

ADMIN QUESTION

FACILITY: VERMONT YANKEE

DATE:

CANDIDATE: _____

RO: X **SRO:** X

SUBJECT: Conduct of Operations

K/A: 295021A205(3.4/3.4)

QUESTION: OPEN REFERENCE

The plant had been in Hot Shutdown with shutdown cooling in service when the running RHR pump tripped. Forced circulation cannot be re-established.

What indications are used to determine whether temperature stratification is occurring?
What would be the indications that stratification is occurring?

EXPECTED ANSWER:

Temperature stratification may be detected by monitoring skin temperatures using TR 2-3-89 and TR 2-3-90.

Indications of stratification are wide variance in vessel skin temperatures, location to location, top to bottom, and around the vessel circumference.

REFERENCE:

ON3156, Section B.6

SAT: _____ **UNSAT:** _____

✓

ADMIN QUESTION

FACILITY: VERMONT YANKEE

DATE:

CANDIDATE: _____

RO: X SRO: X

SUBJECT: Conduct of Operations

K/A: 295021G2122(2.8/3.3)

QUESTION: OPEN REFERENCE

The plant has lost all means of shutdown cooling while in Cold Shutdown. The following conditions exist:

- temperature readings indicate reactor water temperature is rising 1.5 degrees every 7 minutes
- current reactor temperature is 123 degrees F
- the vessel head is installed

Assuming no means of core cooling becomes available, when will the plant change modes?

EXPECTED ANSWER:

212 degrees - 123 degrees = 99 degrees

99 degrees/1.5 deg/7 min. = 462 minutes/60 min/hr = 7.7 hrs = 7 hrs 42 min

CANDIDATE ANSWER:

REFERENCE:

ON3156, Section B.7

SAT:

UNSAT:

ADMIN JPM

FACILITY: Vermont Yankee

DATE: _____ **TIME START:** _____ **TIME COMPLETE:** _____

JPM TITLE: Perform control room emergency communications checks

K/A# G2.4.43 [2.8/3.5]

SIMULATOR: X **CONTROL RM:** X **IN-PLANT:** _____

FAULTED: YES _____ NO X

TIME CRITICAL: YES _____ NO X

CANDIDATE: _____

R X S _____

EXAMINER: _____

SAT: _____ UNSAT: _____

REFERENCE:

OP3506 and VYOPF 3506.01.

COMMENTS:

JPM TITLE: Perform control room emergency communications checks

PROCEDURES/ REFERENCES:

1. OP 3506, REV.38, Section "A"
2. VYOPF 3506.01, REV.38 - COMMUNICATIONS CHECKLIST

TASK STANDARD:

The candidate tests equipment identified in section "A", and completes the checklist.

INITIATING CUE:

1. The plant is operating at 100% reactor power
2. All systems are operable

TASK:

Perform the monthly communications check per OP 3506, REV.38, Section "A" (only steps 1 and 2), and complete any associated paperwork.

JPM BRIEFING: - READ TO THE OPERATOR

I will explain the initial conditions and provide all required cues. When verifying a parameter state exactly what it is you are looking at and what you expect to see. When you complete the task, **NOTIFY THE EXAMINER THAT YOU HAVE FINISHED**. You may use any approved plant procedure or reference, including logs, except for those evolutions which would be required to be performed from memory, i.e., immediate operator actions. Make all required written reports, oral reports and log entries as if the evolution is actually being performed.

JPM PERFORMANCE STEPS

Critical steps are noted where applicable in individual steps of the JPM. Failure to meet the standards for a critical step constitutes failure of the JPM. The sequence of steps is assumed unless otherwise denoted.

___1. Refers to OP 3506, A1, and contacts VT, MASS, and NH

STANDARD:

Contacts VT, MASS, NH

SAT: UNSAT:

___2. Advises each police agency of the test of the Nuclear Alert System

STANDARD:

Each police agency notified

SAT: UNSAT:

___3. Tests the group call capability with the police agencies

STANDARD:

Dials 111 to test Group call capability

SAT: UNSAT:

___4. Notify the following if any part of system ...

STANDARD:

N/A

___5. Notify the state Emergency Management office if any part of system ...

STANDARD:

N/A

___6. Tests ENS phone:

- Lifts receiver, hears dial tone, and dials 301-816-5100 or 301-951-0550.
- Gives name, location, and fact that he is testing the ENS, and to call him back at 700-661-4323.

STANDARD:

Tests the NRC FTS 2000 ENS phone in the control room

SAT: UNSAT:

END

ADMIN JPM

FACILITY: Vermont Yankee

DATE: _____ TIME START: _____ TIME COMPLETE: _____

JPM TITLE: Classify event based on simulated plant conditions

K/A# G2.4.41 (2.3/4.1)

SIMULATOR: X CONTROL RM: _____ IN-PLANT: _____

FAULTED: YES _____ NO X

TIME CRITICAL: YES _____ NO X

CANDIDATE: _____

R _____ S X

EXAMINER: _____

SAT: _____ UNSAT: _____

REFERENCE:

facility help

COMMENTS:

JPM TITLE: Classify event based on simulated plant conditions

PROCEDURES/ REFERENCES:

facility help

TASK:

Given simulated, as-found, plant conditions following completed scenario, correctly classify event.

TASK STANDARD:

The candidate correctly applies emergency classification guidelines for simulated plant conditions.

INITIAL CONDITIONS:

Simulated plant conditions following scenario and simulator in freeze.

INITIATING CUES:

You are the Shift Supervisor. Classify the event. Use as-found simulator conditions.

JPM BRIEFING: - READ TO THE OPERATOR

I will explain the initial conditions and provide all required cues. When verifying a parameter state exactly what it is you are looking at and what you expect to see. When you complete the task, **NOTIFY THE EXAMINER THAT YOU HAVE FINISHED**. You may use any approved plant procedure or reference, including logs, except for those evolutions which would be required to be performed from memory, i.e., immediate operator actions. Make all required written reports, oral reports and log entries as if the evolution is actually being performed.

JPM PERFORMANCE STEPS

Critical steps are noted where applicable in individual steps of the JPM. Failure to meet the standards for a critical step constitutes failure of the JPM. The sequence of steps is assumed unless otherwise denoted.

1. Applicant reviews plant conditions once simulator is placed in freeze.

STANDARD:

As stated

SAT: UNSAT:

- ___2. Classifies event using appropriate emergency classification guide.

STANDARD:

Event Declaration will depend on each scenario. Facility to provide independent check.

SAT: UNSAT:

END

ADMIN QUESTION

FACILITY: VERMONT YANKEE

DATE: _____

CANDIDATE: _____

RO: X **SRO:** _____

SUBJECT: Radiation Control

K/A: 2.3.4 (2.5/3.1)

QUESTION: **CLOSED REFERENCE**

An unusual event has been declared due to a seismic event. The facility has entered the appropriate off-normals and the emergency plan. You have been asked to enter the RWCU pipe chase (*facility help*) to determine the conditions of the piping in that area. Your current year exposure is 1970 mrem, TEDE. The inspection is expected to take 30 minutes in an area where dose rates are 250 mrem/hr.

May you enter the area to perform the task without exceeding any administrative dose limit? What is your basis?

EXPECTED ANSWER:

No. The expected dose received would result in exceeding the admin limit of 2000 mrem TEDE per year.

$$1970 + 30/60(250) = 2220 \text{ mrem}$$

REFERENCE:

facility help

SAT: _____ **UNSAT:** _____

ADMIN QUESTION

FACILITY: VERMONT YANKEE

DATE:

CANDIDATE: _____

RO: X SRO: _____

SUBJECT: Radiation Control

K/A: G2.3.4 [2.5/3.1]

QUESTION: OPEN REFERENCE

Entry into a locked high rad area is required, however, RP cannot support the entry.

What requirements must be met for you to enter the LHRA without RP escort?

EXPECTED ANSWER:

1. Must be self-monitored
2. Dose rate must be less than 10 r/hour
3. Carry a monitoring device that continuously indicates dose rate and/or that alarms
4. Facility help

*spelling ↗
alarms ↖*

CANDIDATE ANSWER:

REFERENCE:

facility help

SAT:

UNSAT:

ADMIN QUESTION**FACILITY:** VERMONT YANKEE**DATE:****CANDIDATE:** _____**RO:** _____ **SRO:** X **SUBJECT:** Radiation Control**K/A:** G2.3.1 [2.6/3.0]**QUESTION:** OPEN REFERENCE

An operator has just formally declared her pregnancy in writing. She is at the end of the 2nd month of her pregnancy. Her dose for the last two months is 25 mrem TEDE and 0 mrem CEDE.

What are her exposure limitations (TEDE, CEDE) for the rest of her pregnancy?

EXPECTED ANSWER:

TEDE limit is 500 mrem for entire pregnancy; admin limits are 50 mrem/month or less, and 450 mrem for entire period. Therefore, remainder of the pregnancy TEDE is $450 - 25 = 425$ mrem. CEDE is limited to 50 mrem/year.

CANDIDATE ANSWER:**REFERENCE:**facility help**SAT:****UNSAT:****END**

ADMIN QUESTION

FACILITY: VERMONT YANKEE

DATE:

CANDIDATE: _____

RO: _____ SRO: X

SUBJECT: Radiation Control

K/A: 2.3.4 (2.5/3.1)

QUESTION: CLOSED REFERENCE

An unusual event has been declared due to a seismic event. The facility has entered the appropriate off-normals and the emergency plan. An operator is to be sent into the RWCU pipe chase (*facility help*) to determine the conditions of the piping in that area. His current year exposure is 1970 mrem, TEDE. His inspection is expected to take 30 minutes in an area where dose rates are 250 mrem/hr.

May you send the operator into the area to perform the task without him exceeding any administrative dose limit? What is the basis for your decision?

EXPECTED ANSWER:

No. The expected dose received would cause the operator to exceed the admin limit of 2000 mrem TEDE per year.

$$1970 + 30/60(250) = 2220 \text{ mrem}$$

REFERENCE:

facility help

SAT: _____ UNSAT: _____

ADMIN JPM

FACILITY: Vermont Yankee

DATE: _____ TIME START: _____ TIME COMPLETE: _____

JPM TITLE: Perform RCS temperature checks

K/A# G2.1.32 (3.4/3.8)

SIMULATOR: X CONTROL RM: _____ IN-PLANT: _____

FAULTED: YES X NO _____

TIME CRITICAL: YES _____ NO X

CANDIDATE: _____

R X S _____

EXAMINER: _____

SAT: _____ UNSAT: _____

REFERENCE:
OP4110.05

COMMENTS:

JPM TITLE: Perform RCS temperature checks

PROCEDURES/ REFERENCES:

OP4110.05

TASK:

Perform RCS temperature checks prior to starting "B" RR pump

TASK STANDARD:

The candidate detects temperature of idle loop is not within 50 degrees of operating loop and determines "B" RR pump should not be started.

INITIAL CONDITIONS:

The plant is operating at 40% reactor power (*check with facility on power*)

"A" RR pump is in operation

The shift is preparing to start "B" RR pump

INITIATING CUES:

You are the SCRO during preparations for starting "B" RR pump. Perform RCS temperature checks per OP4110.05 and determine whether pump may be started. (Do not perform daily jet pump operability checks.)

JPM BRIEFING: - READ TO THE OPERATOR

I will explain the initial conditions and provide all required cues. When verifying a parameter state exactly what it is you are looking at and what you expect to see. When you complete the task, **NOTIFY THE EXAMINER THAT YOU HAVE FINISHED.** You may use any approved plant procedure or reference, including logs, except for those evolutions which would be required to be performed from memory, i.e., immediate operator actions. Make all required written reports, oral reports and log entries as if the evolution is actually being performed.

JPM PERFORMANCE STEPS

Critical steps are noted where applicable in individual steps of the JPM. Failure to meet the standards for a critical step constitutes failure of the JPM. The sequence of steps is assumed unless otherwise denoted.

___1. Refers to OP 4110.05, temperature check data sheet.

STANDARD:

Locates correct form in procedure book

EXAMINER CUE:

Provide applicant with blank surveillance form

SAT: UNSAT:

___2. Records data per surveillance ... *(facility help)*

STANDARD:

See completed facility form *(facility help)*

SAT: UNSAT:

___3. Detects temperature of loop B is not within 50 degrees of loop A (NOTE b of surveillance) and determines that "B" RR pump should not be started.

STANDARD:

as stated

SAT: UNSAT:

END

ADMIN JPM

FACILITY: Vermont Yankee

DATE: _____ TIME START: _____ TIME COMPLETE: _____

JPM TITLE: Review RCS temperature checks

K/A# G2.1.32 (3.4/3.8)

SIMULATOR: X CONTROL RM: _____ IN-PLANT: _____

FAULTED: YES X NO _____

TIME CRITICAL: YES _____ NO X

CANDIDATE: _____

R _____ S X

EXAMINER: _____

SAT: _____ UNSAT: _____

REFERENCE:
OP4110.05

COMMENTS:

JPM TITLE: Review RCS temperature checks

PROCEDURES/ REFERENCES:

OP4110.05

TASK:

Review RCS temperature checks prior to starting "B" RR pump

TASK STANDARD:

The candidate detects temperature of idle loop is not within 50 degrees of operating loop and determines "B" RR pump should not be started.

INITIAL CONDITIONS:

The plant is operating at 40% reactor power *(check with facility on power)*

"A" RR pump is in operation

The shift is preparing to start "B" RR pump

INITIATING CUES:

You are the SRO during preparations for starting "B" RR pump. RCS temperature checks have been recorded per OP4110.05. Review the data and determine whether pump "B" may be started. (Daily jet pump operability checks will not be required.)

JPM BRIEFING: - READ TO THE OPERATOR

I will explain the initial conditions and provide all required cues. When verifying a parameter state exactly what it is you are looking at and what you expect to see. When you complete the task, **NOTIFY THE EXAMINER THAT YOU HAVE FINISHED.** You may use any approved plant procedure or reference, including logs, except for those evolutions which would be required to be performed from memory, i.e., immediate operator actions. Make all required written reports, oral reports and log entries as if the evolution is actually being performed.

JPM PERFORMANCE STEPS

Critical steps are noted where applicable in individual steps of the JPM. Failure to meet the standards for a critical step constitutes failure of the JPM. The sequence of steps is assumed unless otherwise denoted.

EXAMINER CUE: Provide applicant with completed surveillance form

___1. Applicant reviews completed form.

STANDARD:
Reviews data

SAT: UNSAT:

___2. Detects temperature of loop B is not within 50 degrees of loop A (NOTE b of surveillance) and determines that "B" RR pump should not be started.

STANDARD:
as stated

SAT: UNSAT:

END

VALID ONLY WHEN
STAMP IS RED

VERMONT YANKEE NUCLEAR POWER CORPORATION
JOB PERFORMANCE MEASURE
WORKSHEET

Task Identification:

Title: Perform Reactor Coolant Temperature Check
Reference: OP 4110, Reactor Recirc System
Task Number: 2020030201

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: _____

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] 1/5/95
Operations Training Instructor Date

Reviewed by: [Signature] 1-9-95
SRO Licensed/Certified Reviewer Date

Approved by: [Signature] 2/5/95
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, tell you which step(s) to simulate or discuss, and answer any questions you have.

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" recirculation loop prepared for pump start IAW Section A of OP 2110.

Initiating Cues: SS directs you to perform a reactor coolant temperature check in preparation for recirc pump startup.

Task Standards: Reactor coolant temperature check completed.

Required Materials: OP 4110, Reactor Recirc System, VYOPF 4110.05, Reactor coolant temperature check data sheet

General References:

Simulator Setup: Any IC, "A" Recirc Pump Secured, "B" Recirc Pump running at minimum

Evaluation

Performance Steps

TIME START: _____

SAT/UNSAT

Step 1: Obtain procedure, review administrative limits and precautions.

Standard: OP 4110, Section E obtained, administrative limits and precautions reviewed.

Interim Cue:

If asked, inform operator that all prerequisites are satisfied.

SAT/UNSAT

Step 2: Obtain VYOPF 4110.05.

Standard: VYOPF 4110.05 obtained.

Interim Cue:

Provide operator with VYOPF 4110.05

SAT/UNSAT

***Step 3: Record recirc loop A temp.**

Standard: Recirc loop A temperature recorded from Recorder TR-2-165 on CRP 9-4 Vertical within $\pm 5^{\circ}\text{F}$.

SAT/UNSAT

***Step 4: Record recirc loop B temp.**

Standard: Recirc loop B temperature recorded from Recorder TR-2-165 on CRP 9-4 Vertical within $\pm 5^{\circ}\text{F}$.

SAT/UNSAT

***Step 5: Record reactor pressure.**

Standard: Operator records reactor pressure from any one of the following to an accuracy of ± 5 psig:

- | | | |
|----|---------------|------------------------------------|
| a. | PR-6-96 | CRP 9-5 Wide Range or Narrow Range |
| b. | PI-2-3-56 A/B | CRP 9-5 Vertical |
| c. | LR/PR 68 | CRP 9-4 Vertical |
| d. | LR/PR 67 | CRP 9-3 Vertical |
| e. | PI-101-22 | CRP 9-7 Vertical |

SAT/UNSAT

***Step 6: Record Point #4 on TR 2-3-89.**

Standard: Point #4 on TR 2-3-89 on CRP 9-21 recorded within $\pm 5^{\circ}\text{F}$.

Evaluation

Performance Steps

SAT/UNSAT

***Step 7:** Determine saturation temperature corresponding to above reactor pressure from saturated steam tables and record.

Standard: Saturation temperature determined and recorded using steam tables.

SAT/UNSAT

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

Standard: Difference between Saturation Temperature and Bottom Vessel Drain Temperature determined and recorded.

Interim Cue:

When the operator indicates that he would start the pump at this time the evaluator should inform the operator that no further actions are required for completion of this JPM task.

TIME FINISH _____

Terminating Cue:

Reactor coolant temperature check of OP 4110 completed and given to the Shift Supervisor.

Evaluators Comments:

System: 202001 K/A's:

- K1.01 K1.26 K4.09 A1.05 A4.01
- K1.02 K4.12 A1.13
- K1.03

* System Generic K/A's: 1, 5, 6, 8, 9, 10, 11, 13

ADMIN JPM

FACILITY: Vermont Yankee

DATE: _____ TIME START: _____ TIME COMPLETE: _____

JPM TITLE: Respond to medical emergency

K/A# G2.1.2 (3.0/4.0)

SIMULATOR: X CONTROL RM: X IN-PLANT: _____

FAULTED: YES _____ NO X

TIME CRITICAL: YES _____ NO X

CANDIDATE: _____

R X S _____

EXAMINER: _____

SAT: _____ UNSAT: _____

REFERENCE:

OP3508

COMMENTS:

JPM TITLE: Respond to a medical emergency

PROCEDURES/ REFERENCES:

OP3508

TASK:

Respond to report of an injured man in the turbine building

TASK STANDARD:

The candidate makes the appropriate announcement for an injured man per OP3508

INITIAL CONDITIONS:

The plant is operating at 100% reactor power

INITIATING CUES:

You are the SCRO when Security calls with a report that a mechanic has fallen from scaffolding in the turbine building and appears to have broken a leg. Perform the applicable immediate actions for this report.

JPM BRIEFING: - READ TO THE OPERATOR

I will explain the initial conditions and provide all required cues. When verifying a parameter state exactly what it is you are looking at and what you expect to see. When you complete the task, **NOTIFY THE EXAMINER THAT YOU HAVE FINISHED.** You may use any approved plant procedure or reference, including logs, except for those evolutions which would be required to be performed from memory, i.e., immediate operator actions. Make all required written reports, oral reports and log entries as if the evolution is actually being performed.

JPM PERFORMANCE STEPS

Critical steps are noted where applicable in individual steps of the JPM. Failure to meet the standards for a critical step constitutes failure of the JPM. The sequence of steps is assumed unless otherwise denoted.

___1. Refers to OP 3508, Section A, Immediate actions for a medical emergency

STANDARD:

As stated

SAT: UNSAT:

___2. Any individual discovering a medical emergency ...

STANDARD:

n/a

___3. Turns page system volume switch to ALERT position

STANDARD:

Volume switch in ALERT position

SAT: UNSAT:

___4. Makes announcement:
 "Medical emergency, medical emergency. Medical assistance needed at (*facility help*), medical response team respond. Medical assistance needed at (*facility help*), medical response team respond. "

STANDARD:

Medical emergency announcement made.

SAT: UNSAT:

END

ADMIN JPM

FACILITY: Vermont Yankee

DATE: _____ TIME START: _____ TIME COMPLETE: _____

JPM TITLE: Respond to a fire

K/A# G2.1.2 (3.0/4.0)

SIMULATOR: X CONTROL RM: X IN-PLANT: _____

FAULTED: YES _____ NO X

TIME CRITICAL: YES _____ NO X

CANDIDATE: _____

R _____ S X

EXAMINER: _____

SAT: _____ UNSAT: _____

REFERENCE:
OP3020

COMMENTS:

JPM TITLE: Respond to a fire

PROCEDURES/ REFERENCES:
OP3020

TASK:
Respond to indications of a fire in the east switchgear room

TASK STANDARD:
The candidate makes the appropriate announcement of a fire and directs response per step 2 of OP3020

INITIAL CONDITIONS:
The plant is operating at 100% reactor power

INITIATING CUES:
Control room annunciator (*facility help*) alarms, followed by indications of CO2 discharge

JPM BRIEFING: - READ TO THE OPERATOR

I will explain the initial conditions and provide all required cues. When verifying a parameter state exactly what it is you are looking at and what you expect to see. When you complete the task, **NOTIFY THE EXAMINER THAT YOU HAVE FINISHED.** You may use any approved plant procedure or reference, including logs, except for those evolutions which would be required to be performed from memory, i.e., immediate operator actions. Make all required written reports, oral reports and log entries as if the evolution is actually being performed.

JPM PERFORMANCE STEPS

Critical steps are noted where applicable in individual steps of the JPM. Failure to meet the standards for a critical step constitutes failure of the JPM. The sequence of steps is assumed unless otherwise denoted.

___1. Refers to OP 3020, Section C, CR response to report of a fire

STANDARD:

As stated

SAT: UNSAT:

___2. If fire is stated to be extinguished ...

STANDARD:

n/a

___3. Makes announcement on plant paging system:

- a. Page volume to ALERT
- b. n/a
- c. "Fire, fire , fire. There is a Zone (*facility help*) fire alarm. All non-essential personnel stay clear of the area.
- d. n/a
- e. "Fire brigade respond to (*facility help*). All personnel evacuate the switchgear rooms, the admin building lower level and lobby. All personnel evacuating will report to the west side of the admin building."

STANDARD:

Announcement is made per procedure

SAT: UNSAT:

___4. Upon confirmation that fire is not immediately extinguished ...

EXAMINER CUE: Brigade leader reports fire is out.

STANDARD:

n/a

SAT: UNSAT:

___5. For verified CO2 discharge in the switchgear room, consult Appendix V

STANDARD:

Consults Appendix V

EXAMINER CUE (after applicant locates Appendix V): SE will complete review of Appendix V for applicability

SAT: UNSAT:

___6. Consider declaring a plant emergency in accordance with OP3125 if fire potentially affects safety systems

EXAMINER CUE: Effects of fire on safety systems are indeterminate

STANDARD:

Declares UE

SAT: UNSAT:

END