NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: RO/SRO ADMIN 1a

TITLE: DETERMINE FEEDWATER RESERVE INVENTORY

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Determine Feedwater Reserve Inventory

Alternate Path: N/A

Facility JPM #: Modified RO-A.1a 2008 AUDIT

K/A: 2.1.25 Importance: RO: 3.9 SRO: 4.2

K/A Statement: Ability to interpret reference materials such as graphs, curves, tables, etc.

Task Standard: Feedwater reserve inventory calculated to last 3.9 to 4.5 hours.

Preferred Evaluation Location: ANY __X__

Preferred Evaluation Method: Perform __X__ Simulate _____

References:EOP Supplement 2, “PCS Cooldown Strategy”

Validation Time:10 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

EOP Supplement 2, "PCS Cooldown Strategy"

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

With the plant at 100% power, a loss of offsite power occurs. The reactor was manually tripped and the operators transitioned to EOP-8.0. The following plant conditions exist:

- Offsite power is not expected to be restored for at least 12 hours.
- Bus 13 is out of service and not expected to be restored for at least 10 hours
- It is 30 minutes after shutdown
- T-81 gravity feed to T-2 is not aligned
- T-2 is at 86%, T-81 is at 85%, and T-939 is at 58%
- Cold leg temperatures are stable at 535°F

INITIATING CUES:

The CRS has directed you to complete EOP Supplement 2, PCS Cooldown Strategy. Calculation of minimum cooldown rate (section 5.0 step 6) is NOT required at this time.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Locate EOP Supplement 2, PCS Cooldown Strategy	EOP Supplement 2 LOCATED	**S U**
Comment: ***Evaluator: Provides a working copy of EOP Supplement 2.***			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
1.1	**CONDENSATE STORAGE TANK T-2** **DETERMINE** AND **RECORD** Condensate Storage Tank T-2 level using the "T-2 inventory" curve	T-2 inventory = **94,000 gallons** RECORDED (93,000 to 95,000 allowed)	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
2.1	**DEMINERALIZED WATER TANK T-939** IF any of the following conditions exist: … THEN Demineralized Water Tank T-939 is available	DETERMINES T-939 water is **NOT** available	**S U**
Comment: **NOTE: Loss of Bus 13 combined with loss of Bus 1E (due to loss of offsite power) results in inability to power P-936 to transfer T-936 water to T-2.** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
3.1	If any of the following conditions exist…..THEN Primary System Makeup Tank T-81 is available.	Determines T-81 is NOT available	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
4.1	**ADD** the available tank inventories: (Step 1.1 T-2) + (Step 2.2 T-939) = (Total inventory)	Total Inventory **= 94,000 gallons** RECORDED (93,000 to 95,000 allowed)	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
5.1	**DETERMINE** AND **RECORD** present highest PCS Loop T_C (T_C Initial)	T_C Initial = **535** °F RECORDED (given in initial conditions)	**S U**
Comment:			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
5.2	**DETERMINE** AND **RECORD** inventory required to remove sensible heat using "T_C Initial" temperature and the "Sensible Heat Removal" curve.	Required Sensible Heat Removal Inventory = **42,000** gallons RECORDED (41,000 to 43,000 allowed)	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 8	STANDARD	Grade
5.3	SUBTRACT Step 5.2 results from Step 4.1 results: (Step 4.1 Total FW) – (Step 5.2 Sensible Heat) = (Inventory for decay heat removal)	Inventory Available to remove decay heat = **52,000** gallons RECORDED (94,000 – 42,000 = 52,000) (50,000 to 54,000 allowed)	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 9	STANDARD	Grade
5.4	**DETERMINE** AND **RECORD** the time interval available for heat removal using the following: ▪ Applicable "Decay Heat Removal" curve for the number of PCPs operating ▪ Graph line for elapsed time after shutdown ▪ Amount of inventory available to remove decay heat (graph)	Time interval available for heat removal = **4.2** hours RECORDED (Interpolation may be used) (3.7 to 4.5 hours allowed)	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 10	STANDARD	Grade
5.5.a	If the time interval available for heat removal is less than eight hours, THEN PERFORM the following: a. Inform the Shift Manager of the available interval and that additional inventory sources are required.	Shift Manager Informed that time interval available for heat removal = **4.2** hours (3.7 to 4.5 hours allowed)	**S U**
Comment: ***EVALUATOR: Notify candidate that the Shift Manager will have someone else identify potential inventory sources that can be made available in the next 4 hours per step 5.b of section 5.0.***			

Proc. Step	TASK ELEMENT 11	STANDARD	Grade
n/a	Notify the CRS EOP Supplement 2 is complete [reported time interval available for heat removal and available inventory sources]	CRS NOTIFIED that EOP Supplement 2 task is complete	**S U**
Comment: ***Evaluator: If notified as CRS, Acknowledge.***			

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

- NONE

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

With the plant at 100% power, a loss of offsite power occurs. The reactor was manually tripped and the operators transitioned to EOP-8.0. The following plant conditions exist:

- Offsite power is not expected to be restored for at least 12 hours.
- Bus 13 is out of service and not expected to be restored for at least 10 hours
- It is 30 minutes after shutdown
- T-81 gravity feed to T-2 is not aligned
- T-2 is at 86%, T-81 is at 85%, and T-939 is at 58%
- Cold leg temperatures are stable at 535°F

INITIATING CUES:

The CRS has directed you to complete EOP Supplement 2, PCS Cooldown Strategy. Calculation of minimum cooldown rate (section 5.0 step 6) is NOT required at this time.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: RO ADMIN 1b

TITLE: PERFORM A PCS HEATUP DETERMINATION

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Perform PCS Heatup Determination

Alternate Path: N/A

Facility JPM #: RO-A.1b 2008AUDIT

K/A: 2.1.25 Importance: RO: 3.9 SRO: 4.2

K/A Statement: Ability to interpret reference materials such as graphs, curves, tables etc.

Task Standard: Allowable Shutdown Cooling outage time calculated to be 28 minutes (27 minutes to 29 minutes).

Preferred Evaluation Location: ANY __X__

Preferred Evaluation Method: Perform __X__ Simulate _____

References: SOP-3, “Safety Injection and Shutdown Cooling System”
ONP-17, “Loss of Shutdown Cooling”

Validation Time: 15 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

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Tools/Equipment/Procedures Needed:

SOP-3, “Safety Injection and Shutdown Cooling System”
ONP-17, “Loss of Shutdown Cooling”

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- Ten days after a plant shutdown, PCS temperature is 114ºF
- The Reactor cavity is flooded to a level of 629'
- The Pressurizer manway is removed
- Shutdown Cooling is in operation, but must be shutdown for the maximum time allowable

INITIATING CUES:

The CRS directs you to determine how long (in minutes) Shutdown Cooling may be secured in accordance with SOP-3, Section 7.3.7.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Locates SOP-3, Safety Injection And Shutdown Cooling System, Section 7.3.7, PCS Heatup Rate Determination	Section 7.3.7 of SOP-3 LOCATED	**S U**
Comment:			
Evaluator: Provides a working copy of SOP-3, section 7.3.7.			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
7.3.7a	DETERMINE "Approximate Time to 200°F time from appropriate curve in ONP-17, Loss of Shutdown Cooling, for existing/anticipated PCS conditions and convert to hours.	Attachment 1, Approximate Time to 200°F Curves, of ONP-17 LOCATED	**S U**
Comment:			
Evaluator: Provide a working copy of ONP-17, Attachment 1.			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
(ONP-17, Att.1) 1.	DETERMINE PCS level using all available indications.	PCS level **629 feet** (given in initial conditions)	**S U**
Comment:			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
(ONP-17, Att.1) 2.	DETERMINE PCS temperature using any of the following:	PCS temperature **114°F** (given in initial conditions)	**S U**
Comment:			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
(ONP17, Att.1) 5.	REFER TO appropriate page in this attachment for PCS conditions	**Page #8** of Attachment 1 REFERED TO: ▪ Uses Refueling Cavity Flooded to 629' to determine time to 200ºF ▪ USES "10 Days" (time after reactor shutdown) and 114ºF point (initial PCS temperature) and DETERMINES time to 200ºF is ~2 hours	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
7.3.7b	DETERMINE PCS heatup rate as follows: $\frac{(200°F - T_{INITIAL})}{\text{Approximate Time to 200°F (Hours)}}$	Heatup rate CALCULATED to be ~43ºF / hour	**S U**
Comment: **NOTE: Heatup rate is calculated by dividing 86ºF (200ºF - 114ºF) by 2 hours.** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
7.3.7c.	DETERMINE the allowable Shutdown Cooling outage time (heatup rate > 20°F/Hr)	CALCULATES allowable Shutdown Cooling outage time to be 28 minutes (27 - 29 minutes).	**S U**
Comment: **NOTE: Allowable outage time calculated by dividing 20ºF (maximum allowed heatup) by 43ºF / hour (previously calculated heatup rate) and converting to minutes.** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 8	STANDARD	Grade
n/a	Notifies the CRS that securing Shutdown Cooling has been calculated at approximately 28 minutes.	CRS NOTIFIED Shutdown Cooling can be secured for approximately 28 minutes.	**S U**
Comment: ***Evaluator: If notified by Operator of time for securing Shutdown Cooling, Acknowledge.***			

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

- NONE

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

- Ten days after a plant shutdown, PCS temperature is 114ºF
- The Reactor cavity is flooded to a level of 629'
- The Pressurizer manway is removed
- Shutdown Cooling is in operation, but must be shutdown for the maximum time allowable

INITIATING CUES:

The CRS directs you to determine how long (in minutes) Shutdown Cooling may be secured in accordance with SOP-3, Section 7.3.7.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: SRO ADMIN 1b

TITLE: MONITOR PCS HEATUP/COOLDOWN WITH THE PPC

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Operate the Palisades Plant Computer System

Alternate Path: N/A

Facility JPM #: PPC-JPM-02

K/A: 2.1.19 Importance: RO: 3.9 SRO: 3.8

K/A Statement: Ability to use plant computers to evaluate system or component status.

Task Standard: Commence monitoring a PCS heatup/cooldown using Page 372 "SDC 15 Minute Rate Trend," of the PPC.

Preferred Evaluation Location: Simulator __X__ In Plant _____

Preferred Evaluation Method: Perform __X__ Simulate _____

References: GOP-2, "MODE 5 To MODE 3 ≥ 525°F"
PO-2, "PCS Heatup/Cooldown Operations"

Validation Time: 10 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

- PO-2, PCS Heatup/Cooldown Operations

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- A Plant refueling has just been completed.
- Shutdown Cooling is in service with a PCS temperature of 186°F.
- GCL-2, Mode 5 to Mode 3 $\geq$ 525°F Checklist is in progress.
- Two PCPs are in service.
- Technical Specification Surveillance Procedure PO-2, PCS Heatup/Cooldown Operations, has just been authorized by the CRS.
- No equipment is out of service, all systems are OPERABLE.

INITIATING CUES:

- The CRS directs you to setup for monitoring a PCS heatup via the PPC, utilizing Page 361 “PCS 15 Minute Rate Trend” per PO-2, step 5.1.1.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Locate PO-2, PCS Heatup/Cooldown Operations, step 5.1.1	Step 5.1.1 of PO-2 LOCATED	**S U**
Comment: ***EVALUATOR: Provide Operator a working copy of PO-2, step 5.1.1.***			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
5.1.1b	**SELECT** the "Operator Mode Support" screen from the main menu	▪ Main menu screen SELECTED. ▪ "Operator Mode Support" screen SELECTED from main menu screen**.**	**S U**
Comment: ***EVALUATOR NOTE: Operator may go straight to PPC page 361 (task element 3).***			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
5.1.1c	**SELECT** any of the following, as applicable, to monitor PCS heatup/cooldown rate: ▪ Page 361 "PCS 15 Minute Rate Trend"	Page 361 "PCS 15 Minute Trend" page SELECTED	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
5.1.1d	**START** 15 minute automatic reports as follows: ▪ **DEPRESS** F7 key "HCR Reports"	F7 key "HCR Reports" DEPRESSED	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
5.1.1d	**START** 15 minute automatic reports as follows: ▪ **SELECT** the "Cyclic Printout Enabled" response	"Cyclic Printout Enabled" SELECTED	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
5.1.1d	**START** 15 minute automatic reports as follows: ▪ TYPE a one (1) AND **DEPRESS** the "UPDATE" Hardkey to start the reports.	One (1) or Y is TYPED AND "Update" Hardkey is DEPRESSED.	**S U**
Comment: **NOTE:** ***The Heatup/Cooldown print out is on a 15 minute timer that is always running. When the printout is enabled, the next print timeout could be anywhere from 1 second to 15 minutes later.*** ***Evaluator: If Operator checks that the printout is printing and it is not, STATE that the hardcopy printout is not required and to continue.*** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
5.1.1d	Notify the CRS that heatup/cooldown monitoring of the SDC by PPC, Page 361 is in progress	CRS notified that heatup/cooldown monitoring by PPC in progress	**S U**
Comment: ***EVALUATOR: If notified as CRS that PPC monitoring is in progress, Acknowledge.***			

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

- IC-3, Ready to come off S/D Cooling.

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

- A Plant refueling has just been completed.
- Shutdown Cooling is in service with a PCS temperature of 186°F.
- GCL-2, Mode 5 to Mode 3 $\geq$ 525°F Checklist is in progress.
- Two PCPs are in service.
- Technical Specification Surveillance Procedure PO-2, PCS Heatup/Cooldown Operations, has just been authorized by the CRS.
- No equipment is out of service, all systems are OPERABLE.

INITIATING CUES:

The CRS directs you to setup for monitoring a PCS heatup via the PPC, utilizing Page 361 “PCS 15 Minute Rate Trend” per PO-2, step 5.1.1.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: RO ADMIN 2

TITLE: PERFORM SHO-1 SURVEILLANCE

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Complete the SHO-1 Surveillance

Alternate Path: N/A

Facility JPM #: RO-A.2 2008 AUDIT

K/A: 2.2.12 Importance: RO: 3.7 SRO: 4.1

K/A Statement: Knowledge of surveillance procedures

Task Standard: Identification of two out-of-spec readings during the performance of SHO-1 for Wide Range Nuclear Instruments and 'B' Steam Generator Pressure

Preferred Evaluation Location: Simulator __X__ In Plant _____

Preferred Evaluation Method: Perform __X__ Simulate _____

References:SHO-1, "Operator's Shift Items Modes 1, 2, 3, and 4"

Validation Time:20 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

- SHO-1, Attachment 1, Shift Surveillance Data Sheet
- Red ink pen

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- The plant is at 100% power.
- It is Monday, 0100 hours.

INITIATING CUES:

You have been directed to take the readings of SHO-1, Items 5.1.1 through and including 5.1.14 on pages 1,2,3,4, and 5 for 'A' Shift. ALL remaining readings have already been taken by another NCO.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Partially completed copy of SHO-1 located	LOCATES copy of partially completed SHO-1	**S U**
Comment:			
Evaluator: Provides Operator with a partially completed copy of SHO-1.			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
5.1.1	**Power Range Nuclear Instrumentation:** Record data and check all channels agree within 1%	▪ CHECKS all channels agree within 1% ▪ RECORDS readings in “Shift A Readings” column ▪ INITIALS "RECRD BY"	**S U**
Comment:			
NOTE: ***Surveillance steps may be performed in any order.***			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
5.1.2	**Thermal Margin Monitor ΔT Power:** Record data and check all channels agree within 1%	▪ CHECKS all channels agree within 1% ▪ RECORDS readings in “Shift A Readings” column ▪ INITIALS "RECRD BY"	**S U**
Comment:			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
5.1.3	**Thermal Margin Monitor Functions, NI/ΔT Power Deviation Meter (C-27):** ▪ Check NI/ΔT Comparator varying as expected for changes between NI/ΔT Power ▪ Check TMM Primary Screens updating	▪ CHECKS NI/ΔT and TMM Primary Screens updating ▪ RECORDS a √ in "Shift A Readings" column ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
5.1.4	**Axial Shape Index:** Check TMM "System Status" Screen Power Density status "OK"	▪ CHECKS TMM "System Status" Screen Power Density status "OK" ▪ RECORDS a √ in "Shift A Readings" column ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
5.1.5	**PCS Cold Leg Temperature:** ▪ Check TMM "System Status" Screen T_C <543.5°F ▪ Check TMM "System Status" Screen Trip Status Box indicates T_C: "OK"	▪ CHECKS TMM "System Status" Screen T_C < 543.5°F ▪ Check TMM "System Status" Screen Trip Status Box indicates T_C: "OK" ▪ RECORDS a √ in "Shift A Readings" column ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
5.1.6	**Wide Range Nuclear Instrumentation (NIs):** Record data and check NIs agree within 1½ decades	▪ CHECKS data within 1½ decades ▪ RECORDS data in "Shift A Readings" column	**S U**
Comment: **NOTE:** ***Data for NI 1/3 is NOT within 1½ decades***			

Proc. Step	TASK ELEMENT 8	STANDARD	Grade
5.1.6	**Wide Range Nuclear Instrumentation (NIs):** ▪ Determine out of tolerance data for NI 1/3 ▪ Identifies out of tolerance reading	▪ DETERMINES NI 1/3 not within 1½ decades ▪ CIRCLES in RED NI-1/3A reading ▪ INITIALS RECRD BY * ▪ May NOTIFY CRS of the out of spec reading	**S U**
Comment: ***Evaluator Cue: If notified as the CRS of the out of spec reading: Acknowledge. If asked if the surveillance should continue: RESPOND to continue with the surveillance.*** ***NOTE: 'INITIALS RECRD BY" is not part of the critical step*** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 9	STANDARD	Grade
5.1.7	**Quadrant Power Tilt:** ▪ Check NI Channels 5, 6, 7 and 8 Deviation lights not lit ▪ No alarms (EK-06C3)	▪ CHECKS no Deviation lights lit for NI 5, 6, 7 and 8 ▪ VERIFIES no alarms (EK-06C3) ▪ RECORDS a √ in "Shift A Readings" column ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 10	STANDARD	Grade
5.1.8	**Steam Generator Pressure:** Record data and check all channels for each S/G agree within 40 psi	▪ RECORDS S/G pressures in "Shift A Readings" column ▪ CHECKS S/G pressures within 40 psi	S U
Comment: **NOTE:** ***Data for PIC-0752C indication for "B" S/G is > 40 psi out of agreement.***			

Proc. Step	TASK ELEMENT 11	STANDARD	Grade
5.1.8	**Steam Generator Pressure:** Record data and check all channels for each S/G agree within 40 psi	▪ DETERMINES PIC-0752C indication for "B" S/G is >40 psi out of agreement with the other three for "B" S/G ▪ CIRCLES in RED at least PIC-0752C reading (may circle all four) ▪ *INITIALS RECRD BY ▪ May NOTIFY CRS of the out of spec reading	S U
Comment: ***Evaluator Cue: If notified as the CRS of the out of spec reading: Acknowledge. If asked if the surveillance should continue: RESPOND to continue with the surveillance.*** ***NOTE: 'INITIALS RECRD BY" is not part of the critical step*** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 12	STANDARD	Grade
5.1.9	**Steam Generator Level:** Record data and check all channels for each S/G agree within 4%	▪ RECORDS S/G levels in "Shift A Readings" column ▪ CHECKS S/G levels within 4% ▪ INITIALS RECRD BY	S U
Comment:			

Proc. Step	TASK ELEMENT 13	STANDARD	Grade
5.1.10	**Primary Coolant Flow:** Record data and check all channels agree within 5%	▪ RECORDS PCS flow in "Shift A Readings" column ▪ CHECKS PCS flows within 5% ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 14	STANDARD	Grade
5.1.11	**PZR Code Safety Relief Valve Position Indication Temperature:** Record data and check temperatures are consistent with plant conditions	▪ RECORDS PZR Safety Relief temperatures readings ranging from approx. 100° to 120°F in "Shift A Readings" column ▪ INITIALS RECRD BY	**S U**
Comment: ***Note: These reading are ambient and consistent with plant conditions.***			

Proc. Step	TASK ELEMENT 15	STANDARD	Grade
5.1.12	**PORV Position Indication Temperature:** Record data and check temperatures are consistent with plant conditions and other PORV indications	▪ RECORDS 'N/A' in this block (does not apply for plant conditions)	**S U**
Comment:			

Proc. Step	TASK ELEMENT 16	STANDARD	Grade
5.1.13	**PZR Pressure:** Record data and check all agree within 40 psi and Mode 1 pressure ≥ 2010 psia and ≤ 2100 psia	▪ RECORDS PZR pressures in "Shift A Readings" column ▪ CHECKS pressures within 40 psia ▪ Checks PZR pressure between 2010 psia and 2100 psia ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 17	STANDARD	Grade
5.1.14	**Thermal Margin Low Pressure Trip Channels:** Record data and: ▪ Check Channels A and C agree within 85 psi ▪ Check Channels B and D agree within 85 psi	▪ RECORDS TMM low pressures in "Shift A Readings" column ▪ CHECKS Channels A and C agree within 85 psi ▪ CHECKS Channels B and D agree within 85 psi ▪ INITIALS RECRD BY	**S U**
Comment:			

Proc. Step	TASK ELEMENT 18	STANDARD	Grade
n/a	▪ Return completed SHO-1 to CRS ▪ Inform CRS of out of spec readings (if not already done)	▪ Completed SHO-1 RETURNED to the CRS ▪ CRS INFORMED of the out of spec readings (if not already done)	**S U**
Comment:			

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

- Reset to any full power IC.
- Insert the following or use CAE file
  - OVERRIDE NI-1/3A Wide Range Log Meter indication to failed low (NI-3 - PWR-1 @ 0.75)
  - OVERRIDE PIC-0752C to indicate ~860# (Value = 0.71)
  - OVRD NI-4-PWR-1 @ 1.0.
- Ensure "A" Channel TMM VHPT setpoint is at normal value.
- Ensure NI @ 100.1%, i.e., accurate.
- Ensure copies of SHO-1, Attachment 1, page 1, 2, 3, 4, and 5 are available with Section 5.1.14 grayed out.
- Ensure Simulator clipboard copy of SHO-1, Attachment 1 is the current revision.

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

- The plant is at 100% power
- It is Monday, 0100 hours

INITIATING CUES:

You have been directed to take the readings of SHO-1, Items 5.1.1 through and including 5.1.14 on pages 1,2,3,4, and 5 for 'A' Shift. ALL remaining readings have already been taken by another NCO.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: SRO ADMIN 2

TITLE: REVIEW SHO-1 SURVEILLANCE

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Conduct Surveillance Testing

Alternate Path: N/A

Facility JPM #: NEW

K/A: 2.2.12 Importance: RO: 3.7 SRO: 4.1

K/A Statement: Knowledge of surveillance procedures

Task Standard: Identification of two out-of-spec readings during the performance of SHO-1 for Wide Range Nuclear Instrumentation and 'B' Steam Generator Pressure AND the identification of the appropriate Technical Specification LCO action statement entries due to the out-of-spec readings.

Preferred Evaluation Location: ANY __X__

Preferred Evaluation Method: Perform __X__ Simulate _____

References:SHO-1, "Operator's Shift Items Modes 1, 2, 3, and 4"

Validation Time:15 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

- Completed SHO-1, Attachment 1, Shift Surveillance Data Sheet for Monday
- Technical Specifications
- Technical Specifications Bases

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- The plant is at 100% power.
- It is Monday, 2200 hours.
- You are an on-shift SRO.
- SHO-1, Shift Surveillance Data Sheet, was completed at 2115 hours.
- The plant is in Mode 1.

INITIATING CUES:

- The Shift Manager directs you to complete a supervisory review of completed SHO-1 in accordance with step 5.3 of SHO-1.

Evaluator Note: Provide candidate with completed SHO-1 for Monday with one data point for S/G Pressure and one for NI-1/3A are below the acceptance range. Do **NOT** circle the readings in red. Bad data should be for 'C' shift only.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Partially completed copy of SHO-1 located	LOCATES copy of partially completed SHO-1	**S U**
Comment:			
Evaluator: Provides Operator with a copy of SHO-1 completed for Monday (all three shifts).			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
5.3.1	REVIEW SHO-1 Monday entries to ensure all applicable components have been inspected.	At the end of each day, an On Shift SRO shall review the data sheets applicable to that day for completion of applicable items and ensure proper disposition of off-normal items. This is documented by sign-off on Attachment 1, "Shift Surveillance Data Sheet."	**S U**
Comment:			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
5.1.6	**Wide Range Nuclear Instrumentation (NIs):** ▪ Determine out of tolerance data for NI 1/3 ▪ Identifies out of tolerance entry for A-shift	▪ DETERMINES NI 1/3 not within 1½ decades ▪ CIRCLES in RED NI-1/3A entry for C-shift ▪ May NOTIFY CRS of the out of spec reading	**S U**
Comment:			
Evaluator Cue: If notified as the CRS of the out of spec reading: Acknowledge. If asked if the surveillance review should continue: RESPOND to continue with the surveillance review. **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
5.1.8	**Steam Generator Pressure:** Reviews data and checks all channels for each S/G agree within 40 psi	▪ DETERMINES PIC-0752C indication for "B" S/G is >40 psi out of agreement with the other three for "B" S/G for C-shift. ▪ CIRCLES in RED PIC-0752C reading (may circle others as well) ▪ May NOTIFY CRS of the out of spec reading	**S U**

Comment:

Evaluator Cue: If notified as the CRS of the out of spec reading: Acknowledge. If asked if the surveillance review should continue: RESPOND to continue with the surveillance review.

CRITICAL STEP

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
5.3	▪ At the end of each day, an On Shift SRO shall review the data sheets applicable to that day for completion of applicable items and ensure proper disposition of off-normal items. This is documented by sign-off on Attachment 1, "Shift Surveillance Data Sheet."	▪ Attachment 1 "5.3 Reviewed:" space signed. ▪ The following TS Conditions are identified for the inoperable NI instrumentation: • LCO 3.3.7.A • LCO 3.3.1.B ▪ The following TS Conditions are identified for the inoperable S/G pressure instrument: • LCO 3.3.7.A • LCO 3.3.1.A ▪ LCO 3.3.9.A **MAY** be identified for the inoperable NI instrumentation for LCO Annex entry (since it applies in MODES 3, 4 and 5):	**S U**

Comment:

Evaluator Cue: If asked as the CRS to disposition the out of spec readings: Acknowledge and inform candidate that they need to determine proper disposition of the off-normal items.

CRITICAL STEP

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

IF Simulator is used for conducting this JPM, then perform the following:

- Reset to any full power IC.
- Insert the following or use CAE file
  - OVERRIDE NI-1/3A Wide Range Log Meter indication to failed low (NI-3 PWR-1 @ 0.75)
  - OVERRIDE PIC-0752C to indicate ~860# (Value = 0.71)
  - OVRD NI-4-PWR-1 @ 1.0.
- Ensure "A" Channel TMM VHPT setpoint is at normal value.
- Ensure NI @ 100.1%, i.e., accurate.
- Ensure copies of SHO-1, Attachment 1, page 1, 2, 3, 4, and 5 are available with Section 5.1.14 grayed out.
- Ensure Simulator clipboard copy of SHO-1, Attachment 1 is the current revision.

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

- The plant is at 100% power.
- It is Monday, 2200 hours.
- You are an on-shift SRO.
- SHO-1, Shift Surveillance Data Sheet, was completed at 2115 hours.
- The plant is in Mode 1.

INITIATING CUES:

The Shift Manager directs you to complete a supervisory review of completed SHO-1 in accordance with step 5.3 of SHO-1.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: SRO ADMIN 3

TITLE: CALCULATE MAXIMUM PERMISSIBLE STAY TIME

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Determine maximum permissible stay time

Alternate Path: N/A

Facility JPM #: NEW

K/A: 2.3.4 Importance: RO: 3.2 SRO: 3.7

K/A Statement: Knowledge of radiation exposure limits under normal or emergency conditions.

Task Standard: Maximum time to perform Task #3 is calculated to be 51.4 to 51.9 minutes.

Preferred Evaluation Location: ANY __X__

Preferred Evaluation Method: Perform __X__ Simulate _____

References: EI-2.1, “Site Emergency Director”
EN-RP-201, “Dosimetry Administration”

Validation Time: 20 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

EI-2.1, "Site Emergency Director"

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The plant was at 100% power when a Steam Generator Tube Rupture occurred. A General Emergency was declared due to the plant conditions (fuel failure is also evident). Worker #1 has received 1.85 R TEDE this year prior to this event. Worker #1 has performed the following task for this event:

#	TASK	TIME REQUIRED	DOSE RATE
1	Closed 'A' S/G ASDV air supply isolation valves	4 min	17.75 R/hr

The Shift Manager then determined that the 'B' S/G should have been isolated instead of 'A' S/G. The following outside the Control Room tasks are now required:

#	TASK	TIME REQUIRED	DOSE RATE
2	Open 'A' S/G ASDV air supply isolation valves	3 min	17.75 R/hr
3	Manually open MO-0510, 'A' S/G MSIV Bypass Valve	unknown	25.5 R/hr
4	Close 'B' S/G ASDV air supply isolation valves	3 min	17.75 R/hr

NOTE: Assume no dose is received while traveling between tasks.

INITIATING CUES:

Worker #1 is the only worker available to perform Tasks 2, 3 and 4. Your task is to determine the maximum time for Worker #1 to perform Task #3 without exceeding any established emergency dose limits. Report your results to the Shift Manager.

Proc.Step	TASK ELEMENT 1	STANDARD	Grade
---	Determine dose received while performing Task #1.	Calculates dose received at 1.18 R.	S U
Comment: **(17.75 R/hr) (1hr/60 min) (4 min) = 1.183 R** **CRITICAL STEP**			

Proc.Step	TASK ELEMENT 2	STANDARD	Grade
---	Determine dose to be received while performing Task #2.	Calculates dose received at 0.878 R.	S U
Comment: **(17.75 R/hr) (1hr/60 min) (3 min) = 0.8875 R** **CRITICAL STEP**			

Proc.Step	TASK ELEMENT 3	STANDARD	Grade
---	Determine dose to be received while performing Task #4.	Calculates dose received at 0.878 R.	S U
Comment: **(17.75 R/hr) (1hr/60 min) (3 min) = 0.8875 R** **CRITICAL STEP**			

Proc.Step	TASK ELEMENT 4	STANDARD	Grade
---	Determine dose remaining from emergency dose limits.	Dose remaining determined to be 22.064 R. Candidate may use EI-2.1, "Site Emergency Director" to determine 25R emergency dose limit.	S U

Comment:

(25R) – (1.183R) – (2) (0.8875R) = 22.042 R

EVALUATOR: If candidate asks which emergency dose limit is being considered for Task #3, inform them that this would be "for protection of large populations." Also if asked, inform candidate that they do not desire to volunteer dose limit above 25R.

CRITICAL STEP

Proc.Step	TASK ELEMENT 5	STANDARD	Grade
---	Determine time available for Worker #1 to complete Task #3 without exceeding emergency dose level.	Time available calculated to be 51.9 min.	S U

Comment:

(Available Dose)/(Dose Rate) = (22.042 R)/(25.5 R/hr) = 0.8644 hr (60 min/Hr) = 51.86 minutes (accept 51.9 to 51.4 minutes)

CRITICAL STEP

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
n/a	Inform the Shift Manager of calculation results.	Inform the Shift Manager that Worker #1 will exceed 25 R emergency dose limit if Task #3 takes more than 51.9 minutes.	S U

Comment:

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

- No Simulator setup required.

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The plant was at 100% power when a Steam Generator Tube Rupture occurs. A General Emergency was declared due to the plant conditions (fuel failure is also evident). Worker #1 has received 1.85 R TEDE this year. The following task has been performed by Worker #1:

#	TASK	TIME REQUIRED	DOSE RATE
1	Closed 'A' S/G ASDV air supply isolation valves	4 min	17.75 R/hr

The Shift Manager has determined that the wrong S/G has been isolated. The following outside the Control Room tasks are now required:

#	TASK	TIME REQUIRED	DOSE RATE
2	Open 'A' S/G ASDV air supply isolation valves	3 min	17.75 R/hr
3	Manually open MO-0510, 'A' S/G MSIV Bypass Valve	**unknown**	25.5 R/hr
4	Close 'B' S/G ASDV air supply isolation valves	3 min	17.75 R/hr

NOTE: Assume no dose is received while traveling between tasks.

INITIATING CUES:

Worker #1 is the only worker available to perform Tasks 2, 3 and 4. Your task is to determine the maximum time for Worker #1 to perform Task #3 without exceeding any established emergency dose limits. Report your results to the Shift Manager.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: RO ADMIN 4

TITLE: OBTAIN METEOROLOGICAL DATA FOR EMERGENCY NOTIFICATION FORM

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Obtain Meteorological Data for Emergency Notification Form

Alternate Path: N/A

Facility JPM #: RO-A.4 2008 NRC

K/A: 2.4.39 Importance: RO: 3.9

K/A Statement: Knowledge of RO responsibilities in emergency plan implementation

Task Standard: EI-6.7, Attachment 1, completed with correct data obtained

Preferred Evaluation Location: Simulator __X__ In Plant _____

Preferred Evaluation Method: Perform __X__ Simulate _____

References: EI-3.0, “Communications and Notifications”
EI-6.0, “Offsite Dose Calculation and Recommendations for Protective Actions”
EI-6.7, “Plant Site Meteorological System”

Validation Time: 10 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

EI-6.7, Attachment 1

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The Shift Manager, acting as the Site Emergency Director, has declared an Alert condition. A thunderstorm is in progress.

INITIATING CUES:

The Shift Manager has directed you to obtain Meteorological Data by completing Attachment 1 of EI-6.7, utilizing the Meteorological Data display in the Control Room.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Correct Procedure located	EI-6.7, Attachment 1 located	**S U**
Comment: ***Evaluator: Provide candidate with a Working Copy.***			

EVALUATOR NOTE: EI-6.7 Attachment 1 is completed by referencing steps 5.1.3 and 5.1.4. Due to wind speed and wind direction at 10 meters unavailable, 60 meter data is used.

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
5.1.3	Obtain meteorological data from the PPC, page 351 WS, Wind Speed (WS60) _9_MPH	On EI-6.7 Att. 1 data recorded as follows: WS, Wind Speed = 6.93 mph 9 mph X .77 = 6.93 MPH (X) 60 meters, *corrected	**S U**
Comment: **NOTE:** ***WS60 must be used. WS60 multiplied by 0.77 to obtain corrected wind speed.*** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
5.1.3	Obtain meteorological data from the PPC, page 351 WD, Wind Direction (WD60) _____°	On EI-6.7 Att. 1 data recorded as follows: WD, Wind Direction = 73° from (X) 60 meters	**S U**
Comment: **NOTE:** ***WD60 must be used.*** **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
5.1.4	Obtain meteorological data from the PPC, page 351 Stability Class (STAB) _____	On EI-6.7 Att. 1 data recorded as follows: Stability Class = _C_	**S U**
Comment: **CRITICAL STEP**			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
n/a	EI-6.7, Attachment 1 completed: Date:, Time:, Completed By:	On EI-6.7 Att. 1 data recorded as follows: Date: Today's date Time: Current time Completed By: Operator's name	**S U**
Comment:			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
n/a	Notify the CRS that EI-6.7 Attachment 1 completed.	Operator notifies CRS of completion of EI-6.7, Attachment 1.	**S U**
Comment:			

END OF TASK

SIMULATOR OPERATOR INSTRUCTIONS

1. Reset to IC 17

2. Remove the following two PPC points from service by using MFs PC20 and PC 21 on PID PC02. These MFs will cause a "V" or invalid display from the Met Tower 10 meter height. Candidate will have to use the 60 meter readings and use a conversion factor of 0.77 to obtain appropriate data. **(ENSURE these MFs are changed back after JPM is completed)**

    - MWD10
    - MWS10

3. Provide a Working Copy of EI-6.7, Att. 1 to evaluator.

4. Use Remote Functions (RF) on PID PC02 to modify the following (after all RFs are changed, then use UPDATE NOW and respond 'YES"):
    - WS60 = 9 (change RF to this value)
    - WD60 = 73 degrees FROM (change RF to this value)
    - Stability = C (no change needed since RF should already say "3")

5. Candidate may use PPC monitor in Simulator Computer Room for this JPM: ensure it is up and running.

PLANT SITE METEOROLOGICAL SYSTEM WORKSHEET

ANSWER KEY ANSWER KEY ANSWER KEY ANSWER KEY ANSWER KEY

1.	WS, Wind Speed = 6.93 mph *Multiply by 0.77 (9 MPH X 0.77 = 6.93 MPH)	( ) 10 meters (X) 60 meters, *corrected (See Step 5.1.3 or 5.2.6)

2.	WD, Wind Direction = 73 ° from	( ) 10 meters (X) 60 meters (See Step 5.1.3 or 5.2.6)
3.	Stability Class = C	(see Step 5.1.4 or 5.2.7)

Date: TODAY Time: NOW Completed By: JOE OPERATOR

ANSWER KEY ANSWER KEY ANSWER KEY ANSWER KEY ANSWER KEY

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

The Shift Manager, acting as the Site Emergency Director, has declared an Alert condition. A thunderstorm is in progress.

INITIATING CUES:

The Shift Manager has directed you to obtain Meteorological Data by completing Attachment 1 of EI-6.7, utilizing Meteorological Data display in the Control Room.

NRC REGION III

INITIAL LICENSE EXAM

JOB PERFORMANCE MEASURE

JPM: SRO ADMIN 4

TITLE: CLASSIFY EVENT AND DETERMINE PAR

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Classify an Event and Determine PARs - Protective Action Recommendations

Alternate Path: N/A

Facility JPM #: SRO-A.4 2003 NRC

K/A: 2.4.41, 2.4.44 Importance: RO:4.1, 4.0 SRO: 4.1, 4.4

K/A Statement: (2.4.41) Knowledge of the emergency action level threshholds and classifications.
(2.4.44) Knowledge of emergency plan protective action recommendations.

Task Standard: Event classified as a General Emergency and PAR is evacuation of 2 mile radius and 5 miles in Areas 1 and 2, within 30 minutes.

Preferred Evaluation Location: Simulator __X__ In Plant _____

Preferred Evaluation Method: Perform __X__ Simulate _____

References: EI-1, Emergency Classifications and Actions
EI-3, Communications and Notifications
EI-6.13, Protective Action Recommendations for Offsite Populations

Validation Time: __30__ minutes Time Critical: YES

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT_____ UNSAT _____

Comments:

Examiner: _____ Date: _____
Signature

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

EI-1 Attachment 1
EI-3
EI-6.13 Attachment 1

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. The Reactor has tripped.
2. A LOCA is in progress.
3. Pressurizer level is offscale LOW.
4. PCS pressure is 100 psia.
5. CETs indicate 600ºF.
6. Total LPSI/HPSI flow is NOT adequate per EOP Supplement 4.
7. SIRW tank level is 38% and lowering slowly.
8. Containment isolation has occurred as designed and EOP Supplement 6 for Containment Isolation is in progress.
9. A release is NOT occurring through the plant stack or steam dumps.
10. Containment Gamma Monitors (RIA-2321 and 2322) are indicating 5E4R/hr.
11. Reactor Vessel Level Monitoring System (RVLMS) indicates ALL red lights
12. Failed fuel analysis is in progress with no results to report yet.
13. Obtained Meteorological Data is as follows:
    - QN = 0.0
    - QI = 0.0
    - Wind Speed = 1.1
    - Stability Class = G
    - Wind Direction = 235 (from)
    - Weather is clear with no precipitation

INITIATING CUES:

During activation of the Site Emergency Plan, you are the Shift Manager (acting as the Site Emergency Director). You are to classify the event given the above information and determine any required Protective Action Recommendations, and complete an Event Notification Form. No previous event declaration has been made.
This JPM is Time Critical.

Proc.Step	TASK ELEMENT 1	STANDARD	Grade
EI-1	Locates procedure to determine Emergency Classification.	Locates EI-1 and refers to Attachment 1, “Hot Conditions (PCS > 200 degrees F)”.	**S U**
Comment: ***EVALUATOR: Candidate may use placard of site emergency plan classifications or use paper copy from EI-1, attachment 1.***			

Proc.Step	TASK ELEMENT 2	STANDARD	Grade
EI-1 **Att 1**	Refers to "Fission Product Barriers" section (lower right-hand corner)	Refers to lower right-hand corner of EI-1, Attachment 1, “Hot Conditions (PCS > 200 degrees F)”.	**S U**
Comment:			

Proc.Step	TASK ELEMENT 3	STANDARD	Grade
EI-1 **Att 1**	Determines status of fission product barriers.	___ Refers to Table F1 ___ Determines a LOSS of Fuel Cladding (based on Containment Gamma monitors readings (item 5) ___ Determines a LOSS of PCS Barrier (based on leak rate and PCS subcooling)(item 2) OR based on Containment Gamma Monitor readings. ___ Determines a POTENTIAL LOSS of Containment Barrier (based on Containment Gamma monitors readings).(item 6)	**S U**
Comment: ***EVALUATOR: If candidate refers to EI-11, inform them "That procedure will be performed by the TSC."***			

Proc.Step	TASK ELEMENT 4	STANDARD	Grade

EI-1 Att 1	Declares Emergency Classification.	Declares a GENERAL EMERGENCY per FG1 based on status of fission product barriers (loss of TWO and potential loss of THIRD).	**S U**
Comment: **CRITICAL STEP**			

Proc.Step	TASK ELEMENT 5	STANDARD	Grade
EI-1 Att 2	Prepares Emergency Actions/Notifications form.	Obtains EI-1, Attachment 2 and fills out per attached KEY.	**S U**
Comment: **NOTE: This Task Element may be performed at any time during the JPM. Filling out this form is NOT required for this JPM; however a key is attached in case candidate fills out the form.** **NOTE: It is NOT the intent of this JPM to have candidate actually make the notifications.**			

Proc.Step	TASK ELEMENT 6	STANDARD	Grade
EI-3 Att 1	Prepares Event Notification Form.	Obtains EI-3, Attachment 1 and fills out per attached KEY.	**S U**
Comment: **NOTE: KEY is attached to this JPM.** **NOTE: EI-3, Attachment 2, "Palisades Event Technical Data Sheet" is NOT required during this JPM.** **NOTE: Candidate may use computer on Control Room island area to prepare this form.**			

Proc.Step	TASK ELEMENT 7	STANDARD	Grade
EI-6.13 Att 1	Determines Protective Action Recommendations (PARs).	Obtains EI-6.13 and corresponding Attachment 1 and determines: ___ Evacuate 5 mile in Areas 1 and 2 (minimum GE recommendation on bottom of Pg 1 of Attachment 1)	**S U**
Comment: **CRITICAL STEP**			

Proc.Step	TASK ELEMENT 8	STANDARD	Grade
EI-3 Att 1	Completes filling out Palisades Event Notification Form.	Palisades Event Notification Form completely filled per attached KEY AND form is approved (Candidate initials, date, and time entered at bottom of form)	**S U**
Comment: **NOTE: Candidate may use computer on back-bar of Control Room island area to complete and print this form.** **CRITICAL STEP**			

END OF TASK

ANSWER KEY

Attachment 1
Revision 26
Page 1 of 1

PALISADES EVENT NOTIFICATION FORM

☐ Actual Event ☒ Drill

Plant Contact Information

Nuclear Power Plant : Palisades

Plant Communicator :_____ Time of Communication: V.B._____
S.O.M._____
NRC_____

Calling From: ☐ Control Room ☐ TSC ☐ EOF ☐ Other: _____

Call Back Telephone Number: _____

1

Plant Message Number

Current Classification

☐ Unusual Event ☐ Alert ☐ Site Area Emergency ☒ General Emergency ☐ Termination

This classification was declared as of: Date 5/31/2009 Time 1453

Reason for Classification

☐ Abnormal Rad Levels / Radiological Effluent

☐ Hazards and Other Conditions Affecting Plant Safety

☐ System Malfunctions

☐ Cold Shutdown/Refueling System Malfunction

☐ Independent Spent Fuel Storage Installation Events

☒ Fission Product Barrier Degradation

IC Number FG1

Radiological Release in Progress Due to Event

☐ Yes ☒ No

Protective Action Recommendations

☐ None

Evacuation of Area(s): ☒ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5

In-Place Shelter of Area(s): ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

PAR based on: ☐ Dose Calculation (Palisades Event Technical Data Sheet required) ☒ Plant Status ☐ Security Event

☐ Other _____

Meteorological Data

Wind Direction (degrees): From 235 To 55

Wind Speed (MPH): 1

Stability Class: G

Precipitation: ☐ Yes ☒ No

Emergency Director Approval: _____ Date: _____ Time: _____

SIMULATOR OPERATOR INSTRUCTIONS

- No Simulator setup required.
- It is preferred that this JPM be done separately from the simulator. If, by chance, candidate IS in the simulator while doing this JPM, THEN ensure the IC does NOT have a release in progress.

ENSURE ALL DATA IS CLEARED FROM EP NOTIFICATION COMPUTER ON BACK-BAR OF CRS ISLAND PRIOR TO NEXT USE OF THIS JPM.

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

1. The Reactor has tripped.
2. A LOCA is in progress.
3. Pressurizer level is offscale LOW.
4. PCS pressure is 100 psia.
5. CETs indicate 600ºF.
6. Total LPSI/HPSI flow is NOT adequate per EOP Supplement 4.
7. SIRW tank level is 38% and lowering slowly.
8. Containment isolation has occurred as designed and EOP Supplement 6 for Containment Isolation is in progress.
9. A release is NOT occurring through the plant stack or steam dumps.
10. Containment Gamma Monitors (RIA-2321 and 2322) are indicating 5E4R/hr.
11. Reactor Vessel Level Monitoring System (RVLMS) indicates ALL red lights.
12. Failed fuel analysis is in progress with no results to report yet.
13. Obtained Meteorological Data is as follows:
    - QN = 0.0
    - QI = 0.0
    - Wind Speed = 1.1
    - Stability Class = G
    - Wind Direction = 235 (from)
    - Weather is clear with no precipitation

INITIATING CUES:

During activation of the Site Emergency Plan, you are the Shift Manager (acting as the Site Emergency Director). You are to classify the event given the above information and determine any required Protective Action Recommendations, and complete an Event Notification Form. No previous event declaration has been made.

This JPM is Time Critical.