Facility: **Calvert Cliffs 1&2** Job Performance Measure No.: **2008-RM**

Task Title: **Determine if a reportable event has occured**

Task Number: **204.025**

K/A Reference: **2.1.18 (3.6, 3.8)**

Method of testing:

Simulated Performance: ___√___ Actual Performance: _____

Classroom: ___√_____ Simulator: _____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. **During a refueling outage an unbadged contractor was found wandering around in the Turbine Building. It has been determined that this individual had not completed Plant Access Training.**
2. **Security has escorted the individual offsite.**
3. **A condition report has been initiated and a prompt investigation is in progress.**
4. **The Shift Manager has asked you to evaluate this condition for possible reportability**

Initiating Cue:

The Shift Manager ask you to evaluate this condition for possible reportability. Are there any questions? You may begin.

Task Standard:

The JPM is complete when the conditions have been analyzed to determine that a 1-hour reportable event has occurred under Safeguards Events. The evaluator is expected to end the JPM. No further actions are required.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Procedures and manuals normally available in the control room**
2. **CR documenting the condition**

General References:

1. **CNG-NL-1.01-1004**

Time Critical Task:

Yes

Validation Time:

20 minutes

Simulator Setup:

NONE

ELEMENT (* = CRITICAL STEP)		STANDARD
TIME START _____		
_____	Review CR conditions.	Same as element.
_____	Refer to CNG-NL-1.01-1004	Same as element
_____*	Review Attachment 2 of CNG-NL-1.01-1004	Determines **that the condition is a 1 Hour reportable event under 73.71(b)(1) – (b).**

TIME STOP _____

Examiner Note:	The JPM is complete when it is determined that a 1 Hour reportable even has occurred under 73.71(b)(1) –(b.)

Verification of Completion

Job Performance Measure Number: **2008-RM**

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

_____

_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

1. During a refueling outage an unbadged contractor was found wandering around in the Turbine Building. It has been determined that this individual had not completed Plant Access Training.
2. Security has escorted the individual offsite.
3. A condition report has been initiated and a prompt investigation is in progress.
4. The Shift Manager has asked you to evaluate this condition for possible reportability

INITIATING CUE:

The SM directs you to evaluate this condition for reportability.

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.:**2008-AOP7H**

Task Title: **Determine the New Power Ratio Recorder Potentiometer setting with the plant computer failed**

Task Number: **202.089**

K/A Reference: **K/A 015 A3.03 (3.9, 3.9)**

Method of testing:

Simulated Performance: _____ Actual Performance: √

Classroom: √ Simulator: _____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. **Unit 1 has been operating at 100% for 6 months.**
2. **The plant computer has failed and rebooting efforts have been unsuccessful so far. DAS is Inoperable.**
3. **The current highest excore NI reading is 99.2%.**
4. **CECOR is not available. Reactor Engineering reports a measured value of FxyT of 1.521**
5. **Axial Shape Index is at +0.02**
6. **The Power Ratio Recorder is Operable**

Initiating Cue:

You are directed to perform AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Step IV.D.2.d and fully complete AOP-7H, Attachment 4.

Task Standard:

Determine Power Ratio recorder new alarm setpoints.

Evaluation Criteria:

1. **All critical steps completed.**

2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Calculator**
2. **AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Revision 22**
3. **Blank AOP-7H Attachment 2**
4. **NEOP-23, "Technical Data Book", Revision 22**

General References:

1. **AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Revision 22 (pages 16 of 25 and Attachment 4**
2. **NEOP-23, "Technical Data Book", Revision 22 (pgs 75-76 of 81)**

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

None

TIME START _____

_____	Identify and locate AOP-7H, Step IV.D.2.d.	Same as element.

CAUTION :The Power Ratio Calculator is NOT operable below 20% RTP.

CUE: Power Ratio Recorder is operable

_____*	d. **IF** the Power Ratio Recorder operable,**THEN** perform the following: (1) Calculate the power ratio recorder alarm setpoints **PER** ATTACHMENT (4), POWER RATIO RECORDER ALARM SETPOINTS. (2) Adjust the Power Ratio Recorder to the new alarm setpoints.	Refers to attachment 4
_____	1. Select and indicate the appropriate Power vs ASI figure based on the following:	
_____*	**IF** the DAS is out of service, **THEN** use the "assumed FxyT curve" of NEOP-13, Figure 1-IV.A.1, **OR** For Unit 2, NEOP-23, Figure 2-IV.A.1.	Determines that this step is applicable and refers to NEOP-13 Figure 1-IV.A.1
_____*	**IF** the DAS is in service, **THEN** use NEOP-13, Figure 1-IV.A.2, **OR** For Unit 2, NEOP-23, Figure 2-IV.A.2.	Determines this step is NOT applicable
_____*	2. Record the (+) and (-) ASI Limits (Y_I) and associated thermal power from the appropriate figure. Thermal Power Limit_____ Y_I (+) Y_I (-) _____	Records the following on Attachment 4: Y_I (+) = 0.10 Y_I (-) = - 0.06
_____*	3. Convert the Internal ASI Limits (Y_I) to external ASI Limits (Y_E) for the appropriate unit. For Unit 1: Y_E = Y_I divided by the Shape Annealing Factor. Y_E (+) = [Y_I (+)] divided by 2.51 = Y_E (-) = [Y_I (-)] divided by 2.51=	Records following values on Attachment 4. • Y_E (+) = 0.03984 • Y_E (-) = 0.0239

_____* 4. Calculate the deviation (D).
D = Y_E (+) minus Y_E (-) divided by 2
= [Y_E (+)____ minus Y_E (-)____] divided by 2.=

Records following values on Attachment 4:

- D =0.03185

_____* 5. Calculate the Power Ratio Deviation Adj pot setting (DPS)
DPS = D multiplied by 2 = ____

Records following values on Attachment 4:

DPS =0.0637

_____* 6. Calculate the setpoint (S).
S = Y_E (+) minus D =

Records following values on Attachment 4:

S =0.00795

_____* 7. Calculate the Power Ratio Setpoint Adj pot setting (SPS)
SPS = S plus 0.3 =

Records following values on Attachment 4:

SPS = .30795

TIME STOP _____

Examiner Note:	The task is complete when the applicant has filled in AOP-7H, Attachment 4.

Verification of Completion

Job Performance Measure Number: 2008- AOP7H

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

_____

_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

1. Unit 1 has been operating at 100% for 6 months.
2. The plant computer has failed and rebooting efforts have been unsuccessful so far. DAS is Inoperable.
3. The current highest excore NI reading is 99.2%.
4. CECOR is not available. Reactor Engineering reports a measured value of FxyT of 1.521
5. Axial Shape Index is at +0.02
6. The Power Ratio Recorder is Operable

INITIATING CUE:

You are directed to perform AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Step IV.D.2.1.3 and fully complete AOP-7H, Attachment 4

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.: **2008-RCP**

Task Title: **Determine if RCP restart criteria are satisfied**

Task Number: **201.028**

K/A Reference: **2.2.44 (4.2, 4.4)**

Method of testing:

Simulated Performance: _____ Actual Performance: ___√___

Classroom: _____ Simulator: ___√_____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. **A station blackout resulted in a reactor trip on Unit-1.**
2. **Offsite power has been restored to Unit-1 and it is desired to restart RCPs.**
3. **Component cooling has been restored and RCP seal parameters appear satisfactory.**
4. **You are performing the duties of the Unit-1 CRO/RO.**

Initiating Cue:

The CRS directs you to perform Block Step AA, Evaluate Restoring Forced Circulation, of EOP-7 to determine if RCP restart criteria are satisfied. Are there any questions? You may begin.

Task Standard:

Determine that the current plant conditions and RCP parameters allow the RCPs to be restarted.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Procedures and manuals normally available in the control room**

General References:

1. **EOP-7**
2. **OI-1A**

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

1. Reset the simulator IC-11 (MOC Hot Standby)
2. Secure All RCPs
3. Secure Condensate & Main Feed System & Start 11 or 12 AFW Pump
4. Establish Aux Feed to 11 & 12 S/Gs
5. Use Malfunction to lower Condenser Vacuum to Zero
6. Open ADVs to establish Tcold at 530°F
7. Freeze simulator

TIME START _____

____	Locates and identifies EOP-7, Block Step AA.	Same as element.

CUE:	The CRS has directed to evaluate and restart a RCP. CRS directs to start 11A or 11B RCP, preference is 11A.

____	1.	**WHEN** 500KV offsite power is restored, **THEN** evaluate the need and desirability of restarting RCPs based on the following:	
		• Adequacy of RCS and Core Heat Removal using natural circulation	Determines it is more desirable to use forced circulation.
		• Existing RCS pressure and temperatures	Verifies RCS pressure and temperatures per pump curves (OI-1A or EOP Attachments).

CUE:	**If asked the highest Controlled Bleed-off temperature is on 11A RCP at 201°F and stable.**

		• RCP Controlled Bleed-off temperatures	Looks at Controlled Bleed-off temperatures on Plant Computer.
____*		Evaluates 11A and 11B RCP seal temperatures	Determines that 11A RCP cannot be restarted, informs CRS
____	2.	**IF** RCP operation is **NOT** desired,	Determines step is N/A.

CUE:	When checked or asked: RCS T_{COLD} is 524°F.

____	3.	**IF** T_{COLD} is less than 369°F, **THEN** restart the RCPs **PER** OI-1A Reactor Coolant System and Pump Operations.	Checks T_{COLD} indications, on 1C06, and determines that T_{COLD} is greater than 369°F.

CUE:	SM has determined meggering is not necessary.

____	4.	**IF** RCPs have been exposed to excessive moisture,	No action required.

CAUTION: If an RCP Controlled Bleed-off temperature exceeds 250°F, the affected seal must be rebuilt before the RCP can be operated. Do NOT restart ANY RCP whose Controlled Bleed-off temperature has exceeded 250°F

CUE: When checked or asked: Highest recorded RCP Controlled Bleed-off temperature was 242°F on 11B RCP.

____ 5. Check Controlled Bleed-off temperatures for the RCPs to be restarted have **NOT** exceeded 250°F.

Asks which RCPs are to be restarted and refers to step Q of EOP-7 for bleed-off temperature data or asks the CRS.

CUE: When checked or asked: 11B RCP Controlled Bleed-off temperature is 192°F and lowering.

____ 6. Verify RCP Controlled Bleed-off temperatures are less than 200°F or are lowering.

Checks control bleed-off temperatures indication on plant computer.

CUE: When checked or asked, Pressurizer level is 167" and stable.

____ 7. Raise Pressurizer level to between 155 and 180 inches.

Checks the strip chart and level indication, on 1C06, to determine pressurizer level.

CUE: When checked or asked: RCS T_{COLD} is 535°F. After ADV operation RCS T_{COLD} is <525°F.

*____ 8. Reduce T_{COLD} to less than 525°F.

Operates ADVs to reduce T_{COLD} to less than 525°F.

____ 9. Verify RCP restart criteria are met by **ALL** of the following:

CUE: When checked or asked: 12 13KV Bus is energized and RCP FDR BKR is closed. 12 13KV Bus voltage is 14.7KV.

____ • Verify electrical power is available to the RCPs.

- RCP BUS
- MCC-115 (ALL RCPs)
- MCC-105 (11A/11B RCP)

Checks that 13KV Bus is energized and either the normal or alternate RCP feeder breaker shut.

____ • 12/22 SERV BUS VOLTS is less than 14.8 KV.

Checks 12/22 SERV BUS volts are less than 14.8 at 1C19.

CUE: When checked or asked, 4KV bus voltage is 4200 volts.

____ • 4KV Vital Bus voltage is greater than 4100 volts.

Checks 11 and 14 4KV Bus voltage indication, on 1C18 and 1C19.

CUE: When checked or asked, highest RCP Controlled Bleed-off temperature for 11A RCP is 201°F and stable, and for 11B RCP 192°F and lowering.

____ • RCP Controlled Bleed-off

Checks Controlled Bleed-off

temperatures are less than 200°F.

temperature indications on the plant computer.

CUE: When checked or asked, highest CET temperature 550°F, RCS pressure 2100 PSIA, CET subcooling 92°F.

____ • RCS subcooling is greater than 30°F based on CET temperatures.

Determines that subcooling is ~92°F by either using the steam tables or checking CET subcooling indication, on 1C05.

CUE: When checked or asked, both S/Gs are available for heat removal.

____ • At least ONE S/G is available for heat removal.

- S/G level greater than (-) 170 inches
- capable of being supplied with feedwater
- capable of being steamed

Checks S/G level, ADV status and auxiliary feedwater status, on 1C03 and 1C04, to determine that both S/Gs are available for heat removal.

CUE: When checked or asked, Pressurizer level 160" and steady.

____ • Pressurizer level is greater than 155 inches and **NOT** lowering.

Checks Pressurizer level indication, on 1C06, (1-LI-110X(Y) or digital) to determine pressurizer level at 160 and steady.

CUE: When checked or asked, T_{COLD} is 520°F.

____ • T_{COLD} is less than 525°F.

Checks T_{COLD} indication, on 1C06, to determine T_{COLD} to be 520°F.

CUE: When checked or asked, RCS temperature is 550°F and RCS pressure is 2100 PSIA.

*____ • RCS temperature and pressure are greater than the minimum operating limits **PER** ATTACHMENT (1), RCS PRESSURE TEMPERATURE LIMITS, for the pumps to be started.

Refers to Attachment (1) and determines that RCS pressure is greater than the minimum required and 11B RCP can be started.

TIME STOP _____

Examiner Note: The JPM is complete when it is determined that all RCP restart criteria are met for 11B RCP. No further actions are required.

Verification of Completion

Job Performance Measure Number: **2008-RCP**

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

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_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

a. A station blackout resulted in a reactor trip on Unit-1.

b. Offsite power has been restored to Unit-1 and it is desired to restart RCPs.

c. Component cooling has been restored and RCP seal parameters appear satisfactory.

d. You are performing the duties of the Unit-1 CRO/RO.

INITIATING CUE:

The CRS directs you to perform Block Step AA, Evaluate Restoring Forced Circulation, of EOP-7 to determine if RCP restart criteria are satisfied. Are there any questions? You may begin.

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.: **2008-RAD**

Task Title: **Review an RWP prior to entry into an RCA**

Task Number: **NA**

K/A Reference: **2.3.10**

Method of testing:

Simulated Performance: _____ Actual Performance: ___√___

Classroom: _____ Simulator: _____ Plant: ___√_____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. Your IN-Plant NRC Exam Walkthrough is in progress. You are about to perform a JPM in the RCA. You are escorting an NRC Examiner

Initiating Cue:

Review the applicable RWP with your NRC Examiner to ensure that both of you understand the entry requirements and any associated restrictions

Task Standard:

This JPM is complete all RWP requirements have been read understood and complied with

.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Procedures and manuals normally available in the plant**

General References:

1. **RWP-2008-0002 Rev 0**
2. **Survey MAP for 27' AUX BLDG Unit-1 MSIV Room**

Time Critical Task:

No

Validation Time:

5 minutes

Simulator Setup:

NONE

JOB PERFORMANCE MEASURE 2008-RAD

ELEMENT (* = CRITICAL STEP)	STANDARD
TIME START _____	
CUE: You are Escorting an NRC Examiner into the RCA	
IF This is performed in the classroom, provide the candidate with the RWP # 2008-002:	Reviews RWP
IF an RWP ws provided to the candidate in the classroom, then step 1 is not a critical step	
_____* 1. Candidate obtains his TLD from the carosel on the 72' level of the Auxiliary Building	
_____* 2. Candidate refers to the proper RWP outside the RP office on the 72' level of the Auxiliary Building	Locates the Ops RWP 2008-0002 Rev 0
_____* 3. Locates task to be performed under the RWP	Determines MO for general rounds
_____* 3. Reviews RWP for specific PC requirements associated with entry under this task	For general rounds no specific PC are specified
_____* 4. Reviews RWP for specific dosimetry requirements associated with entry under this task	Determines that EPD is required
_____* 5. Reviews survey sheet for specific areas to be entered	Locates appropriate survey map and verifies contamination and radiation levels require no special restrictions to enter
_____* 6. Candidate applies 200% accountability to the person(s0 he is escorting into the RCA	Ensure the NRC examiner has the required dosimetry and understands the requirements for entry into the RCA
_____* 7. Logs into the ACW using appropriate self checking and complies with instructions on the ACW screen.	Verifies proper HP ID no in EPD and logged into the correct MO
_____* 8. Checks in with Radiation Protection at the RP office window and practice 200 % accountability rules for entering the RCA	Idenitifies what job is to be performed, the location of the job, under which RWP the job is being worked using 3- way communication
TIME STOP _____	
TERMINATING CUE: This JPM is complete when candidate has met all requirements listed above for entering the RCA, evaluator will terminate this JPM.	

Verification of Completion

Job Performance Measure Number: **2008-RAD**

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

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Applicant Response: _____

_____

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_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

Initial Conditions:

Your In-Plant NRC Exam Walkthrough is in progress. You are about to perform a JPM in the RCA. You are escorting an NRC Examiner

INITIATING CUE:

Review the applicable RWP with your NRC Examiner to ensure that both of you understand the entry requirements and any associated restrictions.

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.:**2008-AOP7H-SRO**

Task Title: **Review the new Power Ratio Recorder Setpoints**

Task Number: **202.089**

K/A Reference: **K/A 015 A3.03 (3.9, 3.9)**

Method of testing:

Simulated Performance: _____ Actual Performance: ___√___

Classroom: ___√___ Simulator: _____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. **Unit 1 has been operating at 100% for 6 months.**
2. **The plant computer has failed and rebooting efforts have been unsuccessful so far. DAS is Inoperable.**
3. **The current highest excore NI reading is 99.2%.**
4. **CECOR is not available. Reactor Engineering reports a measured value of FxyT of 1.521**
5. **Axial Shape Index is at +0.02**
6. **The Power Ratio Recorder is Operable**

Initiating Cue:

The RO has calculated New Power Ratio recorder alarm setpoints and you are doing the SRO check as required .

Task Standard:

Check the Power Ratio recorder new alarm setpoints.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Calculator**
2. **AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Revision 22**
3. **Blank AOP-7H Attachment 2**
4. **NEOP-23, "Technical Data Book", Revision 22**

General References:

1. **AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Revision 22 (pages 16 of 25 and Attachment 4**
2. **NEOP-23, "Technical Data Book", Revision 22 (pgs 75-76 of 81)**

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

None

TIME START _____

_____	Identify and locate AOP-7H, Step IV.D.2.d.	Same as element.

CAUTION :The Power Ratio Calculator is NOT operable below 20% RTP.

CUE: Power Ratio Recorder is operable

Cue: Obtain completed copy of Attachment (4)

_____*	d. **IF** the Power Ratio Recorder operable,**THEN** perform the following: (1) Calculate the power ratio recorder alarm setpoints **PER** ATTACHMENT (4), POWER RATIO RECORDER ALARM SETPOINTS. (2) Adjust the Power Ratio Recorder to the new alarm setpoints.	Refers to attachment 4
_____	1. Select and indicate the appropriate Power vs ASI figure based on the following:	
_____*	**IF** the DAS is out of service, **THEN** use the "assumed FxyT curve" of NEOP-13, Figure 1-IV.A.1, **OR** For Unit 2, NEOP-23, Figure 2-IV.A.1.	Determines that this step is applicable and refers to NEOP-13 Figure 1-IV.A.1
_____*	**IF** the DAS is in service, **THEN** use NEOP-13, Figure 1-IV.A.2, **OR** For Unit 2, NEOP-23, Figure 2-IV.A.2.	Determines this step is NOT applicable
_____*	2. Record the (+) and (-) ASI Limits (Y_I) and associated thermal power from the appropriate figure. Thermal Power Limit_____ Y_I (+) Y_I (-) _____	Determines that the following should be recorded on Attachment 4: Y_I (+) = 0.10 Y_I (-) = - 0.06
_____*		Observes that the recorded values are: Y_I (+) = 0.13 Y_I (-) = - 0.06

_____* 3. Convert the Internal ASI Limits (Y_I) to external ASI Limits (Y_E) for the appropriate unit.
For Unit 1:
Y_E = Y_I divided by the Shape Annealing Factor.
Y_E (+) = [Y_I (+)] divided by 2.51 =
Y_E (-) = [Y_I (-)] divided by 2.51=

Records following values on Attachment 4.

- Y_E (+) = 0.03984
- Y_E (-) = 0.0239

_____*

Observes that the recorded values on Attachment 4 are:.

- Y_E (+) = 0.0517
- Y_E (-) = 0.0239

_____* 4. Calculate the deviation (D).
D = Y_E (+) minus Y_E (-) divided by 2
= [Y_E (+)____ minus Y_E (-)____] divided by 2.=

Records following values on Attachment 4:

- D =0.03185

_____*

Observes that the following values on Attachment 4:

- D =0.0378

_____* 5. Calculate the Power Ratio Deviation Adj pot setting (DPS)
DPS = D multiplied by 2 = ____

Records following values on Attachment 4:

DPS =0.0637

_____*

Observes the following values on Attachment 4:

DPS =0.0756

_____* 6. Calculate the setpoint (S).
S = Y_E (+) minus D =

Records following values on Attachment 4:

S =0.00795

_____*

Observes the following values on Attachment 4:

S =0.0922

_____* 7. Calculate the Power Ratio Setpoint Adj pot setting (SPS)
SPS = S plus 0.3 =

Records following values on Attachment 4:

SPS = .30795

ELEMENT (* = CRITICAL STEP)	STANDARD
_____*	Observes the following values on Attachment 4: SPS =0.3922

TIME STOP _____

Examiner Note:	The task is complete when the applicant has determined that the calculated setpoints are incorrect and has identified the correct setpoints

Verification of Completion

Job Performance Measure Number: 2008- AOP7H

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

_____

_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

1. Unit 1 has been operating at 100% for 6 months.
2. The plant computer has failed and rebooting efforts have been unsuccessful so far. DAS is Inoperable.
3. The current highest excore NI reading is 99.2%.
4. CECOR is not available. Reactor Engineering reports a measured value of FxyT of 1.521
5. Axial Shape Index is at +0.02
6. The Power Ratio Recorder is Operable

INITIATING CUE:

You are directed to perform AOP-7H, "Loss Of Plant Computer In Mode One Or Two", Step IV.D.2.1.3 and fully complete AOP-7H, Attachment 4

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.: **2008-MNT**

Task Title: **Apply Technical Specifications to a Diesel Generator Failure**

Task Number: **xxx.xxx**

K/A Reference: **K/A 2.2.36 (4.2, 4.4)**

Method of testing:

Simulated Performance: _____ Actual Performance: ___√___

Classroom: ___√___ Simulator: _____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. **Unit 1 &2 are at 100% power.**
2. **2A Diesel Generator failed during an STP O-8A-2 run at 1200 on 6-15 and will require 10 days to fix.**
3. **23 HPSI pump motor was found charred at 0430 on 6/19 and the EM shop has determined that the motor has failed and will require 4 days to fix**

Initiating Cue:

You are directed to determine which TS LCOs apply, the LCO actions that must be taken and the completion time limits for these actions And When would either unit need to be placed in Mode-3.

Task Standard:

Determine the TS LCOs that apply and the LCO actions that must be taken.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Technical Specifications**
2. **Technical Specification Basis**

General References:

1. **Technical Specifications**
2. **LOI-212-1-5, "TS Introduction for Licensed Operator Initial Training" Lesson Plan, Revision 12/02/2004, Objective 1.3 - Given a plant or system condition and the Tech Specs be able to apply the appropriate Action requirements.**

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

None

ELEMENT (* = CRITICAL STEP)		STANDARD
TIME START _____		
_____	Review initial conditions.	Same as element.
_____	Refer to Technical Specifications	Same as element
_____*	Identify the TS LCOs that apply.	Determines **TS LCO 3.8.1 Action B.2 applies for 2A DG Failed STP on 6/15**
_____*	Identify the TS LCOs Actions that are required.	Determines that TS LCO 3.8.1 Action B.3 must be completed four hours after 23 HPSI is determined to be failed since it is redundant equipment, declare both ECCS trains OOS
_____*	Identify the required completion time for the actions.	Determines that required completion time is **4 hours**.tp declare both ECCS trains OOS per 3.8.1 B.3
_____*	Identify the TS LCOs Actions that are required.	Determines that TS LCO 3.5.2 Action A.1 applies
_____*	Identify the required completion time for the actions.	Determines that required completion time is 72 hours to restore an ECCS train to operable status per 3.5.2 A.1
_____*	Identify the require Actions based on maintenance schedule	Determines that one ECCS train will not be restored for 96 hours (4 days times 24 hours/day). And that per 3.5.2A1 and 3.8.1.B.3 you only have a total of 80 hours, so Unit 2 needs to be in Mode 3 . 80 hours from when the breaker was determined to be inoperable
_____*	Identify when the unit must be in Mode 3	Must be in Mode 3 at 1230 on 6/22

TIME STOP _____

Examiner Note:	The task is complete when the applicant has determined which TS LCOs apply, the LCO actions that must be taken and the completion time limits for these actions.

Verification of Completion

Job Performance Measure Number: **2008-MNT**

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

_____

_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

1. Unit 1 &2 are at 100% power.
2. A potential hurricane is forecasted for 6/18
3. 2A Diesel Generator failed during an STP o-8A-2 run at 1200 on 6-15 and will require 10 days to fix.
4 .23 HPSI pump motor was found charred at 0430 on 6/19 and the EM shop has determined that the motor has failed and will require 4 days to fix

INITIATING CUE:

You are directed to determine which TS LCOs apply, the LCO actions that must be taken and the completion time limits for these actions. The technical specifications are provided.

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.: **2008-RAD-SRO**

Task Title: **Risk Assess Filling the RWT**

Task Number: **204.084**

K/A Reference: **2.3.14**

Method of testing:

Simulated Performance: _____ Actual Performance: __√__

Classroom: __√__ Simulator: _____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. Last Shift the SITS were filled
2. OI 2B Sect 6.9 is the procedure that will be used
3. You are performing the duties of the Shift Manager

Initiating Cue:

You are to perform the Risk Assessment Work Sheet Attachment 2 of NO-1-117 and determine if additional risk managing tools will be required to perform this task. Are there any questions

Task Standard:

This JPM is complete when the candidate has determined the risk associated with this task is Medium, and the additional controls are appropriate.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **Procedures and manuals normally available in the plant**

General References:

1. **NO-1-117**
2. **OI-2B**
3. **Survey MAP for U-1 VCT Room**

Time Critical Task:

No

Validation Time:

10 minutes

Simulator Setup:

NONE

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE 2008-RAD-SRO

ELEMENT (* = CRITICAL STEP)	STANDARD
TIME START ____	
CUE: When asked supply candidate a copy of Survey Map	
IF an RWP ws provided to the candidate in the classroom, then step 1 is not a critical step	
____* 1. Reviews OI-2B Section 6.7 to compare work activities with NO-1-117 Attachment 1	Circles YES for work in Posted High RAD Area
____* 2. Compares job with NO-1-117 Attachment 2	Answers NO
____* 3. Reviews Attachment 3	Determines additional controls at a minimum are required: 1, 10, 19, 22, 30, 32, 42, 45, 46
____* 8. Checks in with Radiation Protection at the RP office window and practice 200 % accountability rules for entering the RCA	Identifies what job is to be performed, the location of the job, under which RWP the job is being worked using 3- way communication
TIME STOP ____	

TERMINATING CUE: This JPM is complete when Attachment 1-3 of NO-1-117 is completed and the candidate determines that additional controls 1, 10, 19, 22, 30, 32, 42, 45, 46 are required

Verification of Completion

Job Performance Measure Number: **2008-RAD-SRO**

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

_____

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_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

1. Last Shift the SITS were filled
2. OI 2B Sect 6.9 is the procedure that will be used
3. You are performing the duties of the Shift Manager

INITIATING CUE:

You are to perform the Risk Assessment Work Sheet Attachment 2 of NO-1-117 and determine if additional risk managing tools will be required to perform this task. Are there any questions.

Facility: **Calvert Cliffs 1&2** Job Performance Measure No.: **2008-ERPIP**

Task Title: **Determine Appropriate Emergency Response Actions**

Task Number: **204.097**

K/A Reference: **K/A 2.4.29 (2.6, 4.0)**

Method of testing:

Simulated Performance: _____ Actual Performance: ___√___

Classroom: ___√___ Simulator: _____ Plant: _____

READ TO THE APPLICANT:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. **A total loss of feed flow has occured on Unit-2.**
2. **The reactor tripped on low S/G level and auxiliary feed failed to initiate automatically or manually**
3. **Once-through core cooling has been initiated**

Initiating Cue:

You are to complete the emergency response initial notification form.

Task Standard:

Determine EAL classification and protective action recommendations and complete the emergency response form.

Evaluation Criteria:

1. **All critical steps completed.**
2. **All sequential steps completed in order.**
3. **All time-critical steps completed within allotted time.**
4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

1. **ERPIP 3.0, "Immediate Actions", Revision 38**
2. **ERPIP 3.0 Attachment 1, "EAL Criteria", Revision 29**
3. **ERPIP Basis**
4. **Blank Copy of ERPIP 3.0 Attachment 3, "Initial Notification Form" (ERPIP 3.0 Pages 19 and 20)**

General References:

1. **ERPIP 3.0, "Immediate Actions", Revision 38 (Pages 18 thru 25)**
2. **ERPIP 3.0 Attachment 1, "EAL Criteria", Revision 29**
3. **ERPIP Basis**

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

None

TIME START ____

____	1.	Identify and locate ERPIP.	Same as element.
____	2.	Refers to Immediate Actions and identifies the appropriate category from the listing and go to the appropriate Attachment.	Selects and goes to attachment 2, Emergency Classification.

ATTACHMENT 2 EMERGENCY CLASSIFICATION
A. CLASSIFY THE EMERGENCY

NOTE: The decision to classify an emergency may NOT be delegated.

*____	1.0	**EVALUATE** conditions against Attachment 1, Emergency Action Level (EAL) criteria.	Fills in Notification Form to indicate a n ALERT classification is warranted under Emergency Director Judgment, once through core cooling initiated A.A.7.1.2

B. IMPLEMENT EMERGENCY RESPONSE PLAN ACTIONS (ATTACHMENT 2)

____ 1.0	**If** an EAL is satisfied, **THEN OBTAIN** an Attachment 3, Initial Notification Form (from this procedure).	Determines from above evaluation that an EAL is satisfied and obtains an Initial Notification form from the working copy or the extra forms book.
____	**GO TO** the respective classification tab.	Determines Attachment 11, Alert Actions, is applicable.

ATTACHMENT 4

____ 1.0	**COMPLETE** Attachment 3, page 1 of 2, Initial Notification Form, using directions on page 2 of 2.	Refers to Attachment 3, Initial Notification Form.

NOTE TO EVALUATOR: ***The following page 2 instructions may or may not be referred to as the student completes page 1.***

ATTACHMENT 3-Page 2

____ 1.a.	Item A5 **RETRIEVE** this information from the EAL chart in ERPIP-3.0, Immediate Actions, Attachment 1, Emergency Action Level Criteria.	Enters A.A.7.1.2 on Attachment 3.

____	1.b. Item A6 **IF** any of the following conditions are/have been met, **THEN** Radioactivity is being/has been released: 1) The release flowpath monitor is/was in alarm. 2) The release is/was greater than Technical Specification limits. 3) The release is/was accidental.	Determines that NO radioactivity is being released.
_____	1.c. Item A8 **IF** General Emergency is checked in Item 4, **THEN DETERMINE** appropriate Protective Action Recommmendatein and downwind zones(z) from ERPIP 3.0, Attachment 5, General Emergency Protective Action Recommendations, **AND CHECK** corresponding box (check one box only). **IF** General Emergency is not checked in Item 4, **THEN CHECK** "NONE."	Determines that NONE is entered
_____	1.d. Item A10 Emergency Director must sign form after Items 1 through 10 have been completed	Signs Attachment 3 after items 1 through 10 have been completed

ATTACHMENT 3-Page 1

____ 1.	Complete Item 1.	Checks "is" in Item 1.
____ 2.	Complete Item 2.	Checks Unit 1
____ 3.	Complete Item 3.	Checks "'Alert"
*____ 4.	Complete Item 4.	Enters A.A.7.1.2

*____	5.	Complete Item 5.	Checks '"NO"
*____	5.a	Complete Item 5a	Check "NA"
*____	5.b	Complete Item 5b	Check "NA"
*____	6.	Complete Item 6.	Checks 'NONE
*____	7.	Complete Item 7.	Enter current time

TIME STOP _____

TERMINATING CUE:	This JPM is complete when initial notification form Parts A 1 -7 are completed. No further actions are required.

Verification of Completion

Job Performance Measure Number: 2008-ERPIP

Applicant: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

_____

_____

_____

Applicant Response: _____

_____

_____

_____

_____

_____

_____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

APPLICANT'S CUE SHEET

INITIAL CONDITIONS:

1. **A total loss of feed flow has occured on Unit-2.**
2. **The reactor tripped on low S/G level and auxiliary feed failed to initiate automatically or manually**
3. **Once-through core cooling has been initiated**

INITIATING CUE:

You are to complete the emergency response initial notification form. Are there any questions? You may begin