JOB PERFORMANCE MEASURE

Job Position SRO / RO	No. JP-OP-802-4101-431	Revision 2
JPM Title Thermal Limit Verification (MAPRAT)	Duration 15 minutes*	Page 1

*2 times Duration for ILO Exams

Examinee: _____ SRO / RO

Evaluator: _____

Validating Representatives Name: Ken Griffin / Phil Heuker

JPM Type: **Normal** / Alternate Path **/** Time Critical Start Time _____

Evaluation Method: Perform / **Walkthrough** / Discuss Stop Time _____

Location: Plant / Simulator / **Classroom** Total Time: _____

PERFORMANCE EVALUATION SUMMARY											
Element	S	U	Comment	Element	S	U	Comment	Element	S	U	Comment
1.											
2.											
3.											
*** 4.**											
*** 5.**											
*** 6.**											
7.											
*** 8.**			**SRO Only**								

OPERATOR FUNDAMENTALS OBSERVATION				
Monitor operator fundamentals during the JPM set. Rate each area based on the criteria by placing a checkmark in the appropriate column. Indicate the comment number associated with the observation.				
Operator Fundamental	**Meets all Expectations**	**Opportunity for Improvement**	**Does not meet Expectations**	**Comment Number**
Monitoring				
Control				
Conservatism				
Teamwork				
Knowledge				

OVERALL EVALUATOR COMMENTS: _____

_____

_____

REMEDIAL CONTENT: _____

_____ **PASS** _____ **FAIL**

Evaluator Signature / Date: _____ /

JPM Observation Criteria

Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations
Monitoring	Equipment status monitored at proper frequency, using multiple means if available. Understood which indications were critical.	Some monitoring was performed but undue focus on task or lack of system knowledge prevented ideal monitoring.	Did not recognize key equipment status indicators, too much focus on single indications and ignored total system status.
Control	Task preview used to prepare for job. Aware of control bands and maintained them. Configuration control maintained.	Adequate control of system maintained throughout task but some improvements could be made such as better manual control or greater depth of knowledge for anticipating system response.	No anticipation of results of actions. Unaware or control bands or not able to maintain them. Lack of knowledge of how to control system parameters.
Conservatism	Low threshold for identification of problems. Questioning attitude. Uses “stop when unsure” if needed. Sensitive to nuclear safety.	Some opportunities existed to question before proceeding, High focus on task completion without consideration for other system affects.	Proceeds even when unsure with unanswered questions. High threshold for problem conditions.
Teamwork	Routinely communicates system status changes to the team. Communicates actions before taking them.	Communicated most status and actions. Some improvement would be warranted.	Routinely takes action without informing the team.
Knowledge	Able to anticipate system response based on solid system knowledge. Good working knowledge of generic fundamentals to predict and monitor system response.	Plant, system, or generic fundamental knowledge has some gaps.	Unable to predict system response, unsure of generic fundamentals concepts related to plant operation. Only relied on procedure for operating knowledge.

JPM Title Thermal Limit Verification (MAPRAT)	No.: JP-OP-802-4101-431 Revision: 2 Page 3

JPM Information

System:

B1100 & J1100 – Core and Fuel

Task:

8068 - Perform core performance parameter check

References: Required (R) / Available (A)

24.000.02, Shifty, Daily and Weekly Required Surveillances, Attachment 2 (pg 19 of 24) (R)

Tools and Equipment Required:

3DM Edit Printout (attached)

Initial Conditions:

- Today is Sunday (*previous Sunday's date*) Dayshift.
- You are the Patrol LNO.
- The plant is operating steady state at 100% rated thermal power, and has been at 100% power for greater than one week.

Initiating Cue(s):

- The CRS directs you to complete Step 16 of 24.000.02, Attachment 2, Core Thermal Limit Verification.
- The STA has indicated that 3DM limits are reflective of the status of the MSR and BPVs.
- There has been no TAU change.

Terminating Cue(s):

Surveillance is complete, and Tech Spec and limiting time identified (SRO only).

Task Standard:

Perform Core Thermal Limit verification in accordance with 24.000.02 Attachment 2 (Step 16), and identify Tech Spec LCO 3.2.1 not met – one hour time limit (SRO only).

JPM Title Thermal Limit Verification (MAPRAT)	No.: JP-OP-802-4101-431 Revision: 2 Page 4

Licensed Operator Exam Information (required for NRC exams)

Safety Function:

N/A

K/A Reference: (from NUREG 1123)

K/A SYSTEM: 293009 - Core Thermal Limits

K/A STATEMENT: Generic

2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics / reactor behavior / and instrument interpretation. ..... 3.7 / 4.4

2.1.33 Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications. ..... 3.4 / 4.0

Maintenance Rule Safety Classification:

N/A

Maintenance Rule Risk Significant? (Yes or No)

N/A

PERFORMANCE EVALUATION

Start Time _____

ELEMENT		STANDARD	
CUE:	**Provide examinee with Cue Sheet.** **Provide examinee copy of 24.000.02 Att. 2, and the 3D Monicore Edit (attached). Inform the examinee this is the latest 3DM Edit.**		
1.	Verify LPRMs are not failed (except for Bypassed LPRMs) and no other sensors are failed which affect the Heat Balance	1.	Verifies there are no failed LPRMs or other sensors shown on the 3DM edit.
2.	Verify Flow basis is “MEAS.”	2.	Verifies Flow basis is “MEAS”.
3.	If failed sensors exist (other than Bypassed or PANACEA-rejected LPRMs) or the flow basis is not “MEAS,” consult with the STA/SNE for appropriate action before continuing.	3.	Identifies no failed sensors exist on the 3DM edit.
*** 4**.	Place a check in items a and b when the review is satisfactory or when discrepancies are resolved and logged by the STA/SNE.	*** 4**.	Checks blocks “a” and “b”. The review is satisfactory.
*** 5**.	Record Calculated Date and Time (items c and d) of the Core Monitor Periodic Log and verify complete in last 24 hours.	*** 5**.	Records Date and Time and verifies complete within the last 24 hours
CUE:	**As CRS acknowledge report of Tech Spec.**		
*** 6**.	Record the listed parameters (items e – h) as they appear on the Core Monitor Periodic Log.	*** 6**.	Records CTP and Thermal Limit values. Identifies that **MAPRAT is 1.008**. Notifies CRS that TS is not met.
NOTE:	**Examinee may state that this non-compliance should be noted in the Comments Section**		
7.	Step signature	7.	Does **NOT** initial or sign since Acceptance Criteria is **NOT** met.
*** 8**.	Review Tech Specs (**SRO Only**)	*** 8**.	Identifies TS 3.2.1 APLHGR Condition A.1, Restore within 2 hours (**SRO Only**).
CUE:	End JPM when surveillance is complete, and Tech Spec and limiting time identified (SRO only).		

_____ SATISFACTORY _____ UNSATISFACTORY

Stop Time _____

*** Critical Step**

Evaluator Notes:

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

Generic Notes and Cues:

None

System Specific Notes and Cues:

None

Task Performance and Cues:

The Elements of this JPM are step by step in accordance with the procedure. The Standard is that the procedure is performed as written. The Cues are as listed above for indication or as each step is completed the appropriate information is reported to the examinee.

Critical Steps:

Critical Tasks are identified by asterisk (*) and **bolded** steps on the cover sheet. Verify that the latest revision of the procedure is used and critical tasks are correctly identified.

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for follow-up question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Simulator Setup

IC#:

N/A

Malfunctions:

Number	Title	Value	Delay	Ramp
N/A				

Remote Functions:

Number	Title	Value	Delay	Ramp
N/A				

Override Functions:

Number	Title	Value	Delay	Ramp
N/A				

Special Instructions:

N/A

Cue Sheet: (JP-OP-802-4101-431)

Initial Conditions:

- Today is Sunday *(previous Sunday's date)* Dayshift.
- You are the Patrol LNO.
- The plant is operating steady state at 100% rated thermal power, and has been at 100% power for greater than one week.

Initiating Cue(s):

- The CRS directs you to complete Step 16 of 24.000.02, Att. 2, Core Thermal Limit Verification.
- The STA has indicated that 3DM limits are reflective of the status of the MSR and BPVs.
- There has been no TAU change.

JOB PERFORMANCE MEASURE

FERMI CYCLE 20 SEQUENCE NO 11

CORE PARAMETERS			3DM/P11		Today 08:00 CALCULATED
POWER	MWT	3430	PERIODIC LOG		Today 08:01 PRINTED
POWER	MWE	1134.	AUTOMATIC		CASE ID FMLD1050609105759
FLOW	MLB/HR	92.266	CALC RESULTS		RESTART FMLD1050609095759
FPADPR		0.905			LPRM SHAPE – FULL CORE
SUBC	BTU/LB	21.97	Keff	1.0026	
PR	PSIa	1040.78	XE WORTH %	-2.33	LOAD LINE SUMMARY
CORE	MWD/sT	23998.7	XE/RATED	1.02	CORE POWER 100.0%
CYCLE	MWD/sT	3997.3	AVE VF 0.469		CORE FLOW 92.3%
MCPR		1.628			LOAD LINE 104.9%

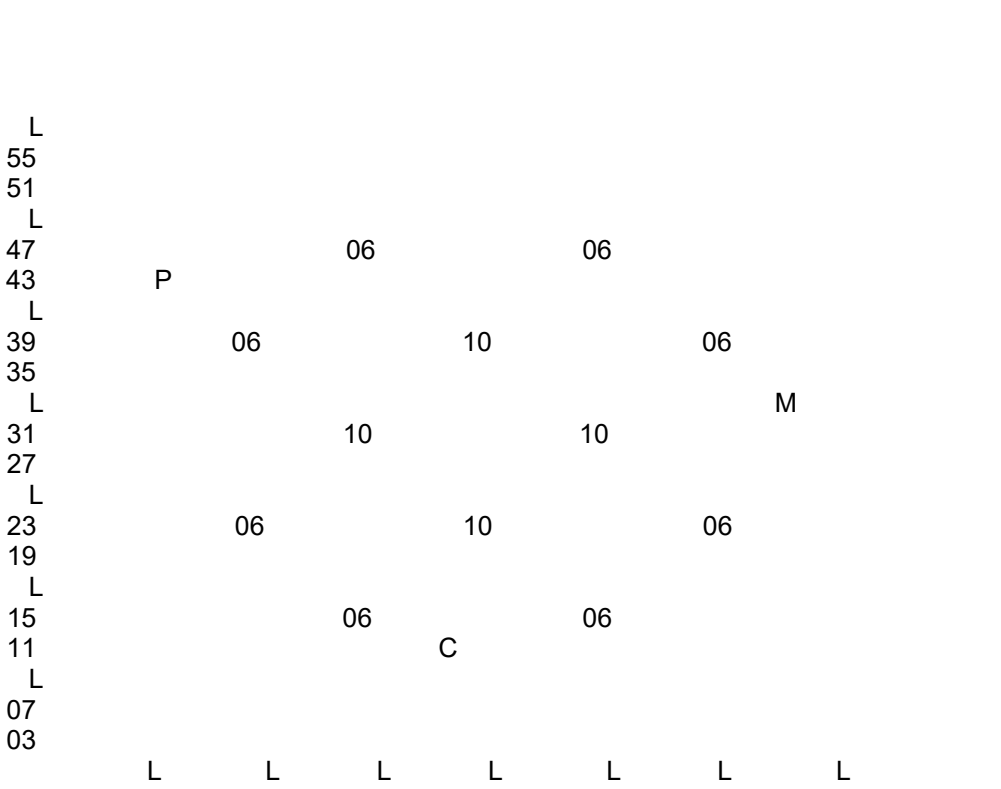
CORRECTION FACTOR: MFLCPR= 1.000 MFLPD= 1.000 MAPRAT= 1.000

OPTIONS: ARTS 2 LOOPS ON MANUAL FLOW MCPRLIM= 1.350

MOST LIMITING LOCATIONS (NON-SYMMETRIC)

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
0.829	29-10	0.985	51-34- 4	1.008	51-34- 4	1.011	9-42- 5
0.826	9-30	0.975	33-10- 5	0.975	33-10- 5	1.006	9-34- 5
0.814	29-14	0.955	51-32- 4	0.925	51-20- 5	1.006	13-42- 5
0.812	13-30	0.867	51-20- 5	0.900	41-10- 5	1.006	11-40- 5
0.805	27-12	0.862	53-32- 5	0.747	51-32- 4	1.005	7-32- 5
0.803	11-28	0.861	41-10- 5	0.747	37-10- 5	1.005	27-52- 3
0.796	27-10	0.861	31-10- 5	0.743	51-24- 5	1.004	7-40- 5
0.790	9-28	0.854	53-34- 4	0.742	53-30- 5	1.004	13-32- 4
0.786	25-10	0.854	37-10- 5	0.734	31- 8- 5	1.003	19- 5- 4
0.785	9-26	0.849	51-24- 5	0.727	47-20- 5	1.003	23-52- 4

SEQ. A002 C=MFLCPR D=MFLPD M=MAPRAT P=PCRAT *=MULTIPLE



CORE AVE AXIAL NOTCH	REL PW	LOC
	0.110	25
00	0.244	24
02	0.582	23
04	0.780	22
06	0.835	21
08	0.902	20
10	0.927	19
12	0.934	18
14	0.953	17
16	1.015	16
18	1.049	15
20	1.103	14
22	1.152	13
24	1.190	12
26	1.203	11
28	1.219	10
30	1.269	09
32	1.312	08
34	1.335	07
36	1.405	06
38	1.449	05
40	1.382	04
42	1.280	03
44	1.008	02
46	0.362	01

CORE AVERAGE RADIAL POWER DISTRIBUTION

RING #	1	2	3	4	5	6	7	8
REL PW	1.123	1.259	1.138	1.202	1.123	1.261	1.087	0.497

FERMI CYCLE 20 INSTRUMENT READINGS/STATUS
CALIBRATED LPRM READINGS

SEQUENCE NO 11
Today 08:00 CALCULATED
Today 08:01 PRINTED
CASE ID FMLD1050609105759
LPRM SHAPE - FULL CORE

57 D		20.0	26.5	26.3	22.3		
C		23.8	32.2	31.1	29.2		
B		26.0	38.8	40.0	35.3		
A		23.3	41.5	39.0	37.5		
49 D	20.7	27.9	30.1	30.3	29.7	24.7	
C	25.8	40.6	40.7	38.7	39.6	25.8	
B	28.9	49.3	49.8	53.9	50.6	43.7	
A	27.4P	58.9	56.9	63.8	62.1	52.3	
41 D	26.2	29.7	31.9	34.2	30.2	28.8	22.5
C	35.9	39.5	42.4	40.5	40.2	38.7	30.2
B	46.8	48.9	53.2	52.8	53.2	50.5	36.6
A	64.8	55.0	53.7	52.7	60.6	63.4	39.4
33 D	28.1	32.0	35.9	34.5	35.5	31.4M	25.3
C	40.2	42.8	41.1	42.5	41.8	43.3	36.3
B	50.7	53.7	50.4	50.3	53.4	55.0	43.2
A	69.7	56.9	50.7	58.9	53.7	43.4	41.0
25 D	28.4	31.7	34.7	35.4	31.3	28.9	25.6
C	39.1	43.0	44.6	40.9	41.5	38.8	32.6
B	51.1	53.1	56.7	52.0	52.9	51.1	39.5
A	66.0	51.2	56.4	50.8	57.7	51.2	44.1
17 D	22.1	30.7	31.8C	32.9	29.4	26.9	19.4
C	31.2	41.7	43.7	44.0	38.4	39.3	23.7
B	40.1	53.4	54.3	54.6	49.4	49.8	26.0
A	51.7	61.6	49.6	54.8	58.5	61.5	24.6
09 D		23.6	28.9	29.5	26.8	21.1	
C		39.3	39.6	41.6	38.6	25.5	
B		42.4	50.6	51.4	47.6	28.8	
A		51.6	64.7	66.3	63.0	28.0	
	08	16	24	32	40	48	56

FAILED SENSORS
LPRM (0 SIGNALS FAILED)
LPRM (0 PANACEA REJECTED)
OTHER SENSORS (0 TOTAL)
SUB RODS
NONE

T = T I P RUN RECOMMENDED
C = MFLCPR LOCATION
M = MAPRAT LOCATION
D = MFLPD LOCATION
P = PCRAT LOCATION
* = MULTIPLE LIMIT

CORE SUMMARY

CORE POWER	100 %	CALC SUB FLOW	94.1%	DP MEAS PSI	13.681
CORE FLOW	92.3 %	OPER SUB FLOW	92.3%	DP CALC PSI	18.836
LOAD LINE	104.9 %	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	14.81

APRM CALIBRATION

	1	2	3	4
READING	99.9	99.9	99.8	99.9
AGAF	1.001	1.001	1.002	1.001
APRM - %CTP	-0.1	-0.1	-0.2	-0.1

TIP RUNS RECOMMENDED
STRINGS : NONE

JOB PERFORMANCE MEASURE

Job Position SRO	No. JP-OP-802-4101-195	Revision 0
JPM Title Perform Plant-Wide Announcement for Probable Aircraft Threat	Duration 5 minutes*	Page 1

*2 times Duration for ILO Exams

Examinee: _____ SRO

Evaluator: _____

Validating Representatives Name: Phil Heuker

JPM Type: **Normal** / Alternate Path **/** Time Critical Start Time _____

Evaluation Method: **Perform** / Walkthrough / Discuss Stop Time _____

Location: Plant / **Simulator** / Classroom Total Time: _____

PERFORMANCE EVALUATION SUMMARY											
Element	S	U	Comment	Element	S	U	Comment	Element	S	U	Comment
1.											
*** 2.**											
*** 3.**											
*** 4.**											
*** 5.**											
*** 6.**											
*** 7.**											
*** 8.**											

OPERATOR FUNDAMENTALS OBSERVATION

Monitor operator fundamentals during the JPM set. Rate each area based on the criteria by placing a checkmark in the appropriate column. Indicate the comment number associated with the observation.

Operator Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations	Comment Number
Monitoring				
Control				
Conservatism				
Teamwork				
Knowledge				

OVERALL EVALUATOR COMMENTS: _____

_____

_____

REMEDIAL CONTENT: _____

_____ PASS _____ FAIL

Evaluator Signature / Date: _____ /

JPM Title Perform Plant-Wide Announcement for Probable Aircraft Threat	No.: JP-OP-802-4101-195 Revision: 0 Page 1

JPM Observation Criteria

Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations
Monitoring	Equipment status monitored at proper frequency, using multiple means if available. Understood which indications were critical.	Some monitoring was performed but undue focus on task or lack of system knowledge prevented ideal monitoring.	Did not recognize key equipment status indicators, too much focus on single indications and ignored total system status.
Control	Task preview used to prepare for job. Aware of control bands and maintained them. Configuration control maintained.	Adequate control of system maintained throughout task but some improvements could be made such as better manual control or greater depth of knowledge for anticipating system response.	No anticipation of results of actions. Unaware or control bands or not able to maintain them. Lack of knowledge of how to control system parameters.
Conservatism	Low threshold for identification of problems. Questioning attitude. Uses “stop when unsure” if needed. Sensitive to nuclear safety.	Some opportunities existed to question before proceeding, High focus on task completion without consideration for other system affects.	Proceeds even when unsure with unanswered questions. High threshold for problem conditions.
Teamwork	Routinely communicates system status changes to the team. Communicates actions before taking them.	Communicated most status and actions. Some improvement would be warranted.	Routinely takes action without informing the team.
Knowledge	Able to anticipate system response based on solid system knowledge. Good working knowledge of generic fundamentals to predict and monitor system response.	Plant, system, or generic fundamental knowledge has some gaps.	Unable to predict system response, unsure of generic fundamentals concepts related to plant operation. Only relied on procedure for operating knowledge.

JPM Information

System:

N/A

Task:

75046 - Determine required actions for a security event using the protective actions flowchart for security events.

References: Required (R) / Available (A)

EP-530, Assembly, Accountability and Onsite Protective Actions (A)

Tools and Equipment Required:

None

Initial Conditions:

- You are an extra SRO On Shift.
- The Shift Manager is not available.
- The Reactor is operating at 100% Power.
- A validated notification of an aircraft attack has been received from the NRC.
- The aircraft is approximately 20 minutes from the site.
- The CRS is executing the Airborne Threat AOP.

Initiating Cue(s):

The CRS directs you to implement Onsite protective measures from EP-530, Enclosure B.

Terminating Cue(s):

Announcement of Probable Aircraft Threat has been made.

Task Standard:

Announcement of Probable Aircraft Threat has been made per EP-530.

JPM Title Perform Plant-Wide Announcement for Probable Aircraft Threat	No.: JP-OP-802-4101-195 Revision: 0 Page 3

Licensed Operator Exam Information (required for NRC exams)

Safety Function/Category:

11 – Abnormal Plant Evolutions

K/A Reference: (from NUREG 1123)

K/A SYSTEM: GENERIC

K/A STATEMENT: 2.1 Conduct of Operations

2.1.14 Knowledge of criteria or conditions that require plant-wide announcements, such as pump starts, reactor trips, mode changes, etc ..... 3.1 / 3.1
2.1.17 Ability to make accurate, clear, and concise verbal reports ..... 3.9 / 4.0
2.1.20 Ability to interpret and execute procedure steps ..... 4.6 / 4.6

Maintenance Rule Safety Classification:

N/A

Maintenance Rule Risk Significant? (Yes or No)

N/A

JPM Title Perform Plant-Wide Announcement for Probable Aircraft Threat	No.: JP-OP-802-4101-195 Revision: 0 Page 1

PERFORMANCE EVALUATION

Start Time _____

ELEMENT		STANDARD	
CUE:	**Provide Examinee with CUE Sheet**		
1.	Refer to EP-530 Enclosure B, Security Event Onsite Protective Actions Flowchart. **Note**: EP-530, Section 5.1 Immediate Actions, Step 5.1.2 requires that, if there is a security event, GO TO the Security Event Onsite Protective Actions Flowchart in Enclosure B.	1.	Refers to EP-530 Enclosure B, Security Event Onsite Protective Actions Flowchart.
*** 2.**	Evaluates decision step to determine if a Hostile Attack is in progress.	*** 2.**	Determines that a Hostile Attack is NOT in progress.
*** 3.**	Evaluates decision step to determine if the aircraft threat is imminent.	*** 3.**	Determines that the aircraft threat is NOT imminent.
*** 4.**	Evaluates decision step to determine if the aircraft threat is probable.	*** 4.**	Determines that the aircraft threat IS probable.
*** 5.**	Evaluates decision step to determine if the time of impact is >5 to <10 minutes.	*** 5.**	Determines that the time of impact is NOT >5 to <10 minutes.
*** 6.**	Evaluates decision step to determine if the time of impact is ≥10 to <30 minutes.	*** 6.**	Determines that the time of impact IS ≥10 to <30 minutes.
*** 7.**	Sound the Plant Area Alarm.	*** 7.**	Sounds the Plant Area Alarm.
*** 8.**	Make the following announcement using Hi-Com override: **"Attention all personnel. There is a Probable Aircraft threat with an estimated arrival time of (insert time). On-Shift personnel relocate to the TSC or RHR Complex. All OSC, TSC, and EOF personnel report to the EOF. All other personnel assemble in the NTC auditorium!"** Repeat announcement.	*** 8.**	Makes the following announcement: **"Attention all personnel. There is a Probable Aircraft threat with an estimated arrival time of (current time +20 minutes). On-Shift personnel relocate to the TSC or RHR Complex. All OSC, TSC, and EOF personnel report to the EOF. All other personnel assemble in the NTC auditorium!"** Repeats announcement.
CUE:	**Terminate JPM when announcement of Probable Aircraft Threat has been made.**		

_____ SATISFACTORY _____ UNSATISFACTORY

Stop Time _____

*** Critical Step**

JPM Title Perform Plant-Wide Announcement for Probable Aircraft Threat	No.: JP-OP-802-4101-195 Revision: 0 Page 2

Evaluator Notes:

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

Generic Notes and Cues:

N/A

System Specific Notes and Cues:

N/A

Task Performance and Cues:

The Elements of this JPM are step by step in accordance with the procedure. The Standard is that the procedure is performed as written. The Cues are as listed above for indication or as each step is completed the appropriate information is reported to the examinee.

Critical Steps:

Critical Tasks are identified by asterisk (*) and **bolded** steps on the cover sheet. Verify that the latest revision of the procedure is used and critical tasks are correctly identified.

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for follow-up question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Cue Sheet: (JP-OP-802-4101-193)

Initial Conditions:

- You are an extra SRO On Shift.
- The Shift Manager is not available.
- The Reactor is operating at 100% Power.
- A validated notification of an aircraft attack has been received from the NRC.
- The aircraft is approximately 20 minutes from the site.
- The CRS is executing the Airborne Threat AOP.

Initiating Cue(s):

The CRS directs you to implement Onsite protective measures from EP-530, Enclosure B.

JOB PERFORMANCE MEASURE

Job Position SRO / RO	No. JP-OP-804-0001-191	Revision 0
JPM Title Determine HPCI OPERABILITY and apply Technical Specifications	Duration 15 minutes*	Page 0

*2 times Duration for ILO Exams

Examinee: _____ SRO / RO / NO

Evaluator: _____

Validating Representatives Name: Phil Heuker

JPM Type: **Normal** / Alternate Path / Time Critical — Start Time _____

Evaluation Method: **Perform** / Walkthrough / Discuss — Stop Time _____

Location: Plant / Simulator / **Classroom** — Total Time: _____

PERFORMANCE EVALUATION SUMMARY											
Element	S	U	Comment	Element	S	U	Comment	Element	S	U	Comment
*** 1.**											
*** 2.**											
*** 3.**											
*** 4.**											
*** 5.**											

OPERATOR FUNDAMENTALS OBSERVATION

Monitor operator fundamentals during the JPM set. Rate each area based on the criteria by placing a checkmark in the appropriate column. Indicate the comment number associated with the observation.

Operator Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations	Comment Number
Monitoring				
Control				
Conservatism				
Teamwork				
Knowledge				

OVERALL EVALUATOR COMMENTS: _____

_____

_____

REMEDIAL CONTENT: _____

_____ **PASS** _____ **FAIL**

Evaluator Signature / Date: _____ / _____

JPM Observation Criteria

Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations
Monitoring	Equipment status monitored at proper frequency, using multiple means if available. Understood which indications were critical.	Some monitoring was performed but undue focus on task or lack of system knowledge prevented ideal monitoring.	Did not recognize key equipment status indicators, too much focus on single indications and ignored total system status.
Control	Task preview used to prepare for job. Aware of control bands and maintained them. Configuration control maintained.	Adequate control of system maintained throughout task but some improvements could be made such as better manual control or greater depth of knowledge for anticipating system response.	No anticipation of results of actions. Unaware or control bands or not able to maintain them. Lack of knowledge of how to control system parameters.
Conservatism	Low threshold for identification of problems. Questioning attitude. Uses “stop when unsure” if needed. Sensitive to nuclear safety.	Some opportunities existed to question before proceeding, High focus on task completion without consideration for other system affects.	Proceeds even when unsure with unanswered questions. High threshold for problem conditions.
Teamwork	Routinely communicates system status changes to the team. Communicates actions before taking them.	Communicated most status and actions. Some improvement would be warranted.	Routinely takes action without informing the team.
Knowledge	Able to anticipate system response based on solid system knowledge. Good working knowledge of generic fundamentals to predict and monitor system response.	Plant, system, or generic fundamental knowledge has some gaps.	Unable to predict system response, unsure of generic fundamentals concepts related to plant operation. Only relied on procedure for operating knowledge.

JOB PERFORMANCE MEASURE

JPM Information

System:

N/A

Task:

76034 - Implement Technical Specification/Technical Requirements Manual actions

References: Required (R) / Available (A)

Technical Specifications (A), 23.202 HPCI System (A)

Tools and Equipment Required:

None

Initial Conditions:

- You are the on-coming CRS.
- You are preparing to take the shift following your 7-day off.
- While walking down the HPCI System, you observe it to be in the lineup shown on the provided handout.
- Upon review of the unit log, you determine that HPCI has been in the configuration shown for the past 15 hours.
- Your review of the unit log also shows that HPCI Keep Fill was removed from service 13 hours ago.
- No other plant equipment is out of service.

Initiating Cue(s):

Evaluate HPCI OPERABILITY and document below. If HPCI is OPERABLE, mark the table below with N/A.

Terminating Cue(s):

Required actions listed under Tech Spec 3.5.1, Condition E, have been identified, and the LCO documented on the Cue Sheet.

Task Standard:

HPCI declared INOPERABLE and Actions of TS 3.5.1 have been identified.

Licensed Operator Exam Information (required for NRC exams)

Safety Function/Category:

N/A

K/A Reference: (from NUREG 1123)

K/A SYSTEM: GENERIC

K/A STATEMENT: Equipment Control

2.2.36 Ability to determine operability and/or availability of safety related equipment……3.1 / 4.2

2.2.40 Ability to apply Technical Specifications for a system……..……3.4 / 4.7

Maintenance Rule Safety Classification:

N/A

Maintenance Rule Risk Significant? (Yes or No)

N/A

JOB PERFORMANCE MEASURE

PERFORMANCE EVALUATION

Start Time _____

ELEMENT		STANDARD	
CUE:	**Provide examinee with Cue Sheet and HPCI mimic graphic.** **NOTE:** **The information leading to the determination below comes from 23.202, HPCI System SOP, Precaution 3.19.**		
*** 1.**	Review HPCI system lineup and recognize HPCI suction is aligned to the Torus.	*** 1.**	Recognizes HPCI suction is aligned to the Torus.
*** 2.**	Review initial conditions against 23.202 Precautions and Limitations to determine if HPCI OPERABILITY is impacted.	*** 2.**	Determines that, with HPCI aligned to the Torus, in Standby, for more than 12 consecutive hours without Keep Fill in operation, HPCI should be declared INOPERABLE.
*** 3.**	Review initial conditions to determine which LCO and Condition(s) apply.	*** 3.**	Determines that, with HPCI declared INOPERABLE, Tech Spec LCO 3.5.1, ECCS-Operating is not MET. Determines that Tech Spec LCO 3.5.1 **Condition E applies** to HPCI INOPERABLE.
*** 4.**	Review LCO 3.5.1, Action E.1 to determine its applicability.	*** 4.**	Determines that RCIC must be verified to be OPERABLE by administrative means Immediately.
*** 5.**	Review LCO 3.5.1, Action E.2 to determine its applicability.	*** 5.**	Determines that HPCI must be restored to OPERABLE status within 14 days.
CUE:	**End JPM when the required actions listed under Tech Spec 3.5.1, Condition E, have been identified, and the LCO documented on the Cue Sheet**		

_____ SATISFACTORY _____ UNSATISFACTORY

Stop Time _____

*** Critical Step**

Evaluator Notes:

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

FAILURE TO WEAR ALL PPE REQUIRED FOR TASK PERFORMANCE WILL RESULT IN FAILURE OF THIS JPM.

Generic Notes and Cues:

None

System Specific Notes and Cues:

None

Task Performance and Cues:

The Elements of this JPM are step by step in accordance with the procedure. The Standard is that the procedure is performed as written. The Cues are as listed above for indication or as each step is completed the appropriate information is reported to the examinee. Notify Examinee that time compression may be used for activities performed outside of the Control Room. Notify Examinee if JPM is Time Critical (only if JPM is **NOT** Alternate Path.)

Critical Steps:

Critical Tasks are identified by asterisk (*) and **bolded** steps on the cover sheet. Verify that the latest revision of the procedure is used and critical tasks are correctly identified.

JOB PERFORMANCE MEASURE

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for follow-up question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Simulator Setup

IC#:

N/A

Malfunctions:

Number	Title	Value	Delay	Ramp
N/A				

Remote Functions:

Number	Title	Value	Delay	Ramp
N/A				

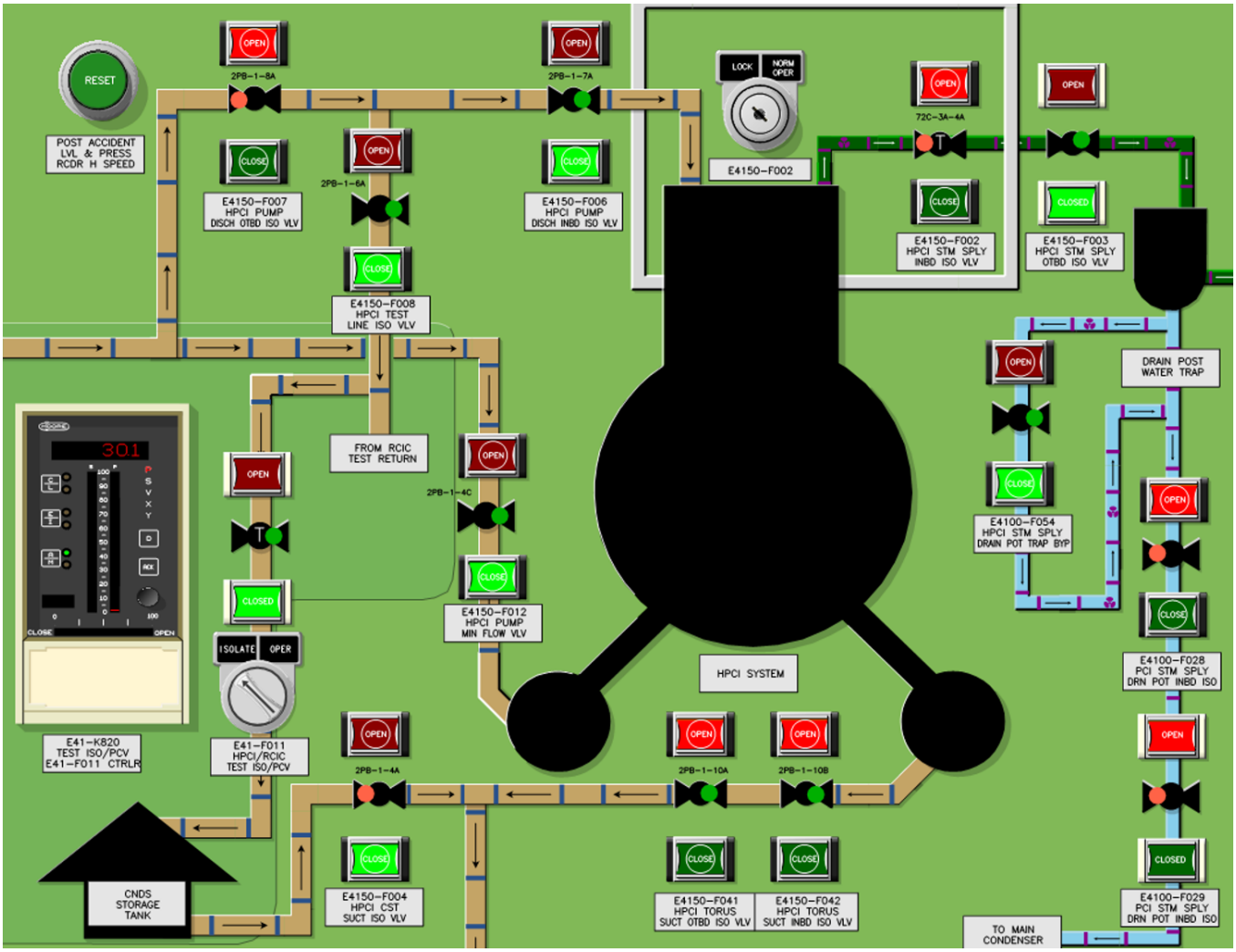
Override Functions:

Number	Title	Value	Delay	Ramp
N/A				

Special Instructions:

N/A

Handout: (JP-OP-804-0001-191)



Key for Lights in Handout	
Open Light Lit	
Closed Light Lit	
Open Light Off	
Closed Light Off	

Cue Sheet: (JP-OP-804-0001-191)

Initial Conditions:

- You are the on-coming CRS.
- You are preparing to take the shift following your 7-day off.
- While walking down the HPCI System, you observe it to be in the lineup shown on the provided handout.
- Upon review of the unit log, you determine that HPCI has been in the configuration shown for the past 15 hours.
- Your review of the unit log also shows that HPCI Keep Fill was removed from service 13 hours ago.
- No other plant equipment is out of service.

Initiating Cue(s):

Evaluate HPCI OPERABILITY and document below. If HPCI is OPERABLE, mark the table below with N/A.

TS	CONDITION	REQUIRED ACTION	COMPLETION TIME

Job Position SRO	No. JP-OP-802-4101-194	Revision 0
JPM Title Initiate Authorization to Exceed Dose Control Threshold.	Duration 22 minutes	Page 1

Examinee: _____ SRO

Evaluator: _____

Validating Representatives Name: Phil Heuker

JPM Type: **Normal** / Alternate Path **/** Time Critical — Start Time _____

Evaluation Method: **Perform** / Walkthrough / Discuss — Stop Time _____

Location: Plant / Simulator / **Classroom** — Total Time: _____

PERFORMANCE EVALUATION SUMMARY											
Element	S	U	Comment	Element	S	U	Comment	Element	S	U	Comment
*** 1.**											
*** 2.**											
*** 3.**											
*** 4.**											
*** 5.**											
*** 6.**											

OPERATOR FUNDAMENTALS OBSERVATION				
Monitor operator fundamentals during the JPM set. Rate each area based on the criteria by placing a checkmark in the appropriate column. Indicate the comment number associated with the observation.				
Operator Fundamental	**Meets all Expectations**	**Opportunity for Improvement**	**Does not meet Expectations**	**Comment Number**
Monitoring				
Control				
Conservatism				
Teamwork				
Knowledge				

OVERALL EVALUATOR COMMENTS: _____

_____

_____

REMEDIAL CONTENT: _____

_____ **PASS** _____ **FAIL**

Evaluator Signature / Date: _____ /

JPM Observation Criteria

Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations
Monitoring	Equipment status monitored at proper frequency, using multiple means if available. Understood which indications were critical.	Some monitoring was performed but undue focus on task or lack of system knowledge prevented ideal monitoring.	Did not recognize key equipment status indicators, too much focus on single indications and ignored total system status.
Control	Task preview used to prepare for job. Aware of control bands and maintained them. Configuration control maintained.	Adequate control of system maintained throughout task but some improvements could be made such as better manual control or greater depth of knowledge for anticipating system response.	No anticipation of results of actions. Unaware or control bands or not able to maintain them. Lack of knowledge of how to control system parameters.
Conservatism	Low threshold for identification of problems. Questioning attitude. Uses “stop when unsure” if needed. Sensitive to nuclear safety.	Some opportunities existed to question before proceeding, High focus on task completion without consideration for other system affects.	Proceeds even when unsure with unanswered questions. High threshold for problem conditions.
Teamwork	Routinely communicates system status changes to the team. Communicates actions before taking them.	Communicated most status and actions. Some improvement would be warranted.	Routinely takes action without informing the team.
Knowledge	Able to anticipate system response based on solid system knowledge. Good working knowledge of generic fundamentals to predict and monitor system response.	Plant, system, or generic fundamental knowledge has some gaps.	Unable to predict system response, unsure of generic fundamentals concepts related to plant operation. Only relied on procedure for operating knowledge.

JPM Title Initiate Authorization to Exceed Dose Control Threshold.	No.: JP-OP-802-4101-194 Revision: 0 Page 3

JPM Information

System:

N/A

Task:

73443 - SOER 01-1 Rec. 5 - Radiation protection training and retraining for plant personnel should include a review of selected industry events involving large, unplanned exposures and the responsibility of individuals for the prevention of such events.

References: Required (R) / Available (A)

MRP12, Authorization To Exceed Dose Control Thresholds(R)

Tools and Equipment Required:

Form MRP12001

Initial Conditions:

- You are an SRO on shift.
- An LNO on your shift, Ronald L. Price, must enter the N. RWCU Pump Room to perform an inspection of G33-F013A, North RWCU Pump Discharge Isolation Valve.
- Ron's SSN is 123-45-6789.
- Ron will be working between the lead blanket and the pump casing to inspect the valve.
- The estimated time to perform the inspection is 6 minutes.
- It would take longer to install more shielding than for Ron to perform the work.
- Ron's current exposure for the year is 1753 mrem TEDE.
- The situation is NOT an emergency, but there is no alternative to performing the inspection.
- NO other individuals are available to perform the inspection.

Initiating Cue(s):

Refer to the survey map of the North RWCU Pump Room to determine the total projected Accumulated Dose for the LNO and determine if a Fermi 2 administrative dose guideline or federal dose limit will be exceeded.

IF you determine that a dose guideline or federal dose limit will be exceeded, then initiate an authorization to exceed a dose control threshold using Form MRP12001 including any approval signatures that are required.

Terminating Cue(s):

Candidate determines that a dose extension is required, initiates authorization to exceed dose control thresholds and determines appropriate approval authority.

Task Standard:

Determination is made that authorization to exceed Fermi 2 Administrative Guidelines is required per MRP 12, Form MRP12001 is initiated, and appropriate Approving Authority is determined.

JPM Title Initiate Authorization to Exceed Dose Control Threshold.	No.: JP-OP-802-4101-194 Revision: 0 Page 4

Licensed Operator Exam Information (required for NRC exams)

Safety Function:

N/A

K/A Reference: (from NUREG 1123)

K/A SYSTEM: Generic

K/A STATEMENT:

2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions. .....3.2 / 3.7

Maintenance Rule Safety Classification:

N/A

Maintenance Rule Risk Significant? (Yes or No)

N/A

PERFORMANCE EVALUATION

Start Time _____

ELEMENT	STANDARD
CUE: Provide candidate with Cue Sheet, survey map of North RWCU Pump Room, and copy of MRP12, including Form MRP12001	
*** 1.** Review survey map and determine dose rate in area of G3300-F013A.	*** 1.** Determines dose rate in area of G3300-F013A to be 6,000 mr/hr.
*** 2.** Calculate projected dose for the inspection.	*** 2.** Calculates Projected Dose = 6/60 hr * 6,000 mr/hr = 600 mr
*** 3.** Calculate projected accumulated dose for the year.	*** 3.** Projected Accumulated Dose = 600 mr + 1753 mr = 2353 mr = 2.353 R
*** 4.** Determine if a Fermi 2 administrative dose guideline or 80% of the federal dose limit will be exceeded.	*** 4.** Determines that the Fermi 2 administrative dose guideline is projected to be exceeded. NOTE: Fermi 2 Admin Guideline = 2 REM/yr TEDE.
*** 5.** Initiate an authorization to exceed dose control thresholds.	*** 5.** Initiates authorization to exceed dose control thresholds (**Form MRP12001**) as follows: • Enters **Ronald L. Price** and **123-45-6789** in Part 1A. **(*Critical)** • Enter the following in Part 1B: o Accumulated dose: **1753 mrem** o Current guideline/limit: **2000 mrem** o Requested dose level: ***NOTE 1*** • In Part 1C, briefly describes the reason for the request and why another worker cannot be substituted to perform the task, or job dose reduced. **NOTE 1**: Requested Dose Level must be between the anticipated projected dose (2353 mrem) and 80% of the Federal Dose Limit (4000 mrem). **2354 to 4000 mrem. (*Critical).**
*** 6.** Determine appropriate approving authority signatures required to exceed the Fermi 2 administrative dose guideline.	*** 6.** Determines that the following signatures are required: • Individual's Section Head. • Radiation Protection Manager. • Plant Manager.
CUE: End JPM when Authorization to Exceed Dose Control Threshold form has been filled out and Approving Authority is determined.	

_____ SATISFACTORY _____ UNSATISFACTORY

Stop Time _____

*** Critical Step**

JPM Title Initiate Authorization to Exceed Dose Control Threshold.	No.: JP-OP-802-4101-194 Revision: 0 Page 6

Evaluator Notes:

The Plant can be in any mode of operation to conduct this JPM.

This JPM may be started at the CRS Desk in the Simulator.

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

Generic Notes and Cues:

None

System Specific Notes and Cues:

None

Task Performance and Cues:

The Elements of this JPM are step by step in accordance with the procedure. The Standard is that the procedure is performed as written. The Cues are as listed above for indication or as each step is completed the appropriate information is reported to the examinee.

Critical Steps:

Critical Tasks are identified by asterisk (*) and **bolded** steps on the cover sheet. Verify that the latest revision of the procedure is used and critical tasks are correctly identified.

JP-OP-802-4101-194 JPM KEY

If any data has been entered, handle form as Confidential.

AUTHORIZATION TO EXCEED DOSE CONTROL THRESHOLDS FORM

PART 1: IDENTIFICATION

A) Higher Dose Guideline Requested for:

Name: Ronald L. Price (*Critical) **SSN:** 123-45-6789 (*Critical)

B) Dose Summary: ☒ Fermi 2 Administrative Dose Guideline
☐ 80% of Federal Dose Limit

		Accumulated Dose (mrem)	Current Guideline/Limit (mrem)	Requested Dose Level (mrem)
☒	TEDE	1753 (*Critical)	2000 (*Critical)	2354 to 4000 (*Critical)
☐	Other Specify:			

C) Extension Justification:

Extension needed to allow inspection of G33-F013A, N RWCU Pump Discharge Isolation Valve. Estimated dose for the job is 600 mrem. It would take longer to install shielding than perform the inspection. There is no alternative to performing the inspection. No other individuals are available to perform the inspection.

D) Individual's Acknowledgement:

_____ Date: _____
print/sign

E) Part 1 Completed By:

Examinees printed name / signature Date: Today's Date
print/sign

PART 2: PROCESSING AND REVIEW (RADIOLOGICAL HEALTH)

A) Form 4 Verified Complete: ☐ Yes ☐ No

B) Comments:

C) Reviewed by Radiological Health Supervision:

_____ Date: _____
print/sign

DTC: TPMMRP DSN: MRP12001 Rev. 4 P1/2 File:1703.22 IP:I Issued: 11/08/2016
DTC: VSRHED DSN: _____ File:1301.02.01 IP: C

JP-OP-802-4101-194 JPM KEY

JP-OP-802-4101-194 JPM KEY

AUTHORIZATION TO EXCEED DOSE CONTROL THRESHOLDS FORM

PART 3: APPROVAL (APPROPRIATE APPROVING AUTHORITY)

A) Approval Signature:

Individual's Section Head: _____ Date: _____
print/sign

Radiation Protection Manager: _____ Date: _____
print/sign

Plant Manager: _____ Date: _____
print/sign

Vice President, Nuclear Generation:
☒ NA _____ Date: _____
print/sign

Comments/Controls

PART 4: INPUT (RADIOLOGICAL HEALTH)

A) Input/Update By:

_____ Date: _____
print/sign

B) Verified By:

Date: _____

C) Radiation Protection Operations Notification:

_____ Date: _____
print/sign

DTC: TPMMRP DSN: MRP12001 Rev. 4 P2/2 File:1703.22

JP-OP-802-4101-194 JPM KEY

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for follow-up question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Simulator Setup

IC#:

N/A

Malfunctions:

Number	Title	Value	Delay	Ramp
None				

Remote Functions:

Number	Title	Value	Delay	Ramp
None				

Override Functions:

Number	Title	Value	Delay	Ramp
None				

Special Instructions:

Cue Sheet: (JP-OP-802-4101-194)

Initial Conditions:

- You are an SRO on shift.
- An LNO on your shift, Ronald L. Price, must enter the N. RWCU Pump Room to perform an inspection of G33-F013A, North RWCU Pump Discharge Isolation Valve.
- Ron's SSN is 123-45-6789.
- Ron will be working between the lead blanket and the pump casing to inspect the valve.
- The estimated time to perform the inspection is 6 minutes.
- It would take longer to install more shielding than for Ron to perform the work.
- Ron's current exposure for the year is 1753 mrem TEDE.
- The situation is NOT an emergency, but there is no alternative to performing the inspection.
- NO other individuals are available to perform the inspection.

Initiating Cue(s):

Refer to the survey map of the North RWCU Pump Room to determine the total projected Accumulated Dose for the LNO and determine if a Fermi 2 administrative dose guideline or federal dose limit will be exceeded.

IF you determine that a dose guideline or federal dose limit will be exceeded, then initiate an authorization to exceed a dose control threshold using Form MRP12001 including any approval signatures that are required.

Fermi 2-Radiation Protection
Radiological Survey

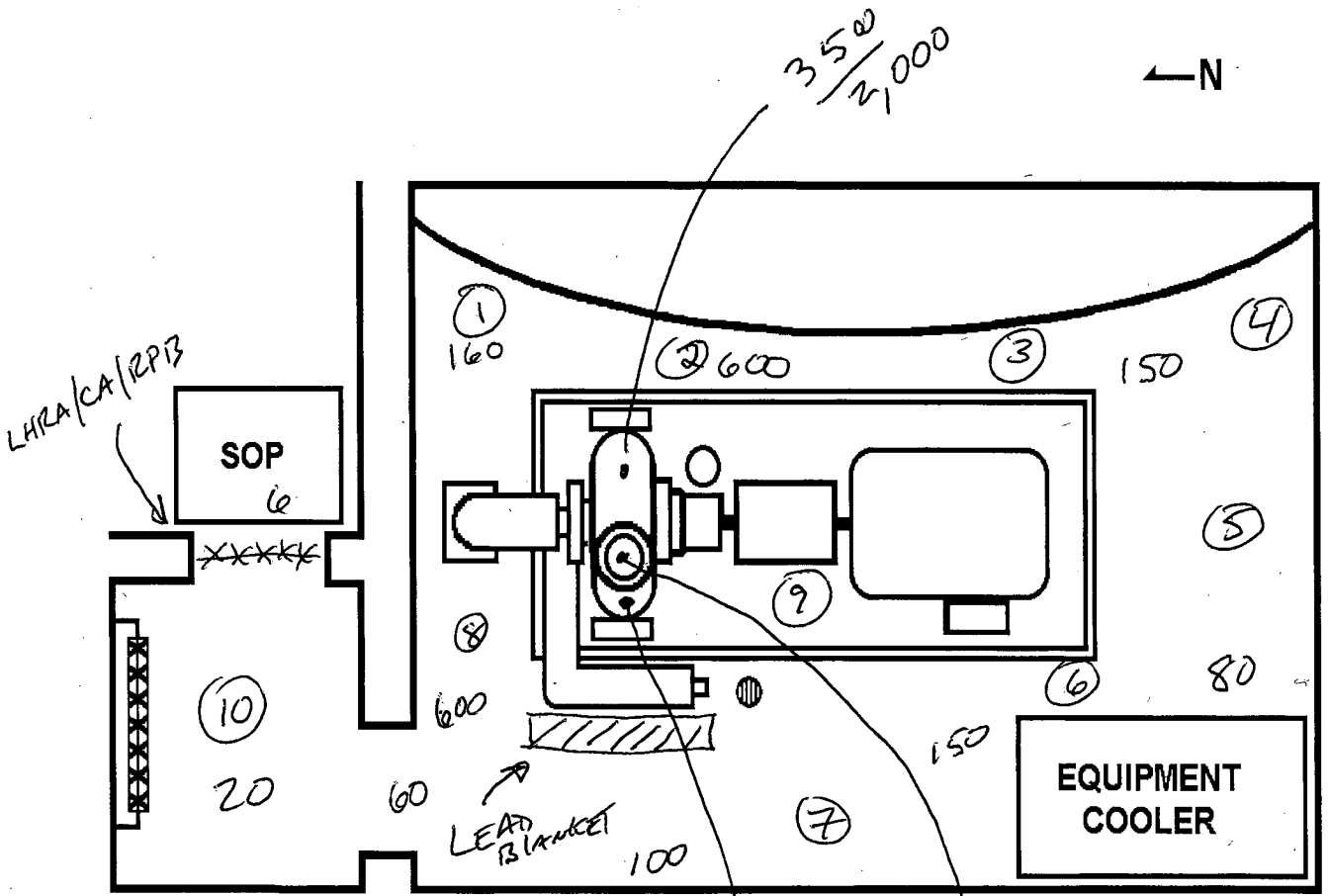
Detroit Edison

FOR TRAINING USE ONLY

Area(s)	RWP. No.	Continuous coverage	Yes / No
RB-2 N. RWCU Pump Room	R-1003	Survey Posted	Yes / No
Purpose VALVE CODE G3300-F013A	Date 2/19/19	HWC 12	SCFM
Survey by (Print/Sign) Kevin Schulz	Time 1030	Reactor Power 100	%
		Surveyor's Dose 27.1	mrem

Survey No. 00467-1219 Page 1 of 1

	Location	Contamination (dpm/100cm²) Beta/gamma	Alpha
1	SEE MAP	2K	N/A
2		35K	N/A
3		1K	
4		45K	
5		6K	
6		6K	
7		10K	
8		30K	
9		40K	
10		10K	



G3300-F013A

NORTH REACTOR WATER CLEAN-UP PUMP ROOM **R-2-8A**

40,000 / 6,000

Unless otherwise noted, all dose rate readings are in the following units: Gamma (mR/hr), Beta (mRad/hr), Neutron (mrem/hr).

All smears not listed are <1000dpm/100cm²

Instruments

Type	Serial No.	Cal. Due
9-3	322796	8/19
TELEPOLE	6604-039	8/19
L2000	281372	8/19
177	245664	9/19

Air Sample No.	Results	
	N/A Uci/ml	DAC

Reviewed by | Date 2/19/19

FOR TRAINING USE ONLY

JOB PERFORMANCE MEASURE

Job Position SRO	No. JP-OP-173-1002-181	Revision 0
JPM Title Determine Immediate Notification Requirements for Reportable Events - SRO Only	Duration 22 minutes*	Page 1

*2 times Duration for ILO Exams

Examinee: _____ SRO

Evaluator: _____

Validating Representatives Name: Phil Heuker

JPM Type: **Normal** / Alternate Path / Time Critical

Evaluation Method: **Perform** / Walkthrough / Discuss

Location: Plant / **Simulator** / **Classroom**

Start Time _____

Stop Time _____

Total Time: _____

PERFORMANCE EVALUATION SUMMARY											
Element	S	U	Comment	Element	S	U	Comment	Element	S	U	Comment
1.											
2.											
3.											
4.											
5.											
* **6.**											
* **7.**											
8.											

OPERATOR FUNDAMENTALS OBSERVATION				
Monitor operator fundamentals during the JPM set. Rate each area based on the criteria by placing a checkmark in the appropriate column. Indicate the comment number associated with the observation.				
Operator Fundamental	**Meets all Expectations**	**Opportunity for Improvement**	**Does not meet Expectations**	**Comment Number**
Monitoring				
Control				
Conservatism				
Teamwork				
Knowledge				

OVERALL EVALUATOR COMMENTS: _____

_____

_____

REMEDIAL CONTENT: _____

_____ **PASS** _____ **FAIL**

Evaluator Signature / Date: _____ / _____

JPM Observation Criteria

Fundamental	Meets all Expectations	Opportunity for Improvement	Does not meet Expectations
Monitoring	Equipment status monitored at proper frequency, using multiple means if available. Understood which indications were critical.	Some monitoring was performed but undue focus on task or lack of system knowledge prevented ideal monitoring.	Did not recognize key equipment status indicators, too much focus on single indications and ignored total system status.
Control	Task preview used to prepare for job. Aware of control bands and maintained them. Configuration control maintained.	Adequate control of system maintained throughout task but some improvements could be made such as better manual control or greater depth of knowledge for anticipating system response.	No anticipation of results of actions. Unaware or control bands or not able to maintain them. Lack of knowledge of how to control system parameters.
Conservatism	Low threshold for identification of problems. Questioning attitude. Uses “stop when unsure” if needed. Sensitive to nuclear safety.	Some opportunities existed to question before proceeding, High focus on task completion without consideration for other system affects.	Proceeds even when unsure with unanswered questions. High threshold for problem conditions.
Teamwork	Routinely communicates system status changes to the team. Communicates actions before taking them.	Communicated most status and actions. Some improvement would be warranted.	Routinely takes action without informing the team.
Knowledge	Able to anticipate system response based on solid system knowledge. Good working knowledge of generic fundamentals to predict and monitor system response.	Plant, system, or generic fundamental knowledge has some gaps.	Unable to predict system response, unsure of generic fundamentals concepts related to plant operation. Only relied on procedure for operating knowledge.

JPM Title Determine Immediate Notification Requirements for Reportable Events - SRO Only	No.: JP-OP-173-1002-181 Revision: 0 Page 2

JPM Information

System:

N/A

Task:

01A0001004 - Determine immediate notification requirements for reportable events.

References: Required (R) / Available (A)

MLS05 (R), Grrr List (A), MLS05004 (R), Laminated table of Immediate Notification Requirements from the Grrr List (R).

Tools and Equipment Required:

N/A

Initial Conditions:

You are an extra SRO on shift.

The plant was operating at 100% power when a plant transient and the following conditions occurred:

- Both RFPs tripped.
- The mode switch was placed in S/D by the operators due to lowering level prior to an automatic scram.
- The lowest RPV level recorded was 95".
- HPCI automatically injected for 45 seconds and was secured prior to reaching Level 8.
- RCIC automatically started and injected.
- RPV level is currently being maintained in the normal band using RCIC.

The event occurred 1 hour ago and plant conditions are stable.

Initiating Cue(s):

The Shit Manager has directed you to evaluate the event in accordance with MLS05 and determine if any Immediate Notifications are required.

Document your results on form MLS05004 and provide to the Shift Manager for review.

Terminating Cue(s):

MLS05004 is filled out and provided to the Shift Manager for review.

Task Standard:

Determine immediate notification requirements for reportable events.

JPM Title Determine Immediate Notification Requirements for Reportable Events - SRO Only	No.: JP-OP-173-1002-181 Revision: 0 Page 3

Licensed Operator Exam Information (required for NRC exams)

Safety Function/Category:

11 - Abnormal Plant Evolutions

K/A Reference: (from NUREG 1123)

K/A SYSTEM: 2.4 – Emergency Procedures / Plans

K/A STATEMENT:

2.4.30 Knowledge of events related to system operation/status that must be reported to internal organizations or external agencies, such as the State, the NRC, or the transmission system operator ..... 2.7 / 4.1

Maintenance Rule Safety Classification:

N/A

Maintenance Rule Risk Significant? (Yes or No)

N/A

JPM Title Determine Immediate Notification Requirements for Reportable Events - SRO Only	No.: JP-OP-173-1002-181 Revision: 0 Page 1

PERFORMANCE EVALUATION

Start Time _____

ELEMENT		STANDARD	
CUE:	**Provide examinee with Cue Sheet.**		
1.	Locate and obtain a copy of MLS05, Notifications/General Regulatory Reporting Requirements.	1.	Obtains a copy of MLS05, Notifications/General Regulatory Reporting Requirements.
2.	Review plant conditions from Cue Sheet.	2.	Reviews events from Cue Sheet.
3.	Compare conditions to the requirements of MLS05 and the GRRR List.	3.	Refers to MLS05 Section 4.1 and the GRRR List.
4.	Obtain a copy of form MLS05004.	4.	Obtains a copy of Form MLS05004.
CUE:	**When examinee locates MLS05004, provide examinee with pink copy.**		
5.	Evaluate for 1-hour, Non-Emergency reporting requirements in accordance with 10CFR50.72(b)(1).	5.	Determines that a 1-hour report is NOT required.
*** 6.**	Evaluate for 4-hour reporting requirements in accordance with 10CFR50.72(b)(2).	*** 6.**	Determines that a 4-hour report is required per **BOTH** 10CFR50.72 paragraphs below: • 50.72(b)(2)(iv)(A) due to the ECCS (HPCI) discharge to the RCS. And • 50.72(b)(2)(iv)(B) due to the RPS Actuation (scram).
*** 7.**	Evaluate for 8-hour reporting requirements in accordance with 10CFR50.72(b)(3).	*** 7.**	Determines that an 8-hour report is required per 10CFR50.72(b)(3)(iv)(A) due to a Specified System Actuation (HPCI, RCIC).
8.	Complete Form MLS05004 for the event and provide to Shift Manager for review.	8.	Completes Form MLS05004 and provides to Shift Manager for review.
NOTE:	**A sample copy of MLS05004 is provided with this JPM for use by the evaluator.**		
CUE:	**End JPM when form MLS05004 is handed to the Shift Manager for review.**		

_____ SATISFACTORY _____ UNSATISFACTORY

Stop Time _____

*** Critical Step**

JPM Title Determine Immediate Notification Requirements for Reportable Events - SRO Only	No.: JP-OP-173-1002-181 Revision: 0 Page 2

Evaluator Notes:

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

FAILURE TO WEAR ALL PPE REQUIRED FOR TASK PERFORMANCE WILL RESULT IN FAILURE OF THIS JPM.

Generic Notes and Cues:

None

System Specific Notes and Cues:

None

Task Performance and Cues:

The Elements of this JPM are step by step in accordance with the procedure. The Standard is that the procedure is performed as written. The Cues are as listed above for indication or as each step is completed the appropriate information is reported to the examinee. Notify Examinee that time compression may be used for activities performed outside of the Control Room. Notify Examinee if JPM is Time Critical (only if JPM is **NOT** Alternate Path.)

Critical Steps:

Critical Tasks are identified by asterisk (*) and **bolded** steps on the cover sheet. Verify that the latest revision of the procedure is used and critical tasks are correctly identified.

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for follow-up question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Cue Sheet: (JP-ER-173-1002-181)

Initial Conditions:

You are an extra SRO on shift.

The plant was operating at 100% power when a plant transient and the following conditions occurred:

- Both RFPs tripped.
- The mode switch was placed in S/D by the operators due to lowering level prior to an automatic scram.
- The lowest RPV level recorded was 95".
- HPCI automatically injected for 45 seconds and was secured prior to reaching Level 8.
- RCIC automatically started and injected.
- RPV level is currently being maintained in the normal band using RCIC.

The event occurred 1 hour ago and plant conditions are stable.

Initiating Cue(s):

The Shit Manager has directed you to evaluate the event in accordance with MLS05 and determine if any Immediate Notifications are required.

Document your results on form MLS05004 and provide to the Shift Manager for review.

KEY: Critical Task Elements are denoted with *

FERMI 2 EVENT NOTIFICATION WORKSHEET

Message No.: 1

Notification Time: current time Facility: FERMI 2 Name of Caller: examinee name Call Back No.: number on phone

Event Time & Zone: 1 hour ago Event Date: today's date Power/Mode Before: MODE 1 Power/Mode After: MODE 3

Event Classifications		1-Hr. Non-Emergency 10CFR50.72(b)(1)		(v)(A) Safe S/D Capability	AINA
☐ General Emergency	GEN/AAEC	☐ TS Deviation	ADEV	☐ (v)(B) RHR Capability	AINB
☐ Site Area Emergency	SIT/AAEC	**4 Hr. Non-Emergency 10CFR50.72(b)(2)**		☐ (v)(C) Control of Rad Release	AINC
☐ Alert	ALE/AAEC	☐ (i) TS Required S/D	ASHU	☐ (v)(D) Accident Mitigation	AIND
☐ Unusual Event	UNU/AAEC	* ☒ (iv)(A) EECS Discharge to RCS	ACCS	☐ (xii) Offsite Medical	AMED
* ☒ 50.72 Non-Emergency	(see next columns)	* ☒ (iv)(B) RPS Actuation (scram)	ARPS	☐ (xiii) Loss Comm/Asmt/Resp	ACOM
☐ Physical Security (73.71)	DDDD	☐ (xi) Offsite Notification	APRE	**60-Day Optional 10CFR50.73(a)(1)**	
☐ Material/Exposure	B????	**8 Hr. Non-Emergency 10CFR50.72(b)(3)**		☐ Invalid Specified Sys Actuation	AINV
☐ Fitness for Duty	HFIT	☐ (ii)(A) Degraded Condition	ADEG	**Other Unspecified Req. (Identify)**	
☐ Other Unspecified Req.	(see last column)	☐ (ii)(B) Unanalyzed Condition	AUNA	☐	NONR
☐ Information Only	NNF	* ☒ (iv)(A) Specified System Actuation	AESF	☐	NONR

Event Description

Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc. (Cont. on p. 2)

A plant transient occurred at the Fermi 2 site from 100% power (MODE 1). The plant transient resulted in an automatic scram and trip of the Reactor Protection System (RPS) due to trip of both Reactor Feedwater Pumps. Automatic start and injection of the High Pressure Coolant System (HPCI) and Reactor Core Isolation Cooling System (RCIC) occurred. RPV level is currently in the normal control band using RCIC. HPCI has been shut down. Plant conditions are currently stable.

Anything Unusual or Not Understood? ☐ Yes (Explain above) ☒ No **Did all Systems Function as Required?** ☒ Yes ☐ No (Explain above)

Mode of Operation Until Corrected: MODE 3 Estimated Restart Date: Unknown Additional Information on Back? ☐ Yes ☒ No

Approved: (Shift Manager Initials/Director – Operations Signature) _____

Notifications

NRC Resident	☐ Yes	☐ No	☐ Will Be	Nuclear Information	☐ Yes	☐ No	☐ Will Be
State(s)	☐ Yes	☐ No	☐ Will Be	Licensing	☐ Yes	☐ No	☐ Will Be
Local	☐ Yes	☐ No	☐ Will Be	Director - Operations	☐ Yes	☐ No	☐ Will Be
Other Gov Agencies	☐ Yes	☐ No	☐ Will Be	Plant Manager	☐ Yes	☐ No	☐ Will Be
Media/Press Release	☐ Yes	☐ No	☐ Will Be	Other _____	☐ Yes	☐ No	☐ Will Be

FERMI 2 EVENT NOTIFICATION WORKSHEET

Additional Information

Radiological Releases: Check or Fill in Applicable Items (specific details/explanations should be covered in event description)

☐ Liquid Release ☐ Gaseous Release ☐ Unplanned Release ☐ Planned Release ☐ Ongoing ☐ Terminated

☐ Monitored ☐ Unmonitored ☐ Offsite Release ☐ ODCM Exceeded ☐ RM Alarms ☐ Areas Evacuated

☐ Personnel Exposed or Contaminated ☐ Offsite Protective Actions Recommended *State release path in description

	Release Rate (Ci/sec)	% ODCM Limit	HOO Guide	Total Activity (Ci)	% T.S. Limit	HOO Guide
Noble Gas						
Iodine						
Particulate						
Liquid (excluding tritium and dissolved noble gases)						
Liquid (tritium)						
Total Activity						

	Plant Stack	Condenser/ Air Ejector	Main Steam Line	Other
Rad Monitor Readings				
Alarm Setpoints				
%ODCM Limit (if applicable)				

RCS Leaks: Check or Fill in Applicable Items: (specific details/explanations should be covered in event description)

Location of the Leak (e.g. valve, pipe, etc.): _____

Leak Rate: _____ Units (gpm/gpd): _____ T.S. Limits: _____ Sudden or Long-Term Development: _____

Leak Start Date: _____ Leak Start Time: _____

Coolant Activity and Units: Primary: _____ Secondary: _____

List of Safety Related Equipment not Operational: _____

Event Description (Continued from Page 1)