

NRC Administrative JPM

SRO JPM A.1

I. JPM Title: Administrative Requirements for Shift Manning Activities – Working Hour Limitations

JPM ID Number: SRO A.1

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

7 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

SUMMARY OF CHANGES

Change	Description	Date

Facility: Millstone Unit 3

Student: _____

JPM ID Number: SRO A.1

Revision: 0

Task Title: Administrative Requirements for Shift Manning Activities – Working Hour Limitations

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO X PEO _____

K/A Number: 2.1.5 K/A Rating: 3.4 / 2.3
Ability to locate and use procedures and directives related to shift staffing and activities.

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

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

Task Standards: Applicant determines working hour limitations would be exceeded. Examinee completes form OA 18-001 "Authorization to Exceed Established Overtime Limits".

Required Materials: OA 18, Overtime Controls for All Personnel at Millstone Station Form OA 18-001

General References: OA 18, Overtime Controls for All Personnel at Millstone Station

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

Initial Conditions:	<p>You are the Shift Manager for the off-going shift.</p> <p>The time is 16:00 on Thursday, 22 July 2004.</p> <p>You have just learned that one of the on-coming CROs can NOT report to work. Therefore, one CRO from your shift is required to holdover for up to four hours to maintain minimum shift manning requirements. Another CRO has been recalled from vacation and will report to work at 22:00.</p> <p>One CRO on your shift, Jane Doe, has volunteered to holdover. Her work history for the current shift (07:00 to 19:00) is:</p> <ul style="list-style-type: none"> • Saturday, 17 July 2004 OFF • Sunday, 18 July 2004 OFF • Monday, 19 July 2004 07:00 to 19:00 excluding turnover time • Tuesday, 20 July 2004 07:00 to 19:00 excluding turnover time • Wednesday, 21 July 2004 07:00 to 19:00 excluding turnover time • Thursday, 22 July 2004 07:00 to 19:00 excluding turnover time • Friday, 23 July 2004 Scheduled OFF
----------------------------	---

Initiating Cue:	<p>DETERMINE WHETHER JANE DOE IS ABLE TO HOLDOVER FOR FOUR HOURS AFTER SHIFT WITHOUT VIOLATING WORKING HOUR LIMITATIONS.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>
------------------------	---

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

1. Critical steps for this JPM are indicated by an asterisk after the step number. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Start Time: _____

#	Step	Standard	S/U
Examiner Cue		DETERMINE WHETHER JANE DOE IS ABLE TO HOLDOVER FOR FOUR HOURS AFTER SHIFT WITHOUT VIOLATING WORKING HOUR LIMITATIONS.	
1.	Applicant obtains/requests a copy of OA 18, Overtime Controls for All Station Personnel at Millstone Station.	NOTE: Provide a copy of OA 18, Overtime Controls for All Station Personnel at Millstone Station if requested. Applicant may request a procedure list or determine the appropriate course of action.	
2. *	Applicant evaluates holdover time to determine if working hour limitations are exceeded.	Applicant determines that Jane Doe will exceed working hour limits because she will work more than 24 hours in a 48 hour period.	
Examiner Cue		Direct Applicant to take actions necessary to permit Jane Doe to work the additional four hours. Applicant is to take actions as BOTH Supervisor and Manager.	
3.	Applicant obtains copy of Form OA 18-001.	NOTE: Provide a copy of Form OA 18-001 to applicant.	
4.	Applicant completes Form OA 18-001		
5. *	Applicant completes Section A. <ul style="list-style-type: none"> Task or Duties portion should refer to or relate the safety significance of the CRO duties JUSTIFICATION portion should refer to minimum staffing requirements. May also refer to medical emergency. Applicant signs/dates as Supervisor. 	Refer to Answer Key. Exact wording is not critical. Examiner must use judgment to determine if performance is satisfactory.	
6. *	Applicant completes Section B. <ul style="list-style-type: none"> Must check or mark "c. More than 24 hours within any 48-hour period". Applicant signs/dates as Manager or Designee. 	Applicant may also check or mark a. for >16 hours straight or b. for >16 hours in a 24-hour period if Applicant elects to authorize more than 4 hours.	
7.	Applicant indicates intent to forward Form OA 18-001 to the Operations Director	TASK IS COMPLETE.	

Stop Time: _____

* denotes critical step

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Student Handout
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

When I tell you to begin, **DETERMINE WHETHER JANE DOE IS ABLE TO HOLDOVER FOR FOUR HOURS AFTER SHIFT WITHOUT VIOLATING WORKING HOUR LIMITATIONS.**

Initial Conditions

You are the Shift Manager for the off-going shift.

The time is 16:00 on Thursday, 22 July 2004.

You have just learned that one of the on-coming CROs can **NOT** report to work. Therefore, one CRO from your shift is required to holdover for up to four hours to maintain minimum shift manning requirements. Another CRO has been recalled from vacation and will report to work at 22:00.

One CRO on your shift, Jane Doe, has volunteered to holdover. Her work history for the current shift (07:00 to 19:00) is:

- Saturday, 17 July 2004 OFF
- Sunday, 18 July 2004 OFF
- Monday, 19 July 2004 07:00 to 19:00 excluding turnover time
- Tuesday, 20 July 2004 07:00 to 19:00 excluding turnover time
- Wednesday, 21 July 2004 07:00 to 19:00 excluding turnover time
- Thursday, 22 July 2004 07:00 to 19:00 excluding turnover time
- Friday, 23 July 2004 Scheduled OFF

NRC Administrative JPM

SRO JPM A.2

I. JPM Title: Determine the maximum rate of power increase and control rod withdrawal restrictions.

JPM ID Number: SRO A.2

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

12 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

SUMMARY OF CHANGES

Change	Description	Date

Facility: Millstone Unit 3

Student: _____

JPM ID Number: SRO A.3

Revision: 0

Task Title: Determine the maximum rate of power increase and control rod withdrawal restrictions.

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO _____ PEO _____

K/A Number: 2.1.25 K/A Rating: 3.1

Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.

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

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

- Task Standards:
- Applicant recognizes the Fuel Condition Category as "Partially Conditioned" up to power level, P, of 80% and rod position, N, of 218 steps on CBD.
 - Applicant correctly identifies the following limits:
 - ◆ 10% per hour to power level "P" where P=80%.
 - ◆ 4% over any 1 hour period, 7% over any 2 hour period, 10% over any 3 hour period to achieve a nominal 3% full power per hour rate, and
 - ◆ Control Rod Withdrawal restricted to 3 steps per hour above 218 steps on CBD.
 - Applicant correctly applies the limits to determine that schedule adherence is possible without exceeding authorized fuel condition load increase restrictions.

- Required Materials:
- Operating Procedure OP 3204, At Power Operations.
 - Attachment 4 of OP 3204

General References: Operating Procedure OP 3204, At Power Operations.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

Initial Conditions:	<p>You are the Unit Supervisor of Millstone Generating Station, Unit 3. The plant has recently completed a refueling outage and plant startup. When returning to power following this refueling outage, the plant reached 80% and then was forced to reduce power to 50%.</p> <p>Specifically, on Wednesday, 14 July 2004 at 09:00, the plant reached 80% reactor power. The plant remained at 80% power until Saturday, 17 July 2004 at 13:00 when a Main Feedwater Pump malfunctioned and had to be shutdown for repairs. The plant reached 50% power on Saturday, 17 July 2004 at 19:30.. Since then the plant has been operating steady at 50% power and CBD step 218.</p> <p>Now the time is Wednesday, 21 July 2004 at 08:00 hours. Main Feedwater Pump repairs and post-maintenance testing are complete and satisfactory. The plant is ready to begin its return to full power in all other aspects.</p> <p>According to the current schedule, the plant should be at full (100%) power by the end of shift today, Wednesday, 21 July 2004 at 18:00 hours.</p> <p>Based on fuel conditioning alone, is it possible to reach 100% reactor power as scheduled? Assume that control rods will remain at CBD step 218 throughout the power ascension and that the power ascension begins immediately.</p>
----------------------------	---

Initiating Cue:	<p>YOU ARE TO DETERMINE WHETHER THE PLANT CAN ACHIEVE 100% POWER BY THE END OF SHIFT WITHOUT EXCEEDING ANY MANEUVERING LIMITS.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>
------------------------	---

1. Critical steps for this JPM are indicated by an asterisk after the step number. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Start Time: _____

#	Step	Standard	S/U
Examiner Cue		YOU ARE TO DETERMINE THE MAXIMUM RATE OF POWER INCREASE AND CONTROL ROD WITHDRAWAL RESTRICTIONS.	
1.	Applicant obtains/requests a copy of OP 3204, At Power Operation. Applicant may only request Attachment 4, Fuel Condition Load Increase Restrictions.	NOTE: Provide a copy of OP 3204, At Power Operation.	
2.	Applicant reviews the initial conditions to determine recent power history.	None.	
3.*	Applicant correctly determines that the plant has been at 80% power and CBD step 218 for at least 72 hours.	Applicant should state or write this determination.	
4.*	Applicant recognizes that the Fuel Condition Category is "Partially Conditioned" to 80%.		
5.*	Applicant determines that the Applicable Range of Power Level is 50% to 100% power".		
6.*	Applicant recognizes the maximum rate of power increase as 10% per hour to 80% and 3% per hour to 100%.	NOTE: step can be conservatively read as 3% per hour or 10% over any 3 hour period.	
7.*	Applicant applies the identified limits to determine the following times: <ul style="list-style-type: none"> • 3 hours to raise power 30% (from 50% to 80%). • 6 hours, 40 minutes to raise power 20% (from 80% to 100%). • <u>Total time = 9 hours: 40 minutes.</u> 	Accept 9:00 or 9:40 because 10% in 3 hours reduces the required time to 9 hours. Both interpretations are acceptable.	
9.*	Applicant recognizes and reports that there are 10 hours scheduled to complete the power ascension.	Based on fuel conditioning alone, it is possible to reach full power by 18:00 (or similar words).	
NOTE: Order or sequence of performance is NOT critical			

Stop Time: _____

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Student Handout
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

When I tell you to begin, **YOU ARE TO DETERMINE WHETHER THE PLANT CAN ACHIEVE 100% POWER BY THE END OF SHIFT WITHOUT EXCEEDING ANY MANEUVERING LIMITS.**

Initial Conditions

You are the Unit Supervisor of Millstone Generating Station, Unit 3. The plant has recently completed a refueling outage and plant startup. When returning to power following this refueling outage, the plant reached 80% and then was forced to reduce power to 50%.

Specifically, on **Wednesday, 14 July 2004 at 09:00**, the plant reached 80% reactor power. The plant remained at 80% power until **Saturday, 17 July 2004 at 13:00** when a Main Feedwater Pump malfunctioned and had to be shutdown for repairs. The plant reached 50% power on **Saturday, 17 July 2004 at 19:30..** Since then the plant has been operating steady at **50% power and CBD step 218.**

Now the time is **Wednesday, 21 July 2004 at 08:00** hours. Main Feedwater Pump repairs and post-maintenance testing are complete and satisfactory. The plant is ready to begin its return to full power in all other aspects.

According to the current schedule, the plant should be at full (100%) power by the end of shift today, **Wednesday, 21 July 2004 at 18:00** hours.

Based on fuel conditioning alone, is it possible to reach 100% reactor power as scheduled? Assume that control rods will remain at CBD step 218 throughout the power ascension.

NRC Administrative JPM

SRO JPM A.3

I. JPM Title: Shutdown Safety Assessment Checklist Review and Addition

JPM ID Number: SRO A.3

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

24 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

SUMMARY OF CHANGES

Change	Description	Date

Facility: Millstone Unit 3

Applicant: _____

JPM ID Number: SRO A.3

Revision: 0

Task Title: Shutdown Safety Assessment Checklist Review and Addition

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO X PEO _____
K/A Number: 2.2.10 K/A Rating: 3.3 / 1.9

Knowledge of the process for determining if the margin of safety, as defined in the basis of any technical specification is reduced by a proposed change, test or experiment.

Applicable To: SRO X RO X PEO _____
K/A Number: 2.2.18 K/A Rating: 3.6 / 2.3

Knowledge of the process for managing maintenance activities during shutdown operations.

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

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

Task Standards: Applicant accurately completes Form OP 3260A-004 and recognizes ORANGE condition for RCS Inventory Control.

Required Materials:

- Operating Procedure OP 3260A, Conduct of Outages.
- Form OP 3260A-004, Shutdown Safety Assessment Checklist

General References: Operating Procedure OP 3260A, Conduct of Outages.

<p>I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.</p>	
<p>Initial Conditions:</p>	<p>You are the Work Control SRO during a refueling outage. The new core has been loaded and the plant is in the following condition:</p> <ul style="list-style-type: none"> • Mode 5 • RCS Pressure is 200 psia • Pressurizer Level is 60% - cold calibrated scale. • "A" Train is protected • "B" Train unavailable for an electrical outage. Buss 34D is deenergized. • "A" & "D" Steam Generator levels are 50%; both available for steaming & feeding • "A" Train of RHR is in the cooldown mode. • "A" Train of Spent Fuel Cooling is running • The Spent Fuel Pool water level is normal. • "A" CHS Pump (3CHS*P1A) is in pull-to-lock (PTL) • "A" SIH Pump (3SIH*P1A) is in pull-to-lock (PTL) • Both offsite electrical power sources are available. • The Station Blackout Diesel-generator (SBO) is available. • The Shutdown Margin Monitor is available. • Containment closure is set. • RCS Boron Concentration is 2,100 ppm. • Shutdown Margin Calculated Boron Concentration is 1,950 ppm. • Dilution paths are tagged per SP 3604C.6 • The RWST Level is greater than 1,000,000 gallons. • 3RHS*V43 is tagged and locked closed. • Electrical Maintenance has asked you to authorize replacement of the breaker for the "A" SIH (3SIH*P1A) pump.
	<p>Initiating Cue:</p> <p>DETERMINE WHETHER YOU WILL AUTHORIZE ELECTRICAL MAINTENANCE's REQUEST TO PERFORM WORK ON 3SIH*P1A.</p> <p>ARE THERE ANY QUESTIONS? YOU MAY BEGIN.</p>
<ol style="list-style-type: none"> 1. Critical steps for this JPM are indicated by an asterisk after the step number. For the Applicant to achieve a satisfactory grade, ALL critical steps must be completed correctly. The Applicants performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step. 2. When the Applicant states what his/her simulated action/observation would be, read the appropriate "Cue". 3. If necessary, question the Applicant for details of simulated actions/observations (i.e. "What are you looking at?" or "What are you observing?"). 	

#	Step	Standard	S/U
Examiner Cue		DETERMINE WHETHER YOU WILL AUTHORIZE ELECTRICAL MAINTENANCE's REQUEST TO PERFORM WORK ON 3SIH*P1A.	
1.	Applicant obtains/requests copies of OP3260A and OP3260A-004	Examiner provides copies of OP3260A and OP3260A-004	
2. *	Circle "A" as the protected train	Top of Form OP 3260A-004	
3. *	Applicant marks appropriate boxes for RCS Decay Heat Removal	Value = 2 Condition = YELLOW	
a. *	RHR Train "A"		
b. *	<p>All conditions satisfied to support natural circulation in the RCS</p> <p>VERIFY all of the following are satisfied to ensure two steam generators available and proper RCS conditions are established to support natural circulation:</p> <ul style="list-style-type: none"> Both available SG NR levels > 17% Capability to feed SGs w/ MD AFW Pp Capability to steam available SGs RCS pressurized or capable of being pressurized to between 170 psia and 330 psia prior to core boiling RCS openings being tracked RCS loops associated with the available SGs; filled, swept, vented, & unisolated <p>Pressurizer cold calibrated level 50% unless a steam bubble is established in the pressurizer</p>		
4*	Applicant marks appropriate boxes for SFC Decay Heat Removal	Value = 2 Condition = YELLOW	
a. *	SFC Train A		
b. *	> 23' pool level above fuel		
5. *	Applicant marks appropriate boxes for Inventory	Value = 1 Condition = ORANGE	
a. *	Train A CHS PP A/C and associated flow path		
b. *	RWST Level > 250,000 gallons		
c. *	3RHS*V43 tagged & Locked Shut		
NOTE:	The condition is YELLOW if Applicant takes credit for 3SIH*P1A availability at this time. Critical task is for Applicant to recognize that taking 3SIH*P1A out of service raises the INVENTORY risk condition from YELLOW to ORANGE.		

6. *	Applicant marks appropriate boxes for Power Availability	Value = 4 Condition = GREEN																			
a. *	"A" EDG																				
b. *	RSST																				
c. *	NSST/Main																				
d. *	SBO EDG Applicant should recognize that time to boil is > 30 minutes.																				
7. *	Applicant marks appropriate boxes for Reactivity	Value = 4 Condition = GREEN																			
a. *	RCS Boron > required SDM																				
b. *	Inventory Flowpaths 0-2 (1)																				
c. *	At least one SDM Monitor Train Operable																				
d. *	Dilution paths tagged per OP 3604C.6																				
8. *	Applicant marks appropriate boxes for Containment																				
a. *	Containment Closure Set.																				
9.	Pressurizer Surge Line Flooding																				
a.	Reactor core refueled																				
10. *	Applicant sums the points for each Key Safety Function and circles the associated color condition.	<table border="0"> <tr> <td>RCS DHR</td> <td>2</td> <td>Yellow</td> </tr> <tr> <td>SFC DHR</td> <td>2</td> <td>Yellow</td> </tr> <tr> <td>Inventory</td> <td>1</td> <td>Orange</td> </tr> <tr> <td>Power Availability</td> <td>4</td> <td>Green</td> </tr> <tr> <td>Reactivity</td> <td>4</td> <td>Yellow</td> </tr> <tr> <td>Containment</td> <td>1</td> <td>Green</td> </tr> </table> <p>* See note following Step 5 above.</p>	RCS DHR	2	Yellow	SFC DHR	2	Yellow	Inventory	1	Orange	Power Availability	4	Green	Reactivity	4	Yellow	Containment	1	Green	
RCS DHR	2	Yellow																			
SFC DHR	2	Yellow																			
Inventory	1	Orange																			
Power Availability	4	Green																			
Reactivity	4	Yellow																			
Containment	1	Green																			
Examiner Cue:	If Applicant continues beyond step 1.2.1.j (page 9 of OP 3260A), direct Applicant to stop, evaluate checklist and make recommendations to the Shift Manager (Examiner).																				
11.	Applicant reports that Key Safety Function INVENTORY will become ORANGE if work proceeds on 3SIH*P1A.																				
12. *	Applicant determines from Section 1.2.2 of OP 3260A that he does not have sufficient authority to authorize the requested work.																				
Examiner Cue	This JPM is complete.																				

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Applicant Handout
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO APPLICANT

When I tell you to begin, **DETERMINE WHETHER YOU WILL AUTHORIZE ELECTRICAL MAINTENANCE'S REQUEST TO PERFORM WORK ON 3SIH*P1A.**

Initial Conditions

You are the Work Control SRO during a refueling outage. The new core has been loaded and the plant is in the following condition:

- Mode 5
- RCS Pressure is 200 psia
- Pressurizer Level is 60% - cold calibrated scale.

- "A" Train is protected
- "B" Train unavailable for an electrical outage. Buss 34D is deenergized.

- "A" & "D" Steam Generator levels are 50%; both available for steaming & feeding

- "A" Train of RHR is in the cooldown mode.

- "A" Train of Spent Fuel Cooling is running
- The Spent Fuel Pool water level is normal.

- "A" CHS Pump (3CHS*P1A) is in pull-to-lock (PTL)

- "A" SIH Pump (3SHI*P1A) is in pull-to-lock (PTL)

- Both offsite electrical power sources are available.
- The Station Blackout Diesel-generator (SBO) is available.

- The Shutdown Margin Monitor is available.

- Containment closure is set.

- RCS Boron Concentration is 2,100 ppm.
- Shutdown Margin Calculated Boron Concentration is 1,950 ppm.

- Dilution paths are tagged per SP 3604C.6

- The RWST Level is greater than 1,000,000 gallons.
- 3RHS*V43 is tagged and locked closed.

- **Electrical Maintenance has asked you to authorize replacement of the breaker for the "A" SIH (3SIH*P1A) pump.**

NRC Administrative JPM

SRO JPM A.4

Job Performance Measure Guide

I. JPM Title: Determine and Perform Actions Required to Remove a Radiation Monitor from Service.

JPM ID Number: SRO A.4

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

24 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

Job Performance Measure Guide

SUMMARY OF CHANGES

Change	Description	Date

Job Performance Measure Guide

Facility: Millstone Unit 3

Student: _____

JPM ID Number: SRO A.4

Revision: 0

Task Title: Determine and Perform Actions Required to Remove a Radiation Monitor from Service.

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO X PEO _____

K/A Number: 2.3.1 K/A Rating: 3.0 / 2.6
Knowledge of 10 CFR: 20 and related facility radiation control requirements.

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

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

- Task Standards:
- Applicant determines the requirements of OP3250.62.
 - SRO Applicant performs those administrative requirements.

- Required Materials:
- Operating Procedure OP 3250.62, Removal and Restoration of Radiation Monitors.
 - REMODCM
 - Shift Manager Log – simulation

- General References:
- Operating Procedure OP 3250.62, Removal and Restoration of Radiation Monitors.

Job Performance Measure Guide

*****READ TO THE STUDENT*****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

<p><u>Initial Conditions:</u></p> <p align="center">SRO</p>	<p>You are the Work Control Supervisor at Millstone Generating Station Unit 3. It is 02:00 in the morning. I&C wishes to perform emergent maintenance on 3HVR*RE10B, Ventilation Vent Stack radiation monitor.</p>
<p><u>Initiating Cue:</u></p>	<p>YOU ARE TO DETERMINE AND PERFORM THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>

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

1. Critical steps for this JPM are indicated by an asterisk and unshaded box after the step number. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Job Performance Measure Guide

Start Time: _____

OP 3250.62, Section 4.1, Requirement		Standard	S/U
Examiner Cue	DETERMINE THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.		
<p>Applicant obtains/requests:</p> <ul style="list-style-type: none"> • OP 3250.62, Removal and Restoration of Radiation Monitors. • SP 3883 Normal Vent Rad Monitor System – Inoperative • REMODCM. • 3670.2-004, 3HVR*RE10B, Temporary Sampling Surveillance. • 3670.1-003, 3HVR-RE10A & 3HVR-10B Stack Flow Surveillance. 			
NOTE preceding Step 4.1.1	A phone call may be used to notify Health Physics and Chemistry Departments of a radiation monitor being removed from service. However, a three part memo must be used to notify Health Physics and Chemistry Departments of any actions required, e.g., sample rigs, temporary monitors, etc.		3-part forms no longer used.
NOTE: Provide the requested procedures now or when requested. All procedures may be distributed at start of JPM if administering to more than one Applicant simultaneously.			
4.1.1	NOTIFY Health Physics Department which radiation monitor will be off line.	Applicant notifies Health Physics that 3HVR*RE10B will be secured. Telephone call is adequate for this notification.	
* 4.1.2	Refer to Attachment 3 and PERFORM specified responses for the radiation monitor being removed from service.	Applicant refers to Attachment 3 of OP 3250.62 and determines that Response 2, 5, 6, 8, & 19 are required.	
* Att A, Act 2	CONTACT Chemistry Department in writing for sampling to meet REMODCM Requirements.	Examiner Cue: All Chemistry Department notifications are complete. MS3 no longer uses 3-part forms. Proper notification is a phone call followed by a Condition Report.	
Att A, Act 5	IF radiation monitor indicates "OFF-LINE," that rad monitor is inoperable, RECORD all applicable actions in the SM log.	Examiner Cue: The Radiation Monitor does NOT indicate OFF-LINE Applicant recognizes that Response 5 is not applicable.	
* Att A, Act 6	Complete SP 3670.2-004, "3HVR*RE10B Temporary Sampling Surveillance."	Applicant states that SP 3670.2-004 must be completed/performed. Examiner Cue: PEOs are performing SP 3670.2-004 every 3 hours.	

Job Performance Measure Guide

OP 3250.62, Section 4.1, Requirement		Standard	S/U
* Att A, Act 8	Complete SP 3670.1-003, "3HVR-RE10 A & 3HVR-RE10B Stack Flow Surveillance"	Applicant states that SP 3670.1-003 must be completed. Examiner Cue: BoP RO is performing 3670.1-003 every 3 hours.	
* Att A, Act 19	Refer To REMODCM Section V.C.2 and Table V.C-3, "Radioactive Gaseous Effluent Instrumentation," and PERFORM applicable actions.	Applicant refers to REMODCM and determines that Continuous Operation is permitted provided best efforts to repair are exerted and that Action Statements A, B, C are complied with: A – grab samples every 12 hours / analyzed within 24 hours (Chemistry) B – continuous sampling with auxiliary equipment (3670.2-004 & Chemistry) C – estimate flow rate every 4 hours (3670.1-003).	
* 4.1.3	IF one of the following radiation monitors is being removed from service, REQUEST Chemistry refer to the listed procedure and perform applicable actions: SP 3883, For 3HVR*RE10B: "Normal Vent Rad Monitor System - Inoperative"	Applicant indicates that Chemistry must be notified to perform SP 3883 for 3HVR*RE10B. This surveillance satisfies Chemistry's sampling requirements.	
4.1.4	ENSURE all applicable T/S, TRM, and REMODCM actions are recorded in Shift Manager Log.	SRO Applicants make a log entry to open LCO <ul style="list-style-type: none"> • REMODCM V.C.2.b (30 days to restore Operability and, if unsuccessful, explain in next . . . report why not corrected in timely manner. • REMODCM V.C.2., Table V.C-3, Lines 1.a. thru e. (Actions A, B, C). best efforts to repair & <ul style="list-style-type: none"> A – grab samples every 12 hours B – continuous sampling, analyzed every 7 days C – flow rate estimate every 4 hours. 	

Stop Time: _____

* denotes critical step_

Job Performance Measure Guide

Appendix C3

Form ES-C-1

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Job Performance Measure Guide

Student Handout – SRO Applicants
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

When I tell you to begin, **YOU ARE TO DETERMINE AND PERFORM THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.**

Initial Conditions

You are the Work Control Supervisor at Millstone Generating Station Unit 3. It is 02:00 in the morning. I&C wishes to perform emergent maintenance on 3HVR*RE10B, Ventilation Vent Stack radiation monitor.

NRC Administrative JPM

SRO JPM A.5

Job Performance Measure

I. JPM Title: Emergency Plan Classification for General Emergency

JPM ID Number: SRO A.5

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

12 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

Job Performance Measure

SUMMARY OF CHANGES

Change	Description	Date

Job Performance Measure

Facility: Millstone Unit 3

Student: _____

JPM ID Number: SRO A.5

Revision: 0

Task Title: Emergency Plan Classification for General Emergency

System: n/a

Time Critical Task: () YES () NO

Validated Time (minutes): 30

Task Number(s): _____

Applicable To: SRO RO _____ PEO _____

K/A Number: 2.4.41 K/A Rating: 4.1 / 2.3

Method of Testing: Simulated Performance: _____ Actual Performance:

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

Task Standards:

- ◆ Determine the EAL and State Posture Code
- ◆ Determine the minimum required PAR

Required Materials:

- MP-26-EPI-FAP06-003
- MP-26-EPI-FAP-01-001
- MP-26-EPI-FAP06
- MP-26-EPI-FAP06-005

General References:

Job Performance Measure

READ TO THE STUDENT

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

Initial Conditions:

You are the Shift Manager at Millstone Generating Station, Unit 3 on Wednesday, 19 August 2004. The time is 14:05. Emergency Diesel Generator 3EGS*EGA is inoperable and undergoing emergent corrective maintenance. 3EGS*EGA operability can NOT be restored in less than 16 hours. The plant is at 100% power and no unusual evolutions are planned.

The following events occur in quick succession:

1. The plant loses off-site power (LOOP) and the plant trips,
2. Turbine Drive Auxiliary Feedwater Pump (TDAFW), 3FWA*P2, does NOT start,
3. Emergency diesel generator 3EGS*EGB started BUT its output breaker did NOT close. Attempts to close the 3EGS*EGB output breaker remotely from the Control Room have failed,
4. Steam Generator Narrow Range levels are currently 7% and lowering.

The Unit Supervisor dispatches a Plant Equipment Operator (PEO) to investigate the problem with the 3EGS*EGB output breaker. Shortly after leaving the Control Room, the PEO reports that the breaker housing is bulging and charred.

You call CONVEX to explain that the unit has tripped and currently has no AC power. CONVEX reports back that a blackout throughout the region has occurred and she has no way to provide off-site power to Millstone. Duration of the blackout is currently estimated at 14 hours.

The current wind speed is less than one (1) mile per hour. The current wind direction is from 010 and into 190.

A PEO dispatched to TDAFW 3FWA*P2 is still investigating.

Job Performance Measure

Initiating Cue:	<p>DETERMINE THE APPLICABLE EMERGENCY ACTION LEVEL AND MAKE ANY APPROPRIATE PROTECTIVE ACTION RECOMMENDATION.</p> <p>This is a time critical task.</p> <ul style="list-style-type: none">• You have 15 minutes to determine the Emergency Action Level and State Posture Code.• You have 15 minutes after classifying the event to determine the minimum required PAR. <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>
------------------------	---

Notes to Examiner

1. Critical steps for this JPM are indicated by an asterisk after the step number. For the student to achieve a satisfactory grade, ALL critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

#	Step	Standard	S/U
Examiner Cue		YOU ARE TO DETERMINE THE APPLICABLE EMERGENCY ACTION LEVEL AND MAKE ANY APPROPRIATE PROTECTIVE ACTION RECOMMENDATIONS.	
NOTE: Record the Start Time			
1.	<p>Applicant obtains or requests copy of MP-26-EPI-FAP06-003.</p> <p>Applicant may request copies of:</p> <ul style="list-style-type: none"> • 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 	NOTE: Provide copies when Applicant requests or seeks to obtain the procedure.	
2.*	Applicant recognizes a LOSS OF VOLTAGE ON BUSES 34C AND 34D (STATION BLACKOUT DIESEL CANNOT BE CREDITED).	A loss of off-site power, unavailability on one EDG and failure to the available EDG output breaker deenergizes 34C & 34D	
3.*	Applicant recognizes HEAT SINK – RED.	Entry conditions for EOP 35 FR-H.1 are: <ul style="list-style-type: none"> • Minimum AFW flow not verified and • All SG narrow range levels < 8% 	
4.	Applicant may conclude that RESTORATION OF POWER TO AT LEAST ONE BUS IS NOT LIKELY WITHIN FOUR HOURS	This issue is arguable and not necessary to recognizing that General Emergency PG1 exists because critical safety function HEAT SINK – RED exists.	
5.*	Applicant reviews MP-26-EPI-FAP06-003 and determines that a NRC EAL of GENERAL EMERGENCY, PG1 exists.	Loss of voltage on both 34C and 34D AND Heat Sink – Red	
6.*	Applicant reviews MP-26-EPI-FAP06-003 and determines that the block for PG1 is the same color as State Posture BRAVO	Tables are color coded to reflect the State Posture.	
NOTE: Record the Time Classification is Completed			
7.*	Applicant uses MP-26-EPI-FAP06-005 to determine the PAR.	Applicant indicates the minimum required PAR is to evacuate a 2 mile radius.	
NOTE: Record time the Protective Action Recommendation is Completed			

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

STUDENT HANDOUT
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

When I tell you to begin, **YOU ARE TO DETERMINE THE APPLICABLE EMERGENCY ACTION LEVEL AND MAKE ANY APPROPRIATE PROTECTIVE ACTION RECOMMENDATIONS.**

Initial Conditions

You are the Shift Manager at Millstone Generating Station, Unit 3 on Wednesday, 21 July 2004. Emergency Diesel Generator 3EGS*EGA is inoperable and undergoing emergent corrective maintenance. 3EGS*EGA operability can NOT be restored in less than 16 hours. The plant is at 100% power and no unusual evolutions are planned.

The following events occur in quick succession:

1. The plant loses off-site power (LOOP) and trips,
2. Turbine Drive Auxiliary Feedwater Pump (TDAFW), 3FWA*P2, does NOT start,
3. Emergency diesel generator 3EGS*EGB started BUT its output breaker did NOT close. Attempts to close the 3EGS*EGB output breaker remotely from the Control Room have failed,
4. Steam Generator Narrow Range levels are currently 7% and lowering.

The Unit Supervisor dispatches a Plant Equipment Operator (PEO) to investigate the problem with the 3EGS*EGB output breaker. Shortly after leaving the Control Room, the PEO reports that the breaker housing is bulging and charred.

You call CONVEX to explain that the unit has tripped and currently has no AC power. CONVEX reports back that a blackout throughout the region has occurred and she has no way to provide off-site power to Millstone. Duration of the blackout is currently estimated at 14 hours.

A PEO dispatched to TDAFW 3FWA*P2 is still investigating.

The current wind speed is one (1) mile per hour. The current wind direction is from 010 and into 190.

This is a time critical task.

- Within 15 minutes, determine the Emergency Action Level and State Posture Code..
- Within 15 minutes of classifying the event, determine the minimum required PAR.

Emergency Action Level (EAL) _____

State Posture Code _____

Protective Action Recommendation (PAR) _____

NRC Administrative JPM

RO JPM A.1

I. JPM Title: Administrative Requirements for Shift Manning Activities – Working Hour Limitations.

JPM ID Number: RO A.1

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

12 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

Facility: Millstone Unit 3

Student: _____

JPM ID Number: RO A.1

Revision: 0

Task Title: Administrative Requirements for Shift Manning Activities – Working Hour Limitations

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO X PEO _____
K/A Number: 2.1.1 K/A Rating: 3.8 / 3.7

Knowledge of conduct of operations requirements.

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

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

Task Standards: Applicant determines working hour limitations would be exceeded.

Required Materials: OA 18, Overtime Controls for All Personnel at Millstone Station
Form OA 18-001

General References: OA 18, Overtime Controls for All Personnel at Millstone Station

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

Initial Conditions:	<p>You have recently been relieved as Primary Reactor Operator and traveled home. The time is 19:45 on Thursday, 19 October 2006. The plant was steady state at 100% power when you left. You are now watching television and enjoying a glass of ice tea.</p> <p>The night shift Work Control Supervisor has called to ask if you can report back to work. At 19:15, your earlier relief, Jane Doe, experienced severe chest pains and was taken to the hospital. This has left the crew below minimum staffing requirements. The Work Control Supervisor has arranged for another NRC licensed Reactor Operator, Harry Callahan, to work the shift. However, Harry cannot get to work before 23:00.</p> <p>Your current work history is:</p> <ul style="list-style-type: none"> • Saturday, 17 July 2004 OFF • Sunday, 18 July 2004 OFF • Monday, 19 July 2004 07:00 to 19:00 excluding turnover time • Tuesday, 20 July 2004 07:00 to 19:00 excluding turnover time • Wednesday, 21 July 2004 07:00 to 19:00 excluding turnover time • Thursday, 22 July 2004 07:00 to 19:00 excluding turnover time • Friday, 23 July 2004 Scheduled OFF <p>What should you tell the Work Control Supervisor?</p>
----------------------------	---

Initiating Cue:	<p>DETERMINE WHETHER YOU ARE ABLE TO REPORT TO WORK IMMEDIATELY WITHOUT VIOLATING WORKING HOUR LIMITATIONS.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>
------------------------	--

1. Critical steps for this JPM are indicated by an unshaded box after the step. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Start Time: _____

#	Step	Standard	S/U
Examiner Cue		DETERMINE WHETHER YOU ARE ABLE TO REPORT IMMEDIATELY WITHOUT VIOLATING WORKING HOUR LIMITATIONS OR FITNESS FOR DUTY REQUIREMENTS.	
1	Applicant may obtain/request a copy of OA 18, Overtime Controls for All Station Personnel at Millstone Station.	NOTE: Provide a copy of OA 18, Overtime Controls for All Station Personnel at Millstone Station. Applicant may request a procedure list to determine the appropriate course of action.	
2	Applicant evaluates holdover time to determine if working hour limitations are exceeded.	Applicant determines that he will exceed working hour limits because he will work more than 24 hours in a 48 hour period.	
	NOTE: Applicant may merely state that he will exceed overtime limits. In that case, prompt the Applicant to state what specific limit will be exceeded.		
3.	Applicant reports that he: <ul style="list-style-type: none"> will exceed overtime limits if he reports to work as requested (or similar words). 		
Examiner Cue		This JPM is complete.	

Stop Time: _____

* denotes critical step

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Student Handout**JOB PERFORMANCE MEASURE INSTRUCTION SHEET****DIRECTIONS TO STUDENT**

When I tell you to begin, **DETERMINE WHETHER YOU ARE ABLE TO REPORT IMMEDIATELY WITHOUT VIOLATING WORKING HOUR LIMITATIONS.**

Initial Conditions

You have recently been relieved as Primary Reactor Operator and traveled home. The time is 19:45 on Thursday, 19 October 2006. The plant was steady state at 100% power when you left. You are now watching television and enjoying a glass of ice tea.

The night shift Work Control Supervisor has called to ask if you can report back to work. At 19:15, your earlier relief, Jane Doe, experienced severe chest pains and was taken to the hospital. This has left the crew below minimum staffing requirements. The Work Control Supervisor has arranged for another NRC licensed Reactor Operator, Harry Callahan, to work the shift. However, Harry cannot get to work before 23:00.

Your current work history is:

- Saturday, 17 July 2004 OFF
- Sunday, 18 July 2004 OFF
- Monday, 19 July 2004 07:00 to 19:00 excluding turnover time
- Tuesday, 20 July 2004 07:00 to 19:00 excluding turnover time
- Wednesday, 21 July 2004 07:00 to 19:00 excluding turnover time
- Thursday, 22 July 2004 07:00 to 19:00 excluding turnover time
- Friday, 23 July 2004 Scheduled OFF

What should you tell the Work Control Supervisor?

NRC Administrative JPM

RO JPM A.2

I. JPM Title: Determine the maximum rate of power increase and control rod withdrawal restrictions.

JPM ID Number: RO A.2

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

12 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

Facility: Millstone Unit 3

Student: _____

JPM ID Number: RO A.2

Revision: 0

Task Title: Determine the maximum rate of power increase and control rod withdrawal restrictions.

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO _____ PEO _____

K/A Number: 2.1.25 K/A Rating: 3.1

Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.

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

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

- Task Standards:
- Applicant recognizes the Fuel Condition Category as “Partially Conditioned” up to power level, P, of 80% and rod position, N, of 218 steps on CBD.
 - Applicant correctly identifies the following limits:
 - ◆ 10% per hour to power level “P” where P=80%.
 - ◆ 4% over any 1 hour period, 7% over any 2 hour period, 10% over any 3 hour period to achieve a nominal 3% full power per hour rate, and
 - ◆ Control Rod Withdrawal restricted to 3 steps per hour above 218 steps on CBD.
 - Applicant correctly determines the minimum time as 9 hours: 40 minutes.

- Required Materials:
- Operating Procedure OP 3204, At Power Operations.
 - Attachment 4 of OP 3204

General References: Operating Procedure OP 3204, At Power Operations.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

Initial Conditions:	<p>You are the Reactor Operator of Millstone Generating Station, Unit 3. The plant has recently completed a refueling outage and plant startup. When returning to power following this refueling outage, the plant reached 80% and then was forced to reduce power to 50%.</p> <p>Specifically, on Wednesday, 14 July 2004 at 09:00, the plant reached 80% reactor power. The plant remained at 80% power until Saturday, 17 July 2004 at 13:00 when a Main Feedwater Pump malfunctioned and had to be shutdown for repairs. The plant reached 50% power on Saturday, 17 July 2004 at 19:30.. Since then the plant has been operating steady at 50% power and CBD step 218.</p> <p>Now the time is Wednesday, 21 July 2004 at 08:00 hours. Main Feedwater Pump repairs and post-maintenance testing are complete and satisfactory. The plant is ready to begin its return to full power in all other aspects.</p> <p>Based on fuel conditioning alone, what is the minimum time it will take to reach 100% reactor power? Assume that control rods remain at CBD step 218 throughout the power ascension.</p>
----------------------------	--

Initiating Cue:	<p>YOU ARE TO DETERMINE THE MINIMUM TIME REQUIRED TO REACH FULL POWER BASED ON FUEL CONDITIONING ALONE.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>
------------------------	--

1. Critical steps for this JPM are indicated by an asterisk after the step number. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Start Time: _____

#	Standard	Standard	S/U
Examiner Cue		YOU ARE TO DETERMINE THE MAXIMUM RATE OF POWER INCREASE AND CONTROL ROD WITHDRAWAL RESTRICTIONS.	
1.	Applicant obtains/requests a copy of OP 3204, At Power Operation. Applicant may only request Attachment 4, Fuel Condition Load Increase Restrictions.	NOTE: Provide a copy of OP 3204, At Power Operation.	
2.	Applicant reviews the initial conditions to determine recent power history.	None.	
3. *	Applicant correctly determines that the plant has been at 80% power and CBD step 218 for at least 72 hours.	Applicant should state or write this determination.	
4. *	Applicant recognizes that the Fuel Condition Category is "Partially Conditioned" to 80%.		
5. *	Applicant determines that the Applicable Range of Power Level is 50% to 100% power".		
6. *	Applicant recognizes the maximum rate of power increase as 10% per hour to 80% and nominally 3% per hour to 100%.	NOTE: step can be conservatively read as 3% per hour or 10% over any 3 hour period.	
7. *	Applicant applies the identified limits to determine the following times: <ul style="list-style-type: none"> • 3 hours to raise power 30% (from 50% to 80%). • 6 hours, 40 minutes to raise power <u>20%</u> (from 80% to 100%). • <u>Total time = 9 hours: 40 minutes.</u> 	Accept 9:00 or 9:40 because 10% in 3 hours reduces the required time to 9 hours. Both interpretations are acceptable.	
8. *	Applicant reports or writes that it will take 9:00 or 9:40 hours to reach full power based on fuel conditioning alone.		
NOTE: Order or sequence of performance is NOT critical			

Stop Time: _____

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Student Handout
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

When I tell you to begin, **YOU ARE TO DETERMINE THE MINIMUM TIME REQUIRED TO REACH FULL POWER BASED ON FUEL CONDITIONING ALONE.**

Initial Conditions

You are the Reactor Operator of Millstone Generating Station, Unit 3. The plant has recently completed a refueling outage and plant startup. When returning to power following this refueling outage, the plant reached 80% and then was forced to reduce power to 50%.

Specifically, on **Wednesday, 14 July 2004 at 09:00**, the plant reached 80% reactor power. The plant remained at 80% power until **Saturday, 17 July 2004 at 13:00** when a Main Feedwater Pump malfunctioned and had to be shutdown for repairs. The plant reached 50% power on **Saturday, 17 July 2004 at 19:30..** Since then the plant has been operating steady at **50% power and CBD step 218.**

Now the time is **Wednesday, 21 July 2004 at 08:00** hours. Main Feedwater Pump repairs and post-maintenance testing are complete and satisfactory. The plant is ready to begin its return to full power in all other aspects.

Based on fuel conditioning alone, what is the minimum time it will take to reach 100% reactor power? Assume that control rods remain at CBD step 218 throughout the power ascension.

NRC Administrative JPM

RO JPM A.3

I. JPM Title: Review a Completed Technical Specification Surveillance and Take Appropriate Follow-up Actions

JPM ID Number: RO A.3

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

14 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

Facility: Millstone Unit 3 Student: _____

JPM ID Number: SRO A.2 Revision: 0

Task Title: Review a Completed Technical Specification Surveillance and Take Appropriate Follow-up Actions

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO X PEO _____

K/A Number: 2.2.12 K/A Rating: 3.4 / 3.0

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

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

- Task Standards:
- Applicant identifies & corrects math error.
 - Applicant recognizes that 3CHS*P2A vibrations are outside the immediate action range, declares 3CHS*P2A inoperable.

- Required Materials:
- Surveillance Procedure SP 3604C.4, Boric Acid Pump 3CHS*P2A Operational Readiness Test.
 - Surveillance Form SP 3604C.4-001, Boric Acid Pump 3CHS*P2A Operational Readiness Test.
 - ENG Form 31121-008, IST Pump Test Plan for 3CHS*P2A.
 - Engineering Procedure EN 31121, IST Pump Operational Readiness Evaluation.
 - Millstone Generating Station, Unit 3 Technical Specifications.
 - Millstone Generating Station, Unit 3, Technical Requirements Manual.

General References: Engineering Procedure EN 31121, IST Pump Operational Readiness Evaluation

*****READ TO THE STUDENT*****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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 Number: SRO A.2Revision: 0

Initial Conditions: You are the Work Control RO at Millstone Generating Station, Unit 3. The crew has just completed Technical Specification Surveillance SP 3604C.4, Boric Acid Pump 3CHS*P2A Operational Readiness Test. The Work Control Supervisor has asked you to review the completed surveillance for any potential problems.

When I tell you to begin, **YOU ARE TO REVIEW THE COMPLETED SURVEILLANCE AND, IF NECESSARY, RECOMMEND APPROPRIATE FOLLOW-UP ACTIONS.**

Initiating Cue: **YOU ARE TO REVIEW THE COMPLETED SURVEILLANCE AND, IF NECESSARY, RECOMMEND APPROPRIATE FOLLOW-UP ACTIONS.**

ARE THERE ANY QUESTIONS?

YOU MAY BEGIN.

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

1. Critical steps for this JPM are indicated by an asterisk and unshaded box after the step number. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Start Time: _____

#	Step	Standard	S/U
Examiner Cue		REVIEW THE COMPLETED SURVEILLANCE AND, IF NECESSARY, TAKE FOLLOW-UP ACTIONS.	
1.	Applicant obtains/requests: <ul style="list-style-type: none"> • SP 3604C.4. • SP 3604C.4-001. • ENG Form 31121-008. • EN 31121. • Technical Specifications. • Technical Requirements Manual. 	NOTE: Provide the requested procedures now or when requested. All procedures may be distributed at start of JPM if administering to more than one Applicant simultaneously.	
2.	Applicant recognizes that the surveillance was completed before its late date	NOTE: Provide a copy of Form OA 18-001 to applicant.	
3.	Applicant recognizes that the test equipment is in calibration.		
4.*	Applicant recognizes that calculated pump d/p at step 4.2.21.c.1) is calculated incorrectly.	Applicant recognition that it is a <u>transposition</u> error is not critical.	
5.	Applicant recognizes that the check valve d/p 3CHS*V296 is within T/S Acceptance Criteria.	Applicant may recognize that the “off line” and “on line” values are transposed – not critical	
6.	Applicant recognizes that the make up flow to VCT at step 4.2.22.d meets acceptance criteria.		
7.	Applicant reviews ENG Form 31121-008 and recognizes that:		
A.*	Vibration Data Point MOV is above the Normal Vibration Range but below the Maximum Limit.	This data point should be circled per EN 31121, Step 4.3.4.	
B.*	Vibration Data Point MIH is above the Maximum Limit.	This data point should be annotated UNSAT and circled. The Test Plan should be annotated UNSAT. The Surveillance Form should be annotated UNSAT at step 4.3.15. See EN 31121, Step 4.3.5.	
8.	Applicant reviews TRM ¼ 1.2 and determines that the requirements of LCO 3.1.2.2 are met.	Applicant may recognize this from memory.	

Stop Time: _____

* denotes critical step

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

When I tell you to begin, **YOU ARE TO REVIEW THE COMPLETED SURVEILLANCE AND, IF NECESSARY, RECOMMEND APPROPRIATE FOLLOW-UP ACTIONS.**

Initial Conditions

You are the Work Control RO at Millstone Generating Station, Unit 3. The crew has just completed Technical Specification Surveillance SP 3604C.4, Boric Acid Pump 3CHS*P2A Operational Readiness Test. The Work Control Supervisor has asked you to review the completed surveillance for any potential problems.

The time is 14:30 on Tuesday, 20 July 2004.

The plant has been operating at 100% power for 97 days. No significant evolutions are planned.

NRC Administrative JPM

RO JPM A.4

I. JPM Title: Determine and Perform Actions Required to Remove a Radiation Monitor from Service.

JPM ID Number: SRO A.4

Revision: 0

II. Initiated:

Nuclear Regulatory Commission
Developer

24 May 2004
Date

III. Reviewed:

Technical Reviewer

Date

IV. Approved:

Cognizant Plant Supervisor (optional)

Date

Nuclear Training Supervisor

Date

Facility: Millstone Unit 3

Student: _____

JPM ID Number: RO A.4

Revision: 0

Task Title: Determine and Perform Actions Required to Remove a Radiation Monitor from Service.

System: n/a

Time Critical Task: () YES (X) NO

Validated Time (minutes): 15

Task Number(s): _____

Applicable To: SRO X RO X PEO _____

K/A Number: 2.3.1 K/A Rating: 3.0 / 2.6
Knowledge of 10 CFR: 20 and related facility radiation control requirements.

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

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

- Task Standards:
- Applicant determines the requirements of OP3250.62.
 - SRO Applicant performs those administrative requirements.

- Required Materials:
- Operating Procedure OP 3250.62, Removal and Restoration of Radiation Monitors.
 - REMODCM
 - Shift Manager Log – simulation

- General References:
- Operating Procedure OP 3250.62, Removal and Restoration of Radiation Monitors.

*****READ TO THE STUDENT*****

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objectives 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.

<p><u>Initial Conditions:</u></p> <p>SRO</p>	<p>You are the Work Control Supervisor at Millstone Generating Station Unit 3. It is 02:00 in the morning. I&C wishes to perform emergent maintenance on 3HVR*RE10B, Ventilation Vent Stack radiation monitor.</p>
<p><u>Initiating Cue:</u></p>	<p>YOU ARE TO DETERMINE AND PERFORM THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>
<p><u>Initial Conditions:</u></p> <p>RO</p>	<p>You are the Balance of Plant Operator at Millstone Generating Station Unit 3. It is 02:00 in the morning. I&C wishes to perform emergent maintenance on 3HVR*RE10B, Ventilation Vent Stack radiation monitor. The Work Control Supervisor has asked you to determine what actions are required to remove 3HVR*RE10B from service. DETERMINE THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.</p>
<p><u>Initiating Cue:</u></p>	<p>DETERMINE THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.</p> <p>ARE THERE ANY QUESTIONS?</p> <p>YOU MAY BEGIN.</p>

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

1. Critical steps for this JPM are indicated by an asterisk and unshaded box after the step number. For the student to achieve a satisfactory grade, **ALL** critical steps must be completed correctly. The students performance is graded by an "S" for satisfactory or a "U" for unsatisfactory on each step.
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?").

Start Time: _____

OP 3250.62, Section 4.1, Requirement		Standard	S/U
Examiner Cue	DETERMINE THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.		
Applicant obtains/requests: <ul style="list-style-type: none"> • OP 3250.62, Removal and Restoration of Radiation Monitors. • SP 3883 Normal Vent Rad Monitor System – Inoperative • REMODCM. • 3670.2-004, 3HVR*RE10B, Temporary Sampling Surveillance. • 3670.1-003, 3HVR-RE10A & 3HVR-10B Stack Flow Surveillance. 			
NOTE preceding Step 4.1.1	A phone call may be used to notify Health Physics and Chemistry Departments of a radiation monitor being removed from service. However, a three part memo must be used to notify Health Physics and Chemistry Departments of any actions required, e.g., sample rigs, temporary monitors, etc.		
NOTE:	3-part forms no longer used. Phone Call followed by Condition Report is the standard practice.		
NOTE: Provide the requested procedures now or when requested. All procedures may be distributed at start of JPM if administering to more than one Applicant simultaneously.			
4.1.1	NOTIFY Health Physics Department which radiation monitor will be off line.	Applicant notifies Health Physics that 3HVR*RE10B will be secured. Telephone call is adequate for this notification.	
*	Refer to Attachment 3 and PERFORM specified responses for the radiation monitor being removed from service.	Applicant refers to Attachment 3 of OP 3250.62 and determines that Response 2, 5, 6, 8, & 19 are required.	
*	CONTACT Chemistry Department in writing for sampling to meet REMODCM Requirements.	Applicant describes process for notifying Chemistry. Per Training Dept., 3-part forms are no longer used.	
Att A, Act 5	IF radiation monitor indicates "OFF-LINE," that rad monitor is inoperable, RECORD all applicable actions in the SM log.	Examiner Cue: The Radiation Monitor does NOT indicate OFF-LINE Applicant recognizes that Response 5 is not applicable.	
*	Complete SP 3670.2-004, "3HVR*RE10B Temporary Sampling Surveillance."	Applicant states that SP 3670.2-004 must be completed/performed. Examiner Cue: PEOs are performing SP 3670.2-004 every 3 hours.	
Att A, Act 6			

OP 3250.62, Section 4.1, Requirement	Standard	S/U
<p style="text-align: center;">*</p> <p>Att A, Act 8</p>	<p>Complete SP 3670.1-003, "3HVR-RE10 A & 3HVR-RE10B Stack Flow Surveillance"</p> <p>Applicant states that SP 3670.1-003 must be completed.</p> <p>Examiner Cue: BoP RO is performing 3670.1-003 every 3 hours.</p>	
<p>End of JPM for RO Applicants.</p>		

Stop Time: _____

* denotes critical step_

VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

Student Handout – RO Applicants
JOB PERFORMANCE MEASURE INSTRUCTION SHEET

DIRECTIONS TO STUDENT

DETERMINE THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.

Initial Conditions

You are the Balance of Plant Operator at Millstone Generating Station Unit 3. It is 02:00 in the morning. I&C wishes to perform emergent maintenance on 3HVR*RE10B, Ventilation Vent Stack radiation monitor. The Work Control Supervisor has asked you to determine what actions are required to remove 3HVR*RE10B from service. **DETERMINE THE ACTIONS REQUIRED TO REMOVE 3HVR*RE10B FROM SERVICE.**