

**VERMONT YANKEE  
JOB PERFORMANCE MEASURE  
WORKSHEET**

**Task Identification:**

Title: PAR Based on Plant Conditions (Faulted – Alternate Path)

Reference: OP 3511 Off-Site Protective Action Recommendations, Rev 11

Task Number: 34470803

**Task Performance:** AO/RO/SRO \_\_\_ RO/SRO \_\_\_ SRO Only X

Sequence Critical: Yes \_\_\_ No X

Time Critical: Yes \_\_\_ No X

Operator Performing Task: \_\_\_\_\_

Examiner: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_

Activity Code: \_\_\_\_\_

Method of Testing: Simulation \_\_\_ Performance X Discuss

Setting: Classroom \_\_\_ Simulator X Plant

Performance Expected Completion Time: 15 minutes

Evaluation Results:

Performance: PASS \_\_\_ FAIL \_\_\_ Time Required: \_\_\_\_\_

Prepared by: [Signature]  
Operations Training Instructor

6/24/02  
Date

Reviewed by: [Signature]  
SRO Licensed/Certified Reviewer

6/27/02  
Date

Approved by: [Signature]  
Operations Training Supervisor

6/27/02  
Date

**Directions:** Discuss the information given on this page with the operator being evaluated. Allow time for him to ask questions before beginning performance of the task. As each performance step is performed, evaluate the performance of that step by circling either "Sat" or "Unsat". Comments are required for any "Unsat" classification. If a step is preceded by an asterisk (\*), it is a critical step. If a critical step is skipped or performed unsatisfactorily, then the operator has failed the Job Performance Measure.

After providing the initiating cue, ask the operator "Do you understand the task?"

**Read to the person being evaluated:**

Before starting, I will explain the initial conditions, provide the initiating cues and answer any questions you have.

This JPM will be performed in the Simulator and you are to perform the actions.

You are requested to **"talk through"** the procedure, stating the parameters you are verifying or checking and the steps you are performing.

Inform me upon completion of this task.

**Initial Conditions:**

A failure to SCRAM and a loss of cooling accident has occurred. All ECCS systems responded as expected.

- Rx water level is -10"
- Containment RAD level is 6000 R/hr and increasing.
- Drywell pressure is 25 psig and steady.
- Containment isolation valves AC-6 and AC-6A have failed to isolate.
- Stack high range monitor RM17-155 is alarming.

The Shift Supervisor has declared a General Emergency and the EOF has not yet been manned. A stack release is in progress.

**Initiating Cues:**

The PED (Shift Supervisor) directs you make a PAR based on plant conditions per OP 3511. A second individual is not available to independently verify the PAR.

**Task Standards:**

PAR and VYOPF 3511.01 complete.

**Required Materials:**

OP 3511, VYOPF 3511.01  
OP 3513 Appendix I

**Simulator Setup:**

Rad High >6000 R  
AC-6 and AC-6A open  
CRP 9-48 Backup Met Instrumentation OFF

**Evaluation**

**Performance Steps**

TIME START: \_\_\_\_\_

**SAT/UNSAT**

**Step 1: Obtain Procedure OP 3511, Section 1 and review precautions.**

Standard: Operator obtains and reviews procedure.

**SAT/UNSAT**

**Step 2: Use Figure 1 and Table 3 to determine the appropriate Protective Action Recommendation (PAR) based on plant conditions**

Standard: Operator obtains Figure 1 of OP 3511.

**SAT/UNSAT**

**Step 3: If the actual or potential release pathway is a stack release, use the upper wind direction using Appendix I of OP 3513.**

Standard: Operator obtains Appendix I of OP 3513 to determining upper wind direction

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**NOTE:**

**STEPS 4-8 are from OP 3513 Appendix I**

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**SAT/UNSAT**

**Step 4: Access MET DATA HISTORY-1 display on ERFIS monitor by depressing the "ODPS" key and then selecting the MH1 poke box.**

Standard: Operator selects MET DATA HISTORY-1.

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**Interim Cue:**

MET DATA HISTORY-1 data is all purple.

---

**Evaluation**

**Performance Steps**

SAT/UNSAT

**Step 5: If the primary meteorological tower instrumentation is not functioning, but ERFIS is operable obtain meteorological data from the secondary tower. Access MET DATA HISTORY-2 display on the ERFIS monitor by depressing the "ODPS" key and then selecting the MH2 poke box.**

Standard: Operator selects MET DATA HISTORY-2.

---

**Interim Cue:**

MET DATA HISTORY-2 data is all purple.

---

SAT/UNSAT

**Step 6: If the primary meteorological tower instrumentation is functioning, but the MET DATA HISTORY-1 display on ERFIS monitor is unavailable, determine the required meteorological data from the video graphic recorder in the Relay House.**

Standard: Sends operator to Relay House to obtain wind direction from video graphic recorder.

---

**Interim Cue:**

Operator from the Relay House reports the recorder is not functioning.

---

SAT/UNSAT

**Step 7: If the primary meteorological tower instrumentation is not functioning, and the MET DATA HISTORY-1 and MET DATA HISTORY-2 displays on ERFIS monitor are not available, obtain readouts of wind speed, wind direction, ambient temperature, and one value of delta T from the secondary (backup) tower from CRP 9-48.**

Standard: Attempts to obtain wind direction from CRP 9-48 instrumentation.

---

**Interim Cue:**

If operator attempts to turn on monitor, inform monitor fails to energize.

---

Evaluation

Performance Steps

SAT/UNSAT

**\*Step 8: If the primary and secondary meteorological tower instrumentation is not available, consult Albany National Weather Service Station (Tel. No.'s 800-833-9880 [Primary] or 518-435-9574 [Backup], and ask for "Public Forecaster") regarding meteorological observations.**

Standard: Contacts Albany National Weather Service Station by telephone to obtain wind direction.

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Interim Cue:

When operator begins to dial the phone, provide him a wind direction is from 100<sup>0</sup>.

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SAT/UNSAT

**\*Step 9: Determine from initial conditions that substantial core damage is in progress.**

Standard: Operator answers **YES** to "substantial core damage" decision block on Figure 1 of OP 3511 due to containment rads >5000 R/Hr.

SAT/UNSAT

**\*Step 10: Determine from initial conditions that containment failure has occurred and a release is underway.**

Standard: Operator answers **YES** to "containment failure projected or release underway" decision block on Figure 1 of OP 3511 due to AC-6 and 6a failure to close.

SAT/UNSAT

**\*Step 11: Determine that a puff release is not underway.**

Standard: Operator answers **NO** to "is a puff release underway?" decision block on Figure 1 of OP 3511.

SAT/UNSAT

**\*Step 12: Determine PAR of evacuation for Vernon, Hinsdale and Any towns 5 miles downwind (Refer to Table 3 of OP 3511).**

Standard: Using Table 3 determines Sector E (Vernon, Hinsdale, Brattleboro, Guilford, and Bernardston) are towns affected.



## **Examinee Handout**

### **Initial Conditions:**

A failure to SCRAM and a loss of cooling accident has occurred. All ECCS systems responded as expected.

- Rx water level is -10"
- Containment RAD level is 6000 R/hr and increasing.
- Drywell pressure is 25 psig and steady.
- Containment isolation valves AC-6 and AC-6A have failed to isolate.
- Stack high range monitor RM17-155 is alarming.

The Shift Supervisor has declared a General Emergency and the EOF has not yet been manned. A stack release is in progress.

### **Initiating Cues:**

The PED (Shift Supervisor) directs you make a PAR based on plant conditions per OP 3511. A second individual is not available to independently verify the PAR.

**VERMONT YANKEE  
JOB PERFORMANCE MEASURE  
WORKSHEET**

**Task Identification:**

Title: Initiate SLC (Faulted – Alternate Path)  
Reference: OP 2114, Standby Liquid Control System  
Task Number: 2110050101

**Task Performance:** AO/RO/SRO \_\_\_ RO/SRO X SRO Only

Sequence Critical: Yes \_\_\_ No X

Time Critical: Yes \_\_\_ No X

Operator Performing Task: \_\_\_\_\_

Examiner: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_

Activity Code: \_\_\_\_\_

Method of Testing: Simulation \_\_\_ Performance X Discuss

Setting: Classroom \_\_\_ Simulator X Plant \_\_\_\_\_

Performance Expected Completion Time: 7 minutes

**Evaluation Results:**

Performance: PASS \_\_\_ FAIL \_\_\_

Time Required: \_\_\_\_\_

Prepared by: \_\_\_\_\_  
Operations Training Instructor

6/20/02  
Date

Reviewed by: \_\_\_\_\_  
SRO Licensed/Certified Reviewer

6/27/02  
Date

Approved by: \_\_\_\_\_  
Operations Training Supervisor

\_\_\_\_\_  
Date

**Directions:** Discuss the information given on this page with the operator being evaluated. Allow time for him to ask questions before beginning performance of the task. As each performance step is performed, evaluate the performance of that step by circling either "Sat" or "Unsat". Comments are required for any "Unsat" classification. If a step is preceded by an asterisk (\*), it is a critical step. If a critical step is skipped or performed unsatisfactorily, then the operator has failed the Job Performance Measure.

After providing the initiating cue, ask the operator "Do you understand the task?"

**Read to the person being evaluated:**

Before starting, I will explain the initial conditions, provide the initiating cues and answer any questions you have.

This JPM will be performed in the Simulator and you are to perform the actions.

You are requested to "**talk through**" the procedure, stating the parameters you are verifying or checking and the steps you are performing.

Inform me upon completion of this task.

**Initial Conditions:**

The plant has experienced an ATWS and the torus temperature is approaching 110°F.

**Initiating Cues:**

You are directed to initiate SLC injection to the reactor vessel.

**Task Standards:**

Boron injected in to the vessel IAW EOP-2, using OP 2114, Appendix B.

**Required Materials:**

EOP-2 ATWS RPV Control  
OP 2114, Operation of Standby Liquid Control System

**Simulator Setup:** Pre-insert Malf: SL01A  
SL02B

**Evaluation**

**Performance Steps**

TIME START: \_\_\_\_\_

**SAT/UNSAT**

**Step 1: Obtain Procedure, Review Admin. Limits, Precautions and Prerequisites**

Standard: OP 2114 Appendix B obtained

Comment: Procedure is located at CRP 9-5

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**Interim Cue:**

**If asked, all prerequisites are satisfied.**

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**SAT/UNSAT**

**\*Step 2: Unlock SLC switch (Keylock) by positioning key to the two o'clock position.**

Standard: Keylock turned to two o'clock position

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**Note:**

**If SYS 1 is initially selected, steps 3-17 apply.**

**If SYS 2 is initially selected, steps 18-38 apply**

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**SAT/UNSAT**

**\*Step 3: Turn Key-Lock Switch to SYS 1**

Standard: Switch turned to SYS 1, located on CRP 9-5 horizontal panel upper left corner.

**SAT/UNSAT**

**\*Step 4: Verify SLC PUMP A P-45-1A starts**

Standard: Recognizes SLC pump A fails to start by observing red light off, CRP 9-5

<u>Evaluation</u>	<u>Performance Steps</u>
SAT/UNSAT	<p><b><u>Step 5: Verify RWCU system isolation valves automatically close: Outlet Isolation, CU-15; Inlet Isolation, CU-18; Return Isolation CU-68</u></b></p> <p>Standard: Observes RCU-15, -18, -68 closed on CRP 9-4 green light ON and red light OFF</p>
SAT/UNSAT	<p><b><u>Step 6: Verify squib valve SLC-14A fires, as indicated by Amber SQUIB VALVE READY light goes out, and annunciator 5-A-1 SLC SQUIB VLV CONTINUITY LOSS alarms.</u></b></p> <p>Standard: 1. Observes amber light goes out for "A" valve on CRP 9-5 vertical panel 2. Observes "SQB VLV CON LOSS" alarm annunciator 5-A-1</p>
SAT/UNSAT	<p><b><u>Step 7: Verify SLC DISCH PRESSURE PI-11-65 increases.</u></b></p> <p>Standard: Observes zero discharge pressure on PI-11-65</p>
SAT/UNSAT	<p><b><u>Step 8: Verify Red FLOW indicator light on</u></b></p> <p>Standard: Observes Red FLOW indicator light is OFF</p>
SAT/UNSAT	<p><b><u>Step 9: Verify SLC TANK LEVEL LI 11-66 (CRP 9-5) decreases</u></b></p> <p>Standard: Observes tank level unchanged</p>
SAT/UNSAT	<p><b><u>*Step 10: If the above actions did not result in SLC injection, then turn the SLC switch (keylock) to the other position SYS 2 and repeat verification of Step 3.</u></b></p> <p>Standard: Switch turned to SYS 2, located on CRP 9-5 horizontal panel upper left corner</p>

**Evaluation**

**Performance Steps**

**SAT/UNSAT**

**Step 11: Verify SLC PUMP A P-45-1B starts**

Standard: Observes SLC pump B red light on, CRP 9-5

**SAT/UNSAT**

**Step 12: Verify RWCU system isolation valves automatically close: Outlet Isolation, CU-15; Inlet Isolation, CU-18; Return Isolation CU-68**

Standard: Observes RCU-15, -18, -68 closed on CRP 9-4 green light ON and red light OFF.

**SAT/UNSAT**

**Step 13: Squib valve SLC-14B fires, as indicated by Amber SQUIB VALVE READY light goes out, and annunciator 5-A-1 SLC SQUIB VLV CONTINUITY LOSS alarms.**

Standard: 1. Observes amber light goes out for "B" valve on CRP 9-5 vertical panel  
2. Observes "SQB VLV CON LOSS" alarm annunciator 5-A-1

**SAT/UNSAT**

**Step 14: Verify SLC DISCH PRESSURE PI-11-65 increases.**

Standard: Observes pressure increase on PI-11-65

**SAT/UNSAT**

**Step 15: Verify Red FLOW indicator light on**

Standard: Observes Red FLOW indicator light is ON

**SAT/UNSAT**

**Step 16: Verify SLC TANK LEVEL LI 11-66 (CRP 9-5) decreases**

Standard: Operator indicates he will be checking for storage tank level indicator decreasing LI-11-66

Comment: Level decrease is not expected immediately

**SAT/UNSAT**

**Step 17: Monitor Power Level**

Standard: Operator indicates he will check Rx power decreasing on APRM recorders on CRP 9-5

TIME FINISH: \_\_\_\_\_

Evaluation

Performance Steps

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**Note:**                    **If SYS 1 is initially selected, steps 3-17 apply.**  
**If SYS 2 is initially selected, steps 18-38 apply**

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**SAT/UNSAT**

**\*Step 18: Turn Key-Lock Switch to SYS 2**

Standard: Switch turned to SYS 2, located on CRP 9-5 horizontal panel upper left corner.

**SAT/UNSAT**

**Step 19: Verify SLC PUMP A P-45-1B starts**

Standard: Observes SLC pump B red light on, CRP 9-5

**SAT/UNSAT**

**Step 20: Verify RWCU system isolation valves automatically close: Outlet Isolation, CU-15; Inlet Isolation, CU-18; Return Isolation CU-68**

Standard: Observes RCU-15, -18, -68 closed on CRP 9-4 green light ON and red light OFF

**SAT/UNSAT**

**Step 21: Squib valve SLC-14B fires, as indicated by Amber SQUIB VALVE READY light goes out, and annunciator 5-A-1 SLC SQUIB VLV CONTINUITY LOSS alarms.**

Standard:    1. Observes amber light goes out for "B" valve on CRP 9-5 vertical panel. Amber light will come on when SYS switch returned to neutral position.  
              2. Observes "SQB VLV CON LOSS" annunciator 5-A-1 failed to alarm

**SAT/UNSAT**

**Step 22: Verify SLC DISCH PRESSURE PI-11-65 increases.**

Standard: Observes discharge pressure on PI-11-65 cycling at relief setpoint, indicating failure of squib valve.

Evaluation

Performance Steps

SAT/UNSAT

Step 23: Verify Red FLOW indicator light on

Standard: Observes Red FLOW indicator light is OFF

SAT/UNSAT

Step 24: Verify SLC TANK LEVEL LI 11-66 (CRP 9-5) decreases

Standard: Observes tank level unchanged

SAT/UNSAT

\*Step 25: If the above actions did not result in SLC injection, then turn the SLC switch (keylock) to the other position SYS 1 and repeat verification of Step 3.

Standard: Switch turned to SYS 1, located on CRP 9-5 horizontal panel upper left corner

SAT/UNSAT

Step 26: Verify SLC PUMP A P-45-1A starts

Standard: Observes SLC pump A red light off, CRP 9-5

SAT/UNSAT

Step 27: Verify RWCU system isolation valves automatically close: Outlet Isolation, CU-15; Inlet Isolation, CU-18; Return Isolation CU-68

Standard: Observes RCU-15, -18, -68 closed on CRP 9-4 green light ON and red light OFF

SAT/UNSAT

Step 28: Squib valve SLC-14A fires, as indicated by Amber SQUIB VALVE READY light goes out, and annunciator 5-A-1 SLC SQUIB VLV CONTINUITY LOSS alarms.

Standard: 1. Observes amber light goes out for "A" valve on CRP 9-5 vertical panel  
2. Observes "SQB VLV CON LOSS" alarm annunciator 5-A-1

**Evaluation**

**Performance Steps**

**SAT/UNSAT**

**Step 29: Verify SLC DISCH PRESSURE PI-11-65 increases.**

Standard: Observes zero pressure on PI-11-65

**SAT/UNSAT**

**Step 30: Verify Red FLOW indicator light on**

Standard: Observes Red FLOW indicator light is off

**SAT/UNSAT**

**\*Step 31: If Step 4 did not result in SLC injection, turn the SLC switch back to the initially selected system and repeat verification of Step 3.**

Standard: Switch turned to SYS 2, located on CRP 9-5 horizontal panel upper left corner

**SAT/UNSAT**

**Step 32: Verify SLC PUMP A P-45-1B starts**

Standard: Observes SLC pump B red light on, CRP 9-5

**SAT/UNSAT**

**Step 33: Verify RWCU system isolation valves automatically close: Outlet Isolation, CU-15; Inlet Isolation, CU-18; Return Isolation CU-68**

Standard: Observes RCU-15, -18, -68 closed on CRP 9-4 green light ON and red light OFF

**SAT/UNSAT**

**Step 34: Squib valve SLC-14A fires, as indicated by Amber SQUIB VALVE READY light goes out, and annunciator 5-A-1 SLC SQUIB VLV CONTINUITY LOSS alarms.**

Standard: 1. Observes amber light goes out for "A" valve on CRP 9-5 vertical panel  
2. Observes "SQB VLV CON LOSS" alarm annunciator 5-A-1

**Evaluation**

**Performance Steps**

**SAT/UNSAT**

**Step 35: Verify SLC DISCH PRESSURE PI-11-65 increases.**

Standard: Observes pressure increase on PI-11-65

**SAT/UNSAT**

**Step 36: Verify Red FLOW indicator light on**

Standard: Observes Red FLOW indicator light is ON

**SAT/UNSAT**

**Step 37: Verify SLC Tank Level Decreases**

Standard: Operator indicates he will be checking for storage tank level indicator decreasing LI-11-66

Comment: Level decrease is not expected immediately

**SAT/UNSAT**

**Step 38: Monitor Power Level**

Standard: Operator indicates he will check Rx power decreasing on APRM recorders on CRP 9-5

TIME FINISH:\_\_\_\_\_

**Terminating Cue:** Boron injected into the vessel IAW EOP-2, using OP 2114 Appendix B

**Evaluators Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**System:** 211000 K/A's: K1.05 K1.06 K2.01 K2.02 K4.04 K4.07 K4.08 K5.04

A1.02 A1.04 A1.06 A1.08 A1.09 A1.10 A2.02  
A2.04 A3.01 A3.03 A3.05 A3.06 A3.07 A3.08  
A4.02 A4.03 A4.05 A4.06 A4.07 A4.08

## Examinee Handout

### Initial Conditions:

The plant has experienced an ATWS and the torus temperature is approaching 110°F.

### Initiating Cues:

You are directed to initiate SLC injection to the reactor vessel.

**VERMONT YANKEE  
JOB PERFORMANCE MEASURE  
WORKSHEET**

**Task Identification:**

Title: Perform MSIV Partial Closure Testing of MSIV-86A  
Reference: OP 4113, Main and Auxiliary Steam System Surveillance  
Task Number: 2397030201

**Task Performance:** AO/RO/SRO \_\_\_ RO/SRO X SRO Only

Sequence Critical: Yes \_\_\_ No X

Time Critical: Yes \_\_\_ No X

Operator Performing Task: \_\_\_\_\_

Examiner: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_

Activity Code: \_\_\_\_\_

Method of Testing: Simulation \_\_\_ Performance X Discuss

Setting: Classroom \_\_\_ Simulator X Plant

Performance Expected Completion Time: 15 minutes

Evaluation Results:

Performance: PASS \_\_\_ FAIL \_\_\_

Time Required: \_\_\_\_\_

Prepared by: [Signature]  
Operations Training Instructor

7/1/02  
Date

Reviewed by: [Signature]  
SRO Licensed/Certified Reviewer

7-1-02  
Date

Approved by: [Signature]  
Operations Training Supervisor

7/1/02  
Date

**Directions:** Discuss the information given on this page with the operator being evaluated. Allow time for him to ask questions before beginning performance of the task. As each performance step is performed, evaluate the performance of that step by circling either "Sat" or "Unsat". Comments are required for any "Unsat" classification. If a step is preceded by an asterisk (\*), it is a critical step. If a critical step is skipped or performed unsatisfactorily, then the operator has failed the Job Performance Measure.

After providing the initiating cue, ask the operator "Do you understand the task?"

**Read to the person being evaluated:**

Before starting, I will explain the initial conditions, provide the initiating cues and answer any questions you have.

This JPM will be performed in the Simulator and you are to perform the actions.

You are requested to "**talk through**" the procedure, stating the parameters you are verifying or checking and the steps you are performing.

Inform me upon completion of this task.

**Initial Conditions:**

The plant is at power during normal operation.

**Initiating Cues:**

I&C recently completed work on MS-86A. As part of PMT, you have been directed to perform the MSIV partial closure RPS relay actuation functional test on MS-86A IAW OP 4113. Other operators are available to assist in the performance of back panel actions.

**Task Standards:**

MSIV partial closure test performed IAW OP 4113.

**Required Materials:**

OP 4113, Main and Auxiliary Steam System Surveillance  
VYOPF 4113.03

**Simulator Set-Up:**

Any at power IC with MSIVs OPEN.

**Evaluation**

**Performance Steps**

TIME START: \_\_\_\_\_

**SAT/UNSAT**

**Step 1: Obtain Procedure. Review Administrative Limits, Precautions and Prerequisites**

Standard: OP 4113, section B, obtained, administrative limits, precautions and prerequisites reviewed

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Interim Cue: If asked, inform operator that prerequisites are met. If asked supply operator with VYOPF 4113.03.

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**SAT/UNSAT**

**Step 2: Obtain permission from the Shift Supervisor to perform the test**

Standard: Obtains permission from SS to perform the test

---

Interim Cue: SS grants permission to perform the test.

---

**SAT/UNSAT**

**Step 3: Record reactor power**

Standard: Records reactor power on VYOPF 4113.03

**Evaluation**

**Performance Steps**

**SAT/UNSAT**

**Step 4: Verify that RPS has recognized the MSIVs are open by observing the following relays energized (contacts closed):**

<u>CRP 9-15</u>	<u>CRP 9-17</u>	<u>Valve No.</u>
<u>Relay</u>	<u>Relay</u>	
5A-K3A	5A-K3B	MS-80A or 86A
5A-K3E	5A-K3D	MS-80B or 86B
5A-K3C	5A-K3F	MS-80C or 86C
5A-K3G	5A-K3H	MS-80D or 86D

Standard: Locates and observes relays are energized on CRP 9-15/9-17 panels

Interim Cue: For each relay observed, indicate contact is as-pictured

**SAT/UNSAT**

**Step 5: Station an operator at the RPS Panels to observe the RPS relays**

Standard: Station an operator at the RPS panels

Interim Cue: An operator is stationed at the RPS panels.

**SAT/UNSAT**

**Step 6: Continuously monitor individual steam line flow, (FI 6-88A/B/C/D)**

Standard: Direct 9-5 operator to continuously monitor steam line flow during testing

Interim Cue: The 9-5 operator is monitoring individual steam line flows.

**Evaluation**

**Performance Steps**

**SAT/UNSAT**      **Step 7: Determine which valve will be tested and notify operators at RPS Panel and CRP 9-5**

Standard: Inform operators at RPS and 9-5 that MS-86A will be tested

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Interim Cue: Operators acknowledge the report

---

**SAT/UNSAT**      **\*Step 8: Depress and hold the test pushbutton for MS-86A**

Standard: Depress and hold MS-86A pushbutton on CRP 9-3.

**SAT/UNSAT**      **Step 9: Note that the green indicating light comes on**

Standard: Observes MS-86A green indicating light comes ON

**SAT/UNSAT**      **\*Step 10: Continue to hold the test pushbutton depressed until the operator reports that RPS has recognized the MSIV closure as indicated by the appropriate relays deenergizing (contacts opening)**

CRP 9-15	CRP 9-17	Valve No. _____
Relay _____	Relay _____	
5A-K3A	5A-K3B	MS-80A or 86A

Standard: Operator maintains pushbutton depressed until RPS panel operator provides report on RPS relays

---

Interim Cue: RPS operator reports Relays 5A-K3A and 5A-K3B are open and deenergized

---

**SAT/UNSAT**      **\*Step 11: Release the test pushbutton and verify that the MSIV returns to the full open position (only red indicating light energized)**

Standard: Releases test pushbutton and observe MS-86A green indicating light goes out and red light on.

**Evaluation**

**Performance Steps**

**SAT/UNSAT**

**Step 12: Verify the RPS has recognized that the MSIV is open by observing the appropriate relays energized (contacts closed)**

CRP 9-15 Relay _____ 5A-K3A	CRP 9-17 Relay _____ 5A-K3B	Valve No. _____ MS-80A or 86A
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Standard: Obtains report on relays from RPS Panel operator

---

Interim Cue:

RPS operator reports Relays 5A-K3A and 5A-K3B are closed and energized

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**SAT/UNSAT**

**\*Step 13: Record results on VYOPF 4113.03**

Standard: Operator logs results on VYOPF 4113.03 for MS-86A

**SAT/UNSAT**

**Step 14: When valve testing is complete route form to the Shift Supervisor.**

Standard: Routes form to the SS for review

TIME FINISH: \_\_\_\_\_

**Terminating Cue:** MSIV partial closure test performed IAW OP 4113 for MS-86A.

**Evaluators Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**System:** 223002 **K/A's:** K1.01 K3.09 K4.02  
A1.01 A2.08 A3.01

**Examinee Handout:**

**Initial Conditions:** The plant is at power during normal operation.

**Initiating Cues:** I&C recently completed work on MS-86A. As part of PMT, you have been directed to perform the MSIV partial closure RPS relay actuation functional test on MS-86A IAW OP 4113. Other operators are available to assist in the performance of back panel actions.



**VERMONT YANKEE  
JOB PERFORMANCE MEASURE  
WORKSHEET**

**Task Identification:**

Title: Transfer DC-3A to DC-1  
Reference: ON 3160, Loss of DC-2 and DC-3 (Rev. 3)  
Task Number: 2000320501

**Task Performance:** AO/RO/SRO  RO/SRO Only  SE Only

Sequence Critical: Yes  No

Time Critical: Yes  No

Individual Performing Task: \_\_\_\_\_

Examiner: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_

Activity Code: \_\_\_\_\_

Method of Testing: Simulation  Performance  Discuss

Setting: Classroom  Simulator  Plant

Performance Expected Completion Time: 10 minutes

Evaluation Results:

Performance: PASS  FAIL  Time Required: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Operations Training Instructor

7/1/02  
Date

Reviewed by: \_\_\_\_\_

SRO Licensed/Certified Reviewer

7-1-02  
Date

Approved by: \_\_\_\_\_

Operations Training Supervisor

7/1/02  
Date

**Directions:**

Discuss the information given on this page with the operator being evaluated. Allow time for him to ask questions before beginning performance of the task. As each performance step is performed, evaluate the performance of that step by circling either "Sat" or "Unsat". Comments are required for any "Unsat" classification. If a step is preceded by an asterisk (\*), it is a critical step. If a critical step is skipped or performed unsatisfactorily, then the individual has failed the Job Performance Measure.

After providing the initiating cue, ask the individual "Do you understand the task?"

**Read to the person being evaluated:**

Before starting, I will explain the initial conditions, provide the initiating cues and answer any questions you have.

This JPM will be performed in the **Plant** and you are to **simulate** all actions.

You are requested to **"talk-through"** the procedure, stating the parameters you are verifying or checking and the steps you are performing.

Inform me upon completion of this task.

**Initial Conditions:**

The plant was operating at 100% power when a complete loss of DC-2 and DC-3 occurred. Off Normal procedure ON-3160 has been entered.

**Initiating Cues:**

The SCRO has directed you to transfer DC-3A to DC-1 IAW ON 3160, Step 12 a – c.

**Task Standards:**

DC-3A transferred to DC-1

**Required Materials:**

ON-3160, Loss of DC-2 and DC-3 (latest revision)

**Simulator Setup:**

N/A

TIME START: \_\_\_\_\_

**SAT/UNSAT**      **Step 1: Obtain and review procedure**

Standard: Procedure reviewed and obtained

---

**SAT/UNSAT**      **+\*Step 2: Close DC-3A Manual Transfer (Emerg) Switch Breaker #10 at DC-1**

Standard: Operator places Breaker #10 at DC-1 in the CLOSE position

---

Interim Cue: Inform Operator that the switch has been moved to the LEFT in the ON position

---

**SAT/UNSAT**      **+\*Step 3: At DC-3A, open the Normal Breaker (Ckt 26)**

Standard: Operator places the Normal (Ckt 26) Breaker on DC-3A in the OPEN position

---

Interim Cue: Inform Operator that the Normal Breaker has been moved to the RIGHT in the OFF position

---

**SAT/UNSAT**      **+\*Step 4: Loosen the knurled knob on the metal interlock plate**

Standard: Operator rotates the knurled knob counter clockwise to loosen

---

Interim Cue: Inform Operator that the knurled knob has been loosened.

---

**SAT/UNSAT**      **+\*Step 5: Slide the metal interlock plate downward**

Standard:      Operator slides the metal interlock plate downward

---

Interim Cue:      Inform Operator that the metal interlock plate has been moved to the downward position

---

**SAT/UNSAT**      **Step 6: Re-tighten the knurled knob**

Standard:      Operator turns the knurled knob clockwise to tighten

---

Interim Cue:      Inform Operator that the knurled knob has been re-tightened.

---

**SAT/UNSAT**      **+\*Step 7: Close the Emergency Breaker (Ckt 25) on DC-3A**

Standard:      Operator places the Emergency Breaker in the CLOSE position

---

Interim Cue:      Inform Operator that the Emergency Breaker has been moved to the RIGHT in the ON position

---

**SAT/UNSAT**      **Step 8: Inform Control Room that DC-3A has been transferred to DC-1**

Standard:      Operator informs Control Room that DC-3A has been transferred to DC-1

---

Interim Cue:      As Control Room, acknowledge report of transfer

---

TIME FINISH: \_\_\_\_\_

**Terminating Cue:**      DC-3A transferred to DC-1 IAW ON 3160 Step 12



Examinee Handout

**Initial Conditions:**

The plant was operating at 100% power when a complete loss of DC-2 and DC-3 occurred. Off Normal procedure ON-3160 has been entered.

**Initiating Cues:**

The SCRO has directed you to transfer DC-3A to DC-1 IAW ON 3160, Step 12 a – c.

**VERMONT YANKEE  
JOB PERFORMANCE MEASURE  
WORKSHEET**

**Task Identification:**

Title: Alternate Shutdown Operator #2 Actions  
Reference: OP 3126, Shutdown Using Alternate Shutdown Methods (Rev. 16)  
Task Number: 2007170501

**Task Performance:** AO/RO/SRO \_\_\_ RO/SRO Only X SE Only \_\_\_

Sequence Critical: Yes X No \_\_\_

Time Critical: Yes \_\_\_ No X

Individual Performing Task: \_\_\_\_\_

Examiner: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_

Activity Code: \_\_\_\_\_

Method of Testing: Simulation X Performance \_\_\_ Discuss \_\_\_

Setting: Classroom \_\_\_ Simulator \_\_\_ Plant X

Performance Expected Completion Time: 35 minutes

Evaluation Results:

Performance: PASS \_\_\_ FAIL \_\_\_ Time Required: \_\_\_\_\_

Prepared by: \_\_\_\_\_  
Operations Training Instructor

6/24/02  
Date

Reviewed by: \_\_\_\_\_  
SRO Licensed/Certified Reviewer

6/27/02  
Date

Approved by: \_\_\_\_\_  
Operations Training Manager

6/27/02  
Date

**Directions:**

Discuss the information given on this page with the operator being evaluated. Allow time for him to ask questions before beginning performance of the task. As each performance step is performed, evaluate the performance of that step by circling either "Sat" or "Unsat". Comments are required for any "Unsat" classification. If a step is preceded by an asterisk (\*), it is a critical step. If a critical step is skipped or performed unsatisfactorily, then the individual has failed the Job Performance Measure.

After providing the initiating cue, ask the individual "Do you understand the task?"

**Read to the person being evaluated:**

Before starting, I will explain the initial conditions, provide the initiating cues and answer any questions you have.

This JPM will be performed in the **Plant** and you are to **simulate** all actions.

You are requested to **"talk-through"** the procedure, stating the parameters you are verifying or checking and the steps you are performing.

Inform me upon completion of this task.

**Initial Conditions:**

A fire in the control room has forced the evacuation of the control room. The Initial Actions in the control room from OP 3126, Shutdown Using Alternate Shutdown Methods, have been completed. Operators 1-4 have been dispatched to complete Appendices A-D in the plant.

**Initiating Cues:**

You have been directed to complete Appendix B of OP 3126 for Operator #2. You have a portable radio and a set of operator keys.

**Task Standards:**

Perform Shutdown From Outside the Control Room

**Required Materials:**

OP-3126, Shutdown Using Alternate Shutdown Methods

**Simulator Setup:**

N/A

**Evaluation**

**Performance Steps**

TIME START: \_\_\_\_\_

SAT/UNSAT

**Step 1: Obtain and review procedure**

Standard: Obtain and review procedure

SAT/UNSAT

**\*Step 2: Isolate and depressurize the outboard MSIV air header by performing the following:**

**Close air supply valves (on mezzanine above the TIP Room):**

- **IA-28A**
- **IA-28B**

**Open air header vent valves (on mezzanine above the TIP Room):**

- **IA-28D**
- **IA-28E**

Standard: Operator turns IA-28A CW to the close position

---

**Interim Cue:** Inform Operator that the valve turns CW, valve stem lowers, hard stop is felt

---

Standard: Operator turns IA-28B CW to the close position

---

**Interim Cue:** Inform Operator that the valve turns CW, valve stem lowers, hard stop is felt

---

Standard: Operator turns IA-28D CCW to the open position

---

**Interim Cue:** Inform Operator that the valve turns CCW, valve stem rises, hard stop is felt

---

Standard: Operator turns IA-28E CCW to the open position

---

**Interim Cue:** Inform Operator that the valve turns CCW, valve stem rises, hard stop is felt. An air sound is heard venting from the bottom of the open ended piping.

---

SAT/UNSAT      **Step 3:**      **If required, close CRD CHARGING WATER HEADER SUPPLY CRD-56 to limit Reactor Vessel level increase.**

Standard:      Operator determines RPV water level does not requires closing CRD-56.

---

**Interim Cue:** If operator attempts to determine RPV water level, inform him RPV water level is 130 inches and stable

---

SAT/UNSAT      **\*Step 4:**      **On IAC panel A, open ckt. #4 to isolate Reactor Water Cleanup Drain regulator CU-55 (Rx Bldg 252' behind elevator).**

Standard:      Operator opens ckt #4 on IAC panel A

---

**Interim Cue:** Inform Operator that ckt #4 on IAC panel A has been moved to the RIGHT in the OPEN position.

---

SAT/UNSAT      **+\*Step 5:**      **At CP-82-2, RHR ALTERNATE SHUTDOWN SYTEM, position the four RHR ALTERNATE SHUTDOWN TRANSFER switches o EMER in the following sequence:**

**SS1315A**

**SS1315B**

**SS1315C**

**SS1315D**

Standard:      Operator turns the four emergency switches to EMER in the specified order.

---

**Interim Cue:** Inform Operator the four switches are at the 11 o'clock position. After repositioning each switch several valves lights became lit. All of the valve and panel lights are now lit

---

SAT/UNSAT      **Step 6 :**      **If the Recirc MG foam system has initiated, close RECIRC MG FOAM DELUGE ISOL FP V76-312 (at the recirc MG foam system).**

Standard:      Operator observes the status of the recirc system foam status adjacent to panel CP-82-2 and determines the foam system has not initiated.

---

**Interim Cue:** Inform Operator that the recirc foam system is as-is.

---

SAT/UNSAT

**\*Step 7: Open the following ACB:**

**V10-66 RHR DISCHARGE TO RADWASTE ISOL. VALVE (MCC-8B)**

Standard: Operator places the V10-66 RHR DISCHARGE TO RADWASTE ISOL. VALVE (MCC-8B) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

SAT/UNSAT

**\*Step 8: Open the following ACB:**

**EMERG. INTERTIE VALVE V10-183 (MCC-8B)**

Standard: Operator places the EMERG. INTERTIE VALVE V10-183 (MCC-8B) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

SAT/UNSAT

**\*Step 9: Open the following ACB:**

**MAIN STEAM DRAIN INBOARD VALVE V2-74, (MCC-8B)**

Standard: Operator places the MAIN STEAM DRAIN INBOARD VALVE (MCC-7A) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

SAT/UNSAT

**\*Step 10: Open the following ACB:**

**CLEANUP RECIRC PUMP P49-1A (MCC-7A)**

Standard: Operator places the CLEANUP RECIRC PUMP P49-1A (MCC-7A) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position. One RWCU pump breaker will be OPEN. For this pump, report breaker is as-is.

---

SAT/UNSAT      **\*Step 11:      Open the following ACB:**

**MAIN STEAM LINE DRAIN VALVE V2-77 (MCC-DC-2A)**

Standard:      Operator places the MAIN STEAM LINE DRAIN VALVE V2-77 (MCC-DC-2A) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

SAT/UNSAT      **\*Step 12:      Open the following ACB:**

**CONT. SPRAY OUTBOARD INJECT VALVE V10-26A (MCC-9B)**

Standard:      Operator places the CONT. SPRAY OUTBOARD INJECT VALVE (MCC-9B) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

SAT/UNSAT      **\*Step 13:      Open the following ACB:**

**EMERG. INTERTIE VALVE V10-184, (MCC-9B)**

Standard:      Operator places the EMERG. INTERTIE VALVE V10-184, (MCC-9B) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

SAT/UNSAT      **\*Step 14:      Open the following ACB:**

**CLEANUP RECIRC PUMP P49-1B (MCC-6A)**

Standard:      Operator places the CLEANUP RECIRC PUMP P49-1B (MCC-6A) breaker in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position. One RWCU pump breaker will be OPEN. For this pump, report breaker is as-is.

---

**SAT/UNSAT**      **Step 15: Close/check closed RHR-66 (NE torus catwalk)**

Standard:      Operator checks valve position indication to determine valve is closed.  
Operator declutches mechanism and checks valve in CLOSE direction.

---

**Interim Cue:** Inform Operator that the valve is as-is. No movement in valve when checked in the CW direction.

---

**SAT/UNSAT**      **Step 16: Close/check closed RHR-V10-26A (Rx Bldg 252' level by North HCU)**

Standard:      Operator checks valve position to determine valve is closed. Operator declutches mechanism and checks valve in CLOSE direction.

---

**Interim Cue:** Inform Operator that the valve is as-is. No movement in valve when checked in the CW direction.

---

**SAT/UNSAT**      **+\*Step 17: Place MCC-89A on the Maintenance Tie in the following sequence:****a. Open FEED FROM UPS 1-A breaker (MCC-89A)**

Standard:      Operator places the FEED FROM UPS 1-A breaker (MCC-89A) in the OPEN position

---

**Interim Cue:** Inform Operator that the breaker has been moved DOWN to the OPEN position

---

**SAT/UNSAT**      **+\*Step 18: Place MCC-89A on the Maintenance Tie in the following sequence:****b. Close FEED FROM MCC-9B breaker (MCC-89A)**

Standard:      Operator unlocks and opens door enclosure. Operator attaches breaker handle and places the FEED FROM MCC-9B breaker (MCC-89A) in the CLOSE position

---

**Interim Cue:** Inform Operator that the door is unlocked and open. Breaker handle is attached and breaker has been moved to the CLOSE position

---



## EXAMINEE HANDOUT

### **Initial Conditions:**

A fire in the control room has forced the evacuation of the control room. The Initial Actions in the control room from OP 3126, Shutdown Using Alternate Shutdown Methods, have been completed. Operators 1-4 have been dispatched to complete Appendices A-D in the plant.

### **Initiating Cues:**

You have been directed to complete Appendix B of OP 3126 for Operator #2. You have a portable radio and a set of operator keys.