Limerick Generating Station

Job Performance Measure

Prepare a Partial Procedure

JPM Number: RO A1-1

Revision Number: 0

Date: _____/_____/_____

Developed By:	**Tomlinson**	**9/24/08**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Facility Representative	**Date**
Review By:	**Haagensen**	**9/24/08**
	Examiner	**Date**
Approved By:	**Caruso**	**9/25/08**
	Chief Examiner	**Date**

ADMIN JPM # A1-1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

REVISION RECORD (Summary):

JPM Setup Instructions:

1. **Provide a copy of ST-6-043-200-1 including Attachment 1 on yellow paper and a copy of AD-LG-101-1002 on white paper.**
2. **Applicant is given instruction to prepare a partial ST for post maintenance testing (PMT) of HV-048-1F020, Outboard Sample PCIV following limit switch replacement.**

TASK STANDARD: The applicant should prepare the partial ST in accordance with plant procedures, AD-LG-101-1002. Comments on the front should be "Partial ST prepared for PMT HV-43-1F020 per C099590301", prepared by: name, initials, date and signature. Critical that PARTIAL is written and comments made. Signature, date, initials and name are not critical to task. They may also write "SQR By" and leave blank for the Station Qualified reviewer, but it is not required, as the SQR will. In the body of the test, the applicant should line out, initial, and date the following items for the valve not being tested, F019: pg. 2 first item under purpose, pg.6 step 4.3.2 first item, Attachment 1 Upper row (critical), pg.11 first item, and pg. 12 Upper row (critical).

TASK CONDITIONS:

- Maintenance on HV-048-1F020 is complete per work order C099590301.
- A partial ST for PMT on this valve needs to be completed.
- Prepare partial of ST-6-043-200-1

INITIATING CUE:

- The Control Room Supervisor directs you to prepare a partial ST to facilitate the PMT on valve HV-048-1F020 following maintenance per work order C099590301. Prepare a partial ST using ST-6-043-200-1.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

ADMIN JPM # A1-1

Operator's Name: _____
Job Title: ☐ NLO **XX RO** ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Perform Reactor Coolant Leakage Surveillance

JPM Number: RO A1-1 **Revision Number:** 0

K/A Number and Importance: Generic 2.2.11 Knowledge of the Process for Controlling Temp Changes (CFR: 41.10 / 43.3 / 45.13) IMPORTANCE RO 2.5 SRO 3.4

Suggested Testing Environment: Classroom - Group

Actual Testing Environment: Table-top - Group

Testing Method: Simulate **Faulted: No**

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **Actual Time Used:** __15___minutes

References: ST-6-043-200-1; AD-LG-101-1002

EVALUATION SUMMARY:
1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____
_____
_____
_____
_____
_____
Note: Any grade of UNSAT requires a comment.

Evaluator's Name: _____(Print)

ADMIN JPM # A1-1

Evaluator's Signature: _____ **Date:** _____

Description:

Maintenance on HV-048-1F020 is complete per C099590301. A partial ST of ST-6-043-200-1 for PMT needs to be completed. The RO needs to prepare partial of ST-6-043-200-1 to facilitate the PMT following maintenance per work order C099590301.

JPM is designed to test the ability to create a temporary change to a procedure. The candidate will be provided the entire procedure and the work order outlining the maintenance completed on the equipment. The partial ST needs to fulfill the requirement for the PMT.

Candidate should identify at the top of the procedure that this is a PARTIAL ST prepared for PMT HV-43-1F020 per C099590301. Candidate should line out, initial and date the upper row on Attachment 1 and the upper row on pg. 12 of the ST.

ADMIN JPM # A1-1

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Hand the applicant: • ST-6-043-200-1 • JPM cue sheet	Review the handouts **Examiner Cue:** If asked for a copy of the C0995903 work order, inform the applicant that **the work order has been evaluated by the Work Center Supervisor.**			
*2. Write "PARTIAL" at the top of the cover sheet. of ST-6-043-200-1	PARTIAL written at the top of the cover page. See answer key.			
3. Write comments on the cover page to include	See answer key			
3a. Partial ST prepare for PMT HV-43-1F020 per C099590301	Comment written.			
3b. Prepared By: name, initials, date, signature	Comment written.			
4. Line out, initial and date the following procedure steps	See answer key			
4a. Pg. 2 first item under "purpose:	Line out, initial and date			
4b. Pg. 6 step 4.3.2 first item	Line out, initial and date			
*4c. Attachment 1 upper row	Line out, initial and date			
4d. Pg. 11 first item	Line out, initial and date			
*4e. Pg. 12 upper row	Line out, initial and date			

JPM Stop Time _____

ADMIN JPM # A1-1

HANDOUT PAGE

TASK CONDITIONS:

- Maintenance on HV-048-1F020 is complete per C099590301.
- A partial ST for PMT needs to be completed.
- Prepare partial of ST-6-043-200-1

INITIATING CUE:

- The Control Room Supervisor directs you to prepare a partial ST of ST-6-043-200-1to facilitate the PMT on valve HV-048-1F020 following maintenance per work order C099590301.

Limerick Generating Station

Job Performance Measure

Evaluate Jet Pump Operability

JPM Number: RO A1-2

Revision Number: 1

Date: _____/_____/_____

Developed By:	**Tomlinson**	**9/24/08**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Technical Reviewer	**Date**
Review By:	**Haagensen**	**9/25/08**
	Examiner	**Date**
Approved By:	**Caruso**	**9/26/08**
	Chief Examiner	**Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

REVISION RECORD (Summary):

1. This JPM was revised from the original bank version by changing the OMS screen shot data. The total core flow test in step 4.3.3.4 is now SAT instead of UNSAT – on the original version of the JPM. The final outcome of the surveillance is still UNSAT.

JPM Setup Instructions:

1. **Provide OMS Screen Shots (2 pages), ON-100 and yellow copy of a ST-6-043-320-1, Daily Jet Pump Operability Verification for Two Recirculation Loop Operation (file password is "gb3v") not filled in.**
2. **Provide calculator to applicant**
3. **Applicant is given instruction to perform ST-6-043-320-1, enter the data and report results.**

TASK STANDARD: The candidate should report the test is unsatisfactory due to failing on "A" loop drive flow high and "A" loop jet pumps flow low.

TASK CONDITIONS:

Unit 1 plant conditions are as follows:

- Today's date is 6/9/08
- An unexpected drop in reactor power occurred
- An unexplained rise in core flow occurred
- ON-100, FAILURE OF A JET PUMP was entered

INITIATING CUE:

- The Control Room Supervisor directs you to perform ST-6-043-320-1 (Daily Verification of Jet Pump Operability for Two Recirculation Loop Operation) complete the data and report the results.

Information for Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

Operator's Name: _____

Job Title: ☐ NLO **X RO** ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Evaluate Jet pump Operability

JPM Number: RO A1-2 **Revision Number:** 0

K/A Number and Importance: Generic 2.1.19 ability to use Plant computers to Evaluate System or Component Status (CFR: 41.10 / 45.12) IMPORTANCE RO 3.9

Suggested Testing Environment: Classroom

Actual Testing Environment:

Testing Method: Simulate **Faulted: Yes**

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **Actual Time Used:** 15 minutes

References: ST-6-043-320-1

EVALUATION SUMMARY:

1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____

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Note: Any grade of UNSAT requires a comment.

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Hand the applicant: • ST-6-043-320-1 • PMS computer screen shots • Calculator • JPM cue sheet	Review the handouts			
*2. STEP 4.3.1.3 Determine if Loop A flow is within 10% of the loop flow values on the established pump speed-loop flow characteristic curve	Determines that loop "A" is NOT within the limits – UNSAT. **Examiner cue:** If asked for recirc pump flow from FR-43-1R614 point 1, inform the applicant this is 47,146 gpm.			
3. Step 4.3.2.3 Determine if Loop B flow is within 10% of the loop flow values on the established pump speed-loop flow characteristics curve	Determines that loop "B" is within the limits – SAT **Examiner cue:** If asked for recirc pump flow from FR-43-1R614 point 2, inform the applicant this is 40,642 gpm.			
*4. Step 4.3.3.4 Determine if the value of total core flow is within 10% of the established Total Core Flow value derived from Recirc Loop Flow Measurements	Determine that total core flow is within the limits – SAT.			
*5. Step 4.3.4.4 Determine if Loop A jet pump diffuser-to-lower plenum differential pressure is within 10% of the established patterns	Determine that some of the jet pumps on Loop "A" are NOT within the limits - UNSAT.			

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6. Step 4.3.5.4 Determine if Loop B jet pump diffuser-to-lower plenum differential pressure is within 10% of the established patterns	Determine that all of the jet pumps on Loop "B" are within the limits - SAT			
*7. Verify at least two of the step combinations in the surveillance are satisfactory: 4.3.1.3 and 4.3.2.3 (Pump speed vs. drive flow) 4.3.3.4 (Total loop flow vs. total core flow) 4.3.4.4 and 4.3.5.4 (Indiv JP DP vs. Drive Flow)	Determine that two of three areas are UNSAT and the overall ST results are UNSAT UNSAT + SAT = **UNSAT** **SAT** UNSAT + SAT = **UNSAT** **2 UNSAT + 1 SAT = UNSAT** Report the **unsatisfactory** results – The A jet pumps have failed the surveillance test.			
CUE: (You may stop here. You have reached the termination criteria for this JPM)				

JPM Stop Time _____

ADMIN RO JPM #A1-2

HANDOUT PAGE

TASK CONDITIONS:

Unit 1 plant conditions are as follows:

- Today's date is 6/9/08
- An unexpected drop in reactor power occurred
- An unexplained rise in core flow occurred
- ON-100, FAILURE OF A JET PUMP was entered

INITIATING CUE:

- The Control Room Supervisor directs you to perform ST-6-043-320-1 (Daily Verification of Jet Pump Operability for Two Recirculation Loop Operation) for 00:15 on 6/10/08 complete the data and report the results.

Limerick Generating Station

Job Performance Measure

Perform Reactor Coolant Leakage Surveillance

JPM Number: RO A2

Revision Number: 1

Date: _____/_____/_____

Developed By:	Haagensen	1/24/2008
	Author	**Date**
Validated By:	_____	_____
	Facility Representative	**Date**
Review By:	Hedigan	9/25/08
	Examiner	**Date**
Approved By:	Caruso	9/25/08
	Chief Examiner	**Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

Jeff Stevens questions 9/24/08:

1. What is the total capacity of the floor sump and the equipment sump? At what point would they be pumped down (hi level alarm?). **1080 gallons capacity – DWEDT pumped automatically at 22.5 to 6.2 ft, DWFDT pumped between 21.5 and 6.2 ft.**

2. If the sumps were pumped down between tech spec surveillance intervals, would this be logged on the surveillance comment sheet?

3. We are adding a source of IDENTIFIED LEAKAGE in the drywell (Rx head vent). How would this be documented in the surveillance test?

4. We are adding another leak in the equipment drain (DWEDT) tank – what are the likely sources for leakage into this sump?
   - **Reactor Recirculation System pump seals**
   - **RPV bottom head drain**
   - **RPV head seal leakoff**
   - **RPV Vent**
   - **RPV to drywell bellows seal drain**

REVISION RECORD (Summary):

1. Modified original JPM to add in 1.5 gpm identified leakage from the RPV head vent and to exceed tech spec 3.4.3.2.f (> 2 gpm increase in 24 hours) instead of tech spec 3.4.3.2.b (> 5 gpm unidentified leakage).

JPM Setup Instructions:

1. **Hand out the following materials**
   - **ST-6-107-596-2 Drywell Floor Drain Sump/Equipment Drain Tank Surveillance Log /OPCON 1, 2, 3 – partially completed.**
   - **Tech Specs**
   - **Calculator**

TASK STANDARD: The applicant should determine that the floor drain average leak rate is X gpm and has exceeded the Tech Spec limit of 2.0 gpm increase over 24 hours. The applicant should determine that tech spec LCO 3.4.3.2.f has been exceeded (UNIDENTIFIED LEAKAGE has increased by more than 2 gpm over a 24-hour period.

TASK CONDITIONS:

- The Unit 2 has been operating at 100% power for 5 days.
- There is known IDENTIFIED LEAKAGE of 1.5 gpm coming from the Unit 2 head vent valve into the drywell.
- All steps of ST-6-107-596-2 have been completed for days 1, 2 and part of day 3 for the weekly surveillance. These have been filled out on the attached data sheets.
- The following readings were taken by the RO at 00:15 for the day 3 data sheet.

  FI-61-215 = 2.3 gpm

  FI-61-235 = 21.1 gpm

FQRSH-61-212 point 3:	Reading = 1000 gallons	Min since last reset = 60 min
FQRSH-61-212 point 4:	Reading = 950 gallons	Min since last reset = 45 min

INITIATING CUE:

- The Control Room Supervisor directs you as RO to complete ST-6-107-596-2 "Drywell Floor Drain Sump/Equipment Drain Tank Surveillance Log /OPCON 1, 2, 3" at 00:15 for day 3 using the above data.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

Operator's Name: _____

Job Title: ❑ NLO **X RO** ❑ SRO ❑ STA ❑ SRO Cert

JPM Title: Perform Reactor Coolant Leakage Surveillance

JPM Number: RO A2 **Revision Number:** 0

K/A Number and Importance: Generic 2.2.12 Knowledge of surveillance procedures. (CFR: 41.10 / 45.13) IMPORTANCE RO 3.7 SRO 4.1

Suggested Testing Environment: Classroom - Group

Actual Testing Environment:

Testing Method: Table-top **Faulted: Yes**

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **Actual Time Used:**__15___minutes

References: ST-6-107-596-2

EVALUATION SUMMARY:

1. Were all the Critical Elements performed satisfactorily? ❑ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____

_____

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_____

Note: Any grade of UNSAT requires a comment.

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

Description: A reactor coolant leakage surveillance is completed and unidentified leakage is found to be within 5 gpm UNIDENTIFIED LEAKAGE but to exceed 2 gpm increase in INDENTIFIED LEAKAGE over a 24-hour period. Tech Spec LCO 3.4.3.2.f has been exceeded and action statement "e" applies (Identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Development Notes: Rev 1 – modify to address larger indentified leakage into the equipment sump and a leaking head vent (that has been classified as IDENTIFIED LEAKAGE) at 1.5 gpm into the drywell.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Hand the applicant: • ST-6-107-596-2 (partially completed) • JPM cue sheet with leakage data	Review the handouts			
2. Enter the surveillance test data from the cue sheet for 00:15 on the day 3 page of ST-6-107-596-2	Data entered properly per answer key page.			
*3. Complete Table 1 for day 3.	Determine total leak rate is 23.4 gpm – which is SAT Determine unidentified leak rate is 2.5 gpm - which is SAT. Determine that unidentified leak rate has increased by 2.4 gpm over the past 24 hours and mark step 4.2.7.1 as UNSAT. **Examiner Note: the block for the previous 00:15 reading was entered incorrectly. The correct entry should have been 0.1 gpm instead of 1.2 gpm.** The applicant should catch this error and correct the entry.			
*4. Complete Table 2 for day 3.	Fill in data from day 3 at 00:15 from handout sheet.			

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*5. Calculate values in Table 3 for day 3 at 00:15.	Floor sump average leak rate = 2.5 gpm (this is UNIDENTIFIED leakage). Equipment sump average leak rate = 21.11 gpm Total average leak rate = 23.61 gpm Determine UNIDENTIFIED leak rate is UNSAT because there was a 2 gpm increase in unidentified leakage over a 24-hour period.			
*6. Determine applicable Tech Specs.	Tech Spec LCO 3.4.3.2.f has been exceeded "2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period". Tech Spec LCO 3.4.3.2.b (5 gpm UNIDENTIFIED LEAKAGE) has **NOT** been exceeded. Tech Spec LCO 3.4.3.2.c (30 gpm TOTAL LEAKAGE) and 3.4.3.2.d (25 gpm averaged over any 24 hour period) have **NOT** been exceeded. **Examiner note: If the applicant states that either Tech Spec 3.4.3.2.b, c or d have been exceeded, then the applicant fails this JPM.**			

JPM Stop Time _____

HANDOUT PAGE

TASK CONDITIONS:

- The Unit 2 has been operating at 100% power for 5 days.
- There is known IDENTIFIED LEAKAGE of 1.5 gpm coming from the Unit 2 head vent valve into the drywell.
- All steps of ST-6-107-596-2 have been completed for days 1, 2 and part of day 3 for the weekly surveillance. These have been filled out on the attached data sheets.
- The following readings were taken by the RO at 00:15 for the day 3 data sheet.

  FI-61-215 = 2.3 gpm

  FI-61-235 = 21.1 gpm

  FQRSH-61-212 point 3: Reading = 1000 gallons Min since last reset = 60 min

  FQRSH-61-212 point 4: Reading = 950 gallons Min since last reset = 45 min

INITIATING CUE:

The Control Room Supervisor directs you as RO to complete ST-6-107-596-2 "Drywell Floor Drain Sump/Equipment Drain Tank Surveillance Log /OPCON 1, 2, 3" at 00:15 for day 3 using the above data.

Limerick Generating Station

Job Performance Measure

Determine Offgas Effluent Activity Release Rate

JPM Number: RO A3

Revision Number: 0

Date: ___/___/ 2008

Developed By:	**Tomlinson**	**9/24/2008**
	Author	**Date**
Validated By:	**Monahan**	**10/1/2008**
	Facility Representative	**Date**
Review By:	**Haagensen**	**9/24/2008**
	Examiner	**Date**
Approved By:	**Caruso**	**9/25/08**
	Chief Examiner	**Date**

ADMIN JPM #A3

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. __2___ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

REVISION RECORD (Summary):

JPM Setup Instructions:

1. **Provide applicant copy of GP-5 "STEADY STATE OPERATIONS"**
2. **Provide calculator to applicant**
3. **Unit 1 is in OPCON 1**
4. **RR-26-1R601 "A" SJAE Discharge Rad Monitor reads 110mRem/hr**
5. **RR-26-1R601 "B" SJAE Discharge Rad Monitor reads 131mRem/hr**
6. **FR-69-*15 (scfm) Point 2 Reads 35 scfm**

TASK STANDARD: The applicant should calculate the average pre-treatment release rate to be 4619 to 5105 (4862 +/- 5%)

TASK CONDITIONS:

1. **Unit 1 is in OPCON 1**
2. **RR-26-1R601 "A" SJAE Discharge Rad Monitor reads 110mRem/hr**
3. **RR-26-1R601 "B" SJAE Discharge Rad Monitor reads 131mRem/hr**
4. **FR-69-*15 (scfm) Point 2 Reads 35 scfm**
5. **The following placard is mounted to the 10C600 panel:**

U/1 OFFGAS	
SUM OF SIX	140
K "A"	1.18
K "B"	1.13
DATE:	10/6/08

INITIATING CUE: The CRS has directed you to calculate the average offgas pre-treatment radioactivity release rate per GP-5, "STEADY STATE OPERATIONS"

Information for Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

ADMIN JPM #A3

Operator's Name: _____

Job Title: ☐ NLO **X RO** SRO ☐ STA ☐ SRO Cert

JPM Title: Authorize Reactor Maneuvering Shutdown Instructions Following a Rod Pattern Adjustment

JPM Number: A3 **Revision Number:** 0

K/A Number and Importance: 2.3.11 Ability to Control Radiation Releases (CFR: 41.11 / 43.4 / 45.10) IMPORTANCE RO 3.8 SRO 4.3

Suggested Testing Environment: Classroom - Group

Actual Testing Environment:

Testing Method: Table-top **Faulted:** Yes

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **15** **Actual Time Used:**_____minutes

References:

EVALUATION SUMMARY:

1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____

_____

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_____

_____

Note: Any grade of UNSAT requires a comment.

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

Description: Unit 1 is in OPCON 1. The SJAE rad monitors are reading 110 mRem/hr and 131 mRem/hr respectively. Placard is posted at the 10C600 panel as follows:

U/1 OFFGAS	
SUM OF SIX	140
K "A"	1.18
K "B"	1.13
DATE:	10/20/08

Cue is that a CRS has directed you to calculate the average pre-treatment radioactivity release rate per GP-5, "STEADY STATE OPERATIONS".

Candidate should calculate the average release rate using the posted information and GP-5 step 3.1.19.

ADMIN JPM #A3

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. CALCULATE Off-gas release rates for the A ***AND*** B channels using the following equation: RR = RL x F x K Where: RR = Release Rate for A(B) (μCi/second) RL = Radiation Level of SJAE as indicated on RR-26-*R601 (mRem/hour) F = Off-gas flow as indicated by FR-69-*15 (scfm), Point 2 K = C Conversion Factor for A(B) data (posted on panel *0C600)	N/A			
2. **Channel A** (Point 1) RR =____ mRem/hour x ____CFM x ____K__ RR = _____ μCi/second	Calculate "A" channel release = 4543 μCi/sec 110 x 35 x 1.18 = 4543			
3. **Channel B** (Point 2) RR =____ mRem/hour x ____CFM x ____K__ RR = _____ μCi/second	Calculate "B" channel release = 5181 μCi/sec 131 x 35 x 1.13 = 5181			

ADMIN JPM #A3

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*4. CALCULATE the average of the A AND B channel values to obtain the average Off-gas pretreatment release rate as follows: ARR = $\frac{(RR\ "A") + (RR\ "B")}{2}$ Where: ARR = Average Off-gas Pretreatment Release Rate (μCi/second) RR "A" = Release Rate value for "A" Channel (μCi/second) RR "B" = Release Rate value for "B" Channel (μCi/second) ARR = $\frac{(\quad) + (\quad)}{2}$ ARR = _____ μCi/second	Calculate the average release rate ARR= (4543 +5181)/2 = 4862 μCi/sec Acceptable band is 4619 to 5105 (4862 +/- 5%)			
(CUE: You may stop here; you have met the termination criteria for this JPM.)	N/A	N/A		

JPM Stop Time _____

ADMIN JPM #A3

HANDOUT PAGE

TASK CONDITIONS:

1. **Unit 1 is in OPCON 1**
2. **RR-26-1R601 "A" SJAE Discharge Rad Monitor reads 110mRem/hr**
3. **RR-26-1R601 "B" SJAE Discharge Rad Monitor reads 131mRem/hr**
4. **FR-69-*15 (scfm) Point 2 Reads 35 scfm**

U/1 OFFGAS SUM OF SIX	140
K "A"	1.18
K "B"	1.13
DATE:	10/6/08

INITIATING CUE: The CRS directs you to determine the average offgas pre-treatment radioactivity release rate per GP-5, "STEADY STATE OPERATIONS".

Limerick Generating Station

Job Performance Measure

Authorize a Reactor Maneuvering Shutdown Instruction (RMSI)

Following a Rod Pattern Adjustment

JPM Number: SRO A1-1

Revision Number: 1

Date: 10/1/2008

Developed By:	**Haagensen**	**9/24/2008**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Facility Representative	**Date**
Review By:	**Tomlinson**	**9/24/2008**
	Examiner	**Date**
Approved By:	**Caruso**	**9/25/08**
	Chief Examiner	**Date**

ADMIN JPM #A1-1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. __2___ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

Review Questions and Comments:

1. Missing NF-LG-721-2001 Exhibit 6. This is referenced in the procedure that is handed out. **Locate this procedure – check with Jeff Stevens.**
2. Not clear how the CRS will review the RMSI. The handout procedure NF-LG-721-1005 lists the review steps 6.3.2 but these are for RE review, not SRO review.
3. Not clear what the "pre-down power positions" were. Need more information or another handout?
4. **Talk to Jeff Stevens.**

REVISION RECORD (Summary):

1. Changed setup so that only one rod (14-47) was out of position instead of 4 rods.

JPM Setup Instructions:

1. Hand out the following materials

- **P-1 Core Map**
- **Reactor Maneuvering Shutdown Instructions**
- **NF-LG-721-1005 Reactor Maneuvering Shutdown Instructions Preparation Guideline**

TASK STANDARD: The applicant should determine that the SRO should NOT authorize the Reactor Maneuvering Shutdown Instructions because there is a rod out of position from the P-1 core map. Rod 14-47 is out of position.

TASK CONDITIONS:

1. **A rod pattern adjustment has just been completed.**
2. **The Reactor Engineer has handed you a new Reactor Maneuvering Shutdown Instruction (RMSI). The RMSI has been prepared and verified on 10/20/2008 by qualified reactor engineers, Brian Haagensen and Joyce Tomlinson**
3. **The Reactor Engineer states that the 3D MONICORE PREDICTOR results have been independently verified using the checklist in Exhibit 6 of NF-LG-721-2001 to determine successful case execution.**

INITIATING CUE: The Reactor Engineer requests that you authorize the new RMSI.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

ADMIN JPM #A1-1

Operator's Name: _____

Job Title: ☐ NLO ☐ RO XX SRO ☐ STA ☐ SRO Cert

JPM Title: Authorize Reactor Maneuvering Shutdown Instructions Following a Rod Pattern Adjustment

JPM Number: A1-1 **Revision Number:** 0

K/A Number and Importance: 2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management. (CFR: 41.1 / 43.6 / 45.6) IMPORTANCE SRO 4.6

Suggested Testing Environment: Classroom

Actual Testing Environment:

Testing Method: Simulate **Faulted:** Yes

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **15** **Actual Time Used:**_____minutes

References: NF-LG-721-1005

EVALUATION SUMMARY:

1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____

_____

_____

_____

_____

_____

Note: Any grade of UNSAT requires a comment.

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

Description: A rod pattern adjustment has just been completed. The Reactor Engineer has brought the new Reactor Maneuvering Shutdown Instructions (RMSI) to the control room and requested that the Shift Manager/CRS authorize (or activate) the new instructions. There is one rod out of position (14-47) on the Instruction sheet. The applicant must compare the instruction sheet to the P1 core map and determine that the SRO should not activate the sheet.

JPM is designed to test the ability to determine that a new RMSI rod insertion sheet has been submitted for SRO approval with an error. The candidate will be provided the RMSI package and a core map that shows one of the rods in the RMSI listed to be inserted are already inserted

The SRO signoffs are on the RMSI cover sheet and the rod sequence sheet. The candidate may be cued as to the locations to sign, as RE's are usually asked and will show the SRO where to sign.

Must be provided with the scanned P-1 showing the rod pattern

Fill out NF-AB-721-1005 Page 7 with "R. Potter" in the Reactor Engineer signoff
Fill out page 8 with RWM Sequence ID LGSIMSU2.0
RE/QNE R. Potter
2nd Verifier A. Johnson

Step	Rod ID	Target	
1	22-39	00	
2	38-23	00	
3	38-39	00	
4	22-23	00	
5	30-47	00	
6	30-15	00	
7	46-31	00	
8	14-31	00	
9	14-47	00	This rod is out of position
10	46-19	00	
11	14-19	00	
12	46-43	00	

NA remaining blanks on rod sheet place NA in each column with a down arrow to bottom

Page 3 enter LGSIMSU2.0 at step 53 at the bottom.

Cue is that a rod pattern exchange took place and the RE has provided the new RMSI for SRO approval signoff on page 1 and 2

Candidate should identify the step 9 rod is incorrect and already at 00

ADMIN JPM #A1-1

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Review the 3D MONICORE PREDICTOR results generated in step 6.3.1 using the checklist in Exhibit 6 of NF-LG-721-2001 to determine successful case execution.	The case execution was successful as indicated by the initial conditions.			
2. Confirm that the load line is less than the lower boundary of the instability exclusion region of the unit specific power/flow operating map.	Determine the load line is less than the lower boundary of the instability exclusion regions of the power/flow operating map.			
*3. Confirm all rods are at either their pre-down power positions or at position 00.	Identify that rod 14-47 is not at the correct pre-down power position and not at the 00 position.			
*4. Determine if the RMSI should be authorized for use.	Do NOT authorize the RMSI – do not sign the RMSI.			

JPM Stop Time _____

ADMIN JPM #A1-1

HANDOUT PAGE

TASK CONDITIONS:

1. **A rod pattern adjustment has just been completed.**
2. **The Reactor Engineer has handed you a new Reactor Maneuvering Shutdown Instruction (RMSI). The RMSI has been prepared and verified on 10/20/2008 by qualified reactor engineers, Brian Haagensen and Joyce Tomlinson**
3. **The Reactor Engineer states that the 3D MONICORE PREDICTOR results have been independently verified using the checklist in Exhibit 6 of NF-LG-721-2001 to determine successful case execution.**

INITIATING CUE: The Reactor Engineer requests that you authorize the new RMSI.

Limerick Generating Station

Job Performance Measure

Evaluate Jet Pump Operability and Determine Tech Spec Implications

JPM Number: SRO A1-2

Revision Number: 2

Date: 10/1/2008

Developed By:	**Haagensen**	**9/29/08**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Facility Technical Representative	**Date**
Review By:	**Caruso**	**9/30/08**
	Examiner	**Date**
Approved By:	**Caruso**	**9/30/08**
	Chief Examiner	**Date**

ADMIN SRO JPM #A1-2

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

Technical changes and modifications:
1. Made minor changes to initiating cue and initial conditions. DONE

REVISION RECORD (Summary):

1. This JPM was revised from the original proposed version by having the SRO complete the same jet pump surveillance as the RO rather than review a completed surveillance. There are a number of SRO(I)s in this class.
2. This JPM was revised to add testing the tech spec implications of the jet pump failure for the SROs.

JPM Setup Instructions:

1. **Provide OMS Screen Shots and yellow copy of ST-6-043-320-1, Daily Jet Pump Operability Verification for Two Recirculation Loop Operation (file password - gb3v)**
2. **Provide a copy of Tech Specs for each applicant.**
3. **Provide a calculator to applicant**
4. **Applicant is given instruction to perform ST-6-043-320-1 and report results.**
5. **Applicant is required to determine applicable tech specs**

TASK STANDARD: The candidate should report the test is unsatisfactory due to failing on "A" loop drive flow high and "A" loop jet pumps flow low. Applicant should identify:

- **Tech Spec LCO 3.4.1.3.a (Recirc Pumps) with an action statement of 2 hours to take action to restore recirc loop flows within 5% or 8 hours to take actions required by Tech Spec 3.4.1.1 (Recirc Loops) 4 hours to reduce thermal power < 76.2%, and reduce the speed of the recirc pumps to < 90%**
- **Tech Spec LCO 3.4.1.2 (Jet Pumps) be in hot shutdown within 12 hours.**

TASK CONDITIONS:

Unit 1 plant conditions are as follows:

- Unit 1 was operating at 100%
- An unexpected drop in reactor power occurred
- An unexplained rise in core flow occurred
- ON-100, FAILURE OF A JET PUMP and OT-104 (Unexpected / Unexplained Positive or Negative Reactivity Insertion) were entered.

INITIATING CUE:

- The Control Room Supervisor directs you to perform ST-6-043-320-1, Daily Verification of Jet Pump Operability for Two Recirculation Loop Operation and report the results and analyze for tech spec implications (if any).

Information for Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The time clock starts when the candidate acknowledges the initiating cue.

ADMIN SRO JPM #A1-2

Operator's Name: _____

Job Title: ☐ NLO **X RO** ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Evaluate Jet pump Operability and Determine Tech Spec Implications

JPM Number: SRO A1-2 **Revision Number:** 0

K/A Number and Importance: Generic 2.1.19 ability to use Plant computers to Evaluate System or Component Status (CFR: 41.10 / 45.12) IMPORTANCE SRO 3.8

Suggested Testing Environment: Classroom - Group

Actual Testing Environment:

Testing Method: Table-top - Group **Faulted: Yes**

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **Actual Time Used:** 15 minutes

References: ST-6-043-320-1

EVALUATION SUMMARY:

1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____

_____

_____

_____

_____

_____

Note: Any grade of UNSAT requires a comment.

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Hand the applicant: • ST-6-043-320-1 • PMS computer screen shots • Calculator • JPM cue sheet	Review the handouts			
*2. STEP 4.3.1.3 Determine if Loop A flow is within 10% of the loop flow values on the established pump speed-loop flow characteristic curve	Determines that loop "A" is NOT within the limits – UNSAT. **Examiner cue:** If asked for recirc pump flow from FR-43-1R614 point 1, inform the applicant this is 47,146 gpm.			
3. Step 4.3.2.3 Determine if Loop B flow is within 10% of the loop flow values on the established pump speed-loop flow characteristics curve	Determines that loop "B" is within the limits – SAT **Examiner cue:** If asked for recirc pump flow from FR-43-1R614 point 2, inform the applicant this is 40,642 gpm.			
*4. Step 4.3.3.4 Determine if the value of total core flow is within 10% of the established Total Core Flow value derived from Recirc Loop Flow Measurements	Determine that total core flow is within the limits – SAT.			
*5. Step 4.3.4.4 Determine if Loop A jet pump diffuser-to-lower plenum differential pressure is within 10% of the established patterns	Determine that some of the jet pumps on Loop "A" are NOT within the limits - UNSAT.			

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6. Step 4.3.5.4 Determine if Loop B jet pump diffuser-to-lower plenum differential pressure is within 10% of the established patterns	Determine that all of the jet pumps on Loop "B" are within the limits - SAT			
*7. Verify at least two of the step combinations in the surveillance are satisfactory: 4.3.1.3 and 4.3.2.3 (Pump speed vs. drive flow) 4.3.3.4 (Total loop flow vs. total core flow) 4.3.4.4 and 4.3.5.4 (Indiv JP DP vs. Drive Flow)	Determine that two of three areas are UNSAT and the overall ST results are UNSAT UNSAT + SAT = **UNSAT** **SAT** UNSAT + SAT = **UNSAT** **2 UNSAT + 1 SAT = UNSAT** Report the **unsatisfactory** results – The A jet pumps have failed the surveillance test.			

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*8 Determine Tech Spec implications of the failed Jet Pump surveillance	*1. Tech Spec LCO 3.4.1.3.a (Recirc Pumps) with an action statement of **2 hours** to take action to restore recirc loop flows within 5% or **8 hours** to take actions required by Tech Spec 3.4.1.1 (Recirc Loops) which requires 4 hours to reduce thermal power < 76.2%, and reduce the speed of the recirc pumps to < 90%. *2. Tech Spec LCO 3.4.1.2 (Jet Pumps) be in hot shutdown within **12 hours**. **Examiner Note:** If the applicant only focuses on the Jet Pump Tech Spec, ask if there are any other applicable Tech Specs. **BOTH** Tech Specs are required for a complete answer.			
CUE: (You may stop here. You have reached the termination criteria for this JPM)				

JPM Stop Time _____

ADMIN SRO JPM #A1-2

HANDOUT PAGE

TASK CONDITIONS:

Unit 1 plant conditions are as follows:

- Unit 1 was operating at 100%
- An unexpected drop in reactor power occurred
- An unexplained rise in core flow occurred
- ON-100, FAILURE OF A JET PUMP and OT-104 (Unexpected / Unexplained Positive or Negative Reactivity Insertion) were both entered.

INITIATING CUE:

- The Control Room Supervisor directs you to perform ST-6-043-320-1, Daily Verification of Jet Pump Operability for Two Recirculation Loop Operation and report the results and analyze for tech spec implications (if any).

Limerick Generating Station

Job Performance Measure

Review RHR Pump, Valve and Flow test and Determine Required Actions

JPM Number: SRO A2

Revision Number: 0

Date: 10/1/08

Developed By:	**Haagensen**	**9/26/08**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Facility Representative	**Date**
Review By:	**Tomlinson**	**9/26/08**
	Examiner	**Date**
Approved By:	**Caruso**	**9/26/08**
	Chief Examiner	**Date**

ADMIN JPM SRO A-2

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

REVISION RECORD (Summary):

1.

JPM Setup Instructions:

1. Hand out the following materials

- **ST-6-051-234-2 (D RHR Pump, Valve and Flow Test) completed surveillance**

TASK STANDARD:

The applicant determines that an immediate retest of HV-051-2F004D is required. Once retested, the valve is NOT declared inoperable but is referred to engineering for a 96 hour evaluation.

The applicant should not declare this valve to be inoperable.

TASK CONDITIONS:

- You are the Work Control Supervisor.
- ST-6-051-234-2 (D RHR Pump, Valve and Flow Test) has just been completed and passed to you for review.

INITIATING CUE:

You are directed to perform review as the Work Control Supervisor for the completed "D" Loop RHR Pump, Valve, and Flow Test.

Information for Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

Operator's Name: _____

Job Title: ☐ NLO ☐ RO **X SRO** ☐ STA ☐ SRO Cert

JPM Title: Review RHR Pump, Valve and Flow Test and Determine Required Actions

JPM Number: SRO A2

Revision Number: 0

K/A Number and Importance: 2.2.12 Knowledge of surveillance procedures.
(CFR: 41.10 / 45.13)
IMPORTANCE RO 3.7 SRO 4.1

Suggested Testing Environment: Classroom - Individual

Actual Testing Environment:

Testing Method: Individual - Table top **Faulted: Y**

Alternate Path: Y

Time Critical: No

Estimated Time to Complete: **Actual Time Used:**_____minutes

References:

- ST-6-051-234-2

EVALUATION SUMMARY:

1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____

_____

_____

_____

_____

_____

Note: Any grade of UNSAT requires a comment.

ADMIN JPM SRO A-2

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

Description:

Original Development Notes:

Provide copy of completed ST on green paper

Cue:

You are directed to perform review as the Work Control Supervisor for the completed D Loop RHR Pump, Valve, and Flow test.

The test contains an error in that the RO did not identify that the valve stroke time for the RHR suction valve F004D is in the ALERT range

Candidate should determine that the valve stroke time for the RHR suction valve F004D is in the ALERT range and should be re-tested, with the potential that the valve will be operable, inoperable immediately, or require Engineering 96 hour eval based on the re-test.

Valve data is on Attachment 1
Evaluation criteria is on Page 11 and in the precautions

10/1/08 - 1. Added peer check initials to all applicable steps – **need to rescan procedure**.

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Hand out the JPM cue sheet and allow time for the applicants to read and ask questions.	Ready to begin JPM			
2. When applicants state they understand their task and are ready to begin, hand out the competed copy of ST-6-051-234-2 and note the start time.	Start JPM			
*3. Review ST-6-051-234-2 and note deficiencies	On Attachment 1, the valve stroke time for HV-051-2F004D is outside of the acceptable range but within the max allowable time.			
*4. Determine what needs to be done to address the excessive stroke time for HV-051-2F004D per section 4.4.1.3.	HV-051-2F004D shall be **immediately retested**. **Examiner Cue:** If the applicant hesitates to retest the valve because of system conditions, inform the applicant that the system conditions still support the valve test. **Examiner Cue:** The valve test team is standing by with their instrumentation ready to conduct any further testing required. **Examiner Cue:** if the applicant states that he would declare the valve inoperable without conducting a retest, determine the reason for this statement.			

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
	Examiner Cue: If the applicant states that retesting the valve constitutes preconditioning and he would elect to employ the option to declare the valve inoperable, respond as the Shift Manager that an immediate retest is required. This direction should cause him to loop back to the retest section of the JPM			
*5. Conduct an immediate retest of HV-051-2F004D in the closed direction. Reopen this valve and stroke it closed.	**Examiner Cue:** The retest shows that the HV-051-2F004D closing stroke time is 140.25 seconds.			
*6. Evaluate the retest stroke time per section 4.4.3.6.	Determine the retest shows that the stroke time is still outside of the acceptable range but within the MAX Allowable stoke time.			
*7. Initiate appropriate remedial actions as specified in section 3.9.	Determine that section 4.4.3.6 refers the applicant to the precaution in section 3.9			
	3.9.1 Immediately notify SSV			
	*3.9.2 initiate a Potential LCO (PLCO) Entry			
	*3.9.3 Initiate an A/R to perform an analysis of stroke time data to verify the new stroke time represents acceptable operation.			
	3.9.4 Document the A/R number in the Additional Action/Test Comments section			
	*3.9.5 Notify the EDM that analysis of the stroke time data MUST be completed within 96 hours.			

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
	Examiner Note: If the applicant decides to declare the valve inoperable because he does **not** recognize that he should conduct an immediate retest, this meets JPM failure criterion.			
8. JPM completion occurs when the applicant decides that the valve is either: • operable, • operable but degraded, or • Not operable.	Termination the JPM – note the time.			

JPM Stop Time _____

HANDOUT PAGE

TASK CONDITIONS:

- You are the Work Control Supervisor for the day.
- ST-6-051-234-2 (D RHR Pump, Valve and Flow Test) has just been completed and passed to you for review and approval.

INITIATING CUE:

You are directed to perform the review as the Work Control Supervisor for the completed "D" Loop RHR Pump, Valve, and Flow Test.

Limerick Generating Station

Job Performance Measure

Authorize Liquid Radioactive Inventory Release

From the Floor Drain Sample Tank

JPM Number: SRO A3

Revision Number: 0

Date: 10/1/2008

Developed By:	**Haagensen**	**9/26/08**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Facility Representative	**Date**
Review By:	**Caruso**	**9/26/08**
	Examiner	**Date**
Approved By:	**Caruso**	**9/26/08**
	Chief Examiner	**Date**

ADMIN JPM #SRO A3

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

REVISION RECORD (Summary):

1.

JPM Setup Instructions:

1. Hand out the following materials

- Provide a completed copy of S63.1.C (Inventory Release from 00T308 Floor Drain Sample Tank Number 2 to Cooling Tower Blowdown Line)

TASK STANDARD:

Applicant should identify that cooling tower blowdown flow is below the required 5000 gpm and should NOT authorize the release

TASK CONDITIONS:

- Floor Drain Sample Tank #2 has been sampled satisfactorily for river release
- The RWEO is performing S63.1.C and has requested FSSV review and approval to commence release to the river.
- The RWEO has the discharge permit ST-5-061-570-0 which was received from Chemistry indicating FDST 2 is sat for river release.
- Cooling tower blowdown flow is now at 4000 gpm.
- No Hold Pond release is in progress.

INITIATING CUE:

You are direct to perform the shift supervisory review required per S63.1.C Step 4.3.7. When complete, note your answer on the JPM cue sheet.

Information for Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

Operator's Name: _____
Job Title: ☐ NLO ☐ RO **X SRO** ☐ STA ☐ SRO Cert

JPM Title: Review and Approve a Radioactive Liquid Discharge

JPM Number: SRO A-3

Revision Number: 0

K/A Number and Importance: 2.3.11 **Ability to control radiation releases.**
(CFR: 41.11 / 43.4 / 45.10)
IMPORTANCE RO 3.8 SRO 4.3

Suggested Testing Environment: Classroom - Group

Actual Testing Environment: Classroom

Testing Method: Table top - Group **Faulted: No**

Alternate Path: No

Time Critical: No

Estimated Time to Complete: **Actual Time Used:**_____minutes

References:

1. S63.1.C rev 29 (Inventory Release from 00T308 Floor Drain Sample tank Number 2 to Cooling Tower Blowdown Line

EVALUATION SUMMARY:
1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____
_____
_____
_____
_____
_____

Note: Any grade of UNSAT requires a comment.

ADMIN JPM #SRO A3

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

Description:

Development notes:

9/24 Original Version:

Initial conditions:

Plant conditions are as follows:

- Floor Drain Sample Tank #2 has been sampled satisfactorily for river release
- The RWEO is performing S63.1.C and has requested FSSV review and approval to commence release to the river
- The RWEO has the discharge permit ST-5-061-570-0 which was received from Chemistry indicating FDST 2 is sat for river release
- Cooling tower blowdown flow is 4000 gpm
- No Hold Pond release is in progress

The following indications are observed on the 00C303 panel in the RWCR

-	63-0047	OPEN
-	HV-63-050	OPEN
-	HV-63-051	OPEN
-	HV-63-055	OPEN

Applicant should identify that cooling tower blowdown flow is below the required 5000 gpm and should not authorize the release

You are direct to perform the supervisory review required per S63.1.C Step 4.3.7

Provide a copy of S63.1.C

10/1 Technical Review
1. Added examiner cue to JPM step 3.
2. Need to initial off the steps in S.63.1.C instead of using check marks. **Rescan procedure with initials.**

ADMIN JPM #SRO A3

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Hand out the JPM cue sheet and a completed copy of S63.1.C	Start the task when all applicants acknowledge they are ready to begin the JPM.			
2. Hand out a completed copy of S63.1.C for review.	All applicants begin the JPM Log the start time.			
3. Review the completed copy of S63.1.C and the JPM Cue sheet.	Review S63.1.C and JPM cue sheet.			
*4. Determine if the release can be authorized.	If the applicant determines the release can be authorized, initial step 4.3.7 on S63.1.C. **This is incorrect.**			
	If the applicant determines the release should NOT be authorized, then **do NOT initial step 4.3.7 of S63.1.C and complete the JPM answer sheet stating that the cooling tower blowdown flow is less than the required amount (5000 gpm)**.			
5. Hand in JPM at completion.	Log completion time.			

JPM Stop Time _____

ADMIN JPM #SRO A3

HANDOUT PAGE

TASK CONDITIONS:

- Floor Drain Sample Tank #2 has been sampled satisfactorily for river release
- The RWEO is performing S63.1.C and has requested FSSV review and approval to commence release to the river
- The RWEO has the discharge permit ST-5-061-570-0 which was received from Chemistry indicating FDST 2 is sat for river release
- Cooling tower blowdown flow is now at 4000 gpm
- No Hold Pond release is in progress

INITIATING CUE:

You are direct to perform the shift supervisory review required per S63.1.C Step 4.3.7. When complete, note your answer on the JPM cue sheet below.

ANSWER Key:

Circle the appropriate answer:

1. Release is APPROVED.

2. Release is NOT approved: state the reason for disapproval below:

_____

_____

_____

_____

Limerick Generating Station

Job Performance Measure

Classify the Event and Recommend KI

JPM Number: SRO A-4

Revision Number: 1

Date: 10/1/2008

Developed By:	**Haagensen**	**9/26/08**
	Author	**Date**
Validated By:	**Monahan**	**10/1/08**
	Facility Representative	**Date**
Review By:	**Caruso**	**9/26/08**
	Examiner	**Date**
Approved By:	**Caruso**	**9/26/08**
	Chief Examiner	**Date**

ADMIN JPM #SRO A4

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by Examiner review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, Examiner sign and date JPM cover page.

REVISION RECORD (Summary): The original JPM was used on the 2005 Peach Bottom NRC Exam.

1. Revised to include an event classification in addition to KI recommendation. Also changed the decision on KI from "do not authorize" to "authorize".

JPM Setup Instructions:

1. Hand out the following materials

- EP-AA-113 Personnel Protective Actions
- EP-AA-113-F-03 Thyroid Blocking Agent Authorization Form – completed with the exception of the Station Emergency Director authorization
- EP-AA-1008 Table LGS 3-1 Emergency Action Level (EAL) Matrix

TASK STANDARD:

1. Classify the event as a general emergency
2. Complete the initial notification form
3. Determine that Field Monitoring Teams should take KI as a precautionary measure

TASK CONDITIONS:

1. A design basis earthquake caused a loss of offsite power and a large break LOCA at 0200 today.
2. Multiple failures in safety systems caused the operators to conduct an emergency depressurization in T-112.
3. Drywell pressure peaked at 55 psig and then dropped rapidly to 3 psig.
4. Secondary containment radiation levels increased substantially.
5. RPV level dropped as low as -170 inches.
6. The dose projection estimate indicates expected doses of 3 rem TEDE and 35 rem CDE (thyroid) for the field monitoring teams.
7. The DIV 1 and 2 EDGs have failed.
8. The ERO is staffing the emergency response facilities but neither the TSC nor the EOF has been fully activated (the earthquake caused damage to local roads)
9. The OSC has been activated and is preparing to dispatch the field monitoring teams to measure radiation levels at the site boundary.

10. A Site Area Emergency was declared at 0210 and the offsite notification message was transmitted at 0220.
11. The time is now 0230 and the following plant conditions exist:
    - Drywell radiation levels = 1.5E+02 R/hr
    - RPV level = -150 inches and recovering slowly on firewater
    - You are the Emergency Director until relieved.

INITIATING CUE:

1. Review the event classification and update if necessary – list the current classification and EAL on the answer sheet. Do not fill out a notification form.

2. The OSC Director has requested to deploy the field monitoring teams to measure radiation levels at the site boundary. He requests to administer KI (thyroid Blocking Agent) to the Field Monitoring Team members. Indicate on your answer sheet if KI should be administered or not administered to Field Monitoring Team members as they are dispatched into the field

3. This is a TIME CRITICAL JPM.

Please review the initial conditions and initiating cues, ask any questions and let the proctor know when you are ready to begin the JPM. The following references will be handed out at the start of the JPM:

- **EP-AA-113 Personnel Protective Actions**
- **EP-AA-113-F-03 Thyroid Blocking Agent Authorization Form – completed with the exception of the Station Emergency Director authorization**
- **EP-AA-1008 Table LGS 3-1 Emergency Action Level (EAL) Matrix – HOT and COLD conditions**

Information for Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

Operator's Name: _____
Job Title: ☐ NLO ☐ RO **X SRO** ☐ STA ☐ SRO Cert

JPM Title: Reclassify the event and determine if KI should be administered to FMTs

JPM Number: SRO A4

Revision Number: 1

K/A Number and Importance: 2.4.29 Knowledge of the emergency plan. ITS SRO 4.4

Suggested Testing Environment: Classroom - Group

Actual Testing Environment: Classroom

Testing Method: Tabletop **Faulted: No**

Alternate Path: No

Time Critical: 15 minutes

Estimated Time to Complete: 15 minutes Actual Time Used: _____minutes

- **References: EP-AA-113 Personnel Protective Actions**
- **EP-AA-113-F-03 Thyroid Blocking Agent Authorization Form – completed with the exception of the Station Emergency Director authorization**
- **EP-AA-1008 Table LGS 3-1 Emergency Action Level (EAL) Matrix**

EVALUATION SUMMARY:
1. Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No
2. Was the task standard met?

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ **Satisfactory** ☐ **Unsatisfactory**

Comments:_____
_____
_____
_____
_____
_____

Note: Any grade of UNSAT requires a comment.

ADMIN JPM #SRO A4

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ **Date:** _____

Description:

Development notes:

This JPM was developed from a Peach Bottom JPM but substantially modified to include an upgrade in the classification as well as the decision to authorize KI. The original JPM reached a determination that KI was NOT authorized. The modification was that KI is now authorized for the Field Monitoring Teams.

1. The intent of this JPM is to place the applicant in a condition where the event classification should be upgraded to a GE due to the loss of containment and RCS barrier – and the potential (but not actual) loss of the clad.
2. KI should be administered to field monitoring team members
3. It is not necessary to fill out the offsite notification form for this JPM.
4. The answer key will be used to collect answers from the applicants.
5. This is a time critical JPM. The event should be reclassified and the decision to administer KI should be made within 15 minutes from the start.

10/1 Technical review comments:
1. Change to initial conditions (-170 statement)
2. Add in initiating cue for time critical data collection.

The licensee questioned the 15 minute time critical limit. They said that only the classification had to be completed within 15 minutes. I stated that completing both the classification upgrade as well as the decision to authorize KI was appropriate for the 15 minute time clock. If they continue to object to the 15 minute time clock, then I told them we would change the clock from 15 to 30 minutes BUT include the completion of the offsite notification message form AND determination of offsite PARs in the JPM.

They stated they would "see how it validated".

The 15 minute time limit is clearly appropriate for the classification decision and the authorization to dispatch the Field Monitoring Teams is clearly time sensitive. It is considered appropriate for a competent operator to be able to make these decisions within 15 minutes.

ADMIN JPM #SRO A4

NOTE: Critical Element(s) indicated by * in Performance Checklist.

PERFORMANCE CHECKLIST:

JPM Start Time _____ (TIME CRITICAL)

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Applicants review the handout sheet and ask any questions regarding the initial conditions or initiating cues.	Applicants review initial conditions and initiating cues.			
2. Log the JPM start time and handout the references	Start the JPM – note the start time.			
*3. Review the EALs and determine the appropriate event classification.	The event should be classified as a **General Emergency** – EAL Fission Product Barrier Matrix FG-1.			
*4. Review EP-AA-113 (Personnel Protective Actions) and determine if KI should be administered to Field Monitoring Teams.	KI **should be administered** to FMT members because the potential for a lost clad barrier and the release offsite.			
5. Collect the answer pages when 15 minutes has elapsed – note the stop time for each individual.	Hand in answer pages.			

JPM Stop Time _____

ADMIN JPM #SRO A4

HANDOUT PAGE

1. A design basis earthquake caused a loss of offsite power and a large break LOCA at 0200 today.
2. Multiple failures in safety systems caused the operators to conduct an emergency depressurization in T-112.
3. Drywell pressure peaked at 55 psig and then dropped rapidly to 3 psig.
4. Secondary containment radiation levels increased substantially.
5. RPV level dropped as low as -170 inches.
6. The dose projection estimate indicates expected doses of 3 rem TEDE and 35 rem CDE (thyroid) for the field monitoring teams.
7. The DIV 1 and 2 EDGs have failed.
8. The ERO is staffing the emergency response facilities but neither the TSC nor the EOF has been fully activated (the earthquake caused damage to local roads)
9. The OSC has been activated and is preparing to dispatch the field monitoring teams to measure radiation levels at the site boundary.
10. A Site Area Emergency was declared at 0210 and the offsite notification message was transmitted at 0220.
11. The time is now 0230 and the following plant conditions exist:
    - Drywell radiation levels = 1.5E+02 R/hr
    - RPV level = -150 inches and recovering slowly on firewater
    - You are the Emergency Director until relieved.

INITIATING CUE:

1. Review the event classification and update if necessary – list the current classification and EAL on the answer sheet. Do not fill out a notification form.

2. The OSC Director has requested to deploy the field monitoring teams to measure radiation levels at the site boundary. He requests to administer KI (thyroid Blocking Agent) to the Field Monitoring Team members. Indicate on your answer sheet if KI should be administered or not administered to Field Monitoring Team members as they are dispatched into the field

3. This is a TIME CRITICAL JPM.

Please review the initial conditions and initiating cues, ask any questions and let the proctor know when you are ready to begin the JPM. The following references will be handed out at the start of the JPM:

- **EP-AA-113 Personnel Protective Actions**
- **EP-AA-113-F-03 Thyroid Blocking Agent Authorization Form – completed with the exception of the Station Emergency Director authorization**
- **EP-AA-1008 Table LGS 3-1 Emergency Action Level (EAL) Matrix – HOT and COLD conditions**

Answer Sheet:

Hand in this answer sheet upon completion of the JPM. This will be collected when the critical time has elapsed.

1. **Circle the correct classification:**
   a. **NOUE**
   b. **Alert**
   c. **Site Area Emergency**
   d. **General Emergency**

2. **List the EAL used as the basis for your classification decision:_____**

3. **Circle the correct answer regarding whether KI be administered to Field Monitoring Team Members?**
   a. **Administer KI prior to deployment**
   b. **Do NOT administer KI prior to deployment**

Note the actual time you completed this JPM_____.