Facility: Vermont Yankee Date of Examination: Jan 31, 2005

Examination Level (circle one): SRO Operating Test Number: 1

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N, S	A.1 Respond to a Code Red Event (Note 1) 2.1.13 SRO 2.9
Conduct of Operations	M, D	A.2 (29902) Evaluate CRO logs for readings out of specification and determine required action 2.1.18 SRO 3.0
Equipment Control	D	A.3 (23411) Respond to lowering spent fuel pool level during refueling 2.2.28 SRO 3.3
Radiation Control	D, P	A.4 (29903) Locate and determine radiological conditions for valve inspection 2.3.4 SRO 3.1
Emergency Plan	D, S	A.5 (20036) Offsite Protective Action Recommendation Using ODPS (Note 1) 2.4.44 SRO 4.0

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:
(C)ontrol room
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)
(S)imulator

Note 1: Changed from initial outline.

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:

An armed man is attempting to enter the protected area. He has fired at the security officers and at both the main and startup transformers. He is currently pinned down behind a concrete barrier in the old parking lot. The Security Shift Supervisor has just declared that a "Code Red" condition exists.

Initiating Cues:

The Shift Manager has directed you to carry out the actions required for a Code Red.

Task Standards:

Send a licensed operator out of the control room, notify plant personnel of a Code Red security condition, declare an Unusual Event and initiate the pager system.

Required Materials:

OP 3132, Operations Department Response to Security Events
AP 3125, Emergency Plan Classification and Action Level Scheme

Simulator Setup:

Any 100% power IC
Take positive steps to ensure no outside notifications

Evaluation	Performance Steps	
	TIME START: _____	
SAT/UNSAT	**Step 1:**	**Obtain OP 3132.**
	Standard:	Obtain OP 3132.
SAT/UNSAT	**Step 2:**	**Use Code Red Appendix.**
	Standard:	Utilizes Appendix A.
SAT/UNSAT	***Step 3:**	**Dispatch a Licensed Operator.**
	Standard:	Sends a licensed operator outside of control room with radio and key ring.

Interim Cue: An operator has left the control room with a key ring and radio.

SAT/UNSAT	**Step 4:**	**Engage Control Room Dead Bolt.**
	Standard:	Indicates he would engage dead bolts.

Interim Cue: The dead bolts have been engaged.

SAT/UNSAT	**Step 5:**	**Set Paging Systems to Alert.**
	Standard:	Turns Page Sys Volume and Alarm Tone Select on CRP 9-10 to Alert.
SAT/UNSAT	***Step 6:**	**Make Announcement.**
	Standard:	Informs plant personnel that a Code Red exists and they should not move about the plant.
SAT/UNSAT	**Step 7:**	**Repeat Announcement.**
	Standard:	Repeats above announcement.

Evaluation	Performance Steps	
SAT/UNSAT	**Step 8:**	**Turn Page System to OFF.**
	Standard:	Places Page Sys Volume and Alarm Tone Select switch on CRP 9-10 to OFF.
SAT/UNSAT	**Step 9:**	**Place Outdoor Page Silence Switch to NORM.**
	Standard:	Verifies Outdoor Page Silence Switch is in NORM.
SAT/UNSAT	***Step 10:**	**Insert a Scram.**
	Standard:	Initiates a manual scram.
SAT/UNSAT	**Step 11:**	**Scram actions.**
	Standard:	Initiates immediate scram actions as follows: • Verifies all rods inserted • Power downscale on APRMs • Depresses PB1 on Master FW controller • Mode switch to SHUTDOWN after MS flow <0.5 Mlbm/hr

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Interim Cue: The operator at the controls and the Shift Manager will perform Steps B.2 to B.4.

SAT/UNSAT	***Step 12:**	**Review OP 3125.**
	Standard:	Determines a UE or Alert should be declared per U9a/U10a or A9a/A10a.

Interim Cue: The Shift Manager will review your recommendation and the STA will fill out the paperwork.

SAT/UNSAT	**Step 13:**	**Start to Dial the Pager System.**
	Standard:	Candidate indicates he would dial the pager system.

Interim Cue: The Shift Manger will complete the remainder of the Code Red procedure.

EXAMINEE HANDOUT

Initial Conditions:

An armed man is attempting to enter the protected area. He has fired at the security officers and at both the main and startup transformers. He is currently pinned down behind a concrete barrier in the old parking lot. The Security Shift Supervisor has just declared that a "Code Red" condition exists.

Initiating Cues:

The Shift Manager has directed you to carry out the actions required for a Code Red.

VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET

Task Identification:

Title: Respond to Lowering Spent Fuel Pool Level During Refueling

Reference: OP 1101

Task Number: 2337140401, 34102903, 34404203

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

Sequence Critical: Yes ___ No X

Time Critical: Yes ___ No X

Operator Performing Task: _____

Examiner: _____

Date of Evaluation: _____

Activity Code: _____

Method of Testing: Simulation X Performance __ Discuss

Setting: Classroom __ Simulator __ Plant X

Performance Expected Completion Time: 15 minutes

Evaluation Results:

Performance: PASS __ FAIL __ Time Required: _____

Prepared by: Frank Hayes — Operations Training Instructor — 11/30/04 — Date

Reviewed by: Thomas Scott — SRO Licensed/Certified Reviewer — 11/30/04 — Date

Approved by: [signature] — Operations Training Superintendent — 12/1/04 — 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.

Initial Conditions:

Refueling is in progress and you are the SRO on the refueling bridge. An AO and spotter are on the bridge with you moving fuel. A new fuel bundle has been grappled and is being raised from location R-41 in the Spent Fuel Pool. It has not yet cleared the rack.

Initiating Cues:

You notice an unexpected drop in fuel pool level, lowering at about 1 inch per minute. There are no radiation alarms. You are to take any required actions.

Task Standards:

Respond in accordance with OP 1101, precaution 4, evacuate the refuel floor and initiate makeup to the fuel pool.

Required Materials:

OP 1101

General References:

None

Evaluation **Performance Steps**

TIME START: _____

SAT/UNSAT ***Step 1:** **Direct Refuel Platform Operator to Stop Raising the New Fuel Bundle**

Standard: Direction given to platform operator to stop.

Interim Cue: Grapple raise motion is stopped.

SAT/UNSAT ***Step 2:** **Direct Refuel Platform Operator to Lower the New Fuel Bundle to Full Down**

Standard: Direction given to lower the bundle full down in SFP R-41 or any empty fuel pool location.

Interim Cue: The bundle has been lowered to the full down position.

Note: The candidate may direct that the main grapple be opened; however this is not required.

SAT/UNSAT ***Step 3:** **Direct All Refuel Floor Personnel to Evacuate the Refuel Floor**

Standard: Direction given to all refuel floor personnel to evacuate.

Interim Cue: Refuel floor personnel have commenced evacuation. **The Shift Manager directs you to initiate makeup to the spent fuel pool, *prior to you evacuating,* by opening DW-111, and report back on level.**

Evaluation **Performance Steps**

SAT/UNSAT ***Step 4:** **Open DW-111**

Standard: Candidate rotates DW-111 handwheel counter clock-wise until resistance is felt.

Interim Cue: DW-111 handwheel rotates smoothly CCW until resistance is felt. Fuel pool level is now rising.

SAT/UNSAT **Step 5: Report to Control Room that DW-111 is OPEN**

Standard: Make report to control room that DW-111 is open and level is rising.

Interim Cue: **NO FURTHER ACTIONS ARE REQUIRED FOR THIS JPM.**

TIME FINISH: _____

Terminating Cue: New fuel bundle returned to full down , refuel floor being evacuated, DW-111 open providing SFP makeup.

Evaluators Comments: _____

K/A's: 2.2.28 SRO 3.3

EXAMINEE HANDOUT

Initial Conditions:

Refueling is in progress and you are the SRO on the refueling bridge. An AO and spotter are on the bridge with you moving fuel. A new fuel bundle has been grappled and is being raised from location R-41 in the Spent Fuel Pool. It has not yet cleared the rack.

Initiating Cues:

You notice an unexpected drop in fuel pool level, lowering at about 1 inch per minute. There are no radiation alarms. You are to take any required actions.

VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET

Task Identification:

Title: Evaluate CRO Logs for Readings Out of Specification and Determine Required Actions
Failure Mode: N/A
Reference: OP 0150, "Conduct of Operations and Operator Rounds"
Task Number: 2990090301

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 _X_ Simulator ___ Plant ____

Performance Expected Completion Time: 20 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: Fred Fagan — Operations Training Instructor — 11/30/04 — Date

Reviewed by: Fred Fagan for T. Schultz — SRO Licensed/Certified Reviewer per Telecon — 11/30/04 — Date

Approved by: _____ — Operations Training Superintendent — 12/1/04 — 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 **Classroom** 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 at 100% power. The following equipment was taken out of service on the last shift:

"A" Rx Bldg Supply Fan for lubrication
"B" RHRSW pump for impeller replacement

There is one active 30 day LCO for the RHRSW pump per Tech Specs 3.5.c.2. The plant is in summer time operations with circ water in closed cycle operation.

Initiating Cues:

The Shift Manager has requested you to review a CRO trainee's practice set of log entries, pages 24-27.

Task Standards:

It is determined that the current cooling tower basin temperature requires all 4 RHRSW pumps operable and, with one pump inoperable, Alternate Cooling is inoperable and a 7 day LCO is entered.

Required Materials:

OP 0150, "Conduct of Operations and Operator Rounds" (latest revision), including sheets 24-27 and completed with appropriate data
OP 2181 "Service Water/Alternate Cooling Operating Procedure
Tech Specs

Simulator Setup: N/A

Evaluation **Performance Steps**

TIME START: _____

SAT/UNSAT **Step 1: Obtain Procedure OP 0150, Operator Rounds, and review procedure.**

Standard: OP 0150 obtained and reviewed.

Interim Cue: Provide log sheets (VYOPF 0150.03 Sheets 24-27) with appropriate data filled in.

Note: If the candidate questions the accuracy of a log entry, inform him the readings are accurate.

SAT/UNSAT **Step 2: Review log readings.**

Standard: Compare log entry to log's Required Condition

SAT/UNSAT **Step 3: Determines inappropriate "lineout" of reading**

Standard: Indicates that the Torus Water Volume reading should have initials next to the lineout.

SAT/UNSAT **Step 4: Reviews OP 2181**

Standard: Reviews OP 2181 admin for required RHRSW pumps

SAT/UNSAT ***Step 5: Determine basin temperature and RHRSW requirements .**

Standard: Determines 4 RHRSW pumps required.

SAT/UNSAT **Step 6: Notify Shift Manager.**

Standard: Candidate informs Shift Manager that the plant has less than the required 4 RHRSW pumps.

Interim Cue: Shift Manager requests that you determine what actions are required.

Note: The candidate may determine Tech Spec required actions before informing the Shift Manager.

Evaluation	Performance Steps	
SAT/UNSAT	*Step 7:	Determine LCO
	Standard:	Candidate determines that the Alternate Cooling System is inoperable and the plant is in a 7 day LCO
SAT/UNSAT	Step 8:	Notify Shift Manager.
	Standard:	Candidate informs Shift Manager that the Alternate Cooling System is inoperable and the plant is in a 7 day LCO.
SAT/UNSAT	Step 9:	Complete review of logs
	Standard:	Candidate continues to review logs.

Interim Cue: The Shift Manager will complete the review of the logs.

* Critical Step

TIME FINISH: _____

Terminating Cue: It is determined that the current cooling tower basin temperature requires all 4 RHRSW pumps operable and, with one pump inoperable, Alternate Cooling is inoperable and a 7 day LCO is entered.

Evaluator Comments: _____

System: **K/A's:**

System Generic K/A's: 2.1.18 SRO 3.0

EXAMINEE HANDOUT

Initial Conditions:

The plant is at 100% power. The following equipment was taken out of service on the last shift:

"A" Rx Bldg Supply Fan for lubrication
"B" RHRSW pump for impeller replacement

There is one active 30 day LCO for the RHRSW pump per Tech Specs 3.5.c.2. The plant is in summer time operations with circ water in closed cycle operation.

Initiating Cues:

The Shift Manager has requested you to review a CRO trainee's practice set of log entries, pages 24-27. ~~You are to ensure the entries are appropriately entered, per OP 0150, and to ensure all readings~~ are ~~in spec.~~

EXAMINEE HANDOUT

Initial Conditions:

The plant is at 100% power. The following equipment was taken out of service on the last shift:

"A" Rx Bldg Supply Fan for lubrication
"B" RHRSW pump for impeller replacement

There is one active 30 day LCO for the RHRSW pump per Tech Specs 3.5.c.2. The plant is in summer time operations with circ water in closed cycle operation.

Initiating Cues:

The Shift Manager has requested you to review a CRO trainee's practice set of log entries, pages 24-27.

CRO ROUND SHEET (Continued) Date_____

	TS [TRM] (ODCM)	REQUIRED CONDITION	00-06	06-12	12-18	18-24
H_2AN-OG 2921 (A/B) (SR 91-75)	3.8.3.1 4.8.J.1 (4.3.4) (T.4.1.2)	1. <100% of Full Scale (100%=4%H_2) 2. Agrees w/in 10% Full Scale of H_2AN-OG 2922 (A/B)	0.0 SAT-B	0.0 SAT-B		
H_2AN-OG 2922 (A/B)		1. <100% of Full Scale (100%=4%H_2) 2. Agrees w/in 10% Full Scale of H_2AN-OG 2921 (A/B)	0.0 SAT-B	0.0 SAT-B		
Rad Monitor 3127/3128 (SR 90-20) (SR 91-75)	(4.3.4) (T.4.1.2)		708 303	686 281		
Rad Monitor 3127/3128 Instrument Check		Agree w/in 1 decade	SAT	SAT		
HVAC Fans (AC, AH, & EXH)		Train A or B Running (Note a combination of A and B fans running is an indication that a standby unit may have auto-started)		B		

CRP 9-23

Bearing Metal Temps (TR-110-5/R-1) (ER950525_02)		• Thrust Bearing (Front & Rear Plate Metal) ≤225°F. • All bearings ≤225°F.	SAT SAT	SAT SAT		
Hotwell Conductivity A/B (CR 109-21/23)		Highest Channels <0.2 µmho/cm		0.04 0.06		
Outside Gai-Tronics		Normally off 1800-0600 weekdays and all day weekends/holidays		ON		

	TS [TRM] (ODCM)	REQUIRED CONDITION	00-06	06-12	12-18	18-24
OTHER						
Control Room Fire Detection Panel (CP-115-3)	[3.13.A.1]	Power Available/No Alarms		SAT		
Turbine Bearing Oil Temps Check (ERFIS TBD Screen) (ER950525_02)		≤35°F ΔT rise across bearings	SAT	SAT		
Turbine Bearing Vibration (ERFIS TBD Screen)		If any Turbine Bearing Vibration exceeds 6 mils, notify Mechanical Maintenance Manager via e-mail		SAT		
Compensated Torus Water Volume (C029 or LI-16-19-46A/B and OP 2115 Fig. 1)	3.7.A.1.e 3.7.A.1.f 4.7.A.1	• 68,255-69,745 cubic feet • If Torus water level is not w/in the Acceptable Range/Region, notify the Operations Manager and enter Tech. Spec. LCO 3.7.A.8.		69190 ~~69189~~		
Core Thermal Power C047		≤1593 MWt	1591.6			
Compensated Torus Water Temperature (C207) or Average Torus Water Temperature from TI-16-19-33A/C	3.7.A.1 4.7.A.1	Average Temperature 50 - 87.3°F. See Note (4).		79.8		
SJAE Steam Flow T032			10989			
Circ Water Inlet (C053) and Condenser Backpressure (C033) During Cold Weather Operations		Circ water inlet (C053) ≥33°F and Condenser backpressure (C033) between 1.0 and 1.6 inHg with 2 circ water pumps running. (ER970019)(OP 2180)		NA NA		
ACS Operability, CT-2-1 Deep Basin Temperature. Use computer point F074. Record Value.	3.5.D.1	Using Deep Basin temperature indicated by F074 verify Deep Basin temperature and number of RHRSW pumps operable satisfies OP 2181 Admin. Limits		95		

	TS [TRM] (ODCM)	REQUIRED CONDITION	00-06	06-12	12-18	18-24
Outside Air Temperature (Primary Met Tower 33' Elev. - C182)		At -15°F initiate OP 3127 extreme cold weather actions.		92		
SW Supply Temperature (F060)		If F060 ≥82°F, refer to OP 2181 Admin. Limits	80	80		
M036/M037 River Temperature Upstream/Downstream		If either point is out of service, refer to OP 2180, Section O.	79.5	79.5		
			80.6	80.5		
Record Operable APRM GAFs from REO Screen (LER9717_02)		Compare per Note 2. Any GAF >Scale Factor shall be corrected within 6 hours.	(A) .986	(A) .987	(A)	(A)
			(C) .994	(C) .994	(C)	(C)
			(E) .991	(E) .993	(E)	(E)
			(B) .991	(B) .993	(B)	(B)
			(D) .993	(D) .994	(D)	(D)
			(F) .993	(F) .993	(F)	(F)
Review the following computer displays: a) General Alarm List b) Suspended Alarm List c) Bad Point Summary List d) Heat Balance Inputs Screen		If any Heat Balance points failed or removed from scan as referenced in OP 5399 Appendix A, or if a SPDS safety parameter became inoperable during shift, notify R/CE.		SAT		
Review the PVO Display		All parameters consistent with plant status	SAT	SAT		
3D Monicore Case Print/Error Messages		Case printed out and checked for normal limits/no unexplained error messages on LA3	SAT	SAT		
			SAT	SAT		
Drywell Sump Surveillance	3.6.C 4.6.C	VYOPF 4152.05	SAT	SAT		
Jet Pump Surveillance	4.6.F.1 4.6.F.2	VYOPF 4110.04				

CRO ROUND SHEET (Continued) Date_____

	TS [TRM] (ODCM)	REQUIRED CONDITION	00-06	06-12	12-18	18-24
Core Parameters	4.11.A 4.11.B 4.11.C	VYOPF 4401.01	SAT			
Control Room Recorders Timed/Trend Dated		All recorders in service or refer to Note 1	SAT			
Input Data into "Runtanks" for CST and DST Levels						
Perform Daily Operations Department Control Room Panel Walkdown Checklist VYOPF 0150.10			SAT			
Recorded By		Initials	KM	KM		

GENERAL NOTES:

(1) When recorders that monitor Tech. Spec./[TRM] items are out of service, perform the following:

a. If the parameter is required to be continuously recorded, log the parameter hourly in the Comments section.

b. If the parameter is not required to be continuously recorded, log the parameter once a shift in the Comments section.

(2) Compare the operable APRM GAFs from ERFIS REO screen from one shift to another at steady state conditions (no power changes greater than 5% in the last 24 hours or no rod pattern adjustment within the last 24 hours).

a. If all the operable APRM GAFs change by greater than 0.010 (equivalent to 15.93 MWth) and this change cannot be attributed to APRM GAF adjustment by I&C or some other known reason.

2) Then request Reactor Engineering validate heat balance inputs.

b. If all the operable APRM GAFs change by more than 0.010

1) Then maintain actual RTP less than or equal 100% APRM power indication.

(3) Notify SM if increase >0.03 ft. (4 gpm in-leakage) from previous 6 hour reading. The Shift Supv. shall have previous week's readings trended to determine normal volume increase. If Torus volume increases 4 gpm higher than normal, action shall be taken to determine the cause.

(4) (If the 87.3°F limit is exceeded refer to OP 2115 Appendix G for additional margin based upon instrument and computer point availability)

CRO ROUND SHEET TURNOVER SHEET Date_____

	TS [TRM] (ODCM)	REQUIRED CONDITION	00-06	06-12	12-18	18-24
TURNOVER - PRIOR TO SHIFT RELIEF						
Receipt/Review of Rounds		OATC/BOP both initial		VM / FF		/
SM, STA Key Rings, 1A, 2A, 3A, 4A Key Rings Signed Out or In Locker	6.5.B	All key rings intact with two MEDECO keys on each		VM		
Review CRS Turnover checklist		OATC/BOP both initial		VM / FF		/
Review T.S./T.R.M. Components Inoperable checklist		OATC/BOP both initial		VM / FF		/
Review Operations Logs		OATC/BOP both initial		VM / FF		/
Conduct panel walk down		OATC/BOP both initial		VM / FF		/
Review Reactivity Management • Anticipated reactivity changes for the shift • Nuclear Instrumentation operable/inoperable • 3D Monicore - Thermal Limits • Equipment Status related to reactivity • Reactivity related scheduled work		Reactivity Control (Circle at least one) • Recirc Flow Control - Master • Recirc Flow Control - Individual • Recirc Flow Control (Bias A/B) • Rods - Rapid S/D/Normal seq.		VM		
Review Disabled Equipment/Annunciators		OATC/BOP both initial		VM / FF		/

#	DAYS Time/ Initial	NIGHTS Time/ Initial	Equipment/Component/Annunciator	Reason Inoperable or Degraded	WR/WO Number
A1					
A2					
A3					
A4					
A5					
A6					
A7					

VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET

Task Identification:

Title: Locate and Determine Radiological Conditions for Valve Inspection
Failure Mode: N/A
Reference: AP 0506, "Personnel Monitoring"
Task Number: 2990100301

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 _X_ Simulator ___ Plant _____

Performance Expected Completion Time: 15 minutes

Evaluation Results:

Performance: PASS ___ FAIL ___ Time Required: _____

Prepared by: Jim Fagan — Operations Training Instructor — 11/30/04 — Date

Reviewed by: Jim Fagan per T. Schultz per Telecon — SRO Licensed/Certified Reviewer — 11/30/04 — Date

Approved by: _____ — Operations Training Superintendent — 12/1/04 — 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 **Classroom** 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:

You have requested that an AO verify the RCU Pump "A" suction, CU-19A, is open and to observe the pump run. The AO currently has an accumulated dose (TEDE) of 1800 mr for the year and is the only one available for the job. He is a new AO and has no accumulated dose for previous years. As part of preparation for a pre-job brief you are to review the survey map to determine the radiological conditions.

Initiating Cues:

Determine the following information for the brief:

- Area with the lowest dose
- Area with the lowest contamination levels
- Maximum stay time if:
  - AO stands next to ladder to observe valve and pump and he does not exceed VY "Routine Annual Administrative Guidelines" for dose
- In the event a dose extension is necessary, determine who's approval is necessary to extend the dose to VY's "Maximum Annual Administrative Guidelines" for dose

Task Standards:

Areas with the lowest dose and contamination levels are determined. The correct stay time is calculated. The proper authorities for a dose extension are named.

Required Materials:

AP 0506, Personnel Monitoring
Radiological Survey Map for 280E RWCU A Pump Room

Simulator Setup:

N/A

Evaluation **Performance Steps**

TIME START: _____

SAT/UNSAT **Step 1: Obtain and review survey map.**

Standard: Survey map obtained and information reviewed.

Interim Cue: Provide survey map.

SAT/UNSAT ***Step 2: Determine area with lowest dose.**

Standard: Area in front of step off pad identified.

SAT/UNSAT ***Step 3: Determine area with lowest contamination levels.**

Standard: Area in front of step off pad identified.

SAT/UNSAT ***Step 4: Calculate maximum stay time.**

Standard: Calculates a maximum stay time of 2 hours.

Note: Calculation based on 200 mr remaining on a routine admin limit of 2000 mr. The general area dose near ladder is 100 mr/hr.

SAT/UNSAT ***Step 5: Identify authorities required for dose extension to Maximum Admin Limits.**

Standard: The RP Superintendent and General Manager identified as approval authorities for extension.

* Critical Step

TIME FINISH: _____

Terminating Cue: Low contamination/dose areas identified, stay time calculated and extension authorities identified.

Evaluator Comments: _____

_____

_____

_____

_____

_____

System: **K/A's:**

System Generic K/A's: 2.3.4 SRO 3.1

EXAMINEE HANDOUT

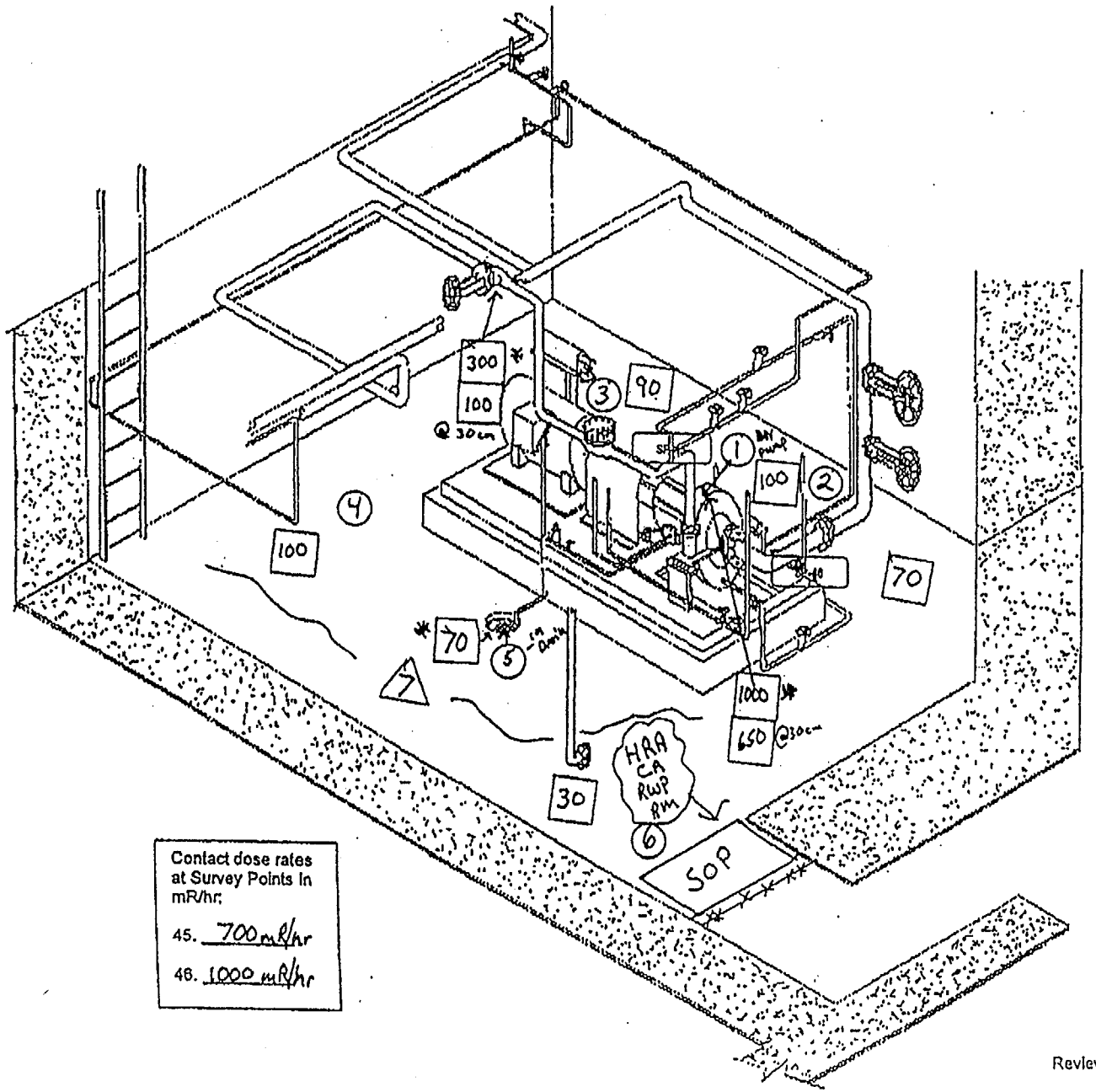
Initial Conditions:

You have requested that an AO verify the RCU Pump "A" suction, CU-19A, is open and to observe the pump run. The AO currently has an accumulated dose (TEDE) of 1800 mr for the year and is the only one available for the job. He is a new AO and has no accumulated dose for previous years. As part of preparation for a pre-job brief you are to review the survey map to determine the radiological conditions.

Initiating Cues:

Determine the following information for the brief:

- Area with the lowest dose
- Area with the lowest contamination levels
- Maximum stay time if:
  - AO stands next to ladder to observe valve and pump and he does not exceed VY "Routine Annual Administrative Guidelines" for dose
- In the event a dose extension is necessary, determine who's approval is necessary to extend the dose to VY's "Maximum Annual Administrative Guidelines" for dose



Contact dose rates at Survey Points in mR/hr:

45. 700 mR/hr

46. 1000 mR/hr

Survey Logbook #	502 0050-333
Survey Log ID: RB 280 E RWCU A Pump Room	
DATE: 1-18-05	TIME: 1400
Power level:	100%
RWP: 0500002 /02-0001D	

Instrument(s)	Serial number	Cal due date
RO-20	3059	7.05
L-1000	157591	9.05
L-1000	115248	11.05
N/A	N/A	N/A

Contamination Data

1. DPM/100CM² unless otherwise noted
2. LAS in CCPM

Smear #	Results	Smear #	Results
1.	4.5 K	13.	N/A
2.	4.1 K	14.	
3.	5.8 K	15.	
4.	8.1 K	16.	
5.	5 K	17.	
6.	2 K	18.	
7.	4 K	19.	
8.	N/A	20.	
9.		21.	
10.		22.	
11.		23.	
12.		24.	

Alpha Smears

#	Results	#	Results
L	< MDC		N/A
H	< MDC		N/A

Air sample results: N/A mR/hr.

- ☐ Routine
- ☐ Pre-Job
- ☐ Pre-decon
- ☐ Other (note type)
- ☒ Job Coverage
- ☐ System Breach
- ☐ Post decon

Surveyor(s):

Print Name: Michael D Brown

Signature:

Remarks: Pump Running Vibration readings

Reviewed by:

VERMONT YANKEE
JOB PERFORMANCE MEASURE
WORKSHEET

Task Identification:

Title: Off-Site Protective Action Recommendations Using ODPS
Failure Mode: N/A
Reference: OP-3511, Off-Site Protective Action Recommendations
OP-3513, Evaluation of Offsite Radiological Conditions
Task Number: 2007150501

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: 30 minutes

Evaluation Results:

Performance: PASS __ FAIL __ Time Required: _____

Prepared by: Frank Fagan — Operations Training Instructor — 11/30/04 Date

Reviewed by: _____ — SRO Licensed/Certified Reviewer — 11/30/04 Date

Approved by: _____ — Operations Training Manager — 12/1/04 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 following plant conditions exist:

- A reactor transient has occurred that caused fuel damage
- Reactor is shutdown
- Elevated release is in progress
- NO ground release has occurred
- Release began two hours ago
- General Emergency EAL has just been declared
- Chemistry technician is taking a silver zeolite air sample from the stack
- Site Boundary Team dispatched
- PAR based on plant conditions has been completed per OP 3511, section I.

Initiating Cues:

The PED has requested that you determine off-site protective action recommendations based on Radiological Dose information using ODPS.

Task Standards:

Operator makes appropriate off-site PAR determination per OP 3511.

Required Materials:

OP 3511, Off-Site Protective Action Recommendations (latest revision)
VYOPF 3511.01, Protective Action Recommendation Worksheet completed for initial PAR on plant conditions
OP 3513, Evaluation of Offsite Radiological Conditions (latest revision)
Initial plant PAR completed on form 3511.01 (attached)
ERFIS Source Term Data printout (attached)
ERFIS PAR printout (attached)

Simulator Setup:

Any full power IC with ERFIS available. Insert malfunction RMO1F at 0.4%, stack Hi-Range monitor.

Evaluation	Performance Steps	
	TIME START: _____	
SAT/UNSAT	**Step 1:**	**Obtain Procedure OP 3511, Section II and review precautions**
	Standard:	Operator obtains and reviews procedure
SAT/UNSAT	**Step 2:**	**Obtain Procedure OP 3513, Section I and review precautions**
	Standard:	Operator obtains procedure and reviews precautions
SAT/UNSAT	**Step 3:**	**Obtain current off-site dose projection results and meteorological data (wind direction and stability class) from OP 3513.**
	Standard:	Operator Goes to OP 3513 as directed by OP 3511, step II.A.1.
SAT/UNSAT	**Step 4:**	**If ODPS is operable, then implement Appendix G to access off-site dose projection information from ODPS.**
	Standard:	Operator Goes to OP 3513, Appendix G as directed by OP 3513, step I.A.4.
SAT/UNSAT	**Step 5:**	**Press the "ODPS" ERFIS terminal key to access the "ODPS Menu" screen**
	Standard:	Operator presses the white "ODPS" key on an ERFIS keyboard or enters ODPS by clicking through screen menus
SAT/UNSAT	***Step 6:**	**Click on the "SOURCE TERM DATA" box to display screen**
	Standard:	Operator clicks on the "Source Term Data" box.
SAT/UNSAT	**Step 7:**	**Click on the PRINTER icon to obtain record of stack release projection information (Reactor Trip Status and Stack).**
	Standard:	Clicks on the PRINT icon on the ERFIS screen

Interim Cue: Provide the candidate with the attached ERFIS Source Term Data printout. If asked, the printout has the current date and time.

SAT/UNSAT **Step 8:** **Press the "ODPS" ERFIS terminal key to return to the "ODPS Menu" screen**

Standard: Operator presses white "ODPS" key.

SAT/UNSAT ***Step 9:** **Click on the "PROTECTIVE ACTION RECOMMENDATIONS LIVE STACK MR/HR" box to display screen**

Standard: Operator clicks on the Protective Action box to generate the PAR

SAT/UNSAT **Step 10:** **When "PROTECTIVE ACTION RECOMMENDATION" screen is displayed, click on the PRINTER icon to obtain stack release off-site dose projection information.**

Standard: Operator clicks on the PRINT icon.

Interim Cue: Provide the candidate with the attached ERFIS PAR printout. If asked, the printout has the current date and time.

SAT/UNSAT **Step 11:** **Press the "ODPS" ERFIS terminal key to return to the "ODPS Menu" screen**

Standard: Operator presses white "ODPS" key

SAT/UNSAT **Step 12:** **If only one release point exists (stack or ground), then continue with the following actions:**

Implement OP 3511 Section II, Step A.2 to formulate Protective Action Recommendations for State authorities

Standard: References OP 3511, Section 2 Step A.2.

SAT/UNSAT **Step 13:** **Compare the calculated dose projection results with EPA Protective Action Guidelines delineated below to determine whether EPA Protective Action Guidelines have been exceeded**

Standard: Notes that Total Effective Dose is >1.

SAT/UNSAT ***Step 14: Determine appropriate table to use.**

Standard: Selects Table 5.

SAT/UNSAT ***Step 15: Choose towns affected by the PAR**

Standard: Selects "Sector A" for wind direction and stability class.

SAT/UNSAT ***Step 16: Record appropriate PAR information in Section II of VYOPF 3511.01**

Standard: Operator records PAR data on OP 3511.01 with evacuation recommended for Vernon, Hinsdale, Bernardston and Northfield.

SAT/UNSAT **Step 17: Forward completed VYOPF 3511.01 to the Site Recovery Manager or senior manager in charge.**

Standard: Provides copy of Protective Action Recommendation to the PED.

Interim Cue: No further actions are required for this JPM.

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* Critical Step

TIME FINISH: _____

Terminating Cue: Operator completes 3511.01 with appropriate offsite protective action recommendations.

Evaluator Comments: _____

_____

_____

_____

_____

_____

System Generic K/A's: 2.4.44 SRO 4.4

EXAMINEE HANDOUT

Initial Conditions:

The following plant conditions exist:

- A reactor transient has occurred that caused fuel damage
- Reactor is shutdown
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- NO ground release has occurred
- Release began two hours ago
- General Emergency EAL has just been declared
- Chemistry technician is taking a silver zeolite air sample from the stack
- Site Boundary Team dispatched
- PAR based on plant conditions has been completed per OP 3511, section I.

Initiating Cues:

The PED has requested that you determine off-site protective action recommendations based on Radiological Dose information using ODPS.

PROTECTIVE ACTION RECOMMENDATION WORKSHEET

INFORMATION CURRENT AT: Today 1 0600 (Time/Date)

PROTECTIVE ACTION RECOMMENDATIONS

SECTION I: PLANT CONDITIONS
(Fill in with appropriate letter designation for affected towns from Table 3)

S= Shelter in Place
OR
E= Evacuate

VERMONT TOWNS

_____ Brattleboro
_____ Guilford
__S__ Vernon

NEW HAMPSHIRE TOWNS

__S__ Hinsdale
__S__ Winchester

MASSACHUSETTS TOWNS

__S__ Bernardston
__S__ Northfield

Performed By: Jack Jones

Verified By: Ed Lynch

SECTION II: RADIOLOGICAL DOSE
(Fill in with letter designation for affected towns)
E= Evacuate

OR

(Check if appropriate)
_____ NO PARs Based on Radiological Dose

VERMONT TOWNS

_____ Brattleboro
_____ Dummerston
_____ Guilford
_____ Halifax
_____ Vernon

NEW HAMPSHIRE TOWNS

_____ Chesterfield
_____ Hinsdale
_____ Richmond
_____ Swanzey
_____ Winchester

MASSACHUSETTS TOWNS

_____ Bernardston
_____ Colrain
_____ Gill
_____ Greenfield
_____ Leyden
_____ Northfield
_____ Warwick

The following was used (Check as applicable):
☐Nomogram ☐ODPS ☐METPAC ☐Field Data

Performed By:_____

Verified By:_____

(The following information to be filled in by Senior Manager in charge or designated alternate)

Approved By: Wayne Bates (Time/date) 0600/Today

☒PED ☐TSC Coordinator ☐Site Recovery Manager (Check one)

Transmit approved PAR to State Authorities as delineated in OP 3540 (PED or TSC Coordinator using OP 3540.06) or OP 3546 (Site Recovery Manager using OP 3546.02)

PLANT MODE
RUN

PROTECTIVE ACTION RECOMMENDATIONS

SPPCS
11/25/2004
10:54:23

THIS STRAIGHTLINE PROJECTION USES SOURCE TERM DATA AND 15 MINUTE AVERAGES
OF UPPER PRIMARY METEOROLOGICAL TOWER DATA FROM 10 : 45 AND THE
STACK DOSE RATE OF 39999.5000 MR/HR.

MET DATA

WIND DIRECTION FROM:	2	DEGREES
WIND SPEED:	2	MPH
DELTA TEMPERATURE:	-3.20	F
STABILITY CLASS:	A	
PRECIPITATION:	0.50	IN/QTR HR
TOTAL EFF. EQUIV:	1869	MR/HR
ADULT THYROID:	106	MR/HR

SITE BOUNDARY

8 HOUR DOSE	DIST (MI)	TOTAL EDE (REM)	ADULT THY (REM)	PAR
	.35	14.949	0.845	EVAC
	1.00	2.372	0.239	EVAC
	2.00	0.912	0.034	EVAC
	3.00	0.566	0.006	EVAC
	4.00	0.423	0.001	EVAC
	5.00	0.343	0.000	EVAC
	6.00	0.291	0.000	NONE
	7.00	0.254	0.000	NONE
	8.00	0.225	0.000	NONE
	9.00	0.202	0.000	NONE
	10.00	0.184	0.000	NONE

ARRIVAL TIMES				
.35 MILES AT	10 : 41	2.00 MILES AT	11 : 34
5.00 MILES AT	13 : 4	10.00 MILES AT	15 : 34

PLANT MODE RUN	VYOPF3513.01 SOURCE TERM DATA	SPPCS 11/25/2004 10:54:04

REACTOR TRIP STATUS NORM — ON 0/ 0/ 0 AT 0: 0: 0

ELAPSED TIME SINCE PLANT TRIP 0 MINUTES

STACK

HIGH RANGE RADIATION		ELEVATED RELEASE		
39999.5000 MR/HR	> 0.1445 MR/HR	YES	ON	11/ 25/ 4
			AT	10: 34: 3

NOTE: A RELEASE IS ASSUMED TO BE IN PROGRESS IF AN ELEVATED STACK MR/HR VALUE IN EXCESS OF 0.1445 IS PRESENT FOR LONGER THAN 10 SECONDS. THIS AFFECTS THE CALCULATION OF PLUME ARRIVAL TIMES ONLY.

AVG STACK FLOW (FT-108-22) 135690 SCFM

UNMONITORED

A NONZERO DOWNWIND SITE BOUNDARY DOSE RATE OF:
0.0000 MR/HR HAS BEEN MANUALLY ENTERED
FOR 0/ 0/ 0 AT 0: 0: 0