

Facility: <u>Vermont Yankee</u> Date of Examination: <u>SEP 18, 2000</u>		
Exam Level (circle one): RO / SRO(I) / SRO(U) Operating Test No.: _____		
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. CRD / Transfer CRD Pumps (w/ failure of second pump to start) [JPM 29504F/0]	N,A,L	1
b. FW / Transfer Feedwater Pumps at Power (w/ failure of discharge valve to remain open) [JPM 25907F/0]	M,A	2
c. PCIS / Perform MSIV Full Closure Test [JPM 23904/0]	N	3
d. RCIC / RCIC Turbine Mechanical Overspeed Trip Test (w/ bearing high temperature) [JPM 21707F/0]	N,A	4
e. RHR- CTMT SPRAY / Line Up For Primary Containment Spray Using Fire System To RHR Loop A [JPM 20030/7]	D	5
f. 480 VAC / Transfer MCC 89B From UPS To Maintenance Tie [JPM 26201/10]	D	6
g. SBTG / Secure Standby Gas Treatment [JPM 26102/8]	D	9
B.2 Facility Walk-Through		
a. SLC / Perform the SLC Quarterly Capacity Check on One Pump (w/ low SLC tank level) [JPM 21102F/6]	M,A,R	1
b. ADS / Operate SRV-71A From the RCIC Room [JPM 21804/7]	D,R	3
c. RPS / Respond to RPS Power Protection Panel Trip [JPM 21205/1]	D	7
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

Final

Facility: Vermont Yankee Date of Examination: SEP 18, 2000

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B.2 Facility Walk-Through

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**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Start CRD Pump Following Trip of Running Pump
Failure Mode: Second Accumulator Trouble with Pressure < 800 psig and no Pumps Running
Reference: ON 3145, Loss of CRD Regulating Function, Rev. 10
Task Number: 2017200401

Task Performance: AO/RO/SRO ___ RO/SRO Only X SE Only ___

Sequence Critical: Yes ___ No X

Time Critical: Yes ___ No X

Individual Performing Task: _____

Examiner: _____

Date of Evaluation: _____

Activity Code: _____

Method of Testing: Simulation ___ Performance X Discuss ___

Setting: Classroom ___ Simulator X Plant ___

Performance Expected Completion Time: 10 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: [Signature]
Operations Training Instructor

9/7/00
Date

Reviewed by: [Signature]
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: [Signature]
Operations Training Supervisor

9/11/00
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 **Simulator** and you are to **perform** 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 plant startup is in progress and the "A" CRD Pump has tripped on low suction pressure. Recirc Pump seal purge has been secured.

Initiating Cues:

You are the CRO, and the SCRO has directed you to place the "B" CRD Pump in service in accordance with ON 3145, Loss of CRD Regulating Function.

Task Standards:

Manual reactor scram inserted.

Required Materials:

ON 3145, Loss of CRD Regulating Function (latest revision)

Simulator Setup:

Any startup IC with pressure less than 800 psig.

Insert the following malfunctions / overrides:

mfRD_01A	CRD Pump "A" Trip	Pre-insert
Rddi053BS4B	CRD Pump "B" Control Switch failure	Pre-insert
mfRD_072223	Rod 22-23 Accumulator Low Pressure	Key 1
mfRD_073611	Rod 36-11 Accumulator Low Pressure	Key 2

Note: Once setup is complete, place simulator in FREEZE, and maintain in FREEZE until Operator is ready to commence taking actions.

TIME START: _____

SAT/UNSAT **Step 1: Review ON 3145**

Standard: Operator reviews ON 3145 (including Section 3) in preparation for starting CRD Pump "B"

SAT/UNSAT **Step 2: Place CRD System Flow Control station in MANUAL**

Standard: Operator places the CRD Flow Controller in MANUAL at CRP 9-5

Interim Cue: **Insert Key 1 (Rod 22-23 Accumulator Low Pressure)**

SAT/UNSAT ***Step 3: Acknowledge "CRD Accumulator Pressure Lo or Level Hi" annunciator, identify Rod 22-23 in alarm, and inform SCRO**

Standard: Operator acknowledges annunciator 5-B-8, identifies Rod 22-23 as having the alarming accumulator, and informs SCRO

Interim Cue: As SCRO, acknowledge report of CRD Accumulator Low Pressure alarm and identification of Rod 22-23

SAT/UNSAT **Step 4: Adjust CRD flow controller to zero**

Standard: Operator closes the CRD flow control valve by adjusting the flow controller to zero.

SAT/UNSAT ***Step 5: Start CRD Pump "B"**

Standard: Operator attempts to start CRD Pump "B" by taking the control switch at CRP 9-5 to START

SAT/UNSAT ***Step 6: Recognize failure of CRD Pump "B" to start and inform SCRO**

Standard: Operator recognizes failure of pump to start and informs SCRO

Interim Cue: As SCRO, acknowledge report of pump start failure.
 Insert Key 2 (Rod 36-11 Accumulator Low Pressure)

SAT/UNSAT ***Step 7: Identify Rod 36-11 as second accumulator trouble alarm and inform SCRO**

Standard: Operator identifies second accumulator trouble condition and informs SCRO

Interim Cue: As SCRO, acknowledge report of second accumulator trouble condition

SAT/UNSAT ***Step 8: Insert manual scram**

Standard: Operator inserts manual reactor scram

Interim Cue: Inform Operator that the task is complete for this JPM.

TIME FINISH: _____

Terminating Cue: Reactor scram inserted

Evaluator Comments: _____

System: 295022 **K/A's:** AK1.01 AK2.03 AK3.01 AA1.01 AA1.02

System Generic K/A's: 2.1.2 2.1.7 2.1.20 2.4.11

Initial Conditions:

A plant startup is in progress and the "A" CRD Pump has tripped on low suction pressure. Recirc Pump seal purge has been secured.

Initiating Cues:

You are the CRO, and the SCRO has directed you to place the "B" CRD Pump in service in accordance with ON 3145, Loss of CRD Regulating Function.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Transfer Feedwater Pumps at Power
Failure Mode: Pump discharge valve fails to remain open
Reference: OP 2172, Feedwater System, Rev. 21
Task Number: 2597150101

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

Sequence Critical: Yes No

Time Critical: Yes No

Operator Performing Task: _____

Operator Answering Questions: _____

Examiner: _____

Date of Evaluation: _____

Activity Code: _____

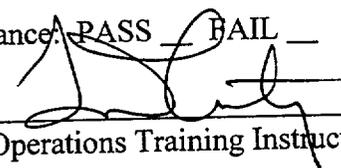
Method of Testing: Simulation Performance Discuss

Setting: Classroom Simulator Plant

Performance Expected Completion Time: 7 minutes

Evaluation Results:

Performance: PASS ~~FAIL~~ Time Required: _____

Prepared by: 
Operations Training Instructor

9/7/00
Date

Reviewed by: _____
SRO Licensed/Certified Reviewer

Date

Approved by: _____
Operations Training Supervisor

Date

Directions:

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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 operating at power. The "B" Feedwater Pump needs to be started and the "A" Feedwater Pump secured.

Initiating Cues:

The SCRO directs you to start the "B" feedwater pump and secure the "A" feedwater pump.

Task Standards:

The "B" feedwater pump tripped due to discharge valve failing to remain open.

Required Materials:

OP 2172, Feedwater System (latest revision)

Simulator Setup:

Any at power IC with Feedwater pumps "A" and "C" running.

Insert Event Triggers (ETs) that will cause the following:

- FDW-4B to stroke closed once it reaches the full-open position after pump start (and remain closed)
- FDW-2B to indicate closed once FDW-4B reaches its full-open position
- EI 9-6-17 (FDW Pump "B" Amps) to indicate 220 Amps once FDW 4B closes
- Annunciator 6-E-5 to alarm 13 seconds after FDW-4B fails closed

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure; review admin limits, precautions, prerequisites and Section D.**

Standard: OP 2172 obtained; admin limits, precautions, prerequisites, and Section D reviewed.

Interim Cue: If asked, inform the operator that all the prerequisites are met.

SAT/UNSAT ***Step 2: Close FDW 4B**

Standard: The operator closes FDW 4B, feedwater pump discharge valve on CRP 9-6 by placing control switch to CLOSE.

SAT/UNSAT **Step 3: Verify FDW-4B closed**

Standard: Operator verifies green Light On and red light Off

SAT/UNSAT ***Step 4: Start Feedwater Pump B**

Standard: Operator places control switch on CRP 9-6 to START.

SAT/UNSAT **Step 5: Verify Feedwater pump B breaker closes**

Standard: Operator verifies red light On and green light Off above FDW Pump "B" control switch

SAT/UNSAT **Step 6: Verify feedwater pump B discharge valve opens**

Standard: Operator verifies FDW 4B opens by observing red light On and green light Off above valve control switch.

- SAT/UNSAT **Step 7: Verify that the minimum flow valve opens.**
- Standard: Operator verifies FDW 2B opens by observing red light On and green light Off above valve control switch.
-
- SAT/UNSAT **Step 8: Verify Auxiliary lube oil pump stops**
- Standard: Operator verifies auxiliary lube oil pump stops on CRP 9-6 by observing valve position indication on CRP 9-6, green light On and red light Off.
-
- SAT/UNSAT **Step 9: Verify that Minimum Flow Recirc valve (FDW 2B) closes**
- Standard: Operator verifies FDW 2B (Minimum Flow Recirc valve) closes by observing green light On and red light Off above valve control switch, as FDW-4B strokes open.
-
- SAT/UNSAT ***Step 10: Recognize that FDW-4B strokes closed and that FDW-2B (recirc valve) remains closed**
- Standard: Operator recognizes that the pump discharge valve does not remain open
-
- SAT/UNSAT ***Step 11: Trip the "B" Feedwater Pump**
- Standard: Operator trips the "B" Feedwater Pump by taking the control switch to STOP
-
- Interim Cue: Inform Operator that no further actions are necessary from this JPM.
-
- TIME FINISH: _____
- Terminating Cue: The "B" feedwater pump tripped.

Evaluator Comments:

System: 259001 **K/A's:** K1.01, K1.08, A1.01, A3.04, A4.02, A4.04, A4.05

System Generic K/A's: 2.1.28, 2.1.30

Initial Conditions:

The plant is operating at power. The "A" feedwater pump needs to be secured and the "B" feedwater pump started to prove operability of the "B" feedwater pump following maintenance.

Initiating Cues:

The SCRO directs you to start the "B" feedwater pump and secure the "A" feedwater pump.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Perform Quarterly MSIV Full Closure Timing and RPS Relay Actuation
Functional Test
Failure Mode: N/A
Reference: OP 4113, Main and Auxiliary Steam System Surveillance, Rev. 23
Task Number: 2390010201

Task Performance: AO/RO/SRO ___ RO/SRO Only X SE Only ___

Sequence Critical: Yes ___ No X

Time Critical: Yes ___ No X

Individual 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

9/7/00
Date

Reviewed by: [Signature]
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: [Signature]
Operations Training Supervisor

9/11/00
Date

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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 operating at power, and conditions have been met to conduct MSIV Full Closure Testing.

Initiating Cues:

You are the ACRO, and the SCRO has directed you to perform the Quarterly MSIV Full Closure Timing and RPS Relay Actuation Functional Test in accordance with Section A of OP 4113. Another Operator is standing by to verify MSIV relays.

Task Standards:

MS-80A closed in response to MS-86A excessive closure time.

Required Materials:

OP 4113, Main and Auxiliary Steam Surveillance (latest revision)
VYOPF 4113.01 (latest revision)
Stop Watch

Simulator Setup:

Any at-power IC with power less than 73%

TIME START: _____

SAT/UNSAT **Step 1: Obtain procedure; review admin limits, precautions, pre-requisites, and Section A**

Standard: OP 4113 obtained; admin limits, precautions, pre-requisites, and Section A reviewed

Interim Cue: If asked, inform Operator that all pre-requisites are met.

SAT/UNSAT **Step 2: Obtain SS permission to conduct test.**

Standard: Operator requests SS permission to begin surveillance.

Interim Cue: As the SS, grant permission to begin surveillance.

SAT/UNSAT **Step 3: Ensure reactor power is less than 73%, and record on VYOPF 4113.01**

Standard: Operator verifies that power is less than 73%, and records plant power level on VYOPF 4113.01

SAT/UNSAT **Step 4: Verify that RPS relays on CRP 9-15 and 9-17 associated with MSIV position are energized (contacts closed)**

Standard: Operator requests another Operator to verify RPS relays energized in accordance with Step 3.

Interim Cue: As additional Operator, inform Operator that relays 5A-K3A through H are energized.

SAT/UNSAT	<u>Step 5: Station an operator to observe RPS relays</u>
	Standard: Operator requests additional Operator to standby to observe RPS relays during MSIV closure.
Interim Cue:	Inform Operator that an additional Operator is standing by the RPS relays.
<hr/>	
SAT/UNSAT	<u>Step 6: Verify all MSIVs open</u>
	Standard: Operator verifies all MSIVs open by observing valve position indications on CRP 9-3.
<hr/>	
SAT/UNSAT	<u>Step 7: Verify that all four steam flow indicators on CRP 9-5 are indicating approximately the same value</u>
	Standard: Operator checks steam flow indicators on CRP 9-5 and verifies each is indicating approximately the same steam flow.
<hr/>	
SAT/UNSAT	<u>Step 8: Determine which valve will be tested</u>
	Standard: Operator identifies which valve is the first to be tested.
Interim Cue:	Inform Operator that the valves are to be tested in the order listed in VYOPF 4113.01
<hr/>	
SAT/UNSAT	<u>Step 9: Notify the Operator at the RPS relays and the Operator at CRP 9-5 of the valve to be tested</u>
	Standard: Operator notifies the Operator at the RPS relays and the 9-5 Operator that valve MS-80A will be tested.
<hr/>	
SAT/UNSAT	<u>*Step 10: Close MS-80A by placing the control switch to CLOSE</u>
	Standard: Operator places MS-80A control switch to CLOSE
<hr/>	

SAT/UNSAT **Step 11: Observe valve going closed by observing green light On and red light Off**

Standard: Operator identifies valve going closed by observing green light On when valve begins stroke and red light Off when valve is fully closed

SAT/UNSAT ***Step 12: Time stroke of valve (to nearest 1/100 of a second)**

Standard: Operator times valve stroke using stop watch and identifies that 3-5 second criteria met.

SAT/UNSAT **Step 13: Verify that RPS relays K3A and K3B de-energize**

Standard: Operator directs Operator at RPS relays to verify that relays K3A and K3B have de-energized.

Interim Cue: As Operator at the RPS relays, inform Operator that relays K3A and K3B have de-energized.

SAT/UNSAT ***Step 14: Return MS-80A control switch to AUTO OPEN**

Standard: Operator returns MS-80A control switch to AUTO OPEN

SAT/UNSAT **Step 15: Observe MSL "A" steam flow indication and MS-80A valve position**

Standard: Operator identifies MSL "A" flow indication returned to the approximate value of the other steam lines, and that the MS-80A red light is On, green light Off

SAT/UNSAT **Step 16: Verify that RPS relays have re-energized**

Standard: Operator directs Operator at RPS relays to verify that relays K3A and K3B have re-energized.

Interim Cue: As Operator at RPS relays, inform Operator that relays K3A and K3B have re-energized.

SAT/UNSAT **Step 17: Record results on VYOPF 4113.01**

Standard: Operator records stroke time and relay actuation results for MS-80A on VYOPF 4113.01

SAT/UNSAT ***Step 18: Close MS-86A by placing the control switch to CLOSE**

Standard: Operator places MS-86A control switch to CLOSE

SAT/UNSAT **Step 19: Observe valve going closed by observing green light On and red light Off**

Standard: Operator identifies valve going closed by observing green light On when valve begins stroke and red light Off when valve is fully closed

SAT/UNSAT ***Step 20: Time stroke of valve and record time (to nearest 1/100 of a second) on VYOPF 4113.01**

Standard: Operator times valve stroke using stop watch and identifies 3-5 second criteria met

Interim Cue: Inform Operator that JPM is complete, and that another Operator will complete the remaining valves.

TIME FINISH: _____

Terminating Cue: All MSIVs open; MS-80A and MS-86A data recorded on VYOPF 4113.01.

Evaluator Comments: _____

System: 239001 **K/A's:** K1.27 K4.05 A1.09 A2.03 A4.01

System Generic K/A's: 2.1.20 2.2.12

Initial Conditions:

The plant is operating at power, and conditions have been met to conduct MSIV Full Closure Testing.

Initiating Cues:

You are the ACRO, and the SCRO has directed you to perform the Quarterly MSIV Full Closure Timing and RPS Relay Actuation Functional Test in accordance with Section A of OP 4113. Another Operator is standing by to verify MSIV relays.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: RCIC Turbine Mechanical Overspeed Trip Test
Failure Mode: RCIC Bearing High Temperature
Reference: OP 4121, Reactor Core Isolation Cooling System, Rev. 38
Task Number: 2177150201

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

9/7/00
Date

Reviewed by: [Signature]
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: [Signature]
Operations Training Supervisor

9/11/00
Date

Directions:

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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.

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Inform me upon completion of this task.

Initial Conditions:

A startup is underway. OP 4121, Section D, RCIC Turbine Mechanical Overspeed Test is in progress. It is being turned over and is complete up to and including Step 13. RHR "A" is in torus cooling.

Initiating Cues:

The SCRO directs you to complete the RCIC Turbine Mechanical Overspeed Trip Test per OP 4121. For purposes of this JPM, Reactor pressure is 140 – 149 psig.

Task Standards:

RCIC is tripped due to high bearing temperature

Required Materials:

OP 4121, Reactor Core Isolation Cooling System (latest revision)
VYOPF 4121.06

Simulator Setup:

- IC-3; Withdraw control rods using Sequence A2 until reactor pressure is 140-149 psig.
- Insert mfAN04U5 to SPURIOUS on Key 1
- Complete Form VYOPF 4121.06 up to and including Step 9.
- Place the "A" loop of RHR in torus cooling.
- Set RCIC Overspeed Test Flow Control switch fully counter-clockwise
- Open RCIC-15 and 16

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure OP 4121 and VYOPF 4121.06 and review Admin Limits, Precautions, and Pre-requisites.**

Standard: OP 4121 and VYOPF 4121.06 obtained, admin limits, precautions, and pre-requisites reviewed.

Interim Cue: Provide copy of VYOPF 4121.06, completed through Step 9. If asked, all pre-requisites SAT.

SAT/UNSAT ***Step 2: Place the Overspeed Test Selector switch to TURB TEST.**

Standard: Operator positions Overspeed Test Selector switch to TURB TEST.

SAT/UNSAT **Step 3: Ensure RCIC Ovspd Logic Test annunciator (4-U-9) alarms**

Standard: Operator verifies alarm CRP 4-U-9 alarms.

SAT/UNSAT ***Step 4: Place the Overspeed Test Power Supply switch to ON.**

Standard: Operator positions Overspeed Test Power Supply switch to ON.

SAT/UNSAT ***Step 5: Open RCIC-132 Cooling Water.**

Standard: Operator positions RCIC oil cooler supply valve RCIC-132 to OPEN and observes red light On and green light Off.

SAT/UNSAT ***Step 6: Set PCV-13-23 to 40.**

Standard: Operator directs AO to set pressure control valve PCV-13-23 to 40 psig.

Interim Cue: PCV 13-23 is now set at 40 psig.

SAT/UNSAT	*Step 7: <u>Start the gland seal vacuum pump.</u>
	Standard: Operator positions gland seal vacuum pump control switch to START and observes breaker red light On and green light Off.

SAT/UNSAT	Step 8: <u>Perform Average Suppression Pool Temperature Determination</u>
	Standard: Operator indicates he would use OP 2115 to log Suppression Pool temperatures.

Interim Cue:	Inform Operator another operator will perform applicable portions of OP 2115.
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SAT/UNSAT	*Step 9: <u>Open RCIC-131 Steam Supply.</u>
	Standard: Operator positions valve RCIC-131 hand switch to OPEN.

SAT/UNSAT	Step 10: <u>Verify Steam Supply open.</u>
	Standard: Operator verifies RCIC-131 red light On and green light Off.

SAT/UNSAT	Step 11: <u>Verify turbine starts.</u>
	Standard: Operator verifies speed increase on SI 13-2.

SAT/UNSAT	Step 12: <u>Monitor turbine bearing drain oil temperatures locally.</u>
	Standard: Operator directs AO to monitor RCIC bearing drain oil temperatures at TIS-13-44 and TIS-13-45, to record highest temperature, and to inform him if bearing oil temperatures approach 160°F.

Interim Cue:	As AO acknowledge directions.
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SAT/UNSAT	Step 13: <u>Monitor barometric condenser vacuum tank outlet temperature.</u>
	Standard: Operator directs AO to monitor barometric condenser vacuum tank outlet temperature using a pyrometer, to record highest temperature achieved, and to inform him if temperature approaches 180°F.

SAT/UNSAT **Step 14: Request maintenance to constantly monitor turbine speed.**
Standard: Operator informs Maintenance that the turbine speed is being increased and directs them to monitor turbine speed with a calibrated tachometer until a trip occurs.

Interim Cue: Inform Operator maintenance will monitor speed.

SAT/UNSAT ***Step 15: Increase the magnitude of the control signal.**
Standard: Operator slowly turns the Overspeed Test Flow Control switch in a clockwise direction.

Interim Cue: Once speed increase is begun, activate Key 1 to cause annunciator 4-U-5 to alarm.

SAT/UNSAT ***Step 16: Acknowledge Annunciator 4-U-5 in alarm and trip RCIC.**
Standard: Operator acknowledges annunciator 4-U-5, "RCIC Coup Brg Temp HI," and trips RCIC by depressing the RCIC Trip pushbutton

Interim Cue: Inform Operator that for the purposes of this JPM his task is complete.

TIME FINISH: _____

Terminating Cue: The RCIC Turbine is manually tripped.

Evaluators Comments: _____

System: 217000 **K/A's:** A4.10

System Generic K/A's:

Initial Conditions:

A startup is underway. OP 4121, Section D, RCIC Turbine Mechanical Overspeed Test is in progress. It is being turned over and is complete up to and including Step 13. RHR "A" is in torus cooling.

Initiating Cues:

The SCRO directs you to complete the RCIC Turbine Mechanical Overspeed Trip Test per OP 4121. For purposes of this JPM, Reactor pressure is 140 – 149 psig.

RCIC TURBINE MECHANICAL OVERSPEED TRIP TEST

Test Frequency: _____ Date _____
 Refuel Outage _____ Other - Specify _____ WO# _____
 Tachometer # 10368 Pyrometer JA104 (Supplied by Maint.)

Corresponding Proc. Steps

Initials

- | | | |
|--------|--|---|
| 1 | Pre-job briefing conducted. (ER961033_01) | <u>CRO</u> |
| 2 | Radiation Department notified that RCIC turbine will be operated. | <u>CRO</u> |
| 6c | Turbine uncoupled from pump. | <u>CRO</u> |
| d | Spin plate installed on turbine coupling. | <u>CRO</u> |
| e | Turbine rotates freely by hand. | <u>CRO</u> |
| 7 | Jumper installed across relay 13A-K43, terminals 7 and 8. | <u>CPO</u> / <u>EPO</u>
Perf. By / Verif. By |
| 8a,b,c | Posting of "DO NOT ENTER" signs and announcement of RCIC testing and for all personnel to stay clear of torus catwalk area completed. (ER970389 and CAR930390P1) | <u>CRO</u> |
| 9 | Reactor steam pressure <u>145</u> psig (between 140 and less than 150 psig). | <u>CRO</u> |
| 15 | RCIC overspeed alarm logic (CRP annunciator 4-V-9). | _____ |
| 18 | PCV-13-23 set at 40. | _____ |
| 20 | Average Suppression Pool Temperature Determination initiated per OP 2115. | _____ |
| 22 | Highest turbine bearing drain oil temperature locally using TIS-13-44 _____°F TIS-13-45 _____°F. | _____ |
| 23 | Highest barometric condenser vacuum tank outlet temperature _____°F. | _____ |
| 24 | Turbine overspeed trip setpoint verification #1 _____ rpm _____ | _____ |
| | Turbine overspeed trip setpoint verification #2 _____ rpm _____ | _____ |
| | Turbine overspeed trip setpoint verification #3 _____ rpm _____ | _____ |
| 32 | PVC-13-23 set at 0. | _____ |
| 33 | The "DO NOT ENTER" signs have been removed and the announcement that normal access to the torus catwalk area is restored has been made. (ER970389 and CAR930390P1) | _____ |
| 34 | Jumper removed from relay 13A-K43, terminals 7 and 8. | _____ / _____
Perf. By / Verif. By |
| 35 | Overspeed test power supply off. | _____ |
| 37 | Inspect turbine after running for freedom of rotation. | _____ |
| 38 | Recouple pump and turbine. | _____ |
| 39 | RCIC in standby per OP 2121. | _____ |
| 40 | RCIC verified in standby per OP 2121. | _____ |

Acceptance Criteria:

1. Turbine bearing drain oil temperature less than 180°F.
2. Barometric condenser vacuum tank outlet temperature less than 180°F.
3. Turbine tripped between 5535 and 5715 rpm on each test and trip points show no adverse trends (VYEM 0119) or if a trip occurs outside the specified range, an evaluation has been completed by Maintenance Engineering (or Terry Turbine Tech Rep) concluding that the trip setpoint is acceptable. Attach evaluation.

LPC
4

Remarks:

Reviewed By _____ / _____
 Shift Supervisor Date

NOTE: The Operations Administrative Assistant is required to forward a copy of this completed form to the System Engineering Department Records Clerk.

VYOPF 4121.06 (Sample)
 OP 4121 Rev. 38
 Page 1 of 1
 RT No. 08.703.204
 LPC #4

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Line-up for Torus Spray Using Fire System to RHR Loop "A"
Reference: OE 3107, OE Appendices, Appendix S, Rev. 15
Task Number: 2000070501

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

Sequence Critical: Yes No

Time Critical: Yes No

Operator Performing Task: _____

Examiner: _____

Date of Evaluation: _____

Activity Code: _____

Method of Testing: Simulation Performance Discuss

Setting: Classroom Simulator Plant

Performance Expected Completion Time: 5 minutes

Evaluation Results:

Performance: PASS FAIL

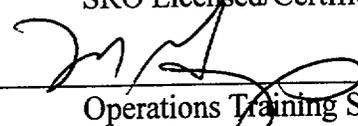
Time Required: _____

Prepared by: 
Operations Training Instructor

9/7/00
Date

Reviewed by: 
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: 
Operations Training Supervisor

9/11/00
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:

Drywell pressure is 8 psig. Torus Spray is required per EOP-3 and RHR and RHRSW Pumps are unavailable for use. Emergency Diesel Generators are operable. Fire Water Pumps are available.

Initiating Cues:

The SCRO has directed you to line-up and spray the TORUS using the Fire System to RHR Loop "A" from the Control Room, LAW OE 3107, Appendix S.

Task Standards:

Complete valve line-up and spray the Torus using the Fire System to RHR from the Control Room.

Required Materials:

OE 3107 OE Appendices, Appendix S (latest revision)

Simulator Set-Up:

Any IC.

Insert malfunction mfRR_01A at 1%. Delete when drywell pressure is 8 psig.

Insert the following remote functions:

rfSW_35	OPEN	Key 1
rfFP_01	HAND	Key 2
rfFP_02	HAND	Key 2

Place all RHR & RHRSW Pumps in PTL.

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure and Review Prerequisites**

Standard: OE 3107, Appendix S obtained, prerequisites reviewed.

Interim Cue: If asked, all prerequisites have been met.

SAT/UNSAT ***Step 2: Close or Check Closed RBCCW HX Service Water Outlet Valves SW-92A and SW-92B**

Standard: Operator directs AO to close or check closed SW-92 A and B.

Interim Cue: AO reports SW-92A and SW-92B closed (this action is simulated).

SAT/UNSAT ***Step 3: Close SW-20.**

Standard: Positions SW-20 control switch on CRP 9-6 to CLOSE.

SAT/UNSAT **Step 4: Verify SW-20 Shut.**

Standard: Observes green light On and red light Off on CRP 9-6.

SAT/UNSAT ***Step 5: Close SW-19A**

Standard: Positions SW-19A switch on CRP 9-6 to CLOSE.

SAT/UNSAT **Step 6: Verify SW-19A closed.**

Standard: Observes green light On, red light Off.

SAT/UNSAT ***Step 7: Close SW-19B.**

Standard: Position SW-19B switch on CRP 9-6 to CLOSE.

SAT/UNSAT **Step 8: Verify SW-19B closed.**

Standard: Observes green light On, red light Off.

SAT/UNSAT **Step 9: Verify Fire Water Pumps are not running.**

Standard: Observes annunciator 6-J-9 and 6-L-9 are not in alarm (or contacts AO).

Interim Cue: If contacted as AO, inform Operator that the fire pumps are not running.

SAT/UNSAT ***Step 10: Open Fire Water to Service Water Crosstie SW-8**

Standard: Operator directs AO to open SW-8.

Interim Cue: AO reports SW-8 is now open. (Activate Key 1, rfSW_35)

SAT/UNSAT **Step 11: Close/check closed RHR 34A.**

Standard: Operator checks shut RHR-34A by green light On and red light Off above valve control switches on CRP 9-3.

Interim Cue: If asked if a LPCI signal is present, state that drywell pressure remains at 8 psig (as stated in initial conditions).

SAT/UNSAT ***Step 12: Place UPS FDR BKR switch to BLOCK.**

Standard: Positions keylock switch 10AS36A on CRP 9-32 to BLOCK.

SAT/UNSAT **Step 13: Close/check closed RHR-25A or RHR 27A.**

Standard: Verifies RHR-27A closed by observing green light On and red light Off on CRP 9-3

NOTE: Operator may elect to also close RHR-25A

SAT/UNSAT ***Step 14: Start Available Fire Water Pumps.**

Standard: Operator directs AO to start the diesel and electric fire pumps.

Interim Cue: If asked, state the diesel and electric fire pumps are running (Activate Key 2, rFP_01 and 02).

SAT/UNSAT ***Step 15: Place RHR 89A TEST Switch to TEST.**

Standard: Positions keylock switch 10AS89A1 to TEST on CRP 9-3.

SAT/UNSAT ***Step 16: Throttle RHR-89A to 22% OPEN.**

Standard: Positions control switch to OPEN until white light is lit on CRP 9-3.

SAT/UNSAT ***Step 17: Open RHRSW/RHR Intertie Keylock Valve RHR-184**

Standard: Operator positions keylock control switch on CRP 9-3 horizontal for RHR-184 to OPEN.

SAT/UNSAT **Step 18: Verify RHR-184 Open**

Standard: Operator verifies RHR-184 open by Red light On and Green light Off indication above the respective valve control switch on CRP 9-3.

SAT/UNSAT ***Step 19: Open RHRSW/RHR Intertie Keylock Valve RHR-183**
Standard: Operator positions keylock control switch on CRP 9-3 horizontal
for RHR 183 to OPEN.

SAT/UNSAT **Step 20: Verify RHR-183 Open**
Standard: Operator verifies RHR 183 open by Red light On and Green light
Off indication above the respective valve control switch on CRP
9-3.

SAT/UNSAT ***Step 21: Place RHR A/C Logic Ctmt Spray Vlv Shroud Lvl Ovrld
Keylock Switch to MANUAL OVRD.**
Standard: Keylock Switch positioned to MANUAL OVRD on CRP 9-3.

SAT/UNSAT ***Step 22: Place RHR A/C Logic Ctmt Spray Vlv LPCI Sig Bypass
(pistol grip) to MAN.**
Standard: Pistol grip switch taken to MAN on CRP 9-3.

SAT/UNSAT ***Step 23: Open RHR-39A**
Standard: Operator positions control switch for RHR-39A to OPEN on
CRP 9-3

SAT/UNSAT **Step 24: Verify RHR-39A Open**
Standard: Operator verifies RHR-38A Open by Red light On and Green
light Off above control switch.

SAT/UNSAT ***Step 25: Open RHR-38A**
Standard: Operator positions control switch for RHR-38A to OPEN on
CRP 9-3

Initial Conditions:

Drywell pressure is 8 psig. Torus Spray is required per EOP-3 and RHR and RHRSW Pumps are unavailable for use. Emergency Diesel Generators are operable. Fire Water Pumps are available.

Initiating Cues:

The SCRO has directed you to line-up and spray the TORUS using the Fire System to RHR Loop "A" from the Control Room, IAW OE 3107, Appendix S.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Transfer MCC 89B Power From UPS to the Maintenance Tie
Reference: OP 2143, 480/LV AC Sys. (except Vital, Inst.AC/Lt.Pnls), Rev 41
Task Number: 2627301001

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

Sequence Critical: Yes No

Time Critical: Yes No

Operator Performing Task: _____

Examiner: _____

Date of Evaluation: _____

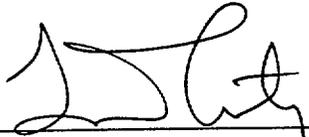
Method of Testing: Simulation Performance Discuss

Setting: Classroom Simulator Plant

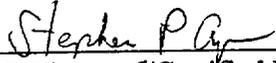
Performance Expected Completion Time: 5 minutes

Evaluation Results:

Performance: PASS FAIL Time Required: _____

Prepared by: 
Operations Training Instructor

9/7/00
Date

Reviewed by: 
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: 
Operations Training Supervisor

9/11/00
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 operating normally at **% power
(* power based upon chosen IC)

Initiating Cues:

The SCRO directs you to transfer MCC-89B power from UPS to the Maintenance Tie. The SCRO has reviewed and addressed Tech Specs.

Task Standards:

MCC-89B supplied from the Maintenance Tie.

Required Materials:

OP 2143 480/LVAC Sys. (except Vital, Inst.AC/Lt.Pnls) (latest revision)
"13 key" from key locker

Simulator Setup:

Any IC

Evaluation

Performance Steps

TIME START: ____

SAT/UNSAT **Step 1: Obtain Procedure Review Administration Limits, Precautions, and Prerequisites**

Standard: Current revision of OP 2143 Section J obtained; administration limits, precautions, prerequisites reviewed.

Interim Cue: When asked, all prerequisites are met.

SAT/UNSAT ***Step 2: Insert key into UPS "B" Control Switch on 9-3 and position UPS "B" Control on 9-3 to OFF**

Standard: Inserts key into UPS "B" Control Switch on 9-3 and takes UPS "B" control switch to "OFF" on CRP 9-3

SAT/UNSAT **Step 3: Verify UPS "B" off**

Standard: Verify UPS 1B volts go to zero on CRP 9-3 vertical panel and the following alarms in alarm, 3-C-4, 3-C-5.

SAT/UNSAT ***Step 4: Place MCC-89B ALT. Source Switch to UPS 1B TRIP Position**

Standard: Operator places alternate source switch to UPS 1B TRIP

SAT/UNSAT **Step 5: Verify UPS 1B Trip**

Standard: Observes red light out for UPS 1B on CRP 9-3

SAT/UNSAT ***Step 6: Place MCC-89B ALT. Source Control Switch to the MCC-8B CLOSE Position**

Standard: Places alternate source switch to MCC 8B CLOSE position

SAT/UNSAT **Step 7: Verify MCC 8B Closed**

Standard: Observes red light on CRP 9-3 for MCC 8B and alarm 3-C-5 clears

Initial Conditions:

The plant is operating normally at **% power
(* power based upon chosen IC)

Initiating Cues:

The SCRO directs you to transfer MCC-89B power from UPS to the Maintenance Tie. The SCRO has reviewed and addressed Tech Specs.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Secure Standby Gas Treatment
Failure Mode: N/A
Reference: OP 2117, Standby Gas Treatment, Rev. 17
Task Number: 2610060101

Task Performance: AO/RO/SRO ___ RO/SRO Only X SE Only ___

Sequence Critical: Yes ___ No X

Time Critical: Yes ___ No X

Individual Performing Task: _____

Examiner: _____

Date of Evaluation: _____

Activity Code: _____

Method of Testing: Simulation ___ Performance X Discuss ___

Setting: Classroom ___ Simulator X Plant ___

Performance Expected Completion Time: 10 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: [Signature]
Operations Training Instructor

9/7/00
Date

Reviewed by: [Signature]
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: [Signature]
Operations Training Supervisor

9/11/00
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 **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:

Both trains of SBGT are running as a result of auto initiation
Initiating signals are clear.
Reactor Building ventilation is operating normally.

Initiating Cues:

You have been directed by the SRO to secure SBGT Train "A", and then SBGT Train "B", and establish torus vent path through SBGT Train "A".

Task Standards:

Both SBGT Trains in Standby mode, with torus vent path aligned through SBGT Train "A".

Required Materials:

OP 2117, Standby Gas Treatment (latest revision)

Simulator Setup:

N/A

Evaluation

Performance Steps

TIME START: _____

SAT/UNSAT

Step 1: Obtain procedure; review administrative limits, precautions, and prerequisites

Standard: OP 2117 Section D obtained; administrative limits, precautions, and prerequisites reviewed.

Interim Cue:

Inform Operator that all prerequisites are SAT.

SAT/UNSAT

***Step 2: Momentarily place SBTG Fan A(B) control switch to STOP**

Standard: Operator momentarily places SBTG FAN A(B) REF 2-A(B) control switch to STOP on CRP 9-26 and releases

SAT/UNSAT

Step 3: Close/verify closed SGT-2A(B)

Standard: Operator verifies SGT-2A(B) closed by observing green light On and red light Off on CRP 9-26, and repositions control switch to OFF

SAT/UNSAT

Step 4: Close/verify closed SGT-3A(B)

Standard: Operator verifies SGT-3A(B) closed by observing green light On and red light Off on CRP 9-26, and repositions control switch to OFF

SAT/UNSAT

***Step 5: Close/check closed SGT-1A(B)**

Standard: Operator takes control switch on CRP 9-26 to CLOSE and verifies green light On, red light Off

SAT/UNSAT	*Step 6: <u>Secure the second train by momentarily placing SGBT Fan B(A) control switch to STOP</u>
	Standard: Operator momentarily places SGBT FAN B(A) REF 2-B(A) control switch to STOP on CRP 9-26 and releases
<hr/>	
SAT/UNSAT	Step 7: <u>Close/verify closed SGT-2B(A)</u>
	Standard: Operator verifies SGT-2B(A) closed by observing green light On and red light Off on CRP 9-26, and repositions control switch to OFF
<hr/>	
SAT/UNSAT	Step 8: <u>Close/verify closed SGT-3B(A)</u>
	Standard: Operator verifies SGT-3B(A) closed by observing green light On and red light Off on CRP 9-26, and repositions control switch to OFF.
<hr/>	
SAT/UNSAT	*Step 9: <u>Close/check closed SGT-1B(A)</u>
	Standard: Operator takes SGT-1B(A) control switch on CRP 9-26 to CLOSE and verifies green light On, red light Off
<hr/>	
SAT/UNSAT	*Step 10: <u>Establish torus vent path by opening/checking open the following valves:</u>
	<ul style="list-style-type: none">• <u>SGT-2A</u>• <u>SGT-3A</u>
	Standard: Operator opens/verifies open SGT-2A and SGT-3A on CRP 9-26 by taking associated control switch to OPEN and verifying red light On, green light Off
<hr/>	
SAT/UNSAT	Step 11: <u>Close/check closed SGT-1A</u>
	Standard: Operator closes/checks closed SGT-1A on CRP 9-26 by taking associated control switch to OPEN and verifying red light On, green light Off

SAT/UNSAT

Step 12: Verify normal standby valve lineup

Standard: Operator verifies the following:

_____SGT-1A(B), SGT-2B, SGT-3B, SGT-4A(B) and SGT-5 are closed

_____SGT-2A and SGT-3A open

_____SBGT Fan A(B) control switches in AUTO

_____9 KW heaters SBGT-A Elec Htr EUH-2 and SBGT-B Elec Htr EUH-4 control switches are in AUTO

TIME FINISH: _____

Terminating Cue: SBGT System in Standby Mode, with torus vent path established through SBGT Train "A"

Evaluator Comments: _____

System: 261000 **K/A's:** K1.02 K1.03 K3.03 K6.09 A1.07
 A2.03 A3.04 A4.02 A4.03 A4.08

System Generic K/A's: 2.1.20, 2.1.21, 2.1.29

Initial Conditions:

Both trains of SBGT are running as a result of auto initiation
Initiating signals are clear.
Reactor Building ventilation is operating normally.

Initiating Cues:

You have been directed by the SRO to secure SBGT Train "A", and then SBGT Train "B", and establish torus vent path through SBGT Train "A".

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Perform Pump Capacity Check on the "A" SLC Pump
Failure Mode: SLC test tank level lowering
Reference: OP 4114, Standby Liquid Control System Surveillance, Rev. 30
Task Number: 211010204

Task Performance: AO/RO/SRO ___ RO/SRO X SRO Only ___

Sequence Critical: Yes ___ No X

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: 20 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: [Signature]
Operations Training Instructor

9/7/00
Date

Reviewed by: [Signature]
SRO Licensed/Certified Reviewer

9/8/00
Date

Approved by: [Signature]
Operations Training Supervisor

9/11/00
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 is operating normally at full power.

Initiating Cues:

You have been directed by the SCRO to perform the Pump Capacity Check on the "A" SLC Pump in accordance with OP 4114 Section B. The SS will declare SLC inoperable/operable at the appropriate procedure steps. The IST requirement to verify opening/closing of SLC pump discharge check valves (SLC-43A/B) is not required during this test. It is not necessary to add water to the Test Tank.

Task Standards:

SLC Pump "A" stopped and test terminated in response to lowering SLC Tank level.

Required Materials:

OP 4114, Standby Liquid Control System Surveillance (latest revision)
VYOPF 4114.01 (latest revision)

Simulator Setup:

N/A

TIME START: _____

SAT/UNSAT **Step 1: Obtain procedure; review admin limits, precautions, and pre-requisites**

Standard: Procedure obtained; admin limits, precautions, and pre-requisites reviewed.

Interim Cue: If asked, all pre-requisites are met.

SAT/UNSAT **Step 2: Obtain VYOPF 4114.01**

Standard: Operator obtains VYOPF 4114.01

SAT/UNSAT **Step 3: Obtain SS permission to conduct test**

Standard: Operator obtains SS permission to conduct test.

Interim Cue: As SS, grant permission to conduct surveillance.

SAT/UNSAT **Step 4: Verify at least one SLC area drain collection drum is valved in and is less than ½ full**

Standard: N/A

Interim Cue: Drum is valved in and is less than half full.

SAT/UNSAT **Step 5: Check for adequate SLC Test Tank level**

Standard: Operator verifies SLC Test Tank level is above the minimum water level mark

Interim Cue: If actual water level is below the minimum water level mark, inform Operator that tank level is 41 inches.

SAT/UNSAT

Step 6: Check SLC Tank level

Standard: Operator checks SLC Tank level

Interim Cue:

Unless SLC Tank level is already at 92%, inform Operator that level is 92%

SAT/UNSAT

***Step 7: Unlock and close SLC Tank Outlet (SLC-11)**

Standard: SLC-11 unlocked and shut by turning the handwheel clockwise until the valve stops moving (located at the bottom of the SLC Tank)

Interim Cue:

Handwheel rotates clockwise and the valve stem lowers until the handwheel stops moving.

SAT/UNSAT

***Step 8: Unlock and open SLC Test Tank Outlet (SLC-41)**

Standard: SLC-41 unlocked and opened by turning the handwheel counter-clockwise until the valve stops moving (located behind ladder to right of SLC skid)

Interim Cue:

Handwheel rotates counter-clockwise and the valve stem rises until the handwheel stops moving.

SAT/UNSAT

***Step 9: Open Recirc Test Tank (SLC-27)**

Standard: SLC-27 opened by turning the handwheel counter-clockwise until the valve stops moving

Interim Cue:

Handwheel rotates counter-clockwise and the valve stem rises until the handwheel stops moving.

SAT/UNSAT

***Step 10: Open Combined Recirc (SLC-26) at least three turns**

Standard: SLC-26 opened by turning the handwheel counter-clockwise at least three turns (located above platform by SLC Tank)

Interim Cue: Handwheel rotates counter-clockwise and opens a minimum of three turns.

SAT/UNSAT

Step 11: Check pump lube oil level

Standard: Operator verifies that oil level is visible in the sightglass located on the "A" SLC Pump

SAT/UNSAT

***Step 12: Start the "A" SLC Pump**

Standard: Local pushbutton for the "A" SLC Pump is depressed and locked.

Interim Cue: When Operator simulates depressing and locking the pushbutton, inform Operator that the sound of the "A" SLC Pump running can be heard.

SAT/UNSAT

Step 13: Verify that the PI-11-53 isolation valve is partially open and that no pressure oscillations exist.

Standard: Operator looks for indicator movement to verify that the isolation valve is open, and checks for pressure oscillations.

Interim Cue: Inform Operator that indicator movement does exist, and that no pressure oscillations are evident.

SAT/UNSAT

Step 14: Monitor SLC Test Tank Level

Standard: Operator continuously monitors test tank level while system pressure is being established to ensure stable tank level.

Interim Cue: When Operator indicates that he is monitoring test tank level, inform Operator that tank level is 39 inches and lowering slowly.

SAT/UNSAT

***Step 15: Stop the SLC Pump**

Standard: When Operator recognizes that SLC Test Tank level is lowering, the pump is stopped by releasing the Start pushbutton.

Interim Cue: When the pushbutton is simulated released, inform Operator that the SLC Pump has stopped.

SAT/UNSAT

Step 16: Notify the Control Room

Standard: Operator notifies the control room of the lowering tank level and that the pump has been stopped.

Interim Cue: Inform Operator at this point that the JPM task has been completed. There are no further actions required.

TIME FINISH: _____

Terminating Cue: SLC Pump "A" stopped due to lowering Test Tank level.

Initial Conditions:

The plant is operating normally at full power.

Initiating Cues:

You have been directed by the SCRO to perform the Pump Capacity Check on the "A" SLC Pump in accordance with OP 4114 Section B. The SS will declare SLC inoperable/operable at the appropriate procedure steps. The IST requirement to verify opening/closing of SLC pump discharge check valves (SLC-43A/B) is not required during this test. It is not necessary to add water to the Test Tank.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Lineup to Operate SRV-71 A and B From The RCIC Room
Reference: OP 3126, Appendix C, Shutdown Using Alternate Shutdown Methods, Rev. 16
Task Number: 2007170501

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

Sequence Critical: Yes No

Time Critical: Yes No

Operator Performing Task: _____

Examiner: _____

Date of Evaluation: _____

Activity Code: _____

Method of Testing: Simulation Performance Discuss

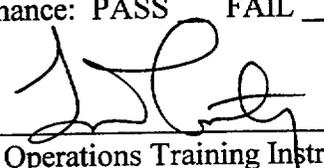
Setting: Classroom Simulator Plant

Performance Expected Completion Time: 20 minutes

Evaluation Results:

Performance: PASS FAIL

Time Required: _____

Prepared by: 
Operations Training Instructor

9/11/00
Date

Reviewed by: _____
SRO Licensed/Certified Reviewer

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 **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:

Plant Shutdown is in progress from outside the Control Room, and reactor depressurization is required. All OP 3126 Initial Actions are complete. Maintenance Electricians are not available to perform this procedure.

Initiating Cues:

The SCRO directs you to energize the RCIC and SRV Alt SD panels in the RCIC room per OP 3126, Appendix C and report when available for operation. Steps 1, 2 & 3 of Appendix C are complete.

Task Standards:

OP 3126, Appendix C (Steps 4 through 6) properly completed.

Required Materials:

OP 3126 (Shutdown Using Alternate Shutdown Methods) Appendix C (latest revision)

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure, review Appendix C.**

Standard: OP 3126 obtained, Appendix C reviewed.

SAT/UNSAT **Step 2: Check/place Safety Relief Valve RV2-71A control switch to CLOSE**

Standard: Operator indicates switch closed

Interim Cue: Inform Operator that switch is in CLOSE

SAT/UNSAT **Step 3: Check/place Safety Relief Valve RV2-71B control switch to CLOSE**

Standard: Operator indicates switch closed

Interim Cue: Inform Operator that switch is in CLOSE

SAT/UNSAT ***Step 4: Place ADS Transfer Switch (SS-752) to EMERGENCY.**

Standard: Operator places the switch is in the EMERGENCY position.

Interim Cue: When operator indicates he will reposition the switch, inform him the switch moves sharply to the EMERGENCY position.

SAT/UNSAT ***Step 5: Transfer 125VDC Manual RCIC Transfer Switch (MTS-13-1) to EMERGENCY.**

Standard: Operator turns switch counter-clockwise to the EMERGENCY position.

Interim Cue: Inform Operator that the switch moves smartly counter-clockwise to the EMERGENCY position.

SAT/UNSAT ***Step 6: Place the three RCIC Alternate Shutdown transfer switches to EMER in the following sequence: SS1178A, SS1178B, SS1178C.**

Standard: The operator indicates that the transfer switches on the RCIC shutdown panel are placed in EMER in the following order: SS1178A, SS1178B, SS1178C.

Interim Cue: When operator indicates he is placing the transfer switches in EMER, inform him that each switch moves counter-clockwise to the EMER position.

SAT/UNSAT ***Step 7: Transfer the SRV Control Power kniveswitch (Panel 1300BSII) to EMER.**

Standard: Operator indicates the SRV control power knife switch is in EMER.

Interim Cue: When the operator indicates that he is placing the knife switch in EMER, inform him the switch moves and then comes to a hard stop.

SAT/UNSAT **Step 8: Notify SS that SRV Operation is Now Possible**

Standard: Operator notifies SS that SRV-71A or SRV-71B is ready for operation.

Interim Cue: When operator says he will call SS, inform him SS is informed.

TIME FINISH: _____

Terminating Cue: OP 3126, Appendix C, Steps 4 through 6 properly completed.

Evaluator Comments: _____

System: 295016 **K/A's:** K2.01 K2.02 K3.03

System Generic K/A's: 2.1.20

Initial Conditions:

Plant Shutdown is in progress from outside the Control Room, and reactor depressurization is required. All OP 3126 Initial Actions are complete. Maintenance Electricians are not available to perform this procedure.

Initiating Cues:

The SCRO directs you to energize the RCIC and SRV Alt SD panels in the RCIC room per OP 3126, Appendix C and report when available for operation. Steps 1, 2 & 3 of Appendix C are complete.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET**

Task Identification:

Title: Respond to RPS Power Protection Panel Trip
Failure Mode: N/A
Reference: OP 2134, Reactor Protection System, Rev. 16
Task Number: 2127070401

Task Performance: AO/RO/SRO RO/SRO SRO 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: [Signature] _____ Date 9/7/00
Operations Training Instructor

Reviewed by: [Signature] _____ Date 9/8/00
SRO Licensed/Certified Reviewer

Approved by: [Signature] _____ Date 9/11/00
Operations Training Supervisor

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** 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 operating normally at full power. RPS Power Protection Panel PPP-A-1 has tripped. In addition, the MG3-1A output breaker has tripped. The trip has been determined to be spurious.

Initiating Cues:

The SCRO directs you to reset the RPS Power Protection Panel Trip in accordance with OP 2134 Section F.

Task Standards:

RPS Power Protection Panel PPP-A-1 reset and powered.

Required Materials:

OP 2134 Reactor Protection System (latest revision)

Simulator Setup:

N/A

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure OP 2134 and review precautions and prerequisites.**

Standard: OP 2134 obtained, precautions and prerequisites reviewed.

Interim Cue: Maintenance is NOT available to assist in setting RPS MG Set voltage at this time. The prerequisites are complete

SAT/UNSAT **Step 2: Check the status lights on the tripped RPS power protection panel to determine the cause of the trip.**

Standard: Operator checks the status lights on panel PPP-A-1.

Interim Cue: Panel PPP-A-1 status light for undervoltage is lit.

SAT/UNSAT **Step 3: Check the M/G set output voltage and adjust voltage to 118 ± 1 volt.**

Standard: Operator checks MG3-1A output voltage meter.

Interim Cue: MG3-1A output voltage meter indicates 118 volts. (As-is if operating.)

SAT/UNSAT **+*Step 4: Position the MG3-1A output breaker to OFF.**

Standard: MG3-1A output breaker is placed on OFF.

Interim Cue: Inform Operator that breaker is in OFF.

SAT/UNSAT **+*Step 5: Position the MG3-1A output breaker in ON.**

Standard: MG3-1A output breaker is placed in ON.

Interim Cue: Inform Operator that breaker is in ON.

SAT/UNSAT **Step 6: Verify Power In lamp is On.**

Standard: Operator verifies that PPP-A-1 POWER IN lamp is On.

Interim Cue: Inform Operator that PPP-A-1 POWER IN lamp is On.

SAT/UNSAT **+*Step 7: Position panel output breaker to OFF.**

Standard: PPP-A-1 output breaker is placed in OFF.

Interim Cue: Inform Operator that breaker is in OFF.

SAT/UNSAT **+*Step 8: Position panel output breaker to ON.**

Standard: PPP-A-1 output breaker is placed in ON.

Interim Cue: Inform Operator that breaker is in ON.

SAT/UNSAT **Step 9: Check Power Out lamp On.**

Standard: Operator verifies that PPP-A-1 Power Out light is lit.

Interim Cue: Inform Operator that light is lit.

SAT/UNSAT

Step 10: Ensure the AEOG radiation monitor is indicating correctly.

Standard: Operator directs control room operator to check the indications on the AEOG radiation monitor.

Interim Cue:

The AEOG radiation monitor indicates correctly.

SAT/UNSAT

Step 11: At Box B1024, check that RPS AVAILABLE white lamp is On.

Standard: Operator verifies that RPS AVAILABLE white lamp on Box B1024 is On.

Interim Cue:

Inform Operator that lamp is lit.

SAT/UNSAT

+*Step 12: Turn the APRM Bus A Reset selector switch to RESET and return it to NORMAL.

Standard: Operator turns the APRM Bus A Reset selector switch to RESET and returned to NORMAL on Box B1024.

Interim Cue:

Switch has been rotated to RESET and returned to NORMAL

SAT/UNSAT

Step 13: Ensure that red lamp for RPS A is On

Standard: Operator verifies that the RPS A red lamp is lit.

Interim Cue:

The red lamp is lit.

SAT/UNSAT

Step 14: Contact the Control Room and request that the following actions be performed:

- a) Reset of the half scram.**
- b) Reset of the Group 3 isolation per OP 2115**

Standard: Operator contacts the Control Room and requests the following actions be performed:

- a) Reset of the half scram
- b) Reset of the Group 3 isolation per OP 2115

Interim Cue: Inform Operator that the JPM is complete.

TIME FINISH: _____

Terminating Cue: The RPS Power Protection Panel PPP-A-1 has been reset.

Evaluator Comments: _____

System: 212000 **K/A's:** A2.02

Initial Conditions:

The plant is operating normally at full power. RPS Power Protection Panel PPP-A-1 has tripped. In addition, the MG3-1A output breaker has tripped. The trip has been determined to be spurious.

Initiating Cues:

The SCRO directs you to reset the RPS Power Protection Panel Trip in accordance with OP 2134 Section F.