

CLINTON POWER STATION

Job Performance Measure

Reset "A" Diesel Generator After an Overspeed Trip

JPM Number: 35060132NSN01

Revision Number: 06

Date: 03/19/07

Developed By:	<u>Tom Pickley</u>	<u>3/19/06</u>
	Instructor	Date
Reviewed By:	<u>Stacey Hagan</u>	<u>6/15/07</u>
	Operations Representative	Date

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
 Current Procedure Rev. _____ Date: _____
 Procedure Rev. Referenced _____ Date: _____
 - If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____	SME/Instructor	_____	Date
_____	SME/Instructor	_____	Date
_____	SME/Instructor	_____	Date

**Clinton Power Station
Job Performance Measure (JPM)**

Revision Record (Summary)

Revision	Date	Description
5	08/15/06	New Format
6	03/19/07	Update procedure revision

**Clinton Power Station
Job Performance Measure (JPM)**

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The Division 1 Diesel Generator overspeed devices, DG lockout relay (86 device) and exciter field circuit breaker (41 device) are reset IAW CPS No. 3506.01, Diesel Generator And Support Systems.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None.

PROCEDURAL/REFERENCES:

- CPS No. 3506.01, Diesel Generator And Support Systems. Rev 32c.

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- Do NOT allow examinee to shine any type light into a panel.
- All pre-job briefings are completed.

**Clinton Power Station
Job Performance Measure (JPM)**

INITIAL CONDITIONS:

You are an extra RO on shift. The Division 1 Diesel Generator tripped, due to an overspeed condition, while performing a post maintenance test run. The cause of the overspeed trip was determined and has been corrected.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.
- Do NOT shine any type light into a panel.

You are directed to reset the Division 1 Diesel Generator overspeed trip per CPS 3506.01, section 8.4.5.

START TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

CPS No. 3506.01, Diesel Generator And Support Systems (DG)
8.4.5 Resetting Overspeed Trip Device

*** 8.4.5.1 At the 16 (12) cylinder engine, reset the trip mechanism by pulling down (counter-clockwise rotation) strongly on the Reset Lever until it latches. (Refer to Figures 2 & 3)**

If the overspeed switch finger is preventing downward movement (counter-clockwise rotation) of the Reset Lever, push the Overspeed Switch finger towards engine centerline (pivot clockwise), and then latch the Reset lever.

Standard: Overspeed switch finger is located.
Simulates pushing overspeed switch finger towards engine centerline.
Simulates pulling down on Reset Lever.

Cue: When the student demonstrates proper movement of the reset lever, cue the student the overspeed switch finger is not preventing downward movement. Overspeed switch finger is moved towards engine centerline.
Reset Lever is moved down and latched.

Comments Do not allow the student to climb on the diesel. When the student locates the Over Speed Device, have the student describe the required actions using figures 2 & 3 from the procedure.

SAT UNSAT Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

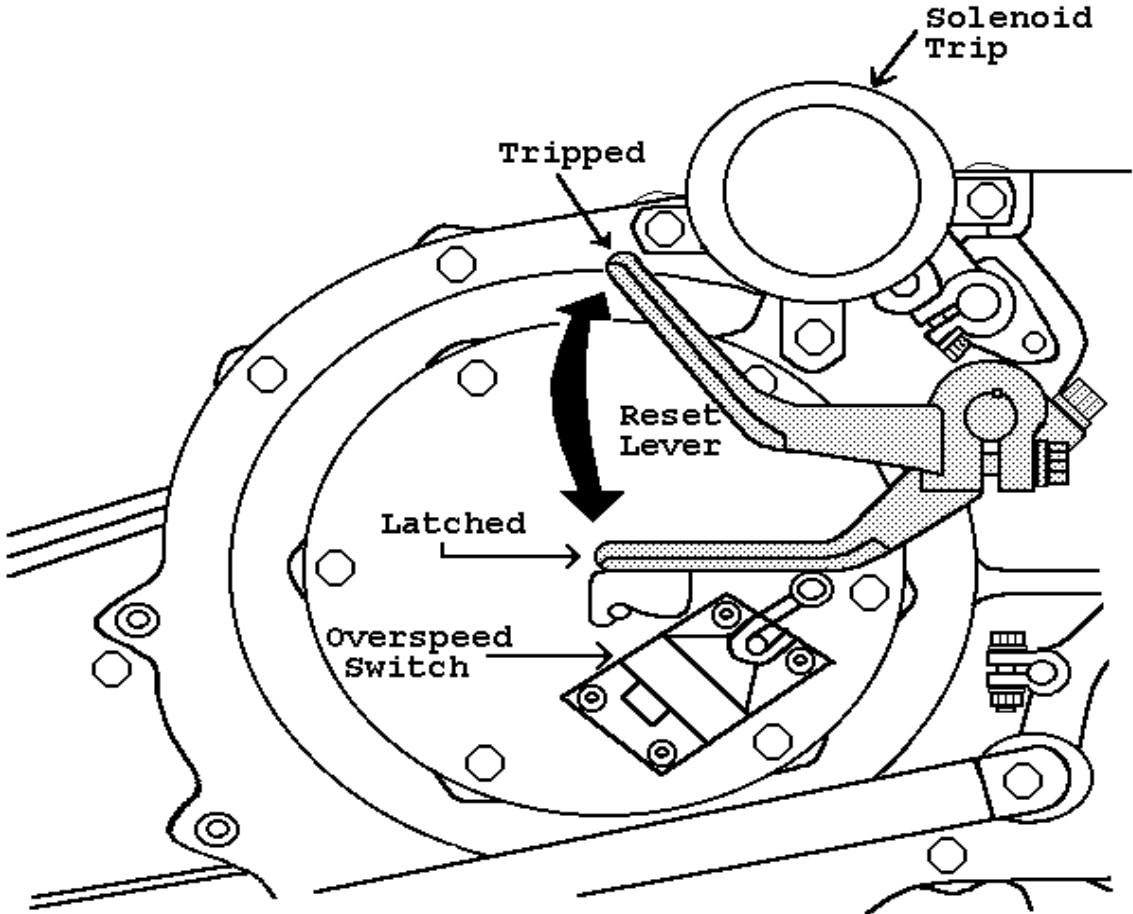


FIGURE 2

Clinton Power Station
Job Performance Measure (JPM)

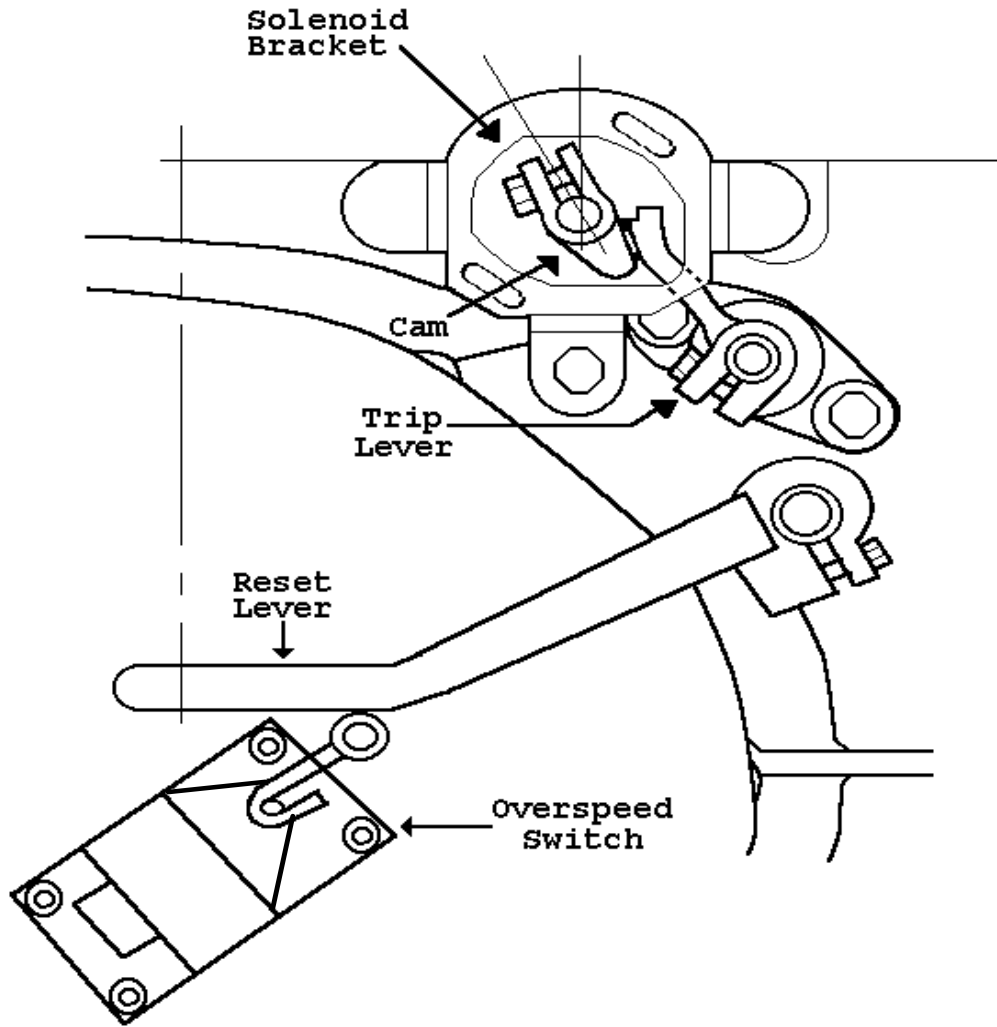


FIGURE 3

**Clinton Power Station
Job Performance Measure (JPM)**

*** 8.4.5.2 Perform step 8.4.5.1 for the other engine as applicable.**

At the 12 (16) cylinder engine, reset the trip mechanism by pulling down (counter-clockwise rotation) strongly on the Reset Lever until it latches. (Refer to Figures 2 & 3)

If the overspeed switch finger is preventing downward movement (counter-clockwise rotation) of the Reset Lever, push the Overspeed Switch finger towards engine centerline (pivot clockwise), and then latch the Reset lever.

Standard: Overspeed switch finger is located.
Simulates pushing overspeed switch finger towards engine centerline.
Simulates pulling down on Reset Lever.

Cue: Overspeed switch finger is moved towards engine centerline.
Reset Lever is moved down and latched.

Comments Do not allow the student to climb on the diesel. When the student locates the Over Speed Device, have the student describe the required actions using figures 2 & 3 from the procedure.

SAT UNSAT Comment Number _____

8.4.5.3 Reset DG 1A lockout relays per section 8.4.6.

Standard: Proceeds to section 8.4.6.

Cue:

Comments

SAT UNSAT Comment Number _____

**Clinton Power Station
Job Performance Measure (JPM)**

NOTE

1. Trip of the DG 1A(1B) Lockout Relay (86 device) causes trip of the associate Exciter Field Circuit Breaker (41 device). Therefore the Lockout Relay must be reset prior to the Exciter Field Circuit Breaker.
2. Failure to reset the Exciter Field Breaker will permit the DG to be restarted, but without voltage control.

CAUTION

“Holding Engine/Generator Lockout in reset for greater than 2 seconds will damage the lockout relay”

*** 8.4.6.2 (local) For DG 1A, Reset DG Lockout Relay (86 device) at 1PL12JA.**

Standard: Locates DG Lockout Relay (86 device) on 1PL12JA.
 Simulates rotating handle in CLOCKWISE direction until latched but less than 2 seconds.
 Verifies Blue Light is ON and Amber Light is OFF.

Cue: Handle is rotating in CLOCKWISE direction. Handle is Latched.
 Blue light is ON.
 Amber Light is OFF.
 Red flag is cleared.

Comments

SAT UNSAT Comment Number _____

**Clinton Power Station
Job Performance Measure (JPM)**

*** 8.4.6.3 (local) For DG 1A, Reset the Exciter Field Circuit Breaker (41 device) at 1PL12JA.**

Standard: Locates Exciter Field Circuit Breaker (41 device) on 1PL12JA.
Simulates rotating handle in CLOCKWISE direction until latched.
Verifies Red Light is ON and Green Light is OFF.

Cue: Handle is rotating in CLOCKWISE direction. Handle is Latched.
Red light is ON.
Green Light is OFF.

Comments

SAT UNSAT Comment Number _____

TERMINATING CUES:

Division 1 Diesel Generator overspeed devices, DG lockout relay (86 device) and exciter field circuit breaker (41 device) are reset.

STOP TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

Initial Conditions

You are an extra RO on shift. The Division 1 Diesel Generator tripped, due to an overspeed condition, while performing a post maintenance test run. The cause of the overspeed trip was determined and has been corrected.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.
- Do NOT shine any type light into a panel.

You are directed to reset the Division 1 Diesel Generator overspeed trip per CPS 3506.01, section 8.4.5.

CLINTON POWER STATION

Job Performance Measure

Reset Shunt Trips to Restore Drywell Cooling

JPM Number: 44100006LSN02

Revision Number: 02

Date: 08/16/06

Developed By:	<u>Tom Pickley</u>	<u>08/16/06</u>
	Instructor	Date
Reviewed By:	<u>Stacey Hagan</u>	<u>6/15/07</u>
	Operations Representative	Date

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

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- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
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- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____	SME/Instructor	_____	Date
_____	SME/Instructor	_____	Date
_____	SME/Instructor	_____	Date

**Clinton Power Station
Job Performance Measure (JPM)**

Revision Record (Summary)

Revision	Date	Description
02	08/16/06	New Format

**Clinton Power Station
Job Performance Measure (JPM)**

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The shunt trips listed in Table 1 of CPS No. 4410.00C006, DEFEATING VP/WO INTERLOCKS Rev. 5, are reset.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None.

PROCEDURAL/REFERENCES:

- CPS No. 4410.00C006, DEFEATING VP/WO_INTERLOCKS Rev. 5.

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- Student will demonstrate knowledge of EOP tools, procedures and equipment location. Direct the examinee to the bottom drawer for training tools and equipment. Provide examinee the procedure.
- Do NOT allow examinee to shine any type light into a panel.
- All pre-job briefings are completed.

**Clinton Power Station
Job Performance Measure (JPM)**

INITIAL CONDITIONS:

You are an extra RO on shift. The Main Control Room is attempting to restore Drywell Cooling per CPS No. 4410.00C006, DEFEATING DRYWELL COOLING ISOLATIONS.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.
- Do NOT shine any type light into a panel.

You are directed to reset the shunt trips listed in Table 1 of CPS No. 4410.00C006, DEFEATING DRYWELL COOLING ISOLATIONS. Steps 3.1 – 3.7 are complete.

START TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

CPS No. 4410.00C006, DEFEATING DRYWELL COOLING ISOLATIONS.

NOTE

Controlled procedures, tools, & equipment which support Section 3.0 are located in the EOP Supply Cabinet (MCR).

***1 RESET APPLICABLE SHUNT TRIPS PER TABLE 1, RESETTING SHUNT TRIPS.**

Standard: Simulates resetting and closing each of the breakers listed in Table 1 of CPS No. 4410.00C006.

Cue: Initially each breaker is in the tripped condition. Indicate that breaker is in the ON position as the examinee simulates resetting and closing each of the breakers listed in Attachment 1 by going to OFF and back to ON.

Comments Each Breaker is a Critical Step

SAT UNSAT Comment Number _____

TERMINATING CUES:

The shunt trips listed in Table 1 of CPS No. 4410.00C006 are reset.

STOP TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

TABLE 1
RESETTING SHUNT TRIPS
(Local operations)

NOTE
Both CNMT isolation breakers need to be reset.

<u>COMPONENT</u>	<u>MCC/BREAKERS</u>	<u>LOCATION</u>	<u>INITIALS</u>
<u>DIV 1</u>			
Drywell Cooling Fan 1A, 1VP01CA	AB MCC 1A1-1D	AB 781' East	_____
Drywell Cooling Fan 1C, 1VP01CC	AB MCC 1A1-3B	AB 781' East	_____
Drywell Chiller 1A Oil Pump, 1VP04CA	AB MCC 1A1-8A	AB 781' East	_____
Control Power to VP Chiller A, Oil Htr & Pump Down Unit 1VP04CA	CB MCC E2-2B Ckt 30	CB 825' VC 'A' Room	_____
Control Pwr to 1PL43JA VP 'A' PNL & 1WS066A, 1VP010A, 1VP10Y	CB MCC E2-2B Ckt 31	CB 825' VC 'A' Room	_____
<u>DIV 2</u>			
Drywell Cooling Fan 1B, 1VP01CB	AB MCC 1B1-2C	AB 781' West	_____
Drywell Cooling Fan 1D, 1VP01CD	AB MCC 1B1-3A	AB 781' West	_____
Drywell Chiller 1B Oil Pump, 1VP04CB	AB MCC 1B1-3B	AB 781' West	_____
Control Power to VP Chiller B, Oil Htr & Pump Down Unit 1VP04CB	CB MCC F2-1B Ckt 30	CB 825' VC 'B' Room	_____
Control Pwr to 1PL43JB VP 'B' PNL & 1WS066B, 1VP010B, 1VP12Y	CB MCC F2-1B Ckt 31	CB 825' VC 'B' Room	_____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: NLO RO SRO STA SRO Cert

JPM Title: Reset Shunt Trips to Restore Drywell Cooling

JPM Number: 44100006LSN02 Revision Number: 02

Task Number and Title: 441000.06 Defeat RWCU system interlocks when in EOPs/SAGs.

Table with 4 columns: K/A System, K/A Number, Importance (RO/SRO), and a blank column. Rows include data for K/A System 295028 with K/A Number EA 1.03 and 2.1.30.

Suggested Testing Environment: Plant

Actual Testing Environment: Simulator Plant Control Room

Fill in the correct Testing Method, Faulted, Alternate Path or Time Critical as appropriate below. Use the following mark to identify correct items.

Testing Method: [X] Simulate Perform Faulted: Yes [X] No Alternate Path: Yes [X] No

Time Critical: Yes [X] No

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

References: DEFEATING VP/WO_INTERLOCKS CPS No. 4410.00C006, Rev. 5

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

**Clinton Power Station
Job Performance Measure (JPM)**

Initial Conditions

You are an extra RO on shift. The Main Control Room is attempting to restore Drywell Cooling per CPS No. 4410.00C006, DEFEATING DRYWELL COOLING ISOLATIONS.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.
- Do NOT shine any type light into a panel.

You are directed to reset the shunt trips listed in Table 1 of CPS No. 4410.00C006, DEFEATING DRYWELL COOLING ISOLATIONS. Steps 3.1 – 3.7 are complete.

CLINTON POWER STATION

Job Performance Measure

Defeating ARI Logic Trips

JPM Number: 44110801LSN01

Revision Number: 00

Date: 08/17/06

Developed By:	<u>Tom Pickley</u>	<u>08/17/06</u>
	Instructor	Date
Reviewed By:	<u>Stacey Hagan</u>	<u>6/15/07</u>
	Operations Representative	Date

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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SME/Instructor	Date
SME/Instructor	Date
SME/Instructor	Date

**Clinton Power Station
Job Performance Measure (JPM)**

Revision Record (Summary)

Revision	Date	Description
00	08/17/06	New JPM

**Clinton Power Station
Job Performance Measure (JPM)**

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The ARI trips are defeated IAW DEFEATING ATWS INTERLOCKS, 4410.00C012 R 4.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- H1 Room Key
- ARI/RPT Test Switch Keys (2).

PROCEDURAL/REFERENCES:

- DEFEATING ATWS INTERLOCKS, 4410.00C012 R 4.

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- Student will demonstrate knowledge of EOP tools, procedures and equipment location. Direct the examinee to the bottom drawer for training tools and equipment. Provide examinee the procedure.
- Do NOT allow examinee to shine any type light into a panel.
- All pre-job briefings are completed.

**Clinton Power Station
Job Performance Measure (JPM)**

INITIAL CONDITIONS:

You are an extra RO on shift. A high power ATWS is in progress and both Recirc Pumps are tripped.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.
- Do NOT shine any type light into a panel.

Defeat the ARI Logic Trips per 4410.00C012, DEFEATING ATWS INTERLOCKS Section 3.4.

START TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

4410.00C012, Defeating ATWS Interlocks

NOTE

Controlled procedures, tools, & equipment which support Section 3.0 are located in the EOP Supply Cabinet (MCR).

2.1 EOP tool bag

Standard: Locates the procedure and tools in the EOP Supply Cabinet.

- Cue:
1. Tell examinee NOT to break the seal or use
 2. Provide the examinee a copy of the CPS 4410.00C012
 3. Direct the examinee to take the training tool bag from the bottom drawer of the EOP Supply Cabinet.

Comments If the examinee is able to acquire the procedure and tools to perform this task through alternate means then this step is successfully completed.

SAT UNSAT Comment Number _____

**Clinton Power Station
Job Performance Measure (JPM)**

*** 3.4.2 (ARI Room - Unit 2 MCR Area) At ATWS ARI/RPT panel, 1RR04JA, place ARI/RPT SYSTEM 1 TEST keylock switch in TEST.**

Standard: Correct location is identified.
Correct switch located.
The switch is placed in TEST.

Cue: The switch is in TEST.

Comments Do NOT allow examinee to shine any type light into this panel
SAT UNSAT Comment Number _____

3.4.3 Verify “ARI/RPT SYSTEM 1 IN TEST” light ON.

Standard: Correct light is identified.

Cue: “ARI/RPT SYSTEM 1 IN TEST” light is ON.

Comments Do NOT allow examinee to shine any type light into this panel
SAT UNSAT Comment Number _____

***3.4.4 (ARI Room - Unit 2 MCR Area) At ATWS ARI/RPT panel, 1RR04JB, place ARI/RPT SYSTEM 2 TEST keylock switch in TEST.**

Standard: Correct location is identified.
Correct switch located.
The switch is placed in TEST.

Cue: The switch is in TEST.

Comments Do NOT allow examinee to shine any type light into this panel
SAT UNSAT Comment Number _____

**Clinton Power Station
Job Performance Measure (JPM)**

3.4.5 Verify “ARI/RPT SYSTEM 2 IN TEST” light ON.

Standard: Correct light is identified.

Cue: “ARI/RPT SYSTEM 2 IN TEST” light is ON.

Comments Do NOT allow examinee to shine any type light into this panel

SAT

UNSAT

Comment Number _____

TERMINATING CUES:

Both “ARI/RPT SYSTEM IN TEST” lights are ON.

STOP TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

Initial Conditions

You are an extra RO on shift. A high power ATWS is in progress and both Recirc Pumps are tripped.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur. (This statement should be removed if this is a Simulator JPM)
- Do NOT shine any type light into a panel.

Defeat the ARI Logic Trips per 4410.00C012, DEFEATING ATWS INTERLOCKS Section 3.4.