switch to STOP; green light ON and red light OFF. Control switch placed in AUTO.

Comment:

Performance Step: 14	Venting SI Accumulator via SI-HCV-943: ensure SI-HCV-943 and NNE-AOV-863 are CLOSED. OPEN 31 SI Accumulator N2 valve, SI-AOV891A slowly OPEN SI-HCV-943 and RE-CLOSE When venting complete CLOSE 31 SI Accumulator N2 valve, SI-AOV-891A Complete Attachment 1.
Standard:	Vent SI Accumulator via HCV-943: observes SI-HCV-943 and NNE-AOV-863 are CLOSED OPENS 31 SI Accumulator N2 valve, SI-AOV-891A. Red light LIT Slowly OPENS SI-HCV-943 and RE-CLOSES when venting is complete CLOSES 31 SI ACCUMULATOR N2 valve, SI-AOV-891A. Green light LIT States need to complete Attachment 1.
Comment:	**CUE: Another operator will complete Attachment 1.**
Performance Step: 15	Exit LCO previously entered.
Standard:	CRS informed about exiting LCO.
Comment:	**CUE: CRS acknowledges that LCO can be exited.**
Performance Step: 16	Inform Evaluator that JPM is COMPLETE.
Standard:	Evaluator informed.
Comment:	**CUE: JPM is COMPLETE.**
Terminating Cue:	31 Accumulator is filled to approximately 30% and 31 Accumulator alarms are CLEAR.

VERIFICATION OF COMPLETION

Job Performance Measure No.: 2003 NRC S2

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: The plant is at 100% power.

31 Accumulator has a low level.

INITIATING CUE: You are directed to fill the 31 Accumulator to 30% using 31 SI Pump, and clear all 31 Accumulator Alarms in accordance with SOP-SI-1, section 4.1.6 through step 18.

Facility:	Indian Point Unit 3	Task No.:	N/A
Task Title:	Depressurize The RCS Following A SGTR	JPM No.:	2003 NRC S3
K/A Reference:	038 EA1.03 (4.3/4.1)		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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:	A Steam Generator Tube Rupture has occurred. The RCS has been cooled down to target temperature in accordance with E-3.
Task Standard:	Aux Spray is initiated and RCS pressure is dropping.
Required Materials:	E-3
General References:	E-3
Handouts:	NONE
Initiating Cue:	The CRS has directed you to initiate depressurization to refill the pressurizer in accordance with E-3, step 18.
Time Critical Task:	NO
Validation Time:	15 minutes

SIMULATOR SETUP

Reset to IC-32

(Denote Critical Steps with an asterisk)

Performance Step: 1 Depressurize RCS using PRZR Spray to minimize break flow and refill PRZR:

- Check normal PRZR spray – AVAILABLE.

Standard: Determines RCPs running.

Comment:

* **Performance Step: 2** Initiate maximum PRZR spray.

Standard: Attempts to open spray valve. Spray valve will NOT open.

Performance Step: Go to step 20, page 24.

Standard: Refers to step 20.

Comment:

CAUTION

- **The PRT may rupture IF a PRZR PORV is used to depressurize the RCS. This may result in Abnormal Containment Conditions.**
- **Cycling of the PRZR PORV should be minimized.**

NOTE

The upper head region may void during RCS depressurization if RCPs are NOT running. This may result in a rapidly increasing PRZR level.

Performance Step: 3 Depressurize RCS using PRZR PORV to minimize break flow and refill PRZR:

- Check PRZR PORVs – any available.

Standard: Both PORVs appear available, but neither PORV will open. One PORV stuck, other PORV Block Valve stuck.

Comment:

Performance Step: 4 PERFORM the following:

a. USE auxiliary spray:

- REFER to SOP-CVCS-2.

Standard:

Comment:

CAUTION

- **IF ΔT between PZR and PZR spray is greater than 320°F, THEN PZR spray SHALL NOT be used, per TRO 3.4.D.**
- **Initiation of Aux Spray with RCPs stopped will cause rapid increase in 34 hot let temps due to outflow from PZR into loop. IF necessary to initiate Aux. Spray, THEN spray flow SHALL be initiated very slowly.**

Performance Step: 5 Verify ΔT between charging and PZR is less than 320°F.

Standard: Determines ΔT is GREATER THAN 320°F.

Comment:

Performance Step: 6 If auxiliary spray can NOT be established OR is NOT effective, THEN GO to ECA-3.3. SGTR without pressurizer pressure control.

Standard: Refers to ECA-3.3.

Comment:

Performance Step: 7 Check Ruptured SG(s) NR Level – LESS THAN 75% [68%].

Standard: Determines ruptured SG level is LESS THAN 75%.

Comment:

Performance Step: 8 Check RCP Seal Cooling:

- Seal Injection – ESTABLISHED

OR

- Thermal Barrier Cooling – ESTABLISHED

Standard: Determines Seal Cooling and Thermal Barrier Cooling are ESTABLISHED.

Comment:

Performance Step: 9 Try to establish Normal PRZR Spray:

Check RCP status:

- 33 RCP – RUNNING

OR

- 34 RCP – RUNNING

Standard: Determines RCP and RCP 34 are RUNNING.

Comment:

Performance Step: 10 Check Normal Spray available.

Standard: Determines spray valves will NOT open.

Comment:

Performance Step: 11 Try to restore PRZR PORV:

- Check PORV N_2 pressure – NORMAL
  - PCV 455C LO NITROGEN SUPPLY alarm on panel SKF – CLEAR
  - PCV 456 LO NITROGEN SUPPLY alarm on panel SKF – CLEAR

Standard: Determines PORV N_2 pressure is NORMAL.

Comment:

Performance Step: 12 Check PORV position indicating lights – EITHER ILLUMINATED.

Standard: Determines BOTH PORV position indicting lights are LIT.

Comment:

Performance Step: 13 Check PORV status – EITHER available.

Standard: Determines neither PORV available for depressurization.

Comment:

Performance Step: 14 Perform the following:

a. IF IA-PCV-1228 is open, THEN GO to step 5, page 9

Standard: Refers to step 5.

Comment:

CAUTION

Auxiliary spray should be initiated slowly to minimize thermal stresses to the PRZR spray nozzle.

NOTE

WHEN auxiliary spray is in service, THEN closing the normal spray valves will increase spray flow and opening the normal spray valves will decrease spray flow.

* **Performance Step: 15** Try to establish auxiliary spray:

Manually OPEN both PRZR normal spray valves to full open position.

Standard: Determines valves will NOT open.

Performance Step: 16 Go to Attachment 1, Controlling Auxiliary Spray, page 43.

Standard: Refers to Attachment 1.

Comment:

Performance Step: 17 Determine if spray flow should be controlled with HCV-142:
Check RCP seal injection – ESTABLISHED.

Standard: Determines seal injection ESTABLISHED.

Comment:

* **Performance Step: 18** CLOSE HCV-142, CHG Line Flow Pr. Control.

Standard: CLOSES HCV-142.

Comment:

* **Performance Step: 19** Adjust charging pump speed to maintain RCP seal injection between 6 and 12 gpm.

Standard: Adjusts charging speed as necessary.

Comment:

* **Performance Step: 20** CLOSE CH-AOV-204A and CH-AOV-204B.

Standard: CLOSES AOV-204A/204B.

Comment:

* **Performance Step: 21** OPEN CH-AOV-212, Pressurizer Auxiliary Spray.

Standard: OPENS CH-AOV-212.

Comment:

Performance Step: 22 CLOSE both normal spray valves.

Standard: Determines valves CLOSED.

Comment:

* **Performance Step: 23** Slowly adjust HCV-142 to control auxiliary spray flow.
Standard: Adjusts HCV-142.

Comment:

Performance Step: 24 Check auxiliary spray – AVAILABLE.
Standard: Determines auxiliary spray – AVAILABLE.

Comment:

Performance Step: 25 Go to E-3, Steam Generator Tube Rupture, step 19.a.
Standard: Refers to E-3, step 19.a

Comment:

Terminating Cue: When auxiliary spray flow is established and RCS pressure is dropping, the evaluation for this JPM is complete.

Job Performance Measure No.: 2003 NRC S3

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: A Steam Generator Tube Rupture has occurred.

The RCS has been cooled down to target temperature in accordance with E-3.

INITIATING CUE: The CRS has directed you to initiate depressurization to refill the pressurizer in accordance with E-3, step 18.

Facility:	Indian Point Unit 3	Task No.:	003 006 03 01
Task Title:	Start A Reactor Coolant Pump As Per SOP RCS-1	JPM No.:	2003 NRC S4
K/A Reference:	003 A2.03 (2.7/3.1)		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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:	The plant is in Mode 3 and preparations are being made for plant startup. A balance adjustment has been made on the #31 Reactor Coolant Pump and the pump is aligned to be started. Pump was secured 4 hours ago.
Task Standard:	Start #31 RCP in accordance with SOP RCS-1.
Required Materials:	SOP RCS-1
General References:	SOP RCS-1
Handouts:	NONE
Initiating Cue:	You are directed to start the 31 RCP per SOP RCS-1, steps 4.1.1 – 4.1.25. Procedure Prerequisites are complete, and Unit Log verified to ensure RCP Rotation Requirements are satisfied.
Time Critical Task:	NO
Validation Time:	20 Minutes

SIMULATOR SETUP

Reset to IC-28

(Denote Critical Steps with an asterisk)

Performance Step: 1 Ensure 31 RCP Standpipe Level Off Normal Light is EXTINGUISHED. (Panel SAF)

Standard: Observe light NOT illuminated.

Comment:

Performance Step: 2 Ensure 31 RCP Oil Level Off Normal Light is EXTINGUISHED. (Panel SAF)

Standard: Observe light NOT illuminated.

Comment:

Performance Step: 3 Ensure 31 RCP Bearing Coolant Low Flow Annunciator EXTINGUISHED. (Panel SGF)

Standard: Observe annunciator NOT lit.

Comment: **CUE:** **If NPO is sent, combined flow is 165 gpm, lower bearing flow is 5.5 gpm.**

Performance Step: 4 Ensure Thermal Barrier CCW Header Low Flow Annunciator EXTINGUISHED.

Standard: Observe annunciator NOT lit.

Comment: **CUE:** **If NPO is sent, CCW flow to the Thermal Barrier Cooling Coil is > 25 gpm.**

Performance Step: 5 Ensure RCP Thermal Barrier Cooling Return High Temperature EXTINGUISHED.

Standard: Observe annunciator NOT lit.

Comment:

Performance Step: 6 Ensure 31 RCP Bearing Cooling Water Return High Temperature Annunciator EXTINGUISHED.

Standard: Observe annunciator NOT lit.

Comment:

Performance Step: 7 Ensure Metal Impact Monitor System Annunciator EXTINGUISHED. (Panel SGF)

Standard: Observe annunciator NOT lit.

Comment:

Performance Step: 8 Ensure seal injection flow is between 6 and 12 gpm on FI-144A.

Standard: Observe seal injection flow is between 6 and 12 gpm on 31 RCP.
If NOT, seal injection flow is adjusted per SOP CVCS-2.

Comment:

Performance Step: 9 Ensure seal injection temperature is 60 – 150°F as read on TI-140, VCT outlet temperature.

Standard: Observe seal injection temperature is between 60 – 150°F.

Comment:

Performance Step: 10 Ensure VCT pressure PI-139 is 15 – 60 psig.

Standard: Observe VCT pressure between 15 – 60 psig.

Comment:

Performance Step: 11	Ensure seal return flow is in acceptable range per Attachment 1, RCP #1 Seal Normal Operating Range.
Standard:	Refer to Attachment 1 Observe Leakoff Flow Rate in Normal Range for current plant conditions (Seal Delta P > 2000 psig).
Comment:	
Performance Step: 12	Ensure RCS pressure-temperature limits are met per graph RCS-1C, Reactor Coolant Pump Operating Limits Curve.
Standard:	Compare RCS pressure and temperature to graph RCS-1C for allowable RCP operation.
Comment:	
Performance Step: 13	Prior to starting 31 and/or 32 RCP for motor run, ensure 31/32 RCP Lower Oil Float Chamber/Sight Glass Vent Value is set per COL-RCS-1 (Throttle opened 5 turns).
Standard:	Observe 31/32 RCP Lower Oil Float Chamber/Sight Glass Vent Value is set per COL-RCS-1 (Throttle opened 5 turns).
Comment:	**Cue: Value is set per COL-RCS-1**
Performance Step: 14	Determine that it is NOT required to bar over the RCP.
Standard:	Does not direct an operator to bar over RCP.
Comment:	**CUE: It is NOT necessary to bar over the RCP since 31 RCP has been barred over**

Performance Step: 15	Verify RCS Tcold is GREATER THAN 332°F.
Standard:	Tcold is at 547 Attachment 3 does not have to be done.
Comment:	
Performance Step: 16	If any SG secondary side temperature needs to be lowered to less than any RCS temperature, then drain and fill applicable SG
Standard:	Operates SG temperature selector
Comment:	**Cue: SG temperature selector is OOS. NPO has verified SG temperature is less than RCS temperature using a pyrometer**
Performance Step: 17	Ensure motor starting times of SOP-EL-004A are met by reviewing Unit Log.
Standard:	Refers to Unit Log
Comment:	**Cue: Starting times are met**
Performance Step: 18	Select noise monitor 31 RCP. (Operator's desk)
Standard:	Rotate switch to 31 RCP.
Comment:	**CUE: Noise Monitor not functional in simulator.**
Performance Step: 19	Select Shaft and Frame Vibration Recorder for 31 RCP. (Rack C-11).
Standard:	Rotate both Vibration Recorder Switches to 31 RCP.
Comment:	
Performance Step: 20	Dispatch operator to inspect Bearing Lift Oil System prior to and during run
Standard:	Dispatches Operator
Comment:	**Cue: NPO reports Bearing Lift Oil System is ready to start**

* **Performance Step: 21** START the Bearing Lift Pump for 31 RCP.

Standard: Turn handswitch to START for the 31 RCP Bearing Lift Pump.

Comment:

Performance Step: 22 Verify minimum bearing lift oil pressure of 500 psig. (Panel SAF)

Standard: Observe RCP bearing lift pressure white permissive light ILLUMINATED.

Comment:

Performance Step: 23 Wait 2 minutes or longer prior to starting RCP.

Standard: Wait 2 minutes.

Comment: **CUE:** **2 minutes have elapsed.**

Performance Step: 24 Review ONOP-RCS-5 RCP Malfunctions.

Standard: Review ONOP-RCS-5 for Emergency Trip Criteria.

Comment:

Performance Step: 25 Adjust 6.9kv voltage prior to and as RCP is started.

Standard: Station an operator at tap changer and coordinate voltage adjustment as necessary.

Comment: **CUE:** **Operator is stationed at the tap changer (FCR).**

Voltage adjusted in MANUAL to the high end of normal range.

When starting current decays bus voltage adjusted to normal value of at least 6.9kv.

* **Performance Step: 26** Start 31 RCP.

Standard: Select START on 31 RCP handswitch.

Comment: **CUE: Instructor insert OVR IND RCS50A 90.**
Observe starting current dissipates in 30 seconds.

Performance Step: 27 Monitor Emergency Shutdown Parameters listed in step 2.16 Reactor Coolant Pump Emergency Trip Criteria.

Standard: Observe parameters in step 2.16; 31 RCP Motor winding temperature indicates 273°F.

Comment:

* **Performance Step: 28** Trip RCP 31 based upon motor winding temperature 273°F.

Standard: RCP 31 tripped based upon motor winding temperature of 273°F.

Comment:

Terminating Cue: When the RCP has been tripped based upon high temperature, the evaluation for this JPM is complete

Job Performance Measure No.: 2003 NRC S4

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: The plant is in Mode 3 and preparations are being made for plant startup. A balance adjustment has been made on the #31 Reactor Coolant Pump and the pump is aligned to be started. Pump was secured 4 hours ago.

INITIATING CUE: You are directed to start the 31 RCP per SOP RCS-1, steps 4.1.1 – 4.1.25. Procedure Prerequisites are complete, and Unit Log verified to ensure RCP Rotation Requirements are satisfied.

Facility:	Indian Point Unit 3	Task No.:	N/A
Task Title:	Respond to PRT High Pressure	JPM No.:	2003 NRC S5
K/A Reference:	007 A4.04 (2.6/2.6)		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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:	A PORV has lifted.
Task Standard:	PRT pressure has been reduced below the alarm setpoint and the alarm on panel SAF is clear.
Required Materials:	SOP-RCS-7
General References:	SOP-RCS-7
Handouts:	NONE
Initiating Cue:	The CRS has directed you to reduce PRT pressure below alarm setpoint by venting the PRT to the vent header in accordance with SOP-RCS-7.
Time Critical Task:	NO
Validation Time:	5 Minutes

SIMULATOR SETUP

Reset to IC-25

(Denote Critical Steps with an asterisk)

Performance Step: 1 Contact Chemistry to ensure that purging to vent header will NOT cause an explosive atmosphere in LGDT being filled.

Standard: Contacts Chemistry.

Comment: **CUE: Purging the vent header will NOT cause explosive atmosphere in LGDT.**

* **Performance Step: 2** Ensure valve 550, N2 to PRT, is closed.

Standard: Closes valve.

Comment:

* **Performance Step: 3** Start a waste gas compressor per SOP-WDS-002, Gaseous Waste Disposal System.

Standard: Contacts NPO to START Waste Gas Compressor.

Comment: **CUE: Waste Gas Compressor STARTED.**

* **Performance Step: 4** Ensure the following valves are OPEN:

- 1786 Containment Vent Header Isolation Valve
- 1787 Containment Vent Header Isolation Valve

Standard: Contacts NPO to verify valves OPEN.

Comment: **CUE: NPO reports 1786/1787 are OPEN.**

* **Performance Step: 5** CLOSE 1610 N2 to RCDT (bottom of panel SKF).

Standard: CLOSES 1610.

Comment:

* **Performance Step: 6** OPEN Vent Valve 516 (for PRT).

Standard: OPENS 516.

Comment:

* **Performance Step: 7** When desired PRT pressure is achieved, THEN:

CLOSE Vent Valve 516 (for PRT on panel SAF).

Standard: CLOSES valve when alarm CLEAR.

Performance Step: 8 OPEN 1610 N2 to RCDT bottom of panel SKF).

Standard: OPENS valve.

Performance Step: 9 SHUTDOWN Waste Gas Compressor per SOP-WDS-002, Gaseous Waste Disposal System.

Standard: Contacts NPO to STOP Waste Gas Compressor.

Performance Step: 10 IF reactor is above Mode 5, THEN ensure the following valves are OPEN:

- 1786 Containment Vent Header Isolation Valve
- 1787 Containment Vent Header Isolation Valve

Standard: Directs NPO to leave valves OPEN.

Comment: **Cue: NPO reports 1786, 1787 open**

Performance Step: 11 OPEN 550, N2 to PRT.

Standard: OPENS 550.

Comment:

Terminating Cue: When PRT pressure is within limits and venting is terminated, the evaluation for this JPM is complete

Job Performance Measure No.: 2003 NRC S5

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: A PORV has lifted.

INITIATING CUE: The CRS has directed you to reduce PRT pressure below alarm setpoint by venting the PRT to the vent header in accordance with SOP-RCS-7.

Facility:	Indian Point Unit 3	Task No.:	080 004 03 01
Task Title:	Transfer 6.9KV Buses 1 Through 4 To Buses 5 And 6 (Station Aux Transformer)	JPM No.:	2003 NRC S6
K/A Reference:	063 A4.01 3.3/3.1		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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 shutdown is in progress. Buses 5 and 6 are energized from the Station Auxiliary Transformer. Busses 1-4 are energized from the Unit Auxiliary Transformer.
Task Standard:	Observes Caution regarding MW and VAR loading. 50 volt limit observed. Bus 5 and 6 loading is below 2000 ampere each. Bus tie breakers 6900V Bus No. 1-5, 2-5, 3-6 and 4-6 ties are closed and unit feeder breakers 6900V Bus No. 1, 2, 3, and 4 normal feed are open.
Required Materials:	SOP EL-5
General References:	SOP EL-5
Handouts:	NONE
Initiating Cue:	You are directed to transfer 6.9KV buses 1, 2, 3 and 4 to the Station Aux Transformer (Bus 5 and 6) in accordance with SOP EL-5.
Time Critical Task:	NO
Validation Time:	12 Minutes

SIMULATOR SETUP

Reset to IC-35

(Denote Critical Steps with an asterisk)

Performance Step: 1 Obtain and review SOP EL-5.

Standard: Obtains and reviews SOP EL-5, section 4.4.

Comment:

Performance Step: 2 Observe Cautions prior to transfer.

Standard: Candidate checks MW output LESS THAN 40 MW and VARS are at zero.

Comment:

Performance Step: 3 Ensure LESS THAN 100 volt difference between Station and Unit Auxiliary Transformers by adjusting MTG voltage or placing Station or Unit Auxiliary Transformers Tap Changers in MANUAL and adjusting volume.

Standard: LESS THAN 100 volt difference between Station and Unit Auxiliary Transformer.

Comment:

* **Performance Step: 4** Place 6900V Bus No. 1 Synchroscope in Bus 1 Bus 5 position.

Standard: Synchroscope in Bus 1 Bus 5 position.

Comment:

* **Performance Step: 5** If Synchroscope is at 12 o'clock then CLOSE Bus No. 1-5 tie breaker.

Standard: Red light ON and green light OFF.

Comment:

* **Performance Step: 6** OPEN 6900 Bus No. 1 Normal Feed Breaker.

Standard: Green light ON and red light OFF.

Comment:

Performance Step: 7 Place 6900V Bus No. 1 Synchroscope in OFF.

Standard: Synchroscope is in OFF position.

Comment:

Performance Step: 8 Ensure LESS THAN 2000 amps on 6900V Bus No. 5.

Standard: LESS THAN 2000 amps on 6900V Bus No. 5.

Comment:

Performance Step: 9 If both of the following breakers are CLOSED then ensure 480V Bus No. 2A-3A tie breaker is

Standard: Verify 2A-3A tie breaker is OPEN.

Comment:

Performance Step: 10 Ensure LESS THAN 100 volt difference between Station and Unit Auxiliary Transformers by adjusting voltage or placing Station or Unit Auxiliary Transformers Tap Changers in MANUAL and adjusting voltage.

Standard: LESS THAN 100 volt difference between Station and Unit Auxiliary Transformers.

Comment:

* **Performance Step: 11** Place 6900V Bus No. 2 Synchroscope in Bus 2 Bus 5.

Standard: Synchroscope in Bus 2 Bus 5 position.

Comment:

* **Performance Step: 12** If Synchroscope is at 12 o'clock then CLOSE 6900V Bus No. 2-5 tie breaker.

Standard: Red light ON green light OFF.

Comment:

* **Performance Step: 13** OPEN 6900V Bus No. 2 Normal Feed Breaker.

Standard: Green light ON and red light OFF.

Comment:

Performance Step: 14 Place 6900V Bus No. 2 Synchroscope in OFF.

Standard: Synchroscope in OFF.

Comment:

Performance Step: 15 Ensure LESS THAN 2000 amps on 6900V Bus No. 5.

Standard: LESS THAN 2000 amps on 6900V Bus No. 5.

Comment:

Performance Step: 16 If both of the following breakers are CLOSED then ensure 480V Bus No. 2A-3A Tie Breaker is OPEN. 480V Bus No. 2A Normal Feed and 480V Bus No. 3A Normal Feed.

Standard: Verify 2A-3A Tie Breaker is OPEN.

Comment:

Performance Step: 17 Ensure LESS THAN 100 volt difference between Station and Unit Auxiliary Transformers by adjusting MTG voltage or placing Station or Unit Auxiliary Transformer Tap Changers in Manual and adjusting voltage.

Standard: LESS THAN 100 volt difference between Station and Unit Auxiliary Transformers.

Comment:

* **Performance Step: 18** Place 6900V Bus No. 3 Synchroscope in Bus 3 Bus 6.

Standard: Synchroscope in Bus 3 Bus 6 position.

Comment:

* **Performance Step: 19** If Synchroscope is at 12 o'clock then CLOSE 6900V Bus No. 3-6 Tie Breaker.

Standard: Red light ON and green light OFF.

Comment:

* **Performance Step: 20** OPEN 6900V Bus No. 3 Normal Feed Breaker.

Standard: Green light ON and red light OFF.

Comment:

Performance Step: 21 Place 6900V Bus No. 3 Synchroscope in OFF.

Standard: Synchroscope in OFF.

Comment:

Performance Step: 22 Ensure LESS THAN 2000 amps on 6900V Bus No. 6.

Standard: LESS THAN 2000 amps on 6900V Bus No. 6.

Comment:

* **Performance Step: 23** Place 6900V Bus No. 4 Synchroscope in Bus 4 Bus 6.
Standard: Synchroscope in Bus 4 position.

Comment:

* **Performance Step: 24** If Synchroscope is at 12 o'clock then CLOSE 6900V Bus No. 4-6 Tie Breaker.
Standard: Red light ON and green light OFF.

Comment:

* **Performance Step: 25** OPEN 6900V Bus No. 4 Normal Feed Breaker.
Standard: Green light ON and red light OFF.

Comment:

Performance Step: 26 PLACE 6900V Bus No. 4 Synchroscope in OFF.
Standard: Synchroscope in OFF.

Comment:

Performance Step: 27 Ensure LESS THAN 2000 amps on 6900V Bus No. 6.
Standard: LESS THAN 2000 amps on 6900V Bus No. 6.

Comment:

Performance Step: 28 When transfer is complete then ensure the Unit and Station Auxiliary Transformer Tap Changers are in AUTO.
Standard: Unit and Station Auxiliary Transformer Tap Changers are in AUTO.

Comment:

Performance Step: 29 Notify JPM Evaluator JPM is COMPLETE.

Standard: JPM Evaluator notified.

Comment:

Terminating Cue: Buses 1, 2, 3 and 4 transferred to the Station Auxiliary Transformer in accordance with SOP EL-5.

VERIFICATION OF COMPLETION

Job Performance Measure No.: 2003 NRC S6

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: Plant shutdown is in progress.

Buses 5 and 6 are energized from the Station Auxiliary Transformer. Busses 1-4 are energized from the Unit Auxiliary Transformer.

INITIATING CUE: You are directed to transfer 6.9KV buses 1, 2, 3 and 4 to the Station Aux Transformer (Bus 5 and 6) in accordance with SOP EL-5.

Facility:	Indian Point Unit 3	Task No.:	015 002 01 01
Task Title:	Return A Power Range Drawer To Service	JPM No.:	2003 NRC S7
K/A Reference:	015 A3.01 3.8/3.8 015 A4.01 3.6/3.6		015 A4.03 3.6/3.6 015 A4.04 3.3/3.3

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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:	Power Range Instrument N-41 was removed from service for repair. Repairs are complete and the Power Range Channel N-41 is ready to be returned to service.
Task Standard:	Power Range N-41 returned to service in accordance with SOP-NI-1.
Required Materials:	SOP-NI-1
General References:	SOP-NI-1
Handouts:	NONE
Initiating Cue:	You are directed to place Power Range Channel N-41 back in service per SOP-NI-1, Attachment 2.
Time Critical Task:	NO
Validation Time:	22 Minutes

SIMULATOR SETUP

Reset to IC-30

(Denote Critical Steps with an asterisk)

Performance Step: 1 Obtain and review SOP-NI-1.

Standard: SOP-NI-1 obtained and reviewed.

Comment:

Performance Step: 2 Ensure Dropped Rod Mode Switch in Bypass.

Standard: Verified in bypass.

Comment:

Performance Step: 3 Ensure Rod Stop Bypass Switch in Bypass PR 41 (Located in Miscellaneous Control and Indication Panel).

Standard: Verified in Bypass PR 41.

Comment:

Performance Step: 4 Ensure Dropped Rod Protection Bypass Relays BLOCKED.

Standard: Relays 1/NC41KX in Reactor Protection CH 1 Rack E2 and 1/NC41KX in Reactor Protection CH 1 Rack F2 verified BLOCKED.

Comment:

Performance Step: 5 Ensure Delta T Defeat Switch 3T/411A located in Rack B-8 is in Defeat CH 1 position.

Standard: Verified correct channel defeated.

Comment:

Performance Step: 6 Ensure Over Temperature Delta T Bistable in the Trip Position (N-41 Loop 1 Over Temp Trip, Rack A-4 CH 1 Red).

Standard: Verified bistable in trip position.

Comment:

Performance Step: 7 Ensure Power Mismatch Bypass Switch (located on Miscellaneous Control and Indication Panel) in Bypass PR 41.

Standard: Verified in Bypass 41.

Comment:

Performance Step: 8 Ensure both the Upper Section and Lower Section Switches (located on Detector Current Comparator Drawer) in Bypass PRN 41.

Standard: Verified both in Bypass PRN 41.

Comment:

Performance Step: 9 Ensure Comparator Channel Defeat Switch (located in Comparator and Rate Drawer) in the N-41 position.

Standard: Switches in N-41 position.

Comment:

Performance Step: 10 Place both the Upper and Lower Detector Range Milli-amps Selector Switches for the affected channel in Position 5, to select the maximum range of 0-5 milli-amps. (Prevents possible damage to the milli-amp meter.)

Standard: Switches for Detector A and B in Position 5.

Comment:

Performance Step: 11 Ensure the Operation Selector Switch for the affected channel is in NORMAL.

Standard: Switch in NORMAL.

Comment:

* **Performance Step: 12** Energize the affected channel by installing instrument and control power fuses.

Standard: Fuses installed, NIS Power Range Upper/Lower Det High Flux Deviation or Auto Defeat Clear on SBF-1 when instrument power fuses are installed.

Comment:

Performance Step: 13 Check the NIS Power Range Loss of Detector Voltage Alarm is CLEAR on Panel SBF-1.

Standard: Observes alarm CLEAR.

Comment:

Performance Step: 14 Check the NIS Power Range Single Channel High Range Trip Alarm is CLEAR on Panel SBF-1.

Standard: Observes alarm CLEAR.

Comment:

Performance Step: 15 Place both the Upper and Lower Detector Range Milli-Amps Selector Switches for the affected channel in the desired range setting.

Standard: Switches ranged down as needed (Range 1).

Comment:

Performance Step: 16 When the channel has been energized for GREATER THAN 30 minutes, then RETURN the channel to SERVICE.

Standard: See steps 17 and 18 below.

Comment: **CUE: 30 minutes has elapsed.**

* **Performance Step: 17** Momentarily place the Dropped Rod Mode Switch for the affected channel in RESET and return to NORMAL.

Standard: Momentarily place the Dropped Rod Mode Switch for the affected channel in RESET and return to NORMAL.

Comment:

Performance Step: 18 Check Dropped Rod Bypass Lamp Extinguished

Runback Chan N41 Lamp on Miscellaneous Control and Indication Panel is EXTINGUISHED

NIS power Range Dropped Rod Rod Stop Alarm on SBF-1 CLEAR.

Standard: Verified Dropped Rod Bypass Lamp EXTINGUISHED.

Runback Chan N41 Lamp on Miscellaneous Control and Indication Panel is EXTINGUISHED.

NIS Power Range Dropped Rod Rod Stop Alarm on SBF-1 is CLEAR.

Comment:

* **Performance Step: 19** Unblock the affected Dropped Rod Protection Bypass Relays by removing the Blocking Strip placed across the relays, as listed.

Standard: N-41 Relays 1/NC41KX (Rx Protection Ch. 1 Rack E2) and 1/NC41KX (Rx Protection Ch. 1 Rack F2) unblocked.

Comment:

Performance Step: 20 Verify NIS Rod Drop Bypass PR 1 Lamp on Panel FBF is EXTINGUISHED

NIS Trip Bypass Alarm on Panel SBF-1 is CLEAR.

Standard: Verified NIS Rod Drop Bypass PR 1 Lamp on Panel FBF is EXTINGUISHED;

NIS Trip Bypass Alarm on Panel SBF-1 is CLEAR.

Comment:

Performance Step: 21 Ensure the Rod Control Mode Select Switch (FCF) is in MAN, to prevent unnecessary rod movement while performing the next step.

Standard: Place or observe Rod Control Mode Select Switch in MANUAL.

Comment:

* **Performance Step: 22** Place the applicable Power Mismatch Bypass Switch in OPERATE (Miscellaneous Control and Indication Panel).

Standard: Bypass Switch in OPERATE.

Comment:

Performance Step: 23 When a minimum of two minutes has elapsed, then return the Rod Control Mode Select Switch to AUTO.

Standard: Waited two minutes; Rod Control Selector Switch placed in AUTO.

Comment: **CUE: Two minutes has elapsed.**

* **Performance Step: 24** Place both the Upper Section and Lower Section Switches (located on the Detector Current Comparator Drawer) in NORMAL.

Standard: Placed switches in NORMAL; both channel defeat lights are extinguished.

Comment:

Performance Step: 25 Check both Channel Defeat Lights are EXTINGUISHED.

Standard: Checked both Channel Defeat Lights EXTINGUISHED.

Comment:

* **Performance Step: 26** Place the comparator Channel Defeat Switch (Located on the Comparator and Rate Drawer) in NORMAL.

Standard: Placed Defeat Switch in NORMAL; Comparator Defeat Light EXTINGUISHED.

Comment:

Performance Step: 27 Check Comparator Defeat Light is EXTINGUISHED.

Standard: Checked Comparator Defeat Light EXTINGUISHED.

Comment:

* **Performance Step: 28** Place the applicable Rod Stop Bypass Switch in OPERATE (located on the Miscellaneous Control and Indication Panel).

Standard: Placed Bypass Switch in OPERATE.

Comment:

* **Performance Step: 29** Return the Overtemperature Delta-T Bistable Trip Switch for the affected Channel to the OPERATE position (N-41 Loop 1 Over Temp Trip Rack A-4, Ch. 1 (RED))

Standard: Placed Bistable Trip Switch in OPERATE.

Comment:

Performance Step: 30 Check Bistable Proving Lamp EXTINGUISHED.

Overtemp Delta-T Channel Trip or Rod Stop Alarm CLEARED.

Bistable Status Panel Lamp EXTINGUISHED.

Standard: Observed Bistable Lamps and Alarm (Panel SAF) EXTINGUISHED.

Comment:

* **Performance Step: 31** Place the applicable Channel Delta-T Defeat Switch 3T/411A located in Rack B-8, in NORMAL.

Standard: Placed Defeat Switch in NORMAL.

Comment:

* **Performance Step: 32** Place the PR N41 Percent Power Computer Input in Limit Check:
Press Omit Limit Check Key to bring up menu;
Type in N0049A and press Address Key;
Press Execute Key.

Standard: Placed Computer Input Back into Limit Check for Channel N41.

Comment:

Performance Step: 33 If desired, change channels on NR-45 or Delta T recorders.

Standard:

Comment: **CUE: Not desired.**

Performance Step: 34 Exit applicable action statement.

Standard: Informs CRS.

Comment: **CUE: CRS acknowledges.**

Performance Step: 33 Notify Evaluator that JPM is complete.

Standard: Notify JPM Evaluator.

Comment: **CUE: JPM is complete.**

Terminating Cue: When N-41 returned to service, the evaluation for this JPM is complete

Job Performance Measure No.: 2003 NRC S7

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: Power Range Instrument N-41 was removed from service for repair.

Repairs are complete and the Power Range Channel N-41 is ready to be returned to service.

INITIATING CUE: You are directed to place Power Range Channel N-41 back in service per SOP-NI-1, Attachment 2.

Facility:	Indian Point Unit 3	Task No.:	004 001 04 04
Task Title:	Align City Water To The Charging Pumps	JPM No.:	2003 NRC P1
K/A Reference:	026 AA1.03 3.6/3.6		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom _____ Simulator _____ Plant X

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:	A Safety Injection has occurred in coincidence with a loss of offsite power. A total loss of component cooling has occurred.
Task Standard:	City water aligned to charging pumps in accordance with SOP ESP-1.
Required Materials:	SOP ESP-1 Adjustable Wrench Flashlight
General References:	SOP ESP-1
Handouts:	NONE
Initiating Cue:	You are directed to align city water to cool the charging pumps in accordance with SOP ESP-1.
Time Critical Task:	NO
Validation Time:	15 Minutes

(Denote Critical Steps with an asterisk)

Performance Step: 1 Obtain and review SOP ESP-01.

Standard: Obtain and review SOP ESP-01.

Comment:

* **Performance Step: 2** CLOSE AC-756A, CC Supply Header to Charging Pumps Inlet Isolation.

Standard: Rotate handwheel clockwise until seated.

Comment: **CUE: AC-756 stops rotating in the clockwise direction.**

* **Performance Step: 3** CLOSE AC-756B, CC return header from Charging Pumps Outlet Isolation.

Standard: Rotate handwheel clockwise until seated.

Comment: **CUE: AC-756B STOPS rotating in the clockwise direction.**

* **Performance Step: 4** Ensure MW-26, City Water Emergency Cooling Supply to Charging Pumps Isolation, is OPEN.

Standard: Rotate handwheel counter-clockwise until STOPS rotating.

Comment: **CUE: MW-26 STOPS rotating in the counterclockwise direction.**

* **Performance Step: 5** Ensure AC-701A, Emergency City Water Cooling Supply to Charging Pumps Inlet Isolation is OPEN.

Standard: Rotate handwheel counterclockwise until STOPS rotating.

Comment: **CUE: AC-701A STOPS rotating in the counterclockwise direction.**

* **Performance Step: 6** Ensure flange next to AC-701B, Emergency City Water Cooling return from Charging Pumps Outlet Drain, is removed.

Standard: Flange removed.

Comment: **CUE: Flange is removed.**

* **Performance Step: 7** Ensure AC-701B, Emergency City Water Cooling return from Charging Pumps Outlet Drain is OPEN.

Standard: Rotate handwheel counterclockwise until valve STOPS rotating.

Comment: **CUE: AC-701B STOPS rotating in the counterclockwise direction.**

Terminating Cue: City water aligned to the charging pumps in accordance with SOP ESP-1.

Job Performance Measure No.: 2003 NRC P1

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: A Safety Injection has occurred in coincidence with a loss of offsite power.

A total loss of component cooling has occurred.

INITIATING CUE: You are directed to align city water to cool the charging pumps in accordance with SOP ESP-1.

Facility:	Indian Point Unit 3	Task No.:	039 001 04 04
Task Title:	Local Operation of Atmospheric Steam Dump Valves	JPM No.:	2003 NRC P2
K/A Reference:	068 AA1.01 4.3/4.5		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom _____ Simulator _____ Plant X

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: Communication is established with the RO via radio.

31 (32, 33, 34) SG pressure is 1040 psig.

A fire occurred in the Control Building resulting in a Control Room evacuation.

Task Standard: Establish Local Control of 31 (32, 33, 34) Atmospheric Steam Dump Valve and decrease 31 (32, 33, 34) SG pressure to 1005 in accordance with SOP-ESP-1.

Required Materials:
AP 52
SOP ESP-1
Adjustable Wrench
Flashlight

General References:
AP 52
SOP ESP-1

Handouts: NONE

Initiating Cue: You are directed by the CRS to establish Local Control of 31 (32, 33, 34) SG atmospheric and decrease pressure to 1005 psig in accordance with SOP-ESP-1. No SG atmospherics have failed open.

Time Critical Task: NO

Validation Time: 10 Minutes

(Denote Critical Steps with an asterisk)

Performance Step: 1 Obtain and review procedure SOP-ESP-01.

Standard: Obtain and review SOP-ESP-01.

Comment: **CUE:** **Evaluator provides a copy of SOP-ESP-01.**

* **Performance Step: 2** CLOSE valve No. 1, Air Booster Relay Valve.

Standard: Turn Valve No. 1 90 degrees clockwise.

Comment: **CUE:** **Valve No. 1 handle is perpendicular to pipe.**

Performance Step: 3 Verify Valve No. 2, vent is CLOSED.

Standard: Observe vent valve handle.

Comment: **CUE:** **Valve No. 2 handle is perpendicular to pipe.**

Performance Step: 4 Verify Valve No. 3, N2 Supply Header Pressure Gauge Isolation Valve, is OPEN.

Standard: Rotate handwheel clockwise to verify free movement, then return to fully counterclockwise position.

Comment: **CUE:** **Valve handwheel moves freely in clockwise direction. No longer moves in the counterclockwise direction.**

Performance Step: 5 Back Valve No. 7, manual Regulator used for controlling atmospheric, all the way out.

Standard: Rotate manual press regulator knob counterclockwise until it stops.

Comment: **CUE:** **Manual pressure regulator stops turning in the counterclockwise direction.**

* **Performance Step: 6** OPEN Valve No. 4, N2 Supply Header to SG Manual Regulator for atmospheric.

Standard: Rotate handwheel for N2 supply valve counterclockwise until it stops.

Comment: **CUE: N2 Supply Valve 4 stops turning in the counterclockwise direction.**

* **Performance Step: 7** Open Valve No. 5, Manual Regulator for Atmospheric N2 Supply Isolation.

Standard: Rotate handwheel for N2 supply valve counterclockwise until it stops.

Comment: **CUE: N2 Supply Valve 5 stops turning in the counterclockwise direction.**

* **Performance Step: 8** Open Valve No. 6, Manual Regulator for Atmospheric N2 Outlet Isolation.

Standard: Turn N2 supply valve 90 degrees to open.

Comment: **CUE: N2 supply valve 6 turns 90 degrees parallel with pipe.**

Performance Step: 9 Verify adequate N2 pressure.

Standard: Observe N2 pressure to determine if it is at least 45 psig.

Comment: **CUE: N2 pressure is 50 psig.**

Performance Step: 10 Maintain all four SG at approximately the same pressure (A pressure difference of 125 psid between SGs will actuate Safety Injection).

Standard: Pressure in all four SGs within 125 psig of each other.

Comment: **CUE; 31 (32, 33, 34) SG is 1040 psig.**

* **Performance Step: 11** If desired to open or throttle open SG atmospheric, then slowly increase diaphragm pressure using Valve No. 7, manual regulator used for controlling atmospheric, until desired valve position is obtained.

Standard: Valve No. 7 handwheel rotated clockwise.

Comment: **CUE:** **Audible steam flow noises can be heard from elevation above and 31 (32, 33, 34) SG is 1005 psig and decreasing.**

* **Performance Step: 12** If desired to close or throttle SG atmospheric, then adjust Valve No. 7, Manual Regulator used for controlling atmospheric. If necessary, open Valve No. 2, vent, until desired position is obtained.

Standard: Valve No. 7 handwheel throttle counterclockwise; if necessary then open valve No. 2, vent, until desired valve position is obtained.

Comment: **CUE:** **Valve No. 7 is throttle in the counterclockwise direction. 31 (32, 33, 34) SG pressure decease slows, turns and stabilizes at 1005 psig.**

Performance Step: 13 Inform RO that 31 (32, 33, 34) SG pressure is being locally controlled at 1005 psig.

Standard: RO informed.

Comment: **CUE:** **RO acknowledges.**

Performance Step: 14 Inform Evaluator JPM complete.

Standard: JPM Evaluator informed that JPM is complete.

Comment: **CUE:** **JPM is complete.**

Terminating Cue: When SG pressure is under local control, the evaluation for this JPM is complete

Job Performance Measure No.: 2003 NRC P2

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: Communication is established with the RO via radio.

31 (32, 33, 34) SG pressure is 1040 psig.

A fire occurred in the Control Building resulting in a Control Room evacuation.

INITIATING CUE: You are directed by the CRS to establish Local Control of 31 (32, 33, 34) SG atmospheric and decrease pressure to 1005 psig in accordance with SOP-ESP-1. No SG atmospherics have failed open.

Facility:	Indian Point Unit 3	Task No.:	063 002 01 04
Task Title:	Start Up Battery Charger 31	JPM No.:	2003 NRC P3
K/A Reference:	063 A4.01 3.3/3.1		

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom _____ Simulator _____ Plant X

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:	Battery Charger 31 was secured for Preventive Maintenance. Work is complete and the Holdoff is cleared.
Task Standard:	Battery Charger 31 is operating normally in accordance with SOP-EL-3.
Required Materials:	SOP-EL-3
General References:	SOP-EL-3
Handouts:	NONE
Initiating Cue:	You are directed by the CCR to start up 31 Battery Charger per SOP-EL-3, section 4.1.
Time Critical Task:	NO
Validation Time:	15 Minutes

(Denote Critical Steps with an asterisk)

Performance Step: 1 Obtain and review SOP-EL-03.
Standard: Obtain and review SOP-EL-03.

Comment:

* **Performance Step: 2** Place 31 Battery Charger Breaker in ON at MCC-39.
Standard: Pull up on breaker handle for supply to batter charger.

Comment: **CUE:** **The supply breaker handle is up.**

Performance Step: 3 Ensure Equalize-Float Toggle Switch is in FLOAT.
Standard: Observe "Equalize-Float" Toggle Switch position.

Comment: **CUE:** **The Equalize/Float Toggle Switch indicates FLOAT.**

* **Performance Step: 4** Place DC Output Breaker in ON.
Standard: Pull up on DC breaker handle.

Comment: **CUE:** **The DC Output Breaker handle is up.**

* **Performance Step: 5** Place AC Input Breaker in ON.
Standard: Pull up on AC breaker handle.

Comment: **CUE:** **The AC input breaker handle is up.**

Performance Step: 6 Verify AC ON indicating light illuminates.
Standard: Observe indicating light.

Comment: **CUE:** **The AC ON indicating light is ILLUMINATED.**

Performance Step: 7	Verify Battery Charger DC Amperes increases.
Standard:	Observe DC Ampmeter indication.
Comment:	**CUE: The DC Ampmeter Indication Increases.**
Performance Step: 8	Ensure Battery Charger DC volts indicates approximately 131 (130 to 132.5) VDC by adjusting float adjust potentiometer.
Standard:	Adjust float adjust potentiometer to ensure DC volts between 130 and 132.5
Comment:	**CUE: DC volts indicate 131.**

Terminating Cue: 31 Battery Charger is operating.

VERIFICATION OF COMPLETION

Job Performance Measure No.: 2003 NRC P3

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS:	Battery Charger 31 was secured for Preventive Maintenance. Work is complete and the Holdoff is cleared.
INITIATING CUE:	You are directed by the CCR to start up 31 Battery Charger per SOP-EL-3, section 4.1.