

JUSTIFICATION FOR OUTLINE CHANGES:

1. RO WRITTEN EXAM

*** Tier 2/Group 1**

Item 059 MAIN FEEDWATER

Changed category A2 11 to category A4 3 due to transposing error from original outline selection

2. SRO WRITTEN EXAM

*** Tier 1/Group 2**

Item 00038 Steam Generator Tube Rupture

Changed category K2 2 to category A1 11 due to transposing error from original outline selection

Item 00054 Loss of Main Feedwater

Added SRO designation to topic and added SRO K/A topic description due to transposing error from original outline selection

Item 00058 Loss of DC Power

Added K/A topic description due to transposing error from original outline selection

*** Tier 2/Group 1**

Item 0022 Containment Cooling

Added K/A topic description due to transposing error from original outline selection

3. RO/SROI B1/B2 OUTLINE

- * Deleted alternate path designation for B2 item c to get alternate path to 40% criteria**

- * Changed JPM due to duplication on Audit Exam items b and c**

4. SROU B1/2 OUTLINE

- * Deleted alternate path designation for B1 item b and B2 item a to get alternate path to 40% criteria**

- * Changed JPM due to duplication on Audit exam item b**

ES-301 Control Room and Facility Walk-Through Test Outline Form ES-301-2

Facility: **Calvert Cliffs Units 1 & 2**

Date of Examination: **9/25/00**

Exam Level (circle one): **RO/SRO(I)/SRO(U)**

Operating Test No: 1

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. AC Electrical / Emergency start 0C DG	N / S	6
b. Shutdown Cooling / Respond to a complete loss of SDC with pressurization of RCS possible	D / A / S / L	4 (Primary)
c. Component Cooling / Restore CC/trip RCPs	D / A / S / L	8
d. CVCS / Respond to inadvertent dilution while critical using Fast Boration	M / A / S	1
e. ESFAS / Respond to RAS actuation	M / A / S	2
f. Condensate / Respond to a condensate system rupture	N / S	4 (Secondary)
g. Reactor Protection / NI calibration	N / S	7

B.2 Facility Walk-Through

A. Instrument Air / Align IA compressors for Fire Main cooling	D	8
b. AC Electrical / Take local control of 1A DG	D	6
c. Containment / verify containment integrity	N / R	5

*Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrolroom, (S)imulator, (L)ow-Power, (R)CA

ES-301 Control Room and Facility Walk-Through Test Outline Form ES-301-2

Facility: **Calvert Cliffs Units 1 & 2**

Date of Examination: **9/25/00**

Exam Level (circle one): **RO/SRO(I)/SRO(U)**

Operating Test No: **1**

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. ESFAS / Respond to RAS actuation	M / A / S	2
c. Shutdown Cooling / Align CS pumps for SDC	M / S / L	4 (Primary)
c. CEDS and CVCS / Respond to inadvertent dilution while critical	M / A / S	1
d.		
e.		
f.		
g.		

B.2 Facility Walk-Through

a. Containment / Verify Containment Integrity	N / R	5
b. AC Electrical / Take local control of 1A DG	D	6
c.		

*Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrolroom, (S)imulator, (L)ow-Power, (R)CA

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7I-NEW

SYSTEM: Diesel Generator

TASK: 020480101 1A/0C DG Fast Start from the Control Room

PURPOSE: Evaluate the Operator's ability to emergency start the 0C DG to repower 21 4KV

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7I-NEW

TASK: 020480101 1A/0C DG Fast Start from the Control Room

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

PREREQUISITES:

EVALUATION LOCATION:

SIMULATOR

EVALUATION METHOD:

ACTUAL PERFORMANCE

ESTIMATED TIME
TO COMPLETE JPM:

15 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-7I

TASK STANDARDS:

This JPM is complete when the 0C DG has been emergency started and 21 4KV bus is energized.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7I-NEW

TASK: 020480101 1A/0C DG Fast Start from the Control Room

DIRECTIONS TO EVALUATOR:

1. Simulator Setup
 - a. IC-13 Unit 1 100% power (Unit 2 is assumed to be in Mode 5).
 - b. Place the Normal and Alternate Feeders for 21 4KV Bus in PTL
 - c. Tagout 2A DG

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-7I-NEW**

TASK: 020480101 1A/0C DG Fast Start from the Control Room

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-7I-NEW**

TASK: 020480101 1A/0C DG Fast Start from the Control Room

6.0 Locally starting a pump (cont'd)

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7I-NEW

ELEMENT (* = CRITICAL STEP)	STANDARD
TIME START _____	
_____ Locate AOP-7I, Section V.B. step 1.	Same as element.

CUE: No fault exists.

CAUTION: A bus can NOT be re-energized if a fault exists on the bus.

- | | |
|---|--|
| _____ 1. WHEN normal or alternate power can be restored to the 11 4KV Bus,
THEN energize 11 4KV Bus PER OI-27C, <u>4.16 KV System</u> . | Determines step is N/A, refers to Alternate Actions. |
|---|--|

CUE: 07 4KV Bus is energized.

CAUTION: 0C DG prelube will be lost if 07 4KV Bus has been deenergized for greater than 30 minutes, requiring a local emergency start per OI-21C, 0C DIESEL GENERATOR.

- | | |
|--|---|
| 1.1 IF the normal or alternate feed is NOT available
AND 2A DG is out of service,
THEN place 0C DG on 21 4KV Bus as follows: | Determines step is applicable |
| * _____ a. IF the 07 4KV Bus has been deenergized for less than 30 minutes,

THEN start the 0C DG using the EMERGENCY START PB, 0-HS-0707 | Determines step is applicable

0-HS-0707, 1C19C checks 0C DG speed and voltage rising |
| _____ b. IF the 07 4KV Bus has been deenergized for greater than 30 minutes, | Determines step is not applicable. |
| _____ c. Verify 07 4KV bus FDR, 152-0704 in PULL TO LOCK. | Same as element |
| _____ d. Verify 0C DG 21 4KV Bus FDR, 152-2106 in PULL TO LOCK. | Same as element |
| _____ e. Verify 2A DG OUT BKR, 152-2103 in PULL TO LOCK. | Same as element |

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7I-NEW

ELEMENT (* = CRITICAL STEP)		STANDARD
* ____	f. Dispatch an operator to operate disconnect 189-2106 as follows:	Calls TBO to perform this step
____	g. WHEN the 0C DG is up to rated speed and voltage, THEN verify the 0C DG OUT BKR, 152-0703 is closed.	Checks 0C DG speed at 60 Hz and voltage at 4160 volts, on 1C19C {5.0}
CUE: TBO reports Disconnect 189-2106 is closed.		
____	h. WHEN disconnect 189-2106 and breaker 152-0703 are closed, THEN perform the following:	Observes the disconnect closed
* ____	(1) Close 07 4KV BUS TIE, 152-0701	{3.0}
* ____	(2) Insert the sync stick and close the 0C DG 21 4KV BUS FDR, 152-2106	{3.0}
TIME STOP ____		
TERMINATING CUE: This JPM is complete when the 0C DG has repowered 21 4KV bus. No further actions are required.		

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-7I-NEW

TASK: 020480101 1A/0C DG Fast Start from the Control Room

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020480101

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools
2. Initial Conditions:
 - a. The 2A DG has been tagged out for repairs.
 - b. The 21 4kv bus tripped. Neither the Normal or Alternate Feeder are available to restore the bus.
 - c. You are performing the duties of an extra Licensed Operator.
3. Initiating Cue: The CRS directs you to emergency start 0C DG and restore power to 21 4KV Bus per AOP-7I Step V.B.1. Are there any questions? You may begin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3B-2F

TASK: 020070303 Respond to a complete loss of SDC with pressurization of the RCS possible

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

RO & SRO I

only

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3B-2F

TASK: 020070303 Respond to a complete loss of SDC with pressurization of the RCS possible

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

PREREQUISITES:

Completion of the knowledge requirement of the Initial License class training program for the Safety Injection System.

EVALUATION LOCATION:

_____ PLANT _____ SIMULATOR _____ CONTROL ROOM

EVALUATION METHOD:

_____ ACTUAL PERFORMANCE _____ DEMONSTRATE PERFORMANCE

ESTIMATED TIME
TO COMPLETE JPM:

15 MINUTES

ACTUAL TIME
TO COMPLETE JPM:

_____ MINUTES

TIME CRITICAL
TASK:

YES

TASK LEVEL:

LEVEL 1

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-3B

TASK STANDARDS:

This JPM is completed when SDC flow has been restored using a Contmt Spray Pump, per AOP-3B.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3B-2F

TASK: 020070303 Respond to a complete loss of SDC with pressurization of the RCS possible

DIRECTIONS TO EVALUATOR:

1. Simulator Setup
 - a. IC to be determined. Mode 5, 134 DEG with bubble.
 - b. Malfunction SI003_02 (12 LPSI Pp Bkr Failure).
 - c. Malfunction 11 LPSI Pp Bkr Failure.
 - d. Remote Functions to align 11 CS as a LPSI pp
Open 1-SI- 444 11 LPSI pp (Use P&ID or RFI)

Open 1-SI-314 11 CS PP (Use P&ID or RFI SI028)

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-3B-2F**

TASK: 020070303 Respond to a complete loss of SDC with pressurization of the RCS possible

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-3B-2F**

TASK: 020070303 Respond to a complete loss of SDC with pressurization of the RCS possible

6.0 Locally starting a pump (cont'd)

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2F

ELEMENT (* = CRITICAL STEP)	STANDARD
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TIME START _____

_____ Locates AOP-3B, Step IV.A.5.	Same as element.
------------------------------------	------------------

CUE: When monitored, SI-651 and SI-652 indicate open. When monitored, alarm windows H24 and/or H28 are clear. When monitored, M4 is in ALARM.

_____ IV.A.5. IF SDC is lost due to failure of the operating LPSI PP, AND the cause will NOT result in a common mode failure, THEN complete the following actions:	Determines step is applicable. Monitors SI-651 and 652 position indication, on 1C09. Monitors alarm window H24 and H28, on 1C09. Monitors M4, on 1C18. Determines that a 12 LPSI failure will not result in a common mode failure.
_____ a. Place the failed PP handswitch in PULL TO LOCK.	Places HS-302Y, on 1C08, in PTL.

CUE: When checked, CVC-520 indicates in the BYPASS position.
--

_____ b. IF RCS purification is in service, THEN place IX BYP valve handswitch 1-HS-2520 in the BYP position.	HS-2520, on 1C07 [3]
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CUE: When checked, SI-657 indicates shut.

* _____ c. Shut S/D COOLING TEMP CONTR valve, 1-SI-657-CV.	Lowers output of HIC-657, on 1C09, to zero or places HS-3657, on 1C09 to CLOSE. Checks position indication for SI-657.
* _____ d. Place the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, in MANUAL.	Shifts FIC-306, on 1C08, to MANUAL.

CUE: When adjusted, FIC-306 output indicates 95%.

* _____ e. Adjust the output of the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, to 95%.	Adjusts output of FIC-306 to 95%.
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CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2F

ELEMENT	STANDARD
(* = CRITICAL STEP)	

CUE: When checked, HS-302XA and 302YA are in the OVERRIDE position.

_____	f. Verify BOTH RAS OVERRIDE switches in OVERRIDE:	Checks position on HS-302XA and 302YA, on 1C08 and 1C09. If not in OVERRIDE position, places HS in OVERRIDE.
	. 11 LPSI PP RAS OVERRIDE, 1HS-302XA	
	. 12 LPSI PP RAS OVERRIDE, 1-HS-302YA.	

CAUTION: Before starting the standby LPSI PP, the cause for the running LPSI PP failure should be determined to preclude a common mode failure.

CUE: 11 LPSI pump trips. ABO reports 11 LPSI pump made a very loud squealing noise and then stopped running.

_____	g. Start the standby LPSI PP.	[1.0]
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CUE: CRS reports Step B to be performed by another operator and directs you to go to Step C.5.

_____	g.1. IF the standby LPSI PP does NOT start, THEN PROCEED to Step B.	Determines the breaker trips upon start, refers to Step C.5.
_____	C.5. IF NO LPSI PPs are available, THEN align the CS PPs for cooling.	Determines step is applicable.

CAUTION: To prevent CS PP shaft seal and bearing damage, RCS temperature shall be less than 120°F OR the associated ECCS Pump Room Air Cooler shall be functional.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3B-2F

ELEMENT

STANDARD

(* = CRITICAL STEP)

CUE: When checked, CET temperatures indicate ~140°F. ECCS PP Room Air Coolers are not OOS.

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|-------|----|--|--|
| _____ | a. | Verify RCS temperature less than 120°F OR the associated ECCS PP Room Air Cooler is functional. | Checks CET temperatures, on 1C05, or checks that ECCS PP Room Air Coolers are not OOS. |
|-------|----|--|--|

CAUTION: To prevent over pressurization of the ECCS PP suction headers, RCS pressure shall be less than 170 PSIA.

CUE: When checked, RCS pressure is 130 PSIA.

- | | | | |
|-------|----|--|---|
| _____ | b. | Check that RCS pressure is less than 170 PSIA. | Checks RCS pressure on PI-103 and/or PI-103-1, on 1C06. |
|-------|----|--|---|

CUE: When checked, SI-651 and 652 indicate open.

- | | | | |
|-------|----|---|-------------|
| _____ | c. | Check that the SDC HDR RETURN ISOL valves are open: | On 1C09 [4] |
| | | 1-SI-651-MOV | |
| | | 1-SI-652-MOV | |

CUE: When checked, SI-4142 and 4143 indicate shut.

- | | | | |
|---------|----|------------------------------------|--|
| * _____ | d. | Shut the 11 RWT OUT valves: | HS-4142 and 4143, on 1C08 and 1C09 [3] |
| | | 1-SI-4142-MOV | |
| | | 1-SI-4143-MOV | |
| _____ | e. | Isolate CS PP Min Flow to the RWT: | |

CUE: When checked, lockout lights, on HS-3659 and 3660, are out.

- | | | | |
|---------|-----|--|---|
| * _____ | (1) | Place the SI PP RECIRC LOCKOUT handswitches to ON. | Places HS-3659A and 3660A, on 1C09, in ON position. Checks lockout light on HS-3659 and 3660, on 1C09, are out. |
| | | 1-HS-3659A | |
| | | 1-HS-3660A | |

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2F

ELEMENT (* = CRITICAL STEP)	STANDARD
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CUE: When checked, SI-659 and 660 indicate shut.

<p>* _____ (2) Shut the MINI FLOW RETURN TO RWT ISOL valves: 1-SI-659-MOV 1-SI-660-MOV</p>	<p>HS-3659 and 3660, on 1C09, in CLOSE [3]</p>
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CUE: CRS directs use of 11 CS PP.

<p>* _____ f. IF 11 CS PP is desired for SDC, THEN open the following valves:</p>	<p>Determines step is applicable.</p>
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CUE: When dispatched, PO reports SI-314 and 444 are open.

<p>* _____ 11 CS PP Discharge valve, 1-SI-314</p>	
<p>* _____ 11 LPSI PP NORM SUCT ISOL valve, 1-SI-444</p>	<p>Dispatches PO to open SI-314 and SI-444.</p>
<p>_____ g. IF 12 CS PP is desired for SDC,</p>	<p>Determines step is N/A.</p>

CUE: When checked, SI-657 indicates shut.

<p>_____ h. Shut the S/D COOLING TEMP CONTR valve, 1-SI-657-CV.</p>	<p>Verifies output of HIC-657 is zero or HS-3657 is in CLOSE. Checks position indication for SI-657.</p>
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CUE: When checked, FIC-306 is in MANUAL.

<p>_____ i. Place the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, in MANUAL.</p>	<p>Verifies FIC-306, on 1C08, to MANUAL.</p>
--	--

CUE: When checked, FIC-306 output indicates 95%.

<p>_____ j. Adjust the output of the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, to 95%.</p>	<p>Verifies output of FIC-306 is 95%.</p>
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CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2F

ELEMENT

STANDARD

(* = CRITICAL STEP)

CUE: When started, 11 CS Pp has normal running indication.

* _____ k. Start the selected CS PP. HS-4146, on 1C08 [1]

CUE: When adjusted, flow stabilizes at 1500 GPM.

* _____ l. Slowly adjust the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, to raise SDC flow to 1500 GPM. Slowly lowers output of FIC-306, on 1C08. Checks flow indication for FIC-306. Lowers output until flow indicates 1500 GPM.

CUE: When previewed, Auto output matches MANUAL output.

_____ m. Place the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, in AUTO, if desired. Depresses MODE SELECTOR, on FIC-306, to preview Auto output signal. Adjusts auto setpoint to match Auto output to MANUAL output. When outputs are matched, shifts FIC-306 to AUTO.

CUE: When checked, SI-657 indicates intermediate and SDC temperature is 185°F and slowly lowering.

* _____ n. Adjust the S/D COOLING TEMP CONTR valve, 1-SI-657-CV, as desired. If HS-3657 is in CLOSE, places HS-3657, on 1C09, to AUTO. Raises output of HIC-657. Checks position indication for SI-657 indicates intermediate. Checks SDC temperature slowly lowering (TR-351, on 1C09).

_____ 6. IF RCS temperature can NOT be maintained using one CS PP, AND RCS level is above the 37.6 foot elevation, Determines one CS Pp is able to maintain RCS temperature.

TERMINATING CUE: This JPM is complete when SDC has been restored. No further actions are required.

TIME STOP _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2F

TASK: 020070313 Attempt to Correct the Abnormal SDC Condition

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of event free tools

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020070303

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools
2. Initial Conditions:
 - a. Unit 1 has been shutdown for 5 days and is presently in Mode 5.
 - b. SDC is in service, using 12 LPSI Pp, and RCS temperature is ~134°F.
 - c. RCS pressure is ~136#, with a bubble in the Pressurizer.
 - d. ABO reported smoke coming from 12 LPSI Pp motor.
 - e. 12 LPSI Pp has just tripped.
 - f. You are performing the duties of the Unit 1 CRO.
3. Initiating Cue: The CRS directs you to respond to the loss of SDC by implementing AOP-3B, at Step IV.A.5.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3B-2

TASK: 020070315 Align CS pumps for SDC

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

(SRU Upgrade only)

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2

TASK: 020070315 Align CS pumps for SDC

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

PREREQUISITES:

Completion of the knowledge requirement of the Initial License class training program for the Safety Injection System.

EVALUATION LOCATION:

_____ PLANT _____ SIMULATOR _____ CONTROL ROOM

EVALUATION METHOD:

_____ ACTUAL PERFORMANCE _____ DEMONSTRATE PERFORMANCE

ESTIMATED TIME
TO COMPLETE JPM:

15 MINUTES

ACTUAL TIME
TO COMPLETE JPM:

_____ MINUTES

TIME CRITICAL
TASK:

YES

TASK LEVEL:

LEVEL 1

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-3B

TASK STANDARDS:

This JPM is completed when SDC flow has been restored using a Cntmt Spray Pump, per AOP-3B.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3B-2

TASK: 020070315 Align CS pumps for SDC

DIRECTIONS TO EVALUATOR:

1. Simulator Setup
 - a. IC to be determined. Mode 5, 134 DEG with bubble.
 - b. Malfunction SI003_02 (12 LPSI Pp Bkr Failure).

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-3B-2**

TASK: 020070315 Align CS pumps for SDC

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-3B-2**

TASK: 020070315 Align CS pumps for SDC

6.0 Locally starting a pump (cont'd)

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2

ELEMENT	STANDARD
(* = CRITICAL STEP)	

TIME START _____

_____ Locates AOP-3B, Step IV.A.5.	Same as element.
------------------------------------	------------------

CUE: When monitored, SI-651 and SI-652 indicate open. When monitored, alarm windows H24 and/or H28 are clear. When monitored, M4 is in ALARM.

_____ IV.A.5. IF SDC is lost due to failure of the operating LPSI PP, AND the cause will NOT result in a common mode failure, THEN complete the following actions:	Determines step is applicable. Monitors SI-651 and 652 position indication, on 1C09. Monitors alarm window H24 and H28, on 1C09. Monitors M4, on 1C18. Determines that a 12 LPSI failure will not result in a common mode failure.
_____ a. Place the failed PP handswitch in PULL TO LOCK.	Places HS-302Y, on 1C08, in PTL.

CUE: When checked, CVC-520 indicates in the BYPASS position.

_____ b. IF RCS purification is in service, THEN place IX BYP valve handswitch 1-HS-2520 in the BYP position.	HS-2520, on 1C07 [3]
--	----------------------

CUE: When checked, SI-657 indicates shut.

* _____ c. Shut S/D COOLING TEMP CONTR valve, 1-SI-657-CV.	Lowers output of HIC-657, on 1C09, to zero or places HS-3657, on 1C09 to CLOSE. Checks position indication for SI-657.
* _____ d. Place the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, in MANUAL.	Shifts FIC-306, on 1C08, to MANUAL.

CUE: When adjusted, FIC-306 output indicates 95%.

* _____ e. Adjust the output of the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, to 95%.	Adjusts output of FIC-306 to 95%.
---	-----------------------------------

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2

ELEMENT (* = CRITICAL STEP)	STANDARD
--------------------------------	----------

CUE: When checked, HS-302XA and 302YA are in the OVERRIDE position.

_____	f.	Verify BOTH RAS OVERRIDE switches in OVERRIDE:	Checks position on HS-302XA and 302YA, on 1C08 and 1C09. If not in OVERRIDE position, places HS in OVERRIDE.
		11 LPSI PP RAS OVERRIDE, 1HS-302XA	
		12 LPSI PP RAS OVERRIDE, 1-HS-302YA.	

CAUTION: Before starting the standby LPSI PP, the cause for the running LPSI PP failure should be determined to preclude a common mode failure.

CUE: 11 LPSI pump starts.

* _____	g.	Start the standby LPSI PP.	[1.0]
* _____	h.	IF RCS level is above the 37.6 foot elevation, THEN complete the following actions:	Determines step is applicable.
		(1) Slowly adjust the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, to obtain the flowrate that SDC was at prior to the loss of flow. [B0072]	
		(2) Place the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, in AUTO if desired.	

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2

ELEMENT	STANDARD
(* = CRITICAL STEP)	

CAUTION: Do NOT exceed the following cooldown limits in any one hour: [B0053]

- | | |
|----------------------|----------|
| • Greater than 270°F | 100°F/hr |
| • 184°F to 270°F | 20°F/hr |
| • less than 184°F | 10°F/hr |

CAUTION: Do NOT exceed a heatup rate of 14°F/MIN for the Shutdown Cooling Heat Exchanger as indicated on TI-303X and TI-303Y.

CUE: When checked, CET temperatures indicate 185°F. ECCS PP Room Air Coolers are not OOS.

- | | | | | |
|---|-------|----|--|---|
| * | _____ | i. | Adjust the SDC COOLING TEMP CONTR, 1-HIC-3657, as necessary to maintain the desired temperature. | If HS-3657 is in CLOSE, places HS-3657, on 1C09, to AUTO. Raise output of HIC-657. Checks SI-657 position indication. Checks SDC temperature slowly lowering, TR-351 on 1C09. |
|---|-------|----|--|---|

CUE: When checked, SDC flow indicates 3000 GPM.

- | | | |
|----|---|-------------------------------------|
| 6. | Check that the SHUTDOWN CLG FLOW CONTR, 1-FIC-306, is controlling flow. | Checks SDC flow on 1-FIC-306, 1C09. |
|----|---|-------------------------------------|

CUE: When checked, HS-3657 is in AUTO, SI-657 indicates intermediate and SDC temperature is lowering slowly.

- | | | | |
|-------|----|---|--|
| _____ | 7. | Verify the S/D COOLING TEMP CONTR valve, 1-SI-657-CV, is operating from 1C09. | |
| _____ | a. | Ensure that the SDC TEMP CONTR valve keyswitch, 1-HS-3657, is in AUTO. | Checks HS-3657 position |
| _____ | b. | Adjust 1-HIC-3657 to control temperature. | Raises output of HIC-657. Checks SI-657 position indication. Checks SDC temperature slowly lowering, TR-351 on 1C09. |

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2

ELEMENT

STANDARD

(* = CRITICAL STEP)

CUE: The CRS will complete step 8.

8. **IF** SDC has been retored, **THEN**
 complete the following actions:

No actions necessary

TERMINATING CUE:	This JPM is complete when SDC has been restored. No further actions are required.
------------------	---

TIME STOP _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3B-2

TASK: 020070315 Align CS pumps for SDC

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of event free tools

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020070315

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools
2. Initial Conditions:
 - a. Unit 1 has been shutdown for 5 days and is presently in Mode 5.
 - b. SDC is in service, using 12 LPSI Pp, and RCS temperature is 115°F.
 - c. RCS pressure is 130#, with a bubble in the Pressurizer.
 - d. ABO reported smoke coming from 12 LPSI Pp motor.
 - e. 12 LPSI Pp has just tripped.
 - f. You are performing the duties of the Unit 1 CRO.
3. Initiating Cue: The CRS directs you to respond to the loss of SDC by implementing AOP-3B, at Step IV.A.5.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-7A-2F

TASK: 020400203 Restore CC/trip RCPs due to a SW Pump Failure in Modes 3-6

JOB PERFORMANCE MEASURE
CALVERT CLIFFS NUCLEAR POWER PLANT
LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-7A-2F**

TASK: 020400203 Restore CC/trip RCPs due to a SW Pump Failure in Modes 3-6

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

PREREQUISITES:

Completion of the knowledge requirement of the Initial License class training program for the Salt Water System.

EVALUATION LOCATION:

_____ PLANT _____ SIMULATOR _____ CONTROL ROOM

EVALUATION METHOD:

_____ ACTUAL PERFORMANCE _____ DEMONSTRATE PERFORMANCE

ESTIMATED TIME
TO COMPLETE JPM:

5 MINUTES

ACTUAL TIME
TO COMPLETE JPM:

_____ MINUTES

TIME CRITICAL TASK:

NO

TASK LEVEL:

LEVEL 1

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-7A

TASK STANDARDS:

This JPM is complete when the RCP's are tripped on high thrust bearing temperature.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7A-2F

TASK: 020400203 Restore CC/trip RCPs due to a SW Pump Failure in Modes 3-6

DIRECTIONS TO EVALUATOR:

1. Simulator Setup
 - a. IC to be determined. Setup for Mode 3, HSB.
 - b. Panel display 1C13
Override SW 1-HS-3826 to Close
 - c. Malfunction SW002_01 (11 SW PP)
 - d. Isolate Component Cooling to Containment until bleedoff or bearing temperature is near trip setpoint.

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-7A-2F**

TASK: 020400203 Restore CC/trip RCPs due to a SW Pump Failure in Modes 3-6

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-7A-2F

TASK: 020400203 Restore CC/trip RCPs due to a SW Pump Failure in Modes 3-6

- Adequate Suction Pressure
- Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check for proper Pump operation (as applicable):
- Smooth, quiet operation consistent with pump history
 - Oil level remains good
 - Proper seal leakoff
 - Proper discharge pressure
 - Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7A-2F

ELEMENT

STANDARD

(* = CRITICAL STEP)

TIME START _____

____ Locate AOP-7A, Step VI.A.

Same as element

CUE:

If checked:

- a. RCP lower seal temperatures are between 142°F and 149°F
- b. RCP bleed-off temperatures are between 154°F and 161°F
- c. 12A RCP thrust bearing temperature is 170°F, all others are approximately 160°F.
- d. 12A RCP guide bearing temperature is 170°F, all others are approximately 160°F.

CUE:

None of these temperature limits have been exceeded.

____ A.1. **IF ANY** of the following RCP temperature limits are exceeded:

On 1C06:

Monitors temperatures, on 1C06.

- . Upper Thrust Bearing Temp 195°F
- . Downward Thrust Brg Temp 195°F

On the Plant Computer (Groups 009 and 010):

Monitors temperature, on Plant Computer.

- . Upper Guide Bearing Temp 195°F
- . Lower Guide Bearing Temp 195°F
- . Controlled Bleed-off Temp 200°F

THEN perform the following actions:

Determines step is continuously applicable when any of the above temperature limits are exceeded.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7A-2F

ELEMENT

STANDARD

(* = CRITICAL STEP)

CUE: If checked,

- a. 11 CC heat exchanger outlet 1-HIC-5206 indicates intermediate (5%).
- b. 11 CC heat exchanger outlet 1-CC-3824-CV indicates open.

- ___ B.1. On the unaffected SW header, place the associated CC HX in service **PER** ATTACHMENT (1), SHIFTING CC HEAT EXCHANGERS. Refers to Attachment (1).

ATTACHMENT 1

CUE: The CVCS IX is in service. When checked, CVC-520 indicates bypass position.

- ___ 1. **IF** the CVCS IX is in service, **THEN** bypass the IX by placing the CVCS IX BYP handswitch, 1-HS-2520 in BYP. Places 1-HS-2520, on 1C07, in BYP. Checks position indication for 1-CVC-520.

CUE: When 1-HIC-5208 is throttled, 12 CC Heat Exchanger Outlet (1-SW-5208) indicates intermediate.

- ___ 2. Throttle open the CC HX SW FLOW CONTR for the unaffected HX: Throttles 1-HIC-5208, on 1C13.
- . (11 CC HX) 1-HIC-5206
 - . (12 CC HX) 1-HIC-5208

CUE: When open is selected on 1-CC-3826-CV, 12 Component Cooler Heat Exchanger discharge valve does not respond (valve indicates fully shut).

CUE: When the SS or CRS has been informed that 1-CC-3826-CV cannot be opened or that Attachment (1) cannot be completed,

- a. Acknowledge report.
- b. Alarms E-50 and E-62 have just come in (If necessary, direct RO to investigate alarms).

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-7A-2F

ELEMENT

(* = CRITICAL STEP)

STANDARD

3. Open the CC HX CC OUT valve for the unaffected HX:

- . (11 CC HX) 1-CC-3824-CV
- . (12 CC HX) 1-CC-3826-CV

Places 1-HS-3826 in the OPEN. Checks position indication for 1-CC-3826. When it has been determined that 1-CC-3826 will not open, informs CRS or SS that 1-CC-3826 will not open or that Attachment (1) cannot be completed.

CUE: When monitored,

- a. 11A and 11B motor thrust bearing temperatures are 185°F
- b. 12A and 12B motor thrust bearing temperatures are 205°F.

CUE: If tripping RCPs is recommended, trip all RCPs.

- * A.1. **IF ANY** of the following RCP temperature limits are exceeded:

On 1C06:

- . Upper Thrust Bearing Temp 195°F
- . Downward Thrust Brg Temp 195°F

Monitors temperatures, on 1C06.

On the Plant Computer (Groups 009 and 010):

- . Upper Guide Bearing Temp 195°F
- . Lower Guide Bearing Temp 195°F
- . Controlled Bleed-off Temp 200°F

Monitors temperatures, on Plant Computer.

THEN perform the following actions:

- * a. Stop **ALL** RCPs.

Stops all RCPs (HS-151, 161, 171 and 181 on 1C06).

TIME STOP _____

TERMINATING CUE:

The JPM is complete when handswitches for all RCPs have been placed in the tripped position. No further actions are required.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-7A-2F

TASK: 020400203 Restore CC/trip RCPs due to a SW Pp Failure in Modes 3-6

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of event free tools

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020400203

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools
2. Initial Conditions:
 - a. Unit one is in mode 3 at 532°F with all RCPs running.
 - b. 11 Component Cooling heat exchanger is in service.
 - c. The CRS and the CRO have implemented AOP-7A.
 - d. 11 Salt Water header has been lost.
 - e. You are performing the duties of Unit 1 RO.
3. Initiating Cue: The CRS has directed you to implement AOP-7A Step VI.A. Are there any questions? You may begin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)

SYSTEM: Chemical and Volume Control System

TASK: 020060308 Respond to Inadvertent Dilution While Critical (SOER 94-2)

PURPOSE: Evaluates an Operator's Ability to Respond to an Inadvertent Dilution and Initiate Fast Boration or Use CEAs to Maintain Required Shutdown Margin

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)

TASK: 020060308 Respond to Inadvertent Dilution While Critical

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

SIMULATOR

EVALUATION METHOD:

ACTUAL PERFORMANCE

ESTIMATED TIME
TO COMPLETE JPM:

15 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-1A

TASK STANDARDS:

This JPM is complete when fast boration has been initiated to control Reactor power and to maintain required shutdown margin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)

TASK: 020060308 Respond to Inadvertent Dilution While Critical

DIRECTIONS TO EVALUATOR:

1. Simulator Setup
 - a. 1C 13. Drive Group 5 CEAs to ~120" with power ~ 95%.
 - b. Use remote function to open CVC-338 to start dilution.
 - c. Run simulator until power begins to rise then freeze.
 - d. Insert IN-HOLD-OUT Switch malfunction

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)**

TASK: 020060308 Respond to Inadvertent Dilution While Critical

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
 Identify the Control Switch and Indicating Lights, using authorized identification.
 Operate the Control Switch, to START, and check expected Indicating Light response.
 Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
 Operate the Control Switch, to STOP, and check expected Indicating Light response.
 Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
 Select the Control Switch to the desired position.
 Check Valve/Breaker position, using position Indicating Lights.
 Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
 Check the Valve/Breaker is in the correct position.
 If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
 Check the Valve/Breaker is in the correct position.
 If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

Identify the Control Switch and Indicating Lights, using authorized identification.
 Operate the Control Switch, to START, and check expected Indicating Light response.

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)**

TASK: 020060308 Respond to Inadvertent Dilution While Critical

Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)

ELEMENT (* = CRITICAL STEP)	STANDARD
--------------------------------	----------

TIME START _____

Locates AOP-1A Section V actions	Same as element.
----------------------------------	------------------

V. A. **STOP THE PRIMARY SOURCES OF DILUTION**

CUE: RC M/U Pps indicate stop and CVC-512 indicates shut.

_____	1. Stop any makeup to the RCS.	Verifies RC M/U Pps are not running and CVC-512 is shut.
-------	-----------------------------------	--

CUE: CVC-520 indicates in BYPASS position.
--

_____	2. Place the IX BYPASS handswitch, 1-HS-2520, to BYPASS.	Places HS-2520 to BYPASS, on 1C07, and checks position indication for CVC-520.
-------	---	--

B. **CONTROL REACTOR POWER**

_____	1. IF the rate of power rise can NOT be stopped,	No action required, at present time.
-------	--	--------------------------------------

_____	2. Control the rise in power using CEAs and/or boration:	
-------	---	--

CUE: CRS directs you to insert regulating Group 5 CEAs 10" (to ~110 inches) .

CAUTION **CEAs must be maintained above the Transient Insertion Limits PER Tech Spec 3.1.6. to maintain SDM.**

_____	a. Insert CEAs as necessary while maintaining the CEAs above the Transient Insertion Limit.	Selects Manual Sequential or Manual Group (and CEA Group V) and goes to Lower on CEA Control Switch. Determines the CEAs are NOT moving, informs CRS.
-------	--	---

CUE: Fast borate as required for 10 sec, with Chg Pp
--

	b. Borate the RCS as necessary by completing the following actions:	
--	--	--

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)

ELEMENT (* = CRITICAL STEP)	STANDARD
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CUE: CVC-512 indicates shut.

—	(1)	Shut the VCT M/U valve, 1-CVC-512-CV	HS-2512 {4.0}
---	-----	---	---------------

CUE: CVC-514 indicates OPEN.

* —	(2)	Open the BA DIRECT M/U valve, 1-CVC-514- MOV	HS-2514, 1C07 {3.0}
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CUE: 11 and 12 BA Pps indicate running.

* —	(3)	START ALL available BA PPs	HS-226X & Y, 1C07 {1.0}
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—	(4)	Start CHG PPs as necessary	Determines step is N/A.
---	-----	-------------------------------	-------------------------

	(5)	WHEN boration is complete, THEN stop borating	Times 10 sec run of BA Pps.
--	-----	---	-----------------------------

CUE: When checked, BA pumps indicate stopped.

* —	(a)	Stop the BA Pps	HS-226X and Y, 1C07 {2.0}
-----	-----	-----------------	---------------------------

CUE: When checked, CVC-514 indicates SHUT.
--

—	(b)	Shut the BA DIRECT M/U valve, CVC-514- MOV	HS-2514 , 1C07 {3.0}
---	-----	---	----------------------

CUE: When checked, selected PP indicates stopped.

—	(c)	Stop CHG PPs as desired.	Determines step is N/A.
---	-----	-----------------------------	-------------------------

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-1A-1 (MODIFIED)

ELEMENT

STANDARD

(* = CRITICAL STEP)

CUE: ABO reports that 1-CVC-338, CHEM ADD & MTRG TK COMB DISCH was found open and is now SHUT.

CAUTION: Turbine load or steam demand should not be raised if an inadvertent boron dilution event is in progress.

CUE: Tc is on program.

<p>_____ 3.</p>	<p>Maintain T_{COLD} on program by performing the following appropriate steps:</p> <ul style="list-style-type: none"> • Adjust TBVs or ADVs • Reduce Turbine load 	<p>Checks Tcold indication, 1C05, and Tcold Program curve, 1C06</p>
-----------------	---	---

CUE: Electrical load has not changed.

<p>_____ 4.</p>	<p>Notify the SO-BP of any electrical load changes.</p>	<p>Check MWE, 1C01</p>
-----------------	---	------------------------

TERMINATING CUE: This JPM is completed when boration has been completed and Tc and load have been checked. No further actions are required.

TIME STOP _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-1A-1

TASK: 020060308 Respond to Inadvertent Dilution While Critical

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020060308

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. Unit 1 is in Mode 1 at 95% power.
 - b. Regulating CEAs are inserted to ~120”.
 - c. Reactor power unexpectedly begins to increase.
 - d. You are performing the duties of the Unit 1 CRO.
3. Initiating Cue: The CRS directs you to respond to the reactivity excursion. Are there any questions? You may begin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)

SYSTEM: Engineered Safety Features Actuation

TASK: 020630402 Verify a Recirculation Actuation Signal (RAS)

PURPOSE: Evaluates an Operator's ability to verify RAS actuation and operate equipment.

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)

TASK: 020630402 Verify a Recirculation Actuation Signal (RAS)

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

SIMULATOR

EVALUATION METHOD:

ACTUAL PERFORMANCE

**ESTIMATED TIME
TO COMPLETE JPM:**

15 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

EOP-5
EOP Attachment (6) and Attachment (12)

TASK STANDARDS:

This JPM is complete when RAS has been verified and second CC HX and pump have been placed in service.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)

TASK: 020630402 Verify a Recirculation Actuation Signal (RAS)

DIRECTIONS TO EVALUATOR:

1. Simulator Setup
 - a. IC-13, U1, 100%
 - b. Insert Malfunction RCS 001, Cold Leg Rupture
 - c. Run simulator until RAS
 - d. Place malfunction to trip each standby CC pump breaker on separate function keys
 - e. Place SI-659 & 660 lockout H/S to ON.

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)**

TASK: 020630402 Verify a Recirculation Actuation Signal (RAS)

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

Identify the Control Switch and Indicating Lights, using authorized identification.

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)**

TASK: 020630402 Verify a Recirculation Actuation Signal (RAS)

Operate the Control Switch, to START, and check expected Indicating Light response.

Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.

Operate the Control Switch, to STOP, and check expected Indicating Light response.

Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.

Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).

Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.

Operate the Control Switch and check expected Indicating Light response.

Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.

Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).

If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.

Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).

If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)

ELEMENT

STANDARD

(* = CRITICAL STEP)

TIME START _____

_____ Locate EOP-5, Section IV.S. Same as element.

CUE: When checked:

- 1-LIA-4142 indicates off-scale low.
- 1-LIA-4143 indicates approximately 0.5 feet.
- "ACTUATION SYS RAS TRIPPED" alarm has actuated.

- _____ 1. **WHEN** RWT level drops .75 feet
OR the "ACTUATION SYS RAS TRIP"
alarm is received,
THEN perform the following actions:
- Checks RWT level at 1-LIA-4142 and 1-LIA-4143, on 1C08 and 1C09.
- Verifies "ACTUATION SYS RAS TRIPPED" alarm actuation, on 1C08.
- _____ a. Verify RAS actuation.
- Verifies RAS actuation (LPSI PPs off, Containment Sump MOVs open).

CUE: When checked, 1-LI-4146 and 1-LI-4147 indicate approximately 70.0 inches of water in the containment sump.

- _____ b. Ensure that a minimum containment sump level of at least 28 inches is indicated on the CNTMT WR WATER LVL indication, 1-LI-4146 or 1-LI-4147.
- Checks Containment sump level 1-LI-4146 or 1-LI-4147, on 1C10.
- _____ c. Verify RAS lineup **PER** ATTACHMENT (6), RAS VERIFICATION CHECKLIST
- Same as element
- * _____ d. **IF** RAS lineup is verified,
THEN shut the RWT OUT valves:
- Same as element
- 1-SI-4142-MOV
 - 1-SI-4143-MOV
- e. Place a second CC HX in service as follows:

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)

ELEMENT

STANDARD

(* = CRITICAL STEP)

CUE: SW-5208 indicates intermediate and SW flow to 12 CCHX is indicated.

* ____

(1) Throttle open the appropriate CC HX SALTWATER OUT valve:

Places appropriate HIC-5208 to approximately the same output as 11 CC HX SALTWATER OUT.

- 1-HIC-5206
- 1-HIC-5208

CUE: When positioned/checked, 1-CC-3824-CV and 1-CC-3826-CV indicate OPEN.

* ____

(2) Open the appropriate CC HX CC OUT valve:

HS-3824 (3826), 1C13, {3.0}

- 1-CC-3824-CV
- 1-CC-3826-CV

CUE: When initial pump is started:

- Component Cooling Pump breaker indicates closed momentarily, then trips free.
- Ammeter indicates running amps approximately 0 amps.
- No common mode failure conditions indicated

When remaining pump is started:

- Component Cooling Pump breaker indicates closed.
- Ammeter indicates running amps approximately 160 amps.

* ____

(3) Start a second CC PP.

Initial start of second pump results in a tripped condition.

Checks for common mode failure conditions (CC Head Tk level, Sys pressure, 480 V ESF Bkr Alarm

Starts a Second Component Cooling Pump, on 1C13.

Checks Pump breaker indication closed.

Checks Pump running amps at approximately 160 amps.

TIME STOP ____

TERMINATING CUE:

This JPM is complete when RAS has been verified and a second Heat Exchanger and Pump have been started. No further actions are required.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE EOP-5-3 (MODIFIED)

TASK: 020630402 Verify a Recirculation Actuation Signal (RAS)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020630402

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. One hour ago, a major transient occurred on Unit 1, resulting in a reactor trip and SIAS actuation.
 - b. A LOCA has been diagnosed and EOP-5 has been implemented.
 - c. RWT level has dropped to below 0.75 Ft. and RAS actuation has occurred.
 - d. Both 11 and 13 HPSI pumps are running and HPSI total flow is ~1200 gpm.
 - e. RCS pressure is ~25 psia.
3. Initiating Cue: The CRS directs you to verify RAS actuation per EOP-5, Section IV.S and place a second CC Heat Exchanger and pump in service. Are there any questions? You may begin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3G- (NEW)

SYSTEM: Main Feedwater

TASK: 020320302 Respond to a Condensate or Feedwater Rupture

PURPOSE: Evaluates an Operator's Ability to Respond to a Condensate rupture

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3G-NEW

TASK: 0203020302 Respond to a Condensate or Feedwater Rupture

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

SIMULATOR

EVALUATION METHOD:

ACTUAL PERFORMANCE

**ESTIMATED TIME
TO COMPLETE JPM:**

15 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-3G

TASK STANDARDS:

This JPM is complete when actions have been taken for a condensate header rupture in Mode 1.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3G-NEW

TASK: 0203020302 Respond to a Condensate or Feedwater Rupture

DIRECTIONS TO EVALUATOR:

8. Simulator Setup
 - a. IC-13, Unit 1 at ~100% power.
 - b. Insert malfunction for CBP Combined Discharge header rupture at 5% (CD008).
 - c. Run simulator for when directed by evaluator.

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-3G-NEW**

TASK: 0203020302 Respond to a Condensate or Feedwater Rupture

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started. Identify the Control Switch and Indicating Lights, using authorized identification. Operate the Control Switch, to START, and check expected Indicating Light response. Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification. Operate the Control Switch, to STOP, and check expected Indicating Light response. Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification. Select the Control Switch to the desired position. Check Valve/Breaker position, using position Indicating Lights. Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification. Check the Valve/Breaker is in the correct position. If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification. Check the Valve/Breaker is in the correct position. If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-3G-NEW**

TASK: 0203020302 Respond to a Condensate or Feedwater Rupture

6.0 Locally starting a pump (cont'd)

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-3G NEW

ELEMENT

STANDARD

(* = CRITICAL STEP)

TIME START _____

_____ Identify and locate AOP-3G, Section VIII

Same as element.

CUE: S/G levels are slowly lowering. SGFP suction pressure is low. Condensate system flow has risen.

A. RESPONSE TO A CONDENSATE OR
FEEDWATER RUPTURE.

1. IF a rapid unexplained reduction or loss of Condensate or Feedwater header pressure occurs simultaneously with a lowering of Hotwell level, **OR** other indications of a rupture are observed, **THEN** with the approval of the SM/CRS, perform the following actions:
- Monitors S/G levels, condensate and feedwater header pressures on 1C03. Determines Step is applicable at this time, and requests permission from SM/CRS to perform the subsequent steps

* _____

- a. Trip the Reactor.

Depress Rx trip pushbuttons on 1C05

- b. Perform the Reactivity control portion of EOP-0.

Same as element

- c. Trip both SGFPs.

Depress SGFP trip pushbuttons on 1C03

- d. Secure the following pumps, and place their handswitches in PULL TO LOCK:

* _____

- Condenser Booster Pumps

H/S-4453, 4460, 4467, 1C03, {2.0}, PTL

* _____

- Condensate Pumps

H/S-4414, 4421, 4428, 1C03, {2.0}, PTL

* _____

- Heater Drain Pumps

H/S-1467, 1464, 1C03, {2.0}, PTL

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-3G NEW

ELEMENT	STANDARD
(* = CRITICAL STEP)	
____ e. Shut the SG FW ISOL valves:	
____ •1-FW-4516-MOV	H/S-4516, 1C03 {3.0}
____ •1-FW-4517-MOV	H/S-4517, 1C03 {3.0}
____ f. Start an AFW PP.	Opens 1-MS-4070 & 4071, 1C04, {3.0} or starts 13 AFW Pp, 1C04 {1.0}
____ g. IMPLEMENT the remainder of EOP-0.	Element not required to be completed.

TIME STOP ____

TERMINATING CUE:	This JPM is complete when the steps in AOP-3G, VIII.A are complete. It is NOT required to complete the remainder of EOP-0. No further actions are required.
------------------	---

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020320302 Respond to a Condensate or Feedwater Rupture

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020320302

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. Unit 1 is at 100% power .
 - b. TBO reports a large leak on weld on the CBP combined discharge header.
 - c. You are performing the duties of the Unit 1 RO.
3. Initiating Cue: The CRS directs you to respond to the condensate header leak per AOP-3G, Section VIII. Are there any questions? You may begin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE OI-30 (NEW)

SYSTEM: Nuclear Instrumentation System

TASK: 020570501 Calibrate Excore/RRS NI channels

PURPOSE: Evaluates an Operator's Ability to calibrate one channel of NI per OI-30 during Steady State power

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI 30 (NEW)

TASK: 020570501 Calibrate Excore/RRS NI Channel

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

SIMULATOR

EVALUATION METHOD:

ACTUAL PERFORMANCE

**ESTIMATED TIME
TO COMPLETE JPM:**

25 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

OI-30

TASK STANDARDS:

This JPM is complete when one NI Channel has been calibrated per OI-30 Section 6.2.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI 30 (NEW)

TASK: 020570501 Calibrate Excore/RRS NI Channel

DIRECTIONS TO EVALUATOR:

1. Setup instructions:
 - a. Select IC-13 for 100% power.
 - b. Adjust Channel B NUCLEAR POWER CALIBRATE pot to insert ~ 3% deviation from D/T power
 - c. Collect As-found Data per OI-30 using the NI Cal

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-30 (NEW)

ELEMENT

STANDARD

(* = CRITICAL STEP)

TIME START _____

CUE: OI-30 Section 6.2 is complete through Step 4. Begin at Step 5.

_____	Identify and locate OI-30, Section 6.2, Step 5	Same as element
_____ 5.	IF any of the following apply, THEN PROCEED to Step 7: <ul style="list-style-type: none"> • Power less than or equal to 70% • PA912 does NOT have a good quality point • Either difference calculated in Step 4 is greater than or equal to ½% for a specified channel 	Determines Channel B Nuclear power difference with calculated power is out of spec and proceeds to Step 7
_____ 6.	Step is NA	Determines step is N/A
_____ 7.	IF directed by Step 5, THEN CALIBRATE each channel requiring calibration, by performing Steps <u>a. through af.</u> for a specified channel. RECORD all data in the As Left section of the NUCLEAR INSTRUMENTATION CALIBRATION log sheet (unless otherwise specified). a. BYPASS the following RPS trips for the channel to be calibrated.	Determines to be Channel B
* _____	<u>TRIP UNIT</u> <u>BYPASS KEY</u>	
* _____	HI POWER.....1	Same as element
* _____	HI RATE.....2	
* _____	TM/LO PRESS.....7	
* _____	LOSS LOAD.....8	
* _____	AXIAL PWR.....10	

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE OI-30 (NEW)

ELEMENT	STANDARD
(* = CRITICAL STEP)	
_____	b. INDEPENDENTLY CHECK that RPS Trip Units 1, 2, 7, 8, 10 are bypassed. Evaluator should acknowledge this action as a PEER check.
_____	c. PLACE the Linear Power Drawer Operate-Test switch in ZERO for the channel to be calibrated. Same as element
* _____	d. PLACE the ΔT , TM/LP CALCULATR MODE switch in ZERO/EXT INPUT. Same as element
_____	e. ENSURE the DVM METER INPUT switch in NUCLEAR PWR AND OBSERVE DVM reading. Same as element
_____	f. IF the DVM reading is equal to or greater than 1%, THEN PERFORM the following: Determines to be N/A
* _____	g. PLACE the Linear Power Operate – Test switch in OPERATE Same as element
_____	h. Momentarily DEPRESS the Reset pushbutton on the front of the Linear Power Drawer. Same as element

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-30 (NEW)

ELEMENT (* = CRITICAL STEP)		STANDARD
_____	i. <u>IF</u> tripped, <u>THEN RESET VOPT AND</u> associated Control Room annunciators.	Reset VOPT, resets applicable RPS trip units
* _____	j. CONNECT the RPS Trip Test Cable to the RPS HI POWER Trip Unit.	Same as element
* _____	k. PLACE the DVM METER input SWITCH in meter input.	Same as element
_____	l. RECORD the DVM reading as NUC PWR (V) in the As Found section of the NUCLEAR INSTRUMENTATION CALIBRATION log sheet.	Same as element
<p><u>NOTE:</u> Clockwise rotation of the potentiometers lowers the DVM reading and counterclockwise rotation raises the reading.</p> <p><u>CAUTION:</u> Potentiometer adjustments must be stopped immediately if 1C05 annunciator "POWER LEVEL HIGH CHANNEL PRE_TRIP" alarms while adjusting a potentiometer.</p>		
* _____	m. <u>UNLOCK AND</u> Slowly ADJUST the NUCLEAR PWR CALIBRATE potentiometer to obtain a DVM reading equal to the REQUIRED TRIP UNIT INPUT VOLTAGE calculated in Step 6.2.B.2.c	Same as element

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE OI-30 (NEW)

ELEMENT	STANDARD
(* = CRITICAL STEP)	
<p>_____ (1) IF 1C05 annunciator "POWER LEVEL HIGH CHANNEL PRE-TRIP" alarms while the potentiometer is being adjusted, THEN STOP the adjustment AND ENSURE the test switch alignment is correct.</p>	Determines step is N/A
<p>_____ (2) IF 1C05 annunciator "POWER LEVEL HIGH CHANNEL PRE-TRIP" alarmed AND the test switch alignment is correct,</p>	Determines step is N/A
<p>_____ n. LOCK the locking device on the NUCLEAR PWR CALIBRATE potentiometer.</p>	Same as element
<p>_____ o. IF the DVM reading changed while locking the potentiometer above, THEN GO TO Step l.</p>	Same as element
<p>_____ p. RECORD the DVM reading as NUC PWR (V).</p>	Same as element
<p>_____ q. RECORD the NUCLEAR PWR CALIBRATE potentiometer setting as NUC PWR POT SET.</p>	Same as element
<p>_____ r. PLACE the DVM METER INPUT switch in NUCLEAR PWR AND RECORD the DVM reading as NUC PWR %.</p>	Same as element

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-30 (NEW)

ELEMENT (* = CRITICAL STEP)		STANDARD
* _____	s. PLACE the ΔT , TM/LP CALCULATOR MODE switch in OPERATE	Same as element
_____	t. DISCONNECT the RPS Trip Test cable from the HI POWER Trip Unit.	Same as element
NOTE: The deviation meter will fluctuate due to noise in the ΔT Power Channels. Nuclear Power and D/T Power DVM readings are equal at the zero mark		
_____	u. PLACE the DVM METER INPUT switch to ΔT PWR.	Same as element
_____	v. UNLOCK AND ADJUST the D/T PWR CALIBRATE potentiometer to null the NUCLEAR PWR- ΔT PWR (%) deviation meter such that fluctuations occur evenly about the zero mark.	Same as element
_____	w. LOCK the locking device on the ΔT PWR CALIBRATE potentiometer.	Same as element
_____	x. IF the DVM reading changed while locking the potentiometer above, THEN GO TO Step u	Same as element
_____	y. COMPARE the ΔT PWR CALIBRATE potentiometer setting to the As Found ΔT PWR CALIBRATE potentiometer setting AND the Plant Setpoint File. [B0071].	Same as element

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE OI-30 (NEW)

ELEMENT	STANDARD
(* = CRITICAL STEP)	
_____ z. IF the Δ T PWR CALIBRATE potentiometer setting is outside the tolerance listed in the PLANT Setpoint File, THEN REFER to APPENDIX B for appropriate actions.	Determines it is in spec
_____ aa. RECORD the DVM reading as DELTA T PWR %.	Same as element
_____ ab. RECORD the Δ /T PWR CALIBRATE potentiometer setting as DELTA T PWR POT SET.	Same as element
_____ ac. IF tripped, THEN RESET VOPT AND RPS Trip Units 1, 7 and 10 AND associated Control Room annunciators.	Same as element
* _____ ad. REMOVE the Trip Bypass Keys from RPS Trip Units 1, 2, 7, 8 and 10.	Same as element

TIME STOP _____

TERMINATING CUE: This task is complete when the Channel B has been calibrated (through Step ad). No further actions are required.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-30 (NEW)

020570501 Calibrate Excore/RRS NI Channel

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 020570501

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. Unit 1 is in Mode 1, at 100% power for 230 days.
 - b. You are performing the duties of the CRO.
3. Initiating Cue: The CRS directs you to complete Section 6.2.B of OI-30, NI Calibration. The As-Found data has been collected for your review from section 6.2, step 4.
4. Are there any questions? You may begin.

UNIT ONE NUCLEAR

INSTRUMENTATION CALIBRATION DATA SHEET

DATE:

TIME:

CALCULATED POWER:

99.9 (%)

CALCULATED POWER / 20

4.995 (VDC)

AS FOUND

CHAN	NUC PWR %	NUC PWR V	NUC PWR POT SET	DELTA T PWR %	DELTA T PWR POT SET
A	99.9	4.995	480	99.8	415
B	99.0	4.845	467	99.9	422
C	99.8	4.994	486	99.8	436
D	99.9	4.995	478	99.8	412

AS LEFT

NUC PWR %	NUC PWR V	NUC PWR POT SET	DELTA T PWR %	DELTA T POT SET	DELTA T PWR POT STPT.

DELTA T POT SETPOINT TOLERANCE *

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

SYSTEM: Instrument Air

TASK: 010410201 Startup the Instrument Air System (<30 / >30 PSIG)

PURPOSE: Evaluates an Operator's Ability to Align and Startup Instrument Air Using the Fire Main for Compressor Cooling

JOB PERFORMANCE MEASURE
CALVERT CLIFFS NUCLEAR POWER PLANT
LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

TASK: 010410201 Startup the Instrument Air System (< 30/ >30 PSIG)

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

SIMULATOR

EVALUATION METHOD:

DEMONSTRATE PERFORMANCE

**ESTIMATED TIME
TO COMPLETE JPM:**

15 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

OI-19

TASK STANDARDS:

This JPM is complete when the fire main is aligned to supply cooling water to the instrument air compressors and SRW outlet temperature has been checked.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE OI-19-1

TASK: 010410201 Startup the Instrument Air System (< 30/ >30 PSIG)

DIRECTIONS TO EVALUATOR:

None

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

TASK: 010410201 Startup the Instrument Air System (< 30/ >30 PSIG)

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

TASK: 010410201 Startup the Instrument Air System (< 30/ >30 PSIG)

Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

ELEMENT (* = CRITICAL STEP)	STANDARD
--------------------------------	----------

TIME START _____

CUE: Start at Section 6.4.B. The general precautions and initial conditions have been met.

_____ Identify & locate OI-19. Same as element.

NOTE: Compliance with MN-1-110, TROUBLESHOOTING & PROCEDURE CONTROLLED ACTIVITIES, is required when using temporary hose connections.

The supply and discharge fire hoses are located in the AOP/EOP locker outside the SRW Room.

1. **ALIGN** Fire Main to supply cooling water to the Instrument Air Compressors as follows:

- | | | |
|---------|---|--|
| * _____ | a. CONNECT a fire hose at Auxiliary Water Supply to Air Compressors, 1-SRW-182. | Demonstrates connection of fire hose between 1-SRW-182 and nearest available fire main connection. |
| * _____ | b. CONNECT the other end of the fire hose to the nearest available Fire Hose Station. | Points out the nearest fire hose station, near 1T11 |
| * _____ | c. CONNECT the drain hose to Auxiliary Water Return from Air Compressors, 1-SRW-184 AND DIRECT the hose to a floor drain. | Demonstrates connection of drain hose at 1-SRW-184 . |
| _____ | d. ENSURE that another TBO qualified operator VERIFIES the hoses connected in Steps B.1.a and B.1.b and B.1.c. | |
| _____ | e. LOG the connection of hose in Step B.1.a, B.1.b and B.1.c in the Turbine Building Operator's Log. | Same as element. |
| * _____ | f. OPEN Fire Main Supply to the hose connected in Step B.1.b. | Locates and opens fire main supply valve. {8.0} |

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

ELEMENT (* = CRITICAL STEP)	STANDARD
--------------------------------	----------

CAUTION: Steps 1.g, 1.h, 1.i and 1.j must be completed in a timely manner due to the Fire Main and Service Water System being cross-connected.

- | | | | |
|---------|----|--|-------|
| * _____ | g. | OPEN Auxiliary Water Return from Air Compressors, 1-SRW-184. | {8.0} |
| * _____ | h. | OPEN Auxiliary Water Supply to Air Compressors, 1-SRW-182. | {8.0} |
| * _____ | i. | SHUT SRW Supply to Air Compressors, 1-SRW-181. | {8.0} |
| * _____ | j. | SHUT SRW Return from Air Compressors, 1-SRW-183. | {8.0} |

CUE: 11 instrument air compressor is in service and air receiver pressure is greater than 30 psig.
--

- | | | |
|----------|---|------------------------|
| _____ 2. | IF the Instrument Air Compressors are shutdown, | Determines step is N/A |
|----------|---|------------------------|

CUE: 11 IA compressor service water outlet temperature is 117°F and steady.

- | | | |
|----------|--|---|
| _____ 3. | IF an Instrument Air Compressor is running,
THEN MONITOR the Service Water Outlet Temperature maintaining temperature between 100°F and 120°F. | Checks 11 Instrument Air Compressor service water outlet temperature. |
|----------|--|---|

TIME STOP _____

TERMINATING CUE: This JPM is complete when air compressor service water outlet temperature has been checked. No further actions are required.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE OI-19-1

TASK: 010410201 Startup the Instrument Air System (<30 / > 30 PSIG)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 010410201

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. Unit 1 is in Mode 3.
 - b. #11 instrument air compressor is in service.
 - c. Turbine building fire booster pump is in auto.
 - d. Service water system maintenance requires isolating service water to the instrument air compressors.
 - e. You are performing the duties of Unit 1 TBO.
3. Initiating Cue: The CRS directs you to line up fire main cooling to the instrument air compressors per the procedure. Are there any questions? You may begin.

APPENDIX PC, PROCEDURE CONTROLLED TEMPORARY PLANT
CONFIGURATION CHANGES (Page 5 of 8)

ATTACHMENT PC-1, PROCEDURE CONTROLLED TEMPORARY PLANT CONFIGURATION CHANGE FORM (Page 1 of 2)							
Procedure #: <u>OI-19</u>		Date: <u>TODAY</u>		Expected Completion Date: <u>TOMORROW</u>			
Equipment/Functions Affected: <u>SUPPLY TEMPORARY COOLING WATER FROM FIRE SYSTEM TO INSTRUMENT AIR COMPRESSORS</u>				Unit <input checked="" type="checkbox"/> 1 <input type="checkbox"/> Common <input type="checkbox"/> 2			
				System: _____ Modes: <input type="checkbox"/> 1 - Power Operation <input type="checkbox"/> 2 - Startup <input type="checkbox"/> 3 - Hot Standby <input type="checkbox"/> 4 - Hot Shutdown <input checked="" type="checkbox"/> 5 - Cold Shutdown <input type="checkbox"/> 6 - Refueling <input type="checkbox"/> 7 - ALL			
Reason for Configuration Change: <u>SRW IS DEGRADED CONDITION</u>							
ORIGINATOR <u>R. NIEMIELSKI</u> Name (Print)		<u>[Signature]</u> Signature		<u>6542</u> Ext		<u>OIS</u> Work Group	
						<u>TODAY</u> Date	
Tag Seq #	Config Chg Type	Equip ID/Description/Location	INSTALLATION Installer Initial Date	Verifier Initial Date	REMOVAL Remover Initial Date	Verifier Initial Date	
1	TEMP HOSE	FIRE HOSE FROM HOSE STATION TO 1-SRW-182					
2	TEMP HOSE	DRAIN HOSE FROM 1-SRW-184 TO FLOOR DRAIN					
Installer _____			Remover _____				
Verifier _____			Verifier _____				
Name (Print) _____			Initial _____		Name (Print) _____		
			Ext _____		Initial _____		
Monthly Reviewers							
Name		Date		Name		Date	

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-9A-NEW

SYSTEM: Emergency Diesel Generators

TASK: 010480313 Take LOCAL Diesel Generator Control

PURPOSE: Evaluates an Operator's Ability to Shutdown an DG Using Local Engine Control

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-9A-NEW

TASK: 010480313 Take LOCAL Diesel Generator Control

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

PLANT

EVALUATION METHOD:

DEMONSTRATE PERFORMANCE

**ESTIMATED TIME
TO COMPLETE JPM:**

15 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

AOP-9A

TASK STANDARDS:

This JPM is complete when 1A Diesel Generator and Breakers are in local control

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-9A-NEW

TASK: 010480313 Take LOCAL Diesel Generator Control

DIRECTIONS TO EVALUATOR:

None

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-9A-NEW**

TASK: 010480313 Take LOCAL Diesel Generator Control

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE AOP-9A-NEW**

TASK: 010480313 Take LOCAL Diesel Generator Control

Check for proper Pump operation (as applicable):

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-9A-NEW

ELEMENT

STANDARD

(* = CRITICAL STEP)

TIME START _____

CUE: Give the operator a copy of AOP-9A.

CUE: You have been notified by 1C43 to take local control and OPEN 1A DG Output breaker per AOP-9A steps AL and BB. You have the AOP-9A Keys.

- | | | |
|---------|---|---|
| _____ | Identify AOP-9A, Step AL. | Same as element. |
| * _____ | 1. Place a Local/Remote Key into 1A DG Output Breaker LOCAL/REMOTE handswitch, 1-HS-1703A, and unlock it. | Same as element |
| * _____ | 2. Place 1A DG Output Breaker LOCAL/REMOTE handswitch, 1-HS-152-1703A to LOCAL. | Same as element |
| * _____ | 3. Place 1A DG OUT BKR Local Control handswitch, 1-HS-1703B to TRIP | Same as element |
| _____ | 4. Notify 1C43 that 1A Diesel Generator Output Breaker is in LOCAL and TRIPPED. | Simulates call with examiner |
| _____ | 5. Perform step BB. | Locates step BB and proceeds per procedure. |

CUE: As the candidate points out each switch, acknowledge the simulated action after the component has been verified correct by its label for step BB.

- | | | |
|---------|--|-----------------|
| * _____ | 1. Place a Local/Remote Key into 17-11 4KV Bus Tie Breaker LOCAL/REMOTE handswitch, 1-HS-1701A, and unlock it. | Same as element |
| * _____ | 2. Place 17-11 4KV Bus Tie Breaker LOCAL/REMOTE handswitch, 1-HS-152-1701A to LOCAL. | Same as element |
| * _____ | 3. Place a Local/Remote key into U440-17 4KV Feeder Breaker LOCAL/REMOTE handswitch, 1-HS-1702A and unlock it | Same as element |

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE AOP-9A-NEW

ELEMENT	STANDARD
(* = CRITICAL STEP)	
* ____ 4. Place U440-17 4KV Feeder Breaker LOCAL/REMOTE handswitch 1-HS-1702A to LOCAL.	Same as element
* ____ 5. Place a Local/Remote Key into 17 480V Bus Feeder LOCAL/REMOTE handswitch 1-HS-52-1701A and unlock it .	Same as element
* ____ 6. Place 17 480V Bus Feeder Breaker LOCAL/REMOTE handswitch 1-HS-52-1701A to LOCAL.	Same as element
____ 7. GO TO back of Panel 1C188-4 and open door (NOTE: DO NOT OPEN DOOR)	Candidate identifies the panel only
* ____ 8. Insert key and unlock the 43/LR switch. (NOTE: This is discussed only)	Element is N/A
* ____ 9. Place the 43/LR switch handle in the upper, LOCAL position.	Element is N/A
____ 10. Lock 43/LR switch, remove key, and close the door.	Element is N/A

CUE: 1A DG is running.

- | | |
|---|--|
| 11. IF 1A Diesel Generator is running,
THEN: | |
| * ____ a. Simultaneously depress BOTH local emergency stop pushbuttons, 1A LOCAL EMER STOP PB, 1-HS-10335 AND 1-HS-1-10336 | Simulates lifting cover to depress the pushbuttons |
| ____ b. Reset 1A Diesel Generator by depressing 1A GEN EMER S/D RESET PB, 1-HS-10337 | Simulates lifting cover to depress the pushbutton |

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-9A-NEW

ELEMENT

STANDARD

(* = CRITICAL STEP)

- | | | |
|-----------|--|------------------------------|
| _____ 12. | Notify 1C43 that 1A Diesel and Breakers
are in local control. | Simulates call with examiner |
|-----------|--|------------------------------|

TIME STOP _____

TERMINATING CUE: This JPM is complete when 1C43 has been notified. No further actions are required.

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE AOP-9A-NEW

TASK: 010480313 Take LOCAL Diesel Generator Control

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 010480313

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. A severe fire has resulted in a control room evacuation.
 - b. All diesel generators are operating.
 - c. You are performing the duties of the outside operator.
3. Initiating Cue: The CRO at 1C43 has directed you to place the 1A diesel generator and breakers in local control per AOP-9A, Step AL and BB. Are there any questions? You may begin.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP-O-55 (NEW)

SYSTEM: Containment

TASK: 010010501 Verify Containment Integrity (Modes 1-4)

PURPOSE: Evaluates an Operator's Ability to verify Containment Integrity

JOB PERFORMANCE MEASURE

CALVERT CLIFFS NUCLEAR POWER PLANT

LICENSED OPERATOR TRAINING

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP-O55 (NEW)

TASK: 010010501 Verify Containment Integrity (Modes 1-4)

PERFORMER'S NAME: _____

APPLICABILITY:

RO and SRO

EVALUATION LOCATION:

PLANT

EVALUATION METHOD:

ACTUAL PERFORMANCE

ESTIMATED TIME
TO COMPLETE JPM:

20 MINUTES

TIME CRITICAL TASK:

NO

TOOLS AND EQUIPMENT:

None

REFERENCE PROCEDURE(S):

STP O-55-2

TASK STANDARDS:

This JPM is complete when the Containment Integrity is verified for the selected penetration(s).

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP-O55 (NEW)

TASK: 010010501 Verfiy Containment Integrity (Modes 1-4)

DIRECTIONS TO EVALUATOR:

None

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE STP-O55 (NEW)**

TASK: 010010501 Verify Containment Integrity (Modes 1-4)

JPM STANDARDS

(List of minimum Standard Practices for common evolutions at CCNPP)

1.0 Starting a pump

If non-emergency condition, dispatches a PO to verify pump is ready to be started.
Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check proper pump operation (as applicable):

- Motor amps
- Pump discharge pressure
- System flow
- Activation/Clearing of applicable Annunciators (e.g.; Hi Disch Press, Lo Hdr Press)

2.0 Stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level)

3.0 Operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights, using authorized identification.
Select the Control Switch to the desired position.
Check Valve/Breaker position, using position Indicating Lights.
Check expected system response (e.g.; flow, pressure, level, volts, amps, KW)

4.0 Checking Valve/Breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, report Valve/Breaker position to CRS.

5.0 Verifying valve/breaker position

Identify the Valve/Breaker Indicating Lights, using authorized identification.
Check the Valve/Breaker is in the correct position.
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

6.0 Locally starting a pump

Verify the following:

- Suction Valve open
- Discharge Valve position (as applicable)
- Miniflow Valve position (as applicable)
- Pump and Motor oil levels are normal
- Adequate Suction Pressure

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to START, and check expected Indicating Light response.
Check for proper Pump operation (as applicable):

CCNPP LICENSED OPERATOR**JOB PERFORMANCE MEASURE STP-O55 (NEW)**

TASK: 010010501 Verfiy Containment Integrity (Modes 1-4)

- Smooth, quiet operation consistent with pump history
- Oil level remains good
- Proper seal leakoff
- Proper discharge pressure
- Expected system flow

7.0 Locally stopping a pump

Identify the Control Switch and Indicating Lights, using authorized identification.
Operate the Control Switch, to STOP, and check expected Indicating Light response.
Check expected system response (e.g.; flow, pressure, level).

8.0 Operating a Manual Valve

Identify the Valve, using authorized identification.
Operate the Valve and check expected position indication change (e.g.; stem rise, pointer).
Check expected System response (e.g.; fluid flow sounds, pressure changes, tank levels).

9.0 Locally operating Control Valves/Motor Operated Valves/Circuit Breakers

Identify the Control Switch and Indicating Lights (if applicable), using authorized identification.
Operate the Control Switch and check expected Indicating Light response.
Check expected System response (e.g.; flow, pressure, levels, volts, amps).

10.0 Locally checking Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, report Valve/Breaker position to Control Room.

11.0 Locally verifying Valve/Breaker position

Identify the Valve/Breaker, using authorized identification.
Check the Valve/Breaker is in the correct position, using appropriate position indication (e.g.; pointer, stem rise, flags, indicating lights).
If Valve/Breaker is not in correct position, operates Valve/Breaker to correct position.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP O-55 (NEW)

ELEMENT

(* = CRITICAL STEP)

STANDARD

TIME START _____

_____	Identify & locate Penetration on applicable page of STP O-55-2.	Determines penetrations are on page 92, 93 & 94 of STP O-55-2
	Verified the penetrations as described in STP O-55-2	Same as element

CUE: Evaluator to note CANISTER 2ZED2 has 1 PSIG indicated.

* _____	• Attachment 2, 45' East Pent. Cannisters, Page 92 & 93	Charges CANISTER 2ZED2
* _____	• Attachment 2 45' East Pent. Cont.press xmitters, page 94	Same as element

OI-4 STEP 6.6.B

_____	1. NOTIFY the Control Room of electrical penetration canister charging operation.	Notifies evaluator
_____	2. ENSURE SHUT the nitrogen charging hose isolation valve.	{8.0}
* _____	3. OPEN the nitrogen outlet from the associated electric penetration PCV:	
	• OUT ISOL FOR 1-N2-6326-PCV (E Pen) ... 0-N2-353	{8.0}
	• OUT ISOL FOR 1-N2-6328-PCV (W Pen) ... 0-N2-355	Determines N/A
	• OUT ISOL FOR 2-N2-6326-PCV (E Pen) ... 0-N2-384	Determines N/A
	• OUT ISOL FOR 2-N2-6328-PCV (W Pen) ... 0-N2-386	Determines N/A
_____	4. SHUT the PRESSURE SWITCH ISOL VLV on the canister to be charged.	{8.0}
* _____	5. REMOVE the cap from the fill connection below the isolated pressure switch.	Same as element

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP O-55 (NEW)

ELEMENT	STANDARD
(* = CRITICAL STEP)	
* ____ 6. CONNECT the charging hose to the fill connection on the canister to be charged.	Same as element
* ____ 7. OPEN the PRESSURE SWITCH ISOL VLV on the canister to be charged.	{8.0}
* ____ 8. OPEN the hose isolation valve and charge canister to 25 to 30 PSIG.	{8.0}
* ____ 9. <u>WHEN</u> the canister is between 25 and 30 PSIG, <u>THEN SHUT</u> the hose isolation valve.	{8.0}
* ____ 10. SHUT the PRESSURE SWITCH ISOL VLV on the canister just charged.	{8.0}
<u>WARNING:</u> The nitrogen hose will be pressurized between 25 and 30 PSIG, use caution when venting off the trapped pressure.	
____ 11. Slowly LOOSEN the nitrogen hose connection and depressurize the hose.	Same as element
* ____ 12. REMOVE hose connection from the canister fill connection.	Same as element
* ____ 13. REPLACE the cap on the canister fill connection <u>AND TIGHTEN</u> securely.	Same as element
* ____ 14. OPEN the PRESSURE SWITCH ISOL VLV on the canister just charged.	{8.0}
____ 15. REPEAT steps 4 through 14 for each canister requiring charging.	Determines N/A

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP O-55 (NEW)

ELEMENT

(* = CRITICAL STEP)

STANDARD

- | | | |
|-----------|--|----------------------------|
| _____ 16. | SHUT the nitrogen outlet from the associated electric penetration PCV opened above: <ul style="list-style-type: none"> • OUT ISOL FOR 1-N2-6326-PCV (E Pen) ... 0-N2-353 {8.0} • OUT ISOL FOR 1-N2-6328-PCV (W Pen) ... 0-N2-355 Determines N/A • OUT ISOL FOR 2-N2-6326-PCV (E Pen) ... 0-N2-384 Determines N/A • OUT ISOL FOR 2-N2-6328-PCV (W Pen) ... 0-N2-386 Determines N/A | |
| _____ 17. | ROTATE the handle on the local alarm panel clockwise AND counter-clockwise to reset the local dropped flag and signal to the Control Room alarm. | Same as element |
| _____ 18. | CHECK 1(2)C10 "EAST (WEST) PENET RM CANISTER PRESS LO" annunciator clear. | Notifies evaluator |
| _____ 19. | IF the leak tightness of the cap is questionable OR the rate of canister leakage increases,
THEN LEAK CHECK the cap on the canister fill connection. | |
| _____ a. | IF leakage is evident,
THEN TIGHTEN as necessary. | Same as element |
| _____ b. | IF cap leakage can NOT be stopped,
THEN INITIATE an IR. | Determines N/A |
| _____ 2. | Signs off STP O-55-2 each sheet | Same as element, check SAT |

TIME STOP _____

TERMINATING CUE:

This JPM is complete when the penetrations are located and checked per STP O-55-2. No further actions are required.

CCNPP LICENSED OPERATOR

JOB PERFORMANCE MEASURE STP O-55 (NEW)

TASK: 0100010501 Verify Containment Integrity (Modes 1-4)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be

SATISFACTORY

UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CCNPP LICENSED OPERATOR
JOB PERFORMANCE MEASURE

TASK: 010010501

DIRECTIONS TO TRAINEE:

1. To complete the task successfully, you must:
 - perform each critical element correctly. You must inform the evaluator of the indications you are monitoring. Where necessary, consider the evaluator to be the CRS.
 - comply with industrial safety practices, radiation safety practices and use of event free tools.
2. Initial Conditions:
 - a. Unit 2 is in Mode 1.
 - b. You are performing the duties of an extra Licensed Operator.
3. Initiating Cue: The CRS directs you to verify containment integrity per STP O-55-2 in the 45' East Electrical room using Attachment 2. Are there any questions? You may begin.

**CALVERT CLIFFS NUCLEAR POWER PLANT
SURVEILLANCE TEST PROCEDURE
UNIT TWO**

STP O-55-2

CONTAINMENT INTEGRITY VERIFICATION MODE 1 - 4

REVISION 41

SAFETY RELATED

CONTINUOUS USE

Approval Authority: _____

 9-20-99
Signature/Date

Effective Date: _____

9/21/99

ATTACHMENT 2

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OUTSIDE - CONTAINMENT INTEGRITY ALIGNMENT VERIFICATION45' EAST PEN CANISTERS

COMPONENT	POSITION	LOCATION	PEN	INIT
CANISTER 2ZED2	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEA2	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEA4	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEA5	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEA7	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEA9	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEB1	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEB2	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEB3	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEB4	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEB5	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEB6	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEC1	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEC2	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEC4	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEC6	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEC7	PRESS W/CAP INST	45' E PEN RM		

ATTACHMENT 2

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OUTSIDE - CONTAINMENT INTEGRITY ALIGNMENT VERIFICATION45' EAST PEN CANISTERS - (continued)

COMPONENT	POSITION	LOCATION	PEN	INIT
CANISTER 2ZEC9	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED1	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED3	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED4	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED5	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED7	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED6	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZED8	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE1	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE2	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE3	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE4	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE5	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE6	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE7	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE8	PRESS W/CAP INST	45' E PEN RM		
CANISTER 2ZEE9	PRESS W/CAP INST	45' E PEN RM		

ATTACHMENT 2

Page 7 of 9

OUTSIDE - CONTAINMENT INTEGRITY ALIGNMENT VERIFICATION45' EAST PEN CNTMT PRESS XMITTERS

COMPONENT	POSITION	LOCATION	PEN	INIT
2-PT-5308	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	72	
2-PT-5313B	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	72	
2-PT-5314B	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	72	
2-PT-5315B	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	72	
2-PT-5313A	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	77	
2-PT-5314A	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	77	
2-PT-5315A	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	77	
2-PT-5307	PT.HP SIDE PLUG AND TEST CONN CAP INSTALLED	45' E PEN RM SOUTH WALL	77	