

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Perform Reactor Coolant Temperature Check
Failure Mode: Temperatures out of spec for pump start
Reference: OP 4110, Reactor Recirc System Surveillance, Rev 41
Task Number: 2020030201

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: 15 minutes

Evaluation Results:

Performance: PASS FAIL Time Required: _____

Prepared by: _____ Date _____
Operations Training Instructor

Reviewed by: _____ Date _____
SRO Licensed/Certified Reviewer

Approved by: _____ Date _____
Operations Training Manager

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:

The plant is in Hot Shutdown with the Recirc Pumps secured. ERFIS is not available.

Initiating Cues:

You have been directed by the CRS to complete the Reactor Coolant Temperature Check per OP 4110 Section E in preparation for starting the idle Recirc Pump "A".

Task Standards:

VYOPF 4110.05 completed; identification that Recirc Pumps may not be started based upon temperatures.

Required Materials:

OP 4110, Reactor Recirc System Surveillance (latest revision)
VYOPF 4110.05 (latest revision)
Steam Tables

Simulator Setup:

Reset to IC 870

Ensure the following conditions are established with selected IC:

- Plant in Hot Shutdown with steam dome pressure greater than 618 psig
- Recirc Pumps Secured
- Insert mfPP_01 (failure of the ERFIS computer)
- Insert override of PLC-2-166, RPV/SV/RV screen, CH.4) (ERFIS.PTS026)

Evaluation

Performance Steps

TIME START: _____

SAT/UNSAT

Step 1: Obtain procedure; review prerequisites, and Section E.

Standard: OP 4110 obtained; admin limits, prerequisites and Section E reviewed.

Interim Cue:

If asked, all prerequisites are met.

SAT/UNSAT

Step 2: Obtain copy of VYOPF 4110.05

Standard: Operator obtains copy of form.

SAT/UNSAT

***Step 3: Identify and record Recirc Loop A Temperature**

Standard: Operator identifies Recirc Loop A temperature on TR-2-165 (red pen) on CRP 9-4, and records temperature on form.

SAT/UNSAT

***Step 4: Identify and record Recirc Loop B Temperature**

Standard: Operator identifies Recirc Loop B temperature on TR-2-165 (blue pen) on CRP 9-4, and records temperature on form.

SAT/UNSAT

***Step 5: Identify and record reactor pressure**

Standard: Operator identifies reactor pressure on PI-2-56A or PR-6-96 (on CRP 9-5) and records on form.

SAT/UNSAT

***Step 6: Identify and record bottom head drain temperature.**

Standard: Operator identifies bottom head drain temperature on PLC-2-166, RPV/SV/RV screen, CH.4 (ERFIS PT.S026), and records on form.

Evaluation

Performance Steps

SAT/UNSAT

***Step 7: Calculate saturation temperature.**

Standard: Operator calculates saturation temperature using saturated steam tables.

Note: 14.7 psi must be added to the reactor pressure psig number to obtain psia number for use in steam tables.

SAT/UNSAT

***Step 8: Determine and record difference between saturation temperature and vessel bottom head drain temperature**

Standard: Operator subtracts bottom head drain temperature from interpolated saturation temperature and records on form.

SAT/UNSAT

***Step 9: Identify difference between saturation temperature and bottom head drain temperature is greater than 145 deg F; inform CRS that pump may not be started**

Standard: Operator identifies that the temperature difference is greater than 145° F (~146°F), and in accordance with the Note on VYOPF 4110.05, informs the CRS that the pump may **not** be started.

Evaluator Note:

If the operator did not add 14.7# to the pressure identified in step 5, then he would meet the requirement to start the pump with a delta T of ~144°F.

Since there is such a small margin (2°F) regardless of adding the 14.7# or not (based on instrument inaccuracies/tolerances & interpolating the steam tables), the potential does exist that the candidate may come up with a differential temperature of ≤145°F. The evaluator may use grade the performance of the candidate based on how he arrived to his conclusion.

Interim Cue:

Inform the Operator that no further actions are necessary for this JPM.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Perform Shutdown CRO Rounds
Failure Mode: 4 Out of Spec readings
Reference: OP 0150, Conduct of Operations and Operator Rounds, Rev.169, LPC 1
Task Number: 2997230301

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: 15 minutes

Evaluation Results:

Performance: PASS FAIL Time Required: _____

Prepared by: _____ Date _____
Operations Training Instructor

Reviewed by: _____ Date _____
SRO Licensed/Certified Reviewer

Approved by: _____ Date _____
Operations Training Manager

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:

The plant is in Cold Shutdown. A Computer fault has rendered ERFIS inoperable. Troubleshooting is in progress.

Initiating Cues:

You have been directed by the CRS to complete the 06-12 Shutdown CRO round sheet (VYOPF0150.04) on CRP 9-3 and CRP 9-4. ERFIS & the ability to take electronic rounds are not available and manual log entries must be performed.

Task Standards:

VYOPF 0150.04 completed for CRP 9-3 and 9-4; identification of 4 out of spec readings.

Required Materials:

OP 0150, Conduct of Operations and Operator Rounds (latest revision)
VYOPF 0150.04 (latest revision)

Simulator Setup:

Reset to IC 871 (malfunctions inserted for OOS readings)

- Ensure the plant is in Cold Shutdown

Evaluation

Performance Steps

TIME START: _____

SAT/UNSAT

Step 1: Obtain procedure; review prerequisites, Section A.

Standard: OP 0150 obtained; admin limits, prerequisites and Section A reviewed.

Interim Cue:

If asked, all prerequisites are met.

SAT/UNSAT

Step 2: Obtain copy of VYOPF 0150.04

Standard: Operator obtains copy of form.

Examiner Cue:

Once the operator finds the form, provide them a copy.

SAT/UNSAT

***Step 3: Completes the log for panel 9-3 and 9-4 and identifies the following readings out of spec.**

Standard:

Operator identifies:
CRP 9-4, Reactor Water Cleanup Inlet Conductivity, HIGH out of spec
CRP 9-3, RHR/CS A/B HPCI BUS/LOGIC FAIL 3-N-9, Annunciator Energized
CRP 9-3, Torus water temperature (TI-16-19-33C), HIGH out-of-spec
CRP 9-3, TI-16-19-33C/A Instrument Check, HIGH out-of-spec

SAT/UNSAT

***Step 4: Logs are taken IAW OP 0150 Section A. standards**

Standard:

- All round sheet entries shall be neatly recorded using a black ink pen.
- Entry errors will corrected by drawing a single line through the error initialing the correction and recording the correct reading, if applicable.
- Abnormal or unusual readings shall be circled, and identified by the letter number designated in the appropriate turnover section and next to the reading.
- All circled readings shall be reported to the CRS.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Perform DW Temperature Profile Surveillance
Reference: OP 4115, Primary Containment Surveillance, Rev 43
Task Number: 3517290105

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: 15 minutes

Evaluation Results:

Performance: PASS FAIL Time Required:

Prepared by: _____
Operations Training Instructor

Date

Reviewed by: _____
SRO Licensed/Certified Reviewer

Date

Approved by: _____
Operations Training Manager

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 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 reactor is operating at 100% power at steady state conditions. Drywell Air Temperature has been trending up slowly.

Initiating Cues:

You have been requested by the CRS to perform a Drywell Temperature profile per OP 4115, Section F. CRP 9-25 temperatures, RRU lineup data, and RBCCW data, has been taken.

Task Standards:

Drywell Temperature averages calculated.

Required Materials:

VYOPF 4115.05, Drywell Temperature Profile; OP 4115, Primary Containment Surveillance

Simulator Setup:

Any 100% Power IC

Evaluation

Performance Steps

TIME START:

SAT/UNSAT

Step 1: Obtain Procedure

Standard: OP 4115 obtained and Section F reviewed.

SAT/UNSAT

Step 2: Obtain VYOPF 4115.05

Standard: VYOPF 4115.05 obtained.

Interim Cue: Provide Operator with VYOPF 4115.05. Form will be partially filled in with RRU lineup, RRU Return temperatures, and RBCCW lineup/temperatures completed.

SAT/UNSAT

***Step 3: Record Drywell Temperature computer points for elevations 250', < 270', 270-315', and > 315'.**

Standard: Individual records the following computer points: M0-20, M0-21, M0-22, M0-23, M0-24, M0-14, M0-15, M0-16, M0-17, M0-12, M0-13.

SAT/UNSAT

***Step 6: Record Drywell Temperatures from Steam Leak Detection Touch Screen monitor for elevations < 270', 270'-315', and > 315'.**

Standard: Steam Leak Detection Touch Screen Monitor, CRP-9-21, Drywell screen selected and the following channels recorded: Channel 1,2,3,4,15,16,17,5,6,7

SAT/UNSAT

***Step 7: Calculate Drywell average temperatures for elevations: 250', < 270', 270-315', and > 315', and record.**

Standard: Drywell average temperatures for elevations: 250', < 270', 270-315', and > 315', calculated and recorded.

SAT/UNSAT

Step 8: Verify Drywell average temperatures within Acceptance Criteria

Standard: Drywell average temperatures checked against Acceptance Criteria for each elevation.

SAT/UNSAT

Step 9: Sign, Date and Time form

Standard: VYOPF 4115.05 signed, timed and dated.

Examinee Handout

Initial Conditions:

The reactor is operating at 100% power at steady state conditions. Drywell Air Temperature has been trending up slowly.

Initiating Cues:

You have been requested to perform a Drywell Temperature profile per OP 4115, Section F. CRP 9-25 temperatures, RRU lineup data, and RBCCW data has been taken.

Replacement RO Admin JPM A.2 Template

DRYWELL TEMPERATURE PROBE LOCATIONS

NOTE

Identify any out of service temperature probe with INOP and ensure a WR is submitted.

CRP 9-25 TR 1-149

Place a \checkmark Mark If RRU In Operation

Point 1.	RRU 1 Return	<u>139</u> °F	5.	RRU 1 Disch	<u>79</u> °F	RRU 1 A	<input checked="" type="checkbox"/>	B	<input type="checkbox"/>
2.	RRU 2 Return	<u>143</u> °F	6.	RRU 2 Disch	<u>79</u> °F	RRU 2 A	<input checked="" type="checkbox"/>	B	<input checked="" type="checkbox"/>
3.	RRU 3 Return	<u>145</u> °F	7.	RRU 3 Disch	<u>80</u> °F	RRU 3 A	<input checked="" type="checkbox"/>	B	<input checked="" type="checkbox"/>
4.	RRU 4 Return	<u>142</u> °F	8.	RRU 4 Disch	<u>80</u> °F	RRU 4 A	<input checked="" type="checkbox"/>	B	<input type="checkbox"/>

RBCCW HX IN SERVICE (A or B) A

RBCCW HEAT EXCH OUTLET 67.001 °F (M008 or M009)

A. Calculate the average temperature for each Drywell elevation.

DW Elev.	Min. # of Sensors	Avg. Acceptance Criteria
<270'	10	≤150°F
270'-315'	6	≤185
>315'	4	≤270

$$T_{AVG} = \frac{A}{B}$$

A = Sum of all operable sensors

B = number of all operable sensors

1. DRYWELL TEMPERATURE FOR ELEV. 250' IN VICINITY OF RECIRCULATION PUMPS
(DBD-OIHVAC-041_01)

LPC
1+6
M0-20 128.5 °F (M0-20+M0-22/2) = 130.15 °F
M0-22 131.8 °F Acceptance Criteria: Max. ≤135°F

2. DRYWELL TEMPERATURE FOR ELEV. BELOW 270'

COMPUTER POINT

STEAM LEAK DETECTION TOUCHSCREEN MONITOR
IN CRP 9-21 (DRYWELL SCREEN)

LPC
6
M0-20 128.5 °F M0-22 131.8 °F CHANNEL 1 119.4 °F T = 1395.3 = 126.8
M0-21 129.3 °F M0-23 133.7 °F CHANNEL 2 126.1 °F AVG
M0-24 131.8 °F M0-24 131.8 °F CHANNEL 3 130.6 °F (<270') 11
CHANNEL 4 125.7 °F

Acceptance Criteria: Max. Avg. ≤150°F

TI-16-19-30B(DW) 128.4 °F TR-16-19-45 (DW) 110 °F

3. DRYWELL TEMPERATURE FOR ELEV. 270' TO 315'

COMPUTER POINT

STEAM LEAK DETECTION TOUCHSCREEN MONITOR
IN CRP 9-21 (DRYWELL SCREEN)

LPC
6
M0-14 116.6 °F CHANNEL 15 113.7 °F T = 838.5 = 119.8
M0-15 124.1 °F CHANNEL 16 119.6 °F AVG
M0-16 115.9 °F CHANNEL 17 123.8 °F (270'-315') 7
M0-17 124.8 °F

Acceptance Criteria: Max. Avg. ≤185°F

4. DRYWELL TEMPERATURES ABOVE ELEV. 315'

COMPUTER POINT

STEAM LEAK DETECTION TOUCHSCREEN MONITOR
IN CRP 9-21 (DRYWELL SCREEN)

LPC
6
M0-12 115.8 °F CHANNEL 5 119.1 °F T = 593.0 = 118.6
M0-13 119.8 °F CHANNEL 6 119.3 °F AVG
CHANNEL 7 119.0 °F (>315') 5

Acceptance Criteria: Max. Avg. ≤270°F

Performed By Candidate Print & Sign Date/Time 5/8/07 / XXXX
(Print/Sign)

Evaluated By _____ Date _____
Shift Technical Advisor (Print/Sign)

Reviewed By _____ Date _____
Shift Manager (Print/Sign)

VYOPF 4115.05
OP 4115 Rev. 43
Page 1 of 1
LPC #6

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Locate and Determine Radiological Requirements for Inspection of RCU Valve V12-19A (CU-19A)
Failure Mode: N/A
References: AP 0541, "Access to High and Very High Radiation Areas," Rev. 9
OP 2112, "RWCU System", Rev.66
AP 0503, "Establishing and Posting Restricted Areas", Rev.27, LPC 1
Task Number: 2990100301

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 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 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 previous shift prepared the "A" RCU Pump for startup in preparation for swapping operating pumps per OP 2112, Section B
- Abnormal indications were observed during the initial start attempt of RCU Pump "A"
- You have been requested to verify that valve CU-19A (RCU Pump "A" suction valve) is positioned properly for a pump start.

Initiating Cues:

Locate CU-19A using plant reference materials and identify the area radiological conditions. Also identify any access requirements for entering this area to verify the position of the valve.

Task Standards:

Valve location identified in High Radiation Area, and associated AP 0541 requirements determined

Required Materials:

- OP 2112, "Reactor Water Cleanup System" (latest revision)
- AP 0503, "Establishing and Posting Restricted Areas" (latest revision)
- AP 0541, "Access to High and Very High Radiation Areas" (latest revision)

Simulator Setup: N/A

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure OP 2112 and review admin limits, precautions, and prerequisites**
Standard: OP 2112 obtained; admin limits, precautions, and prerequisites reviewed

Interim Cue: Inform Operator that all prerequisites are SAT

SAT/UNSAT **Step 2: Review appropriate section of the procedure for positioning of the suction valve**
Standard: Identifies and reviews Section B, Step 6.a.2.

SAT/UNSAT ***Step 3: Using OP 2112 Appendix A, identify the location of CU-19A**
Standard: Locates Appendix A of OP 2112 (RWCU Valve Lineup), and determines CU-19A located in RCU A Pump Room (page 2 of 7)

Examiner Note: If the candidate states they know where the valve is located, ask them to verify the valve location via procedure.

SAT/UNSAT ***Step 4: Refer to RWP OR AP 0541 to determine access requirements for the area**
Standard: Identifies the following requirements:

- An RWP covering the scope of the work
- RP notification prior to entry (asking for the RWP constitutes the RP notification)
- One of the following:
 - Continuous dose rate monitoring, or
 - Integrated dose rate device with alarm, or
- Continuous RP technician coverage.

Examiner Note: When asked for RWP, provide RWP 07-00011 (General Operations Support, Tagging, System Lineup Duties).

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: PAR Based on Plant Conditions (Shelter)
Failure Mode: N/A
Reference: OP 3511 Off-Site Protective Action Recommendations, Rev 23
Task Number: 3441703, 34470603

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: 15 minutes

Evaluation Results:

Performance: PASS FAIL Time Required: _____

Prepared by: _____
Operations Training Instructor Date

Reviewed by: _____
SRO Licensed/Certified Reviewer Date

Approved by: _____
Operations Training Superintendent 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 large break LOCA has occurred. The following plant data is available:

- Rx water level is 30" and stable with both Core Spray pumps running.
- Containment RAD level is 2000 R/hr and stable.
- Torus pressure is 20 psig and decreasing slowly.
- Containment isolation valves AC-6 and AC-6B have failed to close. Rad levels in the Reactor building are between 10 and 500 mR/hr.
- No report of rad levels at the site boundary or beyond at this time.
- A stack release is in progress. The Stack Gas High Range Rad monitor is reading 500mR/hr
- The Shift Supervisor has declared a General Emergency and the EOF has not yet been manned.

Initiating Cues:

You are to make the initial PAR based on plant conditions per OP 3511. You have 15 minutes to complete this task.

Task Standards:

OP 3511 Att. 9.5, complete.

Required Materials:

OP 3511 and Att. 9.5
OP 3513 Att. 9.7

Simulator Setup:

N/A [ERFIS data can be obtained in EOF (classroom)]

Evaluation

Performance Steps

TIME START: _____

SAT/UNSAT

Step 1: Obtain Procedure OP 3511 and review precautions.

Standard: Operator obtains and reviews procedure.

SAT/UNSAT

***Step 2: Using Att. 9.4 determines wind direction from meteorological data.**

Standard: Operator records current upper wind direction on Att. 9.4

NOTE: MET DATA is variable in the simulator and may be different in the same IC from day to day. Evaluators should verify correct wind direction and down wind towns prior to JPM.

Operator may chose to reference OP 3513 Att. 9.7 for guidance on obtaining MET data from ERFIS (15 minute average).

SAT/UNSAT

***Step 4: Is there substantial core damage in progress or projected.**

Standard: Operator answers NO to "substantial core damage" decision block due to containment rads <4000 R/Hr, Core Spray pumps running.

SAT/UNSAT

***Step 5: Is there significant release underway.**

Standard: Operator answers NO to "significant release" decision block due to stack radiation levels of <4000 R/Hr, and no high rads in Reactor building and low rad levels at the site boundary.

SAT/UNSAT

***Step 6: Recommend shelter of towns Vernon, Hinsdale and any towns 5 miles downwind (refer to Att. 9.1 of OP 3511).**

Standard: Operator determines correct PAR and completes OP 3511 Att. 9.5, section 1: Plant Conditions

SAT/UNSAT **Step 7: If available, a second individual should independently verify the PAR. The verification may be performed by the individual who is approving the PAR (PED, TSC Coordinator, or Site Recovery Manager).**

Standard: Operator requests second check.

Interim Cue: I concur with your PAR.

SAT/UNSAT ***Step 8: Record appropriate PAR information in Section I of OP 3511 Att. 9.5.**

Standard: Operator records PAR data on OP 3511 Att. 9.5.

Interim Cue: Provide operator with a blank copy of OP 3511 Att. 9.5, if asked.

SAT/UNSAT **Step 9: Review PAR with the Site Recovery Manager or senior manager in charge to obtain approval.**

Standard: Operator requests approval of PAR from Shift Manager.

Interim Cue: 15 MINUTE CLOCK STOPS HERE.

 The Shift Manager states that he will complete the remainder of the procedure.

TIME FINISH: _____

Terminating Cue: Operator completes PAR within 15 minutes.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Review Containment Purge and Vent Hours Log VYOPF 2115.04 in preparation for scheduled containment purge.
Failure Mode: Containment Purge and Vent Operation Limit exceeded with containment required.
Reference: OP 2115, "Primary Containment," Rev. 78
Task Number: XXXXXX

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 X Performance ___ Discuss ___

Setting: Classroom ___ Simulator ___ Plant X

Performance Expected Completion Time: 10 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: _____ Date _____
Operations Training Instructor

Reviewed by: _____ Date _____
SRO Licensed/Certified Reviewer

Approved by: _____ Date _____
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 at 100% power.

Initiating Cues:

You are the CRS. Perform supervisory review of VYOPF 2115.04, "Containment Purge and Vent Hours Log" prior to a scheduled purge estimated to last 9 hours.

Task Standards:

1. Review of VYOPF 2115.04, "Containment Purge and Vent Hours Log" has been completed.
2. Recognizes that the "Total Duration This Year" (column D) will not allow a 9 hour purge to be completed without exceeding 90 hour limit. Shift Management has been notified.

Required Materials:

OP 2115, "Primary Containment," Rev. 78
VYOPF 2115.04, "Containment Purge and Vent Hours Log"

Simulator Setup:

N/A

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure OP 2115**

Standard: OP 2115 precautions, limitations, and Section B. obtained and reviewed

Interim Cue: Provide OP 2115 (partial) and completed VYOPF 2115.04

SAT/UNSAT ***Step 2: Reviews VYOPF 2115.04**

Standard: Identifies error on the form which would cause the scheduled
containment purge, if performed, to exceed the 90 hour limit.

Evaluator Note: If calculation error of "Total Duration This Year" is not found then the purge
would be permitted

SAT/UNSAT ***Step 3: Notifies SM if 9 hour purge were performed the limit would be
exceeded**

Standard: SM is notified that a 9 hour purge would exceed the limits

TIME FINISH: _____

Terminating Cue:

Review of form completed. SM notified of error on form.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Review Switching and Tagging Order
Failure Mode: N/A
Reference: AP 0140, Vermont Yankee Local Control Switching Rules, Rev.26, LPC 3
EN-OP-102, Protective and Caution Tagging, Rev.4
Task Number: 3420040302/03

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: 30 minutes

Evaluation Results:

Performance: PASS FAIL Time Required: _____

Prepared by: _____ Date _____
Operations Training Instructor

Reviewed by: _____ Date _____
SRO Licensed/Certified Reviewer

Approved by: _____ Date _____
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** 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. The "A" CRD Pump has been secured due to indications of a clogged suction filter (F-27-A). The 'B' CRD pump is in service.

Initiating Cues:

You are to perform the technical review of a Switching and Tagging Order for change-out of the "A" CRD Pump Suction Filter. The Computerized Switching and Tagging Software program is not available. Ensure tagging sequence is in accordance with recommended tagging order per EN-OP-102 Attachment 9.2. Actual tags are not required to be reviewed.

Task Standards:

CRD Pump "A" Suction Filter adequately isolated per Switching and Tagging Order to allow filter change-out.

Required Materials:

AP 0125, Plant Equipment
AP 0140, Vermont Yankee Local Control Switching Rules (latest revision)
EN-OP-102, Att. 9.3, 9.4
OP 2111, Control Rod Drive System (latest revision)
P&ID G-191170

TIME START: _____

SAT/UNSAT Step 1: Reviews Att. 9.3 and obtains appropriate P&ID

Standard: Reviews scope of work on Att. 9.3 and obtains P&ID G191170

Interim Cue: Once operator finds P&ID, provide a copy

- Interim Cues: 1. Provide Operator with a copy of EN-OP-102, if requested.
 2. Provide prepared ATT. 9.3 and 9.4 to the operator.
 3. If operator asks to review AP 0125, provide copy.
-

SAT/UNSAT *Step 2: Reviews the prepared tagout (Att. 9.4) with the valves, associated positions and sequence necessary to tag out the "A" CRD Pump Suction Filter

Standard: The operator reviews the tagout and identifies that following valves, positions and sequence are incorrect. Errors are in **BOLD**.

	<u>SEQ</u>	<u>Component</u>		<u>Position</u>
	<u>1</u>	CRD/V3-35A	(inlet isolation)	
		CLOSED		
	<u>2</u>	CRD/V3-158A	(outlet isolation)	CLOSED
	<u>3</u>	CRD/V3-156A	(vent)	OPEN
	<u>4</u>	CRD/V3-157A	(drain)	
OPEN	<u>6</u>	CRD/V3-159A	(filter bypass)	OPEN
	<u>5</u>	CRD/P-38-1A C/S	(Pump Ctrl Sw)	CAUTION

Error #1 – the sequence for V3-156A and V3-157A is reversed.

Error #2 – Valve V3-158A is the filter bypass not the outlet isolation. It should be open.

Error #3 – Valve V3-159A is the outlet isolation and should be closed and sequenced #2.

Interim Cues: Once the problems are identified, tell the operator to make the changes necessary to complete the required work (as stated in ATT. 9.3).

Examiner Note: Sequencing shall be as follows: (i.e. 35A sequenced before 159A, 159A sequenced before 157A, etc.).

SAT/UNSAT

***Step 3: Makes corrections**

Standard: Operator makes changes to the Tags On / Placement section of the form with the following corrections: The final tagout shall read as follows:

<u>*SEQ</u>	<u>Component</u>	<u>Position</u>	<u>Location</u>
<u>1</u>	CRD/V3-35A*	CLOSED	RB 232/SW Cnr/CRD Pump Rm
<u>2</u>	CRD/V3-159A*	CLOSED	RB 232/SW Cnr/CRD Pump Rm
<u>3</u>	CRD/V3-157A*	OPEN	RB 232/SW Cnr/CRD Pump Rm
<u>4</u>	CRD/V3-156A*	OPEN	RB 232/SW Cnr/CRD Pump Rm
<u>6</u>	CRD/V3-158A	OPEN	RB 232/SW Cnr/CRD Pump Rm
<u>5</u>	CRD/P-38-1A/1B C/S	CAUTION	CRB 272/control rm/CRP9-5

*Note: The only sequence-critical elements are 1,2,3,4.
Sequence tags #5 and #6 can be done at any point.

Interim Cue:

Once the operator states the corrections are complete, the JPM is complete.

If the applicant simply identifies that the tagout is wrong and needs to be redone then direct the applicant to note any discrepancies on the form and then return it.

TIME FINISH: _____

Terminating Cue:

Appropriate components/positions identified and EN-OP-150 Att. 9.3 and 9.4 errors corrected to allow for change-out of the CRD Pump "A" Suction Filter.

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Review Completed Surveillance and Take Action for Out of Spec Data
Failure Mode: N/A
Reference: OP 4124, "Residual Heat Removal System Surveillance Procedure," Rev. 110
Task Number: 3420260302/3

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 X Performance ___ Discuss ___

Setting: Classroom ___ Simulator ___ Plant X

Performance Expected Completion Time: 15 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: _____ Date _____
Operations Training Instructor

Reviewed by: _____ Date _____
SRO Licensed/Certified Reviewer

Approved by: _____ Date _____
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 RHR Loop "A" Valve Operability Test has been submitted to you for review and signature.

Initiating Cues:

Review the provided surveillance data and sign as Shift Manager. All other paperwork related to the surveillance has been reviewed and approved.

Task Standards:

OOS closure time for RHR-65A valve noted on surveillance; 7-day LCO identified per TS 3.5.A.4.b

Required Materials:

- OP 4124, "Residual Heat Removal System Surveillance Procedure" (latest revision)
- VYOPF 4124.01A, "RHR Loop 'A' Valve Operability Test" (latest revision)
- VY Technical Specifications (Section 3.5 for each applicant)

Simulator Setup:

N/A

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure OP 4124 (Residual Heat Removal System Surveillance Procedure) and review procedure**
Standard: OP 4124 precautions, limitations, and Section E. obtained and reviewed

Interim Cue: Provide completed OP 4124 and VYOPF 4124.01A, for RHR Loop "A"

SAT/UNSAT ***Step 2: Review log sheet data for sheets provided**
Standard: Identifies RHR-65A closure time OOS

SAT/UNSAT ***Step 3: Reviews Acceptance Criteria 1 and 2 on log sheet**
Standard: RHR-65A slow closure time fails Acceptance Criteria 2

SAT/UNSAT ***Step 4: Declares RHR-65A inoperable**
Standard: Identifies OP 4124 criteria for operability

SAT/UNSAT ***Step 5: Refer to Technical Specifications Section 3.5**
Standard: Locates 3.5.A.4.b as the applicable specification

**VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET
NRC EXAM 2007**

Task Identification:

Title: Perform a Core Thermal Hydraulics Limits Evaluation
Failure Mode: MFLPD has exceeded its Administrative Limit
Reference: OP 4401 "Core Thermal Hydraulics Limits Evaluation", Rev.34
Task Number: XXXXXXXX

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: 15 minutes

Evaluation Results:

Performance: PASS FAIL Time Required: _____

Prepared by: _____ Date _____
Operations Training Instructor

Reviewed by: _____ Date _____
SRO Licensed/Certified Reviewer

Approved by: _____ Date _____
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 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 at 100% power.

Initiating Cues:

You are required to perform the Daily Core Thermal Hydraulics Limit Evaluation.

Task Standards:

Daily Core Thermal Hydraulics Limit Evaluation performed IAW OP 4401, MFLPD identified as exceeding the Administrative limit and communicated to the Shift Manager and Reactor Engineering.

Required Materials:

OP 4401, Core Thermal Hydraulics Limit Evaluation (latest revision)

TIME START: _____

SAT/UNSAT **Step 1: Obtains and reviews procedure OP 4401**

Standard: Procedure obtained and reviewed.

Interim Cues: Provide Operator with a copy of OP 4401

When asked to print out a 3D Monicore Case, provided candidate with 3D Monicore Case to be used for this JPM.

SAT/UNSAT ***Step 2: Completes Form VYOPF 4401.01**

Standard: Operator completes form and identifies that Item #5 – MFLPD is out of spec.

Evaluator Note: Look at standard form and compare candidate's results with what is expected.

Interim Cues: When/if asked to verify all control rods positions on the 3D Monicore Case are correct, inform the candidate that control rod positions are correct (VYOPF4401.01 Step 2).

When/if asked to check the APRM gains, inform the candidate that the gains have been verified SAT and are all ≥ 1.0 (VYOPF4401.01 Steps 7 and 9D).

When/if asked for the Administrative Limits, provide the candidate with a copy of the Thermal Limit Status Board (VYOPF4401.01 Step 8).

SAT/UNSAT ***Step 3: Verify MFLCPR, MFLPD and MAPRAT from Steps 4 - 6 are less than or equal to Administrative Limits posted on Thermal Limit Status Board. If not, contact Reactor Engineering.**

Standard: Operator identifies that MFLPD at location 29-14-15 has exceeded the Administrative limit.

Contacts Reactor Engineering and informs them of the MFLPD Administrative Limit being exceeded.

Interim Cues: Acknowledge as Reactor Engineering

SAT/UNSAT

Step 4: Notifies Shift Manager of MFLPD has exceeding the Administrative Limit.

Standard: Notifies Shift Manager

Interim Cues:

Acknowledge as the Shift Manager

SAT/UNSAT

***Step 5: Verify the Acceptance Criteria below are satisfied. If A, B, C or D below are not satisfied, enter applicable Tech. Spec. LCO.**

Standard: Operator verifies that MFLCPR, MFLPD and MAPRAT are all ≤ 1 and that APRM Gain is ≥ 1.0 (provided from earlier cue). Subsequently, all Tech Spec Acceptance Criteria has been satisfied (No T.S. violation).

Terminating Cue:

Once the operator completes the form and identifies the thermal limit Administrative Limit violation, the JPM is complete.

TIME FINISH: _____

Evaluator Comments: _____

System:

K/A: 2.1.7