

NUCLEAR POWER GENERATION  
DIABLO CANYON POWER PLANT  
JOB PERFORMANCE MEASURE

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**Number:** LJPNRC-4

**Title:** TRANSFER PRESSURIZER HEATER GROUP 13 TO BACKUP  
POWER

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:** Sat      Unsat      Total Time:      minutes

**Comments:**

**References:** OP A-4A:I, Pressurizer - Make Available, Rev 13A

**Alternate Path:** Yes      No      X

**Time Critical:** Yes      No      X

**Time Allotment:** 15 minutes

**Critical Steps:** 7, 9

**Job Designation:** RO/SRO

**Task Number:** 010A4.02

**Rating:** 3.6/3.4

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AUTHOR:      DAVE BURNS      DATE:      1/23/2000

REVIEWED BY:      N/A      DATE:      N/A  
JPM COORDINATOR

APPROVED BY:      N/A      DATE:      N/A  
TRAINING LEADER

REV. 0

- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. The examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** The Unit 1 Reactor Coolant System is being filled and vented. Offsite power is available.
- Initiating Cue:** The Shift Foreman directs you to energize pressurizer heater group 13 from its backup power supply per OP A-4A:I, Section 6.3.
- Task Standard:** The control room is notified that pressurizer heater group 13 has been transferred to the backup power supply.

**Start Time:**

**Step**

**Expected Operator Actions**

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1. Place control switch for heater group 13 in the OFF position.
- 

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

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Operator goes to or calls the control room to  
check the position of the control  
switch for heater group 13.

\*\*\*\*\*

**Cue: The control switch for heater  
group 13 is in the OFF position  
and the green light is ON.**

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

1.2 2. Verify that heater group 13  
normal breaker, 52-13E-2 is open.

---

2.1

---

Operator locates the normal breaker for  
heater group 13 on load center 13.

2.2 Verifies that the breaker is open.

\*\*\*\*\*

**Cue: Breaker is open.**

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

2.3 3. Place the DC control power  
switch for pressurizer heater group 13  
normal breaker in the OFF position.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

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---

Operator locates the DC control power  
switch for heater group 13 normal  
breaker on load center 13.

---

3.2 Places the control power switch in the  
OFF position.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

3.3 4. Check heater group 13  
backup breaker, 52-1H-74 open.

---

4.1

---

Operator locates heater group 13 backup  
breaker.

---

4.2 Observes the breaker is open.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

4.3

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

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- 
5. Check open the DC control power knife switch for heater group 13 backup breaker.
- 
- 

---

**Note: The examinee should simulate this step. The cover should not be removed from the DC panel.**

---

- 5.1 Operator locates the DC control power knife switch for heater group 13 (located above the vital breaker).

- 5.2 Verifies that the knife switch is open.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

- 5.3 6. Verify that both white potential lights on the manual transfer switch are not lit.
- 

- 6.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

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---

Operator locates the manual transfer switch  
on the wall next to the 52-1H-74  
breaker.

---

**Note:** Since the normal breaker is  
available, a white light may be  
ON.

---

6.2 Observes that neither white light is  
ON.

\*\*\*\*\*

**Cue:** Both lights are OFF.

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

6.3 7. \*\* Move the transfer switch  
down to the backup (vital) bus  
position.

---

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---

**Note: Cutting the seal is NOT  
actually performed. A sealed valve  
change form will not be needed.**

---

7.1 Operator positions the switch to the  
backup supply.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

7.2

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

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---

8. Check the heater group 13 backup  
breaker, 52-1H-74 racked in.

---

8.1

---

Operator verifies that the heater group 13  
backup breaker is racked in.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

8.2 9. \*\* Close the DC control  
power knife switch for heater group  
13 backup breaker.

---

9.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



INSTRUCTOR WORKSHEET

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---

Operator locates the control power knife  
switch above 52-1H-74.

---

9.2 Places the knife switch in the CLOSE  
position.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

9.3 10. Verify the D.C. charging  
power switch for heater group 13  
backup breaker, 52-1H-74 is on.

---

10.1

---

Operator locates the D.C. charging power  
switch on the lower front of 52-1H-  
74.

---

10.2 Verifies the switch is on.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

10.3 11. Notify the control room of  
the status of heater group 13.

---

11.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

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---

Operator notifies the control room that  
heater group 13 has been transferred  
to the backup power supply.

**Step was:** **Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_\*

---

11.2

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

Initial Conditions: The Unit 1 Reactor Coolant System is being filled and vented. Offsite power is available.

Initiating Cue: The Shift Foreman directs you to energize pressurizer heater group 13 from its backup power supply per OP A-4A:I, Section 6.3.

Task Standard: The control room is notified that pressurizer heater group 13 has been transferred to the backup power supply.

**Number:** LJPNRC-5  
**Title:** Isolate a Ruptured LHUT

**Examinee:**

**Evaluator:**

	Print	Signature	Date
<b>Results:</b>	Sat	Unsat	Total Time: minutes
<b>Comments:</b>			

**References:** OP AP-14, Tank Ruptures, Rev. 7

**Alternate Path:** Yes No X

**Time Critical:** Yes No X

**Time Allotment:** 15 Minutes

**Critical Steps:** 1, 2, 3

**Job Designation:** RO/SRO

**Task Number:** 068A4.02

**Rating:** 3.2/3.1

- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. The examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** PK 64-15 , LHUT 1-1 Lvl Lo and PK 64-31, Unit 1 LHUT Press Lo are in alarm due to a Liquid Holdup Tank (LHUT) rupture. LHUT 1-1 is aligned to receive diverted CVCS and aligned to the Waste Gas System for cover gas.
- Initiating Cue:** You are directed by the Unit 1 Shift Foreman to isolate LHUT 1-1, per OP AP-14, step 8f.
- Task Standard:** Ruptured LHUT is isolated and an unaffected LHUT is aligned for diversion of the CVCS system.

**Start Time:**

**Step**

**Expected Operator Actions**

---

1. \*\*Close Ruptured LHUT Inlet valve.

---

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator selects closed position on FCV-5,  
LHUT 1-1 inlet valve control switch

---

**Note: FCV-5 control switch is located at  
the Aux. Control board.**

---

1.2 Operator verifies FCV-5 is closed  
using green light on and red light off  
above control switch.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

1.3 2. \*\* Close Gas Decay Tank  
Purge Valve.

---

2.1

---

Operator selects closed position on FCV-  
407, GDT 1-1 purge valve.

---

**Note: FCV-407 control switch is located  
at the Aux. Control board.**

---

2.2 Operator verifies FCV-407 is closed  
using green light on and red light off  
above control switch.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

2.3 3. \*\*Isolate Nitrogen Supply to  
LHUTs

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator manually closes CVCS-8264, N<sub>2</sub>  
Supply to Waste Gas Compressors.

---

3.2 Operator manually closes N<sub>2</sub>-1-41, N<sub>2</sub>  
supply to LHUTs

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

3.3

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



**Initial Conditions:** PK 64-15 , LHUT 1-1 Lvl Lo and PK 64-31, Unit 1 LHUT Press Lo are in alarm due to a Liquid Holdup Tank (LHUT) rupture. LHUT 1-1 is aligned to receive diverted CVCS and aligned to the Waste Gas System for cover gas.

**Initiating Cue:** You are directed by the Unit 1 Shift Foreman to isolate LHUT 1-1, per OP AP-14, step 8f.

**Task Standard:** Ruptured LHUT is isolated and an unaffected LHUT is aligned for diversion of the CVCS system.

**Number:** LJPNRC-6

**Title:** CROSS TIE CCW SYSTEM BETWEEN UNITS

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:** Sat      Unsat      Total Time:      minutes

**Comments:**

**References:** OP AP SD-4, Loss of Component Cooling Water, Appendix D, Rev. 12

**Alternate Path:** Yes      No      X

**Time Critical:** Yes      No      X

**Time Allotment:** 15 minutes

**Critical Steps:** 1, 3

**Job Designation:** RO/SRO

**K/A Number:** 008A2.02

**Rating:** 3.2/3.5

- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. The examinee may be given the procedure and told the step with which to begin.
- Required Materials:** 909 Key
- Initial Conditions:** PK01-07, CCW SYS SURGE TK LVL/MK-UP and PK01-14, CCW SURGE TANK PRESSURE are in alarm due to a leak in the CCW surge tank on Unit 2. The CCW system has been walked down and determined to be intact with the exception of the leak which is limited to the surge tank. The Unit 1 CCW system is available for cross-tie.
- Initiating Cue:** You are directed by the Shift Foreman to Cross-Tie CCW between Units, per OP AP SD-4, Appendix D, beginning at step 2.
- Task Standard:** CCW system is cross-tied.

**Start Time:**

**Step**

**Expected Operator Actions**

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1. \*\*Isolate Surge Tank on Unit 2

---

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator locates CCW-51 (100' Pen Area GW), unlocks and closes.

\*\*\*\*\*

**Cue: CCW-51 is closed.**

\*\*\*\*\*

1.2 Operator locates CCW-52 (100' Pen Area GW), unlocks and closes.

\*\*\*\*\*

**Cue: CCW-52 is closed.**

\*\*\*\*\*

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

1.3 2. Isolate Makeup to Surge Tank on Unit 2.

---

2.1

---

Operator locates CCW-61 and closes (100' Pen Area GW).

\*\*\*\*\*

**Cue: CCW-61 is closed.**

\*\*\*\*\*

2.2 Operator locates CCW-64 and closes (100' Pen Area GW).

\*\*\*\*\*

**Cue: CCW-64 is closed.**

\*\*\*\*\*

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**Note: CCW-61 & 64 are sealed valves.  
The operator should discuss completing a sealed valve change form after completing the task.**

---

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

3. \*\*Cross-Tie CCW between Units.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator locates CCW-1-356 and checks  
open (78' ASDR Mezzanine).

\*\*\*\*\*

**Cue: CCW-1-356 is open.**

\*\*\*\*\*

3.2 Operator locates CCW-2-356 and  
opens (78' ASDR Mezzanine).

\*\*\*\*\*

**Cue: CCW-2-356 is open.**

\*\*\*\*\*

3.3 Operator checks makeup capability  
adequate by checking Unit 1 CCW  
Surge Tank is maintaining level.

\*\*\*\*\*

**Cue: Unit 1 Control Room reports  
Unit 1 CCW Surge Tank level is  
54% and constant.**

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

3.4

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

Initial Conditions: PK01-07, CCW SYS SURGE TK LVL/MK-UP and PK01-14, CCW SURGE TANK PRESSURE are in alarm due to a leak in the CCW surge tank on Unit 2. The CCW system has been walked down and determined to be intact with the exception of the leak which is limited to the surge tank. The Unit 1 CCW system is available for cross-tie.

Initiating Cue: You are directed by the Shift Foreman to Cross-Tie CCW between Units, per OP AP SD-4, Appendix D, beginning at step 2.

Task Standard: CCW system is cross-tied.

**Number:** LJCNR-8  
**Title:** ESTABLISH STEADY STATE CONDITIONS AFTER A ROD MISALIGNMENT ~~(PRIVATE)~~

**Examinee:**

**Evaluator:**

	Print	Signature	Date
<b>Results:</b>	Sat	Unsat	Total Time: minutes
<b>Comments:</b>			

**References:** OP AP-12B, Control Rod Misalignment, Rev. 8A

**Alternate Path:** Yes No X

**Time Critical:** Yes No X

**Time Allotment:** 10 minutes

**Critical Steps:** 2, 3, 4, 5

**Job Designation:** RO/SRO

**Task Number:** 001A2.17

**Rating:** 3.3/3.8



- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** The plant is at approximately 75% power ramping up to 100% at 5 MW/minute. The rods are in AUTO with a dilution in progress.
- Initiating Cue:** Control rod K2 is determined to be greater than 12 steps below the other rods in control bank D, group 2. You are directed by the Shift Foreman to take corrective actions.
- Task Standard:** Plant stabilized with  $T_{avg}$  matched to  $T_{ref}$  ( $\pm 0.5^{\circ}F$ ).

**Start Time:**

**Step**

**Expected Operator Actions**

---

1. Obtain the correct procedure.

---

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

References OP AP-12B.

---

**Note: The operator may get to OP AP-12B from AR PK03-25. Some of the steps below may have been done per AR PK03-25.**

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

1.2 2. \*\* Place Rod Control in  
MANUAL.

---

2.1

---

Places the rod control selector switch to  
MANUAL.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

2.2 3. \*\* Stop any turbine load  
changes.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

Places the turbine on HOLD.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

3.2 4. \*\* Stop any RCS boration or  
dilution in progress.

---

4.1

---

Places the STOP/START switch to STOP  
(or places the MODE selector switch  
out of the DILUTE position).

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

4.2—5. \*\* Match  $T_{avg}$  to  $T_{ref}$ .

\*\*\*\*\*

**Cue: Shift Foreman directs that  $T_{avg}$  and  $T_{ref}$  be matched to within  $\pm 0.5^{\circ}\text{F}$ .**

\*\*\*\*\*

5.1 Matches  $T_{avg}$  to  $T_{ref}$  ( $\pm 0.5^{\circ}\text{F}$ ) by changing turbine load.

**OR**

5.2 Matches  $T_{avg}$  to  $T_{ref}$  ( $\pm 0.5^{\circ}\text{F}$ ) by boration/dilution.

**Note: The intent of this element is to ensure the operator has the ability to match  $T_{avg}$  to  $T_{ref}$  by going in the correct direction. The instructor may cue the operator that  $T_{avg}$  is  $0.5^{\circ}\text{F}$  below  $T_{ref}$  prior to temperature being matched if time is a consideration.**

Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_ \*

5.3

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

Initial Conditions: The plant is at approximately 75% power ramping up to 100% at 5 MW/minute. The rods are in AUTO with a dilution in progress.

Initiating Cue: Control rod K2 is determined to be greater than 12 steps below the other rods in control bank D, group 2. You are directed by the Shift Foreman to take corrective actions.

Task Standard: Plant stabilized with  $T_{avg}$  matched to  $T_{ref}$  ( $\pm 0.5^\circ F$ ).

☐

Initialize the simulator to snap LJCNR-8 - "init LJCNR-8"  
OR

- ☐ Initialize the simulator to the IC-2 (75%, BOL).
- ☐ Enter drill file 1022 or manually insert the following:

Command	Description
1. mal rod4a act,1,k2,0,d,0	Sticks rod K-2
2. mal rcs5 act,1500,300,0,d,mcrfpa(14) gt.207	Borates to get rods above K2
3. ser 1251+ act,1,0,0,d,0	Ensures P250 alarm
4. frz when mcrfpa (14).gt.207 Run 0	Freeze sim when Control Bank D is greater than 207 steps

☐ Perform the following:

1. With the file running, complete the following:
    - a. Initiate a 1000 dilution
    - b. Set VPL to 100%
    - c. Commence a ramp @ 5 MW/min to 1125  
(Ensure MW feedback is IN for the ramp)
  2. After Control Bank D is greater than 207 steps, the simulator will go to FREEZE.
- ☐ Inform the examiner that the simulator setup is complete.
  - ☐ Go to RUN when the examinee is given the cue sheet.

**Number:** LJCNR-9  
**Title:** INCREASE ACCUMULATOR PRESSURE

**Examinee:**

**Evaluator:**

	Print	Signature	Date
<b>Results:</b>	Sat	Unsat	Total Time: minutes
<b>Comments:</b>			

**References:** AR PK02-05, ACCUM PRESSURE HI-LO, Rev. 13A

**Alternate Path:** Yes No X

**Time Critical:** Yes No X

**Time Allotment:** 10 minutes

**Critical Steps:** 4, 5

**Job Designation:** RO/SRO

**Task Number:** 006A1.13

**Rating:** 3.5/3.7



- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** Unit 1 is 100% power, steady state conditions.
- Initiating Cue:** Annunciator PK02-05, ACCUM PRESSURE HI-LO, is in alarm.
- Task Standard:** Restore accumulator pressure to within normal range.

**Start Time:**

**Step**

**Expected Operator Actions**

1. Obtain the correct procedure.

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator references AR PK02-05.

---

1.2 Checks annunciator and determines  
alarm is for accumulator 11.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

1.3 2. Verify abnormal condition.

---

2.1

---

Operator verifies accumulator pressure is  
low.

---

2.2 Verifies accumulator level is normal.

---

2.3 Notifies the Shift Foreman of Tech  
Spec 3.5.1 action statement.

\*\*\*\*\*

**Cue: The Shift Foreman will address  
the Tech Spec for accumulator low  
pressure.**

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

2.4 3. Check open valve 8880,  
nitrogen fill header isolation.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator verifies valve 8880 open by  
checking red light ON.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

3.2

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

4. \*\* Open valve 8875A, accumulator 11  
fill and vent isolation.

---

4.1

---

Operator reviews caution and positions  
switch for 8875A to OPEN.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

4.2 5. \*\* Close valve 8875A after  
pressure returns to normal.

---

5.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Operator positions switch for 8875A to  
CLOSE when pressure returns to  
normal (595.5 to 647.5 psig).

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

---

Operator verifies PK02-05 alarm is out.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

6.2

5.2 6. Verify PK02-05 is no longer  
in alarm.

---

6.1

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

**Initial Conditions:** Unit 1 is 100% power, steady state conditions.

**Initiating Cue:** Annunciator PK02-05, ACCUM PRESSURE HI-LO, is in alarm.

**Task Standard:** Restore accumulator pressure to within normal range.

- ☐ Initialize the simulator to snap LJCNR9 - "init LJCNR9"

OR

- ☐ Initialize the simulator to the IC-1 (100%, BOL).  
☐ Enter drill file 1077 or manually insert the following:

Command	Description
1. delm psisacc(1)	Removes point from monitor screen
1. monv psisacc(1)	Monitors Accumulator 1-1 pressure
1. set psisacc(1)=609	Decreases Accumulator 1-1 pressure to 594 psig
1. ser 1251 act,f,0,0,d,0,	Overrides P250 Alarm
1. run 10	Runs sim for 10 seconds

- ☐ Inform the examiner that the simulator setup is complete.  
☐ Go to RUN when the examinee is given the cue sheet.



Nuclear Power Generation  
Diablo Canyon Power Plant  
Job Performance Measure

---

**Number:** LJCNR-10

**Title:** ISOLATE RUPTURED STEAM GENERATOR 12

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:**                      Sat                      Unsat                      Total Time:                      minutes

**Comments:**

**References:** EOP E-3, Steam Generator Tube Rupture, Rev. 17

**Alternate Path:** Yes    X    No

**Time Critical:** Yes                      No                      X

**Time Allotment:** 10 minutes

**Critical Steps:** 2, 4, 7, 9

**Job Designation:** RO/SRO

**Task Number:** 035A2.01

**Rating:** 4.5/4.6

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AUTHOR:                      DAVE BURNS                      DATE:                      3/27/2000

REVIEWED BY:                      N/A                      DATE:                      N/A  
JPM COORDINATOR

APPROVED BY:                      N/A                      DATE:                      N/A  
TRAINING LEADER

REV. 1

- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** A steam generator tube rupture occurred on steam generator 12. All required actions of EOP E-0 and EOP E-3 are complete up to the isolation of steam generator 12.
- Initiating Cue:** You have been directed by the Shift Foreman to isolate steam generator 12 in accordance with EOP E-3 Steps 3 and 4.
- Task Standard:** Steam generator 12 is isolated per Steps 3 and 4 of EOP E-3.

**Start Time:**

**Step**

**Expected Operator Actions**

---

1. Obtain the correct procedure.

---

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

References EOP E-3.

---

1.2 Reads CAUTIONS prior to Step 3.a.

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

1.3 2. \*\*Verify ruptured SG 10%  
steam dump controller in AUTO and  
set to 1040 psig.

---

2.1

---

Verifies SG 12 10% steam dump controller  
is in AUTO.

---

2.2 Turns controller pot setting to 1040  
psig (8.67 turns).

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

2.3 3. Check ruptured SG 10%  
steam dump valve closed.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Checks that PCV-20 is closed. (VB3 controller output at 0% or Steam Dump valve status green light ON.)

---

**Note: The 10% steam dump may open due to SG pressure. If this occurs, the RNO for this step should be performed.**

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

3.2 4. \*\*Close steam supply valves from the ruptured SGs to the TD AFW pump.

---

4.1

---

Places FCV-37 control switch to CLOSE.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

4.2 5. Verify blowdown and sample isolation valves outside containment from the ruptured SG are closed.

---

5.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Verifies blowdown isolation valve, FCV-  
154, is closed. (VB3 green light ON.)

---

5.2 Verifies sample isolation valve,  
FCV-248, is closed. (VB3 green light  
ON.)

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_\*

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

6. Remove subcooled margin monitor input from SG 12.

---

6.1

---

Places RCS loop wide range  $T_{hot}$  input TE-423 for SG 12 to loop out.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

6.2 7. \*\*Close ruptured steam generator MSIV and MSIV bypass valves.

---

7.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Places SG 12 MSIV, FCV-42, in the CLOSE position.

---

7.2 Verifies FCV-42 green light is ON and red light is OFF. (Not critical)

---

7.3 Checks SG 12 MSIV bypass valve FCV-24 is closed; green light is ON. (Not critical)

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

7.4 8. Check ruptured SG NR level greater than 6%.

---

8.1

---

Reads CAUTION prior to Step 4.a.

---

8.2 Checks SG 12 narrow range level greater than 6% (VB3 level indicators).

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

8.3

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



---

9. \*\* Stop feed flow to the ruptured steam generator.

---

9.1

---

Places LCV-107 control switch in the CLOSE position.

---

9.2 Verifies LCV-107 green light is ON and red light is OFF.

---

9.3 Transfers the controller for LCV-111 to MANUAL and depresses the lower pushbutton until the valve position indicator reads 0%.

---

9.4 Determines that LCV-111 is failed open.

---

\*\*\*\*\*

**Cue: If operator requests to use a Hutch Interlock, inform him the Shift Supervisor will not allow use of Hutch Interlock and directs him to manually shut the pump down.**

\*\*\*\*\*

---

9.5 Secures AFW pump 1-2.

- Resets Safety Injection
- Cuts out Auto start of AFW Pumps from trip of Main Feedwater Pumps toggle switch.
- Shuts down AFW pump 1-2

9. Checks AFW flow (FI-158) is isolated by checking flow to SG 12 at 0 gpm. (Not Critical)

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

0.1

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

- Initial Conditions:** A steam generator tube rupture occurred on steam generator 12. All required actions of EOP E-0 and EOP E-3 are complete up to the isolation of steam generator 12.
- Initiating Cue:** You have been directed by the Shift Foreman to isolate steam generator 12 in accordance with EOP E-3 Steps 3 and 4.
- Task Standard:** Steam generator 12 is isolated per Steps 3 and 4 of EOP E-3.
- ☐

Initialize the simulator to snap LJCNR10 - "init LJCNR10"

- ☐ Run Drill 5001

OR

- ☐ Type "init ljc031" at the expert screen command line. Click the BYPASS SWCK button on the expert screen to continue after boards are aligned. The SNAP for LJC-031 will also work for this JPM.
- ☐ Manually insert the following:

Command	Description
a. cnv afw2 2,1,0,0,d,0	Fails LCV-111 full open

- ☐ This SNAP allows entry into EOP E-3, Step 3, Steam Generator Tube Rupture. S/G 12 Level is approximately 10%. Leave simulator in FREEZE.
- ☐ Inform the examiner that the simulator setup is complete.
- ☐ Go to RUN when the examinee is given the cue sheet.

Nuclear Power Generation  
Diablo Canyon Power Plant  
Job Performance Measure

---

**Number:** LJCNR-11

**Title:** SECURE CONTAINMENT SPRAY

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:** Sat      Unsat      Total Time:      minutes

**Comments:**

**References:** EOP E-1, Loss of Reactor or Secondary Coolant, Rev. 16

**Alternate Path:** Yes      No      X

**Time Critical:** Yes      No      X

**Time Allotment:** 5 minutes

**Critical Steps:** 6, 7, 8

**Job Designation:** RO/SRO

**Task Number:** 026A2.08

---

AUTHOR:      DAVE BURNS      DATE:      3/27/2000

REVIEWED BY:      N/A      DATE:      N/A  
JPM COORDINATOR

APPROVED BY:      N/A      DATE:      N/A  
TRAINING LEADER

REV. 1

**Rating:** 3.2/3.7

- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** Unit 1 experienced a steam line break inside containment. Containment spray pump 12 experienced an overcurrent trip. EOP E-1 is complete up to Step 5.
- Initiating Cue:** The Shift Foreman directs you to evaluate and secure, as appropriate, the Containment Spray system.
- Task Standard:** The Containment Spray system is aligned as required by plant conditions.

**Start Time:**

**Step**

**Expected Operator Actions**

---

1. Obtain the correct procedure.

---

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



---

References EOP E-1.

---

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

1.2 2. Check PK01-18,  
CONTAINMENT SPRAY  
ACTUATION - ON.

---

2.1

---

Observes that PK01-18 is ON.

---

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

2.2 3. Check containment radiation  
levels.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Observes PK11-21, HIGH RADIATION, is OFF.

---

3.2 Observes normal indication on RE-2 and RE-7.

---

**Note: Use of RMS cabinet 1, SPDS or PPC is acceptable.**

---

3.3 Observes PK11-19, CONTMT RADIATION, is OFF.

---

3.4 Observes normal indication on R-30 and R-31.

---

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

3.5 4. Check containment pressure.

---

4.1

---

Observes containment pressure greater than 20 psig. (PI-934, 935, 936, 937 on VB1)

\*\*\*\*\*

**Cue: If containment pressure reads less than 20 psig, inform examinee that containment pressure is 22 psig.**

\*\*\*\*\*

---

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

4.2

5. Verify containment spray system is still in operation.

---

5.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Observes Containment Spray pump 1-1 is running. (Red light ON and amps are normal).

Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\*

---

5.2 6. \*\* Reset Containment Spray trains A and B.

\*\*\*\*\*

**Cue: If containment pressure remains above 20 psig, inform examinee that containment pressure is 18 psig**

\*\*\*\*\*

---

6.1 Resets the Containment Spray trains A & B.

6.2 Checks that PK01-18, CONTAINMENT SPRAY ACTUATION, goes out (not critical).

Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\*

---

6.3 7. \*\*Stop Containment Spray Pump.

---

7.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Places the control switch for CSP 1-1 to the  
STOP position.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

7.2 8. \*\* Close 9001 A & B.

---

8.1

---

Places the control switches for 9001 A & B  
to the CLOSE position.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

9. Verifies close 9003 A & B.

---

9.1

---

Observes 9003 A & B are CLOSED.

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

9.2 10. Close 8994A & B

---

10.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Place control switches for 8994  
A & B to the CLOSE position.

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

10.2

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

**Initial Conditions:** Unit 1 experienced a steam line break inside containment. Containment spray pump 12 experienced an overcurrent trip. EOP E-1 is complete up to Step 5.

**Initiating Cue:** The Shift Foreman directs you to evaluate and secure, as appropriate, the Containment Spray system.

**Task Standard:** The Containment Spray system is aligned as required by plant conditions.



Initialize the simulator to snap LJCNR-11 - "init LJCNR-11"

☐ Run Drill 5001

OR

☐ Initialize the simulator to IC-01 (100%, BOL).

☐ Enter drill file 1080 or manually insert the following:

Command	Description
1. mal mssla act,4e+07,0,0,d,0 mal mss1b act,4e+07,0,0,d,0 mal msslc act,4e7,60,0,d	Break SG 11,12, and 13 inside containment
2. pmp css2 6,10,0,0,d,0	Trip containment spray pump 12
5. set tocean=68	Setup to keep containment press greater than 20 psig
6. ovr xrei022h,act,1,0,0,c,fnispr.lt.10,5	Reset MSRs
5. ovr xv3i2240 act,1,0,0,c,fnispr.lt.10,0	Stop CND/BSTR pump set 12
6. delm pcnm monv pcnm run	Sets up containment press to mon (subtract 15 psig)
7. ramp ccnmpmin=36,1,0,c,pcnm.gt.37.0	keeps cnm press greater than 20 psig
1. frz when xn01c04	Will freeze when PK01-18 alarms

☐ Perform the following:

1. Place FCV-53 and 54 in RECIRC.
2. Go to RUN.
3. Place charcoal filter preheater to ON.
4. Verify MSRs reset.
5. Go to Freeze after s/g monitor white lights are OFF.
6. Verify containment pressure is greater than 20 psig.

☐ Inform the examiner that the simulator setup is complete.

☐ Go to RUN when the examinee completes reading the cue sheet.





**Number:** LJCNR-12

**Title:** DEPRESSURIZE THE RCS USING NORMAL SPRAY

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:** Sat      Unsat      Total Time:      minutes

**Comments:**

**References:** EOP E-3, Steam Generator Tube Rupture, Rev. 17

**Alternate Path:** Yes    X    No

**Time Critical:** Yes      No      X

**Time Allotment:** 15 minutes

**Critical Steps:** 4, 5, 6, 7, 8, 9

**Job Designation:** RO/SRO

**Task Number:** 010A2.02

**Rating:** 3.9/3.9

- Directions:** **No plant controls or equipment are to be operated during the performance of this Job Performance Measure.** All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** A steam generator tube rupture occurred in SG 12 and was isolated. An RCS cooldown was completed through Step 19 of EOP E-3.
- Initiating Cue:** The Shift Foreman directs you to depressurize the RCS commencing with Step 20 of EOP E-3.
- Task Standard:** The RCS depressurization is complete.

Start Time:

Step	Expected Operator Actions
	1. Obtain the correct procedure.
	1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

References EOP E-3.

**Step was:** **Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

1.2 2. Check ruptured SG pressure  
stable or increasing.

---

2.1

---

Notes steam generator 12 pressure is stable  
at approximately 1000 psig.

---

2.2 Ruptured s/g 250# >intact s/g's

**Step was:** **Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

2.3 3. Check RCS subcooling based  
on core exit T/Cs.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Checks RCS subcooling greater than 36° F  
using the subcooled margin monitor,  
YI-31, or Appendix C, Subcooled  
Curve.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

3.2 4. \*\* Depressurize the RCS  
using normal pressurizer spray.

---

4.1

---

Opens the spray valves and commences  
RCS depressurization.

---

4.2 Verifies maximum spray flow by  
ensuring both spray valves are fully  
open.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

4.3 5. \*\* Check RCS pressure.

---

5.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Checks RCS pressure less than SG 12  
pressure and PZR level greater than  
12%.

---

**Note: If conditions are met, go to Step 8.  
If conditions are not met, go to  
Step 6.**

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

5.2 6. \*\* Check pressurizer level.

---

6.1

---

Checks pressurizer level greater than 74%.

---

**Note: If conditions are met, go to Step 8.  
If conditions are not met, go to  
Step 7.**

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

6.2 7. \*\* Check RCS subcooling  
based on core exit T/Cs.

---

7.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



---

Checks RCS subcooling less than 20° F  
using the subcooled margin monitor,  
YI-31, or Appendix C, Subcooled  
Liquid Curve.

---

**Note: If conditions are met, go to Step 8.  
If conditions are not met, do  
Steps 5, 6, and 7 until one of them  
is met.**

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

7.2 8. \*\* Close pressurizer spray  
valves.

---

8.1

---

Closes the spray valves.

---

8.2 Identifies spray valve PCV-455B is  
failed open.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

8.3 9. \*\* Stops RCP supplying  
failed spray valve.

---

9.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Stops RCP No. 2.

**Step was:** **Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

9.2

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

Initial Conditions: A steam generator tube rupture occurred in SG 12 and was isolated.  
An RCS cooldown was completed through Step 19 of EOP E-3.

Initiating Cue: The Shift Foreman directs you to depressurize the RCS commencing  
with Step 20 of EOP E-3.

Task Standard: The RCS depressurization is complete.

☐ Initialize the simulator to snap LJCNR12 -"init LJCNR12"

☐ Run Drill file 5001

OR

☐ Type "init ljc033" on the expert screen command line. Click the BYPASS SWCK button on the expert screen to continue after control boards are aligned.

☐ This SNAP allows entry into EOP E-3 at Step 20 with ruptured steam generator 12 level at approximately 35% and increasing slowly. Core exit thermocouples are at approximately 489° F and the RCS is ready for depressurization.

☐ Manually insert the following:

Command	Description
1. cnv rcs2 2,1,0,0,c,rrcp455b.gt.0.9,0 #RRCP455B	Fails PCV-455B wide open when it gets to 90% open.

Perform the following:

☐ Display PPC screen "E3" on one of the CC2 PPC monitors.

☐ Inform the examiner that the simulator setup is complete.

☐ Go to RUN when the examinee is given the cue sheet.

☐ After RUN, display the THERMOCOUPLE MAP on SPDS Panel B.

Nuclear Power Generation  
Diablo Canyon Power Plant  
Job Performance Measure

---

**Number:** LJCNR-13  
**Title:** RESPOND TO AN ATWS

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:** Sat      Unsat      Total Time:      minutes

**Comments:**

**References:** EOP E-0, Reactor Trip or Safety Injection, Rev. 23

EOP FR-S.1, Response to Nuclear Power Generation/ATWS, Rev. 11

**Alternate Path:** Yes    X    No

**Time Critical:** Yes      No      X

**Time Allotment:** 10 minutes

**Critical Steps:** 2, 3, 4, 6

**Job Designation:** RO/SRO

**Task Number:** 012A2.06; 001A2.13

**Rating:** 4.4/4.6; 4.4/4.7

---

AUTHOR:      DAVE BURNS      DATE:      3/27/2000

REVIEWED BY:      N/A      DATE:      N/A  
JPM COORDINATOR

APPROVED BY:      N/A      DATE:      N/A  
TRAINING LEADER

REV. 1



- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** Annunciator PK04-11, REACTOR TRIP INITIATED is in alarm, with Annunciator PK04-14, REACTOR TRIP ACTUATED not in alarm.
- Initiating Cue:** As the Unit 1 CO, you are directed to perform the immediate actions.
- Task Standard:** Immediate actions of EOP E-0 and EOP FR-S.1 are performed to address an ATWS and Steps 3 and 4 of EOP FR-S.1 are performed.

**Start Time:**

**Step**

**Expected Operator Actions**

1. Obtain the correct procedure.

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



---

References EOP E-0.

---

**Note:** Since the immediate actions of both EOP E-0 and EOP FR-S.1 are required to be memorized, it is allowable for the actions to be done WITHOUT either procedure as a guide. The guidance to be used in evaluating each step would be that the operator must complete the INTENT of each step, and not verbatim compliance. After immediate actions are complete, the procedure must be used to verify full compliance with the procedure.

\*\*\*\*\*

**Cue:** Simulator Operator may assume inward rod motion duties once performed by student, so that student may continue with JPM.

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

1.2 2. \*\* Attempt to manually trip the reactor.

---

2.1

---

Attempts trip using either CC-1 or VB-2 switch.

---

2.2 Attempts to manually deenergize rod drive MG set buses 13D and 13E by opening breakers 52-HD-13 and 52-HE-4.

---

2.3 Notes 13D and 13E did not deenergize.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

2.4

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

3. \*\* Transition to EOP FR-S.1 and  
perform immediate actions.

---

3.1

---

Goes to EOP FR-S.1.

---

3.2 Notes Reactor is NOT tripped.

---

3.3 Manually inserts control rods.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

3.4 4. \*\* Verify turbine is tripped.

---

4.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

Notes all 4 stop valves are OPEN.

---

4.2 Manually initiates turbine trip.

---

4.3 Checks all 4 stop valves CLOSED.

---

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

4.4 5. Check AFW pumps running.

---

5.1

---

Verifies both MD AFW pumps are running.

---

5.2 Verifies TD AFW pump RUNNING,  
if necessary.

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

5.3

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

---

6. \*\* Initiate emergency boration of the  
RCS.

---

6.1

---

Opens 8805A and/or B.

---

6.2 CLOSES LCV-112B and/or C.

---

6.3 Verifies at least 105 gpm charging  
flow.

---

6.4 Checks pressurizer pressure (not part  
of critical step).

---

6.5 Determines pressurizer pressure is  
<2335 psig (not part of critical step).

---

**Step was: Sat: \_\_\_\_\_ Unsat: \_\_\_\_\_\***

---

6.6

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

**Initial Conditions:** Annunciator PK04-11, REACTOR TRIP INITIATED is in alarm, with Annunciator PK04-14, REACTOR TRIP ACTUATED not in alarm.

**Initiating Cue:** As the Unit 1 CO, you are directed to perform the immediate actions.

**Task Standard:** Immediate actions of EOP E-0 and EOP FR-S.1 are performed to address an ATWS and Steps 3 and 4 of EOP FR-S.1 are performed.



Initialize the simulator to snap LJCNR13 - "init LJCNR13"

- ☐ Enter drill file 6213 for overrides.

OR

- ☐ Initialize the simulator to the IC-1 (100%, BOL).  
☐ Enter drill file 1041, or manually insert the following:

Command	Description
1. mal pp15a act,3,0,0,d,0	Reactor Trip Breaker Train A fails to trip
2. mal pp15b act,3,0,0,d,0	Reactor Trip Breaker Train B fails to trip
3. ovr xv5i245o act,0,0,0,d,0	13D feeder breaker fails to deenergize
4. ovr xv5i239o act,0,0,0,d,0	13E feeder breaker fails to deenergize
5. mal seil act,0.4,10,0,d,0	Seismic Trip
6. run 15	runs simulator for 15 seconds

- ☐ Inform the examiner that the simulator setup is complete.  
☐ Go to RUN when the examinee is given the cue sheet.

Nuclear Power Generation  
Diablo Canyon Power Plant  
Job Performance Measure

---

**Number:** LJCNR-14

**Title:** RESPOND TO A LOSS OF CCW TO THE LETDOWN HEAT EXCHANGER

**Examinee:**

**Evaluator:**

Print

Signature

Date

**Results:** Sat      Unsat      Total Time:      minutes

**Comments:**

**References:** OP AP-11, Malfunction of Component Cooling Water System, Rev 16;  
OP B-1A:IV, CVCS - Excess Letdown Place in Service and Remove from Service, Rev. 10A.

**Alternate Path:** Yes    X    No

**Time Critical:** Yes      No      X

**Time Allotment:** 20 minutes

**Critical Steps:** 3, 4, 7, 9, 12

**Job Designation:** RO/SRO

**Task Number:** 008A4.01

---

AUTHOR:      DAVE BURNS      DATE:      3/27/2000

REVIEWED BY:      N/A      DATE:      N/A  
JPM COORDINATOR

APPROVED BY:      N/A      DATE:      N/A  
TRAINING LEADER

REV. 1

**Rating:** 3.3/3.1



- Directions:** No plant controls or equipment are to be operated during the performance of this Job Performance Measure. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. The student will be given the initial conditions, initiating cue, and task standard. The examiner will then ask if any clarifications are needed. After identifying the appropriate procedure for the task, the examinee may be given the procedure and told the step with which to begin.
- Required Materials:** None
- Initial Conditions:** Unit 1 is operating at 100% power.
- Initiating Cue:** TCV-130 failed closed and the Shift Foreman directs you to respond to a loss of CCW flow to the letdown HX.
- Task Standard:** A flow balance established that causes pressurizer pressure and level to be in or trending toward their program bands.

**Start Time:**

**Step**

**Expected Operator Actions**

---

1. Obtain the correct procedure.

---

1.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

References OP AP-11, section D (operator may also reference AR PK04-21 which refers the operator to OP AP-11).

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

1.2 2. Verify TCV-130 is  
controlling letdown temperature.

---

2.1

---

Determines TCV-130 is not controlling in  
auto and takes manual control.

---

2.2 Determines letdown temperature  
cannot be maintained in manual  
control.

**Step was: Sat:** \_\_\_\_\_ **Unsat** \_\_\_\_\_ \*

---

2.3 3. \*\* Isolate letdown.

---

3.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

Closes CVCS 8149A, 8149B, and 8149C.

---

3.2 Closes LCV-459 and LCV-460.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

3.3 4. \*\* Isolate normal charging.

---

4.1

---

Reduces charging flow to minimum, while  
maintaining seal injection flow of 8 to  
13 gpm to each RCP with HCV-142.

---

4.2 Isolates charging flow path by closing  
CVCS-8146.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

4.3

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

5. Obtain the correct procedure.

---

5.1

---

References OP B-1A:IV.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

5.2 6. Check excess letdown divert  
valve 8143 in the NORMAL position.

---

6.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

Checks the excess letdown divert valve in the NORMAL position.

\*\*\*\*\*

**Cue: NORMAL is the desired position based on current plant conditions.**

\*\*\*\*\*

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

6.2 7. \*\* Open CCW valve FCV-361.

---

7.1

---

Opens FCV-361.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

7.2 8. Check excess letdown pressure control valve HCV-123 closed.

---

8.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

Checks closed HCV-123.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

8.2 9. \*\* Open excess letdown  
isolation valves 8166 and 8167.

---

9.1

---

Opens 8166 and 8167.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_ \***

---

9.2

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

INSTRUCTOR WORKSHEET

---

---

10. Slowly open HCV-123 to establish  
excess letdown flow.

---

10.1

---

Reads CAUTION prior to step 6.1.5. (not  
part of critical step)

---

10.2 Slowly increases demand on  
HCV-123.

---

10.3 Observes increase in excess letdown  
pressure and temperature. (not part of  
critical step)

---

10.4 Monitors excess letdown temperature  
and pressure, not going above 190  
degrees on TI-122.

---

10.5 Observes NOTE associated with this  
step. (not part of critical step)

---

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

10.6 11. Monitor for a leak at the  
excess letdown heat exchanger.

---

11.1

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.



INSTRUCTOR WORKSHEET

---

---

Checks containment structure sump level  
recorders for increased leakage into  
the sumps.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

11.2 12. \*\* Adjust charging flow to  
maintain pressurizer level.

---

12.1

---

Adjusts charging flow to restore pressurizer  
level toward programmed value.

**Step was: Sat: \_\_\_\_\_ Unsat \_\_\_\_\_\***

---

12.2

**Stop Time:**

**Total Time:** (Enter total time on the cover page)

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

- Initial Conditions:** Unit 1 is operating at 100% power.
- Initiating Cue:** TCV-130 failed closed and the Shift Foreman directs you to respond to a loss of CCW flow to the letdown HX.
- Task Standard:** A flow balance established that causes pressurizer pressure and level to be in or trending toward their program bands.

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.

☐ Initialize the simulator to snap LJCNR-14 - "init LJCNR-14"

OR

☐ Initialize the simulator to IC-1 (100%, BOL).

☐ Enter drill file 1126 or manually insert the following:

Command	Description
1. CNV CVC7 2,0,0,0,d,0	TCV-130 fails closed
2. RUN 30	Run simulator for 30 seconds to allow alarms to actuate

☐ Inform the examiner that the simulator setup is complete.

☐ Go to RUN when the examinee is given the cue sheet.

\*Denotes an entry required on the JPM cover sheet.

\*\*Denotes a Critical Step.