

Facility: Millstone Unit 2Date of Examination: 12/16/02Examination Level (circle one): RO / SROOperating Test Number: 1

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	2.1.3	JPM to perform a review of turnover documents and discover a problem with removing "A" motor driven auxiliary feedwater pump and "B" Emergency Diesel Generator from service at the same time with Facility 2 protected.
	2.1.25	JPM to determine the required Shutdown Margin for a post trip condition and verify that Shutdown Margin is within the acceptance criteria.
	2.1.7	(SPARE) JPM to determine the appropriate color code for the Shutdown Safety Assessment and calculate a time to boil.
A.2	2.2.13	JPM to complete a manual tag out in order to safely remove the "A" Service Water Strainer from service for internal inspection.
A.3	2.3.10	JPM to read and interpret an RWP and survey map to determine highest radiation levels, highest contamination levels, stay time, and protective clothing requirements.
A.4	2.4.39	Question #1 to determine the appropriate reporting location for NON on-duty/on-call SERO personnel presently located in the protected area.
		Question #2 to determine the appropriate reporting location for NON on-duty/on-call SERO personnel who are presently NOT on site, but have been called in to provide shift relief coverage.

JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: RO Shift Turnover

ID Number: JPM-A1.1R

Revision: 0

II. Initiated:

R. J. Ashley
Developer

3/18/02
Date

III. Reviewed:

Richard M. Brown
Technical Reviewer

9/5/02
Date

IV. Approved:

N/A
User Department Supervisor

Date

M. Kuhl
Nuclear Training Supervisor

9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A1.1R Rev. 0

Task Title: **RO Shift Turnover**

System: Administrative

Time Critical Task: Yes _____ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS 119-02-030

Applicable To: SRO _____ RO X PEO _____

K/A No.: 2.1.3 K/A Rating: 3.0/3.4

Method of Testing:

Simulated Performance: _____ Actual Performance: X

Location:

Classroom: _____ Simulator: _____ In-Plant: X

Task Standards:

At the completion of this JPM, the RO should perform a review of documents and find incorrect information related to a shift turnover.

Required Materials

(procedures,equipment):

- Shift Manager Log (Auto Log) - (See pages 8 and 9 of this JPM)
- SP 2619A-001, Control Room Daily Surveillance MODES 1 & 2
- SP 2619A-004, Shift Turnover Report
- MP-14-OPS-GDL02, Operations Standards, Attachment 3, Operating Practices (Rev. 004)

General References:

- SP 2619A-004 Shift Turnover Report
- MP-14-OPS-GDL02, Operations Standards, Attachment 3, Operating Practices (Rev. 004)

****** 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

JPM Number: JPM-A1.1R

Rev. 0

Initiating Cues:

- Review the documents that are required prior to assuming shift duties.
- I will act as the off going SPO.

Initial Conditions:

- You are the oncoming SPO and have just arrived in the control room for the beginning of your shift.

Simulator Requirements: N/A

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

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.1R TITLE: RO Shift Turnover

START TIME: 

STEP 1 X Performance Steps: Obtain the documents that need to be reviewed prior to assuming shift duties.

GRADE X Standards: *Examinee requests the documents that he/she would review. As a minimum, the list should include the following:*

- OPS Form 2619A-4, "Shift Turnover Report"
- Control Room Log book (ie. SM Log or Autolog)

The examinee may request additional documents [ie., Night Order Log (for any new night orders), Radwaste Log Book (AutoLog), Radwaste Night Order Book, or Control Room Daily Surveillance MODES 1 & 2, SP 2619A-001 (NOT required)] that he may want to review. These documents are NOT required, but may be utilized in a turnover.

Cue: **Provide the Turnover Report and the SM Log (Autolog). (The above listed additional documents will NOT be available to the examinee. If the examinee does requests them, state that they are in use by other individuals, but will be provided prior to the completion of shift turnover.)**

Comments: The SP 2619A-004, Shift Turnover Report lists items that should be reviewed. The operator may also refer to MP-14-OPS-GDL02, Operations Standards, Attachment 3, Operating Practices, for any additional requirements.

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## PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.1R      TITLE: RO Shift Turnover

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STEP **2**      X Performance Steps: Review the Turnover Report and the SM Log (autolog) and ask the off-going operator about anything out of the ordinary.

GRADE           X Standards:

- *During the review of the SM log or the Turnover Report, the examinee should recognize that there is a problem with taking the 'B' Diesel Generator out of service when the 'A' Aux Feed Pump is out of service and Facility 2 is protected.*
- *The examinee may also ask why the 'B' Diesel Generator is being removed from service at the same time. 'A' Aux Feed pump is out for bearing replacement as described in the 1830 entry. Facility 2 is protected and the 0619 and 0621 entries are related to removing the 'B' Diesel Generator from service.*
- *The examinee should state that he/she would inform the US/SM of the problem.*

Cue:

- **Provide a copy of the attached auto log and indicate that it should be examined and commented on as necessary as if this was a shift turnover.**
- **If necessary, review equipment out of service.**
- **If asked, state that the "B" DG is out of service for scheduled preventive maintenance.**

Comments:

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Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME:

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A1.1R

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: A1.1R

Initiating Cues:

- Review the documents that are required prior to assuming shift duties.
- I will act as the off going SPO.

Initial Conditions:

- You are the oncoming SPO and have just arrived in the control room for the beginning of your shift.

JOB PERFORMANCE MEASURE APPROVAL SHEET

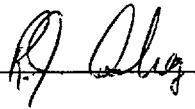
I. JPM Title: Determine Shutdown Margin

ID Number: JPM-A1.2R

Revision: 0

II. Initiated:

R. J. Ashe
Developer



8/29/02
Date

III. Reviewed:

Richard Ashe
Technical Reviewer

9/5/02
Date

IV. Approved:

N/A
User Department Supervisor

Date

M. L. Wil
Nuclear Training Supervisor

9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A1.2R Rev. 0

Task Title: **Determine Shutdown Margin**

System: N/A

Time Critical Task: Yes _____ No X

Validated Time (minutes): 15

Task No.(s): NUTIMS #121-01-145

Applicable To: SRO X RO X PEO _____

K/A No.: 2.1.25 K/A Rating: 2.8/3.1

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 has determined the required shutdown boron concentration is within +50/-15 ppm and that SDM is being met.

Required Materials

(procedures,equipment):

- OP 2208 (and all associated OPS Forms)
- Calculator

General References:

OP 2208, Section 4.3 (Rev. 13)

****** 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

JPM Number: JPM-A08

Rev. 0

Initiating Cues:

- The Unit Supervisor has directed you to verify adequate SDM for the first full hour immediately following a plant trip, taking advantage of the Xenon worth modification option, in accordance with OP 2208.

Initial Conditions:

- Thirty minutes ago, the plant tripped from 100% steady-state equilibrium power after 2 months of operation and is expected to start up in approximately 8 hours.
- The trip was uncomplicated and normal temperature and pressure are being maintained.
- The Chemistry Department has sampled the RCS and determined the Boron concentration to be 802 ppm.
- Reactor Engineering has indicated core average burnup is 6000 MWD/MTU.

Simulator Requirements: N/A

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

1. Critical steps for this JPM are indicated with an "X". 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. As necessary use Data Sheet to verify parameters used.

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.2R TITLE: Determine Shutdown Margin

START TIME: 08:00

STEP 1 — Performance Steps: 1. Obtain present burnup from one of the following and RECORD:

- "CVBURNUP" (PPC)
- Reactor Engineering

2. Record RCS temperature (T_{AVG}).

GRADE ____ Standards: *Examinee obtains a copy of OPS Form 2208-13, SDM Determination in MODES 3, 4, and 5, and records burnup and T_{avg} .*

Cue: Provide examinee with OP 2208, Reactivity Calculations, and a blank copy of OPS Form 2208-13, SDM Determination in MODES 3, 4, and 5

Comments: Burnup was provided and T_{avg} used should be 532 °F.

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STEP 2      X   Performance Steps: Refer To OPS Form 2208-12 and determine required shutdown boron concentration for existing core burnup and  $T_{AVG}$  and record.

- If any untrippable CEA(s) *not* fully inserted, ADD 350 ppm for *each* CEA *not* fully inserted, to the required shutdown boron concentration.

GRADE          X Standards: *Examinee uses burnup and  $T_{avg}$  to determine required shutdown boron concentration from OPS Form 2208-12 and records on OPS Form 2208-13. Since trip was uncomplicated, examinee determines it is not necessary to add 350 ppm.  
**Tolerance is +50/-15 ppm.***

Cue: \_\_\_\_\_

Comments: As necessary Refer to Data Sheet for value.

### PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.2R TITLE: Determine Shutdown Margin

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STEP 3          Performance Steps: Record present RCS boron concentration, date, and time and sign "Determined By" section.

GRADE               Standards:     *Examinee records present RCS boron concentration, date, and time on OPS Form 2208-13 and signs form.*

Cue: 

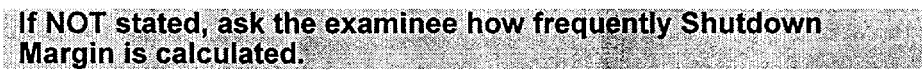
Comments:     Obtained from initial conditions.

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STEP 4 X Performance Steps: If xenon worth modification is applicable (i.e., post trip or shutdown), perform the following once every hour for a maximum of 24 hours:

- a. Record date and time
- b. Refer To OPS Form 2208-005 and determine Inverse Boron Worth at present burnup.
- c. Record Inverse Boron Worth in column "A."

GRADE X Standards: *Examinee references the Initiating Cues and determines that the xenon worth modification is applicable. Examinee uses burnup to determine inverse boron worth from OPS Form 2208-005 and records in column "A" of OPS Form 2208-13 (also date and time).*
Tolerance is ± 0.2 ppm/% $\Delta K/K$.

Cue: 

Comments:

- As stated in the initiating cues, the Xenon modification worth is applicable.
- As necessary, refer to Data Sheet for value.

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.2R TITLE: Determine Shutdown Margin

- STEP 5 X Performance Steps: NOTE: When determining the smallest xenon reactivity worth expected to occur at any time during the next 1 hour period, the following should be considered:
- If xenon is building in, the value at the beginning of the hour should be used.
 - If xenon is decaying, the value at the end of the hour should be used.
1. Refer to one of the following and determine the *smallest* xenon reactivity worth expected within the hour being evaluated:
 - "Xenon-Samarium Post Trip Report" (printed automatically on special typer following trips)
 - OPS Form 2208-004
 - "XENON-SAMARIUM DEMAND" program on PPC
 - Reactor Engineering
 2. Record xenon reactivity worth in column "B."

GRADE ____ X Standards: *Examinee reads note and determines that xenon is building in. Using OPS Form 2208-004, examinee determines the xenon reactivity worth value at the beginning of the hour and records in column "B" on OPS Form 2208-13.*
Tolerance is $\pm 0.1\% \Delta K/K$.

Cue: **If asked which source to use, suggest OPS Form 2208-004.**

Comments: Xenon value will be 100% power equilibrium xenon.
As necessary refer to Data Sheet for value.

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.2R TITLE: Determine Shutdown Margin

STEP 6 X Performance Steps: Calculate Boron Equivalent of Xenon Reactivity Worth as follows and record in column "C":
*Boron Equivalent of Xenon Reactivity Worth =
(Inverse Boron Worth) x (Xenon Reactivity Worth)*

GRADE ____ X Standards: *Examinee multiplies column "A" (Inverse Boron Worth) times column "B" (Xenon Reactivity Worth) and records Boron Equivalent of Xenon in column "C" on OPS Form 2208-13.
Tolerance is +50/-15 ppm.*

Cue: _____

Comments: As necessary refer to Data Sheet for value.
Question the examinee as to how this result was obtained.
This question does NOT constitute a critical component of this step.

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STEP 7      \_\_\_\_ Performance Steps: Record the lowest expected  $T_{AVG}$  in the next hour.

GRADE \_\_\_\_      \_\_\_\_ Standards: *Examinee records  $T_{AVG}$  of 532°F.*

Cue: \_\_\_\_\_

Comments: Obtained from initial conditions.

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STEP 8 ____ Performance Steps: Refer to OP 2208-012 and determine required shutdown boron concentration and record in column "D."

GRADE ____ ____ Standards: *Examinee obtains required shutdown boron concentration at the lowest expected T_{AVG} from OP 2208-012 and records value in column "D" of OP 2208-13
Tolerance is +50/-15 ppm.*

Cue: _____

Comments: Obtained from step 2 above.

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**PERFORMANCE INFORMATION**

JPM ID NUMBER: JPM-A1.2R      TITLE: Determine Shutdown Margin

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STEP 9      X      Performance Steps: Calculate Xenon Corrected Required Shutdown Boron Concentration as follows and record in column "E":

- *Xenon Corrected Required Shutdown Boron Concentration = Required Shutdown Boron Concentration - Boron Equivalent of Xenon Reactivity Worth*
- Sign "Calculated By" column.

GRADE \_\_\_\_      X      Standards:      *Examinee subtracts Boron Equivalent of Xenon Reactivity Worth from the Required Shutdown Boron Concentration and signs OPS Form 2208-13.*  
***Tolerance is +50/-15 ppm.***

Cue: 

Comments:      As necessary refer to Data Sheet for value.  
                    Question examinee as to how this result was obtained.  
                    This question does NOT constitute a critical component of this step.


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STEP 10 X Performance Steps: Report that SDM for the first hour, post-trip, has been verified to be adequate.

GRADE ____ X Standards: *Examinee states SDM reported adequate (verified) for the first hour, post-trip.*

Cue: **Acknowledge report.** 

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME: 

JPM ID NUMBER: JPM-A1.2R TITLE: Determine Shutdown Margin

DATA SHEET

The values for this data sheet must be determined and verified using the current OPS Forms in OP 2208. The data on this sheet may be updated as necessary if the data in OP 2208 changes.

RCS Boron Concentration: 802 ppm

<u>PERFORMANCE STEP</u>	<u>VALUE</u>	<u>FORM AND REV. #</u>
Step 2: Required Shutdown Boron Concentration	952 ppm	OPS Form 2208-012 (Rev. 20)
Step 4: Inverse Boron Worth	117.5 ppm/% $\Delta K/K$	OPS Form 2208-005 (Rev.18)
Step 5: Xenon Reactivity Worth	2.615 % $\Delta K/K$	OPS Form 2208-004 (Rev. 40)
Step 6: Boron Equivalent of Xenon	Value in step 4 times value in step 5 = 307.3 ppm	N/A
Step 7: Required Shutdown Boron Concentration	Value in step 2 minus value in step 6 = 644.7 ppm	N/A

Values Determined by: R. J. Ashey Values Verified by: _____

Date 8/29/02

Date _____

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A1.2R

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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): 15

Actual Time to Complete (minutes): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: JPM-A1.2R

Initiating Cues:

- The Unit Supervisor has directed you to verify adequate SDM for the first full hour immediately following a plant trip, taking advantage of the Xenon worth modification option, in accordance with OP 2208.

Initial Conditions:

- Thirty minutes ago, the plant tripped from 100% steady-state equilibrium power after 2 months of operation and is expected to start up in approximately 8 hours.
- The trip was uncomplicated and normal temperature and pressure are being maintained.
- The Chemistry Department has sampled the RCS and determined the Boron concentration to be 802 ppm.
- Reactor Engineering has indicated core average burnup is 6000 MWD/MTU.

Form Approved by Director - Millstone Unit 2

10/21/96
Effective Date

2-96-246
PORC Mtg. No.

SDM Determination in MODES 3, 4, and 5

Burnup 6000 MWD/MTU	Required Shutdown Boron Concentration (OPS Form 2208-12) 952 ppm	Date (Present Date)
T _{AVG} 532 °F	Present RCS Boron Concentration 802 ppm	Time (Present Time)
Determined By:		

Xenon Worth Modification of Required Shutdown Boron Concentration:

- A - Inverse Boron Worth (OPS Form 2208-5)
B - Xenon Reactivity Worth (OPS Form 2208-4)
C - Boron Equivalent of Xenon Reactivity Worth

- D - Required Shutdown Boron Concentration (OPS Form 2208-12)
E - Xenon Corrected Required Shutdown Boron Concentration

Date/Time	A (ppm/%Δρ)		B (%Δρ)		C (ppm)	RCS T _{AVG} (°F)	D (ppm)		C (ppm)		E (ppm)	Calculated By
(Present/Present)	117.5	X	2.615	=	307.3	532	952	-	307.3	=	644.7	(Examinee)
		X		=				-		=		
		X		=				-		=		
		X		=				-		=		
		X		=				-		=		
		X		=				-		=		
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		X		=				-		=		
		X		=				-		=		

Completed form should be attached to applicable Control Room Daily Surveillance.

NOTE: If any untrippable CEA(s) not fully inserted, for each CEA not fully inserted 350 ppm must be added, to the required shutdown boron concentration.

13/10/96
Form Approved by Director - Millstone Unit 2

10/2/96
Effective Date

2-96-246
PORC Mtg. No.

SDM Determination in MODES 3, 4, and 5

Burnup	Required Shutdown Boron Concentration (OPS Form 2208-12)	Date
MWD/MTU	ppm	
T _{AVG}	Present RCS Boron Concentration	Time
°F	ppm	
Determined By:		

Xenon Worth Modification of Required Shutdown Boron Concentration:

- A - Inverse Boron Worth (OPS Form 2208-5)
 B - Xenon Reactivity Worth (OPS Form 2208-4)
 C - Boron Equivalent of Xenon Reactivity Worth

- D - Required Shutdown Boron Concentration (OPS Form 2208-12)
 E - *Xenon Corrected* Required Shutdown Boron Concentration

Date/Time	A (ppm/%Δρ)	B (%Δρ)	C (ppm)	RCS T _{AVG} (°F)	D (ppm)	C (ppm)	E (ppm)	Calculated By
		X	=			-	=	
		X	=			-	=	
		X	=			-	=	
		X	=			-	=	
		X	=			-	=	
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		X	=			-	=	
		X	=			-	=	
		X	=			-	=	

Completed form should be attached to applicable Control Room Daily Surveillance.

NOTE: If any untrippable CEA(s) *not* fully inserted, for each CEA *not* fully inserted 350 ppm must be added, to the required shutdown boron concentration.

JOB PERFORMANCE MEASURE APPROVAL SHEET

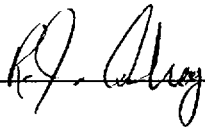
I. JPM Title: RO Tag Clearance Preparation

ID Number: JPM-A2R

Revision: 0

II. Initiated:

R. J. Ashley
Developer



8/29/02
Date

III. Reviewed:

Richard M. Brown
Technical Reviewer

9/5/02
Date

IV. Approved:

N/A
User Department Supervisor

Date

M. Phil
Nuclear Training Supervisor

9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A2R Rev. 0

Task Title: RO Tag Clearance Preparation

System: Administrative

Time Critical Task: Yes _____ No X

Validated Time (minutes): 15

Task No.(s): 119-01-029

Applicable To: SRO _____ RO X PEO _____

K/A No.: 2.2.13 K/A Rating: 3.6/3.8

Method of Testing:

Simulated Performance: X Actual Performance: _____

Location:

Classroom: X Simulator: X In-Plant: X

Task Standards:

At the completion of this JPM, the examinee will present a recommended tagging clearance to the tagging authority.

Required Materials

(procedures,equipment):

- WC2 "Tagging"
- P&ID 25203 26009, Sh 1
- P&ID 25203 30005
- P&ID 25203-30011, Sheet 34E

General References:

WC-2, Section 1.3 (Rev. 006-03)

* * * * 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

JPM Number: JPM-A2R

Rev. 0

Initiating Cues:

- The WC SRO has directed you to prepare a tagout for the "A" Service Water Pump Strainer for an inspection of the strainer hand hole covers in accordance with AWO M2 0222222.
- The clearance number is 2C15-2326A11-0005.
- The contact person is E. Maintenance
- The examiner will review and approve the tagout.

Initial Conditions:

- The "A" Service Water Strainer hand hole covers must be removed, inspected, and replaced.
- The "B" Service Water Pump is operating on Facility 1.
- The station tagging computer program is unavailable; therefore, a manual tagout sheet must be completed.
- The need for a manual tagout has been evaluated and approved.
- The tagout will be entered into the computer as soon as the computer is available.

Simulator Requirements: N/A

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

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A2R TITLE: **RO Tag Clearance Preparation**

START TIME: 000000

STEP 1 Performance Steps: Using WC-2, Tagging:

- Determine the tagging boundary required to provide a safe work area.
- Determine tag type to be used for each component.

GRADE ____ Standards: Obtain WC-2, Tagging, and determine which components to be tagged and what color tag is required for each component.
Refer to P&ID 25203-26008 for valves to be tagged
Refer to P&ID 25203-30005 and P&ID 25203- 30011, sheet 34E for electrical components.

Cue: Provide the examinee with the required documentation including a blank WC2, Attachment 9, Manual Tagout Sheet.

Comments: The examinee may use equivalent documentation for determining components to be tagged. This information will be used in step 3 of this JPM.

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STEP 2               Performance Steps: Enter the sequential steps for establishing a safe working area to include:

- Components
- Equipment ID
- Tag color
- Appropriate instructions
- Information on caution tag

GRADE \_\_\_\_\_ Standards: *On attachment 9, enter the following:*

- Tagout number
- Date
- AWO number
- Contact person
- Equipment
- Reason Tagged
- Special instructions

Cue: \_\_\_\_\_

Comments: The special instructions for Confined Space is optional on the manual tagout.  
This information is contained in the AWO.

~~~~~

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM- A2R TITLE: **RO Tag Clearance Preparation**

STEP **3** X Performance Steps: Enter the component name, identification number, location, tag type, and required position on Attachment 9.

GRADE		Standards:	<i>Select the following components with the designated tag color and position:</i>
—	—		1. "A" Service Water Pump Hand Switch - Yellow (Power is red tagged off)
—	—		2. "A" Service Water Strainer Hand Switch - Yellow (Power is red tagged off)
—	<u>X</u>		3. "A" Service Water Strainer Breaker, B5151 - Red (Open)
—	<u>X</u>		4. "A" Service Water Pump Breaker, A306 - Red (Open)
—	<u>X</u>		5. "A" Service Water Pump Discharge Stop, 2-SW-2A - Red (Closed)
—	<u>X</u>		6. "A" Service Water Strainer Drain, 2-SW-62A - Red (Open)
—	<u>X</u>		7. "A" Service Water Strainer Vent, 2-SW-61A - Red (Open)

Cue: **If NOT entered on the Manual Tagout Sheet, ask the examinee the required tagged position of each component.**

Comments:

- The yellow Caution tags are used for information, but are NOT required for safety purposes; therefore, they are NOT required to successfully complete this JPM.
- The order may differ slightly provided the "A" Service Water Strainer is isolated and deenergized to prevent personnel injury or equipment damage, i.e., the pump breaker must be opened prior to closing the pump discharge valve or opening the vent and drain valves.
- The tagged position is NOT a required entry on the Manual Tagout Sheet.


~~~~~

STEP **4**      X      Performance Steps: Complete block number 11, "Prepared by:"

GRADE         X      Standards:      *Examinee enters his (her) name in block 11 of Attachment 9.*

Cue: 

Comments:      **After this step is completed, the JPM is considered complete.**

STOP TIME: 

### VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM- A2R

Rev. 0

Date Performed: \_\_\_\_\_

Operator: \_\_\_\_\_

Evaluator(s): \_\_\_\_\_

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): 15

Actual Time to Complete (minutes): \_\_\_\_\_

Result of JPM: \_\_\_\_\_ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

## EXAMINEE HANDOUT

JPM ID Number: A2R

### Initiating Cues:

- The WC SRO has directed you to prepare a tagout for the "A" Service Water Pump Strainer for an inspection of the strainer hand hole covers in accordance with AWO M2 0222222.
- The clearance number is 2C15-2326A11-0005.
- The contact person is E. Maintenance
- The examiner will review and approve the tagout.

### Initial Conditions:

- The "A" Service Water Strainer hand hole covers must be removed, inspected, and replaced.
- The "B" Service Water Pump is operating on Facility 1.
- The station tagging computer program is unavailable; therefore, a manual tagout sheet must be completed.
- The need for a manual tagout has been evaluated and approved.
- The tagout will be entered into the computer as soon as the computer is available.

# Attachment 9 Manual Tagout Sheet

(Sheet 1 of 1)

## ANSWER KEY

*This form is for manual use only, it is not intended to match a computer generated form.*

|                                                                                                                                                           |                                                                                                                                          |                                             |                                                                     |                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------|-----------------------------------|
| 1. Tagout Number<br>2C14-2326A11-005                                                                                                                      | 2. Date<br>Today                                                                                                                         | 3. AWO Number ("or Multiple")<br>M2 0222222 | 4. Contact Person<br>E. Maintenance                                 | Tagout Number<br>2C14-2326A11-005 |
| 5. Equipment<br>"A" Service Water Strainer                                                                                                                |                                                                                                                                          |                                             | 8. Tag Lift Sheet Attached [Comm. 3.4] <input type="checkbox"/> Yes |                                   |
| 6. Reason Tagged<br>Inspect "A" SW Strainer Hand Hole Covers, AWO M2 0222222                                                                              |                                                                                                                                          |                                             | 9. Additional AWOs under this tagout <input type="checkbox"/> Yes   |                                   |
| 7. Special Instructions/Caution<br>Confined Space (Optional)                                                                                              |                                                                                                                                          |                                             | 10. Partial Restoration <input type="checkbox"/> Yes                |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             | 11. Prepared by<br>Examinees Name                                   |                                   |
| 12a<br>Step<br>No.                                                                                                                                        | 12b. Equipment identification and nomenclature and location<br><i>Note: Initial position for Blue Tags. N/A if position not required</i> |                                             | 12c. Tag Placed<br>Action complete                                  |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             | Date                                                                | Init                              |
| 1                                                                                                                                                         | Yellow; "A" Service Water Pump Handswitch, C-05 {Red Tagged Off} (Optional)                                                              |                                             |                                                                     |                                   |
| 2                                                                                                                                                         | Yellow; "A" Service Water Strainer Handswitch, Unit 2 Intake {Red Tagged Off} (Optional)                                                 |                                             |                                                                     |                                   |
| 3                                                                                                                                                         | Red; "A" Service Water Strainer Breaker, B5153, Aux Building, 14'6" {Open}                                                               |                                             |                                                                     |                                   |
| 4                                                                                                                                                         | Red; "A" Service Water Pump Breaker, A306, Lower 4160 Volt Switchgear Room {Open}                                                        |                                             |                                                                     |                                   |
| 5                                                                                                                                                         | Red; "A" Service Water Pump Discharge Stop, 2-SW-2A, Intake Structure {Closed}                                                           |                                             |                                                                     |                                   |
| 6                                                                                                                                                         | Red; "A" Service Water Strainer Vent Valve, 2-SW-61A, Intake Structure {Open}                                                            |                                             |                                                                     |                                   |
| 7                                                                                                                                                         | Red; "A" Service Water Strainer Drain Valve, 2-SW-62A, Intake Structure {Open}                                                           |                                             |                                                                     |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             |                                                                     |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             |                                                                     |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             |                                                                     |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             |                                                                     |                                   |
|                                                                                                                                                           |                                                                                                                                          |                                             |                                                                     |                                   |
| 13a. Tagout correct and equipment may be isolated<br>SM/US notified for power block<br><br>Boundary approved by: _____<br>Authorized to be hung by: _____ |                                                                                                                                          |                                             |                                                                     |                                   |

Level of Use  
Information



WC 2  
Rev. 006-03  
73 of 83

(Sheet 1 of 1)

|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------|-----------------------------|
| 1. Tagout Number                                                                     | 2. Date                                                                                                                                   | 3. AWO Number ("or Multiple") | 4. Contact Person                      | Tagout Number               |
| 5. Equipment                                                                         |                                                                                                                                           |                               | 8. Tag Lift Sheet attached [Comm. 3.4] | ___ Yes                     |
| 6. Reason tagged                                                                     |                                                                                                                                           |                               | 9. Additional AWOs under this tagout   | ___ Yes                     |
|                                                                                      |                                                                                                                                           |                               | 10. Partial restoration                | ___ Yes                     |
| 7. Special Instructions/Caution                                                      |                                                                                                                                           |                               | 11. Prepared by                        |                             |
| 12a<br>Step<br>No.                                                                   | <i>Note: Initial position for Blue Tags. N/A if position not required.</i><br>12b. Equipment identification and nomenclature and location |                               | 12c. Tag Placed/<br>Action complete    | Independent<br>Verification |
|                                                                                      |                                                                                                                                           |                               | Date                                   | Init                        |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
|                                                                                      |                                                                                                                                           |                               |                                        |                             |
| 13a. Tagout correct and equipment may be isolated<br>SM/US notified for power block. |                                                                                                                                           |                               | 13b. Date                              |                             |
| Boundary approved by: _____                                                          |                                                                                                                                           |                               |                                        |                             |
| Authorized to be hung by: _____                                                      |                                                                                                                                           |                               |                                        |                             |

WC 2  
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## JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: **Review RWP and Survey Map for Entry into Tech Spec Locked High Rad Area and Contaminated Area**

ID Number: JPM-A3R

Revision: 0

II. Initiated:

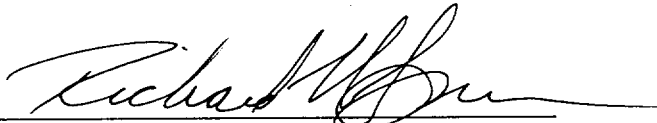
R. J. Ashley  
Developer



8/29/02  
Date

III. Reviewed:

Richard M. Brown  
Technical Reviewer



9/5/02  
Date

IV. Approved:

N/A  
User Department Supervisor

                      
Date

M. Kil  
Nuclear Training Supervisor



9/5/02  
Date

## JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2                      Examinee: \_\_\_\_\_

JPM Number: JPM-A3R                      Rev. 0

Task Title: **Review RWP and Survey Map for Entry into Tech Spec Locked High Rad Area and Contaminated Area**

System: Radiation Control

Time Critical Task: Yes \_\_\_\_\_ No X

Validated Time (minutes): 15

Task No.(s): NUTIMS # 404-01-004

Applicable To: SRO \_\_\_\_\_ RO X PEO \_\_\_\_\_

K/A No.: 2.3.1                      K/A Rating: 2.6/3.0

### 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 has reviewed the applicable RWP and survey map to determine the radiological requirements to perform the assigned task.

### Required Materials

(procedures, equipment):

Operations blanket RWP No. 5.  
Survey map for -5' 6" West Piping Penetration Room

### General References:

RPM 5.2.2, Basic Radiation Worker Responsibilities, Rev. 009-03

### \*\*\*\* 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

JPM Number: JPM-A3R

Rev. 0

Initiating Cues:

- You have been directed to isolate Letdown Flow Control Valve, 2-CH-110Q
- Based on previous experience, you estimate that this task will take 20 minutes.
- State the radiological requirements for entering this area. Include in your discussion:
  - \* Which RWP task (job step) is appropriate for this assignment
  - \* Highest contamination level in the work area
  - \* Protective clothing required in the work area
  - \* Highest radiation level in the work area
  - \* Expected dose for this assignment
  - \* Dose rate alarm
  - \* Longest possible stay time
- The examiner will act as Health Physics (HP) for any related questions.

Initial Conditions:

- The crew is performing a plant heat up in accordance with OP 2201, Plant Heatup
- The plant is in MODE 3 with pressurizer pressure at 1400 psia.
- Two Charging Pumps are in operation.

Simulator Requirements:      N/A

---

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

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

## PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A3R

**TITLE: Review RWP and Survey Map for Entry into Tech Spec Locked High Rad Area and Contaminated Area**

START TIME: 08:00

STEP 1      \_\_\_ Performance Steps:      Review Operations Blanket RWP No. 5 and Radiation Survey Figure 21A

GRADE \_\_\_\_ Standards: *Examinee reviews Operations Blanket RWP No. 5 and Radiation Survey Figure 21A*

**Cue:**

- Provide examinee with Operations Blanket RWP No. 5 and Radiation Survey Figure 21A.
- 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.

~~~~~

STEP 2 X Performance Steps: Review survey map and determine the following:

- Highest contamination level in the work area
- Highest radiation level in the work area

GRADE ____ X Standards: *Examinee reviews the survey map and states that:*

- *the highest contamination level in this area is 7,000 DPM/100cm².*
- *the highest radiation level in the work area is 50 mr/hr.*

Cue: _____

Comments: The examinee may point out the 400 mr/hr hot spot near 2-SI-709, but that the assigned task does NOT require him/her to approach that area.

~~~~~

### PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A3R

TITLE: **Review RWP and Survey Map for Entry into  
Tech Spec Locked High Rad Area and  
Contaminated Area**

---

STEP 3     X Performance Steps: Review the RWP and determine the following:

- Which RWP task (job step) is appropriate for this assignment
- Protective clothing required in the area
- Expected dose for this assignment
- Dose rate alarm
- Longest possible stay time.


GRADE \_\_\_\_ X Standards: *Examinee reviews the RWP and states that:*

- *task (job step) No. 2 is appropriate for this task*
- *contamination levels require full PCs (with modesty garments underneath).*
- *Expected dose is approximately 17 mr. (16-17 mr )*
- *dose rate alarm is 800 mr/hr*
- *longest possible stay time is one hour.*

Cue: **If required, ask examinee what protective clothing he/she thinks should be worn.**

Comments: Examinee may also state the need to obtain a key for the locked high rad area gate.

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME: 

### VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A3R

Rev. 0

Date Performed: \_\_\_\_\_

Operator: \_\_\_\_\_

Evaluator(s): \_\_\_\_\_

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): \_\_\_\_\_

Result of JPM: \_\_\_\_\_ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

## EXAMINEE HANDOUT

JPM ID Number: JPM-A3R

### Initiating Cues:

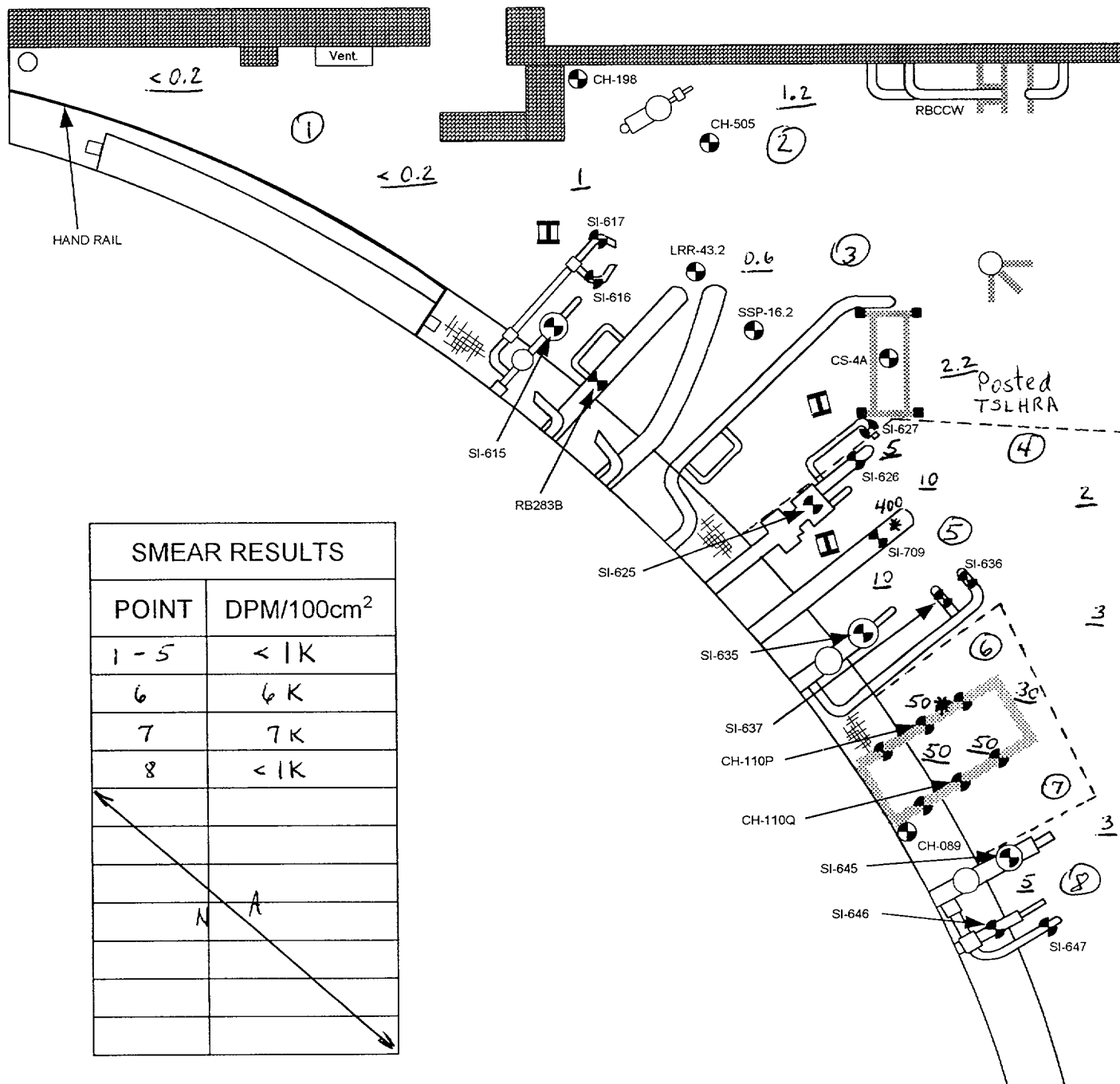
- You have been directed to isolate Letdown Flow Control Valve, 2-CH-110Q
- Based on previous experience, you estimate that this task will take 20 minutes.
- State the radiological requirements for entering this area. Include in your discussion:
  - \* Which RWP task (job step) is appropriate for this assignment
  - \* Highest contamination level in the work area
  - \* Protective clothing required in the work area
  - \* Highest radiation level in the work area
  - \* Expected dose for this assignment
  - \* Dose rate alarm
  - \* Longest possible stay time
- The examiner will act as Health Physics (HP) for any related questions.

### Initial Conditions:

- The crew is performing a plant heat up in accordance with OP 2201, Plant Heatup
- The plant is in MODE 3 with pressurizer pressure at 1400 psia.
- Two Charging Pumps are in operation.

|                         |                                 |                                   |                                                                                                |
|-------------------------|---------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------|
| Date<br><b>12/16/02</b> | Survey by<br><b>H. Physics</b>  | Reviewed by<br><i>[Signature]</i> | Type of Survey<br><input type="checkbox"/> Routine <input checked="" type="checkbox"/> Special |
| Time<br><b>0800</b>     | Print Name<br><b>H. Physics</b> | % Reactor Power<br><b>100</b>     | <input type="checkbox"/> RWP# _____                                                            |
| Type                    | Instrument Type                 | Serial Number                     | 1/Efficiency                                                                                   |
| $\gamma$                | <b>RO-2</b>                     | <b>1204</b>                       | N/A                                                                                            |
| $\eta$                  | <b>NA</b>                       |                                   | N/A                                                                                            |
| $\alpha$                | <b>NA</b> <b>NA</b>             | <b>NA</b> <b>NA</b>               | <b>NA</b>                                                                                      |
| $\beta, \gamma$         | <b>RM-14</b>                    | <b>7285</b>                       | <b>10</b>                                                                                      |
|                         |                                 |                                   | Background<br><b>140 CPM</b>                                                                   |
|                         |                                 |                                   | Calibration Due Date<br><b>3/03</b>                                                            |
|                         |                                 |                                   | <b>2/03</b>                                                                                    |

## -5 WEST PENETRATION ROOM



100 - gamma (g) at waist level in mrem/hr  
2 - contamination survey point

100\* - gamma (g) contact in mrem/hr  
50 mrad - beta (b) reading in mrad/hr

25 h - neutron in mrem/hr

# RADIATION WORK PERMIT - 5

| Plant Code | Year | RWP Number | Rev. | RWP Start   | RWP Type | RWP Category | RWP Expiration |
|------------|------|------------|------|-------------|----------|--------------|----------------|
| 2          | 2    | 0005       | 00   | 01-jan-2002 | G        | POWER        | 05-jan-2003    |

## RWP DESCRIPTION

Operations General RWP

## TASK SUMMARY

| Job | Description                                           |
|-----|-------------------------------------------------------|
| 1   | Operations activities in RCAs, Radiation Areas, and H |
| 2   | (TSLHRA) Operations activities in Tech Spec Locked Hi |
| 3   | Operations Training classes activities in RCAs, Radia |

## ALARA INFORMATION

| ALARA Review No | Hours- Estimated Authorized | Internal (DAC)- Estimated Authorized | External (mRem)-Estimated Authorized |
|-----------------|-----------------------------|--------------------------------------|--------------------------------------|
|                 | 03200 00000                 | 0000 0000                            | 003200 003200                        |

## SPECIAL INSTRUCTIONS

General access to RCAs to perform routine and special rounds, inspections, tagging, surveillances, and and training during Power Operations.

Entry on this RWP requires the worker to understand and comply with the following:

- \*\* Be knowledgeable of radiological conditions of the work area
- \*\* Adhere to the requirements of the RWP
- \*\* Notify HP before entering overhead areas
- \*\* Monitor electronic dosimeter frequently, especially in high noise areas
- \*\* Unless specifically briefed otherwise, if DOSE RATE alarm sounds, move to a lower dose area and notify HP
- \*\* If DOSE alarm sounds, leave the area and notify HP
- \*\* If electronic dosimeter malfunctions, notify HP BEFORE logging out
- \*\* Modesty garments will be worn whenever PCs are worn

|                               |      |                        |                   |
|-------------------------------|------|------------------------|-------------------|
| Health Physics Representative | Date | RWP Term/Rev Date/Time | Terminated/Rev by |
|-------------------------------|------|------------------------|-------------------|

# RADIATION WORK PERMIT - (5) JOB STEP - 3 OF 3

|                                                          |           |                    |            |                                   |               |                                                |                               |
|----------------------------------------------------------|-----------|--------------------|------------|-----------------------------------|---------------|------------------------------------------------|-------------------------------|
| Plant Code<br>2                                          | Year<br>2 | RWP Number<br>0005 | Rev.<br>00 | RWP Start<br>01-jan-2002          | RWP Type<br>G | RWP Category<br>POWER                          | RWP Expiration<br>05-jan-2003 |
| Responsible Individual/Extension<br>CHRISTOPHER SCHWARZ/ |           |                    |            | Department/Company<br>WP/DNC      |               | Job Supervisor/Extension<br>DANIEL HAGAN/6258  |                               |
| Building<br>2AUX                                         |           | Floor              | Zone       | Location<br>LEVELS/MULTIPLE AREAS |               | Plant Equipment<br>MISCELLANEOUS U-2 EQUIPMENT |                               |
|                                                          |           |                    |            |                                   |               |                                                | Rad. Area Type                |

## WRITTEN DESCRIPTION OF JOB (MATERIALS & METHODS)

Operations Training classes activities in RCAs, Radiation Areas, and High Radiation Areas.

## ALARA INFORMATION

|                     |                                            |                                                    |                                                      |                     |
|---------------------|--------------------------------------------|----------------------------------------------------|------------------------------------------------------|---------------------|
| ALARA Review No     | Hours- Estimated Authorized<br>00200 00000 | Internal(DAC)- Estimated Authorized<br>00000 00000 | External(mRem)-Estimated Authorized<br>000200 000200 |                     |
| System Code<br>2000 | Component Code<br>MISC                     | Task<br>OPS                                        | NRC Task<br>RO                                       | Alara Zone<br>2MISC |
|                     |                                            | Location<br>2200                                   | Plant Equipment<br>2MISC                             |                     |

## SURVEY MEASUREMENTS

RADIATION (MR/HR)

CONTAMINATION(DPM/100CM2) AIRBORNE (DAC)

Review latest radiological surveys or historical data prior to entering RCA.

## SPECIAL INSTRUCTIONS

NO entry to Tech Spec Locked High Radiation Areas permitted using this Job Step.

PCs required in contaminated areas.

HP supervision may adjust protective clothing requirements based on any of the following:

- \* TEDE ALARA reviews
- \* Heat stress evaluations
- \* FME controls

Requirements for High Radiation Area entries:

- \* Dose rate meter or alarming dosimeter AND knowledge of area dose rates, OR continuous HP coverage
- \* Health Physics briefing for High Radiation Areas

Dose Limit Alarm(Stay Time)= 0025 mrem      Dose Rate Alarm= 0075 mr/hr  
Elapsed Time Alarm= 0000 min.

## REQUIREMENTS

|                                                                                                                                                                                                            |                                                                 |                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------|
| Protective clothing: <ul style="list-style-type: none"> <li>* Cotton liners</li> <li>* Booties</li> <li>* Coveralls</li> <li>* Shoe covers</li> <li>* Rubber gloves</li> <li>* Modesty garments</li> </ul> | Lab coat<br>Surgeon's gloves<br><br>Electronic dosimeter<br>TLD | Health Physics Coverage<br>Periodic<br><br>Minimum Margin:<br>0125 mrem |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------|

|                               |      |                        |                   |
|-------------------------------|------|------------------------|-------------------|
| Health Physics Representative | Date | RWP Term/Rev Date Time | Terminated/Rev by |
|                               |      |                        |                   |



## RADIATION WORK PERMIT - (5) JOB STEP - 2 OF 3

|                                                          |           |                    |                                   |                              |                                                |                       |                               |
|----------------------------------------------------------|-----------|--------------------|-----------------------------------|------------------------------|------------------------------------------------|-----------------------|-------------------------------|
| Plant Code<br>2                                          | Year<br>2 | RWP Number<br>0005 | Rev.<br>00                        | RWP Start<br>01-Jan-2002     | RWP Type<br>G                                  | RWP Category<br>POWER | RWP Expiration<br>05-Jan-2003 |
| Responsible Individual/Extension<br>CHRISTOPHER SCHWARZ/ |           |                    |                                   | Department/Company<br>WP/DNC | Job Supervisor/Extension<br>DANIEL HAGAN/6258  |                       | Department/Company<br>OP/DNC  |
| Building<br>2AUX                                         | Floor     | Zone               | Location<br>LEVELS/MULTIPLE AREAS |                              | Plant Equipment<br>MISCELLANEOUS U-2 EQUIPMENT |                       | Rad. Area Type                |

### WRITTEN DESCRIPTION OF JOB (MATERIALS & METHODS)

(TSLHRA) Operations activities in Tech Spec Locked High Radiation Areas.

### ALARA INFORMATION

|                     |                           |                     |                                    |                     |                     |                                     |  |                      |
|---------------------|---------------------------|---------------------|------------------------------------|---------------------|---------------------|-------------------------------------|--|----------------------|
| ALARA Review No     | Hours- Estimated<br>00500 | Authorized<br>00000 | Internal (DAC)- Estimated<br>00000 |                     | Authorized<br>00000 | External (mRem)-Estimated<br>000500 |  | Authorized<br>000500 |
| System Code<br>2000 | Component Code<br>MISC    | Task<br>OPS         | NRC Task<br>RO                     | Alara Zone<br>2MISC | Location<br>2200    | Plant Equipment<br>2MISC            |  |                      |

### SURVEY MEASUREMENTS

RADIATION (MR/HR)

CONTAMINATION (DPM/100CM2)

AIRBORNE (DAC)

Review latest radiological surveys or historical data before entering RCA.

### SPECIAL INSTRUCTIONS

PCs required in contaminated areas.

Notify HP before venting or draining any contaminated systems.

HP supervision may adjust protective clothing requirements based on any of the following:

- \* TEDE ALARA reviews
- \* Heat stress evaluations
- \* FME controls

Requirements for Tech Spec Locked High Radiation Area entry:

- \* Dose rate meter, or alarming dosimeter AND knowledge of area dose rates OR continuous HP coverage
- \* Review most current survey results of the specific work area
- \* Area MUST be locked or guarded at ALL times
- \* Health Physics briefing for Tech Spec Locked High Radiation Areas

Maximum allowable Stay Time is 180 minutes.

Dose Limit Alarm(Stay Time)= 0050 mrem

Dose Rate Alarm= 0800 mr/hr

Elapsed Time Alarm= 0180 min.

### REQUIREMENTS

|                                                                                                                                                                                                            |                                                                 |                                                                          |                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------|-------------------|
| Protective clothing: <ul style="list-style-type: none"> <li>* Cotton liners</li> <li>* Booties</li> <li>* Coveralls</li> <li>* Shoe covers</li> <li>* Rubber gloves</li> <li>* Modesty garments</li> </ul> | Lab coat<br>Surgeon's gloves<br><br>Electronic dosimeter<br>TLD | Health Physics Coverage<br>See Notes<br><br>Minimum Margin:<br>0300 mrem |                   |
| Health Physics Representative      Date                                                                                                                                                                    |                                                                 | RWP Term/Rev Date/Time                                                   | Terminated/Rev by |

## RADIATION WORK PERMIT - (5) JOB STEP - 1 OF 3

|                                                          |           |                    |                                   |                              |                                                |                       |                               |
|----------------------------------------------------------|-----------|--------------------|-----------------------------------|------------------------------|------------------------------------------------|-----------------------|-------------------------------|
| Plant Code<br>2                                          | Year<br>2 | RWP Number<br>0005 | Rev.<br>00                        | RWP Start<br>01-jan-2002     | RWP Type<br>G                                  | RWP Category<br>POWER | RWP Expiration<br>05-jan-2003 |
| Responsible Individual/Extension<br>CHRISTOPHER SCHWARZ/ |           |                    |                                   | Department/Company<br>WP/DNC | Job Supervisor/Extension<br>DANIEL HAGAN/6258  |                       | Department/Company<br>OP/DNC  |
| Building<br>2AUX                                         | Floor     | Zone               | Location<br>LEVELS/MULTIPLE AREAS |                              | Plant Equipment<br>MISCELLANEOUS U-2 EQUIPMENT |                       | Rad. Area Type                |

### WRITTEN DESCRIPTION OF JOB (MATERIALS & METHODS)

Operations activities in RCAs, Radiation Areas, and High Radiation Areas.

### ALARA INFORMATION

|                     |                                            |                                                     |                                                       |
|---------------------|--------------------------------------------|-----------------------------------------------------|-------------------------------------------------------|
| ALARA Review No     | Hours- Estimated Authorized<br>02500 00000 | Internal (DAC)- Estimated Authorized<br>00000 00000 | External (mRem)-Estimated Authorized<br>002500 002500 |
| System Code<br>2000 | Component Code<br>MISC                     | Task<br>OPS                                         | NRC Task<br>RO                                        |
| Alara Zone<br>2MISC |                                            | Location<br>2200                                    | Plant Equipment<br>2MISC                              |

### SURVEY MEASUREMENTS

RADIATION (MR/HR)

CONTAMINATION (DPM/100CM2)

AIRBORNE (DAC)

Review latest radiological surveys or historical data prior to entering RCA.

### SPECIAL INSTRUCTIONS

NO entry to Tech Spec Locked High Radiation Areas permitted using this Job Step.

Notify HP before venting or draining any contaminated systems.

PCs required in contaminated areas.

HP supervision may adjust protective clothing requirements based on any of the following:

- \* TEDE ALARA reviews
- \* Heat stress evaluations
- \* FME controls

Requirements for High Radiation Area entries:

- \* Dose rate meter or alarming dosimeter AND knowledge of area dose rates, OR continuous HP coverage
- \* Health Physics briefing for High Radiation Areas

Dose Limit Alarm(Stay Time)= 0050 mrem  
Elapsed Time Alarm= 0000 min.

Dose Rate Alarm= 0150 mr/hr

### REQUIREMENTS

Protective clothing:

- \* Cotton liners
- \* Booties
- \* Coveralls
- \* Shoe covers
- \* Rubber gloves
- \* Modesty garments

Lab coat

Surgeon's gloves

Electronic dosimeter  
TLD

Health Physics Coverage  
Periodic

Minimum Margin:  
0125 mrem

Health Physics Representative Date

RWP Term/Rev Date/Time

Terminated/Rev by

## JOB PERFORMANCE MEASURE APPROVAL SHEET

I. Title: **Reactor Operator E-Plan Responsibilities**

ID Number: JPM-A4R

Revision: 0

II. Initiated:

R. J. Ashe  
Developer

3/18/02  
Date

III. Reviewed:

Richard Ashe  
Technical Reviewer

9/5/02  
Date

IV. Approved:

N/A  
User Department Supervisor

Date

M. P. Hill  
Nuclear Training Supervisor

7/5/02  
Date

## JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2                      Examinee: \_\_\_\_\_

JPM Number: JPM-A4R                      Rev. 0

Task Title: **Reactor Operator E-Plan Responsibilities**

System: \_\_\_\_\_

Time Critical Task: Yes \_\_\_\_\_ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS # 407-01-003

Applicable To:      SRO \_\_\_\_\_ RO X      PEO \_\_\_\_\_

K/A No.: 2.4.39      K/A Rating: 3.3/3.1

### Method of Testing:

Simulated Performance: X      Actual Performance: \_\_\_\_\_

### Location:

Classroom: x      Simulator: x      In-Plant: x

### Task Standards:

At the completion of this JPM, The student will demonstrate a knowledge of the SERO responsibilities for an RO during a station evacuation.

### Required Materials (procedures, equipment):

- MP-26-EPA-FAP01, Management Program for Maintaining Emergency Preparedness, Rev. 000

### General References:

- Millstone Emergency Plan, Rev. 28
- MP-26-EPA-FAP01, Management Program for Maintaining Emergency Preparedness, Rev. 000

\* \* \* \* \* **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

Number: JPM-A4R

Rev. 0

### Initiating Cues:

#### Cue/Question 1:

While eating lunch in the building 475 cafeteria, you hear the evacuation alarm sound. The message following the siren states that an ALERT C-1 has been declared and all non essential personnel evacuate the site via the North Access Point.

Where do you go?

#### Cue/Question 2:

You receive a call at home from the Manager of Resources. He states that a SERO activation has occurred, site access has been restricted and you are requested to report to provide shift relief coverage.

Where do you report and to whom do you report?

### Initial Conditions:

#### Condition 1 and 2:

You are a qualified Control Operator currently working with the Outage Planning Group.

Simulator Requirements: N/A


### **\*\*\*\* NOTES TO EXAMINER \*\*\*\***

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A4R TITLE: **Reactor Operator E-Plan Responsibilities**

---

START TIME: 

STEP 1      X Performance Steps: Non on-duty/on-call SERO personnel within the protected area will report to the **OSC Assembly Area** in the Bldg. 475 Cafeteria.

GRADE \_\_\_\_ X Standards:      *Report to room C103 (OSC Assembly Area) in the Building 475 cafeteria.*

Cue: 

Comments: The responsibilities of 'Control Room personnel NOT on shift' are contained in the MP-26-EPA-FAP01, Management Program for Maintaining Emergency Preparedness.

~~~~~


STEP 2 X Performance Steps: Since site access has been restricted, the qualified Control Operator must report to the **EOF** and **the Manager of Resources**. The Manager of Resources then will contact the requesting party and arrange access to the site for the individual.

GRADE ____ X Standards: *Report to the **EOF** and **the Manager of Resources**.*

Cue:  **If NOT discussed, ask the examinee how he is to gain access to the Control Room.**

Comments: The Manager of Resources then will contact the requesting party (or the Control Room will contact the EOF) and arrange access to the site for the individual.

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME: 

VERIFICATION OF COMPLETION

Job Performance Measure No. JPM-A4R

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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): 5

Actual Time to Complete (minutes): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

ID Number: JPM-A4R

Initiating Cues:

Cue/Question 1:

While eating lunch in the building 475 cafeteria, you hear the evacuation alarm sound. The message following the siren states that an ALERT C-1 has been declared and all non essential personnel evacuate the site via the North Access Point.

Where do you go?

Cue/Question 2:

You receive a call at home from the Manager of Resources. He states that a SERO activation has occurred, site access has been restricted and you are requested to report to provide shift relief coverage.

Where do you report and to whom do you report?

Initial Conditions:

Condition 1 and 2:

You are a qualified Control Operator currently working with the Outage Planning Group.

Facility: Millstone Unit 2Date of Examination: 12/16/02Examination Level (circle one): ~~RO~~ / SROOperating Test Number: 1

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	2.1.7	JPM to determine the appropriate color code for the Shutdown Safety Assessment.
	2.1.4	JPM to determine appropriate staffing levels when a licensed operator is suddenly unable to perform licensed duties, determine which personnel are available to perform licensed duties, and call in the appropriate individual.
	2.1.3	(SPARE) JPM to perform a review of turnover documents and discover a problem with removing both motor driven auxiliary feedwater pumps from service with Facility 2 protected.
A.2	2.2.13	JPM to determine, prior to approval, that incorrect components are listed on a tagging sheet for removing the "A" Service Water Strainer from service for internal inspection.
A.3	2.3.6	JPM to determine that a Radioactive Waste Discharge cannot be performed because the second independent sample was NOT signed for on the surveillance sheet and that the tank was NOT left on recirculation long enough prior to the sample.
A.4	2.4.41	JPM to classify a Small Break LOCA with a stuck open safety valve on the same S/G. The event degrades due to fuel failure which will require the examinee to upgrade the classification and to provide Protective Action Recommendations.

Make
Space

JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: **SRO Shift Turnover**

ID Number: JPM-A1.1S

Revision: 0

II. Initiated:

R. J. Ashley
Developer

5/17/02
Date

III. Reviewed:

[Signature]
Technical Reviewer

9/4/02
Date

IV. Approved:

N/A
User Department Supervisor

Date

[Signature]
Nuclear Training Supervisor

9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A1.1S Rev. 0

Task Title: SRO Shift Turnover

System: Conduct of Operations

Time Critical Task: Yes _____ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS # 119-02-034

Applicable To: SRO X RO _____ PEO _____

K/A No.: 2.1.3 K/A Rating: 3.0/3.4

Method of Testing:

Simulated Performance: X Actual Performance: _____

Location:

Classroom: X Simulator: X In-Plant: X

Task Standards:

At the completion of this JPM, the SRO has performed a review of turn over documents and found incorrect information related to a shift turnover

Required Materials

(procedures,equipment):

- Shift Manager Log (Auto Log) - (See pages 8 and 9 of this JPM)
- SP 2619A-004, Shift Turnover Report
- MP-14-OPS-GDL02, Operations Standards, Attachment 3, Operating Practices (Rev. 004)

General References:

- SP 2619A-004 Shift Turnover Report
- MP-14-OPS-GDL02, Operations Standards, Attachment 3, Operating Practices (Rev. 004)

**** 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

JPM Number: JPM-A1.1S

Rev. 0

Initiating Cues:

- Review the documents that are required prior to assuming shift duties.
- I will act as the off going US.

Initial Conditions:

- You are the oncoming US and have just arrived in the control room for the beginning of your shift.


Simulator Requirements: N/A

**** NOTES TO EXAMINER ****

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.1S TITLE: **SRO Shift Turnover**

START TIME: 

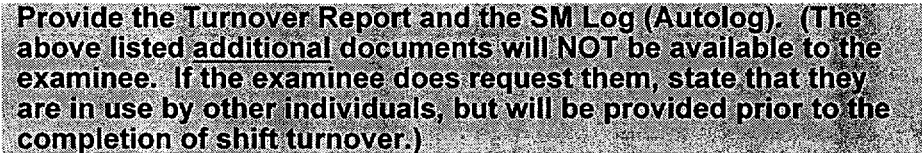
STEP 1 X Performance Steps: Obtain the documents that need to be reviewed prior to assuming shift duties.

GRADE ____ X Standards:

Examinee requests the documents that he/she would review. As a minimum, the list should include the following:

- OPS Form 2619A-4, "Shift Turnover Report"
- Control Room Log book (ie. SM Log or Autolog)

The examinee may include additional documents [ie., Night Order Log (for any new night orders), Radwaste Log Book (AutoLog), Radwaste Night Order Book, or Control Room Daily Surveillance MODES 1 & 2, SP 2619A-001 (NOT required)] that he may want to review. These documents are NOT required, but may be utilized in a turnover.

Cue:  Provide the Turnover Report and the SM Log (Autolog). (The above listed additional documents will NOT be available to the examinee. If the examinee does request them, state that they are in use by other individuals, but will be provided prior to the completion of shift turnover.)

Comments: The SP 2619A-004, Shift Turnover Report lists items that should be reviewed. The operator may also refer to MP-14-OPS-GDL02, Operations Standards, Attachment 3, Operating Practices, for any additional requirements.

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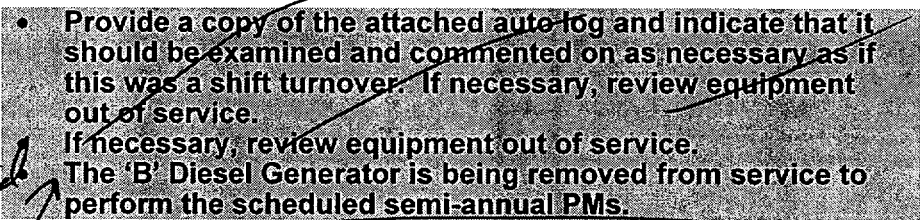
## PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.1S TITLE: **SRO Shift Turnover**

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STEP 2      X Performance Steps: Review the Turnover Report and the SM Log (autolog) and ask the off-going operator about anything out of the ordinary.

GRADE \_\_\_\_ X Standards: *During the review of the SM log (autolog) or the Turnover Report, the examinee should recognize that there is a problem with taking the 'B' Diesel Generator out of service when the 'A' Aux Feed Pump is out of service and Facility 2 is protected. The examinee may also ask why the 'B' Diesel Generator is being removed from service at the same time. 'A' Aux Feed pump is out for bearing replacement as described in the 1830 entry. Facility 2 is protected and the 0619 and 0621 entries are related to the 'B' Diesel Generator. The examinee should state that Tech Spec LCO 3.0.5 is NOT met and that the 'B' Diesel Generator must be returned to service as soon as possible.*

Cue: 


- Provide a copy of the attached auto-log and indicate that it should be examined and commented on as necessary as if this was a shift turnover. If necessary, review equipment out of service.

If necessary, review equipment out of service.  
The 'B' Diesel Generator is being removed from service to perform the scheduled semi-annual PMs.

Comments:

*As requested by "B" EDB, is being removed from service per state that*

~~~~~  
Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME: 

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A1.1S

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: JPM-A1.1S

Initiating Cues:

- Review the documents that are required prior to assuming shift duties.
- I will act as the off going US.

Initial Conditions:

- You are the oncoming US and have just arrived in the control room for the beginning of your shift.

FOR TRAINING ONLY

12/11/02	1830	Shift Hours: 18-06, Tuesday, SM: S. Myers, US: J. Claire, WCSRO: C. Chapin, SPO: S. Howes, PPO J. Jorinscay, STA: M. Strollo, TB: K. Perkins, AB: R. Bowen, FL/FTA: M. Pucel. Plant in Mode:1, Rx power: 100 % , MWe: 904, Control Rods: ARO, Blowdown: 25gpm (#1), 25gpm (#2), RCS Circulation: RCPs, Tave: 571, Onsite Power: NSST, Pzr Level: 65%, SFP Lvl: 36' 10", TSAS: 3.4.11b act. a (PZR vent path isolated), 3.7.1.2 act. a ('A' Aux Feed pump out for bearing replacement); REMODCM IV.C-1, Action C, (RBCCW RM-6038, increased sampling); TRMs: 3.7.9.1a (U-3 fire pump), Table 7.1.15-1, item D ('A' Aux Feed pump out for bearing replacement); Unit 1 TRM: N/A; Facility 2 is Protected.	clairjj	myerssr	SM
12/11/02	1910	REMODCM, Table IV.C-3, Action B. RM-8132 is secured to change out Charcoal and Particulate filters for Chemistry. No Action required. Outages are permitted for a maximum of 12 hours for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.	clairjj	myerssr	SM
12/11/02	1917	Out of REMODCM, Table IV.C-3, Action B. Chemist returned RM-8132 to service, flow 3.25 CFM.	clairjj	myerssr	SM
12/11/02	2125	Entered TSAS 3.7.6.1c. Both trains of Control Room ventilation Inoperable while testing door 249. With both trains of Control Room ventilation Inoperable immediately suspend the movement of fuel assemblies within the Spent Fuel Pool and the movement of shielded casks over the Spent Fuel Pool cask laydown area. Restore at least one Inoperable train to Operable status within 24 hour, or be in Hot Standby within the next 6 hours, and cold shutdown within the following 30 hours.	clairjj	myerssr	SM
12/11/02	2137	Exited TSAS 3.7.6.1c. Door testing complete. Both trains of Control Room ventilation are Operable.	clairjj	myerssr	SM
12/11/02	2219	Diluted 15 gallons of PMW to the VCT to maintain Reactor power.	clairjj	myerssr	SM
12/11/02	2323	Commenced discharge of TK-11. Level 88%.	clairjj	myerssr	SM
12/11/02	0118	Diluted 15 gallons of PMW to the VCT to maintain Reactor power.	clairjj	myerssr	SM
12/11/02	0204	Completed discharge of TK-11. Level 14%.	clairjj	myerssr	
12/11/02	0208	Operated all Charging Pumps for 5 minutes in accordance with SP 2654B, Forcing Sprays for Boron Equalization.	clairjj	myerssr	SM
12/11/02	0307	Entered TSAS 3.3.1.1 act 2 for performance of SP2601D-1. Variable High Power, LPD, TM/LP, and the Turbine Trip channels are Inoperable only during the time they are bypassed. The calibration will only be performed one channel at a time. Within one hour place the affected channel(s) in a tripped or bypassed condition. Restore the affected channel(s) to an Operable status within 48 hours or place the affected channel(s) in the tripped condition.	chapics	myerssr	SM
12/11/02	0328	Exited TSAS 3.3.1.1 act 2. SP 2601D-1 is completed and accepted. All channels of RPS are now Operable.	clairjj	myerssr	SM
12/11/02	0349	Shift Manager reviewed and accepted OPS Form 2619A-001, Control Room Daily Surveillance, MODES 1 & 2.	myerssr	myerssr	SM
12/11/02	0435	Diluted 15 gallons of PMW to the VCT to maintain Reactor power.	clairjj	myerssr	SM
12/11/02	0613	Released AWO M2-00-12193 to the WIN Team. Replace gasket on LS-5331 (2B feedwater heater low level alarm)	clairjj	myerssr	SM

FOR TRAINING ONLY

12/11/02	0615	Traveling screens placed in Manual slow for greasing	clairjj	myerssr	SM
12/11/02	0618	Completed and accepted SP 2619G-2, AC Electrical Sources Inoperability			
12/11/02	0619	Entered TSAS 3.8.1.1.b, act b.; B-EDG is Inoperable for planned maintenance. Verify both offsite circuits Operable within 1 hour and at least every 8 hours thereafter. Verify Terry Turbine is Operable within 2 hours. Verify A-EDG is not Inoperable due to a common cause failure within 24 hours or be in Hot Standby within the next 6 hours and Cold Shutdown within the next 36 hours.	chapics	myerssr	SM
12/11/02	0621	Released AWO M2-00-08904 'B' Diesel Generator PMs.	chapics	myerssr	SM
12/11/02	0622	Completed and accepted the following surveillances this shift: SP 2659-2, Trip Lockout Exercise Test SP 2659-3, SGFP Stop Valve Test SP 2659-4, SGFP DC L/O Pump test SP 2659-5, SGFP Stby MLO Pump Test SP 2654B-1, Forcing Sprays	myerssr	myerssr	SM
12/11/02	0624	Relieved as Shift Manager by J. Kunze S. Myers	dubayte	dubayte	SM

JOB PERFORMANCE MEASURE APPROVAL SHEET

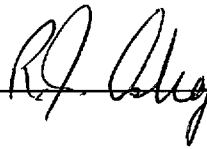
I. JPM Title: Shift Staffing Requirements

ID Number: JPM-A1.2S

Revision: 0

II. Initiated:

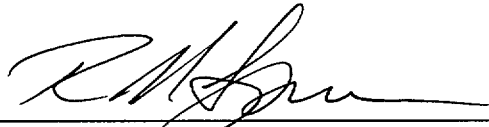
R. J. Ashe
Developer



3/19/02
Date

III. Reviewed:

R. M. Brown
Technical Reviewer



9/4/02
Date

IV. Approved:

N/A
User Department Supervisor

N/A

Date

m. j. wil
Nuclear Training Supervisor



9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A1.2S Rev. 0

Task Title: **Maintain minimum Control Room shift complement**

System: Administrative

Time Critical Task: Yes _____ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS 119-01-050

Applicable To: SRO X RO _____ PEO _____

K/A No.: 2.1.4 K/A Rating: 2.3/3.4

Method of Testing:

Simulated Performance: X Actual Performance: _____

Location:

Classroom: X Simulator: X In-Plant: X

Task Standards: At the completion of this JPM, the SRO will perform the action required in the event that an RO becomes incapacitated (can not perform licensed activities).

Required Materials List of available personnel.
(procedures,equipment):

General References:

- Technical Specifications, Section 6.
- MP-14-OPS-GDL02, Operations Standards, Rev. 004
- ODI 2-OPS 2.03 "Overtime"
- ODI 2-OPS-1.18 "Maintaining Active NRC Licenses"
- NGP 1.09 "Overtime Controls for All Personnel at Millstone Station"

****** 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

JPM Number: JPM-A1.2S

Rev. 0

Initiating Cues:

- You are the shift manager. At 1935, J. Beebe, the SPO, becomes ill and is unable to perform licensed duties. Transportation has been provided to take Jeff home. You are to perform required actions to ensure staffing requirements are met.

Initial Conditions:

- Mode 1 operation at 100% power
- Your crew began its 12 hour shift at 1800
- Current Date is Friday, 20 Dec. 2002
- Current time is 1915
- Off-going crew has left the site
- Your crew consists of:
 - ♦ SM: You
 - ♦ STA: M. Strollo
 - ♦ US: K. Dingle
 - ♦ WC-SRO: NOT staffed
 - ♦ CO: J.Beebe
 - ♦ CO: W. Miles
 - ♦ PEO: R. Bowen
 - ♦ PEO: M. Purcel (FTA)
 - ♦ PEO: R. Johnson

Simulator Requirements: N/A

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

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.2S TITLE: Shift Staffing Requirements

START TIME:

STEP 1 X Performance Steps: Determine whether current staffing level meets requirements of Technical Specifications Section 6.2 Table 6.2-1.

GRADE X Standards: *Examinee evaluates staffing level and determines that another RO must report within 2 hours.*

Cue: If asked what the current staffing is, have examinee refer to initial conditions that were provided.

Comments: Technical Specifications, Administrative Controls, Section 6.2, Table 6.2-1.

~~~~~

STEP 2               Performance Steps: Determine which operator to call in.

GRADE                   Standards:      *Determine which operator to call in by referring to:*

- *Operations Shift Schedule*
- *Work Control and Training Schedule*
- *Active License List*
- *Overtime List*

*Selects an RO with an active license who is fit for duty and will NOT exceed overtime limits.*

Cue: • As a substitute for the above schedules and lists, provide the list attached to this JPM and ask that the examinee take all required actions to simulate calling in the required personnel.  
• Ask that the examinee only consider the 6 names on the list attached to this JPM.

Comments:      ODI 2-OPS 2.03 "Overtime", ODI 2-OPS-1.18 "Maintaining Active NRC Licenses", NGP 1.09 "Overtime Controls for All Personnel at Millstone Station"

~~~~~

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A1.2S TITLE: Shift Staffing Requirements

STEP 3 X Performance Steps: Contact the individual selected to support unscheduled work. Per the Fitness for Duty Manual, ask the individual the following questions:
Question #1 Have you taken any medications or drugs that may affect your ability to perform assigned duties?
Question #2 Have you consumed any alcoholic beverages within the past 5 hours?

GRADE ____ X Standards: *Contact the individual selected to support unscheduled work. Explain the reason for the call and determine if the individual will exceed overtime controls. If it is determined that overtime controls will NOT be exceeded, then ask the individual the following questions:*

- *Have you taken any medications or drugs that may affect your ability to perform assigned duties?*
- *Have you consumed any alcoholic beverages within the past 5 hours?*

Ask T. Perkins to come to work.

Cue: ***If called, respond as indicated below:***

- ***C. Sanders - I was called in to work control for 11 hours today. (will exceed 16 hours or will have less than 8 hours between work periods - NGP 1.09).***
Question #1: No; Question #2: No.
- ***B. Gaynier - I just got home from a 9 hour LORT makeup session and I am supposed to attend makeup training tomorrow. (will exceed 16 hours or will have less than 8 hours between work periods - NGP 1.09)***
Question #1: No; Question #2: No.
- ***M. Cote - NOT qualified due to inactive license (May call to determine current qualification.)***
Question #1: No; Question #2: No.
- ***S. Howes - . It's my second of seven days off.***
Question #1: No; Question #2: I had a couple of beers during the basketball game this evening. (alcohol consumption less than five hours from work period.)
- ***T. Perkins - It's my second of seven days off; If asked, "When can you be here?"; reply, " In about an hour, if you can't find anyone else."***
Question #1: No; Question #2: No.

If requested, provide NGP 1.09, Overtime Controls, and/or Fitness for Duty Manual.

Comments: Examinee should contact everyone on the list to determine their ability to report to work.
May refer to NGP 1.09, Overtime Controls, and/or Fitness for Duty Manual.


~~~~~

**PERFORMANCE INFORMATION**

JPM ID NUMBER: JPM-A1.2S TITLE: Shift Staffing Requirements

---

Comments: **After this step is completed, the JPM is considered complete.**

**STOP TIME:** 



### VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A1.2S

Rev. 0

Date Performed: \_\_\_\_\_

Operator: \_\_\_\_\_

Evaluator(s): \_\_\_\_\_

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): \_\_\_\_\_

Result of JPM: \_\_\_\_\_ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

## EXAMINEE HANDOUT

JPM ID Number: JPM-A1.2S

### Initiating Cues:

- You are the shift manager. At 1935, J. Beebe, the SPO, becomes ill and is unable to perform licensed duties. Transportation has been provided to take Jeff home. You are to perform required actions to ensure staffing requirements are met.

### Initial Conditions:

- Mode 1 operation at 100% power
- Your crew began its 12 hour shift at 1800
- Current Date is Friday, 20 Dec. 2002
- Current time is 1915
- Off-going crew has left the site
- Your crew consists of:
  - ◆ SM: You
  - ◆ STA: M. Strollo
  - ◆ US: K. Dingle
  - ◆ WC-SRO: NOT staffed
  - ◆ CO: J.Beebe
  - ◆ CO: W. Miles
  - ◆ PEO: R. Bowen
  - ◆ PEO: M. Purcel (FTA)
  - ◆ PEO: R. Johnson

For purposes of this JPM, select the individual to be called in from the list of names below:

*C. Sanders*

*B. Gaynier*

*M. Cote*

*S. Howes*

*T. Perkins*

## JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: Approve a Clearance Boundary

ID Number: JPM-A2S

Revision: 0

II. Initiated:

R. J. Ashley  
Developer

8/30/02  
Date

III. Reviewed:

[Signature]  
Technical Reviewer

9/4/02  
Date

IV. Approved:

N/A  
User Department Supervisor

            
Date

[Signature]  
Nuclear Training Supervisor

9/5/02  
Date

## JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2                      Examinee: \_\_\_\_\_

JPM Number: JPM-A2S                      Rev. 0

Task Title: **Approve a Clearance Boundary**

System: Equipment Control

Time Critical Task: Yes \_\_\_\_\_ No X

Validated Time (minutes): 15

Task No.(s): NUTIMS # 119-02-023

Applicable To: SRO X RO \_\_\_\_\_ PEO \_\_\_\_\_

K/A No.: 2.2.13                      K/A Rating: 3.6/3.8

### Method of Testing:

Simulated Performance: X                      Actual Performance: \_\_\_\_\_

### Location:

Classroom: X                      Simulator: \_\_\_\_\_                      In-Plant: \_\_\_\_\_

Task Standards:                      Review and approve a tag clearance boundary.

Required Materials  
(procedures,equipment):                      Completed Clearance/Order Sheet  
P&ID 25203 26009, Sheet 1  
P&ID 25203 30005  
P&ID 25203 30011, Sheet 34E

General References:                      WC-2, Tagging, Section 1.4, Rev. 006-03

### **\*\*\*\* 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

JPM Number: JPM-A2S

Rev. 0

Initiating Cues: Your task is to review and approve the recommended Clearance/Section Order Sheet.

Initial Conditions:

- The "A" Service Water Strainer hand hole covers must be removed, inspected, and replaced.
- The "B" Service Water Pump is operating on Facility 1.
- A Clearance/Section Order Sheet has been prepared for the inspection of the "A" Service Water Strainer hand hole covers.

Simulator Requirements: None

---

### \*\*\*\* NOTES TO EXAMINER \*\*\*\*

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

**PERFORMANCE INFORMATION**

JPM ID NUMBER: JPM-A2S      TITLE: **Approve a Clearance Boundary**

---

START TIME:

STEP 1      ☐ Performance Steps:      Review the Clearance/Section Order Sheet for completeness.

GRADE ☐      Standards:      *Obtain WC-2, Tagging, and ensure the following information is entered in the appropriate spaces:*

- *Tagout number*
- *Date*
- *AWO number*
- *Contact person*
- *Equipment*
- *Reason Tagged*
- *Special instructions*

Cue:

Comments:

~~~~~

STEP 2 ☒ Performance Steps: Select the appropriate reference materials and review the prepared Clearance/Section Order Sheet to ensure personnel and equipment safety.

GRADE ☐ ☒ Standards: *Verify the tagout provides adequate personnel and equipment protection. Verify all energy sources and isolations have been considered.*

- *Refer to P&ID 25203-26009 for valves to be tagged*
- *Refer to P&ID 25203-30005 and P&ID 25203- 30011, sheet 34E for electrical components.*

Cue:

Comments: The examinee may use equivalent documentation for determining components to be tagged.

~~~~~

**PERFORMANCE INFORMATION**

JPM ID NUMBER: JPM-A2S

TITLE: **Approve a Clearance Boundary**

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STEP 3      X    Performance Steps: Determine that the Equipment ID is incorrect for the "A" Service Water Pump Breaker and/or the "A" Service Water Strainer Breaker.

GRADE \_\_\_\_    X    Standards:    *Using P&ID 25203-30005 and P&ID 25203-30011, sheet 34E, determine that the breaker ID numbers are NOT for the "A" Service Water Pump and/or the "A" Service Water Strainer.*

Cue: 

Comments:    See attached Answer Key for the correct ID numbers.

~~~~~  
STEP ⁴/₃ X Performance Steps: Return the tagout to the Tag Control Coordinator (or preparing individual) to correct the problem.

GRADE ____ X Standards: *Return the tagout to the Tag Control Coordinator (or preparing individual) to correct the problem.*

Cue: 

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME: 

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A2S

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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 _____

Validated Time (minutes): _____

Actual Time to Complete (minutes): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: JPM-A2S

Initiating Cues: Your task is to review and approve the recommended Clearance/Section Order Sheet.

Initial Conditions:

- The "A" Service Water Strainer hand hole covers must be removed, inspected, and replaced.
- The "B" Service Water Pump is operating on Facility 1.
- A Clearance/Section Order Sheet has been prepared for the inspection of the "A" Service Water Strainer hand hole covers.

CLEARANCE/SECTION ORDER SHEET

Tag Hang List

12/16/02 10:18
Sheet1 of 1

Clearance Number: 2C14-2326A11-0005	2C14 - 2326A11-0005
-------------------------------------	---------------------

Equipment ID/ Description: L1A "A" SERVICE WATER PUMP DISCHARGE STRAINER ASSEMBLY
--

Reason Tagged: AWO Number M20210525	Prepared by: A. O. Spare 12/16/02 10:18
-------------------------------------	--

Special Instruction/ Cautions: CONFINED SPACE	Approved by:
---	--------------

Step Number	Tag Type	Tagged Position	Tag Serial Number	Equipment ID	Equipment Description	Equipment Location	Notes	Tag Placed by: Init / Date	Verified by: Init / Date
1	YEL	N/A		P5A-HS	SERVICE WATER PP A ("A" SERVICE WATER PUMP HANDSWITCH)	2_CB _03606_CNTRL RM _C06	POWER IS RED TAGGED OFF		
2	YEL	N/A		L1A-HS	A SERVICE WATER PUMP DISCH STRAINER CONTROL PANEL L1A (HANDSWITCH)	2_INTAKE _01406_SW/CW PPS _AUTO-OFF-HAND HNDSWTCH ON PNL	POWER IS RED TAGGED OFF		
3	RED	OFF		B6150	480V BREAKER - LIA SERVICE WATER PUMP A DISCHARGE STRAINER A	2_AB _01406 _EAST / RIGHT CENTER, NEAR EXIT	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
4	RED	RACK DOWN		A407	4.16V BREAKER - P5A SERVICE WATER PUMP	2_TB _03106_LWR SWGR _4160 LOWER SWGR RM	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
5	RED	CLOSE		2-SW-2A	"A" SERVICE WATER PUMP DISCHARGE STOP	2_INTAKE _01406_SW/CW PPS _'A' SW STRAINER ASSEMBLY (L1A)	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
6	RED	OPEN		2-SW-61A	"A" SERVICE WATER PUMP STRAINER VENT STOP	2_INTAKE _01406_SW/CW PPS _ON TOP OF "A" SERV. WTR. STRAINER	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
7	RED	OPEN		2-SW-62A	"A" SERVICE WATER PUMP STRAINER DRAIN STOP	2_INTAKE _01406_SW/CW PPS _UNDER THE "A" SERV. WTR. STRAINER	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		

Clearance correct and equipment may be isolated. SM/US notified for power block. Authorized to be Hung By:	Date:
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CLEARANCE/SECTION ORDER SHEET

Tag Hang List

Answer Key
12/16/02 10:18
Sheet1 of 1

Clearance Number: 2C14-2326A11-0005	2C14 - 2326A11-0005
-------------------------------------	---------------------

Equipment ID/ Description: L1A "A" SERVICE WATER PUMP DISCHARGE STRAINER ASSEMBLY
--

Reason Tagged: AWO Number M20210525	Prepared by: A. O. Spare 12/16/02 10:18
-------------------------------------	--

Special Instruction/ <i>CONFINED SPACE</i> Cautions:	Approved by:
---	--------------

Step Number	Tag Type	Tagged Position	Tag Serial Number	Equipment ID	Equipment Description	Equipment Location	Notes	Tag Placed by: Init / Date	Verified by: Init / Date
1	YEL	N/A		P5A-HS	SERVICE WATER PP A ("A" SERVICE WATER PUMP HANDSWITCH)	2_CB _03606_CNTRL RM _C06	POWER IS RED TAGGED OFF		
2	YEL	N/A		L1A-HS	A SERVICE WATER PUMP DISCH STRAINER CONTROL PANEL L1A (HANDSWITCH)	2_INTAKE _01406_SW/CW PPS _AUTO-OFF-HAND HNDSWTCH ON PNL	POWER IS RED TAGGED OFF		
3	RED	OFF		<u>B5153</u>	480V BREAKER - LIA SERVICE WATER PUMP A DISCHARGE STRAINER A	2_AB _01406 _EAST / RIGHT CENTER, NEAR EXIT	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
4	RED	RACK DOWN		<u>A306</u>	4.16V BREAKER - P5A SERVICE WATER PUMP	2_TB _03106_LWR SWGR _4160 LOWER SWGR RM	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
5	RED	CLOSE		2-SW-2A	"A" SERVICE WATER PUMP DISCHARGE STOP	2_INTAKE _01406_SW/CW PPS _'A' SW STRAINER ASSEMBLY (L1A)	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
6	RED	OPEN		2-SW-61A	"A" SERVICE WATER PUMP STRAINER VENT STOP	2_INTAKE _01406_SW/CW PPS _ON TOP OF "A" SERV. WTR. STRAINER	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		
7	RED	OPEN		2-SW-62A	"A" SERVICE WATER PUMP STRAINER DRAIN STOP	2_INTAKE _01406_SW/CW PPS _UNDER THE "A" SERV. WTR. STRAINER	TAGGED FOR STRAINER HAND HOLE COVER INSPLCTION		

Clearance correct and equipment may be isolated. SM/US notified for power block.	Date:
Authorized to be Hung By:	

JOB PERFORMANCE MEASURE APPROVAL SHEET

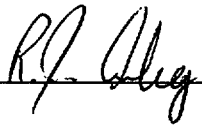
I. JPM Title: Perform a Shutdown Safety Assessment

ID Number: JPM-A6S/R

Revision: 0

II. Initiated:

R. J. Ashey
Developer



8/30/02
Date

III. Reviewed:


Technical Reviewer

9/4/02
Date

IV. Approved:

N/A
User Department Supervisor

Date


Nuclear Training Supervisor

9/5/02
Date

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A6S/R Rev. 0

Task Title: **Perform a Shutdown Safety Assessment**

System: Conduct of Operations

Time Critical Task: Yes _____ No X

Validated Time (minutes): _____

Task No.(s): NUTIMS # 119-01-044

Applicable To: SRO X RO X PEO _____

K/A No.: 2.1.7 K/A Rating: 3.7/4/4

Method of Testing:

Simulated Performance: X Actual Performance: _____

Location:

Classroom: X Simulator: _____ In-Plant: _____

Task Standards:

At the completion of this JPM the examinee has determined the appropriate color code for each key safety function as shown on the Shutdown Safety Assessment.

**Required Materials
(procedures,equipment):**

OP 2264, Conduct of Outages

General References:

OP 2264, Conduct of Outages, Rev. 009

****** 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.

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

JOB PERFORMANCE MEASURE WORKSHEET

JPM Number: JPM-A3S/R Rev. 0

Initiating Cues: As a result of closing and tagging the Charging Header Isolation Valve, 2-CH-429, the US has directed you to perform a Shutdown Safety Assessment.

Initial Conditions: The plant has just entered MODE 5 on day 30 of a scheduled 33 day refueling outage. RCS Temperature from T-351X indicates 89°F. The RCS Boron concentration is 2193 ppm. The following conditions exist:

- Time to boil is 61.5 minutes.
- Both EDGs are OPERABLE
- A temporary EDG is NOT installed
- The SBO diesel is available
- On site power is being supplied by the backfeeding the Main transformer
- the RSST is available
- Unit 3 NNST is powering buses 34A and B (1-5G-13T-2 and associated disconnect switches are open)
- Both DC buses are OPERABLE
- RWST level is 97.6%
- Both trains of SDC are OPERABLE with the "A" train in service
- Both trains of SFPC Cooling are available with the "A" train in service and SFP level at 36'7"
- "A" and "C" HPSI Pumps are available
- Charging Header Isolation Valve, 2-CH-429, is closed and tagged for emergent maintenance. In appropriate TSAS.
- Both motor driven aux feedwater pumps are aligned to the CST
- The refueling purification pump is in service
- Both PMW Pumps are available with "A" in lead
- The fire system is OPERABLE
- Containment Closure is available with the closure team manned.
- There is NO fuel movement in progress in the SFP.

Simulator Requirements: N/A

**** NOTES TO EXAMINER ****

1. Critical steps for this JPM are indicated with an "X". 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?").

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

START TIME:

STEP 1 X Performance Steps:

For Power Availability, ensure the following:

- One EDG available
- Offsite power from either the Unit 2 RSST or the Unit 2 NSST.
- At least one of the following additional power sources:
 - * SBO diesel and calculated time to boil greater than 60 minute.
 - * Unit 3 RSST (or NSST) via 34A or 34B
 - * Installed temporary diesel

GRADE X Standards:

- *Examinee states that the following power sources are available:*
 - *Both EDGs*
 - *SBO diesel via bus 24E (Time to boil is greater than 60 minutes)*
 - *Unit 2 NSST*
 - *Unit 2 RSST*
 - *Unit 3 NSST via 34a/B*
- *Examinee states that the power score is "6" and the condition color is "green".*

Cue: Provide the examinee with a copy of OP 2264, Conduct of Outages, with a blank copy of Attachment 2.

Comments: Only one EDG is required to available in MODE 5 or 6; therefore, the examinee may only count one EDG for a Power score of "5". The condition color is still "green".

~~~~~



## PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R

TITLE: **Perform a Shutdown Safety Assessment**

- STEP 2    X Performance Steps: For RCS Decay Heat Removal, ensure at least one of the following conditions exists:
- Two trains of SDC are available
  - One train of SDC is available and all the following:
    - The associated EDG is available
    - Off site power is available from at least one Unit 2 controlled source to the available SDC train
    - Both SGs are available or the refueling cavity level is greater than 35'6"

- GRADE \_\_\_\_ X Standards:
- *Examinee states that the following systems and components are available for the associated train:*
    - *RWST suction header to available LPSI Pump*
    - *The in service SDC train's emergency AC bus is powered from an off site source (Unit 2 NSST)*
    - *The associated 125 VDC bus is energized from its respective battery and associated battery charger*
    - *An RBCCW Pump is powered from the same facility as the SDC Pump with an RBCCW heat exchanger capable of cooling the associated SDC heat exchanger*
    - *A Service Water Pump is powered from the same facility as the SDC Pump and is capable of supplying cooling water to the associated RBCCW heat exchanger*
  - *Examinee states that two trains of SDC are available for an RCS score of "2" and a condition color of "yellow".*

Cue: 

- Comments:
- The Steam Generators are NOT available for decay heat removal because the U-tubes have NOT been filled (just entered MODE 5 from MODE 6).
  - Makeup from the RWST CANNOT be credited with the vessel head bolted in place.

~~~~~

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

- STEP 3 X Performance Steps: For SFP decay Heat Removal, ensure the following:
- One train of SFPC or SDC is available for SFP cooling
 - An on site source corresponding to the available SFP Decay Heat Removal method
 - An off site source corresponding to the available SFP Decay Heat Removal method
 - SFP level is greater than 35'6"

- GRADE ____ X Standards: *Examinee states that the following are available for a SFP Decay Heat Removal score of "4" and a condition color of "green":*
- *One train of SFPC or SDC is available for SFP cooling*
 - *An on site source corresponding to the available SFP Decay Heat Removal method*
 - *An off site source corresponding to the available SFP Decay Heat Removal method*
 - *SFP level is greater than 35'6"*

Cue: 

Comments:

~~~~~

**PERFORMANCE INFORMATION**

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

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- STEP 4     X Performance Steps: For RCS Inventory Control, ensure at least two of the following are available:
- "A" HPSI PUMP on the "A" HPSI header with a flow path from the RWST to the RCS
  - "B" HPSI PUMP on the "A" or "B" HPSI header with a flow path from the RWST to the RCS
  - "C" HPSI PUMP on the "B" HPSI header with a flow path from the RWST to the RCS
  - "A" Charging Pump with a suction from the RWST or BAST to the RCS.
  - "B" Charging Pump with a suction from the RWST or BAST to the RCS.
  - "C" Charging Pump with a suction from the RWST or BAST to the RCS.

- GRADE \_\_\_\_ X Standards: *Examinee states that the following conditions exist for an RCS Inventory Control score of "2" and a condition color of "yellow":*
- *The "A" and "C" HPSI Pumps are available with a flow path from the RWST to the RCS.*
  - *The Charging Pumps are NOT available.*

Cue: 

Comments:

~~~~~

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

- STEP 5 X Performance Steps: For SFP Inventory (Makeup) Control, ensure one of the following conditions exist:
- One AFW Pump is aligned to the CST and makeup is available from the RWST via LPSI
 - One AFW Pump is aligned to the CST and one of the following additional methods is available:
 - * One refuel purification pump
 - * One PMW pump
 - * Makeup is available from the fire protection system
 - Makeup is available from the RWST via LPSI and any one of the following additional methods:
 - One refuel purification pump
 - One PMW pump
 - Makeup is available from the fire protection system

- GRADE ____ X Standards: *Examinee states that the following conditions exist for a SFP Inventory score of "5" and condition color of "green":*
- *One AFW Pump is aligned to the CST and makeup is available from the RWST via LPSI*
 - *One AFW Pump is aligned to the CST and one of the following additional methods is available:*
 - * *One refuel purification pump*
 - * *One PMW pump*
 - * *Makeup is available from the fire protection system*

Cue: 

Comments:

~~~~~

**PERFORMANCE INFORMATION**

JPM ID NUMBER: JPM-A6S/R      TITLE: **Perform a Shutdown Safety Assessment**

---

STEP 6      X Performance Steps: For Containment, ensure one of the following is available:

- Containment Closure is set
- Containment closure is available with a closure team set.

GRADE \_\_\_\_ X Standards:      *Examinee states that Containment Closure is available with a closure team set for a Containment score of "1" and a condition color of "green".*

Cue: 

Comments:

~~~~~

STEP 7 X Performance Steps: If SFP Ventilation System alignment in accordance with Tech Spec LCO 3.9.15 is NOT required, then NA Section VII of Attachment 2.

GRADE ____ X Standards:

- *Examinee states that the SFP Ventilation System alignment per Tech Spec 3.9.15 is NOT required because there is NO fuel movement in the SFP.*
- *Examinee marks Section VII, SFP Boundary, as "N/A".*

Cue: 

Comments:

~~~~~

## PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R

TITLE: **Perform a Shutdown Safety Assessment**

STEP 8     X Performance Steps: For Reactivity Control, ensure the following conditions exist:

- All identified dilution paths the RCS, SFP, and refueling cavity are being controlled by procedure or Safety tags.
- RCS and SFP Boron concentrations are being maintained greater than Tech Spec requirements.
- Two of the following makeup sources are available:
  - \* "A" HPSI PUMP on the "A" HPSI header with a flow path from the RWST to the RCS
  - \* "B" HPSI PUMP on the "A" or "B" HPSI header with a flow path from the RWST to the RCS
  - \* "C" HPSI PUMP on the "B" HPSI header with a flow path from the RWST to the RCS
  - \* "A" Charging Pump with a suction from the RWST or BAST to the RCS.
  - \* "B" Charging Pump with a suction from the RWST or BAST to the RCS.
  - \* "C" Charging Pump with a suction from the RWST or BAST to the RCS.

GRADE \_\_\_\_ X Standards:

*Examinee states that the following conditions exist for a Reactivity Control score of 4 and a condition color of "yellow":*

- *All identified dilution paths the RCS, SFP, and refueling cavity are being controlled by procedure or Safety tags.*
- *RCS and SFP Boron concentrations are being maintained greater than Tech Spec requirements*
- *The "A" and "C" HPSI Pumps are available with a flow path from the RWST to the RCS.*
- *The Charging Pumps are NOT available.*

Cue:

- Inform the examinee that all dilution paths are properly tagged or controlled as required.
- If asked, inform the examinee that the SFP has had NO additions since the Transfer Tube Isolation Valve, 2-RW-280, was closed.


Comments:

~~~~~

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A6S/R TITLE: **Perform a Shutdown Safety Assessment**

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME: 

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A6S/R

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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 _____

Validated Time (minutes): _____

Actual Time to Complete (minutes): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: JPM-A6S/R

Initiating Cues: As a result of closing and tagging the Charging Header Isolation Valve, 2-CH-429, the US has directed you to perform a Shutdown Safety Assessment.

Initial Conditions: The plant has just entered MODE 5 on day 30 of a scheduled 33 day refueling outage. RCS Temperature from T-351X indicates 89°F. The RCS Boron concentration is 2193 ppm. The following conditions exist:

- Time to boil is 61.5 minutes.
- Both EDGs are OPERABLE
- A temporary EDG is NOT installed
- The SBO diesel is available
- On site power is being supplied by the backfeeding the Main transformer
- the RSST is available
- Unit 3 NNST is powering buses 34A and B (1-5G-13T-2 and associated disconnect switches are open)
- Both DC buses are OPERABLE
- RWST level is 97.6%
- Both trains of SDC are OPERABLE with the "A" train in service
- Both trains of SFPC Cooling are available with the "A" train in service and SFP level at 36'7"
- "A" and "C" HPSI Pumps are available
- Charging Header Isolation Valve, 2-CH-429, is closed and tagged for emergent maintenance. In appropriate TSAS.
- Both motor driven aux feedwater pumps are aligned to the CST
- The refueling purification pump is in service
- Both PMW Pumps are available with "A" in lead
- The fire system is OPERABLE
- Containment Closure is available with the closure team manned.
- There is NO fuel movement in progress in the SFP.

JOB PERFORMANCE MEASURE APPROVAL SHEET

I. JPM Title: SRO Review and Approve a Radioactive Liquid Waste Release Permit

ID Number: JPM-A3S

Revision: 0

II. Initiated:

R. J. Ashe
Developer

5/20/02
Date

III. Reviewed:

[Signature]
Technical Reviewer

9/4/02
Date

IV. Approved:

N/A
User Department Supervisor

Date

[Signature]
Nuclear Training Supervisor

9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A3S Rev. 0

Task Title: SRO Review and Approve a Radioactive Liquid Waste Release Permit

System: Radiation Control

Time Critical Task: Yes _____ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS # 119-02-026

Applicable To: SRO X RO _____ PEO _____

K/A No.: 2.3.6 K/A Rating: 2.1/3.1

Method of Testing:

Simulated Performance: X Actual Performance: _____

Location:

Classroom: X Simulator: X In-Plant: X

Task Standards:

At the completion of this JPM, the examinee will have discovered a plant operating condition that will NOT allow authorizing a radioactive liquid waste discharge.

Required Materials
(procedures,equipment):

- SP 2617A Aerated and Clean Radioactive Liquid Waste Discharges
- OPS Form 2617A-001, Aerated and Clean Radioactive Liquid Waste Discharge
- Chem Form 2864-1, Millstone Unit 2 Liquid Discharge Permit Number 2000

General References:

SP 2617A, Section 4.2.6 and 4.2.7 (Rev. 027-01)

***** **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

JPM Number: JPM-A3S

Rev. 0

Initiating Cues:

As the SM, you have directed the Radwaste PEO to make preparations to discharge the AWMT. Perform the required actions to authorize the discharge.

Initial Conditions:

- No other radioactive discharges are in progress.
- SP 2617A, section 4.2; steps 4.2.1 through 4.2.5 have been completed.
- Chemistry sample results are acceptable.
- RM-9116 is operable.
- AWMT mixer, MT-21, was tagged for electrical PMs at 0635 this morning.
- AWMT level is 89%.
- 100% power, equilibrium, steady state conditions.
- SG blowdown is 25 gpm on both steam generators.

Simulator Requirements: N/A

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

1. Critical steps for this JPM are indicated with an "X". 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 examinee be allowed to manipulate any devices during the performance of this JPM (in-plant only).

PERFORMANCE INFORMATION

JPM ID NUMBER: JPM-A3S TITLE: SRO Approve a Radioactive Liquid Waste Release Permit

START TIME:

STEP 1 ___ Performance Steps: When Chem. Form 2864-1 (Discharge Permit) is obtained from Chemistry Department, SM review and authorize Chem. Form 2864-1, Millstone Unit #2 Liquid Discharge Permit No. 2000..

GRADE ___ ___ Standards: *SM should review and initial Chem Form 2864-1. If examinee determines that the discharge should NOT be made at this point, he may elect NOT to initial the permit.*

Cue:

- Provide Chem. Form 2864-1 to the examinee.
- If the examinee determines that the discharge CANNOT be authorized, ask, "Why?"

Comments:

~~~~~

STEP 2     X Performance Steps: When Chem. Form 2864-1(Discharge Permit) is authorized, refer to OPS Form 2617A-001 and perform the following:

- Review plant conditions and authorize discharge.
- Ensure no other radioactive discharges are in progress (other than SG blowdown) and initial.
- If discharge is to be performed with radiation monitor *not* OPERABLE, Ensure 2 independent samples have been analyzed for AWMT, as specified on Chem Form 2852-1, Unit 2 Liquid Radwaste Effluent Rad Monitor Inoperative, and Initial.

GRADE \_\_\_     X Standards: *Examinee reviews plant conditions and determines that the discharge CANNOT be authorized because the 4 hour recirculation requirement was NOT met.*

Cue: *If the student queries the Chemist about the recirculation time, state that the Chemist was informed that the AWMT was placed on recirculation at 0625 with the mixer. The sample was taken after the required 30 minutes. (See discharge permit)*

Comments: The mixer was tagged (deenergized) 10 minutes after the AWMT was placed on recirculation. The required recirculation time is 30 minutes with the mixer and 4 hours without the mixer.

~~~~~

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME:

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A3S

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: JPM-A3S

Initiating Cues:

As the SM, you have directed the Radwaste PEO to make preparations to discharge the AWMT. Perform the required actions to authorize the discharge.

Initial Conditions:

- No other radioactive discharges are in progress.
- SP 2617A, section 4.2; steps 4.2.1 through 4.2.5 have been completed.
- Chemistry sample results are acceptable.
- RM-9116 is operable.
- AWMT mixer, MT-21, was tagged for electrical PMs at 0635 this morning.
- AWMT level is 89%.
- 100% power, equilibrium, steady state conditions.
- SG blowdown is 25 gpm on both steam generators.

Approved

Approval Date

Effective Date

MILLSTONE UNIT #2

LIQUID DISCHARGE PERMIT NO. 2000

(SP43075)

Tank.....: AWMT

Date/time sampled : [Today] 07:15

Sampled by.....: C

Date/time on recirc : [Today] 06:25

TSS (ppm).....: 2.8 (AWMT limit = 45 ppm; CWMT limit = 22.5 ppm)Boric acid conc = 312 (ppm) Eff. Monitor Bkg = 1.65 E +04 (cpm)

pH = _____ (>2 and <12.5)

Isotope	Activity (uCi/ml)	MPC (uCi/ml)	Activity/MPC
MN-54	4.766E-06	1.000E-04	4.766E-02
CO-57	3.166E-07	4.000E-04	7.914E-04
CO-58	4.451E-06	9.000E-05	4.945E-02
CO-60	1.032E-04	3.000E-05	3.442E+00
AG110M	9.981E-06	3.000E-05	3.327E-01
SB-125	7.137E-06	1.000E-04	7.137E-02
XE-133	3.095E-06		
CS-134	7.431E-07	9.000E-06	8.257E-02
CS-137	2.167E-06	2.000E-05	1.084E-01
H-3	1.780E-02		1.673E+01
Totals	1.328E-04 (@)		1.673E+01

(@) No gasses or H-3 included in totals, however, H-3 is in Activity/MPC col.

2 circulating water pumps must be in operation during a discharge

During Unit 2 shutdown a min. dilution flow rate of 20,000 gpm is allowable with the discharge rate limited to 30.5 gpm.

Diluted gas concentration (uCi/ml) = 3.517E-09

W INIT

Minimum recirc time is: 0.5 hr w/mixer; 4.0 hr w/pump

Administrative quarterly release limit (Ci): 5.000E-02

Total activity released this quarter (Ci): 3.490E-03

Estimated value this discharge: 4000.

Estimated activity this discharge: 2.011E-03

Est total activity released this quarter (Ci): 5.501E-03

(1) Reduction factor: 5.976E-02

S.M. init

(2) Required dilution flow rate: 308000. (gpm)
3 circ water, 2 service water pump(s)

(3) Normal rate limit (flow rate = #1*#2*0.1): 350. (gpm)

(5) Liquid effluent monitor alarm setting
(ALARM): 1.1 x 10⁵ (cpm)Maximum approved rate: 350 (gpm)
(Authorization required to exceed normal rate limit.)

Source check performed: _____

DISCHARGE

DILUTION

INTEGRATOR

	DATE/TIME	FLOW RATE (gpm)	READING (4*DIFF=gal)	DISCHARGE RATE (gpm)	OPERATOR
Start	_____	_____	_____	_____	_____
End	_____	_____	_____	_____	_____
Liquid eff monitor reading 15 min after start of discharge				_____	(cpm)
Total liquid waste discharged = _____ (gal) * 3785				= _____	(ml)
Liquid eff momnitor Bkg reading after flush				_____	(cpm)
Shift Manager	_____	Date	_____	Time	_____

Chem Form 2864-1
Rev. 1
Page 1 of 1

Attachment 2
Evaluation of Rad Monitor Response Based on Isotopic Mix
(Sheet 1 of 1)

Discharge Permit #: 2000

Date: 12/16/02

Total Tank Activity: 1.36 E-4 ($\mu\text{Ci/cc}$)

Tank Being Discharged: AWMT

Isotope	Activity ($\mu\text{Ci/cc}$)	% of Total Activity
<u>Co-60</u>	<u>1.032 E-4</u>	<u>75.9</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

NOTE

Consider gamma yield of each isotope before calculating response factor.

Latest RM response during Cs-137 calibration: 1.9 E+8 cpm/ $\mu\text{Ci/cc}$

Current RM response factor based on isotopic mix:

$$\begin{aligned} &= [1 + (\% \text{Co-60}/100)] \times [\text{RM response to Cs-137}] \\ &= [1 + \underline{75.9}/100] \times [\underline{1.9 E+8} \text{ cpm}/\mu\text{Ci/cc}] \end{aligned}$$

Current RM response factor based on isotopic mix = 3.34 E+8 cpm/ $\mu\text{Ci/cc}$

Performed By: C. Tech

Reviewed By:

Level of use
Information

STOP

THINK

ACT

REVIEW

SP 2864
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53 of 55

JOB PERFORMANCE MEASURE APPROVAL SHEET


I. JPM Title: EAL Classification and PARs

ID Number: JPM-A4S

Revision: 0

II. Initiated:

R. J. Ashley
Developer



8/28/02
Date

III. Reviewed:



Technical Reviewer

9/4/02
Date

IV. Approved:

N/A
User Department Supervisor

Date


Nuclear Training Supervisor

9/5/02
Date

JOB PERFORMANCE MEASURE WORKSHEET

Facility: MP-2 Examinee: _____

JPM Number: JPM-A4S Rev. 0

Task Title: EAL Classification and PARs

System: Emergency Plan

Time Critical Task: Yes _____ No X

Validated Time (minutes): 10

Task No.(s): NUTIMS #000-05-205

Applicable To: SRO X RO _____ PEO _____

K/A No.: 2.4.41 K/A Rating: 4.1

Method of Testing:

Simulated Performance: _____ Actual Performance: X

Location:

Classroom: _____ Simulator: X In-Plant: _____

Task Standards: At the completion of this JPM, the examinee has correctly classified the proposed event and provided the appropriate Protective Action Recommendation.

Required Materials
(procedures,equipment): MP-26-EPI-FAP06-002, Millstone Unit 2 Emergency Action Levels
MP-26-EPI-FAP06-005, Classification and PARs.
MP-26-EPI-FAP01-001, Control Room Director of Emergency Operations

General References: MP-26-EPI-FAP06-002, Millstone Unit 2 Emergency Action Levels
MP-26-EPA-REF02, Millstone Unit 2 EAL Technical Basis Document
MP-26-EPI-FAP06-005, Classification and PARs.

* * * * **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

Initiating Cues:

- You are the on-duty SM.
- Your task is to determine the NRC and state posture code classifications and the Protective Action Recommendations for the attached event.
- The examiner will act as any outside agency.

Initial Conditions:

Plant conditions are determined from the provided attachments.

Simulator Requirements: N/A

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

1. Critical steps for this JPM are indicated with an "X". 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".

JOB PERFORMANCE MEASURE WORKSHEET

JPM Number: JPM-A4S

Rev. 0

START TIME:

STEP 1 X Performance Steps: Review the EAL Tables.

GRADE ____ X Standards:

- *Obtains and reviews the EAL Tables with the information provided.*
- *Evaluates the status of the fission product barriers.*

Cue: Provide the first set of plant conditions and the SERO Specific Position Notebook, Control Room Director of Station Emergency Operations.

Comments:

STEP 2	<u>X</u>	Performance Steps:	Classifies the event as an NRC classification Site Area Emergency; State Posture Code, Charlie-2.
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GRADE ____	<u>X</u>	Standards:	<p>Based on the information provided the examinee classifies the event as a Site Area Emergency; State Posture Code, Charlie-2.</p> <p>{From the RCS BARRIER Failure column, RCB4, Reactor Coolant Leak ≤ CVCS Capacity AND Entry into EOP 2534, Steam Generator Tube Rupture <u>and</u> CTMT BARRIER Failure column, CNB3, Primary to Secondary Leakage > Tech Spec Limits AND Unisolable Secondary Release to the Environment (Does NOT Include Normal Cycling of S/G Atmospheric Dump Valves or Safety Valves to Maintain Pressure/Temperature).}</p>
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Cue:

Comments: The Protective Action Recommendations are automatically included with the State Posture Code.

JOB PERFORMANCE MEASURE WORKSHEET

JPM Number: JPM-A4S

Rev. 0

STEP 3 X Performance Steps: Review plant conditions

GRADE ____ X Standards:

- *Reviews the EAL Tables with the information provided.*
- *Evaluates the status of the fission product barriers.*

Cue: **Provide the second set of plant conditions to the examinee.**

Comments: The second set of plant conditions will be provided after the examinee classifies the initial event.

JOB PERFORMANCE MEASURE WORKSHEET

JPM Number: JPM-A4S

Rev. 0

- STEP 4 X Performance Steps:
- Classifies the event as an NRC classification General Emergency; State Posture Code Alpha.
 - Determines that Alpha - 10 mile PARs are warranted and that Zones A and B must be evacuated and all other zones must be sheltered.
 - Notifies the DEP Dispatcher in Hartford and reports the applicable PAR.
- GRADE ____ X Standards:
- *Based on the information provided the examinee classifies the event as a General Emergency; State Posture Code, Alpha.*
{From the RCS BARRIER Failure column, RCB4, Reactor Coolant Leak \leq CVCS Capacity AND Entry into EOP 2534, Steam Generator Tube Rupture.
From CTMT BARRIER Failure column, CNB3, Primary to Secondary Leakage > Tech Spec Limits AND Unisolable Secondary Release to the Environment (Does NOT Include Normal Cycling of S/G Atmospheric Dump Valves or Safety Valves to Maintain Pressure/Temperature).
From FUEL CLAD BARRIER Failure column, FCB3, RM-8240/8241 Reading > 5 R/hr Without RCS Release Inside CTMT and/or At Least 5% Fuel Clad Damage As Determined By Core Damage Estimates.}
 - *Using MP-26-EPI-FAP06-005, Classification and PARs, examinee determines that Zones A and B must be evacuated for a 10 mile radius and all other zones must be sheltered, based on current wind direction.*
 - *Examinee notifies the DEP Dispatcher in Hartford and reports the applicable PAR..*

Cue: **Examiner will act as the DEP Dispatcher.**

Comments: **After this step is completed, the JPM is considered complete.**

STOP TIME:

VERIFICATION OF JPM COMPLETION

Job Performance Measure No. JPM-A4S

Rev. 0

Date Performed: _____

Operator: _____

Evaluator(s): _____

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): _____

Result of JPM: _____ (Denote by an S for satisfactory or a U for unsatisfactory)

Areas for Improvement:

EXAMINEE HANDOUT

JPM ID Number: JPM-A4S

Initiating Cues:

- You are the on-duty SM.
- Your task is to determine the NRC and state posture code classifications and the Protective Action Recommendations for the attached event.
- The examiner will act as any outside agency.

Initial Conditions:

- A Steam Generator tube leak of 0.25 gpm has been confirmed in #1 S/G. A plant shutdown has been initiated in accordance with Steam Generator Tube Leak, AOP 2569. The plant is presently at 95% power.
- Additional plant conditions are determined from the provided attachments.

Plant Conditions #1

TIME	INFORMATION	SOURCE
0 min.	Vacuum begins degrading rapidly.	SPO
1 min.	Reactor trip is manually initiated. EOP 2525 is commenced.	Crew
15 min.	<p>EOP 2525 is complete. The following conditions exist:</p> <ul style="list-style-type: none"> - Reactor is tripped. - Turbine is tripped. - Buses 24A and 24C are deenergized. Buses 24B and 24D are energized. - Buses 25A, 25B are energized. - Both D.C. Buses are energized. - <u>Only</u> Facility 2 SW and RBCCW pumps are running. - 'B' and 'D' RCPs are operating. - Pzr level indicates 34% and lowering. - RCS subcooling is 101 deg. F and slowly rising. - Pzr pressure is 1850 psia and lowering. - S/G pressures: #1 is 865 psia and lowering; #2 is 885 and lowering. - Tave is 528 deg. F and lowering. - AFW flow is established to both S/Gs. - PEO has confirmed that a safety is open on #1 SG. - Containment pressure is 0 psig and stable. - CTMT Atmos rad monitors are NOT in alarm and are stable. - CTMT low range rad monitors are in alarm, and are rising. - SJAE and Blowdown Rad Monitors are in alarm and rising. - MSL rad monitor, RM-4299A, is reading 0.1 R/hr and rising. - MSL rad monitors, RM-4299B & C, are reading 0.0R/hr and stable. - All other Rad Monitors are normal. - Wind direction is from 40 degrees to 220 degrees. 	Crew
17 min.	Entry into EOP 2534, Steam Generator Tube Rupture.	Crew

Plant Condition #2

TIME	INFORMATION	SOURCE
35 min.	<p>Conditions are as previously stated with the following exceptions:</p> <ul style="list-style-type: none"> - Pzr level indicates off scale low. - RVLMS indicates 61%. - RCS subcooling is 32 deg. F and stable. - Pzr pressure is 645 psia and lowering slowly. - S/G pressures: #1 is 77 psia and stable; #2 is 620 and stable. - #1 S/G level is 93" and slowly lowering; #2 S/G level is 57% and stable. - Tave is 466 deg. F and slowly lowering. - AFW flow is established to <u>only</u> #2 S/G. - PEO has confirmed that a safety is still open on #1 SG. - Safety Injection flow is below the acceptable limit. - Containment pressure is 0 psig and stable. - CTMT Atmos rad monitors are NOT in alarm and are stable. - CTMT low range rad monitors are in alarm, and are off scale high. - SJAE and Blowdown rad monitors are in alarm and stable. - MSL rad monitor, RM-4299A, is reading 7.2 R/hr and rising. - MSL rad monitors, RM-4299B & C, are reading 0.8R/hr and stable. - CTMT High Range rad monitors, RM-8240 and 8241, are reading 5.2 R/hr and rising. - Several rad monitors outside CTMT are rising, but NOT in alarm. - Wind direction is from 40 degrees to 220 degrees. 	Crew