

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Main Turbine
TASK: Perform Quarterly Turbine Stop Valve Testing
TASK NUMBER: 2450040201
JPM NUMBER: NRC-JPM-001

ALTERNATE PATH: K/A NUMBER: 241000A4.19
IMPORTANCE FACTOR: 3.5 3.4
APPLICABILITY: RO SRO
RO SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-ST.AC-0002(Q), Rev. 36

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 10 Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ DATE: _____

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NAME: _____

DATE: _____

SYSTEM: Main Turbine

TASK: Perform Quarterly Turbine Stop Valve Testing

TASK NUMBER: 2450040201

INITIAL CONDITIONS:

1. The Plant is operating at 100% power.
2. The CRS has informed you that you need to perform the Main Turbine Stop Valve Test – (Preferred Method)
3. The testing is required every quarter to prove RPS system is OPERABLE IAW TS Table 4.3.1.1-1 Items 9 and 10
4. The System Load Dispatcher has been notified of the Turbine Stop Valve testing.
5. A Thermal scan of all 185 HCU's has been performed and all scram pilot solenoids have been verified energized.

INITIATING CUE:

Perform HC.OP-ST.AC-0002(Q), Turbine Valve Testing- Quarterly for the Main Turbine Stop valves (Preferred Method).

Successful Completion Criteria:

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

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TASK: Perform Quarterly Turbine Stop Valve Testing

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	
		Operator obtains and locates procedure HC.OP-ST.AC-0002(Q).	Operator obtains the correct procedure. Examiner Note: Provide the operator with a filled out Section 1 of Attachment 1 and N/A all non-applicable steps of HC.OP-ST.AC-0002(Q), Attachment 1.		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If excessive time is taken to review precautions and limitations, inform operator that all are satisfied. Examiner Note: Initialing of steps is not critical.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step of procedure to be 5.1.		

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NAME _____
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SYSTEM: Main Turbine

TASK: Perform Quarterly Turbine Stop Valve Testing

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	
	5.1.1.	<p><u>I</u>F this is the first subsection of the procedure to be performed, <u>T</u>HEN PERFORM the following:</p> <p>A. ENSURE that Section 1.0 of Attachment 1 has been completed <u>A</u>ND Regular Surveillance <u>O</u>R Retest is indicated.</p> <p>B. LOG test start time in the Control Room log(s).</p>	<p>Operator ensures that the provided Att. 1 has been completed and that Regular surveillance has been indicated.</p> <p>Operator initials the appropriate space on the procedure.</p> <p>Examiner Cue: The test start time has been logged in the Control Room log(s).</p> <p>Operator initials the appropriate space on the procedure.</p>		
	5.1.2	<p>ENSURE all prerequisites of section 2.1 are satisfied.</p>	<p>Operator ensures that all prerequisites are satisfied.</p> <p>Operator initials the appropriate space on the procedure.</p> <p>Operator completes Attachment 1, Section 3.0.</p> <p>If excessive time is taken reviewing prerequisites, inform operator that all are satisfied.</p>		

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# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	
	5.1.3	START TIME: _____ IF annunciator C5-C2, TCV FAST CLOSURE & MSV TRIP BYPASS, is illuminated, THEN DIRECT I&C to perform Attachment 3 to remove this bypass.:	Determines that annunciator C5-C2 is NOT illuminated and N/A's the step.		
	5.1.4	IF the EOC-RPT System is NOT in-service, THEN DIRECT I&C to verify the relay contacts on Table AC-002 (Attachment 5) are open, AND to INITIAL Attachment 2.	Operator determines that EOC-RPT is IN SERVICE and N/A's this step		
* #	5.1.5.A	PERFORM the following to bypass the EOC-RPT System: A. PLACE the RECIRC PUMP TRIP DISABLE SYSTEM A (Panel 10C609) AND SYSTEM B (Panel 10C611) in BYP position. INITIAL Attachment 2; performer and verifier.	Operator Places the RECIRC PUMP TRIP DISABLE SYSTEM A (Panel 10C609) AND SYSTEM B (Panel 10C611) in BYP position Examiner Cue: If asked, inform the operator that the Verifier has initialed Attachment 2.		

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NAME _____
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# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	
	5.1.5.B	ENTER Technical Specification LCO 3.3.4.2, AND TAKE action in accordance with Action item "e".	Operator informs the CRS to enter TS 3.3.4.2 and take action in accordance with item "e" Examiner Cue: Respond as the CRS that TS LCO 3.3.4.2 has been entered and actions are being taken in accordance with Action Item "e" Operator initials the appropriate space on the procedure.		
	5.1.6	PERFORM the following at the EHC CONTROL PANEL: A. IF during the performance of this step any MSV moves > 20% in the Closed direction, THEN IMMEDIATELY SELECT Main Stop Valve Pair Testing Start/Stop Stop	Operator notes that if Any MSV moves > 20% in Closed direction that he/she will immediately Select Main Stop Valve Pair Testing Stop		
	B	ENSURE that NO RPS Half Scrams are present.	Operator ENSURES NO RPS half scrams are present.		
* #	C	SELECT Tests, MSV Pair Test	Operator Selects Tests, MSV Pair Test		

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JOB PERFORMANCE MEASURE

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# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	
	D	ENSURE at least three minutes has elapsed since the last MSV reached full open.	Operator ensures at least 3 minutes has elapsed since the last MSV reached full open. EXAMINER CUE: If Operator wants to wait, inform him >3 minutes have elapsed since the last MSV reached full open.		
* #	E	<ul style="list-style-type: none"> SELECT the following: MSV #1, Pair Testing Selector, <u>Include</u> MSV #2, Pair Testing Selector, <u>Include</u> 	Operator Selects <ul style="list-style-type: none"> MSV #1, Pair Testing Selector, <u>Include</u> MSV #2, Pair Testing Selector, <u>Include</u> 		
	F	VERIFY "Paired" is displayed for MSV #1 AND MSV #2	Operator verifies that "Paired" is displayed for MSV #1 AND MSV #2		
* #	G	SELECT Main Stop Valve Pair Testing Start/Stop <u>Start</u>	Operator SELECTS Main Stop Valve Pair Testing Start/Stop <u>Start</u>		

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 JOB PERFORMANCE MEASURE

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SYSTEM: Main Turbine

TASK: Perform Quarterly Turbine Stop Valve Testing

#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U
* #	H	<p>WHEN MSV 1 AND MSV 2 reach the 90% open position, THEN VERIFY the following AND RECORD as SAT/UNSAT on Attachment 2:</p> <ol style="list-style-type: none"> RPS TRIP LOGIC A1, NORMAL RESET status light on 10C651 is extinguished. [TS Table 4.3.1.1-1 Item 9] Control Room Annunciator C5 B2, MAIN STOP VALVE CLOSURE is energized. [TS Table 4.3.1.1-1 Item 9, TS Table 4.3.4.2.1-1 Item 1] Control Room Annunciator C3 A2, REACTOR SCRAM TRIP LOGIC A1 is energized. 	<p>Operator verifies MSV 1 and 2 reach 90% open position and RECORDS SAT on Attachment 2.</p> <p>Operator verifies RPS TRIP LOGIC A1, NORMAL RESET light is extinguished.</p> <p>EXAMINER CUE: If the Operator has concerns about MSV 1 oscillating, then inform Operator they can assume MSV 1 is at 90% and NOT oscillating.</p> <p>Operator verifies C5 B2, MAIN STOP VALVE CLOSURE and C3 A2, REACTOR SCRAM TRIP LOGIC A1 are both energized.</p>	
* #	I	<p>SELECT Main Stop Valve Pair Testing Start/Stop <input type="button" value="Stop"/></p>	<p>Operator selects Main Stop Valve Pair Testing Start/Stop <input type="button" value="Stop"/></p>	
* #	J	<p>SELECT the following:</p> <ul style="list-style-type: none"> MSV #1, Pair Testing Selector <input type="button" value="Test OFF"/> MSV #2, Pair Testing Selector <input type="button" value="Test OFF"/> 	<p>Operator selects the following:</p> <ul style="list-style-type: none"> MSV #1, Pair Testing Selector <input type="button" value="Test OFF"/> MSV #2, Pair Testing Selector <input type="button" value="Test OFF"/> 	

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NAME _____
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SYSTEM: Main Turbine

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# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	
* #	K	RESET RPS Half Scram.	Operator resets the RPS Half Scram		
	L	<p>ENSURE RPS TRIP LOGIC A1, NORMAL RESET status light on 10C651 is energized <u>AND</u> the following occur:</p> <ul style="list-style-type: none"> MSV 1, Main Stop Valve Opens MSV 2, Main Stop Valve Opens Control Room Annunciator C5 B2, MAIN STOP VALVE CLOSURE clears Control Room Annunciator C3 A2, REACTOR SCRAM TRIP LOGIC A1 clears. <p>STOP TIME: _____</p>	<p>Operator ensures that RPS TRIP LOGIC A1, NORMAL RESET light is energized and that MSV 1 & 2 Open and annunciators C5-B2 and C3-A2 have cleared.</p> <p>EXAMINER CUE: Once Operator has ensured that Annunciator C3-A2 has cleared, then inform him that another Operator will complete the rest of this procedure and that this JPM is complete.</p>		

Terminating Cue: Once Operator has ensured that Annunciator C3-A2 has cleared, then state "This JPM is c

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. **The Plant is operating at 100% power.**
2. **The CRS has informed you that you need to perform the Main Turbine Stop Valve Test – (Preferred Method)**
3. **The testing is required every quarter to prove RPS system is OPERABLE IAW TS Table 4.3.1.1-1 Items 9 and 10**
4. **The System Load Dispatcher has been notified of the Turbine Stop valve testing.**
5. **A Thermal scan of all 185 HCU's has been performed and all scram pilot solenoids have been verified energized.**

INITIATING CUE:

Perform HC.OP-ST.AC-0002(Q), Turbine Valve Testing- Quarterly for the Main Turbine Stop valves (Preferred Method).

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

Reset Simulator to any 100% power IC

JOB PERFORMANCE MEASURE
ATTACHMENT 1
SM/CRS DATA AND SIGNATURE SHEET
TURBINE VALVE TESTING - QUARTERLY
(Page 2 of 3)

2.0 POST TEST INFORMATION

2.1 The data acquired during the performance of this test has been reviewed for completeness and compliance with Technical Specification Table 4.3.4.2.1-1 Items 1 and 2, and Table 4.3.1.1-1 Items 9 and 10. This test is considered:

2.1.1 SATISFACTORY (All acceptance criteria is marked SAT)

_____/_____
SM/CRS DATE-TIME

2.1.2 UNSATISFACTORY AND
IF necessary the T/S ACTION statement has been implemented.

_____/_____
SM/CRS DATE-TIME

2.1.4 Order No. _____

2.1.5 Remarks _____

JOB PERFORMANCE MEASURE
ATTACHMENT 1
SM/CRS DATA AND SIGNATURE SHEET
TURBINE VALVE TESTING - QUARTERLY
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3.0 PROCEDURE PERFORMER(S) AND VERIFIER(S)

3.1 I have read and understand the steps of this procedure that I am required to perform.
(All Departments)

<u>PRINT NAME</u>	<u>SIGNATURE</u>	<u>INITIALS</u>	<u>DATE/TIME</u>
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JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
 (Page 1 of 9)

1.0 **TEST INFORMATION**

1.1 **Main Turbine Stop Valve Test - (Preferred Method)**

STEP	NOMENCLATURE	CKT REQUIRED	PERF
5.1.4	TABLE AC-002 RELAY CONTACTS	OPEN	

STEP	NOMENCLATURE	REQUIRED	PERF	VERIF
5.1.5.A	NORM BYP RECIRC PUMP TRIP DISABLE SYSTEM A	BYP		
	NORM BYP RECIRC PUMP TRIP DISABLE SYSTEM B	BYP		

STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF	
5.1.6.H.1	RPS TRIP LOGIC A1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.1.6.H.2	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
5.1.6.H.3	ANNUNCIATOR C3 A2, REACTOR SCRAM TRIP LOGIC A1	ENERGIZES			
5.1.6.Q.1	RPS TRIP LOGIC A2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.1.6.Q.2	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
5.1.6.Q.3	ANNUNCIATOR C3 A3, REACTOR SCRAM TRIP LOGIC A2	ENERGIZES			
5.1.6.Z.1	RPS TRIP LOGIC B1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.1.6.Z.2	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
5.1.6.Z.3	ANNUNCIATOR C3 A4, REACTOR SCRAM TRIP LOGIC B1	ENERGIZES			
5.1.6.II.1	RPS TRIP LOGIC B2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.1.6.II.2	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
5.1.6.II.3	ANNUNCIATOR C3 A5, REACTOR SCRAM TRIP LOGIC B2	ENERGIZES			

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
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1.1 **Main Turbine Stop Valve Test - (Preferred Method) (Continued)**

STEP	NOMENCLATURE	REQUIRED	PERF	VERIF
5.1.7	RECIRC PUMP TRIP DISABLE SYSTEM A	NORMAL		
	RECIRC PUMP TRIP DISABLE SYSTEM B	NORMAL		

STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF	
5.1.8.C	TURBINE STOP VALVE CLOSURE TEST LAMP DS6A	EXTINGUISHES			*
5.1.8.D	TURBINE STOP VALVE CLOSURE LOGIC A1 TEST SWITCH	NORMAL			*
5.1.8.F	TURBINE STOP VALVE CLOSURE TEST LAMP DS8C	EXTINGUISHES			*
5.1.8.G	TURBINE STOP VALVE CLOSURE LOGIC A2 TEST SWITCH	NORMAL			*
5.1.8.I	TURBINE STOP VALVE CLOSURE TEST LAMP DS8B	EXTINGUISHES			*
5.1.8.J	TURBINE STOP VALVE CLOSURE LOGIC B1 TEST SWITCH	NORMAL			*
5.1.8.L	TURBINE STOP VALVE CLOSURE TEST LAMP DS6B	EXTINGUISHES			*
5.1.8.M	TURBINE STOP VALVE CLOSURE LOGIC B2 TEST SWITCH	NORMAL			*

STEP	NOMENCLATURE	CKT REQUIRED	PERF
5.1.9.A	TABLE AC-002 RELAY CONTACTS	OPEN	

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
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1.1 **Main Turbine Stop Valve Test - (Preferred Method) (Continued)**

STEP	NOMENCLATURE	CKT REQUIRED	SAT/UNSAT	PERF	
5.1.9.C	TEST POINT C71A-K49A 2B-2C	CLOSED			*
5.1.9.D	TEST POINT C71A-K49A 2B-2C	OPEN			*
5.1.9.F	TEST POINT C71A-K49G 2B-2C	CLOSED			*
5.1.9.G	TEST POINT C71A-K49G 2B-2C	OPEN			*
5.1.9.I	TEST POINT C71A-K49F 2B-2C	CLOSED			*
5.1.9.J	TEST POINT C71A-K49F 2B-2C	OPEN			*
5.1.9.L	TEST POINT C71A-K49D 2B-2C	CLOSED			*
5.1.9.M	TEST POINT C71A-K49D 2B-2C	OPEN			*

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
 (Page 4 of 9)

1.2 **Main Turbine Stop Valve Test - (Alternate Method)**

STEP	NOMENCLATURE	CKT REQUIRED	PERF
5.2.4	TABLE AC-002 RELAY CONTACTS	OPEN	

STEP	NOMENCLATURE	REQUIRED	PERF	VERIF
5.2.5.A	NORM BYP RECIRC PUMP TRIP DISABLE SYSTEM A	BYP		
	NORM BYP RECIRC PUMP TRIP DISABLE SYSTEM B	BYP		

STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF	
5.2.8.E	RPS TRIP LOGIC A1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
	ANNUNCIATOR C3 A2, REACTOR SCRAM TRIP LOGIC A1	ENERGIZES			
5.2.8.N	RPS TRIP LOGIC A1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
	ANNUNCIATOR C3 A2, REACTOR SCRAM TRIP LOGIC A1	ENERGIZES			
5.2.9.E	RPS TRIP LOGIC A2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
	ANNUNCIATOR C3 A3, REACTOR SCRAM TRIP LOGIC A2	ENERGIZES			
5.2.9.N	RPS TRIP LOGIC A2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES			*
	ANNUNCIATOR C3 A3, REACTOR SCRAM TRIP LOGIC A2	ENERGIZES			

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
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1.2 **Main Turbine Stop Valve Test - (Alternate Method) (Continued)**

STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF
5.2.10.E	RPS TRIP LOGIC B1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES		*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES		*
	ANNUNCIATOR C3 A4, REACTOR SCRAM TRIP LOGIC B1	ENERGIZES		
5.2.10.N	RPS TRIP LOGIC B1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES		*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES		*
	ANNUNCIATOR C3 A4, REACTOR SCRAM TRIP LOGIC B1	ENERGIZES		
5.2.11.E	RPS TRIP LOGIC B2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES		*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES		*
	ANNUNCIATOR C3 A5, REACTOR SCRAM TRIP LOGIC B2	ENERGIZES		
5.2.11.N	RPS TRIP LOGIC B2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES		*
	ANNUNCIATOR C5 B2 MAIN STOP VALVE CLOSURE	ENERGIZES		*
	ANNUNCIATOR C3 A5, REACTOR SCRAM TRIP LOGIC B2	ENERGIZES		

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
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1.2 **Main Turbine Stop Valve Test - (Alternate Method) (Continued)**

STEP	NOMENCLATURE	REQUIRED	PERF	VERIF
5.2.12	RECIRC PUMP TRIP DISABLE SYSTEM A	NORM		
	RECIRC PUMP TRIP DISABLE SYSTEM B	NORM		

STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF	
5.2.13.C	TURBINE STOP VALVE CLOSURE TEST LAMP DS6A	EXTINGUISHES			*
5.2.13.D	TURBINE STOP VALVE CLOSURE LOGIC A1 TEST SWITCH	NORM			*
5.2.13.F	TURBINE STOP VALVE CLOSURE TEST LAMP DS8C	EXTINGUISHES			*
5.2.13.G	TURBINE STOP VALVE CLOSURE LOGIC A2 TEST SWITCH	NORM			*
5.2.13.I	TURBINE STOP VALVE CLOSURE TEST LAMP DS8B	EXTINGUISHES			*
5.2.13.J	TURBINE STOP VALVE CLOSURE LOGIC B1 TEST SWITCH	NORM			*
5.2.13.L	TURBINE STOP VALVE CLOSURE TEST LAMP DS6B	EXTINGUISHES			*
5.2.13.M	TURBINE STOP VALVE CLOSURE LOGIC B2 TEST SWITCH	NORM			*

STEP	NOMENCLATURE	CKT REQUIRED	PERF
5.2.14.A	TABLE AC-002 RELAY CONTACTS	OPEN	

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
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1.2 **Main Turbine Stop Valve Test - (Alternate Method) (Continued)**

STEP	NOMENCLATURE	CKT REQUIRED	SAT/UNSAT	PERF	
5.2.14.C	TEST POINT C71A-K49A 2B-2C	CLOSED			*
5.2.14.D	TEST POINT C71A-K49A 2B-2C	OPEN			*
5.2.14.F	TEST POINT C71A-K49G 2B-2C	CLOSED			*
5.2.14.G	TEST POINT C71A-K49G 2B-2C	OPEN			*
5.2.14.I	TEST POINT C71A-K49F 2B-2C	CLOSED			*
5.2.14.J	TEST POINT C71A-K49F 2B-2C	OPEN			*
5.2.14.L	TEST POINT C71A-K49D 2B-2C	CLOSED			*
5.2.14.M	TEST POINT C71A-K49D 2B-2C	OPEN			*

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

1.3 **Turbine Control Valves Test (CV)**

STEP	NOMENCLATURE	CKT REQUIRED	PERF
5.3.4	TABLE AC-001 RELAY CONTACTS	OPEN	

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
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1.3 **Turbine Control Valves Test (CV) (Continued)**

TURBINE CONTROL VALVE #1				
STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF/ DATE
5.3.11.F	TURBINE CONTROL VALVE FULLY CLOSED	FULL CLOSED INDICATION		
5.3.11.G	TURB CONTROL VALVE FAST CLOSURE LOGIC A1 TEST LIGHT	EXTINGUISHES		
5.3.11.H	C71-K48A 2B-2C RELAY	CLOSED		
5.3.11.I.1	RPS TRIP LOGIC A1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES		
5.3.11.I.2	ANNUNCIATOR C5 A2, TCV FAST CLOSURE	ENERGIZES		
5.3.11.I.3	ANNUNCIATOR C3 A2 REACTOR SCRAM TRIP LOGIC A1	ENERGIZES		

TURBINE CONTROL VALVE #2					
STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF/ DATE	
5.3.11.F	TURBINE CONTROL VALVE FULLY CLOSED	FULL CLOSED INDICATION			*
5.3.11.G	TURB CONTROL VALVE FAST CLOSURE LOGIC B1 TEST LIGHT	EXTINGUISHES			*
5.3.11.H	C710K48B 2B-2C RELAY	CLOSED			*
5.3.11.I.1	RPS TRIP LOGIC B 1, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.3.11.I.2	ANNUNCIATOR C5 A2, TCV FAST CLOSURE	ENERGIZES			*
5.3.11.I.3	ANNUNCIATOR C3 A4 REACTOR SCRAM TRIP LOGIC B 1	ENERGIZES			

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

NOTE : 5.3.11.F OR G must be marked SAT.

JOB PERFORMANCE MEASURE
ATTACHMENT 2
CONTROL ROOM DATA SHEET
TURBINE VALVE TESTING - QUARTERLY
 (Page 9 of 9)

1.3 **Turbine Control Valves Test (CV) (Continued)**

TURBINE CONTROL VALVE #3					
STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF/ DATE	
5.3.11.F	TURBINE CONTROL VALVE FULLY CLOSED	FULL CLOSED INDICATION			*
5.3.11.G	TURB CONTROL VALVE FAST CLOSURE LOGIC B2 TEST LIGHT	EXTINGUISHES			*
5.3.11.H	C71-K48D 2B-2C RELAY	CLOSED			*
5.3.11.I.1	RPS TRIP LOGIC B2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.3.11.I.2	ANNUNCIATOR C5 A2, TCV FAST CLOSURE	ENERGIZES			*
5.3.11.I.3	ANNUNCIATOR C3 A5 REACTOR SCRAM TRIP LOGIC B2	ENERGIZES			

NOTE: 5.3.9 F OR G must be marked SAT.

TURBINE CONTROL VALVE #4					
STEP	NOMENCLATURE	REQUIRED	SAT/ UNSAT	PERF/ DATE	
5.3.12.G	TURBINE CONTROL VALVE FULLY CLOSED	FULL CLOSED INDICATION			*
5.3.12.H	TURB CONTROL VALVE FAST CLOSURE LOGIC A2 TEST LIGHT	EXTINGUISHES			*
5.3.12.I	C71-K48C 2B-2C RELAY	CLOSED			*
5.3.12.J.1	RPS TRIP LOGIC A2, NORMAL/RESET STATUS LIGHT	EXTINGUISHES			*
5.3.12.J.2	ANNUNCIATOR C5 A2, TCV FAST CLOSURE	ENERGIZES			*
5.3.12.J.3	ANNUNCIATOR C3 A3 REACTOR SCRAM TRIP LOGIC A2	ENERGIZES			

* The asterisk indicates acceptance criteria - in order to satisfy the requirements of the acceptance criteria, the SAT/UNSAT block must be marked SAT.

NOTE: 5.3.12 G OR H must be marked SAT.

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Reactor Auxiliaries Cooling System
TASK: Place the Reactor Auxiliaries Cooling System In-Service
TASK NUMBER: 2080010101
JPM NUMBER: NRC-JPM-002

ALTERNATE PATH: **K/A NUMBER:** 400000A4.01
IMPORTANCE FACTOR:

3.1	3.0
RO	SRO

APPLICABILITY: RO SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-SO.ED-0001, Rev. 19
HC.OP-AB.COOL-0003, Rev. 2

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 6 Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author Facility Representative Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: _____ N/A
JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ **DATE:** _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Reactor Auxiliaries Cooling System

TASK: Place the Reactor Auxiliaries Cooling System In-Service

TASK NUMBER: 2080010101

INITIAL CONDITIONS:

1. The Main Generator is synchronized to the grid.
2. The RACS System is in service with the RACS PMP 1AP209 and RACS PMP 1CP209 in operation.
3. RACS PMP 1BP209 is ready for a normal start. This pump was not isolated and drained.

INITIATING CUE:

Swap RACS pumps. Place RACS PMP 1BP209 in service; remove RACS PMP 1CP209 from service.

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Auxiliaries Cooling System
TASK: Place the Reactor Auxiliaries Cooling System In-Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains/locates procedure HC.OP-SO.ED-0001.	Operator obtains the correct procedure.		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations and initials each precaution and limitation in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing precautions and limitations, inform operator that all are satisfied. Examiner Note: It is not critical to initial the procedure steps.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be 5.3.1		
	5.3.1	ENSURE all prerequisites have been satisfied IAW Section 2.3.	Operator reviews prerequisites and initials each prerequisite in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing prerequisites, inform operator that all are satisfied.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Auxiliaries Cooling System
TASK: Place the Reactor Auxiliaries Cooling System In-Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.2	START TIME: _____ ENSURE that one of the following valves are OPEN (10C651A): ED-HV-2537A(B) HX INLET VLVS.	Operator determines the status of ED HV-2537A(B) by observing that the Red OPEN indicating lights for both valves are illuminated on 10C651A. The operator then initials the appropriate procedure steps.		
	5.3.3.	OBSERVE the following lights are off for the RACS Pumps going in service: <ul style="list-style-type: none"> • OVLD/PWR FAIL • INOP • REMOTE 	Operator observes that the OVLD/PWR FAIL, INOP, and REMOTE lights for the "B" RACS Pump are not illuminated. The operator then initials the appropriate procedure step.		
	5.3.4.	For the 1AP209 and/or 1BP209, as applicable, ENSURE RACS PMP 1AP209 BKR 52-41011, and/or 1BP209 BKR 52-42011 CLOSED is on. (10C650E)	Operator observes the CLOSED light for BKR 52-42011 is illuminated, and determines that the "B" RACS Pump breaker is closed. The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Auxiliaries Cooling System
TASK: Place the Reactor Auxiliaries Cooling System In-Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.5	IF returning a pump to service that has been isolated and drained, PERFORM the following steps as necessary to correct/prevent air binding, otherwise, PROCEED to Step 5.3.6 for a normal start of a standby pump:	Operator determines to proceed to Step 5.3.6 since, the Initiating Cue states that the pump was not isolated and drained. The operator then initials the appropriate procedure step.		
# *	5.3.6	PRESS REACTOR AUXILIARIES COOLING PUMP A (B)(C) START PB (10C651A). START comes on. OBSERVE AI-6460 (AI-6461) REACTOR AUXILIARIES COOLING PUMP A(B)(C) MOT AMPS settles at < 180 amps <u>AND</u> is approximately the same as the other I/S RACS pumps' motor amps.	Operator presses the "B" RACS Pump START pushbutton and observes the Red START light illuminates and the Green STOP light goes out. Operator observes AI-6461 is < 180 amps and settles at the same value as the "A" and "C" RACS pumps' amps. The operator then initials the appropriate procedure step.		
# *	5.3.7	PRESS REACTOR AUXILIARIES COOLING PUMP B(A)(C) STOP PB. STOP comes on.	Operator presses the "C" RACS Pump STOP pushbutton and observes the Green STOP light illuminates and the Red START light goes out. The operator then initials the appropriate procedure steps.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Auxiliaries Cooling System
TASK: Place the Reactor Auxiliaries Cooling System In-Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	AB- COOL -0003	5 seconds after the "C" RACS pump has been secured, the Operator observes the following: Annunciator A2-E2, "RACS TROUBLE" alarms "B" RACS pump has Tripped	Operator diagnoses and announces "B" RACS pump has tripped and refers to A2-E2. This procedure will direct him to AB.COOL-0003. Operator then enters AB.COOL-0003 Section A, RACS Pump has tripped		
*	A.1	PRESS the START P.B. for any available RACS pump in standby.	Operator presses the START P.B. for the "C" RACS pump Examiner Cue: "C" RACS pump does NOT start.		
*	A.2	<u>IF</u> a second RACS Pump <u>CANNOT</u> be placed in service, <u>THEN ISOLATE</u> RACS to the out of service Off-Gas Train as follows: <ul style="list-style-type: none"> • <u>IF</u> the Common Off-Gas Train is in service, <u>THEN CLOSE</u> HV-2577. • <u>IF</u> Unit 1 Off-Gas Train is in service, <u>THEN CLOSE</u> HV-7712A. 	Operator should determine that the Unit 1 Off-gas train is in service and CLOSE HV-7712A The Operator should NOT Close HV-2577. Examiner Cue: If the Operator Closes HV-2577 and states he is complete, terminate the JPM, otherwise give him 1 minute to recognize his mistake and then terminate the JPM. Isolating RACS to the in-service Off-gas Train is failure criteria.		

Terminating Cue: Once the Operator has closed HV-7712A then state "This JPM is complete", unless he has also closed HV-2577 then see the Examiner Cue above.

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. **The Main Generator is synchronized to the grid.**
2. **The RACS System is in service with the RACS PMP 1AP209 and RACS PMP 1CP209 in operation.**
3. **RACS PMP 1BP209 is ready for a normal start. This pump was not isolated and drained.**

INITIATING CUE:

Swap RACS pumps. Place RACS PMP 1BP209 in service; remove RACS PMP 1CP209 from service.

JOB PERFORMANCE MEASURE SIMULATOR INSTRUCTIONS

This JPM can be run in any IC, which has RACS in-service.

To setup:

- Ensure the “A & “C RACS pumps are in-service with the “B” RACS pump secured and in standby.
- Setup simulator to trip “B” RACS pump 5 seconds after “C” RACS pump has been secured,
- Once “C” RACS pump has been secured, “C” RACS pump trips on re-start

INITIAL LICENSED OPERATOR EXAMINATION

JOB PERFORMANCE MEASURE:

STATION: Hope Creek

SYSTEM: Reactor Recirculation

TASK: Perform Scoop Tube Positioner Lock-Up Operation

TASK NUMBER: 2020080101

JPM NUMBER: NRC-JPM-003

ALTERNATE PATH:

K/A NUMBER: 202002 A2.05

IMPORTANCE FACTOR: 3.1 3.1

APPLICABILITY:

RO SRO

RO

SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-SO.BB-0002, Rev 60, HC.OP-AB.RPV-0003, Rev 9
HC.OP-AB.MISC-0002, Rev 4, HC.OP-AB.RPV-0001, Rev 4

TOOLS, EQUIPMENT AND PROCEDURES:

Annotated copy of HC.SO.BB-0002.

VALIDATED JPM COMPLETION TIME: 7 Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: Modified Bank

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the SM or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: _____ Minutes
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ DATE: _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE:

NAME: _____

DATE: _____

SYSTEM: Reactor Recirculation

TASK: Perform Scoop Tube Positioner Lock-Up Operation

TASK NUMBER: 2020080101

INITIAL CONDITIONS:

1. The plant was at 77% power when a control signal failure caused the 'A' Reactor Recirc Pump Motor/Generator Scoop Tube to lock-up.
2. The 'A' Reactor Recirc pump was placed in Scoop Tube Positioner Lockup Operation IAW HC.OP-SO.BB-0002.
3. I&C has repaired the control signal failure.

INITIATING CUE:

Reset the Scoop Tube lockup on the 'A' Reactor Recirc pump.
Maintain Reactor power at present after the scoop tube is reset.

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: **Reactor Recirculation**

TASK: **Perform Scoop Tube Positioner Lock-Up Operation**

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If excessive time is taken reviewing precautions and limitations, inform operator that all are satisfied.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be 5.9.1		
	5.9.1	START TIME: _____ ENSURE all prerequisites have been satisfied IAW Section 2.9	Operator reviews prerequisites and ensures that they are satisfied IAW section 2.9. Examiner Cue. If the Operator is taking an excessive amount of time to review the prerequisites, then inform him that all of the prerequisites are satisfied.		
	5.9.2	PRESS SIC-621A MAN <u>AND</u> SIC-621B MAN push buttons.	Operator depresses the SIC-621A and SIC-621B MAN pushbuttons. Examiner Cue: MAN pushbuttons are already lit, Operator may just verify lights are lit vs. depressing PB's, this is acceptable		
# *	5.9.3	PRESS SIC-620 OUTPUT A(B) SELECT push button, for the Pump that will be reset.	Operator presses the SIC-620 OUTPUT A SELECT pushbutton		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: **Reactor Recirculation**

TASK: **Perform Scoop Tube Positioner Lock-Up Operation**

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
# *	5.9.4	Using Attachment 3, DETERMINE the desired SIC-621A(B) SPEED DEMAND for the actual SPEED indicated on SIC-621A(B).	Operator looks at Attachment 3 and determines that SIC-621B SPEED DEMAND should be 51-57% Examiner Cue: The target SPEED DEMAND is 54%. Some leeway has been added for meter readability and interpolation of Attachment 3 data.		
# *	5.9.5	PRESS SIC-R621A(B) SPD CONT INCREASE <u>OR</u> DECREASE pushbutton as necessary to obtain the desired SIC-621A(B) SPEED DEMAND from Step 5.9.4.	Operator depresses the SIC-R621A SPD CONT INCREASE OR DECREASE pushbutton as necessary to obtain desired speed. Examiner Note: ± 2% of the operator determined desired value is acceptable. (i.e. if operator determined 54% was desired, then 53-57% would be acceptable.		
# *	5.9.6	PRESS SCOOP TUBE TRIP RESET <u>AND ENSURE</u> SCOOP TUBE LOCK-UP light extinguishes.	Operator presses SCOOP TUBE TRIP RESET <u>AND ENSURES</u> SCOOP TUBE LOCK-UP light extinguishes. Note: When SCOOP TUBE TRIP RESET is pressed the Recirc pump will runaway and the operator will need to take action IAW AB.RPV-0001		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: **Reactor Recirculation**

TASK: **Perform Scoop Tube Positioner Lock-Up Operation**

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	AB. RPV- 0001 Imm. Actions	A. Operator takes Immediate Operator Actions of AB.RPV-0001 for Single Reactor Recirc Pump runaway <ul style="list-style-type: none"> • PRESS the SCOOP TUBE TRIP Pushbutton for the affected Recirc Pump Controller. 	Operator observes Recirc pump speed increasing Operator presses Pump A SCOOP TUBE TRIP pushbutton. Examiner Note: Scoop tube may have already tripped. If Scoop tube is already tripped, it is not critical to push the SCOOP TUBE TRIP pb.		
	AB. RPV- 0001 Imm. Actions	B. PLACE BOTH Recirc Pump individual controllers in MANUAL.	Operator places Both Recirc Pump individual controlled in MANUAL Examiner Note: SIC-R621A and B are already in MAN, this step is not critical.		
* #	AB. RPV- 0001 Imm. Actions	C. REDUCE the <u>NON</u> -affected Reactor Recirc Pump Speed to Reduce Power to Pre-Transient value.	Operator reduces Reactor power back to pre-transient value using the "B" Recirc pump		
		STOP TIME: _____	Examiner Note: When the operator has reduced power back to the pre-transient value terminate the JPM.		

Terminating Cue: When Operator reduces power back to pre-transient value then state "This JPM is complete"

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The plant was at 77% power when a control signal failure caused the 'A' Reactor Recirc Pump Motor/Generator Scoop Tube to lock-up.
2. The 'A' Reactor Recirc pump was placed in Scoop Tube Positioner Lockup Operation IAW HC.OP-SO.BB-0002.
3. I&C has repaired the control signal failure.

INITIATING CUE:

Reset the Scoop Tube lockup on the 'A' Reactor Recirc pump.
Maintain Reactor power at present after the scoop tube is reset.

ATTACHMENT 4
 JOB PERFORMANCE MEASURE
 JPM/SIMULATOR SETUP INSTRUCTIONS
 (OPTIONAL)

I. INITIAL CONDITIONS:

I.C.

<i>Initial</i>	
	INITIALIZE the simulator to 79% power, MOL.
	REDUCE Reactor Recirc Pump speeds to 55% (It is critical that "A" Recirc pump speed is 55%).
	PRESS the REACTOR RECIRCULATION PUMP A TRIPS SCOOP TUBE TRIP pushbutton.
	PLACE SIC-R621A AND SIC-R621B in Manual.
	REDUCE SIC-R621A Demand Output by 4% AND allow SIC-R621A SPEED DEMAND to saturate low.
	ENSURE SIC R620 MAST CONT OUTPUT A SELECT is selected.

PREP FOR TRAINING (i.e., RM11 set points, procedures, bezel covers)

<i>Initial</i>	Description
	INITIAL a copy of HC.OP-SO.BB-0002 up to step 5.9.1 for the 'A' Reactor Recirc Pump.
	COMPLETE Attachment 2 "Simulator Ready-for-Training/Examination Checklist" of NC.TQ-DG.ZZ-0002(Z).

EVENT TRIGGERS:

<i>Initial</i>	ET #	Description	
	1	EVENT ACTION: COMMAND: PURPOSE:	Rr:k5(1)>= 1.0 // "A" Recirc Scoop Tube Trip Reset Triggers "A" Recirc Runaway
	2	EVENT ACTION: COMMAND: PURPOSE:	

MALFUNCTION SUMMARY

Initial	Description	Delay	Ramp	Trigger	Init Val	Final Val
	RR08A "A" Recirc Pump Runaway			ET-1		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

TASK NUMBER: 2620010101

JPM NUMBER: NRC-JPM-004

ALTERNATE PATH:

K/A NUMBER: 262001 A4.01

IMPORTANCE FACTOR: 3.4 3.7

APPLICABILITY:

RO

SRO

RO

SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-SO.PB-0001(Q), Rev. 20

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 10 Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:

1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes

ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____

GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____

DATE: _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

TASK NUMBER: 2620010101

INITIAL CONDITIONS:

1. The plant is operating at 100% power when the Relay department calls informing you that they are performing relay testing and requests you to swap 10A404 from the Normal Feeder breaker to the Alternate Feeder breaker.

INITIATING CUE:

You have been directed by the CRS to shift power to Switchgear 10A404 from Station Service Transformer 1BX501 to Station Service Transformer 1AX501 IAW HC.OP-SO.PB-0001.

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains/locates procedure HC.OP-SO.PB-0001.	Operator locates the proper procedure.		
		Operator reviews Precautions and Limitations.	Operator reviews Precautions and Limitations and initials each Precaution and Limitation in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing Precautions and Limitations, inform operator that all are satisfied. Examiner Note: It is not critical to initial the procedure steps, nor complete Attachment 1.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be 5.6.1		
	5.6.1	ENSURE all prerequisites have been satisfied IAW Section 2.6.	Operator reviews Prerequisites and initials each Prerequisite in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing Prerequisites, inform operator that all are satisfied.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.6.2	START TIME: _____ A. ENSURE Bus Voltage is adjusted to the higher band required for the Bus alignment prior to transfer. (REFER TO HC.OP-DL.ZZ-0002(3)(Q), Control Console Log(s))	Operator obtains a copy of DL.ZZ-0003 Attachment 3, page 4 of 5 and checks CRIDS points for 1E Bus voltage. Operator notes bus voltage is LOW. Examiner Cue: If asked by Operator act as the CRS and direct him t raise bus voltage to acceptable limits. The operator then initials the appropriate procedure step.		
	SO.MC -0001 Sec 5.23	<u>Adjusting 13.8Kv to 4.16Kv Transformer 1AX501 (1BX501, 1CX501, 1DX501, 1AX503, 1BX503) Load Tap</u>	Operator refers to procedure SO.MC-0001 for adjusting transformer 1AX501 (1BX501) EXAMINER CUE: It is NOT required for the operator to refer to this procedure as long as he/she successfully completes the required actions.		
	5.23.1. A	PLACE the load tap changer in manual control as follows: ENSURE (STATION SERVICE TRANSFORMER TAP CHANGER CONTROL)-XFMR 15-1AX501 (1BX501, 1CX501, 1DX501, 1AX503, 1BX503) CONTROL ROOM light is ON.	Operator ensures Station Service Transformer Tap Changer Control XFMR 15-1AX501 and 1BX501 CONTROL ROOM Lights are ON EXAMINER CUE: Operator may only ensure one of the above lights is ON currently and then come back and do the other light later.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	B.	PRESS (XFMR 15)- 1AX501 (1BX501, 1CX501, 1DX501, 1AX503, 1BX503) - MAN PB.	Operator depresses the 1AX501 and 1BX501 MAN PB's EXAMINER CUE: Operator may only depress one of the above MAN PB's initially and then come back and depress the other PB later.		
*	C.	As desired, PRESS (XFMR 15)- 1AX501 (1BX501, 1CX501, 1AX503, 1BX503) - INCREASE <u>OR</u> DECREASE PB.	Operator depresses the PB's as required to raise bus voltage to acceptable limits and then returns to SO.PB-0001. EXAMINER CUE: Critical part of this task is that when the Operator is finished adjusting voltage, voltage is within the acceptable range of DL.ZZ-0003 (4236 – 4370V).		
	5.6.3.A	B. SHIFT breaker alignment on the desired Class 1E 4160V busses (listed in Table PB-002, Section 5.4) as follows: <ul style="list-style-type: none"> ENSURE that the Alternate (Normal) AUTO CLOSE BLOCK PB backlight is OFF. [CD-056H] 	Operator notes that AUTO CLOSE BLOCK PB backlight is OFF The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.6.3.B	C. <u>IF</u> the Alternate (Normal) AUTO CLOSE BLOCK PB backlight is ON, <u>THEN PRESS</u> the Alternate (Normal) AUTO CLOSE BLOCK <u>AND VERIFY</u> that the PB backlight is OFF. [CD-056H]	Operator verifies PB backlight is OFF. The operator then initials the appropriate procedure step.		
* #	5.6.3.C	D. PRESS Normal (Alternate) AUTO CLOSE BLOCK <u>AND VERIFY</u> that the PB backlight is OFF.	Operator presses Normal AUTO CLOSE BLOCK PB and verifies backlight is OFF. The operator then initials the appropriate procedure step.		
* #	5.6.3.D	E. PRESS CLOSE PB on Alternate (Normal) FEED BRKR.	Operator Presses Close PB on Alternate FEED BRKR The operator then initials the appropriate procedure step.		
		F. ENSURE that the Alternate (Normal) FEED BRKR closes <u>AND</u> that the Normal (Alternate) FEED BRKR trips.	Operator Observes that Alternate FEED BRKR closes AND that the Normal FEED BRKR trips The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		<p>G. When buses swap a slow transfer occurs vs. the expected fast transfer. The following actions occur:</p> <ul style="list-style-type: none"> • Annunciator E3-E2, 4.16KV SYS INCOMING BRKR MALF illuminates • Annunciator A1-C3, SSWS INTAKE "D" TROUBLE illuminates • "D" SW pump trips 	<p>Operators observes trip of "D" SW pump and Annunciators E3-E2, A1-C3 and enters one of the following procedures;</p> <ul style="list-style-type: none"> • ARP for E3-E2 • ARP for A1-C3 • AB-COOL-0001 <p>Examiner Cue: If the Operator directly enters AB-COOL-0001, direct the Operator as the CRS to respond to Control Room Annunciators and the CRS will evaluate the AB.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Class 1E Power

TASK: Shift Class 1E 4.16Kv Bus to an Alternate Feeder Breaker Alignment

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	E3-E2 Step 2	H. As a result of a slow transfer, a PSIS signal will be generated, therefore manually start the following loads from the Control Room as required by SM/CRS. A. Service Water Pump	Operator determines that a Slow transfer took place and a PSIS signal was generated and the "B" pump failed to Auto start on low flow and starts the "D" Service Water Pump Examiner Cue: If asked to direct actions as CRS direct Operator to start the "D" Service Water Pump Other acceptable actions would be to enter ARP A1-C3 and start the "B" Service Water pump Critical Task is to return the Service Water system to a stable condition by starting either the B or D Service Water pumps.		

Terminating Cue: Once the operator has started either the "B" or "D" service water pumps then state "This JPM is complete".

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The plant is operating at 100% power when the Relay department calls informing you that they are performing relay testing and requests you to swap 10A404 from the Normal Feeder breaker to the Alternate Feeder breaker.

INITIATING CUE:

You have been directed by the CRS to shift power to Switchgear 10A404 from Station Service Transformer 1BX501 to Station Service Transformer 1AX501 IAW HC.OP-SO.PB-0001.

**JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS**

Reset simulator to IC-2 or any at power IC.
Ensure "D" Service Water pump is in service.

Complete Attachment 3 of HC.OP-DL.ZZ-0003, Control Room 2-hour readings page 4 of 5

Ensure Tap Changers in AUTO
Ensure 2 Class 1E busses are on each SST

MALFUNCTION SUMMARY:

<i>Initial</i>	Description	Delay	Ramp	Remote/Event	Initial	Final
___	1. CW14B SERVICE WATER PUMP BP502 FAIL TO A			None/None		
___	2. CW05D Service water pump DP502 trip			None/ 2		
___	3. CW14D Service Water Pump DP502 fail to auto Start			None/None		
___	4. AN-E6C2 CRYWOLF ANN E6C2 DIESEL AREA HVAC			None/1		
___	5. AN-E3E2 CRYWOLF ANN E3E2 4.16 KV SYS INC			None/1		

I/O OVERRIDE SUMMARY:

<i>Initial</i>	Description	Delay	Ramp	Remote/Event	Initial	Final
___	1. 1A172 E OVLO DVH401 RUNNING SWGR RM 5417			None/1	OFF	OFF
___	2. 1A172 F OVLO DVH401 STOPPED SWGR RM 5417			None/1	OFF	ON

EVENT TRIGGERS:

<i>Initial</i>	Description
___	1. EVENT ACTION: Cw:s52d5 <=0.0 COMMAND: Dmf cw05d PURPOSE:
___	2. EVENT ACTION: Ed:bk8>=1.0 COMMAND: PURPOSE: When OHA E3-E2 alarms then insert CRIDS pt D4560 to 1.0

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems
TASK NUMBER: 2230020101
JPM NUMBER: NRC-JPM-005

ALTERNATE PATH: **K/A NUMBER:** 223000A4.03
IMPORTANCE FACTOR:

3.6	3.6
RO	SRO

APPLICABILITY: RO SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-SO.SM-0001(Q), Rev. 14

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (8) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A
JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ **DATE:** _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Containment Integrity

TASK: Resetting Isolation Systems

TASK NUMBER: 2230020101

INITIAL CONDITIONS:

1. Hope Creek is recovering from a Scram due to loss of all RFP's at 100% power.
2. RPV level dropped to -130" before HPCI initiated and recovered level.
3. The Crew is in AB.ZZ-0000 and has reached step S-9 "IF Conditions permit THEN RESET isolations
4. You have been directed by the CRS to RESET the Isolations

INITIATING CUE:

RESET isolations IAW HC.OP-SO.SM-0001

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator determines that he needs to perform HC.OP-SO.SM-0001 section 5.3 in order to reset the isolations.	Examiner Cue: Once the operator has correctly determined which procedure to use, provide the operator with a copy of procedure HC.OP-SO.SM-0001(Q).		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If excessive time is taken to review precautions and limitations, inform operator that all are satisfied. Examiner Note: Initialing the following steps is not critical.		
	5.3.1	ENSURE that all prerequisites have been satisfied IAW Section 2.3 of this procedure. START TIME: _____	Operator ensures that the prerequisites are satisfied: Operator initials the step.		
	5.3.2	To reset the Nuclear Steam Supply Shutoff System, PERFORM the following:	Operator determines that NSSSS needs to be reset.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	5.3.2 A	<p>ENSURE the following MSIV control switches in CLOSE:</p> <ul style="list-style-type: none"> • HVF028A OUTBD MSIV A • HVF028B OUTBD MSIV B • HVF028C OUTBD MSIV C • HVF028D OUTBD MSIV D • HVF022A INBD MSIV A • HVF022B INBD MSIV B • HVF022C INBD MSIV C • HVF022D INBD MSIV D 	Operator Places ALL the MSIV Control Switches in CLOSE		
	B.	ENSURE conditions causing the Isolation have been corrected.	Operator checks that ALL isolation signals have cleared		
* #	C.	<u>IF</u> vacuum is > 21.5 inches Hg. Abs. <u>THEN PLACE</u> DIVISION 1 and 2 and 3 and 4 CONDENSER LOW VACUUM BYPASS Switches to BYP (Control Room Panels 10C609 and 10C611	Operator determines that vacuum is LOW places DIVISION 1, 2, 3 and 4 CONDENSER LOW VACUUM BYPASS Switches to BYP		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	D.	<p>PRESS the following PBs:</p> <ol style="list-style-type: none"> 1. NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM TRIP LOGIC A RESET. MSIV TRIP LOGIC TRIPPED goes off. 2. NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM TRIP LOGIC B RESET. MSIV TRIP LOGIC TRIPPED goes off. 3. NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM TRIP LOGIC C RESET. MSIV TRIP LOGIC TRIPPED goes off. 4. NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM TRIP LOGIC D RESET. MSIV TRIP LOGIC TRIPPED goes off. 	Operator depresses the appropriate PB's		
	5.3.3	To reset the Containment Isolation System, PERFORM the following:	Operator determines Containment Isolation needs to be reset.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	B.	<p>PRESS the following PBs:</p> <ol style="list-style-type: none"> 1. CNTMT ISLN MAN INITIATION CHANNEL A RESET. TRIPPED goes off. 2. CNTMT ISLN MAN INITIATION CHANNEL B RESET. TRIPPED goes off. 3. CNTMT ISLN MAN INITIATION CHANNEL C RESET. TRIPPED goes off 4. CNTMT ISLN MAN INITIATION CHANNEL D RESET. TRIPPED goes off 	Operator depresses the appropriate PB's		
	5.3.4	<p>To reset the Core Spray Isolation Signals, PERFORM the following:</p> <p>A. ENSURE conditions causing Core Spray Initiation have been corrected.</p>	Operator determines that Core Spray Isolation signal is present and that initiating condition has been corrected.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	B.	<p>PRESS the following PBs:</p> <ol style="list-style-type: none"> 1. LOOP A INITIATION RESET. A INIT AND SEALED IN goes off. 2. LOOP B INITIATION RESET. B INIT AND SEALED IN goes off. 3. LOOP C INITIATION RESET. C INIT AND SEALED IN goes off. 4. LOOP D INITIATION RESET. D INIT AND SEALED IN goes off. 	Operator depresses the LOOP A, B, C and D INITIATION RESET PB's and verifies A, B, C, and D INIT AND SEALED IN lights go off.		
	5.3.5	<p>To reset the RHR Isolation signals, PERFORM the following:</p> <p>A. ENSURE conditions causing LPCI Initiation have been corrected.</p>	Operator determines that RHR Isolation signal is present and that initiating condition has been corrected.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		<p>PRESS the following PBs:</p> <ol style="list-style-type: none"> 1. LOOP A INITIATION RESET. A INIT AND SEALED IN goes off. 2. LOOP B INITIATION RESET. B INIT AND SEALED IN goes off. 3. LOOP C INITIATION RESET. C INIT AND SEALED IN goes off. 4. LOOP D INITIATION RESET. D INIT AND SEALED IN goes off 	Operator depresses the LOOP A, B, C and D INITIATION RESET PB's and verifies A, B, C, and D INIT AND SEALED IN lights go off.		
	5.3.6	To reset HPCI Isolation Signals, PERFORM the following:	Operator determines that HPCI Isolation signal is NOT present		
	5.3.7	To reset RCIC Isolation Signals, PERFORM the following: STOP TIME: _____	Operator determines that RCIC Isolation signal is NOT present		

Terminating Cue: Once the Operator has determined that the RCIC Isolation signal is NOT present, then state "This JPM is complete"

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. Hope Creek is recovering from a Scram due to loss of all RFP's at 100% power.
2. RPV level dropped to -130" before HPCI initiated and recovered level.
3. The Crew is in AB.ZZ-0000 and has reached step S-9 "IF Conditions permit THEN RESET isolations
4. You have been directed by the CRS to RESET the Isolations

INITIATING CUE:

RESET isolations IAW HC.OP-SO.SM-0001

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

Reset to an 100% IC

Trip all 3 RFP's and let level drop to -130"

Return Level and Pressure to normal and stabilize the plant.

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Reactor Water Level Inventory Control
TASK: Feeding the Reactor Vessel with the Condensate System
TASK NUMBER: 2590020101
JPM NUMBER: NRC-JPM-006

ALTERNATE PATH: **K/A NUMBER:** 259002A4.01
IMPORTANCE FACTOR:

3.8	3.6
RO	SRO

APPLICABILITY: RO SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-SO.AE-0001(Q), Rev. 43

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (20) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:

1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: _____ N/A
JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ **DATE:** _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Reactor Water Level Inventory Control

TASK: Feeding the Reactor Vessel with the Condensate System

TASK NUMBER: 2590020101

INITIAL CONDITIONS:

1. Hope Creek is starting up from a refueling outage.
2. The plant is currently in IOP-2 at step 5.1.2.T, **LINEUP** the startup level control valves to feed the Reactor Vessel IAW HC.OP-SO.AE-0001(Q), Feedwater System Operation.
3. The CRS has decided to terminate long path flow and feed the RPV using the Condensate system Startup Level Control Valves IAW HC.OP-SO.AE-0001(Q), Feedwater System Operation.
4. You have been directed to perform this task.

INITIATING CUE:

Feed the Reactor Vessel with the Condensate System IAW HC.OP-SO.AE-0001

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Water Level Inventory Control
TASK: Swapping FW Level Control from Startup Valves to Master Level Control

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains a copy of HC.OP-SO.AE-0001 and determines he/she needs to perform section 5.1	Examiner Cue: Once the operator has located the procedure, provide the operator with a copy of procedure HC.OP-SO.AE-0001(Q).		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If excessive time is taken to review precautions and limitations, inform operator that all are satisfied. Examiner Note: Initialing the following steps is not critical.		
	5.1.1	ENSURE that all prerequisites have been satisfied IAW Section 2.1 of this procedure. START TIME: _____	Operator ensures that the prerequisites are satisfied: Operator initials the step.		
	5.1.2. A	TERMINATE long path flow to the Main Condenser as follows: A. PRESS the START UP LEVEL CONTROLLER A/M push-button as required to place controller in manual ("M" (manual) light illuminated).	Operator observes the START UP LEVEL CONTROLLER A/M and verifies "M" is illuminated. Examiner Note: "M" should already be illuminated. If Operator only verifies "M" is illuminated, this is acceptable.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Water Level Inventory Control
TASK: Swapping FW Level Control from Startup Valves to Master Level Control

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.1.2. B	B. PRESS STARTUP LEVEL CONTROLLER "SEL" (select) push-button as necessary to select the "DMND" column.	Operator verifies "DMND" is selected on the STARTUP LEVEL CONTROLLER		
* #	5.1.2. C	C. LOWER STARTUP LEVEL CONTROLLER "DMND" using the DEC push-button to 0%.	Operator Lowers STARTUP LEVEL CONTROLLER "DMND" using the DEC PB to 0%.		
* #	5.1.3	CLOSE HV-3626, FW SUPPLY FLUSHING LINE OUTBD MOV	Operator closes HV-3626		
* #	5.1.4	CLOSE HV-3625, FW SUPPLY FLUSHING LINE INBD MOV.	Operator closes HV-3625		
* #	5.1.5	RAISE STARTUP LEVEL CONTROLLER "DMND" to open HV-1754, S/U LVL BYP VLV, approximately 20% using the INC push-button AND MONITOR Computer Points A3245 AND A3246 -RPV Feedwater line press.	Operator raises STARTUP LEVEL CONTROLLER "DMND" to open HV-1754 ~ 20% using the INC push-button. Operator monitors computer points A3245 and A3246		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Water Level Inventory Control
TASK: Swapping FW Level Control from Startup Valves to Master Level Control

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.1.6	<u>WHEN</u> Feedwater line press > 100 psig, <u>THEN DISPATCH</u> an Equipment Operator to vent Feedwater line high points at valves 1-AE-V082, 1-AE- V083, 1-AE-V084, 1-AE-V085, 1-AE-V086, and 1-AE-V087 <u>UNTIL</u> a solid stream of water issues. (Local)	Operator dispatches an NEO to vent FW line high points. EXAMINER CUE: Inform Operator that NEO reports that the High point vent valves AE-V082, 83, 84, 85, 86, and 87 have been vented until a solid stream of water issues.		
*	5.1.7	LOWER STARTUP LEVEL CONTROLLER "DMND" to 0%. using the DEC push-button.	Operator lowers STARTUP LEVEL CONTROLLER "DMND" to 0% (or <0%) using the DEC push-button.		
*	5.1.8	OPEN HV-F032A, FW SPLY LINE A INLET CHK VLV <u>AND</u> HV-F032B, FW SPLY LINE B INLET CHK VLV.	Operator opens HV-F032A and F032B		
*	5.1.9	Intermittently PRESS START UP LEVEL CONTROLLER "DMND" INCREASE <u>OR</u> DECREASE push-buttons as required to attain desired stable Reactor Vessel level as directed by Integrated Operating Procedure.	Operator depresses the START UP LEVEL CONTROLLER "DMND" INCREASE <u>OR</u> DECREASE PB's as required to attain stable RPV level. Examiner Cue: Ask Operator what current level is and have Operator match setpoint to current level.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Water Level Inventory Control
TASK: Swapping FW Level Control from Startup Valves to Master Level Control

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	5.1.10. A	<p><u>WHEN</u> desired stable Reactor Vessel level is attained, <u>THEN PLACE START UP LEVEL CONTROLLER</u> in AUTO as follows:</p> <p>A. On MASTER LEVEL CONTROLLER PRESS "SEL" (select) push-button as necessary to select SPT (level setpoint).</p>	<p>EXAMINER CUE: If asked by the Operator the CRS wants to maintain RPV level at +30-39" Narrow Range.</p> <p>Operator depresses the SEL PB on the MASTER LEVEL CONTROLLER until SPT is selected.</p>		
* #	5.1.10. B	<p>B. On MASTER LEVEL CONTROLLER, PRESS LVL SPT INC <u>OR</u> DECR push-button's as required to establish the desired REACTOR Level Setpoint</p>	<p>Operator depresses the LVL SPT INC or DECR PB's as necessary to establish RPV level ~34.2" (or Match setpoint to current level)</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Water Level Inventory Control
TASK: Swapping FW Level Control from Startup Valves to Master Level Control

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #		C. On MASTER LEVEL CONTROLLER, PRESS "SEL" push-button as necessary to select LEVEL ERROR. Level Error should be 0 (Zero) (<u>IF</u> required, REPEAT Steps 5.1.10.A & B <u>UNTIL</u> level error is 0 (Zero).	Operator depresses SEL PB's as necessary to select LEVEL ERROR on MASTER LEVEL CONTROLLER. Operator adjusts RPV level until Level Error is 0.		
* #		D. PRESS the A/M push-button on STARTUP LEVEL CONTROLLER ("A" auto light should be illuminated).	Operator depresses A/M PB on STARTUP LEVEL CONTROLLER until "A" light should be illuminated.		

Terminating Cue: Once the Operator has depressed the A/M PB, then state "This JPM is complete"

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. Hope Creek is starting up from a refueling outage.
2. The plant is currently in IOP-2 at step 5.1.2.T, LINEUP the startup level control valves to feed the Reactor Vessel IAW HC.OP-SO.AE-0001(Q), Feedwater System Operation.
3. The CRS has decided to terminate long path flow and feed the RPV using the Condensate system Startup Level Control Valves IAW HC.OP-SO.AE-0001(Q), Feedwater System Operation.
4. You have been directed to perform this task

INITIATING CUE:

Feed the Reactor Vessel with the Condensate System IAW HC.OP-SO.AE-0001

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

Reset to a low power IC

Ensure IOP 2 is marked up to step 5.1.2.T

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Standby Liquid Control System
TASK: Initiate SLC System Manually
TASK NUMBER: 2110030101
JPM NUMBER: NRC-JPM-007

ALTERNATE PATH: K/A NUMBER: 211000A4.08
IMPORTANCE FACTOR: 4.2 4.2
APPLICABILITY: RO SRO
RO SRO

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-SO.BH-0001, Revision 9

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (5) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: Bank

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ DATE: _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Standby Liquid Control System

TASK: Initiate SLC System Manually

TASK NUMBER: 2110030101

INITIAL CONDITIONS:

1. A full core ATWS has occurred.
2. The Main turbine is on line.
3. Reactor Power is > 4%
4. The Reactor Recirc Pumps are tripped.
5. HC.OP-E0.ZZ-0101A, ATWS-RPV Control, is being executed.
6. The CRS has directed you to Initiate SLC and Verify RWCU system Isolates per step RC/Q-7 of EOP-0101A.

INITIATING CUE:

Initiate SLC and verify RWCU isolates.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Standby Liquid Control System
TASK: Initiate SLC System Manually

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains/locates procedure HC.OP-SO.BH-0001.			
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations and initials each precaution and limitation in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing precautions and limitations, inform operator that all are satisfied. Examiner Note: It is not critical to initial the procedure step, nor complete Attachment 1 in this and subsequent steps.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be 5.3.1.		
*	5.3.1	START TIME: _____ PLACE both PUMP & SQUIB VLV - OFF/ON keylock switches to ON.	Operator places both PUMP & SQUIB VLV - OFF/ON keylock switches to ON. The operator then initials the appropriate procedure step.		
*	5.3.2	PRESS both PUMP & SQUIB VLV - AP208 <u>AND</u> BP208 START push buttons.	Operator depresses both PUMP & SQUIB VLV - AP208 <u>AND</u> BP208 START pushbuttons. The operator then initials the appropriate procedure step.		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Standby Liquid Control System
TASK: Initiate SLC System Manually

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.3	VERIFY the following: A. Both PUMP & SQUIB VLV - AP208 and BP208 START lights come ON.	Operator verifies that both PUMP & SQUIB VLV - AP208 and BP208 START lights come on. The operator then initials the appropriate procedure step.		
		B. Both SQUIB VALVE CONTINUITY lights are OFF.	Operator verifies that both SQUIB VALVE CONTINUITY lights are off. The operator then initials the appropriate procedure step.		
		C. SLC SQUIB VLV LOSS OF CONTINUITY is ON. (10C800C1)	Operator verifies that SLC SQUIB VLV LOSS OF CONTINUITY annunciator is on. (10C800C1) The operator then initials the appropriate procedure step.		
		D. Both STANDBY LIQUID CONTROL PUMP PRESSURE indicators show pump discharge pressure greater than reactor pressure.	Operator observes both STANDBY LIQUID CONTROL PUMP PRESSURE indicators show pump discharge pressure greater than reactor pressure. The operator then initials the appropriate procedure step.		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Standby Liquid Control System
TASK: Initiate SLC System Manually

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		<p>E. The following Reactor Water Cleanup Isolation Valves close:</p> <ol style="list-style-type: none"> 1. BG-HV-F001, PMP SUCT CONT INBD 2. BG-HV-F004, PMP SUCT CONT OUTBD 	<p>Operator recognizes that the 1-BG-HVF001 and 1-BG-HVF004 have failed to close and closes the valves.</p> <p>EXAMINER CUE: If the Operator asks you for direction, tell him to perform the actions that need to be performed.</p> <p>Operator closes HVF001 and HVF004 by depressing the CLOSE pushbutton for each valve, and observes that both valves close.</p> <p>The operator then initials the appropriate procedure step.</p>		
		<p>F. SLC TANK LVL indicator is decreasing.</p>	<p>Operator observes SLC TANK LVL indicator is decreasing.</p> <p>The operator then initials the appropriate procedure step.</p>		
		<p>G. NEUTRON MONITORING recorders indicate decreasing reactor power.</p> <p>STOP TIME: _____</p>	<p>Operator observes NEUTRON MONITORING recorders indicate decreasing reactor power.</p> <p>The operator then initials the appropriate procedure step.</p> <p>EXAMINER CUE: Once Operator has verified decreasing Reactor power, then terminate the JPM</p>		

Terminating Cue: Once the Operator has verified that reactor power is decreasing then state "This JPM is complete".

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. A full core ATWS has occurred.
2. The Main turbine is on line.
3. Reactor Power is > 4%
4. The Reactor Recirc Pumps are tripped.
5. HC.OP-E0.ZZ-0101A, ATWS-RPV Control, is being executed.
6. The CRS has directed you to Initiate SLC and Verify RWCU system Isolates per step RC/Q-7 of EOP-0101A..

INITIATING CUE:

Initiate SLC and verify RWCU isolates.

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

Reset simulator to a 100% power IC.

Insert malfunctions.

Lock the mode switch in Shutdown.

Take actions IAW EOP-101A so that the next appropriate step is to initiate SLC.

MALFUNCTION SUMMARY:

<i>Initial</i>	Description	Delay	Ramp	Remote/Event	Initial	Final
___ 1.	RP06 Half Core ATWS-Left side					
___ 2.	RP07 Half Core ATWS-Right side					
___ 3.	CU11A RWCU VLVS F001 failure to auto close					
___ 4.	CU11B RWCU VLVS F004 failure to auto close					

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service
TASK NUMBER: 2610030101
JPM NUMBER: NRC-JPM-008

ALTERNATE PATH: **K/A NUMBER:** 290001A4.10
IMPORTANCE FACTOR: 3.4 3.3
APPLICABILITY: **RO** **SRO**
RO **SRO**

EVALUATION SETTING/METHOD: Simulator / Perform

REFERENCES: HC.OP-SO.GU-0001, Rev. 22

TOOLS AND EQUIPMENT:

VALIDATED JPM COMPLETION TIME: 9 Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: Bank

APPROVAL:

Author Facility Representative Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A
JPM PERFORMED _____ **GRADE:** SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ **DATE:** _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)

TASK: Manually Place FRVS In Service

TASK NUMBER: 2610030101

INITIAL CONDITIONS:

1. The plant is operating at 100% power.
2. Heating steam has been lost to the power block.
3. Outside air temperature is <32°F.
4. To prevent freezing the heating coils, Rx Building ventilation must be removed from service.
5. FRVS is in standby.
6. Radiation Protection has been notified that FRVS will be placed in service.

INITIATING CUE:

Manually place FRVS in service using the A, B, C & DV213 FRVS Recirculation Fans, and the AV206 FRVS Vent Fan.

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains/locates procedure HC.OP-SO.GU-0001.	Operator locates the proper procedure.		
		Operator reviews Precautions and Limitations.	Operator reviews precautions and limitations and initials each Precaution and Limitation in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing Precautions and Limitations, inform operator that all are satisfied. Examiner Note: It is not critical to initial Attachment 1 or the procedure steps.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be 5.3.1.		
	5.3.1	ENSURE that all prerequisites have been satisfied IAW Section 2.3.	Operator reviews Prerequisites, completes Section 2 of Attachment 1, and initials each Prerequisite in the space provided in the procedure. Examiner Cue: If excessive time is taken reviewing Prerequisites, inform operator that all are satisfied.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.2	START TIME: _____ VERIFY AUTO Mode for the following FRVS Recirculation Fans: <ul style="list-style-type: none"> • FRVS Recirculation Fan AV213 • FRVS Recirculation Fan BV213 • FRVS Recirculation Fan CV213 • FRVS Recirculation Fan DV213 • FRVS Recirculation Fan EV213 • FRVS Recirculation Fan FV213 	Operator observes that the AUTO indicator is illuminated and the LOCKOUT indicator is extinguished for the following FRVS Recirculation Fans: FRVS RECIRCULATION FAN AV213 FRVS RECIRCULATION FAN BV213 FRVS RECIRCULATION FAN CV213 FRVS RECIRCULATION FAN DV213 FRVS RECIRCULATION FAN EV213 FRVS RECIRCULATION FAN FV213 The operator then initials the appropriate procedure steps.		
# *	5.3.3	START 1 FRVS Vent Fan as follows: A. Momentarily PRESS the MAN push-button for A(B)V206 FRVS Vent Fan.	Operator depresses the MAN PB for AV206 FRVS Vent fan and observes the MAN indicator is illuminated. The operator then initials the appropriate procedure step.		
		B. OBSERVE alarm BOP SAFETY SYS OUT OF SVCE.	Operator observes annunciator D1-A4 alarm state and acknowledges alarm. The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
# *		C. Momentarily PRESS the A(B)V206 START push-button for A(B)V206 FRVS Vent Fan.	Operator depresses the AV206 START PB and observes the AV206 START indicator is illuminated and the STOP indicator is extinguished. The operator then initials the appropriate procedure step.		
		D. OBSERVE an indicated flow of approximately 9000 cfm on FR-9426A(B) for the running FRVS Vent Fan.	Operator observes FR-9426A for indication of flow (10C650E) The operator then initials the appropriate procedure step.		
# *		E. PRESS the AUTO LEAD PB for the inservice FRVS Vent Fan <u>AND</u> INITIAL Attachment 1.	Operator depresses AV206 AUTO LEAD PB and observes the AUTO LEAD indicator is illuminated. The operator then initials Attachment 1 and the appropriate procedure step.		
		F. PRESS the AUTO PB for the out of service FRVS Vent Fan <u>AND</u> INITIAL Attachment 1.	Operator depresses BV206 AUTO PB and observes the AUTO indicator is illuminated. The operator then initials Attachment 1 and the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.4	<p>PERFORM the following to remove the Reactor Building Ventilation System from service:</p> <p>A. PERFORM the following at Aux Building HVAC Panel 10C382:</p>	<p>EXAMINER NOTE: Step 5.3.4.A is performed at local Aux. Bldg. HVAC Panel 10C382.</p> <p>Operator directs the Building Operator to remove RBVS in accordance with Step 5.3.4.</p> <p>EXAMINER CUE: Report as Equipment Operator that Reactor Building Ventilation is secured.</p> <p>The operator then initials the appropriate procedure steps.</p>		
*		<p>B. CLOSE the following dampers at Panel 10C651E:</p> <ul style="list-style-type: none"> • HD9370A, REACTOR BLDG OUTBD SPLY 	<p>Operator depresses the CLOSE PB for HD9370A and observes the CLOSE indicator is illuminated and the OPEN indicator is extinguished.</p> <p>The operator then initials the appropriate procedure step.</p>		
*		<ul style="list-style-type: none"> • HD9414A, REACTOR BLDG INBD EXCH 	<p>Operator depresses the CLOSE PB for HD9414A and observes the CLOSE indicator is illuminated and the OPEN indicator is extinguished.</p> <p>The operator then initials the appropriate procedure step.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		<ul style="list-style-type: none"> HD9370B, REACTOR BLDG INBD SPLY 	<p>Operator depresses the CLOSE PB for HD9370B and observes the CLOSE indicator is illuminated and the OPEN indicator is extinguished.</p> <p>The operator then initials the appropriate procedure step.</p>		
*		<ul style="list-style-type: none"> HD9414B, REACTOR BLDG OUTBD EXCH 	<p>Operator depresses the CLOSE PB for HD9414B and observes the CLOSE indicator is illuminated and the OPEN indicator is extinguished.</p> <p>The operator then initials the appropriate procedure step.</p>		
*	5.3.5	<p>START 4 FRVS Recirculation Fans as follows:</p> <p>A. MOMENTARILY PRESS A(B,C,D,E,F)V213 START PB for the desired fans.</p>	<p>One at a time, the Operator depresses the START PB for A, B, C, and D recirc fans and observes the START indicator is illuminated and the STOP indicator is extinguished.</p> <p>The operator then initials the appropriate procedure steps.</p>		
		<p>B. OBSERVE an indicated flow of approximately 30,000 cfm on FR-9377 for each of the running fans.</p>	<p>After the starting each recirc fan, the Operator observes that each recirc fan started indicates 30,000 CFM, on FR-9377 A(B, C, D)</p> <p>The operator then initials the appropriate procedure step.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Filtration, Recirculation and Ventilation System (FRVS)
TASK: Manually Place FRVS In Service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		<p>C. MONITOR the following:</p> <ul style="list-style-type: none"> PDR-9377 FRVS DIFF PRESS for indication of ≤ 6.0" W.G. for each operating Air Filter Unit 	<p>Operator observes that each PDR-9377A (B, C, D) indicates ≤ 6.0" W.G. for each operating Air Filter unit.</p> <p>The operator then initials the appropriate procedure step.</p>		
		<ul style="list-style-type: none"> PDR-9425A(B) FRVS-VENT System Filter D/P ≤ 3.0" W.G. 	<p>Operator observes that each PDR-9425A, FRVS-VENT System Filter D/P ≤ 3.0" W.G.</p> <p>The operator then initials the appropriate procedure step.</p>		
	5.3.6	<p>PERFORM independent verification that the system is aligned IAW Attachment 1.</p> <p>STOP TIME: _____</p>	<p>Operator requests an independent verification of the system alignment.</p>		

Terminating Cue: Repeat back message from the operator on the status of the JPM, and then state "This JPM is complete".

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The plant is operating at 100% power.
2. Heating steam has been lost to the power block.
3. Outside air temperature is <32°F.
4. To prevent freezing the heating coils, Rx Building ventilation must be removed from service.
5. FRVS is in standby.
6. Radiation Protection has been notified that FRVS will be placed in service.

INITIATING CUE:

Manually place FRVS in service using the A, B, C & DV213 FRVS Recirculation Fans, and the AV206 FRVS Vent Fan.

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Reactor Pressure Control
TASK: Establish Control from Outside the Control Room
TASK NUMBER: 2390010101
JPM NUMBER: NRC-JPM-009

ALTERNATE PATH: **K/A NUMBER:** 259002 A2.03
IMPORTANCE FACTOR:

4.0	4.2
RO	SRO

APPLICABILITY: RO SRO

EVALUATION SETTING/METHOD: Plant /Simulate

REFERENCES: HC.OP-IO.ZZ-0008(Q), Rev. 21

TOOLS AND EQUIPMENT: Key to TSC

VALIDATED JPM COMPLETION TIME: (8) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A
JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ **DATE:** _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Reactor Pressure Control

TASK: Establish Control from Outside the Control Room

TASK NUMBER: 2390010101

INITIAL CONDITIONS:

1. A fire in the Control Room has forced a Control Room Evacuation
2. NO actions were performed in the Control Room prior to evacuation
3. The Plant is still at 100% power and the turbine is still tied to the grid.
4. The CRS has directed you to Establish Control of the plant from Outside of the Control.

INITIATING CUE:

Establish Control of the Plant from Outside of the Control Room IAW with HC.OP-IO.ZZ-0008

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains a copy of HC.OP-IO.ZZ-0008 and determines he/she needs to perform section 5.1	Examiner Cue: Once the operator has located the procedure, provide the operator with a copy of procedure HC.OP-IO.ZZ-0008(Q).		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If excessive time is taken to review precautions and limitations, inform operator that all are satisfied. Examiner Note: Initialing the following steps is not critical.		
	5.1.1	ENSURE that all prerequisites have been satisfied IAW Section 2.0 of this procedure. START TIME: _____	Operator ensures that the prerequisites are satisfied: Operator initials the step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	5.1.2	<p><u>IF</u> the Reactor was NOT scrammed prior to Control Room evacuation, <u>THEN OPEN</u> the following circuit breakers:</p> <ul style="list-style-type: none"> • CB2A, CB3A, CB5A, CB7A <u>AND</u> CB8A (RPS PWR DIST PNL A 10C410). • CB2B, CB3B, CB5B, CB7B <u>AND</u> CB8B (RPS PWR DIST PNL B 10C411). 	<p>Operator goes to the RPS cabinets and simulates opening the following circuit breakers</p> <ul style="list-style-type: none"> • CB2A, CB3A, CB5A, CB7A <u>AND</u> CB8A (RPS PWR DIST PNL A 10C410). • CB2B, CB3B, CB5B, CB7B <u>AND</u> CB8B (RPS PWR DIST PNL B 10C411). <p>Examiner Cue: Once the Operator makes it to the cabinets, show the operator a picture of the inside of the cabinet and ask him which breakers he/she would open. Then inform them that that breaker is open.</p>		
	5.1.3	<p><u>IF</u> the Rx scram was NOT verified prior to evacuating the Control Room, <u>THEN VERIFY</u> Rods Full In. (SPDS/CRIDS (TSC) <u>OR</u> RMCS Activity Control Cards <u>OR</u> other).</p>	<p>Operator verifies Rods Full In using SPDS/CRID in the TSC or RMCS activity control cards</p> <p>Examiner Cue: Once the Operator shows you where he/she would verify the Rx scrammed, then inform he/she that the reactor is scrammed.</p>		
	5.1.4	<p>MONITOR the RSP System indications <u>AND CHECK</u> specifically for the following:</p>	<p>Operator locates RSP indications</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	A	REACTOR VESSEL PRESSURE PR-7853D (905 - 1045 psig)	Operator observes RSP RPV pressure and verifies it is 905-1045 psig Examiner Cue: Once the Operator shows you where he/she would verify reactor pressure, inform them that reactor pressure is ~1005 psig and stable.		
* #	B	REACTOR VESSEL LEVEL LR-7854. • Between 12.5” and 54”. <u>IF</u> the rate of rise of RPV level indicates HPCI is injecting <u>AND</u> the Control Room is unmanned, PERFORM the following: <u>PRIOR</u> to exceeding the high level trip (level 8) <u>OR</u> when HPCI is no longer required, TRIP HPCI IAW Attachment 8. TIME RPV Level Checked: _____	Operator observes RSP RPV level and notes that RPV level is rising Examiner Cue: Once the Operator shows you where he/she would verify reactor water level, inform them that Reactor water level appears to have dropped to -40” and it is now at -20” and rising at ~10”/min Operator should be able to determine that HPCI is injecting and it is no longer required. Operator should go to Attachment 8 and TRIP HPCI. Operator may continue with procedure OR go directly to Attachment 8. Operator needs to trip HPCI prior to RPV level reaching Level 8		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	Att. 8 8.1	<ul style="list-style-type: none"> • OPEN the following circuit breaker at Class 1E 125VDC Distribution Panel 1AD417: <p>Circuit Breaker 10, HPCI RELAY VERT BD 10C620.</p> <p>Time Breaker Opened: _____</p>	<p>Operator proceeds to 125VDC Dist. Pnl 1AD417 and simulates opening Circuit Breaker 10.</p> <p>Examiner Cue: Once the Operator makes it to the cabinets, show the operator a picture of the inside of the cabinet and ask him which breakers he/she would open. Then inform them that that breaker is open.</p>		
	5.1.4 C - F	<ul style="list-style-type: none"> • RCIC System status • PSV-F013F,H,M SRV status • SUPPRESSION CHAMBER WATER TR-3647J • DIESEL GENERATOR 1A(B,C,D)G400 TRIP/CLOSED 	<p>Operator points to appropriate indicators</p> <p>Examiner Cue: As the operator points at the appropriate indicators inform him/her:</p> <ul style="list-style-type: none"> • RCIC Status – RCIC is running and injecting at 400 gpm • SRV status – all indicate closed • Suppression Chamber Water temp – 78°F rising slowly (~1°F/ 5 minutes) • Diesel Generators – all off 		
	5.1.5	ENSURE the following RSP Switches have been PLACED in EMER:	Operator places RSP switches in EMER		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	A.	CH "A" TRANSFER, <u>AND OBSERVE</u> the following valves have Auto Closed: <ul style="list-style-type: none"> • BC-HV-F021A RHR LOOP A INBD CONT SPRAY MOV. • BC-HV-F006A A RHR PMP SUCT FROM RECIRC LOOP B ISLN MOV. 	Operator simulates placing CH "A" TRANSFER switch to EMER Operator Observes valves have Auto Closed Examiner Cue: As the operator points at the appropriate indicators inform him/her: * F021A and F006A have auto closed		
*	B.	CH "C" TRANSFER, <u>AND OBSERVE</u> the following have Auto Opened: <ul style="list-style-type: none"> • HD-9370A, REACTOR BUILDING SUPPLY DAMPER. • HD-9414A, REACTOR BUILDING EXHAUST DAMPER 	Operator simulates placing CH "C" TRANSFER switch to EMER Operator Observes valves have Auto Opened Examiner Cue: As the operator points at the appropriate indicators inform him/her: * HD-9370A and HD-9414A have auto opened		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	C.1	CH "B" TRANSFER, <u>AND OBSERVE</u> the following: The following valves have Auto Closed: <ul style="list-style-type: none"> • BC-HV-F016B, RHR LP B CONT SPRY VLV. • BC-HV-F017B, LPCI INJECTION VALVE. • BC-HV-F021B, RHR LP B CONT SPRY VLV. • BC-HV-F027B, RHR LP B SUP POOL SPRY VLV. • BD-HV-F022, RCIC TEST BYP CST VLV. 	Operator simulates placing CH "B" TRANSFER switch to EMER Operator Observes valves have Auto Closed Examiner Cue: As the operator points at the appropriate indicators inform him/her: * F016B, F017B, F021B, F027B and F022 have auto closed		
	C.2	The following valves have Auto Opened: <ul style="list-style-type: none"> • BD-HV-F012, RCIC PMP DISCH MOV • FC- HV-F059, RCIC EXH ISLN MOV • FC-HV-F060, RCIC VAC PMP DSCH ISLN MOV • FC-HV-F062, RCIC EXH VAC BKR INBD ISLN VLV • HV-2520B, RHR PMP B CLG WTR SUP VLV 	Operator Observes valves have Auto Opened Examiner Cue: As the operator points at the appropriate indicators inform him/her: * F012, F059, F021B, F060, F062 and HV-2520B have auto opened		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	C.3	The RCIC Jockey Pump BP-228 has auto-started	Operator observes RCIC Jockey Pump has auto-started Examiner Cue: As the operator points at the appropriate indicators inform him/her: RCIC Jockey Pump has auto started.		
	C.4	RCIC Turbine alarms are enabled at the RSP (may not be ON)	Operator observes RCIC alarms are enabled.		
*	D.1	CH "D" TRANSFER, <u>AND OBSERVE</u> the following: 1. The following have Auto Opened: <ul style="list-style-type: none"> • BC-HV-F004D, RHR PUMP D SUPP POOL SUCT MOV. • FC-HV-F084, RCIC EXH VAC BKR INBD ISLN MOV. • HD-9370B, REACTOR BLDG SUPPLY DAMPER. • HD-9414B, REACTOR BLDG EXHAUST DAMPER 	Operator places CH "D" transfer switch in EMER Operator observes F004D, F084, HD9370B and HD-9414B are open Examiner Cue: As the operator points at the appropriate indicators inform him/her that the valves have auto opened.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	D.2	The following have Auto Closed: <ul style="list-style-type: none"> • FC-HV-F004, VACUUM TANK CONDENSATE PUMP DISCHARGE TO CRW (Fails Closed). • BC- HV-F010B, RHR LOOP D TEST RET MOV. • FC-HV-F025 STEAM TRAP DRAIN VLV 	Operator observes appropriate valves have auto closed. Examiner Cue: As the operator points at the appropriate indicators inform him/her the valves have auto closed.		
	D.3	RHR Jockey Pump DP228 has started	Operator observes RHR Jockey pump has started Examiner Cue: As the operator points at the appropriate indicators inform him/her RHR jockey pump DP228 has started.		
*	E	CHANNEL "NON-1E" TRANSFER, <u>AND OBSERVE</u> HV-F031B, Reactor Recirculation Pump BP201's Discharge Valve has Closed.	Operator places NON-1E Transfer switch to EMER Operator should be aware that Recirc pump will trip Examiner Cue: As the operator points at the appropriate indicators inform him/her BP201's discharge valve has closed.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	F.	PMP BP202 XFR - B RHR PUMP	Operator place PMP BP202XFR switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her BP202XFR switch is in EMER		
*	G.	PMP BP502 XFR - B SERV WTR PUMP	Operator place PMP BP502XFR switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her BP502XFR switch is in EMER		
*	H.	PMP DP502 XFR - D SERV WTR PUMP	Operator place PMP DP502XFR switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her DP502XFR switch is in EMER		
*	I.	PMP BP210 XFR - B SACS PUMP	Operator place PMP BP210XFR switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her BP210XFR switch is in EMER		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Containment Integrity
TASK: Resetting Isolation Systems

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	J.	PMP DP210 XFR - D SACS PUMP	Operator place PMP DP210XFR switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her DP210XFR switch is in EMER		
*	K.	MOTOR BK400 TRANS	Operator place BK TRANS switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her MOTOR BK400 TRANS switch is in EMER		
*	L.	MOTOR BK403 TRANS	Operator places MOTOR BK403 switch to EMER Examiner Cue: As the operator points at the appropriate indicators inform him/her MOTOR BK403 switch is in EMER		
	5.1.6	<u>I</u> F emergency takeover is successful, notify the Shift Manager that control has been established from the Remote Shutdown Panel	Operator informs Shift Manager that emergency takeover has been successful.		

Terminating Cue: Once the Operator has informed the Shift Manager that control has been established from the Remote Shutdown Panel, then state "This JPM is complete"

JOB PERFORMANCE MEASURE
INSTRUCTIONS

INITIAL CONDITIONS:

1. A fire in the Control Room has forced a Control Room Evacuation
2. NO actions were performed in the Control Room prior to evacuation
3. The Plant is still at 100% power and the turbine is still tied to the grid.
4. The CRS has directed you to Establish Control of the plant from Outside of the Control Room.

INITIATING CUE:

Establish Control of the Plant from Outside of the Control Room IAW with HC.OP-IO.ZZ-0008

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available
TASK NUMBER: 2620020101
JPM NUMBER: NRC-JPM-010

ALTERNATE PATH: **K/A NUMBER:** 262002A4.01
IMPORTANCE FACTOR:

2.8	3.1
RO	SRO

APPLICABILITY: RO SRO

EVALUATION SETTING/METHOD: Plant /Simulate

REFERENCES: HC.OP-SO.PN-0001(Q), Rev. 15

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (8) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: New

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A
JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: _____ **DATE:** _____

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Electrical

TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

TASK NUMBER: 2390010101

INITIAL CONDITIONS:

1. Hope Creek is at 100%
2. UPS 1AD481's inverter blew a fuse and power to the 120VAC Distribution panel 1AJ481 swapped over to its Backup AC power.
3. An NEO has removed the Inverter and Rectifier sections from service IAW section 5.2 of HC.OP-SO.PN-0001, 120 VAC Electrical Distribution.
4. Electrical Maintenance has replaced the fuse and is ready for 120VAC Distribution panel 1AJ481 to be returned to its normal power source.
5. You have been directed to return 120 VAC Distribution panel 1AJ481 to its normal power supply in accordance with HC.OP-SO.PN-0001

INITIATING CUE:

Place the Inverter and Rectifier Sections of 120 VAC UPS 1AD481 in-Service with Backup AC Available IAW HC.OP-SO.PN-0001, 120 VAC Electrical Distribution.

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains a copy of HC.OP-SO.PN-0001 and determines he/she needs to perform section 5.3	<p>Examiner Cue: Once the operator has located the procedure, provide the operator with a copy of procedure HC.OP-SO.PN-0001(Q).</p> <p>Remind Operator NO controls are to be operated. Just point to a control switch and explain how you would operate it.</p>		
		Operator reviews precautions and limitations.	<p>Operator reviews precautions and limitations.</p> <p>Examiner Cue: If excessive time is taken to review precautions and limitations, inform operator that all are satisfied.</p> <p>Examiner Note: Initialing the following steps is not critical.</p>		
	5.3.1	<p>ENSURE that all prerequisites have been satisfied IAW Section 2.3 of this procedure.</p> <p>START TIME: _____</p>	<p>Operator ensures that the prerequisites are satisfied:</p> <p>Operator initials the step.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	5.3.2	<p>PLACE the RECTIFIER AC INPUT BKR-CB201 in the ON position.</p> <p>A. OBSERVE the following:</p> <ol style="list-style-type: none"> 1. LOSS OF ALTERNATE SOURCE light illuminates. 2. LOSS OF SYNCRONISM light illuminates 	<p>Operator goes to the UPS 1AD481 and simulates placing CB-201 in the ON position.</p> <p>Operator observes Loss of Alternate Source light and Loss of Synchronism lights illuminate</p> <p>Examiner Cue: Once the Operator makes it to the cabinets, Have him/her indicate which breaker they would operate and then inform them that that breaker is in the ON position.</p> <p>After each step the Operator should Record the component and initial on Attachment 1. This is not critical.</p>		
* #	5.3.3	<p>PLACE the RECTIFIER AUCTIONEER DC OUTPUT BKR-CB21 in the ON position</p>	<p>Operator simulates placing CB-21 in the ON position</p>		
* #	5.3.4	<p>PLACE the RECTIFIER ALTERNATE DC INPUT BKR-CB20 in the ON position.</p> <ul style="list-style-type: none"> • OBSERVE that the LOSS OF ALTERNATE SOURCE light extinguishes. 	<p>Operator simulates placing CB-20 in the ON position</p> <p>Examiner Cue: Loss of Alternate Source Light extinguishes</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	5.3.5 A.	<p>PLACE the Static Inverter DC FILTER CHARGE SWITCH in the ON position AND PERFORM the following: OBSERVE the following:</p> <ol style="list-style-type: none"> 1. DC FILTER CHARGED light comes illuminates after a several second time delay. 2. LOSS OF INVERTER OUTPUT light illuminates 3. ON INTERNAL FREQUENCY REFERENCE light illuminates. 	<p>Operator simulates placing Static Inverter DC Filter CHARGE SWITCH in the ON position.</p> <p>Examiner Cue: DC FILTER CHARGED, LOSS OF INVERTER OUTPUT and ON INTERNAL FREQUENCY REFERENCE lights all illuminate.</p>		
	B.	<p>VERIFY DC INPUT, DC Voltmeter reads \approx 125VDC</p>	<p>Operator Verifies DC Voltmeter reads \sim125VDC</p> <p>Examiner Cue: Voltage is reading 128VDC</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.6	<u>WHEN</u> a 15-minute warm-up period for Static Inverter Logic has elapsed, <u>THEN PLACE</u> the Inverter TEST Toggle Switch in the UP position <u>AND VERIFY</u> that all 4 LED lights are illuminated.	Examiner Note: Using Time compression inform the operator that the 15 minute warm-up period has passed, also once Operator has pointed to the Inverter, show him a picture of the inside of the cabinet and let him point out where the Test Toggle Switch is. Operator simulates placing Inverter TEST toggle switch in the UP position Examiner Cue: All 4 LED lights are illuminated.		
* #	5.3.7	PLACE the Inverter TEST Toggle Switch in the DOWN position <u>AND PERFORM</u> the following: A. VERIFY all 4 LED lights extinguish. B. <u>IF</u> any LED lights remain illuminated, <u>THEN REPEAT</u> Steps 5.3.6 <u>AND</u> 5.3.7.	Operator simulates putting Inverter TEST toggle switch in the DOWN position Examiner Cue: All 4 LED lights are off.		
* #	5.3.8	PLACE the STATIC INVERTER DC INPUT BKR-CB101 in the ON position. • OBSERVE that the LOSS OF INVERTER OUTPUT light extinguishes.	Operator simulates placing CB101 in ON position Examiner Cue: Loss of Inverter Output light extinguishes		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	5.3.9	PLACE the INVERTER AC OUTPUT BKR-CB10 in the ON position.	Operator simulates placing CB10 in ON position		
* #	5.3.10	PLACE the following ISOLATE Toggle Switches in the ON [right position] <u>AND OBSERVE</u> the noted light response: A. ISOLATE INV OUTPUT (SYNC MONITOR light illuminates) B. ISOLATE SYNC SOURCE (The following lights extinguish:) • LOSS OF SYNCRONISM • SYNC MONITOR • ON INTERNAL FREQUENCY REFERENCE	Operator simulates placing ISOLATE Toggle switches in the ON position Examiner Cue: SYNC Monitor light illuminates Loss of Synchronism, Sync Monitor and On Internal Frequency Reference all illuminate.		
* #	5.3.11	PLACE the MAN BYPASS Control Switch in the BYP TO ALT position.	Operator simulates placing MAN BYPASS switch in the BYP to ALT position.		
	5.3.12	VERIFY the amber LOAD ON BACKUP light is illuminated <u>AND</u> the clear SYNC MONITOR light is extinguished	Operator verifies amber LOAD ON BACKUP light is illuminated. Examiner Cue: LOAD ON BACKUP light is illuminated and SYNC MONITOR light is extinguished.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Electrical
TASK: Placing Inverter and Rectifier Sections in Service with Backup AC Available

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
* #	5.3.13	PLACE the MAN BYPASS Control Switch in NORM.	Operator simulates placing MAN BYPASS in NORM		
*	5.3.14	PLACE the TEST Toggle Switch in NORMAL [center position] AND OBSERVE the following: <ul style="list-style-type: none"> • Green PREF POS light is illuminated. • LOAD ON BACKUP SOURCE light extinguishes. STOP TIME _____	Operator places TEST toggle switch to the NORMAL position Examiner Cue: Green PREF POS light is illuminated. LOAD ON BACKUP SOURCE light extinguishes.		

Terminating Cue: Once the Operator has placed the TEST Toggle Switch in NORMAL and observed the proper indication, then state, "This JPM is complete"

JOB PERFORMANCE MEASURE
INSTRUCTIONS

INITIAL CONDITIONS:

1. Hope Creek is at 100%
2. UPS 1AD481's inverter blew a fuse and power to the 120VAC Distribution panel 1AJ481 swapped over to its Backup AC power.
3. An NEO has removed the Inverter and Rectifier sections from service IAW section 5.2 of HC.OP-SO.PN-0001, 120 VAC Electrical Distribution.
4. Electrical Maintenance has replaced the fuse and is ready for 120VAC Distribution panel 1AJ481 to be returned to its normal power source.
5. You have been directed to return 120 VAC Distribution panel 1AJ481 to its normal power supply in accordance with HC.OP-SO.PN-0001

INITIATING CUE:

Place the Inverter and Rectifier Sections of 120 VAC UPS 1AD481 in-Service with Backup AC Available IAW HC.OP-SO.PN-0001, 120 VAC Electrical Distribution.

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK
SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]
TASK NUMBER: 2010110104
JPM NUMBER: NRC-JPM-011

ALTERNATE PATH: **K/A NUMBER:** 201003A2.10
IMPORTANCE FACTOR: 3.0 3.4
APPLICABILITY: RO SRO
RO SRO

EVALUATION SETTING/METHOD: Reactor Bldg/Simulate

REFERENCES: HC.OP-SO.BF-0002, Rev. 25

TOOLS AND EQUIPMENT: Tool to remove cap from Instrument Block Connection P62.
Torque wrench set at 200 inch pounds

VALIDATED JPM COMPLETION TIME: 11 Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

JPM SOURCE: Bank

APPROVAL:

Author

Facility Representative

Chief Examiner

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission from the OS or Unit CRS;
2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).
3. Verification of the "as left" condition by a qualified individual.

ACTUAL JPM COMPLETION TIME: _____ Minutes
ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT

REASON, IF UNSATISFACTORY:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Control Rod Drive Hydraulics

TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

TASK NUMBER: 2010110104

INITIAL CONDITIONS:

1. The Reactor is operating at 18% power.
2. Control Rod 38-07 has failed a scram time test and is fully inserted at this time.

INITIATING CUE:

Hydraulically isolate the HCU for Control Rod 38-07. DO NOT electrically disarm the HCU. Maintain cooling water flow to the CRD mechanism.

Successful Completion Criteria:

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

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains/locates procedure HC.OP-SO.BF-0002.	Operator obtains the correct procedure.		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If excessive time is taken reviewing precautions and limitations, inform operator that all are satisfied. The operator initials the appropriate procedure steps. Examiner Note: It is not critical to initial the procedure step, nor complete Attachment 1 in this and subsequent steps.		
	4.0	<u>EQUIPMENT REQUIRED</u> <ul style="list-style-type: none"> • Tool to remove cap from Instrument Block Connection P6. • Calibrated torque wrench with the appropriate range to read the reference value of 20 to 100% of range. 	Operator obtains required tools. (Torque wrench set at 200 inch pounds.) Examiner Note: Operator may demonstrate ability to locate required tools. Tools are kept in a locked toolbox. If unable to open, state that the tools have been acquired.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be 5.1.1.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.1.1	ENSURE all prerequisites of Section 2.1 are satisfied.	Operator ensures prerequisites have been satisfied, completes Attachment 1, and initials each prerequisites in the spaces provided in the procedure. Examiner Cue: If excessive time is taken reviewing prerequisites, inform operator that all are satisfied.		
# *	5.1.2	START TIME: _____ PERFORM the following for applicable CRD HCU: A. CLOSE following CRD HCU Isolation valves: 1. 1-BF-V101, Insert Riser Vlv	The Operator rotates 1BF-V101 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat. Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop. The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
# *		2. 1-BF-V102, Withdraw Riser Isln Vlv <u>AND</u> INITIAL Attachment 1.	<p>The Operator rotates 1BF-V102 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat.</p> <p>Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop.</p> <p>The operator then initials Attachment 1 and the appropriate procedure step.</p>		
# *		3. 1-BF-V113, Chg Wtr Riser Isln Vlv <u>AND</u> INITIAL Attachment 1.	<p>The Operator rotates 1BF-V113 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat.</p> <p>Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop.</p> <p>The operator then initials Attachment 1 and the appropriate procedure step.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		B. PERFORM the following to discharge HCU Gas Accumulator: 1. CLOSE 1-BF-V111, Gas Accum Chrg Vlv.	The Operator rotates 1BF-V111 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat. Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop. The operator then initials the appropriate procedure step.		
		2. Slowly UNCAP Instrument Block Conn P6.	The Operator uncaps Instrument Block Conn P6. Examiner Cue: The cap has been removed from the location identified. Note – P6 is the cap on the Front of the Instrument Block not the back. The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		3. Throttle OPEN 1-BF-V111, Gas Accum Chrg Vlv.	<p>Operator slowly rotates 1BF-V111 in the counterclockwise direction and observes decreasing accumulator gas pressure on PI-131.</p> <p>Examiner Cue: The handwheel of the valve you indicated is rotating counterclockwise, gas can be heard escaping from the P6 connection. PI-131 indication is lowering.</p> <p>The operator then initials the appropriate procedure step.</p>		
		4. <u>WHEN</u> PI-131, N ₂ Accumulator Press, is 0 psig, <u>THEN</u> fully OPEN 1-BF-V111, Gas Accum Chrg. Vlv <u>AND</u> INITIAL Attachment 1.	<p>Examiner Cue: PI-131 indicates 0 psig.</p> <p>Operator rotates 1BF-V111 handwheel in the counterclockwise direction until handwheel/stem motion stops and valve is fully open.</p> <p>Examiner Cue: The stem of the valve you indicated is rising, the valve handwheel come to a hard stop.</p> <p>The operator then initials the appropriate procedure step.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		5. CAP Instrument Block Connection P6 <u>AND</u> INITIAL Attachment 1.	Operator threads cap on P6 connection and rotates cap in clockwise direction using appropriate wrench. Examiner Cue: The P6 cap is rotating in the clockwise direction. The operator then initials the appropriate procedure step.		
		6. TORQUE P6 cap to 175 (150 - 200) in-lb.	Using torque wrench, operator rotates P6 cap in clockwise direction until torque wrench clicks indicating that inch pounds have been reached. Examiner Cue: The torque wrench is rotating clockwise, the torque wrench clicks. The operator then initials the appropriate procedure step.		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
# *		<p>C. PERFORM the following to hydraulically isolate Directional Control Valves SV-121, SV-122, SV-123, <u>AND</u> SV-120 from Drive <u>AND</u> Exhaust Water Headers:</p> <p>1. CLOSE 1-BF-V103, Drv Wtr Riser Vlv <u>AND</u> INITIAL Attachment 1.</p>	<p>The Operator rotates 1BF-V103 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat.</p> <p>Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop.</p> <p>The operator then initials Attachment 1 and the appropriate procedure step.</p>		
# *		<p>2. CLOSE 1-BF-V105, Exh Wtr Riser Vlv <u>AND</u> INITIAL Attachment 1.</p>	<p>The Operator rotates 1BF-V105 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat.</p> <p>Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop.</p> <p>The operator then initials Attachment 1 and the appropriate procedure step.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
# *		D. OPEN 1-BF-V101, Insert Riser Vlv <u>AND INITIAL</u> Attachment 1.	<p>The Operator rotates 1BF-V101 handwheel in the counterclockwise direction until handwheel/stem motion stops and valve has reached its open seat.</p> <p>Examiner Cue: The stem of the valve you indicated is rising, the valve handwheel comes to a hard stop.</p> <p>The operator then initials Attachment 1 and the appropriate procedure step.</p>		
# *		E. CLOSE 1-BF-V112, Scram Dsch Riser Vlv <u>AND INITIAL</u> Attachment 1.	<p>The Operator rotates 1BF-V112 handwheel in the clockwise direction until handwheel/stem motion stops and valve has reached its closed seat.</p> <p>Examiner Cue: The stem of the valve you indicated is lowering, the valve handwheel comes to a hard stop.</p> <p>The operator then initials Attachment 1 and the appropriate procedure step.</p>		
		F. OBSERVE appropriate CRD temperature periodically on CRD TEMPERATURE 1-BF-TRS-R018 RECORDER.	<p>Operator relocates to the 1-BF-TRS-R018 RECORDER and observes the temperature for Rod 38-07.</p> <p>Examiner Cue: The indicator identified indicates 195F.</p>		

INITIAL LICENSED OPERATOR EXAMINATION
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Control Rod Drive Hydraulics
TASK: Isolate a CRD HCU During Reactor Operation [Hydraulically]

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.1.3	PERFORM independent verification that the system is aligned IAW Attachment 1. STOP TIME: _____	Operator submits the procedure for an independent verification.		

Terminating Cue: Repeat back message from the operator on the status of the JPM, and then state "This JPM is complete".

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The Reactor is operating at 18% power.
2. Control Rod 38-07 has failed a scram time test and is fully inserted at this time.

INITIATING CUE:

Hydraulically isolate the HCU for Control Rod 38-07. DO NOT electrically disarm the HCU. Maintain cooling water flow to the CRD mechanism.