JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: **Loss of CTMT Closure**

ID Number: NRC SRO A.1.1 Revision: 0

II. Initiated:

Dave Minnich — Developer — 05/12/09 — Date

III. Reviewed:

Technical Reviewer — Date

IV. Approved:

Cognizant Plant Supervisor (optional) — Date

Nuclear Training Supervisor — Date

JOB PERFORMANCE MEASURE WORKSHEET (continued)

Facility: MP3

JPM Number: NRC SRO A.1.1 Rev. 0

Task Title: Loss of Containment Closure

System: N/A

Time Critical Task: Yes ____ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS # 119-03-003, 119-03-013

Applicable To: SRO X RO ____ PEO ____

K/A No. 2.1.36 K/A Rating 4.1

Method of Testing:

Simulated Performance: ____ Actual Performance: X

Location:

Classroom: X Simulator: X In-Plant: X

Task Standards: At the completion of this JPM, the examinee will have identified a loss of CTMT closure and direct actions to suspend all operations involving movement of irradiated fuel assemblies in the containment.

Required Materials (procedures, equipment):
P&ID EM-123E (25212-26923 sht 5 of 7)
P&ID EM-145A (25212-26945 sht 1 of 3)
UNIT 3 TECHNICAL SPECIFICATIONS

General References:
AOP 3565, Loss of Containment Vacuum / Integrity
SP 3613F.3, CTMT Boundary During Movement of Fuel within the CTMT Building
OP 3250.12, Establishing CTMT Boundary for Movement of Fuel within the CTMT Building
UNIT 3 TECHNICAL SPECIFICATIONS

JOB PERFORMANCE MEASURE WORKSHEET (continued)

SUMMARY OF CHANGES:

*** * * * READ TO THE EXAMINEE * * * ***

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied. You may use any approved reference materials normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgments, and log entries as if the evolution was actually being performed.

*** * * * NOTES TO EXAMINER * * * ***

1. Critical steps for this JPM are indicated with a "Y". For the examinee to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When examinee states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question examinee for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

Simulator Requirements:	• None

Initial Conditions:	• The plant is in MODE 6 with refuel shuffle in progress.
	• Containment closure is set with closure plans (administrative controls) established for the following:
	  • CTMT Equipment Hatch
	  • CTMT Personnel Hatch
	  • CTMT Purge Valves
	• The following plant conditions exist:
	  • 'A' train of RHR in service in the cooldown mode.
	  • RHR return temperature - 90°F
	  • 'D' SG secondary side manways are open for inspection with hoses and cables run into the steam generator
	• You are the Unit Supervisor on watch in the Control Room.

Initiating Cues:	• The Primary Rounds PEO calls to report that workers erecting scaffolding in the Main Steam Valve Building 60' have accidentally broken off a main steamline drain valve. He is holding 3DTM-V119 and the broken pipe nipple in his hands. You inform the Shift manager, who directs you to refer to Tech Specs and the TRM to determine if there are any required actions. Also, identify compensatory actions, if any, to allow refueling to continue.

JOB PERFORMANCE MEASURE WORKSHEET (continued)

START TIME:

STEP	PERFORMANCE	STANDARD	CRITICAL (Y/N)	GRADE (S/U)
Comments:	If the candidate questions whether a closure plan exists for the 'D' SG manways, provide the following Cue:			
Cue:	A closure plan is not in place for the 'D' SG.			
1.	Obtain and refer to the appropriate drawings or other documentation to determine that a breach of CTMT closure has occurred.	SRO Applicant refers to P&ID EM-123E (Main Steam system) and EM-145A (Turbine Plant Miscellaneous Drains).	N	
		SRO Applicant determines that the 3DTM-V119 drain path is a breach of CTMT closure.	N	
Cue:	If asked for valve ID name: #4 MSIV Upstream Drain Standpipe LS28D Low Point Drain.			
Comments:	Entry into AOP 3565, *Loss of CTMT Vacuum / Integrity* is not required for success in this JPM but may be referenced by the candidate.			
2.	Refer To Technical Specification 3.9.4 for Containment Building Penetrations and DETERMINE Limiting Condition for Operation.	Refers to T.S. LCO 3.9.4 for Containment Building Penetrations, and enters LCO ACTION statement (ACTION: With the requirements of the above specification not satisfied, immediately suspends all operations involving movement of fuel in the containment building.)	Y	

JOB PERFORMANCE MEASURE WORKSHEET (continued)

		SRO Applicant directs the Refueling SRO to immediately suspend all operations involving movement of fuel in the containment building.	**Y**	
Cue:	If directed to "immediately suspend" all operations involving movement of irradiated fuel assemblies in the containment provide examinee with Handout 2.			
Comments:	Entry into LCO 3.9.4 ACTION requirement is required for success in this JPM. SRO applicant should state or otherwise indicate recognition of LCO requirement.			
3.	Correct recognition that Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.	Applicant recognizes that fuel movement is in progress in CTMT and enroute to the Fuel Building.	**Y**	
		SRO Applicant directs the Refueling SRO to complete both moves and then stop all operations involving CORE ALTERATIONS or movement of fuel in the containment building.	**Y**	
Cue:				
Comments:	Definitions: 1.9 CORE ALTERATIONS shall be the movement of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel. **Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.**			
Cue:	**The evaluation for this JPM is complete.**			

STOP TIME: _____

JPM Number: NRC SRO A.1.1 Rev. 0

VERIFICATION OF JPM COMPLETION

Title: Loss of Containment Closure

Date Performed: _____

Examinee: _____

Evaluator: _____

For examinee to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 10

Actual Time to Complete (minutes): _____

Overall result of JPM: _____ SAT / UNSAT

Areas for Improvement: _____

EXAMINEE HANDOUT 2

DO NOT provide this handout until cued

Initial Conditions:	• In the Containment a used fuel assembly is over its new core location and is ready to be lowered. • In the Spent Fuel Pool, a used fuel assembly is in transit to its final SFP location.

Initiating Cues:	• The Refueling SRO requests guidance on what to do with the fuel assemblies.

EXAMINEE HANDOUT

Initial Conditions:	• The plant is in MODE 6 with refuel shuffle in progress.
	• Containment closure is set with closure plans (administrative controls) established for the following:
	  • CTMT Equipment Hatch
	  • CTMT Personnel Hatch
	  • CTMT Purge Valves
	
	• The following plant conditions exist:
	  • 'A' Train protected
	  • 'A' train of RHR in service in the cooldown mode.
	  • RHR return temperature - 90° F
	  • 'D' SG secondary side manways are open for inspection with hoses and cables run into the steam generator
	
	• You are the Unit Supervisor on watch in the Control Room.

Initiating Cues:	• The Primary Rounds PEO calls to report that workers erecting scaffolding in the Main Steam Valve Building 60' have accidentally broken off a main steamline drain valve. He is holding 3DTM-V119 and the broken pipe nipple in his hands. You inform the Shift manager, who directs you to refer to Tech Specs and the TRM to determine if there are any required actions. Also, identify compensatory actions, if any, to allow refueling to continue.

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Respond to Degrading Intake Conditions.

JPM Number: NRC SRO A.1.2 Revision: 0

Initiated:

Dave Minnich 4/22/09

Developer Date

Reviewed:

Technical Reviewer Date

Approved:

Supervisor, Nuclear Training Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE

JPM WORKSHEET

Facility: MP3 Examinee: _____

JPM Number: NRC SRO A.1.2 Revision: 0

Task Title: Respond to Degrading Intake Conditions.

System: N/A

Time Critical Task: ( ) YES (X) NO

Validated Time (minutes): 15

Task Number(s): 341-01-107, Response to degrading intake conditions.

Applicable To: SRO **X** RO _____ PEO _____

K/A Number:	2.1.23 2.1.20	K/A Rating:	4.3 / 4.4 4.6 / 4.6

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: X Simulator: _____ In-Plant: _____

Task Standards: Respond to degrading intake conditions.
Review and disposition surveillance for Intake Structure Condition Determination.

Required Materials: (procedures, equipment, etc.)
Completed OPS form SP 3665.2-001, Intake Structure Condition Determination with Vacuum in Condenser.
SP 3665.2, Intake Structure Condition Determination.
OP 3215, Response to Intake Structure Degraded Conditions.

General References:

***** READ TO THE EXAMINEE *****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: NRC SRO A.1.2 Revision : 0

Initial Conditions: You are the Shift Manager and the unit is experiencing degrading conditions at the intake structure. The Shift Technical Advisor (STA) is keeping SP 3665.2, Intake Structure Condition Determination current. The last surveillance was done at 0800 and indicated a plant factor condition of YELLOW, an environmental factor condition of YELLOW.

Initiating Cues: Wind speed, from Met. Tower data, has increased to a steady 27 mph and from a new direction of 250°, which is verified by the marine forecast.

You directed the STA to conduct a new Intake Structure Condition Determination which he just completed.

Review and disposition the completed SP 3665.2-001 surveillance, and then perform the required actions associated with the new plant and environmental conditions.

Simulator Requirements: NONE

*** * * * NOTES TO TASK PERFORMANCE EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: NRC SRO A.1.2 Revision: 0

Task Title: Respond to Degrading Intake Conditions

START TIME: _____

	PERFORMANCE	STANDARD		
Comments:	Hand the applicant the completed SP 3665.2-001. The applicant may request a copy of SP 3665.2, Intake Structure Condition Determination. If so, provide.			
STEP #1 SP 3665.2 Step 4.3.5	**REQUEST SM review SP 3665.2-001.** **Review and assess conditions for current Plant Factors.**	Applicant reviews the correct portion of the surveillance form which is the 'Per SM/US column' for the denoted plant conditions for each of the plant factors.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
	Circulating water Pumps and Screens (P1), Screen Wash Pumps (P2),	Applicant reviews the plant factor values for Circulating water Pumps and Screens (P1), Screen Wash Pumps (P2), Trash Racks (P3), Trash Rakes (P4), Traveling Screens (P5) and Debris Conveyor (P6), and determines that correct plant factor values were denoted, and no change from the 0800 surveillance.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:				
		Applicant reviews the Plant Factors Section Total value and determines that a correct total value of '7' was denoted and is the same as the 0800 surveillance Plant Factors Section Total value.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:				

S T E P # 2	**Review and assess conditions for current Environmental Plant Factors.**	Applicant reviews the correct portion of the surveillance form which is the 'Per SM/US column' for the denoted environmental conditions for each of the environmental factors.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant reviews the environmental factor values for Predicted Height of Next High Tide (E1) and Height of Tide in Last 48 Hours (E2), and determines that correct environmental factor values were denoted.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant reviews the environmental factor value for Wind Direction (E3) and determines that a value of '1' was erroneously circled, instead of the correct value of '2'.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:	The new wind direction, as given in the cue, is from 250°. SP 3665.2-001 specifies a Wind Speed factor value of '2' for directions from 120° to 270°.			
Cue:				
		Applicant reviews the environmental factor values for Wind Speed (E4) and Historical Wind Speed (E5) and determines that correct environmental factor values were denoted.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant reviews the environmental factor value for Wind Correction (E6) and determines that a value of '5' was erroneously entered, instead of the correct value of '10'.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]

Comments:	Wind Correction (E6) is equal to Wind Speed (E4) plus Historical Wind Speed (E5) times Wind Direction (E3). E6 = E3 x (E4 + E5). Wind Direction (E3) should actually be a factor of '2' as opposed to '1'.			
Cue:				
		Applicant reviews the environmental factor values for Predicted Wave Height (E7), Historical Wave Height (E8), Wave Height / Seas Factor (E9), Barometric Pressure (E10), Season (E11), Historical Environmental Factor (E12) and Seaweed Loading (E13) and determines that correct environmental factor values were denoted.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant reviews the Environmental Factors Section Total value and determines that a total value of '21' was erroneously entered, instead of the correct value of '26'.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant recognizes that the Plant Factors Section Total value is ≥3, and therefore is a Plant Factor Condition remains "YELLOW".	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Page 5 of 5 of SP 3665.2-001.			
Cue:				
		Applicant recognizes that the Environmental Factors Section Total value is > 23 (specifically 26), and therefore is an Environmental Factor Condition of "RED" *not "YELLOW", as is entered on the form.*	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:	This is an Environmental Factor Condition change from "YELLOW" to "RED".			
Cue:				

		Applicant recognizes that the Intake Condition Total is > 29 (specifically 33), and therefore is an Intake Condition Total condition of "RED", *not "YELLOW", as is entered on the form.*	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments: Cue:	This is an Intake Condition Total condition change from "YELLOW" to "RED'.			
STEP #3	**Determine Required Actions**	Applicant recognizes that if any action level is exceeded, OP 3215 must be referred to. (SP 3665.2-001 Note 2)	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:				
	(SP 3665.2-001 Note 3)	Applicant recognizes that if 'RED' action level is exceeded (environmental total or Intake total), a risk review must be performed.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:	The STA will refer to NF-AA-PRA-370, and PERFORM a risk review.			
STEP #4	Obtain proper procedure.	Applicant obtains a copy of OP 3215 and reviews the procedure steps to determine which are applicable with the plant factor condition "RED", OR the environmental factor condition "RED".	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:				
STEP #5 OP 3215 Step 4.4	WHEN the plant factor OR environmental factor is "YELLOW" OR "RED," EVALUATE conditions and PERFORM the following as appropriate:	Applicant recognizes that step 4.4 is applicable for the new plant and environmental conditions.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

Comments:	OP 3215 step 4.4 should already be in progress based on the 0800 surveillance results which indicated both a plant factor condition and an environmental factor condition of "YELLOW". If questioned by the applicant, provide the following cue:			
Cue:	OP 3215, step 4.4 is in progress.			
STEP #6 OP 3215 Step 4.5	IF environmental factor condition is "YELLOW" OR "RED," EVALUATE conditions and PERFORM the following, as appropriate:	Applicant recognizes that step 4.5 is applicable for the new plant and environmental conditions.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	OP 3215 step 4.5 should already be in progress based on the 0800 surveillance results which indicated an environmental factor condition of "YELLOW". If questioned by the applicant, provide the following cue:			
Cue:	OP 3215, step 4.5 is in progress.			
STEP #7 OP 3215 Step 4.6	IF environmental factor OR unplanned plant factor condition is "RED," PERFORM the following as appropriate:	Applicant recognizes that step 4.6 is applicable for the new plant and environmental conditions.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant notifies the Intake Structure Coordinator and Operations management (or OMOC) of the conditions affecting the Intake Structure.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant discusses that the maximum possible number of steam dumps and atmospheric dumps should be in service and if not, returned to service.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				

Comments: Cue:		Applicant recognizes that continuous trash rack cleaning should be started.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:		Applicant discusses opening the trash trough trap door, if necessary.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:		Applicant discusses opening the plexiglass inspection doors at the backside debris trough on all screens and monitoring debris spray and carryover.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:		Applicant discusses the need to evaluate the condition of the following systems: - Steam Dump System - Condenser Vacuum Systems - Screenwash Systems - Service Water Systems - Circulating Water Systems	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

		Applicant discusses the need that if conditions that could challenge any of these systems exist or may develop, he must perform the following: • NOTIFY the Unit 2 Shift Manager • NOTIFY the Work Week Coordinator • RESTORE the maximum possible number of steam dumps and atmospheric dumps to service • Refer To Attachments 1 through 5 and ESTABLISH response teams at the intake	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:	**Cue (if required): Continue on in OP 3215**			
STEP #8 OP 3215 Step 4.7	Monitor conditions in the following systems • Steam Dump System • Condenser Vacuum Systems • Screenwash Systems • Service Water Systems • Circulating Water Systems	Applicant discusses the need to monitor systems affected by intake challenges.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:				
STEP #9 OP 3215 Step 4.8	IF circ pump amps, discharge pressure, AND condenser delta T indicate the waterbox is fouling, Refer To OP 3325A, "Circulating Water," and PERFORM backwashes	Applicant discusses the need to perform backwashes during intake challenges	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:				
STEP #10 OP 3215 Step 4.9	IF conditions exist in the systems from step 4.7 that could challenge plant operations, PERFORM the following:	Applicant recognizes and discusses that if additional intake challenges develop the need to conduct a downpower or taking the unit off line may be required.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

Comments:	After applicant discusses step 4.9, provide the following cue:			
Cue:	**"The A & B Circulating Water pumps have just tripped."**			
STEP #11 OP 3215 Step 4.10	IF both of the circulating pumps in the same condenser bay are lost, TRIP the reactor and Go To EOP 35 E-0, "Reactor Trip or Safety Injection"	Applicant recognizes that A & B Circulating Pumps ARE in the same condenser bay and directs a reactor trip.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

Termination Cue: The Evaluation For This JPM is Complete.

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: NRC SRO A.1.2 Revision: 0

Date Performed: _____

Student: _____

Evaluator: _____

To achieve a satisfactory grade, **ALL** critical steps must be completed correctly. If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 15

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

JPM Number: NRC SRO A.1.2 Revision: 0

Initial Conditions: You are the Shift Manager and the unit is experiencing degrading conditions at the intake structure. The Shift Technical Advisor (STA) is keeping SP 3665.2, Intake Structure Condition Determination current. The last surveillance was done at 0800 and indicated a plant factor condition of YELLOW, an environmental factor condition of YELLOW.

Initiating Cues: Wind speed, from Met. Tower data, has increased to a steady 27 mph and from a new direction of 250°, which is verified by the marine forecast.

You directed the STA to conduct a new Intake Structure Condition Determination which he just completed.

Review and disposition the completed SP 3665.2-001 surveillance, and then perform the required actions associated with the new plant and environmental conditions.

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Notifications and Reportability Associated with a Safety Limit Violation.

JPM Number: NRC SRO A.2 Revision: 0

Initiated:

Dave Minnich — 5/12/09

Developer — Date

Reviewed:

Technical Reviewer — Date

Approved:

Supervisor, Nuclear Training — Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE

JPM WORKSHEET

Facility: Millstone Unit 3 Examinee: _____

JPM Number: NRC SRO A.2 Revision: 0

Task Title: Notifications and Reportability Associated with a Safety Limit Violation.

System: N/A

Time Critical Task: ( ) YES (X) NO

Validated Time (minutes) 12

Task Number(s): 119-03-003

Applicable To: SRO X RO _____ PEO _____

K/A Number: 2.2.22 K/A Rating: 4.7

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: X Simulator: _____ In-Plant: _____

Task Standards: Determine if the plant is operating outside the requirements of the MP3 Technical Specifications and as a result, the proper notifications and event reporting requirements.

Required Materials: (procedures, equipment, etc.) MP3 Technical Specifications
RAC 14, *Non-Emergency Station Events*

General References: RAC 05, *Reportability Determinations and Licensee Event Reports*

*** **READ TO THE EXAMINEE** ***

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: SRO A.2 Revision : 0

Initial Conditions: The plant is shutdown in MODE 4, cooling down to MODE 5 following a significant transient and subsequent reactor trip. Known post-trip reporting requirements were met. The Event Review Team (ERT) has reported that just prior to the trip, with the reactor at 80% power, RCS pressure had dropped to 2000 psia and Tave elevated to 620°F.

Initiating Cues: The Operations Manager, sponsor of the ERT, asks you to evaluate this new information for reportability, and if reportable, what reporting requirements must be met.

Simulator Requirements: NONE

**** **NOTES TO TASK PERFORMANCE EVALUATOR** ****

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: NRC SRO A.2 Revision: 0

Task Title: Notifications and Reportability Associated with a Safety Limit Violation.

START TIME: _____

	PERFORMANCE	STANDARD		
STEP #1	Obtains and refers to proper procedure.	Applicant obtains and refers to a copy of MP3 technical Specifications.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #2	Refer To Technical Specification 2.1.1 for SAFETY LIMITS: Reactor Core, to determine the Limiting Condition for Operation. ... OR... Determine if a Safety Limit has been violated.	Applicant Refers to T.S. 2.1.1 for SAFETY LIMITS; Reactor Core, determines the LCO is specifed as follows: "The combination of THERMAL POWER, Reactor Coolant System highest loop average temperature, and pressurizer pressure shall not exceed the limits specified in the CORE OPERATING LIMITS REPORT."	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

		Applicant Refers to the CORE OPERATING LIMITS REPORT (COLR) and correctly determines that the locus of points as given in the cue for RCS pressure and temperature is in the "unacceptable region" of Figure 1 (Reactor Core Safety Limit), and is therefore a Safety limit violation.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
		Applicant refers to T.S. LCO 2.1.1 for SAFETY LIMITS; Reactor Core, and enters LCO ACTION statement (ACTION: Whenever the Reactor Core Safety Limit is violated, restore compliance and be in HOT STANDBY within 1 hour.) SRO applicant should state or otherwise indicate recognition of LCO requirement.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	The COLR is located in the Technical Requirements Manual (TRM).			
Cue:				
STEP #3	Obtains proper procedure to determine required notifications.	Obtains and refers to a copy of RAC 14, *Non-Emergency Station Events.*	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #4	Review Precautions. (RAC 14, Section 3)	Applicant reviews precautions 3.1 through 3.8.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
	Cue:			
	Comments:			
STEP #5	**Initial Event Reportability Determination** IF sufficient cause exists for reporting a non-emergency event, PERFORM the following: (RAC 14, step 4.1.1.a)	Applicant recognizes that cause exists for reporting this event.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	If the applicant requests additional personnel to track the event, or requests additional assistance, provide the above cue:			
Cue:	Additional assistance will be available shortly. Continue with your task.			
STEP #6	As required, REQUEST Station Duty Officer (typically the non-affected unit STA) and Emergency Communicator (typically the non-affected unit WC SRO) report to the Control Room and prepare to send a Non Emergency Event Report. (RAC 14, step 4.1.1.d)	Applicant calls Unit 2 and requests the Station Duty Officer and Emergency Communicator report to the Unit 3 Control Room.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	RAC 14, steps 4.1.1.e through 4.1.1.i pertain to event types NOT related to the event in progress. The applicant should recognize that these steps do not apply and move to step 4.1.1.j.			
Cue:				

STEP #7	For all events, Refer To appropriate Attachment 1 through 7 and DETERMINE State and NRC reporting requirements. (RAC 14, step 4.1.1.j)	Applicant refers to Attachments 1 through 7 and determines that Attachment 1, "Plant Operation / Equipment / Technical Specification Events", is the applicable attachment.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
		Applicant matches the event in progress with the following event description in attachment 1: " Safety Limit Violation"	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
		Applicant correctly determines the NRC Reporting Requirement for the event is as follows: **"Within 4 hours via ENS"** (10CFR50.72(b)(2)(i)**	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
		Applicant correctly determines the State posture code for the event is an **"Echo"**	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
		Applicant correctly determines the State Reporting Requirement for the event is as follows: **"Within 1 hour of report to NRC if not already reported"** (State Reg. 22a-135-1)	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:	If the applicant questions whether an Emergency Action Level Classification has been made as a result of the event leading to the Safety Limit violation, provide the following cue.			

Cue:	NO Emergency Action Level Classification has been made.			
STEP #8	Determine Additional Notifications.	Applicant correctly determines that NOTE 8 to Attachment 1 of RAC 14 applies and that there are additional notifications.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	NOTES are located in Attachment 7 to RAC 14.			
		Applicant verbalizes or otherwise notes that The SVP/CNO - Dominion Nuclear Connecticut, Inc. shall be notified within 24 hours.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant verbalizes or otherwise notes that the Senior Vice President - Nuclear Operations shall be notified within 24 hours.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant verbalizes or otherwise notes that the Site Vice President - Millstone shall be notified within 24 hours.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Cue:	**The Emergency Communicator will prepare and send the Non Emergency Event Report and the Station Duty Officer will complete the remaining required notifications.** **The evaluation for this JPM is complete.**			

TERMINATION CUE: The evaluation for this JPM is concluded.

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: SRO A.2 Revision: 0

Date Performed: _____

Student: _____

Evaluator: _____

For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 12

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

JPM Number: SRO A.2 Revision: 0

Initial Conditions: The plant is shutdown in MODE 4, cooling down to MODE 5 following a significant transient and subsequent reactor trip. Known post-trip reporting requirements were met. The Event Review Team (ERT) has reported that just prior to the trip, with the reactor at 80% power, RCS pressure had dropped to 2000 psia and Tave elevated to to 620°F.

Initiating Cues: The Operations Manager, sponsor of the ERT, asks you to evaluate this new information for reportability, and if reportable, what reporting requirements must be met.

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Review and Approve a Radioactive Liquid Waste Discharge Permit

JPM Number: NRC SRO A.3 (JPM-115) Revision: 1

Initiated:

Dave Minnich — 4/28/09

Developer — Date

Reviewed:

Technical Reviewer — Date

Approved:

Supervisor, Nuclear Training — Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE
5/28/09	Revised JPM to update to revision 018-03 to OP 3335D, "Radioactive Liquid Waste System." Split various standards into two standards such that 'initialing the permit' is not part of the critical step. Modified JPM to new fleet format. Modified JPM for a discharge from the 'B' WTT (as opposed to the original 'A' WTT). Obtained new up to date discharge permit ('B' WTT). Modified JPM setup to use the RMS console in the MP3 simulator, as opposed to handing the candidate a color copy of LWS-RE70 database screen. DLM	1

JPM WORKSHEET

Facility: MP3 Examinee: _____

JPM Number: NRC SRO A.3 Revision: 1

Task Title: Review and Approve a Radioactive Liquid Waste Discharge Permit

System: Radioactive Liquid Waste System (068)

Time Critical Task: ( ) YES (X) NO

Validated Time (minutes): 10

Task Number(s): 068-01-064, Discharge the contents of a Low Level Waste Drain Tank. 068-03-001, Adhere to the requirements of the Radwaste Management Program.

Applicable To: SRO **X** RO _____ PEO _____

K/A Number: 2.3.6 K/A Rating: 2.0 / 3.8

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: _____ Simulator: X In-Plant: _____

Task Standards:

Required Materials: (procedures, equipment, etc.)
OP 3335D, Radioactive Liquid Waste System
Liquid Discharge Permit
Screen Print of Rad Monitor LWS70-1

General References: None

***** READ TO THE EXAMINEE *****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: NRC SRO A.3 Revision : 1

Initial Conditions: The unit is at 100% power with all systems in normal line-ups. The "A" and "B" Service Water pumps and all Circulating Water pumps are running.

Initiating Cues: The Radwaste PEO has presented OP 3335D sign off copy and a Liquid Discharge Permit for discharging the "B" Waste Test Tank to the Circulating Water discharge tunnel for your approval. Review and approve the permit and report to the examiner when complete.

Simulator Requirements: **At the RMS console**, use section 4.25 of OP 3335D, to change the alert and alarm setpoints for LWS-RE70 to exactly one order of magnitude higher than is specified on the discharge permit for the 'B' WTT.

*** * * * NOTES TO TASK PERFORMANCE EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: NRC SRO A.3 Revision: 1

Task Title: Review and Approve a Radioactive Liquid Waste Discharge Permit

START TIME: _____

	PERFORMANCE	STANDARD		
STEP #1	Go to the correct procedure step, OP3335D, Section 4.25.6.i.	Applicant locates procedure step 4.25.6.i.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	The candidate may review previous steps. If necessary provide the following cue:			
Cue:	Steps 4.25.1, 2, 3, 4, 5 and step 4.21.6.a through h have been completed.			
STEP #2	PERFORM Independent Verification of liquid effluent monitor alarm and alert settings. [step 4.25.6.i.1)]	Applicant locates liquid effluent monitor alarm and alert settings on Liquid Discharge Permit.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Locates liquid effluent monitor alarm and alert current settings on RMS Console for LWS70-1.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:	Candidate should access the RMS screen for LWS70-1 (database), Liquid Waste Effluent Monitor by entering 'LWS70 1' and pressing 'DATABASE'.			
Cue:				
		Compares permit settings and RMS information and identifies that RMS is incorrect. Recommends changing RMS to match the permit.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]

Comments:	IF candidate identifies error, provide the following cue:			
Cue:	"The setpoints have been corrected."			
		Candidate Initials permit after receiving the cue.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #3	Refer to CHEM Form 3800P-001 and CHECK "EST Activity this Discharge (Ci)" on Liquid Discharge Permit is less than action level specified. [step 4.25.6.i.2)]	Candidate compares CHEM Form 3800P-001 Action Level for activity per discharge to the "Estimated activity this discharge (Ci)" on the Discharge permit "Estimated activity this discharge (Ci)". Determines that the estimated activity for the discharge is less than the Action Level.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Candidate Initials permit	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #4	IF action levels or goals are met or exceeded, Refer To CP 3800P, "Unit 3 Liquid Waste Management," for guidance on further processing of the affected tank. [step 4.25.6.i.3)]	Candidate recognizes that NO action levels or goals are met or exceeded and moves on to step 4.25.6.i.4).	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Step 4.25.6.i.3) is N/A since no limits are exceeded.			
Cue:				

STEP #5	CHECK required dilution flowrate is met. [step 4.25.6.i.4)]	Candidate compares discharge permit requirement of 3 circ water and 2 service water pumps, to actual plant condition of 2 Service Water pumps and all 6 Circulating Water pumps running. Determines that dilution flow is met.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Candidate Initials permit.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				

Termination Cue: The Evaluation of this JPM is Complete

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: NRC SRO A.3 Revision: 1

Date Performed: _____

Student: _____

Evaluator: _____

To achieve a satisfactory grade, **ALL** critical steps must be completed correctly. If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 10

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

JPM Number: NRC SRO A.3 Revision: 1

Initial Conditions: The unit is at 100% power with all systems in normal line-ups. The "A" and "B" Service Water pumps and all Circulating Water pumps are running.

Initiating Cues: The Radwaste PEO has presented OP 3335D sign off copy and a Liquid Discharge Permit for discharging the "B" Waste Test Tank to the Circulating Water discharge tunnel for your approval. Review and approve the permit and report to the examiner when complete.

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Emergency Plan Classification and PAR

JPM Number: SRO A.4 Revision: 0

Initiated:

Dave Minnich 5/14/09

Developer Date

Reviewed:

Technical Reviewer Date

Approved:

Supervisor, Nuclear Training Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE

JPM WORKSHEET

Facility: MP3 Examinee: _____

JPM Number: SRO A.4 Revision: 0

Task Title: Emergency Plan Classification and PAR

System: N/A

Time Critical Task: (X) YES ( ) NO

Validated Time (minutes) 20

Task Number(s): 301-05-366, 301-05-449

Applicable To: SRO **X** RO _____ PEO _____

K/A Number: 2.4.41 2.4.44 K/A Rating: 4.6 / 2.9 4.4 / 2.4

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: X Simulator: _____ In-Plant: _____

Task Standards: Determine the EAL and State Posture Code
Determine the minimum required PAR

Required Materials: (procedures, equipment, etc.)

- MP-26-EPI-FAP06-003, MILLSTONE UNIT 3 EMERGENCY ACTION LEVELS
- MP-26-EPI-FAP06, CLASSIFICATION AND PARs
- MP-26-EPI-FAP06-005, CONTROL ROOM PROTECTIVE ACTION RECOMMENDATIONS

General References: MP-26-EPI-FAP-01-001, CONTROL ROOM DIRECTOR OF STATION EMERGENCY OPERATION (CR DSEO)

*** **READ TO THE EXAMINEE** ***

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: SRO A.4 Revision : 0

Initial Conditions: You are the Shift Manager at Millstone Unit 3. The time is 0900. The plant has been on-line for 219 days. The "A" Charging pump is tagged out for an oil change. All other major plant equipment is in service. A Severe Thunderstorm Watch has been placed in effect for all Connecticut counties.

The following events occur:

1. (0910) A lightning strike causes a loss of offsite power.
2. (0910) Reactor trip, turbine trip. The "A" EDG starts, the "B" EDG fails to start. A small break LOCA occurs in CTMT.
3. (0911) Safety Injection on low Pressurizer pressure.
4. (0919) STA reports pressurizer level off-scale low with no corresponding increase in containment pressure.
5. (0925) RO reports CETs approaching 700 °F and RE04A/05A reading 250 Rem/hr.
6. (0926) BOP reports a trip of the "A" MDAFW pump.
7. (0929) STA reports an Orange Path on Core Cooling.
8. (0933) RO reports only 250 psia discharge pressure on the "A" SI pump with a flooding alarm in the ESF Building.

The current wind speed is ten (10) miles per hour. The current wind direction is from 210°.

Initiating Cues: **DETERMINE THE APPLICABLE EMERGENCY ACTION LEVEL AND MAKE ANY APPROPRIATE PROTECTIVE ACTION RECOMMENDATIONS.**

This is a time critical task.

ARE THERE ANY QUESTIONS? **YOU MAY BEGIN.**

Simulator Requirements: NONE

*** * * * NOTES TO TASK PERFORMANCE EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: SRO A.4 Revision: 0

Task Title: Emergency Plan Classification and PAR

START TIME: _____

	PERFORMANCE	STANDARD		
STEP #1	Obtain Proper procedure.	Applicant obtains or requests copy of MP-26-EPI-FAP06-003, MP3 Emergency Action Levels.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Applicant may also request copies of: • MP-26-EPI-FAP-01-001, CR-DSEO Checklist • MP-26-EPI-FAP06, Classification and PARs • MP-26-EPI-FAP06-005, CR PARs • MP-26-EPI-FAP07, Notifications & Comms • MP-26-EPI-FAP07-001, Incident Report Form The **CR DSEO Notebook** contains all these procedures.			
Cue:				
STEP #2	**Classify the Event.**	Applicant recognizes a loss of the Fuel Clad Barrier, based on > 200 R/hr on RE04/05, ≤2hrs after shutdown. (FCB3 AND Table 1 values)	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant recognizes a loss of the RCS Barrier based on RCS Subcooling < 32°F Due to RCS Leak. (RCB2)	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
Comments:	Although not specifically stated in initial conditions, the applicant should determine that subcooling cannot exist with a valid orange path on Core Cooling.			
Cue:				

Comments: Cue:		Applicant recognizes a loss of the CTMT Barrier based on No CTMT Pressure Increase when Expectation exists. (CNB3)	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
Comments: Cue:		Applicant reviews MP-26-EPI-FAP06-003 and determines that a NRC EAL of GENERAL EMERGENCY, BG1 exists. Fuel Clad Barrier (L), RCS Barrier (L) and CTMT Barrier (L).	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
STEP #3 Comments: NOTE	**Determine State Posture Code** Tables are color coded to reflect the State Posture. **Record the Time Classification is Completed:**	Applicant reviews MP-26-EPI-FAP06-003 and determines that the block for BG1 is the same color as State Posture ALPHA.	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
STEP #4 Comments: Cue:	**Determine the State Protective Action Recommendation**	Applicant uses MP-26-EPI-FAP06-005, Section B, Control Room PAR Process Flowchart, to determine the PAR.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments: Cue:		Applicant reviews flowchart and diagnoses that all 3 barriers ARE lost (Yes) and transitions to "Is There a Release in Progress"	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]

		Applicant reviews flowchart and determines that a release IS in progress. Transitions to "Is the Release Controlled".	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
Comments:	Although not specifically stated in initial conditions, the applicant should determine that a release is in progress based on no increase in containment pressure and "A" SI pump discharge pressure with attendant flooding in the ESF Building. The applicant should also reasonable determination that the release is NOT controlled.			
Cue:				
		Applicant reviews flowchart and determines that the release is NOT controlled. Transitions to the Wind Direction Table to determine appropriate zone to evacuation.	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant marks the box associated with wind direction from 194° - 218°.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant verbalizes or otherwise notes that State officials should evacuate Zones A and B and E and Montville and Waterford in C. Shelter all other zones.evaluation.	Critical: **Y [X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant reviews flowchart and transitions to the block for Potassium Iodide (KI) issuance determination.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

Comments:	When applicant requests dose projections, provide the following cue:			
Cue:	The Chem Tech Initial Dose Assessment is not yet available.			
NOTE	**Record the Time the PAR is determined:**			
S T E P #5	**Communication of the State Protective Action Recommendation**	Applicant reviews flowchart and transitions to Section A, Step 2 of MP-26-EPI-FAP06-005 (Control Room PAR) for the notification.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
	If a General Emergency ALPHA is declared with actions necessary out to 10 miles, PARs are verbally transmitted to the 24 hour DEP Dispatcher in Hartford.	Applicant verbalizes or otherwise notes that the DEP dispatcher in Hartford should be contacted to communicate the applicable evacuation and sheltering recommendations.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Optional Question: What conditions would cause you to change the PAR? Answer: (1) A change in wind direction could change the zones to evacuate, or (2) if dose projections or actual dose for thyroid is greater than or equal to 5 Rem at the site boundary, recommend the State implement KI strategy for the general pubic.			
NOTE:	• **15 minutes to determine Emergency Action Level and State Posture Code.** • **15 minutes after classifying event to determine minimum required PAR.**			
Cue:	**The evaluation for this JPM is complete.**			

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: SRO A.4 Revision: 0

Date Performed: _____

Student: _____

Evaluator: _____

For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
If task is Time Critical, it **MUST** be completed within specified time to achieve a satisfactory grade.

Time Critical Task? Yes **X** No _____

Validated Time (minutes): 20

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

Initial Conditions:

You are the Shift Manager at Millstone Unit 3. The time is 0900. The plant has been on-line for 219 days. The "A" Charging pump is tagged out for an oil change. All other major plant equipment is in service. A Severe Thunderstorm Watch has been placed in effect for all Connecticut counties.

The following events occur:

1. (0910) A lightning strike causes a loss of offsite power.
2. (0910) Reactor trip, turbine trip. The "A" EDG starts, the "B" EDG fails to start. A small break LOCA occurs in CTMT.
3. (0911) Safety Injection on low Pressurizer pressure.
4. (0919) STA reports pressurizer level off-scale low with no corresponding increase in containment pressure.
5. (0925) RO reports CETs approaching 700 °F and RE04A/05A reading 250 Rem/hr.
6. (0926) BOP reports a trip of the "A" MDAFW pump.
7. (0929) STA reports an Orange Path on Core Cooling.
8. (0933) RO reports only 250 psia discharge pressure on the "A" SI pump with a flooding alarm in the ESF Building.

The current wind speed is ten (10) miles per hour. The current wind direction is from 210°.

Initiating Cues:

DETERMINE THE APPLICABLE EMERGENCY ACTION LEVEL AND MAKE ANY APPROPRIATE PROTECTIVE ACTION RECOMMENDATIONS.

This is a time critical task.

ARE THERE ANY QUESTIONS? **YOU MAY BEGIN.**

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Perform SHUTDOWN MARGIN Calculation with Inoperable Rods

JPM Number: NRC RO A.1.1 (JPM 078-2) Revision: 1

Initiated:

Dave Minnich — 7/17/09

Developer — Date

Reviewed:

Technical Reviewer — Date

Approved:

Supervisor, Nuclear Training — Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE
7/17/09	Modified initial conditions to present cycle (13) conditions. Modified JPM to new fleet format. DLM	1/0

JPM WORKSHEET

Facility: Millstone Unit 3 Examinee: _____

JPM Number: NRC RO A.1.1 Revision: 1

Task Title: Perform SHUTDOWN MARGIN Calculation with Inoperable Rods

System: 001 (Control Rod Drive System)

Time Critical Task: ( ) YES (X) NO

Validated Time (minutes): 10

Task Number(s): 341-01-187

Applicable To: SRO _____ RO _____ PEO _____

K/A Number: 001-A4.11 2.1.25 K/A Rating: 3.5 / 4.1 3.9 / 4.2

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: X Simulator: _____ In-Plant: _____

Task Standards: Correctly determines SHUTDOWN MARGIN

Required Materials: (procedures, equipment, etc.) OP 3209B Shutdown Margin (rev 010-06), Form 3209B-001, and Cycle 13 Middle of Life RE Curve Book

General References: Unit 3 Technical Specifications, Technical Requirements

***** READ TO THE EXAMINEE *****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: NRC RO A.1.1 Revision : 1

Initial Conditions: The plant is at 100% power. During performance of SP 3602A.1, Rod Cluster Control Exercise, it was determined that Shutdown Bank 'A' Rods M14 & P12 are inoperable.

Other plant conditions are:

- RCS boron is 1080 ppm
- Core Burnup is 9,500 MWD/MTU
- Tave is on program
- Control Bank D rods are at 218 steps

Initiating Cues: The US has directed you to calculate SHUTDOWN MARGIN for current plant conditions.

Simulator Requirements: NONE

*** * * * NOTES TO TASK PERFORMANCE EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: NRC RO A.1.1 Revision: 1

Task Title: Perform SHUTDOWN MARGIN Calculation with Inoperable Rods

START TIME: _____

	PERFORMANCE	STANDARD		
STEP #1	Obtains copy of OP 3209B "Shutdown Margin".	Obtains proper procedure.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	When candidate identifies that form 3209B-001 is required, **provide a copy of the form.**			
Cue:				
STEP #2 OP 3209B, step 4.1.1	VERIFY "General Prerequisites" completed.	Verifies "Test Authorized By" block is signed on FORM 3209B-001.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
		Reviews OP 3209B Section 3 PRECAUTIONS	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #3 OP 3209B, step 4.1.2	IF only one control rod is inoperable, PERFORM the following...	Proceeds to next step as initiating cue stated 2 rods were inoperable.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #4 OP 3209B, step 4.1.3	Refer to OP 3209B-001 and RECORD calculation time and date.	Records time and date on OP 3209B-001.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #5 OP 3209B, step 4.1.4.a	Refer To" Integral Rod Worth vs. Steps Withdrawn" curves and SELECT the integral rod worth curve based on plant power level and xenon condition.	Select HFP, Eq Xe curve RE-D-02.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #6 OP 3209B, step 4.1.4.b	Refer to OP 3209B-001 and INDICATE the integral rod worth curve selected.	Writes "HFP, Eq Xe" on OP 3209B-001.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #7 OP 3209B, step 4.1.4.c	Using the selected curve, DETERMINE inserted rod worth based on bank position and DOCUMENT as a negative value on OP 3209B-001.	Enters "- 12" (-5 to –20) on OP 3209B-001. Number is approximate. Allow for minor curve interpolation error.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #8 OP 3209B, step 4.1.5.a	IF two or more control rods are inoperable, PERFORM the following: Refer to "Miscellaneous Core Data" in the RE Curve and Data Book and DETERMINE the worst case "Inoperable Rod Worth" and DOCUMENT as a negative value on OP 3209B-001.	Refer to table RE-G-03 and writes "-1143 pcm" on OP 3209B-001.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #9 OP 3209B, step 4.1.5.b	CALCULATE "Inoperable Rod ρ" (MULTIPLY Inoperable rod worth and the number of Inoperable rods) and RECORD value and sign (-) on OP 3209B-001.	Writes "-2286 pcm" on OP 3209B-001.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				

Cue:				
STEP #10 OP 3209B, step 4.1.6	Refer to "Total Power Defect vs Percent Power" in the RE Curve and Data Book and DETERMINE power defect for current conditions and RECORD as a negative value on OP 3209B-001.	Refers to curve RE-E-01 and enters "-2020 pcm". Number is approximate. (Accept 1970 to 2070).	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #11 OP 3209B, step 4.1.7	IF Tavg differs...	Proceeds to next step as initiating cue stated Tavg on program.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #12 OP 3209B, step 4.1.8	Calculate "Total Reactivity Adjustments" (ADD the following reactivity adjustments [taking sign into account] and DOCUMENT value and sign (±) on OP 3209B-001.	Writes "-6318" on OP 3209B-001. Number is approximate. (Accept 6268 to 6368)	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #13 OP 3209B, step 4.1.9.a	DETERMINE the SHUTDOWN MARGIN as follows: Refer to "Miscellaneous Core Data" in the RE Curve and Data Book and DETERMINE the Cycle Minimum Total Control Rod Worth at Hot Zero Power and ENTER as a positive value on OP 3209B-001.	Refers to table RE-G-03 and enters "6344 pcm" on OPS Form 3209B-001.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #14 OP 3209B, step 4.1.9.b	CALCULATE SHUTDOWN MARGIN (ADD total *p* adjustments and Cycle Minimum Total Control Rod Worth) and DOCUMENT value and sign (±) on OP 3209B-001.	Enters "-6318" pcm and "6344" pcm on OP 3209B-001. Adds the numbers together and writes "+26" on OP 3209B-001. Number is approximate. (Accept –76 to +76)	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				

Cue:				
STEP #15 OP 3209B, step 4.1.10	CHECK SHUTDOWN MARGIN > +1300 pcm (1.3% ΔK/K).	Determines SDM < 1300 pcm	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #16	IF SHUTDOWN MARGIN is less than +1300 pcm (1.3% Δ K/K), Refer to AOP 3566, "Immediate Boration," and PERFORM immediate boration to restore SDM.	Refers to AOP 3566 or informs US that immediate boration is required.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:	When examinee has indicated immediate boration is required, provide the following cue:			
Cue:	**The evaluation for this JPM is complete**			

TERMINATION CUE: The evaluation for this JPM is concluded.

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: NRC RO A.1.1 Revision: 1

Date Performed: _____

Student: _____

Evaluator: _____

To achieve a satisfactory grade, **ALL** critical steps must be completed correctly. If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 10

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

JPM Number: NRC RO A.1.1 Revision: 1

Initial Conditions: The plant is at 100% power. During performance of SP 3602A.1, Rod Cluster Control Exercise, it was determined that Shutdown Bank 'A' Rods M14 & P12 are inoperable.

Other plant conditions are:

- RCS boron is 1080 ppm
- Core Burnup is 9,500 MWD/MTU
- Tave is on program
- Control Bank D rods are at 218 steps

Initiating Cues: The US has directed you to calculate SHUTDOWN MARGIN for current plant conditions.

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Complete a Shutdown Safety Assessment Checklist.

JPM Number: NRC RO A.1.2 Revision: 0

Initiated:

Dave Minnich 6/9/09

Developer Date

Reviewed:

Technical Reviewer Date

Approved:

Supervisor, Nuclear Training Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE

JPM WORKSHEET

Facility: MP3 Examinee: _____

JPM Number: NRC RO A.1.2 Revision: 0

Task Title: Complete a Shutdown Safety Assessment Checklist.

System: Conduct of Outages

Time Critical Task: ( ) YES (X) NO

Validated Time (minutes): 15

Task Number(s): 341-01-162

Applicable To: SRO **X** RO **X** PEO _____

K/A Number: 2.1.20 K/A Rating: 4.6 / 4.6

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: X Simulator: _____ In-Plant: _____

Task Standards: Given a specific set of plant conditions, correctly perform a Shutdown Safety Assessment Checklist.

Required Materials: (procedures, equipment, etc.)
OP 3260A, *Conduct of Outages* Rev. 016-07
OP 3260A-004, *Shutdown Safety Assessment Checklist*

General References:
MP-20-OM-FAP02.1, *Shutdown Risk Management*

***** READ TO THE EXAMINEE *****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: NRC RO A.1.2 Revision : 0

Initial Conditions:

The plant is in MODE 5 on day 28 of a scheduled 30 day refueling outage. RCS Boron concentration is 1987 ppm, which is in excess of required Shutdown margin. RCS temperature is 160°F and the RCS is pressurized. 'A' train protected. Both RHR trains are aligned for cooldown with the 'A' RHR running in cooldown mode. Preparations are being made to conduct the final containment closeout. The following conditions exist:

- The 'A' Charging pump is running, the 'B' Charging pump is tagged and its breaker racked down.
- Time to boil has been calculated to be 30.72 hours.
- All four RC loops have been vacuum filled. All four SGs are at 20% narrow range level.
- The RCS is pressurized and at a temperature of 160°F
- The 'B' SI pump is available for inventory control, caution tagged and in Pull-to-Lock.
- Containment Closure is set with exceptions tracked and capable of being closed prior to core boiling.
- 3RHS*V43, RHR to RWST recirculation, is tagged and locked closed.
- 1,200,000 gallons in the RWST.
- Both the North and South busses of the 345 KV switchyard are energized and considered reliable.
- The SBO Diesel is out of service for planned maintenance.
- No other equipment is out of service.

- Dilution flowpaths are tagged.closed.

A loss of emergency bus 34C occurs due to bus differential lockout. The crew enters and carries out actions of EOP 3505, *Loss of Shutdown Cooling and/or Inventory*. The 'B' RHR pump is now running in the cooldown mode and RCS temperatures are stable. The 'B' Charging pump has been racked up and is now running.

Initiating Cues: The Shift Manager has directed you to complete a Shutdown Safety Assessment Checklist to address the new plant conditions for the emergency bus loss. Complete the Shutdown Safety Assessment Checklist up to the point of determining the color condition for each Key Safety Function.

Simulator Requirements: NONE

*** * * * NOTES TO TASK PERFORMANCE EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: NRC RO A.1.2 Revision: 0

Task Title: Complete a Shutdown Safety Assessment Checklist.

START TIME: _____

	PERFORMANCE	STANDARD		
STEP #1	Obtain materials, locate correct procedure step.	Candidate locates section 1.2 of OP 3260A.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:	Provide copy of Op 3260A and 3260A-004 checklist to the candidate.			
STEP #2	**COMPLETE Shutdown Safety Assessment Checklist** CIRCLE appropriate Train Designator (1.2.1.a)	Candidate circles "A" on OP 3260A-004	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #3	**For Containment, PERFORM the following:** Refer to section 1.3 and DETERMINE time to core boil.	Applicant Recognizes that time to core boiling has been given as part of the initial conditions as 30.72 hours.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Time to core boil has been given in the initial conditions. If questioned by the applicant, provide the following cue:			
Cue:	Time to core boil is 30.72 hours.			
STEP #4	Refer To OP 3260A-004 and RECORD time to core boil.	Applicant refers to section 1.3, and fills in the following data. • Time to core boiling 30.72 hours • Days shutdown: 28 • Attachment used: 17	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

Comments:	If the applicant questions the attachment used to determine time to core boiling, provide the following cue:			
Cue:	Attachment 17			
STEP #5	CHECK appropriate boxes for conditions supporting "key safety function" of Containment (1.2.1.b.3)	Applicant refers to section 1.3, Containment Requirements.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Applicant may refer to section 1.3, which provides guidance on Containment Requirements.			
Cue:				
STEP #6	To maintain "Defense in Depth" for Containment, ESTABLISH one of the following conditions: (1.3.1) • Containment Closure • The capability to perform CTMT Closure prior to core boiling or four hours, whichever is less • MODE 0	Candidate checks box. *"Containment Closure set with exceptions ...."* Assigns one point	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #7	**For RCS Decay Heat Removal, PERFORM the following:** IF plant in MODE 0, Go To step 1.2.1.d.	Applicant recognizes that the plant is in MODE 5 and not in MODE 0, and moves on to the next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	If questioned by the applicant, provide the following cue:			
Cue:	The plant is in MODE 5.			
STEP #8	CHECK appropriate boxes for conditions supporting "key safety function" of RCS Decay Heat Removal.	Applicant refers to section 1.4, Decay Heat Removal Requirements.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

Comments:	Applicant may refer to section 1.4, which provides guidance on Decay Heat Removal and Pressurizer Surge Line Flooding Requirements.			
Cue:				
STEP #9	VERIFY one train of RHR in operation. (1.4.2)	Applicant determines that 'B' RHR is in operation in the cooldown mode and checks box: *"RHR Train B"* And assigns one point	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #10	IF in MODE 5, PERFORM at least one of the following to ensure a backup for decay heat removal: • MAINTAIN the non-operating RHR train available. • VERIFY all of the following are satisfied to ensure two steam generators available and proper RCS conditions are established to support natural circulation:	Applicant recognizes that the plant is in MODE 5 and therefore the step applies.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
		Applicant recognizes that the 'A' RHR train is unavailable due to the loss of 34C.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]

		Candidate determines that 4 SGs are available and proper RCS conditions are satisfied to support natural circulation and checks box: *"All conditions satisfied to support natural circulation in the RCS"* And assigns one point	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #11	IF natural circulation is the only available backup for decay heat removal, (only 1 RHR pump is available) PERFORM the Following: (1.4.4)	Applicant recognizes that natural circulation is the only available backup for decay heat removal.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
	• IF the time to core boiling is less than one hour, MAINTAIN one of the following:	Applicant recognizes that time to core boiling is NOT less than one hour and moves on to next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
	• IF a Bus 34C or 34D outage is planned, PRESSURIZE the RCS to greater than 170 psia unless either:	Applicant recognizes that, although a Bus 34C or 34D outage is NOT planned, 34C has been lost, and the step may apply.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Provide the following cue if the applicant questions how to interpret this step.			
Cue:	The US will interpret this step and provide direction to carry out this step if necessary. Continue on.			
	• IF not in a Bus 34C or 34D outage AND RCS is depressurized, MAINTAIN an additional credited charging pump…..	Applicant recognizes that the RCS is NOT depressurized and moves on to next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

Comments:	Candidate may circle NA for an additional credited charging pump.			
Cue:				
	• IF RCS openings are desired, PERFORM the following:	Applicant recognizes that the RCS is intact and RCS openings are NOT desired and moves on to the next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #12	IF in MODE 6, PERFORM at least one of the following to ensure a backup for decay heat removal: (1.4.5) • MAINTAIN greater than or equal to 23 ft of water above the top of the reactor vessel flange.	Applicant recognizes that the plant is NOT in MODE 6 and moves on to next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
		Applicant DOES NOT check the box associated with "> 23' refuel cavity"	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:	Applicant should NOT check the box associated with "> 23' refuel cavity" Only applies in MODE 6. Doing so would incorrectly change the Key Safety Function color for RCS Decay Heat Removal from YELLOW to GREEN.			
Cue:				
STEP #13	**For SFC Decay Heat Removal, PERFORM the following:** CHECK appropriate boxes for conditions supporting "Key Safety Function" of SFC decay heat removal.	Applicant refers to section 1.4, Decay Heat Removal Requirements.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #14	MAINTAIN "Defense in Depth" in the spent fuel pool as follows: (1.4.8) • MAINTAIN at least one train of spent fuel cooling available. • MAINTAIN greater than or equal to 23 ft pool water level above the fuel.	Candidate determines that 'B' SFC train is available for cooling the spent fuel pool and checks box: *"SFC Train B"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Candidate determines that 'there is > 23' level in the pool and checks box: *"> 23' pool level above the fuel"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #15	IF in MODE 6, core offload has started and core reload has not been completed, or MODE 0 ..... (1.2.1.d.2))	Applicant recognizes that the plant is in MODE 5 with the core refueled, and therefore the step is not applicable, and moves on to next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #16	**For PZR Surge Line Flooding, INITIAL and DATE those conditions preventing pressurizer surge line flooding.**	Applicant refers to section 1.4.6, for guidance on preventing Pressurizer Surge Line Flooding.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Candidate may refer to section 1.4.6, which provides guidance on preventing Pressurizer Surge Line Flooding.			
Cue:				
	To prevent "Pressurizer Surge Line Flooding" with the RCS at atmospheric pressure, PERFORM the following: VERIFY one of the following conditions exist: Reactor core has been refueled	Applicant determines that the core has been refueled and initials and dates for: *"Reactor core refueled or decay heat insufficient to cause surge line flooding"*	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				

Cue:				
STEP #17	**For Inventory, PERFORM the following:** IF plant in MODE 0, Go To step 1.2.1.g.	Applicant recognizes that the plant is in MODE 5 and not in MODE 0, and moves on to the next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #18	CHECK appropriate boxes for conditions supporting "Key Safety Function" of Inventory.	Candidate refers to section 1.5, Inventory Control Requirements.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Candidate may refer to section 1.5, which provides guidance on Inventory Control Requirements.			
Cue:				
STEP #19	VERIFY charging pump is in operation or available, and capable of being aligned to the RWST. (1.5.1)	Applicant recognizes that the 'A' charging pump is NOT available due to the loss of 34C.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant recognizes that the 'B' charging pump IS available to meet inventory requirements as given in the initial conditions, and checks box: *"Train B CHS PP B/C and associated flow path"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #20	PROVIDE at least one of the following as a backup for Inventory: • One or both safety injection pumps aligned to the RWST • Another credited charging pump capable of alignment to the RWST • Both RHR trains available for decay heat removal and both • capable of being aligned to the RWST • One RHR train aligned to the RWST	Candidate determines that 'B' Safety Injection pump is available for inventory control and checks box: *"SIH Train B aligned to the RWST with either hot leg or cold leg injection path capability"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant recognizes that another credited charging pump capable of alignment to the RWST is NOT available as a backup for inventory.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant recognizes that ONLY the 'B' RHR pump is available for DHR and capable of being aligned to the RWST.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant recognizes that NO train of RHR is aligned to the RWST.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #21	PERFORM one of the following, then CHECK box on OP 3260A-004: • VERIFY the clearance for 3RHS*V43, RHR to RWST recirculation isolation, is active in the tagging computer	Applicant recognizes that 3RHS*V43 is tagged and locked closed as given in the initial conditions and checks box: *"3RHS*V43, RHR to RWST recirculation tagged and locked closed"*	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #22	VERIFY RWST level is greater than 250,000 gallons and CHECK box. (1.2.1.f.4))	Applicant recognizes that RWST level is greater than 250,000 gallons as given in the initial conditions and checks box: *"Verify RWST level > 250,000 gallons"*	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #23	**For Power Availability, PERFORM the following:** CHECK appropriate boxes for conditions supporting "Key Safety Function" of Power Availability. (1.2.1.g)	Candidate refers to section 1.6, Power Availibility Requirements.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Candidate may refer to section 1.6, which provides guidance on Power Availability Requirements.			
Cue:				
STEP #24	MAINTAIN the following electric power sources: (1.6.2) • One available EDG • One offsite power source	Applicant determines that the 'B' EDG is available as a an On-Site power source and checks box: *"B EDG"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Applicant determines that both the NSST/Main and RSST are available as Off-Site power sources and checks box(es): *"NSST/Main"* and/or *"RSST"* And assigns one (or two) point(s)	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #25	MAINTAIN at least one of the following backup power sources: • EDG • Redundant offsite source • Station blackout diesel (SBO	Applicant recognizes that the 'A' EDG cannot be credited as an available On-site source, since emergency bus 34C is not available.	Critical: Y [**X**] N [ ]	Grade S [ ] U [ ]
Comments: Cue:				
		Applicant determines that the both the NSST/Main and RSST are available as Off-Site power sources and checks box(es): *"NSST/Main"* and/or *"RSST"* And assigns one (or two)point(s)	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments: Cue:	Applicant may have already checked both boxes for Off-site power sources. This is acceptable			
		Applicant recognizes that the SBO Diesel cannot be credited as an available On-site source, since it is out of service.	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments: Cue:				
STEP #26	REVIEW MP-13-PRA-FAP01.1, "Performing Risk Reviews," for guidance and DETERMINE the potential for a "High Offsite Grid Risk" condition, using the following criteria to establish an appropriate penalty	Applicant recognizes that there is no potential for a "High Offsite Grid Risk" condition.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	If questioned by the applicant with respect to current weather, ISO NE / CONVEX alerts or switchyard high risk work, provide the following cue:			
Cue:	There is no threat to the grid as a result of adverse weather, no CONVEX issued alerts or work in progress in the switchyards.			

	IF required, RECORD applicable Penalty Factor on OP 3260A-004 and SUBTRACT from Power Availability Sub-Total to determine Power Availability Total.	Applicant denotes "**N/A**" in the space for: *"Off-Site Grid Risk Penalty Factor"*	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #27	**For Reactivity, PERFORM the following:** IF plant in MODE 0, Go To step 1.2.1.i.	Applicant recognizes that the plant is in MODE 5 and not in MODE 0, and moves on to the next step.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #28	CHECK appropriate boxes for conditions supporting "Key Safety Function" of Reactivity.	Candidate refers to section 1.7, Reactivity Control Requirements.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Candidate may refer to section 1.7, which provides guidance on Reactivity Control Requirements.			
Cue:				
STEP #29	MAINTAIN the following: • RCS boron concentration greater than required boron concentration • One inventory flow path • In MODE 5, either one channel of Shutdown Margin Monitor (SMM) or one channel of Westinghouse source range with either automatic or manual monitoring of count rate. • Strict monitoring and control over the addition of unborated water to the RCS and the Refueling Cavity.	Applicant determines that RCS boron concentration greater than required boron concentration and checks box: *"RCS Boron > required SDM"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

		Applicant determines that there is one inventory flow path and checks box: *"Inventory flow paths"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant determines that both SMMs and both source range NIs are available with the ability to monitor count rate and checks box: *"In Mode 5, at least one Shutdown Margin Monitor train operable or one channel Westinghouse source range...."* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
		Applicant determines that dilution flowpaths are tagged closed as given in the cue and checks box: *"Dilution paths tagged using SP 3604C.6"* And assigns one point	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments: Cue:				
STEP #30 Comments: Cue:	MAINTAIN the following for additional defense in depth: No additional credit for additional defense in depth items in this step.	Applicant reviews items for additional defense in depth for Reactivity.	Critical: Y [ ] N [X]	Grade S [ ] U [ ]

STEP #31	**To obtain each Key Safety Function Total, SUM the points allotted for each credited component or condition supporting the Key Safety Function and ENTER in box.**	Candidate sums the points for each credited component or condition supporting the Key Safety Function • Containment **1** • RCS Decay Heat Removal **2** • SFC Decay Heat Removal **2** • Inventory **2** • Power Availability **3** • Reactivity **4**	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #32	**Using the Key Safety Function Total, CIRCLE the associated color CONDITION.**	Candidate circles the color condition below for each Key Safety Function • Containment **Green** • RCS Decay Heat Removal **Yellow** • SFC Decay Heat Removal **Yellow** • Inventory **Yellow** • Power Availability **Yellow** • Reactivity **Green**	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

TERMINATION CUE: The evaluation for this JPM is concluded.

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: NRC RO A.1.2 Revision: 0

Date Performed: _____

Student: _____

Evaluator: _____

To achieve a satisfactory grade, **ALL** critical steps must be completed correctly. If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 15

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

JPM Number: NRC RO A.1.2 Revision: 0

Initial Conditions:

The plant is in MODE 5 on day 28 of a scheduled 30 day refueling outage. RCS Boron concentration is 1987 ppm, which is in excess of required Shutdown margin. RCS temperature is 160°F and the RCS is pressurized. 'A' train protected. Both RHR trains are aligned for cooldown with the 'A' RHR running in cooldown mode. Preparations are being made to conduct the final containment closeout. The following conditions exist:

- The 'A' Charging pump is running, the 'B' Charging pump is tagged and its breaker racked down.
- Time to boil has been calculated to be 30.72 hours.
- All four RC loops have been vacuum filled. All four SGs are at 20% narrow range level.
- The RCS is pressurized and at a temperature of 160°F
- The 'B' SI pump is available for inventory control, caution tagged and in Pull-to-Lock.
- Containment Closure is set with exceptions tracked and capable of being closed prior to core boiling.
- 3RHS*V43, RHR to RWST recirculation, is tagged and locked closed.
- 1,200,000 gallons in the RWST.
- Both the North and South busses of the 345 KV switchyard are energized and considered reliable.
- The SBO Diesel is out of service for planned maintenance.
- No other equipment is out of service.
- Dilution flowpaths are tagged.closed.

A loss of emergency bus 34C occurs due to bus differential lockout. The

crew enters and carries out actions of EOP 3505, *Loss of Shutdown Cooling and/or Inventory.* The 'B' RHR pump is now running in the cooldown mode and RCS temperatures are stable. The 'B' Charging pump has been racked up and is now running.

Initiating Cues:

The Shift Manager has directed you to complete a Shutdown Safety Assessment Checklist to address the new plant conditions for the emergency bus loss. Complete the Shutdown Safety Assessment Checklist up to the point of determining the color condition for each Key Safety Function.

JOB PERFORMANCE MEASURE APPROVAL SHEET

JPM Title: Given a maintenance repair recommendation and reference material, recommend a clearance boundary.

JPM Number: NRC RO A.2 (based on JPM-067) Revision: 2

Initiated:

Dave Minnich 7/16/09

Developer Date

Reviewed:

Technical Reviewer Date

Approved:

Supervisor, Nuclear Training Date

SUMMARY OF CHANGES

A/I & DATE	DESCRIPTION	REV/CHANGE
6/15/09	Updated JPM to use OP-AA-200, *Equipment Clearance* as the governing reference. WC 2 was superceded by OP-AA-200. Modified JPM to conform to the new fleet JPM format. Changed 'red' tags to danger tags, and 'yellow' tags to caution tags.	1/0
7/16/09	Modified the JPM to tagout a different component at the NRC's request. Specifically, from 3GWS-P1B, to 3LWS-P6A, "A" Waste Test Tank Pump.	2/0

JPM WORKSHEET

Facility: MP3 Examinee: _____

JPM Number: NRC RO A.2 Revision: 1

Task Title: Given a maintenance repair recommendation and reference material, recommend a clearance boundary.

System: Tagging and Clearance

Time Critical Task: ( ) YES ( ) NO

Validated Time (minutes): 10

Task Number(s): 341-01-079

Applicable To: SRO _____ RO X PEO _____

K/A Number: GEN 2.2.13 K/A Rating: 4.1 / 4.3

Method of Testing: Simulated Performance: _____ Actual Performance: X

Location: Classroom: X Simulator: _____ In-Plant: _____

Task Standards: Develop and review a tag clearance.

Required Materials: (procedures, equipment, etc.)
Team Lead Tag-Out Request (attachment 5 to OP-AA-200)
P&IDs, EM-106A
EE One-Line diagrams
ESK Power Supply Book
OP 3335D, *Radioactive Liquid Waste System*

General References:
OP-AA-200, *Equipment Clearance*
OP 3250, Removing Equipment from Service for Maintenance

***** READ TO THE EXAMINEE *****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this JPM will be satisfied. You may use any approved reference material normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgements, and log entries as if the evolution was actually being performed.

JPM WORKSHEET

JPM Number: NRC RO A.2 Revision : 1

Initial Conditions: The pump impeller on the "A" Waste Test Tank Pump, 3LWS-P6A, has seized. Repair efforts are planned and the maintenance first line supervisor has made a work package tag-out request for the repair. The request includes the need to isolate, vent and drain, and to tagout electrically.

Initiating Cues: Your task is to develop a clearance boundary for this repair activity based on the maintenance first line supervisor's request. Record the clearance boundary on Attachment 2 to OP-AA-200. Assume all valves are leak tight.

Simulator Requirements: None

*** * * * NOTES TO TASK PERFORMANCE EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM Number: NRC RO A.2 Revision: 1

Task Title: Given a maintenance repair recommendation and reference material, recommend a clearance boundary.

START TIME: _____

	PERFORMANCE	STANDARD		
Comments:	Electrical and mechanical isolation of the pump can be done in any order.			
Cue:				
STEP #1	Identifies correct piping isolation boundary for the "A" Waste Test Tank Pump, 3LWS-P6A.	Candidate uses P&ID EM-106A or OP3335D-002 and other appropriate references and identifies the correct isolation boundary: • Pump Discharge (3LWS-V33) CLOSED and danger tagged • Pump Suction (3LWS-V31) CLOSED and danger tagged	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #2	Identifies correct vent configuration for the "A" Waste Test Tank Pump, 3LWS-P6A.	Candidate uses P&ID EM-106A or OP3335D-002 and other appropriate references and identifies at least ONE of the following vent valves: • Pump Strainer Test Valve (3LWS-V945) OPEN and danger tagged • Pump Strainer Test Point (3LWS-V946) OPEN and danger tagged	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

STEP #3	Identifies correct drain configuration for the "A" Waste Test Tank Pump, 3LWS-P6A.	Candidate uses P&ID EM-106A or OP3335D-002 and other appropriate references and identifies at least ONE of the following drain valves: • Pump Casing Drain (3LWS-V156) OPEN and danger tagged • Pump Suction Strainer Drain (3LWS-V960) OPEN and danger tagged	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #4	Identifies correct electrical isolation boundary for the "A" Waste Test Tank Pump, 3LWS-P6A.	Candidate uses OP3335D-007, electrical line-up, or EE-1AA and other appropriate references and identifies the correct electrical isolation point: • At MCC 32-1G (F2H), OFF and danger tagged	Critical: Y **[X]** N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				
		Candidate uses OP3335D-007, electrical line-up, or EE-1AA and other appropriate references and identifies the correct electrical isolation point: • 3LWS-P6A Control Switch OFF (or blank) and danger or caution tagged (at Liquid Waste Panel)	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:	Tagging the pump control switch is not required to meet the critical nature of this step.			
Cue:				

STEP #5		Candidate submits the completed Tagging report to the examiner as the Shift Manager. Tagout should substantially match the JPM attachment (completed Attachment 2 to OP-AA-200, Tagging Report).	Critical: Y [ ] N [X]	Grade S [ ] U [ ]
Comments:				
Cue:				
STEP #3			Critical: Y [ ] N [ ]	Grade S [ ] U [ ]
Comments:				
Cue:				

TERMINATION CUE: The evaluation for this JPM is concluded.

STOP TIME: _____

VERIFICATION OF JPM COMPLETION

JPM Number: NRC RO A.2 Revision: 1

Date Performed: _____

Student: _____

Evaluator: _____

To achieve a satisfactory grade, **ALL** critical steps must be completed correctly. If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 10

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT

Areas for Improvement / Comments:

STUDENT HANDOUT

JPM Number: NRC RO A.2 Revision: 1

Initial Conditions: The pump impeller on the "A" Waste Test Tank Pump, 3LWS-P6A, has seized. Repair efforts are planned and the maintenance first line supervisor has made a work package tag-out request for the repair. The request includes the need to isolate, vent and drain, and to tagout electrically.

Initiating Cues: Your task is to develop a clearance boundary for this repair activity based on the maintenance first line supervisor's request. Record the clearance boundary on Attachment 2 to OP-AA-200. Assume all valves are leak tight.

JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: Review a Radiological Work Procedure and Survey Map.

JPM Number: RO A.3 Revision: 0

II. Initiated:

Dave Minnich — 4/15/09
Developer — Date

III. Reviewed:

Technical Reviewer — Date

IV. Approved:

Cognizant Plant Supervisor (optional) — Date

Nuclear Training Supervisor — Date

JOB PERFORMANCE MEASURE

SUMMARY OF CHANGES:

A/I & DATE	DESCRIPTION	REV/CHANGE

JPM Number: RO A.3 Rev. 0

JOB PERFORMANCE MEASURE WORKSHEET (continued)

Facility: MP-2 Examinee: _____

JPM Number: RO A.3 Rev. 0

Task Title: Review a Radiological Work Procedure and Survey Map

System: Radiation Control

Time Critical Task: Yes _____ No X

Validated Time (minutes): 8

Task No.(s): 119-03-070, Approve entry and/or enter/exit the various radiation areas located within Millstone Station

Applicable To: SRO X RO X PEO _____

K/A No. 2.3.7 K/A Rating 3.5/3.6

Method of Testing:

Simulated Performance: _____ Actual Performance: X

Location:

Classroom: X Simulator: _____ In-Plant: _____

Task Standards: At the completion of this JPM the examinee has reviewed the applicable RWP and survey map to determine the radiological requirements to perform the assigned task.

Required Materials (procedures, equipment, etc.): Operations blanket RWP No. 5.
Survey map for ESF Building 4' elevation

General References: RPM 5.2.2, Basic Radiation Worker Responsibilities
RPM 2.5.10, Identification and Control of High Radiological Risk Work

*** * * * READ TO THE EXAMINEE * * * ***

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied. You may use any approved reference materials normally available in the Control Room, including logs. Make all written reports, oral reports, alarm acknowledgments, and log entries as if the evolution was actually being performed.

JOB PERFORMANCE MEASURE WORKSHEET (continued)

Initial Conditions: A refueling outage is in progress at Millstone Unit 3. Preparations are being made to Vent and Drain the 'B' RHR train in preparation for aligning in the injection mode.

Initiating Cues:

- You have been directed to make preparations to vent and drain the 'B' RHR train, including reviewing the applicable RWP and survey map for the area. Your task will be limited to the 'B' RHR Pit.
- Based on previous experience, you estimate that this task will take 1.5 hours.
- Your available dose is 1,000 mR.
- State the radiological requirements for entering this area. Include in your discussion:
  1. Which RWP task (job step) is appropriate for this assignment
  2. Highest radiation level in the work area (including units of measure)
  3. Highest contamination level in the immediate work area (including units of measure)
  4. Protective clothing required in the immediate work area (including transition to and from the area)
  5. Expected dose for this assignment area (including units of measure)
  6. Dose rate alarm for this area (including units of measure)
  7. Assuming significant difficulties are encountered, the longest possible stay time for this area, (including units of measure)
  8. Any special radiological hazards
- The examiner will act as Health Physics (HP) for any related questions.

Simulator Requirements: N/A

*** * * NOTES TO EVALUATOR * * * ***

1. Critical steps for this JPM are indicated by checking "Y". For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly.
2. When the student states what his/her simulated action/observation would be, read the appropriate "Cue".
3. If necessary, question the student for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?").
4. Under **NO** circumstances must the student be allowed to manipulate any devices during the performance of this JPM (in-plant only).

STEP	PERFORMANCE	STANDARD	CRITICAL (Y/N)	GRADE (S/U)

PERFORMANCE INFORMATION

JPM Number: RO A.3 Revision: 0

Task Title: Review a Radiological Work Procedure and Survey Map.

START TIME: _____

	PERFORMANCE	**STANDARD**		
1.	Review Operations Blanket RWP No. 5 and Radiation Survey Figure 30 (ESF 4' Elevation).	*Examinee reviews Operations Blanket RWP No. 5 and Radiation Survey Figure 30 and answers the following questions:*	Critical: Y[ ] N [X]	Grade S [ ] U [ ]
Cue:	• **Provide examinee with Operations Blanket RWP No. 5 and Radiation Survey Figure 30.** • **If required, state that the HP brief is complete with a reminder to follow the requirements of the RWP.**			
Comments:	• Examinee may state that a briefing with HP is required prior to entry into the work area. • The examinee may perform the following steps in any order.			
2.	Determine which RWP task (job step) is appropriate for this assignment.	*Examinee states that task (job step) No. 1 is appropriate for this task.*	Critical: Y[ ] N [X]	Grade S [ ] U [ ]
Cue:				
Comments:				
3.	Determine the highest radiation level in the immediate work area.	*Examinee states that the highest radiation level in immediate work area is 25 mr/hr.*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:	The examinee may point other hot spots located on the 4' level of ESF Building, but the assigned task does NOT require him/her to approach that area.			

STEP	PERFORMANCE	STANDARD	CRITICAL (Y/N)	GRADE (S/U)
4.	Determine the highest contamination level in the work area.	*Examinee states that the highest contamination level in this area is 25,000 DPM/100cm^2.*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:				
5.	Determine what protective clothing is required in the area.	*Examinee states that contamination levels require full PCs (with modesty garments underneath).*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:	Examinee may state the individual items that make up "full PCs" (Cotton liners, Booties, Coveralls, Shoe covers, Rubber gloves, Modesty garments)			
6.	Determine the expected dose for this assignment.	*Examinee states that the expected dose is about 19 mr (18 – 19 mr is acceptable).*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:	25 mrem/hr Dose Rate X 0.75 hrs (45 minutes) = 18.75 mr			
7.	Determine the expected dose rate alarm for this assignment.	*Examinee states that the expected dose rate alarm is 100 mr/hr.*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:	Based on RWP No. 5.			
8.	Determine the longest possible stay time for this assignment.	*Examinee states that the longest possible stay time is one hour.*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:	25 mrem Dose Limit Alarm / 25 mrem/hr Dose Rate = 1 hr.			

PERFORMANCE INFORMATION

JPM Number: RO A.3 Rev. 0

Review RWP and Survey Map

STEP	PERFORMANCE	STANDARD	CRITICAL (Y/N)	GRADE (S/U)
Comments:	After the examinee determines the longest possible stay time, Provide the following cue:			
Cue:	**If an emergent task required you to conduct additional valve manipulations on the mezzanine above 3RHS*V43, what additional requirements must be met?**			
9.	Determine any special radiological hazards.	*Examinee reviews Radiation Survey Figure 30, and identifies the mezzanine area as a High Radiation Area.*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:				
10.		*Examinee states that requirements for entering a High Radiation Area are as follows: Dose rate meter or alarming dosimeter AND knowledge of area dose rates, OR continuous HP coverage. Also, HP briefing for this area.*	Critical: **Y[X]** N [ ]	Grade S [ ] U [ ]
Cue:				
Comments:				

TERMINATION CUE: The evaluation for this JPM is concluded.

STOP TIME: _____

JPM Number: RO A.3 Rev. 0

VERIFICATION OF JPM COMPLETION

Title: **Review a Radiological Work Procedure and Survey Map.**

Date Performed: _____

Student: _____

Evaluator: _____

For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. If task is Time Critical, it **MUST** be completed within the specified time to achieve a satisfactory grade.

Time Critical Task? Yes _____ No **X**

Validated Time (minutes): 8

Actual Time to Complete (minutes): _____

Overall Result of JPM: SAT UNSAT *(circle one)*

Areas for Improvement/Comments:

_____

_____

_____

_____

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STUDENT HANDOUT

Initial Conditions: A refueling outage is in progress at Millstone Unit 3. Preparations are being made to Vent and Drain the 'A' RHR train in preparation for aligning in the injection mode.

Initiating Cues:

- You have been directed to make preparations to vent and drain the 'B' RHR train, including reviewing the applicable RWP and survey map for the area. Your task will be limited to the 'B' RHR Pit.
- Based on previous experience, you estimate that this task will take 1 hour.
- Your available dose is 1,000 mR.
- State the radiological requirements for entering this area. Include in your discussion:
  1. Which RWP task (job step) is appropriate for this assignment
  2. Highest radiation level in the work area (including units of measure)
  3. Highest contamination level in the immediate work area (including units of measure)
  4. Protective clothing required in the immediate work area (including transition to and from the area)
  5. Expected dose for this assignment area (including units of measure)
  6. Dose rate alarm for this area (including units of measure)
  7. Assuming significant difficulties are encountered, the longest possible stay time for this area, (including units of measure)
  8. Any special radiological hazards

The examiner will act as Health Physics (HP) for any related questions.