

**KEWAUNEE
INITIAL LICENSE EXAM**

DECEMBER 11 THRU 20, 2000

The ***as-given walk-through tests***
including Forms ES-301-1,
"Administrative Topics Outline," and ES-
301-2, "Control Room Systems and
Facility Walk-Through Test Outline," and
the JPMs for each walk-through test

Facility: Kewaunee		Date of Examination: 12/11/00
Examination Level: RO		Operating Test Number: 1
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations/Plant Parameter Verification/	1. Perform Calorimetric/Heat Balance Calculation Section 3.2.2 Of SP 87-125. (O-LRQ-JPM-114)
	Conduct of Operations/Mode Change	1. Perform Precritical Checklist For The Electrical System
A.2	Equipment Control/Tagging and Clearances	1. Prepare A Manual Tagout
A.3	Radiation Control/Control Of Radiation Releases	1. Initiate a Containment Purge
A.4	Emergency Plan/Emergency Communications	1. Emergency Classification Escalation Notification

Facility: Kewaunee
Examination Level: RO

Date of Examination: 12/11/2000
Operating Test Number: 1

B.1 Control Room Systems

	System / JPM Title	Type Code*	Safety Function
a.	001(003A) Control Rod Drive System / Recover a Dropped Rod [O-LRQ-JPM-34]	D S	1
b.	076 Service Water System / Perform Semi-Monthly Shifting Of Running Service Water Pumps	N A S	4
c.	064 Diesel Generator / Start And Load The Diesel Generator [O-LRQ-JPM-058A]	D A S	6
d.	010 PZR PCS / Control PRZR Pressure Using Heaters And/Or Spray Manually (O-LRQ-JPM-056)	D S	3
e.	007 PRT / Control Level In The PRT	N S	5
f.	005 RHR / Shift Cooling Trains of RHR	N S L	4
g.	006 ECCS / Operate Safety Injection System In The Recirc Mode [O-LRQ-JPM-115]	M A S	2

B.2 Facility Walk-Through

a.	028 HRPS / Operate And Monitor The Post LOCA Hydrogen Control System [O-LRQ-JPM-099]	D R	5
b.	004 CVCS / Perform Actions Necessary For Control Room Evacuation (Charging Flow) [O-LRQ-JPM-162A]	D A	1
c.	061 AFW / Perform Functional Test of MS-103 [based on O-LRQ-JPM-013]	M	4

* Type Codes: (D) Direct from bank, (M)odified from bank, (N)ew, (A)lternate Path, (C)ontrol Room, (S)imulator, (L)ow Power, (R)CA

Facility: Kewaunee		Date of Examination: 12/11/00
Examination Level: SRO		Operating Test Number: 1
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations/Plant Parameter Verification	1. Perform Calorimetric/Heat Balance Calculation Section 3.2.2 Of SP 87-125. (O-LRQ-JPM-114)
	Conduct of Operations/Fuel Handling	1. Approve Fuel Movement Change
A.2	Equipment Control/Tagging and Clearances	1. Review A Tagout For Approval
A.3	Radiation Control/Control of Radiation Releases	1. Review A Gas Decay Tank Discharge Permit For Approval
A.4	Emergency Plan/Emergency Protective Action Recommendations	1. Direct Required Notifications Of Offsite Personnel For Emergency Event (Site Emergency With Evaluated Release)

Facility: Kewaunee
Examination Level: SRO-I

Date of Examination: 12/11/2000
Operating Test Number: 1

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. 001(003A) Control Rod Drive System / Recover a Dropped Rod [O-LRQ-JPM-34]	D S	1
b. 076 Service Water System / Perform Semi-Monthly Shifting Of Running Service Water Pumps	N A S	4
c. 064 Diesel Generator / Start And Load The Diesel Generator [O-LRQ-JPM-058A]	D A S	6
d. 010 PZR PCS / Control PRZR Pressure Using Heaters And/Or Spray Manually (O-LRQ-JPM-056)	D S	3
e. 007 PRT / Control Level In The PRT	N S	5
f. 005 RHR / Shift Cooling Trains of RHR	N S L	4
g. 006 ECCS / Operate Safety Injection System In The Recirc Mode [O-LRQ-JPM-115]	M A S	2

B.2 Facility Walk-Through

a. 028 HRPS / Operate And Monitor The Post LOCA Hydrogen Control System [O-LRQ-JPM-099]	D R	5
b. 004 CVCS / Perform Actions Necessary For Control Room Evacuation (Charging Flow) [O-LRQ-JPM-162A]	D A	1
c. 061 AFW / Perform Functional Test of MS-103 [based on O-LRQ-JPM-013]	M	4

* Type Codes: (D) Direct from bank, (M)odified from bank, (N)ew, (A)lternate Path, (C)ontrol Room, (S)imulator, (L)ow Power, (R)CA

Facility: Kewaunee
Examination Level: SRO-U

Date of Examination: 12/11/2000
Operating Test Number: 1

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. 010 PZR PCS / Control PRZR Pressure Using Heaters And/Or Spray Manually (O-LRQ-JPM-056)	D S	3
b. 005 RHR / Shift Cooling Trains of RHR	N S L	4
c. 006 ECCS / Operate Safety Injection System In The Recirc Mode [O-LRQ-JPM-115]	M A S	2
d. /		
e. /		
f. /		
g. /		

B.2 Facility Walk-Through

a. 028 HRPS / Operate And Monitor The Post LOCA Hydrogen Control System [O-LRQ-JPM-099]	D R	5
b. 004 CVCS / Perform Actions Necessary For Control Room Evacuation (Charging Flow) [based on O-LRQ-JPM-162]	M A	1
c. /		

* Type Codes: (D) Direct from bank, (M)odified from bank, (N)ew, (A)lternate Path, (C)ontrol Room, (S)imulator, (L)ow Power, (R)CA

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-113-A.1-1S/R REV. ORIG(E)	
	TITLE:	PERFORM CALORIMETRIC/HEAT BALANCE CALCULATION APPENDIX A OF SP-087-125
	DATE:	PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	No
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0870010201
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	INITIAL
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	2, 3, 4, 5, 6, 7, 8 and 9
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	Calculator
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	SP 87-125, Rev. AZ

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

YOU ARE the NCO/Reactor Operator.

Reactor is at 100% power.

The PPCS is out of service.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

You are directed by the CRS to determine Reactor thermal output to the nearest 0.1 MW_{th} using SP 87-125, Appendix A, steps 1 through 8.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the NCO/Reactor Operator.

Reactor is at 100% power.

The PPCS is out of service.

INITIATING CUE:

You are directed by the CRS to determine Reactor thermal output to the nearest 0.1 MW_{th} using SP 87-125, Appendix A, steps 1 through 8.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to SP 87-125, Appendix A, step 1.	* REFER to SP 87-125, Appendix A, step 1.		
(C) 2.	<p>OBTAIN Main Feedwater temperature Header A (meter 4104603) and Header B (meter 4104403) and OBTAIN enthalpy values for each, using either of the following: RD 1.6 OR Steam Tables.</p> <p>NOTE: The candidate is expected to identify the appropriate meter or gauge to obtain value from prior to cueing the value read for each step.</p> <p>Cue: 4104603 reads 419.90°F and 4104403 reads 418.10°F.</p> <p>Enthalpy values determined by Oper.</p> <p>Header A: _____</p> <p>Header B : _____</p>	<p>* OBTAIN control board temperature values for Main Feedwater:</p> <p>Header A : 419-420°F</p> <p>Header B: 418-419°F</p> <p>DETERMINE enthalpy for FW temperatures are</p> <p>Header A: 396.79 BTU/lb (396.35 - 397.45)</p> <p>Header B: 394.81 BTU/lb (394.26 - 395.36)</p>		
(C) 3.	<p>OBTAIN Steam Pressure values by reading and averaging the 3 control board meters for each S/G (S/G A – PI-468, 469, 482; S/G B – PI-478, 479, 483) and OBTAIN enthalpy values for each, using either of the following: RD 1.7 OR Steam Tables.</p> <p>Cue: S/G A pressures read 710, 715 and 720 psig across the board; S/G B pressures read 700, 705 and 710 psig across the board.</p> <p>Enthalpy value determined by Oper.</p> <p>S/G A: _____</p> <p>S/G B : _____</p>	<p>* OBTAIN and average S/G pressure values:</p> <p>S/G A : 715 psig</p> <p>S/G B: 705 psig</p> <p>DETERMINE enthalpy for S/G pressures are</p> <p>S/G A: 1201.15 BTU/lb (1201.10 – 1201.20)</p> <p>S/G B: 1201.37 BTU/lb (1201.35 – 1201.40)</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 4.	<p>OBTAIN Feedwater Flow values by reading and averaging the 2 control board meters for each loop (S/G A: FI-466 & 467; S/G B: FI-476 & 477)</p> <p>Cue: Feedwater Flow Correction Factors are 1.0 for each loop.</p> <p>S/G A flows read 3.47×10^6 and 3.47×10^6 LBM/HR across the board; S/G B flows read 3.52×10^6 and 3.51×10^6 LBM/HR across the board.</p>	<p>* OBTAIN and AVERAGE feedwater flow rate</p> <p>S/G A: 3470.00×10^3 LBM/HR</p> <p>S/G B: 3515.00×10^3 LBM/HR</p>		
(C) 5.	<p>CALCULATE the MW_{th} output from the S/Gs. (by inserting FW flows and the obtained enthalpy values for FW temp and S/G press into the equation and CALCULATE.)</p> <p>Value determined by Oper.</p> <p>A S/G _____ MW_{th}</p> <p>B S/G _____ MW_{th}</p>	<p>* DETERMINE the MW_{th} output is</p> <p>A S/G - 817.79 MW (817.07 - 818.29)</p> <p>B S/G - 830.66 MW (830.08 - 831.26)</p>		
(C) 6.	<p>CALCULATE total steam thermal output. (by inserting MW_{th} output for each S/G into the equation and CALCULATE.)</p> <p>Value determined by Oper.</p> <p>_____ MW_{th}</p>	<p>* DETERMINE total steam thermal output is 1648.45 MW (1647.15 - 1649.55)</p>		
(C) 7.	<p>CALCULATE blowdown correction. (by inserting the sum of S/G blowdown into the equation and CALCULATE.)</p> <p>Cue: Blowdown flows: S/G A – 20 gpm; S/G B – 20 gpm.</p> <p>Value determined by Oper.</p> <p>_____ MW_{th}</p>	<p>* DETERMINE blowdown correction is 3.15 - 3.16</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 8.	<p>CALCULATE total Reactor thermal output. (by inserting total steam thermal output and total blowdown correction into the equation and CALCULATE.)</p> <p>Value determined by Oper.</p> <p>_____ Mw_{th}</p>	* DETERMINE total Reactor thermal output is 1638.18 MW (1636.88 - 1639.29)		
(C) 9.	<p>CALCULATE percent power. (by inserting total Reactor thermal output into the equation and CALCULATE.)</p> <p>Value determined by Oper.</p> <p>_____ %</p> <p>Cue: Steps 9 and 10 of SP 87-125 Appendix A have been completed.</p>	* DETERMINE percent power is 99.3 % (99.2 - 99.4)		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.1-2-R REV. ORIG
	TITLE: PERFORM PRECRITICAL CHECKLIST FOR THE ELECTRICAL SYSTEM
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	N020020101; 1190110301
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	INITIAL
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	9 and 14
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	N-0-02 CLB, Rev. AL

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Balance of Plant Operator.

The plant is in HOT SHUTDOWN following a reactor trip.

Preparations are in progress to start-up the reactor.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The Control Room Supervisor directs complete N-0-02 CLB Precritical Checklist section 2.10 and verify electrical system status will allow startup. Note any discrepancies found and report when section is completed.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Balance of Plant Operator.

The plant is in HOT SHUTDOWN following a reactor trip.

Preparations are in progress to start-up the reactor.

INITIATING CUE:

The Control Room Supervisor directs complete N-0-02 CLB Precritical Checklist section 2.10 and verify electrical system status will allow startup. Note any discrepancies found and report when section is completed.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Reference N-0-02 CLB, section 2.10.	* REFER to N-0-02 CLB, section 2.10		
2.	<p>Reserve Auxiliary Transformer energized.</p> <p>CUE: Applicable indications show Reserve Aux Transformer is energized.</p>	<p>* CHECK any OR all of the following indications:</p> <p>RA-199W OCB C/S RED light lit</p> <p>RA-199E OCB C/S RED light lit</p> <p>RAT secondary windings A and B White lights lit</p> <p>RAT Winding A and B power and current meters indicating above ZERO.</p> <p>OR</p> <p>* CHECK vertical board switchyard breaker indication:</p> <p>1066E OCB C/S Red light</p> <p>1066W OCB C/S Red light</p> <p>RA-199E OCB C/S Red light</p> <p>RA-199W OCB C/S Red light</p> <p>* INITIAL first blank for step 2.10.1</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
3.	<p>Tertiary Auxiliary Transformer energized.</p> <p>CUE: Applicable indications show Tertiary Aux Transformer is energized. If required, Q-303 Green light is light and C/S is tagged in TRIP</p>	<p>* CHECK any OR all of the following indications:</p> <p>1099 OCB C/S Red light</p> <p>Q-303 OCB C/S GREEN light lit/Green flagged</p> <p>TA-199 OCB C/S RED light lit</p> <p>TAT secondary winding White light lit</p> <p>TAT power and current meters indicating above ZERO.</p> <p>* INITIAL first blank for step 2.10.2</p>		
4.	<p>Buses 1-5 and 1-6 energized.</p> <p>CUE: Applicable indications show Bus 5 and Bus 6 are energized.</p>	<p>* CHECK any OR all of the following indications:</p> <p>Breaker 1-501 C/S RED light lit</p> <p>Bus 5 4160V White light lit</p> <p>Bus 1-5 voltmeter (44613) reads \approx 4160 V</p> <p>Breaker 1-601 C/S RED light lit</p> <p>Bus 5 4160V White light lit</p> <p>Bus 1-6 voltmeter (44619) reads \approx 4160 V</p> <p>* INITIAL first blank for step 2.10.3</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
5.	<p>Bus 1-51 energized from Station Service Transformer 1-51. (Part of step that checks Buses 1-51, 1-52, 1-61 and 1-62 energized from their respective Station Service Transformers)</p> <p>CUE: Applicable indications show Bus 51 is energized.</p>	<p>* CHECK any OR all of the following indications:</p> <p>Breaker 15101 C/S RED light lit</p> <p>Bus 51 480V White light lit</p> <p>Bus 1-51 voltmeter (44614) reads \approx 480V</p> <p>DETERMINE Bus 51 is energized.</p>		
6.	<p>Bus 1-52 energized from Station Service Transformer 1-52. (Part of step that checks Buses 1-51, 1-52, 1-61 and 1-62 energized from their respective Station Service Transformers)</p> <p>CUE: Applicable indications show Bus 52 is energized.</p>	<p>* CHECK any OR all of the following indications:</p> <p>Breaker 15201 C/S RED light lit</p> <p>Bus 52 480V White light lit</p> <p>Bus 1-52 voltmeter (44615) reads \approx 480V</p> <p>DETERMINE Bus 52 is energized.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
7.	<p>Bus 1-61 energized from Station Service Transformer 1-61. (Part of step that checks Buses 1-51, 1-52, 1-61 and 1-62 energized from their respective Station Service Transformers)</p> <p>CUE: Applicable indications show Bus 61 is NOT energized. Breakers 16101 (Bus 61 Supply) and 16111 (Bus 51 and Bus 61 tie) are HOLD tagged.</p> <p>CUE: As CRS, Acknowledge report if given and direct continuing with actions.</p>	<p>* CHECKS any OR all of the following indications:</p> <p>Breaker 16101 C/S lights NOT lit (tagged)</p> <p>Bus 61 480V White light NOT lit</p> <p>Bus 1-61 voltmeter (44617) reads \approx 0V</p> <p>DETERMINE Bus 61 is NOT energized.</p> <p>DETERMINE BUS 61 is out due to Maintenance work per Initial Conditions.</p> <p>NOTE status of bus OR REPORT status of Bus 61 to CRS.</p>		
8.	<p>Bus 1-62 energized from Station Service Transformer 1-62. (Part of step that checks Buses 1-51, 1-52, 1-61 and 1-62 energized from their respective Station Service Transformers)</p> <p>CUE: Applicable indications show Bus 62 is energized.</p>	<p>* CHECK any OR all of the following indications:</p> <p>Breaker 16201 C/S RED light lit</p> <p>Bus 62 480V White light lit</p> <p>Bus 1-62 voltmeter (44618) reads \approx 480V</p> <p>DETERMINE Bus 62 is energized.</p>		
(C) 9.	Buses 1-51, 1-52, 1-61 and 1-62 are energized – evaluation	* LEAVE first blank empty for step 2.10.4		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
10.	<p>Bkr 15111 Bus 51 & 61 Tie OR Bkr 16111 Bus 51 & 61 Tie open.</p> <p>CUE: Breakers 15111 Green light lit and 16111 is HOLD tagged OPEN.</p>	<p>* CHECK:</p> <p>15111 Open Green light lit</p> <p>16111 Open (tagged)</p> <p>* INITIAL first blank for step 2.10.5.</p>		
11.	<p>Both station Batteries and both DC System operable.</p> <p>CUE: All DC System indications normal.</p>	<p>* DETERMINE batteries operable (from Initial Conditions).</p> <p>CHECK any OR all of the following indications:</p> <p>DC Bus voltage ≥ 125 V on all DC Bus voltmeters (4494001-4494004)</p> <p>NO DC system Annunciators lit</p> <p>* INITIAL first blank for step 2.10.6.</p>		
12.	<p>Both Diesel Generators operable</p> <p>CUE: Applicable indications show both DGs are operable.</p>	<p>* DETERMINE DGs operable (from Initial Conditions).</p> <p>CHECK any OR all of the following indications:</p> <p>Diesel Engine A C/S in AUTO</p> <p>Diesel Engine A C/S in AUTO</p> <p>NO DG Annunciators lit</p> <p>* INITIAL first blank for step 2.10.7.a.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
13.	<p>DG tank levels:</p> <p>Combined fuel oil supply \geq 39,000 gallons in Diesel Fuel Oil Storage Tanks</p> <p>Day Tanks for each DG contain at least 1000 gallons (\geq 5.5 ft.)</p> <p>CUE: (As Aux Operator) Levels are 31,000 gal (DFOST A), 29,500 gal (DFOST B), 5.8 ft. (Day Tank A), 5.9 ft (Day Tank B).</p>	<p>* DIRECT NAO to check local tank levels:</p> <p>Diesel Fuel Oil Storage Tank A and B</p> <p>DG Day Tanks A and B</p> <p>DETERMINE DGs fuel supply tanks operable.</p> <p>* INITIAL first blank for steps 2.10.7.b and 2.10.7.c.</p>		
(C) 14.	<p>At least one pair of physically independent transmission lines is operable:</p> <p>R-304 and Q-303</p> <p>F-84 and Y-51</p> <p>R-304 and Y-51</p> <p>CUE: Q-303 OCB Green light is lit and C/S tagged TRIP.</p> <p>3450 OCB Red & Green lights are out and C/S is tagged in PULL OUT.</p> <p>3451 OCB Red & Green lights are out and C/S is tagged in PULL OUT.</p> <p>All other C/S Red light lit (R-304, 1099, TA-199, 1066W, 1066E, RA-199W, RA-199E F-84 and Y-51 OCBs).</p>	<p>* CHECK following OCB C/S indications:</p> <p>R-304 OCB (RED)</p> <p>3451 OCB (OUT)</p> <p>3450 OCB (OUT)</p> <p>Q-303 OCB (Green)</p> <p>1099 OCB (Red)</p> <p>1066W OCB (Red)</p> <p>1066E OCB (Red)</p> <p>RA-199W OCB (Red)</p> <p>RA-199E OCB (Red)</p> <p>Y-51 OCB (Red)</p> <p>F-84 OCB(Red)</p> <p>DETERMINE independent supply criteria met by Y-51 and F-84.</p> <p>* INITIAL first blank for steps 2.10.8.</p>		
15.	<p>Return complete section to CRS.</p> <p>CUE: As CRS, Acknowledge of status of checklist and Bus 1-61 NOT energized.</p>	<p>* REPORT inability to complete checklist section: Step 2.10.4 not completed due to Bus 1-61 being deenergized.</p>		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.2-R REV. ORIG
	TITLE: PREPARE A MANUAL TAGOUT
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO/NAO
TASK NUMBER:	FROM OPS TRNG DATABASE	1190120304
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	INITIAL
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	8, 9, 10, 11, 12, 13, 14, 15 and 16.
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	NAD 3.3, Rev. A GNP 3.3.1, Rev. G

• THIS JPM WAS USED TO REPLACE JPM O-LRQ-JPM-NEWA.2R, "DISABLE A 3ER POINT" DUE TO AN ERROR MADE BY AN NRC EXAMINER. THE EXAMINER INADVERTENTLY DIVULGED THE JPM TO AN APPLICANT ON THE WRONG DAY. SINCE IT WAS THE END OF THE DAY, THE JPM COULD NOT THEN BE ADMINISTERED TO THE REMAINDER OF THE APPLICANTS. DLP

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are an extra Control Room Operator.

The Plant is at 100% power

Maintenance person Kelly Gretz has identified a need to isolate the RHR Heat Exchanger B from the rest of the system, with the exception of vents, drains and valve stem leakoffs, to allow retightening of bolts on the flange on the RHR inlet line to the heat exchanger under Work Request KNPP-XXX.

The CRS has discussed this with maintenance and has agreed to prepare a tagout. . They also discussed the condition that the butterfly valves associated with the RHR system, RHR-8A, RHR-8B and RHR-101, have been noted to leak by at an appreciable rate when in the closed position. . .

The RHR Heat Exchanger does NOT need draining or venting for this work.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The CRS directs you to identify the tagout boundary and prepare the Tagout Control Sheet to isolate RHR Heat Exchanger B. Return the completed Tagout Control Sheet to the CRS for assigning the Adequacy Reviewer.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Initiate Tagout. NOTE: Provide attached blank Tagout Control Sheet	* REFER to GNP 3.3.1, drawing OPER XK100-18, N-RH-34-CL, N-ICS-23-CL and/or other plant documentation. * Obtain blank Tagout Control Sheet.		
2.	Fill in Tagout number. CUE: Tagout Number is 00-123.	* ENTER "00-123" in bottom right-hand blank on Tagout Control Sheet.		
3.	Fill in Work Request Number	* ENTER "KNPP-XXX" in WORK REQUEST blank on Tagout Control Sheet.		
4.	Fill in Tagout Group	* ENTER "Maintenance" (or "Maint.") in TAGOUT GROUP blank on Tagout Control Sheet.		
5.	Fill in Reason for Tagout	* ENTER "Retighten bolts on flange for RHR HX B" (or equivalent) in REASON FOR TAGOUT blank on Tagout Control Sheet.		
6.	Fill in Requestor name	* ENTER "Kelly Gretz" in REQUESTOR blank on Tagout Control Sheet.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
7.	<p>Determine the components to be included in tagout and fill in Description and Placement information for each component</p> <p>1) RHR Pump B control switch</p> <p>NOTE: The operator may chose to have an additional tagout point that racks out RHR Pump B feeder breaker [Tag #, RHR Pump B Breaker, Bus 6 breaker 1-605, RACKED OUT]. This is NOT required.</p>	<p>* Fill in the following in first blank:</p> <p>No. – 1</p> <p>Type – HOLD or DANGER</p> <p>Switch/Appar. – RHR PUMP B Control Switch</p> <p>Card Location – Mech Console C</p> <p>Position - PULLOUT</p>		
(C) 8.	<p>Determine the components to be included in tagout and fill in Description and Placement information for each component</p> <p>2) RHR-299B/MV-32135, RHR HX Outlet to SI Pump B</p> <p>NOTE: This step and the next step may be performed in either sequence.</p>	<p>* Fill in the following in next blank:</p> <p>No. – Next number seq.</p> <p>Type – HOLD</p> <p>Switch/Appar. – RHR-299B Control Switch</p> <p>Card Location – Mech Console C</p> <p>Position – CLOSE/MP</p>		
(C) 9.	<p>Determine the components to be included in tagout and fill in Description and Placement information for each component</p> <p>3) RHR-400B/MV-32126, RHR PUMP B Supply to ICS Pump B</p>	<p>* Fill in the following in next blank:</p> <p>No. – Next number seq.</p> <p>Type – HOLD</p> <p>Switch/Appar. – RHR-400B Control Switch</p> <p>Card Location – Mech Console C</p> <p>Position – CLOSE/MP</p>		
(C) 10.	<p>Determine the components to be included in tagout and fill in Description and Placement information for each component</p> <p>4) RHR-299B/MV-32135 Power supply</p> <p>NOTE: This step and the next step may be performed in either sequence.</p>	<p>* Fill in the following in next blank:</p> <p>No. – Next number seq.</p> <p>Type – HOLD</p> <p>Switch/Appar. – RHR-299B Breaker</p> <p>Card Location – MCC62H 1JM</p> <p>Position - OFF</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 11.	Determine the components to be included in tagout and fill in Description and Placement information for each component 5) RHR-400B/MV-32126 Power Supply	* Fill in the following in next blank: No. – Next number seq. Type – HOLD Switch/Appar. – RHR-400B Breaker Card Location – MCC62H 3CF Position - OFF		
(C) 12.	Determine the components to be included in tagout and fill in Description and Placement information for each component 6) RHR-299B/MV-32135 Local Handwheel NOTE: This and the remaining tagout listing steps may be performed in any sequence.	* Fill in the following in next blank: No. – Next number seq. Type – HOLD Switch/Appar. – RHR-299B handwheel Card Location – SI Pump Area (or equivalent) Position - CLOSED		
(C) 13.	Determine the components to be included in tagout and fill in Description and Placement information for each component 7) RHR-400B/MV-32126 Local Handwheel	* Fill in the following in next blank: No. – Next number seq. Type – HOLD Switch/Appar. – RHR-400B handwheel Card Location – ICS Pump Area (or equivalent) Position – CLOSED		
(C) 14.	Determine the components to be included in tagout and fill in Description and Placement information for each component 8) RHR-9B, Residual Heat Exchanger 1B - Outlet	* Fill in the following in next blank: No. – Next number seq. Type – HOLD Switch/Appar. – RHR-9B Card Location – RHR Heat Exchanger B Room Position – CLOSED		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 15.	Determine the components to be included in tagout and fill in Description and Placement information for each component 9) RHR-80B, RHR Hx 1B Sample Isol	Fill in the following in next blank: No. – Next number seq. Type – HOLD Switch/Appar. – RHR-80B Card Location – RHR Heat Exchanger B Room Position – CLOSED		
(C) 16.	Determine the components to be included in tagout and fill in Description and Placement information for each component 10) RHR-7B, Heat Exchanger Isolation (Inlet) NOTE: When the last tagout point is filled in, give the following cue. CUE: The associated tags have been filled in.	* Fill in the following in next blank: No. – Next number seq. Type – HOLD Switch/Appar. – RHR-7B Card Location – RHR Heat Exchanger B Room Position – CLOSED		
17.	Return filled out Tagout Control Sheet. CUE: Acknowledge as CRS and accept Tagout Control Sheet.	* Return completed Tagout Control Sheet to CRS.		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____

UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

FOR TRAIN G ONLY

Work Request: _____	WR Attachment () _____	Procedure No: _____	TCR/DCR: _____	Page _____
Requester: _____	Date: _____	Tagout Group: _____		
Alternate: _____	Permission For Alternate: _____			
Reason For Tagout _____				

[illegible]

Adq/Acc Place					Date	Remove From Service (SS)					Date	Time
Post Approval					Restoration Approval							
Cards	Seq	CRS	Date	Time	Cards	Seq	CRS	Adq/Acc	Date	Time		
					FOR TRAINING ONLY							
Temp Lift Form Y/N			WR Attachment Y/N		Restored As Indicated Above (SS)					Date		

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are an extra Control Room Operator.

The Plant is at 100% power

Maintenance person Kelly Gretz has identified a need to isolate the RHR Heat Exchanger B from the rest of the system, with the exception of vents, drains and valve stem leakoffs, to allow retightening of bolts on the flange on the RHR inlet line to the heat exchanger under Work Request KNPP-XXX.

The CRS has discussed this with maintenance and has agreed to prepare a tagout. They also discussed the condition that the butterfly valves associated with the RHR system, RHR-8A, RHR-8B and RHR-101, have been noted to leak by at an appreciable rate when in the closed position.

The RHR Heat Exchanger does NOT need draining or venting for this work.

INITIATING CUE:

The CRS directs you to identify the tagout boundary and prepare the Tagout Control Sheet to isolate RHR Heat Exchanger B. Return the completed Tagout Control Sheet to the CRS for assigning the Adequacy Reviewer.

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.3-R REV. ORIG
	TITLE: INITIATE A CONTAINMENT PURGE
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM (in Simulator) /SIMULATE (in CR)
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	YES
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0180030101
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	2, 4, 5, 8, 9, 10, 12, 13, 14, 15, 17 and 19
	(S) = SEQUENCE CRITICAL	(S1) 8, 9, 10; (S2) 12,13,14; (S3) 15, and (S4) 17
	(T) = TIME CRITICAL	15-17
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	SP-32B-116, Rev. T Containment Purge Discharge Permit N-RBV-18B, Rev. U

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the NCO/Reactor Operator.

The plant is at HOT SHUTDOWN.

HP has delivered a Containment Purge Discharge Permit to the Control Room.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED [OR SIMULATED, as appropriate to location].

INITIATING CUE:

The Control Room Supervisor directs you to initiate a Containment Vent with the 36" RBV Valves per N-RBV-18B, 4.1.1.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the NCO/Reactor Operator.

The plant is at HOT SHUTDOWN.

HP has delivered a Containment Purge Discharge Permit to the Control Room.

INITIATING CUE:

The Control Room Supervisor directs you to initiate a Containment Vent with the 36" RBV Valves per N-RBV-18B, 4.1.1.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Reference N-RBV-18B, section 4.1.1.	* REFER to N-RBV-18B		
(C) 2.	Obtain Containment Purge Discharge Permit. CUE: (Provide Permit)	* OBTAIN Permit		
3.	Notify Health Physics that discharge is about to begin and request they change fixed filters in R-21 CUE: Acknowledge as HP and report filters for R-21 changed.	* CONTACT Health Physics personnel * NOTIFY HP of planned Containment Purge * REQUEST HP change fixed filters for R-21		
(C) 4.	Record "Start of Release" data.	* REVIEW Precaution step 2.6 AND RECORD start of Vent Operations in: Containment Vent Log Reactor and Control Room Log * RECORD the following on the Permit: RM-11 indication RM-12 indication RM-21 indication RM-11 source check RM-12 source check RM-21 source check * OBTAIN and ATTACH printout of Group Output No. 9 on Honeywell.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
4. (cont.)	Record "Start of Release" data. (Cont.)	<p>* INITIAL following blanks as performed: NOTIFY HP to install fresh filters in RM-21</p> <p>POSITION RM-11 Sample Selector switch to VENT</p> <p>COLLECTION of Group Output No. 9</p> <p>NOTIFY HP prior to start of release</p> <p>* OBTAIN SS authorization to Start (signature)</p>		
(C) 5.	Position R-11/12 Sample Control Switch to VENT. (If not performed above in step 4)	* POSITION RM-11 Sample Selector switch to VENT		
6.	Verify R-21 is operating	* DETERMINE from indications R-21 is functioning.		
7.	Perform Source Check on R-11, R-12 and R-21. (If not performed above in step 4)	<p>* RECORD the following on the Permit:</p> <p>RM-11 source check RM-12 source check RM-21 source check</p>		
(C) 8. (S1)	Open RBV-5/CD-34006, Cntmt Purge/Vent Exhaust Damper	<p>* POSITION C/S for RBV-5 to OPEN</p> <p>VERIFY RBV-5 red light LIT; green light not LIT</p>		
(C) 9. (S1)	Open RBV-4/CV-31123, Cntmt Purge/Vent Exhaust Valve A	<p>* POSITION C/S for RBV-4 to OPEN</p> <p>VERIFY RBV-4 red light LIT; green light not LIT</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 10. (S1)	Open RBV-3/CV-31124, Cntmt Purge/Vent Exhaust Valve B	* POSITION C/S for RBV-3 to OPEN VERIFY RBV-3 red light LIT; green light not LIT		
11.	If Containment Pressure is NOT 0.0 ± 0.2 psig, operate RBV-7 Containment Exhaust Fan and Damper to restore this pressure	* READ Containment pressure on 4151202 (NR Cmt press) * DETERMINE Containment pressure is within limits		
(C) 12. (S2)	Open RBV-1/CV-31125, Cntmt Purge/Vent Supply Valve A	* POSITION C/S for RBV-1 to OPEN VERIFY RBV-1 red light LIT; green light not LIT		
(C) 13. (S2)	Open RBV-2/CV-31126, Cntmt Purge/Vent Supply Valve B	* POSITION C/S for RBV-2 to OPEN VERIFY RBV-2 red light LIT; green light not LIT		
(C) 14. (S2)	Open TAV-12/CD-34033, Cntmt Purge/Supply Damper	* POSITION C/S for TAV-12 to OPEN VERIFY TAV-12 red light LIT; green light not LIT		
(C) 15. (S3) (T1) Time Started:	Start Containment Vent Exhaust fan. NOTE: If Cntmt Purge Exhaust Fan is NOT started within 45 seconds of starting this (Vent Exhaust) fan then this fan will trip.	* Position RBV-7 to ON		
16.	Verify equipment operation: RBV-7 opens Containment Vent Exhaust Fan starts RBV-6/CD-34009 Cntmt Purge Exhaust Filter Assembly Bypass Damper opens	* VERIFY the following: RBV-7 / Cntmt Exhaust Fan red light LIT; green light not LIT RBV-6 red light LIT; green light not LIT.		

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

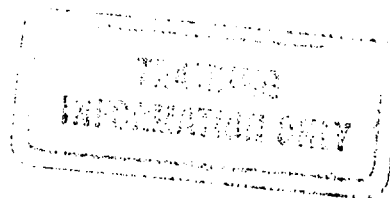
THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:



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CONTAINMENT PURGE DISCHARGE PERMIT

PERMIT NO. 00-XXXX

Total Gas Activity 1.87E+7 μCi Part Alpha 1.0E+1 $\mu\text{Ci/cc}$

Part Beta-Gamma 1.21E+2 μCi Tritium Activity 1.0E-1 $\mu\text{Ci/cc}$

Total Halogens 1.3E-3 μCi RBV SYS Lineup Requested:

Attach sample results and Pre-release Dose Estimate. X 36" Normal Purge
36" Purge Via Purge Filter

Radiation Technologist Gary Trecker Time/Date 12/XX/00 @ 0600

HP Group Supervisor Craig Long Time/Date 12/XX/00 @ 0610

PRIOR TO DISCHARGE:

RM-11 Indication = _____ CPM RM-11 Source Check = _____ CPM
RM-12 Indication = _____ CPM RM-12 Source Check = _____ CPM
RM-21 Indication = _____ CPM RM-21 Source Check = _____ CPM

Notify HP to install fresh filters in the RM-21 Sampler. _____ Initials
Position RM-11 Sample Selector Switch to VENT. _____ Initials

Perform Group Output No. 9 on Honeywell and attach to this permit. _____ Initials

Authorization to Start (Shift Supv) Ed Groves Time/Date 12/XX/00 / 0630

HP notified prior to start of release. _____ Initials

Release Started By _____ Time/Date _____

Release Ended By _____ Time/Date _____

AT END OF RELEASE:

RM-11 Indication = _____ CPM RM-21 Indication = _____ CPM
RM-12 Indication = _____ CPM

Notify HP of release completion and for filter change out in RM-21 Sampler. _____ Initials

Perform Group Output No. 9 on Honeywell and attach to this permit. _____ Initials

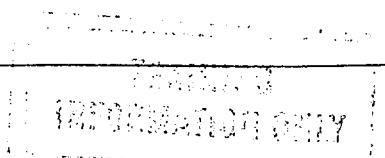
KAP Form ATTACHED: YES NO KAP No. _____

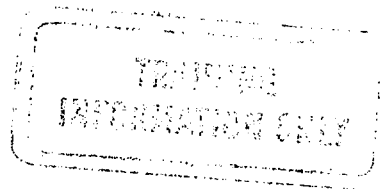
Discharge Permit Reviewed By _____ Time/Date _____
Shift Supervisor

Route completed Discharge Permit to HP Group Supervisor.

Complete all post discharge data. _____ Initials
Complete and attach Post-Discharge Summary Sheet. _____ Initials

Approved By _____ Date _____





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PRE-RELEASE DOSE ESTIMATE

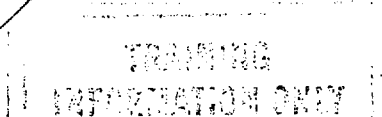
DISCHARGE PERMIT 00-XXXX

- A. Volume to be released 1.87E+11 cc
NOTE: For PORV releases, see Step 6.5
- B. Concentration of all Noble Gas isotopes 1.0E-4 $\mu\text{Ci/cc}$
- C. Concentration of I-131 and all particulate isotopes
half life > 8 days 7.0E-10 $\mu\text{Ci/cc}$
- D. Multiply A times B to get microcuries of noble gases
to be released 1.87E+7 μCi
- E. Multiply A times C to get microcuries of I-131 and
> 8 day particulates to be released 1.31E+2 μCi
- F. Multiply D times $1.2 \text{ E-}10$ to find estimated dose
due to gamma 2.24E-3 mRAD
- G. Multiply D times $2.5 \text{ E-}10$ to find estimated dose due
to beta 4.68E-3 mRAD
- H. Multiply E times $9.32 \text{ E-}5$ to find estimated dose due
to iodines and > 8 day particulates 2.25E-2 mREM
- I. Add F plus cumulative quarterly Whole Body total 2.27E-3 mRAD
- J. Add G plus cumulative quarterly Skin total 4.68E-3 mRAD
- K. Add H plus cumulative quarterly Organ total 2.5E-2 mREM
- L. Is I ≤ 0.62 mRAD? YES NO
- M. Is J ≤ 1.25 mRAD? YES NO
- N. Is K ≤ 0.94 mREM? YES NO

If L, M, or N is answered "NO," notify HP Group Supervisor. Release may not proceed unless Treatment Systems are used. See ODCM Specification 3.4.4.

Prepared By Craig Tiedtke Date 12/XX/00

Reviewed By HP Supv Craig Long Date 12/XX/00



WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.4-R REV. ORIG	
	TITLE:	EMERGENCY CLASSIFICATION ESCALATION NOTIFICATIONS
	DATE:	PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	5 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	RO/NAO
TASK NUMBER:	FROM OPS TRNG DATABASE	1190060301
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	4, 5 and 6
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	EPIP AD-07, Rev. AL

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are currently filling the responsibilities of the control room communicator.

An Alert emergency had been declared 20 minutes ago.

The Shift Supervisor acting as the Emergency Director has completed his continuing assessment and has decided to escalate the Emergency Classification to Site Area Emergency.

The TSC, EOF and State EOC have not been activated yet.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The SS directs you make only the notifications associated with the Emergency Classification escalation.
(Callbacks when required will be handled by another communicator, at that time.)

NOTE: Give the applicant the applicable EPIP Form AD 7.1. **Do NOT let the applicant pick up the phone – see CUE 01.**

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are currently filling the responsibilities of the control room communicator.

An Alert emergency had been declared 20 minutes ago.

The Shift Supervisor acting as the Emergency Director has completed his continuing assessment and has decided to escalate the Emergency Classification to Site Area.

The TSC, EOF and State EOC have not been activated yet.

INITIATING CUE:

The SS directs you make only the notifications associated with the Emergency Classification escalation.
(Callbacks when required will be handled by another communicator, at that time.)

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Reference EPIP-AD-07, section 5.2.	* REFER to EPIP-AD-07		
2.	Verify Event Notice Form EPIP-AD-07.1 received from ED/ERM with approval signature, date and time. CUE: (Provide attached Form AD-7.1)	* RECEIVE From AD-07.11 VERIFY ED signature, date and time completed.		
3.	Attempts to use (pick up) Dial Select system. CUE: There is NO dial tone. The phone is dead.	* CHECK Dial Select phone for dial tone.		
4.	Selects commercial phone. (Step 5.3.1)	* TRANSITION to commercial phone system.		
(C) 5.	Simulates contacting off-site agency in order shown: State Warning Center I or II (1 800 943-0003) Kewaunee County Sheriff Manitowoc County Sheriff CUE: Phone rings and is answered	* SIMULATE dialing number for desired agency.		
(C) 6.	Read slowly and deliberately the message text of the Event Notice EPIP Form AD 7.1. NOTE: The Standard lists the complete expected communications. It is acceptable to read the box, title and the phonetic designation only.	* READ EPIP Form AD 7.1 for Notification. "Message Start" "This is an actual event" "1-Status-A Alpha Actual" "2-Station/Plant-S Sierra Kewaunee" "3-On-Site Accident Classification-C Charlie Site Area Emergency"		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 6. (cont.)	<p>(Cont.) Read slowly and deliberately the message text of the Event Notice EPIP Form AD 7.1.</p> <p>NOTE: The Standard lists the complete expected communications. It is acceptable to read the box, title and the phonetic designation only.</p> <p>CUE: Acknowledge receipt of information (and follow directions).</p>	<p>* (READ EPIP Form AD 7.1 for Notification.)</p> <p>“4-Accident- Classified Time <u>0600</u> Classified Date <u>12/XX/00</u> (today) EAL Chart <u>I</u>”</p> <p>“5-Release to Environment- C Charlie Occurring”</p> <p>“6-Type of Release-B Bravo Radioactive Gas”</p> <p>“7-Wind Direction FROM 60; Downwind Sector Q QUEBEC”</p> <p>“8-Wind Speed-B Bravo 15”</p> <p>“9-Recommendations-A Alpha None”</p> <p>“10-Other Significant Information- Unisolable steam leak on S/G B with primary to secondary leakage of 65 gpm. Indications of possible fuel damage by elevated radiation levels in containment”</p> <p>“11- This message is being transmitted by (candidate’s name) at the Kewaunee Nuclear Plant. The return phone number is (920) 388- 0101. Message transmission was complete at (current time).</p> <p>“State Warning Center, please read back of this message to verify accuracy”</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 6. (cont.)	(Cont.) Read slowly and deliberately the message text of the Event Notice EPIP Form AD 7.1. CUE: Acknowledge receipt of information (and follow directions).	* (READ EPIP Form AD 7.1 for Notification.) "Have all agencies received this message" "Relay this information to Emergency Management immediately. Have the appropriate personnel verify this message by return phone call" "Message End"		
(C) 7.	Completes Roll Call by contacting all THREE required agencies (State Warning center, Kewaunee Sheriff, Manitowoc Sheriff). [Repeats steps 5 & 6 for each agency.]	* CALL made to each of the following: State Warning Center Kewaunee County Sheriff Manitowoc County Sheriff.		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

ROLL-CALL _____ CHECK _____
State Warning Center I or II _____
Kewaunee Co. Sheriff _____
Manitowoc Co. Sheriff _____

**TRAINING
INFORMATION ONLY
EVENT NOTICE**

(Wisconsin Nuclear Accident Reporting Form)
EPIP FORM AD 7.1

EPIP FORM AD 7.1
Rev. P
FEB 01 2000
Page 1 of 1

"MESSAGE START"

"THIS IS [an ACTUAL EVENT] / a DRILL] (Circle One)."

"This is the Kewaunee Nuclear Power Plant calling. An incident has occurred at our facility. Please record the following information on your Nuclear Accident Reporting System form."

1. STATUS (Use both A&D to Declare & Terminate at the same time) <input checked="" type="radio"/> A Actual <input type="radio"/> B Exercise <input type="radio"/> C Drill <input type="radio"/> D Termination		2. STATION/PLANT <input checked="" type="radio"/> (S) Kewaunee	3. ON-SITE ACCIDENT CLASSIFICATION <input type="radio"/> (A) Unusual Event <input type="radio"/> (B) Alert <input checked="" type="radio"/> (C) Site Area Emergency <input type="radio"/> (D) General Emergency <input type="radio"/> (E) Recovery <input type="radio"/> (F) Not Applicable
4. ACCIDENT CLASSIFIED _____ TERMINATED _____ TIME: <u>0600</u> TIME: _____ DATE: <u>12/XX/00</u> DATE: _____ EAL Chart: <u>I</u>		5. RELEASE TO ENVIRONMENT <input type="radio"/> (A) None <input type="radio"/> (B) Potential <input checked="" type="radio"/> (C) Occurring <input type="radio"/> (D) Terminated	6. TYPE OF RELEASE <input type="radio"/> (A) Not Applicable <input checked="" type="radio"/> (B) Radioactive Gas <input type="radio"/> (C) Radioactive Liquid
7. WIND DIRECTION FROM <u>60</u> (degrees) Downwind Sector <u>Q</u> (one)		8. WIND SPEED <input checked="" type="radio"/> (B) Miles / HR <u>15</u>	
9. RECOMMENDED ACTIONS <input checked="" type="radio"/> (A) NONE EVACUATE SECTORS <input type="radio"/> (B) 0-2 mile radius <input type="radio"/> (C) 0-5 mile radius <input type="radio"/> (D) 2-5 miles for sectors _____ <input type="radio"/> (E) 5-10 miles for sectors _____ <input type="radio"/> (F) Other _____		10. OTHER SIGNIFICANT INFORMATION <u>Unisolable Steam leak on S/G B with primary to secondary leakage of 65 GPM. Indications of possible fuel damage by elevated radiation levels in Containment.</u>	

11. This message is being transmitted by _____ (name) at the Kewaunee Nuclear Power Plant.
The return phone number is (920) 388-0101. Message transmission was complete at _____ (Time).

"State Warning Center, please read back of this message to verify accuracy." (PAUSE to allow message to be read)
"Have all agencies received this message?" (WAIT for reply)
"Relay this information to Emergency Management immediately. Have the appropriate personnel verify this message by return phone call."

"MESSAGE END"

Signature Boss Kahuna DATE / TIME APPROVED 0610 112-XX-00
Approved Prior to Release by ED / ERM (Circle One)

Verification	State of Wisconsin (Duty Officer) _____	Time _____
Call Backs	Manitowoc Cnty (Emerg Gov Dir) _____	Time _____
	Kewaunee Cnty (Emerg Gov Dir) _____	Time _____

NOTE: RETURN THIS FORM TO THE EIP **TRAINING** **COMPLETION OF CALL BACKS.**

INFORMATION ONLY

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.1-2S REV. ORIG	
	TITLE: APPROVE FUEL MOVEMENT CHANGE	
	DATE:	PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	PLANT/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO
TASK NUMBER:	FROM OPS TRNG DATABASE	1190310302
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	INITIAL
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	3, 5, and 6
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	RD-12.2, Rev. May 19, 2000 RF-03.01, Rev. D

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the SRO assigned to Fuel Movement.

The plant is in REFUELING.

Core Reloading is in progress with steps 1A-7A completed on the Fuel Assembly Movement Sequence (FAMS) sheet.

While performing step 6B, the fuel assembly could not be properly seated in Core Location H12.

The assembly was temporarily relocated to Core Location L-9 per Fuel Assembly Handling Deviation Report (FAHDR # 1) while an action plan was developed. (Step 6B.)

The Reactor Engineer has proposed FAHDR # 2 to address the problem.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

You are to evaluate FAHDR 2 to determine if it is acceptable for placing the fuel assembly in its location. (Use the provided Core Map to explain reasoning behind decision.)

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the SRO assigned to Fuel Movement.

The plant is in REFUELING.

Core Reloading is in progress with steps 1A-7A completed on the Fuel Assembly Movement Sequence (FAMS) sheet.

While performing step 6B, the fuel assembly could not be properly seated in Core Location H12.

The assembly was temporarily relocated to Core Location L-9 per Fuel Assembly Handling Deviation Report (FAHDR # 1) while an action plan was developed. (Step 6B.)

The Reactor Engineer has proposed FAHDR # 2 to address the problem.

INITIATING CUE:

You are to evaluate FAHDR 2 to determine if it is acceptable for placing the fuel assembly in its location. (Use the provided Core Map to explain reasoning behind decision.)

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Reference FADR.	* REFER to FADR 2		
2.	Reference RF-03.01, step 3.15.	* REFER to RF-03.01		
(C) 3.	Review boxing criteria: A boxing configuration should be made up of assemblies in final configuration locations. CUE (if necessary): Reactor Engineer has determined it is not practical to wait to move another assembly to its final location.	* DETERMINE one assembly (B82) is not in its final configuration and "no restrictions" criteria does not apply.		
4.	The dummy fuel assembly may be used as temporary assembly. CUE (if necessary): The dummy assembly is not available.	* DETERMINE dummy assembly is not used and this criteria does not apply.		
(C) 5.	If boxing configuration uses assembly that is not in its final configuration location, one assembly making up the box must have a face adjacent to an open location or the baffle	* DETERMINE criteria does apply and is met: Assembly (H11) has two faces adjacent to open spaces OR Assembly (H12) has two faces adjacent to open space and on face adjacent to the baffle.		
(C) 6.	A new assembly not in its final configuration which is loaded face adjacent to another new assembly must have at least one of its faces adjacent to an open core location or the baffle. (Assembly faces constituting the boxes should not be considered as fulfilling the requirement.)	* Determine criteria is met: Assembly (H12) has two faces adjacent to open space and on face adjacent to the baffle (when new assembly is loaded in H12). Assembly (H12) is being located to its final configuration location.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
7.	Initial approval of FAHDR	* INITIAL the SRO Approval location on the FAHDR		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

FUEL ASSEMBLY MOVEMENT SEQUENCE

STEP NO	DATE & TIME	ID		FROM								TO								TIME & INITIALS
		FUEL	INSERT	RX CORE	NFP	SFP	UP	NFE	RCC			RX CORE	SFP	UP	NFE	RCC				
									1	2	3					1	2	3		
1A	12/XX/00 0900	Z21				MM39														
1B	12/XX/00 0912	Z21					X								X					0910 SPJ
2A	12/XX/00 0915	B92	NR42			5546								H13						0920 SPJ
2B	12/XX/00 0922	B92	NR42				X							G13						0922 SPJ
3A	12/XX/00 0925	C77				9937									X					0930 SPJ
3B	12/XX/00 0935	C77					X							F13						0932 SPJ
4A	12/XX/00 0939	B81	R45			MM45									X					0938 SPJ
4B	12/XX/00 0948	B81	R45				X							F12						0943 SPJ
5A	12/XX/00 0953	Z31				HH49									X					0951 SPJ
5B	12/XX/00 0956	Z31					X							G12						0955 SPJ
6A	12/XX/00 0959	B82	R55			0046									X					0959 SPJ
6B	12/XX/00 1007	B82	R55				X							L09 H12						1000 SPJ
7A	12/XX/00 1013	C53				9839									X					1015 SPJ
																				1012 SPJ

TRAINING
INFORMATION ONLY

FUEL ASSEMBLY HANDLING DEVIATION REPORT

[illegible]

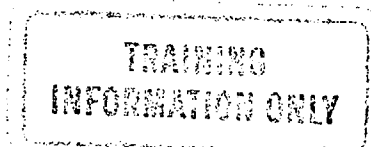
NOTES: 1. The deviation should not violate the F-Specification requirements.
2. The deviation must be approved by Reactor Engineering and the SRO.

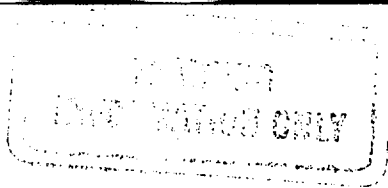
TRAINING
INFORMATION ONLY

FUEL ASSEMBLY HANDLING DEVIATION REPORT

FAHDR#	Fuel Assembly ID and/or Insert ID	Location	Problem Description	Problem Solution and Corrective Action	Approval Initials	
					RXE	SRO
2	B82	L-9	Fuel Assembly could not be seated in its intended core location H-12. It is temporarily relocated to Core Location L-9 (FAHDR 1)	1. Box assembly location H12. a. Place fuel assembly C53 in its permanent core location H-11 (next planned movement) b. Place new fuel assembly 201, currently in location RCCL to temporary position in R _x Core location I12. c. Place fuel assembly B82 in Core Location H12. d. Remove fuel assembly 201 to RCCL.	NG.	

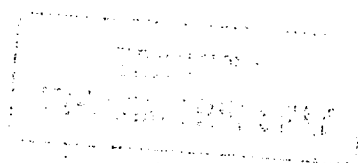
- NOTES:
1. The deviation should not violate the F-Specification requirements.
 2. The deviation must be approved by Reactor Engineering and the SRO.





CORE MAP

	1	2	3	4	5	6	7	8	9	10	11	12	13	
A														
B														
C	N43												N42	
D														
E														
F												R45 B81	CTI N42 B92	
G N31												231		N32
H													221	
I														
J														
K	N41												N44	
L									R45 B82					
M														



WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.2-S REV. ORIG
	TITLE: REVIEW A TAGOUT FOR APPROVAL
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	5 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO
TASK NUMBER:	FROM OPS TRNG DATABASE	1190120302
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	INITIAL
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	2 and 3
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	NAD 3.3, Rev. A GNP 3.3.1, Rev. G

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Control Room Supervisor.

A tagout for SW-601A, Service Water to AFW Pump A Isol. Seat repair has been prepared

“Ian Agian” a Nuclear Control Operator has completed the accuracy verification for this tagout.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

Review the tagout for adequacy and accuracy. Note any discrepancies found and report when review is completed.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Control Room Supervisor.

A tagout for SW-601A, Service Water to AFW Pump A Isol. Seat repair has been prepared

“Ian Agian” a Nuclear Control Operator has completed the accuracy verification for this tagout.

INITIATING CUE:

Review the tagout for adequacy and accuracy. Note any discrepancies found and report when review is completed.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Verify Tagout covers required switches, valves, and breakers.	<ul style="list-style-type: none"> * REFER to GNP 3.3.1 M205, M214, M202 page 2, N-FW-05B-CL and/or other plant documentation. * Verify reason for tagout identifies SW-601A seat repair and requestor is Clete Cisler * Verify all cards are HOLD cards. * Verify Adequacy/Accuracy is signed. * Compare tags to tagout sheet 		
(C) 2.	Determine MU-310A position is incorrect	<ul style="list-style-type: none"> * Determine MU-310A position is incorrect, Valve should be closed and not opened. 		
(C) 3.	Determine tag #2 identification is incorrect.	<ul style="list-style-type: none"> * Determine tag 1 and 2 are the same and required tag 2 is missing. 		
4.	Report errors located during review.	<ul style="list-style-type: none"> * Determine tagout is NOT adequate. * Report MU-310A position should be closed * Report Tag 2 should read "SW-601A C/S CLOSED..." 		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

FOR TRAINING ONLY

Work Request: KNPP-xxx	WR Attachment ()	Procedure No:	TCR/DCR	Page 1
Requester: Clete Cisler		Date: 12/XX/00	Tagout Group: Maint.	
Alternate:		Permission For Alternate:		
Reason For Tagout: Repair SW-601A seat				

FOR TRAINING ONLY

Description				Placement				Restoration			
No.	Type	Switch/Apparatus	Card Location	Position	Date	Time	IV	Position	Date	Time	IV
1	Hold	AFW Pump A Control Switch	Mech Console A	PULLOUT				PULLOUT			
2	Hold	SW-601A Control Switch	Mech Console A	CLOSED				CLOSED			
3	Hold	SW-601A Breaker	MCC52C Cubicle B2	OFF				ON			
4	Hold	AFW-3A	AFW Pump A	CLOSED				OPEN			
5	Hold	AFW-100A	AFW Pump A	CLOSED				OPEN/LOCKED			
6	Hold	CI-222A	AFW Pump A	CLOSED				CLOSED			
7	Hold	SW-600A	AFW Pump A	CLOSED				OPEN			
8	Hold	MU-310A	AFW Pump A	OPEN				OPEN			
9	Hold	SW-610A	AFW Pump A	OPEN				CLOSED			

FOR TRAINING ONLY

Adequacy/Accuracy Signature <i>Jan Aguirre</i>				Date 12/XX/00			
Authorization To Remove From Service Shift Supv _____ Date _____ Time _____				Restoration Approval(CRS) Cards Seq _____ Signature _____ Date _____ Time _____			
Approval Approval(CRS) Cards Seq _____ Signature _____ Date _____ Time _____				FOR TRAINING ONLY			
_____ _____ _____ _____				_____ _____ _____ _____			
Switch/Apparatus Restored As Indicated Above Shift Supv _____ Date _____							

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.3S REV. ORIG
	TITLE: REVIEW A GAS DECAY TANK DISCHARGE PERMIT FOR APPROVAL
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO
TASK NUMBER:	FROM OPS TRNG DATABASE	1190010102
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	6 and 7
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	N/A
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	SP-32B-116, Rev. T Attachment 1 Gas Tank Discharge Permit N-GWP-32B, Rev. X

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Shift Supervisor.

The plant is at 100 % power.

All equipment is available

HP has delivered a Gas Decay Tank Discharge Permit to the Control Room for a planned release of Gas Decay Tank 1B.

The NCO has completed recording the pre-release data on the Gas Decay Tank Discharge Permit

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The NCO has requested you review the information on the Permit for approval so the Gas Decay Discharge can be initiated. Note any discrepancies found and report when review is completed.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Shift Supervisor.

The plant is at 100 % power.

All equipment is available.

HP has delivered a Gas Decay Tank Discharge Permit to the Control Room for a planned release of Gas Decay Tank 1B.

The NCO has completed recording the pre-release data on the Gas Decay Tank Discharge Permit

INITIATING CUE:

The NCO has requested you review the information on the Permit for approval so the Gas Decay Discharge can be initiated. Note any discrepancies found and report when review is completed.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Refer to Gas Decay Tank Discharge Permit	* REFER to Permit		
2.	Verify Radiation Protection has sampled tank & issued a discharge permit.	* REVIEW Gas Decay Tank Permit and Attachment 1 for completeness.		
3.	VERIFY R-13 & R-14 checks.	* CHECK R-13 and R-14 monitors: Current readings recorded AND Source Check readings recorded.		
4.	VERIFY Auxiliary Building Vent System lineup	* CHECK Train A marked operating * DETERMINE Gas Activity requires BOTH Trains Aux Bldg Vent required operating		
5.	VERIFY Group Output 9 information attached to Permit.	* Check Group No. 9 printout attached to Permit.		
(C) 6.	REPORT Permit CANNOT be approved until B-Train Aux Bldg Vent placed in operation.	* DETERMINE Both Aux Bldg Vent Trains must be running due to tank activity		
(C) 7.	Authorize start of Gas Decay Tank Release.	* APPROVAL of Gas Decay Tank Discharge Permit NOT given (unless start of both Trains of Aux Bldg Vent directed).		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

TRAINING
INFORMATION ONLY

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GAS DECAY TANK DISCHARGE PERMIT

PERMIT NO. 00-XXXX

TIME/DATE 0600/12-XX-00

Total Gas Activity 2.3E-2 $\mu\text{Ci/cc}$
Part. Beta-Gamma 5.0E-4 $\mu\text{Ci/cc}$
Part. Alpha 3.3E-6 $\mu\text{Ci/cc}$
Total Halogens 1.1E-5 $\mu\text{Ci/cc}$
Tritium Activity 2.7E-5 $\mu\text{Ci/cc}$

Tank Number 1B
Tank Pressure 85 PSIG

Radiation Technologist tin Dada Time/Date 0600/12-XX-00

Do not exceed 75 % open on Valve WG-36. (See SP-32B-116, Attachment I)
Attach all sampling results sheets and pre-release dose estimate.

HP Group Supervisor Craig Day Time/Date 0610/12-XX-00

PRIOR TO DISCHARGE:

RM-13 Indication = 402 CPM
RM-13 Source Check = 3950 CPM

RM-14 Indication = 230 CPM
RM-14 Source Check = 3117 CPM

Aux Bldg Vent Sys lineup: TRAIN (A) B BOTH (Both required when Total Gas $\geq 1.0\text{E-}2$)

Perform Group Output No. 9 on Honeywell and attach to this permit. GY Initials

Authorization to Start (Shift Supv) _____ Time/Date _____

HP notified prior to start of release. GY Initials

Release Started By _____ Time/Date _____

Release Ended By _____ Time/Date _____

HP notified after completion of release. _____ Initials

AT END OF RELEASE:

RM-13 Indication = _____ CPM
Tank Pressure = _____ PSIG

RM-14 Indication = _____ CPM

Perform Group Output No. 9 on Honeywell and attach to this permit. _____ Initials

KAP Form ATTACHED: YES NO KAP No. _____

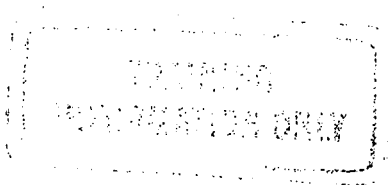
Discharge Permit Reviewed
by Shift Supervisor _____ Time/Date _____

Route completed Discharge Permit to HP Group Supervisor.

Complete all post discharge data. _____ Initials
Complete and attach Post-Discharge Summary Sheet. _____ Initials

Approved By _____ Date _____

TRAINING
INFORMATION ONLY



ATTACHMENT 1

GAS DECAY TANK PRE-RELEASE EVALUATION

DISCHARGE PERMIT 00-XXXX

Complete this attachment when sample results of a gas decay tank indicate total gas activity greater than $1.0\text{E-}2 \mu\text{Ci/cc}$.

TANK NO. C DATE/TIME SAMPLED 12/XX/00 / 0500

TOTAL GAS ACTIVITY $2.3\text{E-}2$ $\mu\text{Ci/cc}$

1. Will this tank be put on hold for decay prior to release? YES ☒ NO
2. If YES, how long will it take for this tank to decay to less than $1.0\text{E-}2 \mu\text{Ci/cc}$? N/A Days
(Attach decay calculations)
This tank should then be resampled for release no sooner than: N/A Time/Date
3. If NO, use the following chart to determine release parameters to be used. Circle appropriate values.

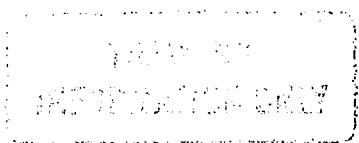
GDT Concentration ($\mu\text{Ci/cc}$)	Allowable Release Rate (SCFM)	WG-36 Setting (% OPEN)	Estimated Release Time (HOURS)
1.0E-2	110	100	0.6
<u>2.0E-2</u>	<u>55</u>	<u>75</u>	<u>1.2</u>
3.0E-2	36	65	1.8
4.0E-2	27	55	2.4
5.0E-2	22	50	3.0
6.0E-2	18	45	3.7
7.0E-2	15	40	4.4
8.0E-2	13	37	5.2
9.0E-2	12	35	5.5
1.0E-1	11	30	6.0

Holdup for decay is mandatory for any gas decay tank exceeding total gas activity concentration of $1.0\text{E-}1 \mu\text{Ci/cc}$.

4. Attach to appropriate discharge permit.

Prepared By Kin Deda Date 12/XX/00

Reviewed By HP Supv Craig Long Date 12/XX/00



TRAINING
INFORMATION ONLY

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PRE-RELEASE DOSE ESTIMATE

DISCHARGE PERMIT 00-XXXX

- A. Volume to be released 9.02E+7 cc
NOTE: For PORV releases, see Step 6.5
- B. Concentration of all Noble Gas isotopes 2.3E-2 $\mu\text{Ci/cc}$
- C. Concentration of I-131 and all particulate isotopes
half life > 8 days 5.2E-7 $\mu\text{Ci/cc}$
- D. Multiply A times B to get microcuries of noble gases
to be released 2.07E+6 μCi
- E. Multiply A times C to get microcuries of I-131 and
> 8 day particulates to be released 4.70E+1 μCi
- F. Multiply D times $1.2 \text{ E-}10$ to find estimated dose
due to gamma 2.48E-4 mRAD
- G. Multiply D times $2.5 \text{ E-}10$ to find estimated dose due
to beta 5.18E-4 mRAD
- H. Multiply E times $9.32 \text{ E-}5$ to find estimated dose due
to iodines and > 8 day particulates 4.38E-3 mREM
- I. Add F plus cumulative quarterly Whole Body total 2.68E-4 mRAD
- J. Add G plus cumulative quarterly Skin total 5.20E-4 mRAD
- K. Add H plus cumulative quarterly Organ total 5.53E-3 mREM
- L. Is I ≤ 0.62 mRAD? ☒ YES ☐ NO
- M. Is J ≤ 1.25 mRAD? ☒ YES ☐ NO
- N. Is K ≤ 0.94 mREM? ☒ YES ☐ NO

If L, M, or N is answered "NO," notify HP Group Supervisor. Release may not proceed unless Treatment Systems are used. See ODCM Specification 3.4.4.

TRAINING
INFORMATION ONLY

Prepared By Kim Dedc Date 12/XX/00

Reviewed By HP Supv Craig Long Date 12/XX/00

TRAINING USE ONLY

METEOROLOGICAL DATA

GOOD	M0301G	PRI TWR-60M WND SPD [15]	21.0	MPH
GOOD	M0302G	PR T-60M WND DIR FRM[15]	45	DEG
GOOD	M0308G	PRI TWR-10M WND SPD [15]	12.9	MPH
GOOD	M0309G	PR T-10M WND DIR FRM[15]	108	DEG
GOOD	M0304G	PRI TWR DELTA T [15]	-0.61	DEGF
GOOD	M0007A	PRI TWR - 10M SIGMA	11.2	DEG
GOOD	M0303G	PRI TWR-10M AMB T [15]	49.56	DEGF
INVD	M0321G	BCK TWR-10M WND SPD[15]	?	N MPH
INVD	M0322G	BK T-10 WND DIR FRM[15]	?	N DEG
OVFL	M0023A	BCKUP TWR - 10M SIGMA	?	N DEG
INVD	M0324G	BCK TWR-10M AMB T [15]	?	N DEGF

TRAINING
INFORMATION ONLY

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWA.4S REV. ORIG
	TITLE: DIRECT REQUIRED NOTIFICATIONS OF OFFSITE PERSONNEL FOR EMERGENCY EVENT (GENERAL EMERGENCY)
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR/CONTROL ROOM
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO
TASK NUMBER:	FROM OPS TRNG DATABASE	1190050502
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	INITIAL
PLANT SYSTEM:	NUMBER AND NAME	ADMINISTRATION
CRITICAL STEPS:	(C) = CRITICAL	5, 6, 7, 8, 11, 13 and 14
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	NONE
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	EPIP-AD-04, Rev. AB EPIP FORM AD 7.1, Rev. P EP-AD-19, Rev. O

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Shift Supervisor, acting as the Emergency Director.

A Steam Generator Tube Rupture has occurred in S/G B. One Safety Relief valve on S/G B has opened and cannot be reclosed. Additionally, the RCS coolant has high activity due to suspected fuel damage prior to the event.

The steam release rate is 3.5×10^5 lbm/hr

The current Emergency Classification is SITE AREA Emergency with Planned Protective Action Recommendation of NONE.

While performing actions of EPIP-AD-04, step 5.2.6.a (Continuous classification), the HP Supervisor has provided the verified initial dose estimation for the next 2 hours:

Total Effective Dose Equivalent – 1.0 REM up to 1.7 miles downwind.

Thyroid dose – 5 REM up to 2.9 miles downwind.

Projected maximum dose to Emergency Team workers is expected to be 1.7 REM TEDE and 6.8 REM to all other organs.

You have decided to escalated the event to a General Emergency based on projected dose rates.(Chart A(1)).

Wind direction is 125° and 130° at speeds between 15 MPH and 25 MPH. Weather conditions are clear with no changes expected over the next 6 hours

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

You are to complete the “Event Notice” EPIP FORM AD 7.1 based on the above information for the event classification escalation and ensure notifications are initiated.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Shift Supervisor, acting as the Emergency Director.

A Steam Generator Tube Rupture has occurred in S/G B. One Safety Relief valve on S/G B has opened and cannot be reclosed. Additionally, the RCS coolant has high activity due to suspected fuel damage prior to the event.

The steam release rate is 3.5×10^5 lbm/hr

The current Emergency Classification is SITE AREA Emergency with Planned Protective Action Recommendation of NONE.

While performing actions of EPIP-AD-04, step 5.2.6.a (Continuous classification), the HP Supervisor has provided the verified initial dose estimation for the next 2 hours:

Total Effective Dose Equivalent – 1.0 REM up to 1.7 miles downwind.

Thyroid dose – 5 REM up to 2.9 miles downwind.

Projected maximum dose to Emergency Team workers is expected to be 1.7 REM TEDE and 6.8 REM to all other organs.

You have decided to escalated the event to a General Emergency based on projected dose rates.(Chart A(1)).

Wind direction is from 125° to 130° at speeds between 15 MPH and 25 MPH. Weather conditions are clear with no changes expected over the next 6 hours

INITIATING CUE:

You are to complete the “Event Notice” EPIP FORM AD 7.1 based on the above information for the event classification escalation and ensure notifications are initiated.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Reference EPIP-AD-04.	* REFER to EP-AD-04.		
2.	In top block circle "an ACTUAL EVENT"	* ENCLOSE "an ACTUAL EVENT" in a circle.		
3.	Complete Block 1, Status	* FILL in circle for "A ACTUAL".		
4.	Complete Block 2 Station/Plant	* FILL in circle for "(S) KEWAUNEE".		
(C) 5.	Complete Block 3 On-Site Accident Classification	* FILL in circle for "(D) General Emergency".		
(C) 6.	Complete Block 4 Accident	* WRITE current time in blank * WRITE current date in blank * LIST EAL Chart "A(1)"		
(C) 7.	Complete Block 5 Release to Environment	* FILL in circle for "(C) Occurring".		
(C) 8.	Complete Block 6 Type of Release	* FILL in circle for "(B) Radioactive Gas".		
9.	Complete Block 7 Wind Direction CUE: Current wind direction is 128°.	* WRITE "128" in FROM blank * WRITE "Q" in Downwind Sector blank (from back of Form)		
10.	Complete Block 8 Wind Speed CUE: Current wind speed is 22 mph.	* FILL in circle for "(B)". * WRITE "22" in Miles/HR blank.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 11.	Complete Block 9 Recommended Actions NOTE: This action may be performed as directed by EPIP-AD-04 step 5.1.5. or may be EPIP-AD-19 "Protective Action Guidelines" (as directed in EPIP-AD-04 step 5.2.6)	<ul style="list-style-type: none"> * FILL in circle for "(B) Evacuate (0-2 mile radius)". * FILL in circle for "(D) Evacuate (2-5 miles for sectors)". * WRITE "P, Q, R" in blank for 2-5 miles for sectors 		
12.	Complete Block 10 Other Significant Information	<ul style="list-style-type: none"> * WRITE in any information deemed pertinent OR WRITE "NONE" in Block. 		
(C) 13.	Complete Approval of Form AD-7.1	<ul style="list-style-type: none"> * SIGN Form AD-7.1 approval in "Signature" blank (under MESSAGE END Block) * WRITE in current date and time in "DATE/TIME APPROVED" blank * ENCLOSE "ED" in a circle in "Approved Prior to Release by". 		
(C) 14.	Forward FORM AD-7.1 to appropriate notifier / communicator for transmission CUE: (As Communicator) Event Notifications are being made.	<ul style="list-style-type: none"> * DIRECT Notifier and/or Communicator to make event notification. 		

* Indicates required items for satisfactory completion of performance items.

Error! Bookmark not defined.*LOG STOP TIME:*

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-034-B.1.a	REV. J
	TITLE: PERFORM A DROPPED ROD RECOVERY	
	DATE:	PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	11 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0490030501
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	049, CRD
CRITICAL STEPS:	(C) = CRITICAL	5, 6, 7, 8, 9, 10 and 12
	(S) = SEQUENCE CRITICAL	8 and 9
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	Key 901
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	E-CRD-49C Rev. K

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

1. Initialize to IC-12, 100% Power, BOL
2. Insert Malf RD11
3. Insert Malf RD0521
4. Place Control Rods in manual.
5. Unfreeze
6. Reset negative rate trips on all four (4) power range NI drawers
7. Pull Control Bank D Rods to 230 Steps (if required)
8. Adjust boron as necessary to stabilize Tave
9. Remove Malf RD0521
10. Remove Malf RD11
11. Stabilize with T_{AVG} and T_{REF} equal. (Leave rods at current step)
12. Acknowledge and reset all annunciators
13. Freeze
14. Snap a temporary IC if desired
15. Ensure rod disconnect box is locked and the Evaluator has the key.

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator – Reactor Operator

The plant is at 100% power

Rod K7 has dropped

Repairs have been made to Rod K7

Reactor Engineering has developed guidelines for rod recovery actions (Provide attached Guidelines)

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE::

The Control Room Supervisor directs you to recover and realign Rod K7 to its bank position

You are at Step 4.2 of Procedure E-CRD-49C, Dropped Rod. Plant Reactor Supervisor and Operations Superintendent have been notified and concur with the retrieval.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator – Reactor Operator

The plant is at 100% power

Rod K7 has dropped

Repairs have been made to Rod K7

Reactor Engineering has developed guidelines for rod recovery actions

INITIATING CUE::

The Control Room Supervisor directs you to recover and realign Rod K7 to its bank position

You are at Step 4.2 of Procedure E-CRD-49C, Dropped Rod. Plant Reactor Supervisor and Operations Superintendent have been notified and concur with the retrieval.

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT S U
1.	Refer to E-CRD-49C, Dropped Rod, step 4.2.	* REFER to E-CRD-49C.	
2.	POSITION the Control Rod Bank Selector to MAN.	POSITION the Control Rod Bank Selector switch to MAN.	N/A
3.	STABILIZE T_{AVG} at the present T_{REF} with rod motion.	* MOVE control rods using the IN-HOLD-OUT switch as required to stabilize T_{AVG} within $\pm 1.5^{\circ}\text{F}$ of T_{REF} using any of the following indications: $T_{AVG} - T_{REF}$ RCDR 42554 $T_{AVG} - T_{REF}$ Meter 41213	
4.	RECORD the Bank-Group Step Positions for the bank having dropped rod.	* RECORD Control Bank D Step Counter Position as 230 steps.	
(C) 5.	POSITION the Control Rod Bank Selector to the affected bank position. NOTE: Rod Speed is 48 spm at this point.	* POSITION Control Rod Bank Selector Switch to CBD.	
(C) 6.	RESET affected Bank-Group Step Position to zero.	* RESET Control Bank D step counter position indicator to get a 000 indication. DEPRESS the reset button on the digital bank step counter.	

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	S U
(C) 7.	<p>RESET affected bank pulse to Analog Converter to zero.</p> <p>(CUE [Floor]: (if required) I and C is standing by in the Relay Room.)</p> <p>(Cue [Booth]: Analog Converter for Bank D is set to zero.)</p> <p>[Note: Analog Converter is remote function RD2, line 7 (RD-10)]</p>	<p>* REQUEST the pulse to analog converter for Bank D reset to 0.</p>		
(C) 8. (s1)	<p>POSITION the lift coil disconnect switches for all rods in the affected bank, except the dropped rod, to DISCONNECT. (Behind Vertical Panel C)</p>	<p>* OBTAIN key and OPEN the Control Rod Disconnect Switch Box.</p> <p>* PLACE disconnect switches for rods G-3, C-7 and G-11 to the UP/DISCONNECTED position.</p>		
(C) 9. (s2)	<p>WITHDRAW the affected RCCA with an appropriate boron increase to compensate for T_{AVG}.</p> <p>(Cue[Floor]: The BOP will adjust boron concentration as required.)</p> <p>NOTE: TLA-1 ROD SUPERVISION ALARM is lit due to rod deviation and will clear as rod K07 is positioned within 12 steps of the Bank D</p> <p>(NOTE [BOOTH]: Adjust Cb 1 ppm at a time RC2, line 5 as required.)</p>	<p>* PLACE IN-HOLD-OUT switch to the out position.</p> <p>* OBSERVE ROD K-7 stepping out on Individual Rod Position Control Bank D Rod K-7 meter.</p> <p>Rod Bottom Light for ROD K-7 goes out.</p>		
(C) 10.	<p>REALIGN the affected RCCA to Bank-Group Step Position recorded in Step 4.2.3.</p>	<p>* WITHDRAW rod K-7 to 230 steps.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT S U
11.	<p>VERIFY that the P/A converter equals the value recorded.</p> <p>(Cue[Booth]: P/A converter is reading 230.)</p>	<p>* REQUEST verification of P/A converter value <u>OR</u></p> <p>STATE that verification is required.</p>	
(C) 12.	POSITION lift coil disconnect switches to connect.	<p>* PLACE disconnect switches for rods G-3, C-7 and G-11 to the down/connected position.</p> <p>CLOSE and LOCK the Control Rod Disconnect Switch door.</p>	
13.	DEPRESS reset pushbutton in CRDM Room or Rod Control Alarm Reset pushbutton on Mechanical Console B to clear ROD CONTROL URGENT FAILURE (47042-P).	* DEPRESS Rod Control Alarm Reset pushbutton or IDENTIFY step not required for this bank.	N/A
14.	POSITION Control Bank Selector Switch to AUTO.	<p>VERIFY that T_{AVG} and T_{REF} are within 1.5°F of each other</p> <p>* POSITION Control Bank Selector Switch to AUTO.</p>	

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then ask the JPM QUESTIONS if required.

READ THE JPM QUESTIONS VERBATIM. If the operator requests clarification, then note rephrasing.

When questioning is complete, then read the following:

THAT COMPLETES THIS JPM.

NOTE: Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Rod K7 is withdrawn and aligned within its bank.

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

TRAINING INFORMATION ONLY

REACTOR ENGINEERING

Rod Recovery Guidelines for Rod K07 dropped on this date at 0600.

1. Power level is to be maintained approximately 100% with maximum power level change of $\pm 2\%$ is allowed during recovery of rod K07.
2. No delay in rod recovery is anticipated if rod is recovered to the remaining Bank position within 12 hours.
3. The maximum allowed rate of movement for Rod K07 during recovery to bank position is 48 spm.
4. Movement of other rods within the bank is not anticipated nor recommended, but these rods may be moved together a maximum of 5 steps in any direction.

TRAINING INFORMATION ONLY

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-B.1.b	REV. NEW
	TITLE: PERFORM SEMI-MONTHLY SHIFTING OF RUNNING SERVICE WATER PUMPS	
	DATE:	PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	7 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0020020101 0020070401
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	002, SW
CRITICAL STEPS:	(C) = CRITICAL	3, 4, 6, 7, 9, 18 and 21
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	N-SW-02, Rev. T A-SW-02, Rev. Q E-SW-02, Rev. P Alarm Response Sheets

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

1. Initialize to IC-12, 100% Power, BOL
[Input conditions for JPM B.1.a (O-LRQ-JPM-034) through step 11]
2. INSERT MALFUNCTION SW06E, All SW Pumps fail to auto start
3. INSERT I/Os: 1, @690,,BL and 2, @1032,,BL to block annunciators 47092-L and 47093-L, associated with the SW Pump 1B breaker trip.
4. ENSURE SW Pumps A1, A2 and B1 running. SW Pump B2 in STOP/AUTO
5. ACKNOWLEDGE and RESET all annunciators
6. FREEZE
7. SNAP a temporary IC if Desired
8. **WHEN SW Pump A1 (A2) is stopped, ENTER MALF SW05D to trip SW Pump B2.**

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Balance of Plant Operator.

The plant is at 100% power.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The Control Room Supervisor directs you perform the semi-monthly shifting of running Service Water equipment per N-SW-02.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Balance of Plant Operator.

The plant is at 100% power.

INITIATING CUE:

The Control Room Supervisor directs you perform the semi-monthly shifting of running Service Water equipment per N-SW-02.

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to N-SW-02, Service Water System, step 4.2.3.	* REFER to N-SW-02, step 4.2.3.		
2.	VERIFY Service Water Pump A1 running.	* VERIFY SW Pump A1 indicating lights-red light ON, green light OFF.		
(C) 3.	VERIFY Service Water Pump B2 running.	* POSITION SW Pump B2 C/S to START. * VERIFY SW Pump B2 indicating lights-red light ON, green light OFF.		
(C) 4.	POSITION Service Water Pump Preferred Selector to new position.	* POSITION Service Water Pump Preferred Selector to 1B.		
5.	START the second pump in the header matching the Service Water Pump Preferred Selector position.	* VERIFY SW Pump B1 indicating lights-red light ON, green light OFF.		
(C) 6.	POSITION Turbine Bldg SW Header Selector to the header matching the Service Water Pump Preferred Selector position.	* POSITION Service Water Pump Preferred Selector to 1B. * VERIFY SW-4B/CV-31085 OPENS. (red light ON, green light OFF) * VERIFY SW-4A/CV-31084 CLOSES. (red light OFF, green light ON)		
(C) 7.	STOP required Pumps.	* POSITION SW Pump A1 C/S to STOP. VERIFY SW Pump A1 indicating lights-red light OFF, green light ON.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
	<p>NOTE: Booth Operator will enter MALF SW05D to trip SW Pump B2</p> <p>NOTE: The operator is expected to respond to the SW low pressure alarms: 47051-P SW HEADER PRESSURE LOW 47052-P TURBINE BLDG SW HEADER ABNORMAL which direct action per A-SW-02 and E-SW-02, respectively. The actions of A-SW-02 are expected to be performed first since this alarm occurs first. Entry into E-SW-02 is expected when the alarm actuates following closure of the SW header isolation valves (automatic action on low header pressure) and the Turbine Bldg SW header is fed from the header with only one operating pump.</p>	N/A	N/A	
8.	<p>Identify SW Pump trip and lowering header pressure. REFER to A-SW-02, section 4.4</p> <p>NOTE: Actions of E-SW-02 begin at step 17 of JPM.</p>	<p>* REFER to alarm Response sheet for 47051-P</p> <p>* REFER to A-SW-02.</p>		
(C) 9.	START standby pumps.	<p>* POSITION SW Pump A1 C/S to START.</p> <p>VERIFY SW Pump A1 indicating lights-red light ON, green light OFF.</p>		
10.	<p>VERIFY header pressure 90-105 psig.</p> <p>NOTE: The initial drop in header pressure results in closure of the SW Train A and Train B common header isolation valves SW-3A and SW-3B. When these valves have closed, the pressure in the SW header supplying the Turbine Bldg SW (Train B) since only one pump is running. E-SW-02 entry expected</p>	<p>* CHECK Service Water - Header A Pressure (41503) and VERIFY reading 90-105 psig.</p> <p>* CHECK Service Water - Header A Pressure (41503) and verify reading 90-105 psig.</p>		
11.	<p>If Travelling Water Screen is in Backwash and $\Delta P < 6''$ H₂O, stop the backwash.</p> <p>Cue[Booth]: Acknowledge and report NO screen is in backwash (ΔP are normal).</p>	<p>* DIRECT NAO to stop travelling screen backwash if $\Delta P < 6''$ H₂O.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
12.	If SW Strainer is in Backwash and $\Delta P < 5$ psid, stop the backwash. Cue[Booth]: Acknowledge and report NO strainer is in backwash (ΔP are normal).	* DIRECT NAO to stop SW strainer backwash if $\Delta P < 5$ psid.		
13.	STOP SWPT Pressure Filter Backwash. Cue[Booth]: Acknowledge and SWPT Pressure Filter backwash is secured.	* DIRECT NAO to stop SWPT Pressure Filter backwash.		
14.	POSITION Makeup Demineralizers to RECYCLE. Cue[Booth]: Acknowledge and report Makeup Demins in RECYCLE.	* DIRECT NAO to position Makeup Demins to RECYCLE.		
15.	SHUT DOWN the Boric Acid Evaporator Cue[Booth]: Acknowledge and report BA Evaporator is shutdown.	* DIRECT NAO to shutdown Boric Acid Evaporator		
16.	ISOLATE SW to Containment Fan Coil Units B and D: CLOSE SW-903B/MV-32061 Cntmt Fan Coil Unit B SW Return Isol CLOSE SW-903D/MV-32059 Cntmt Fan Coil Unit D SW Return Isol POSITION Cntmt Fan Coil Units SW Bypass Control as necessary to maintain RXCP temperature limits	* POSITION SW-903B C/S to CLOSE. VERIFY SW-903B indicating lights-red light OFF, green light ON. POSITION SW-903D C/S to CLOSE. VERIFY SW-903D indicating lights-red light OFF, green light ON. MONITOR RXCP temperatures on PPCS. ADJUST setpoint Cntmt Fan Coil Units SW Bypass Control (SW-904B and SW-904D controller) as necessary to maintain RXCP temperatures below limits		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
17.	Identify Turbine Bldg SW header lowering pressure. REFER to E-SW-02.	<ul style="list-style-type: none"> * Refer to alarm Response sheet for 47052-P * REFER to E-SW-02. 		
(C) 18.	START Standby Service Water Pumps.	<ul style="list-style-type: none"> * POSITION SW Pump A1 C/S to START. (if not performed previously) <p>VERIFY SW Pump A1 indicating lights-red light ON, green light OFF.</p>		
19.	Close SW-3A/CV-31038 Service Water Header A Isol	<ul style="list-style-type: none"> * VERIFY SW-3A indicating lights-red light OFF, green light ON. 		
20.	Close SW-3B/CV-31040 Service Water Header B Isol	<ul style="list-style-type: none"> * VERIFY SW-3B indicating lights-red light OFF, green light ON. 		
(C) 21.	<p>If pressure in SW Header aligned to Turbine Building remains below 60 psig, POSITION Turbine Bldg SW Header Selector to opposite SW Header</p> <p>NOTE: With SW Train A and Train B common header isolation valves SW-3A and SW-3B closed, the pressure in the SW header supplying the Turbine Bldg SW (Train B) will remain below 60 psig since only one pump is running.</p>	<ul style="list-style-type: none"> * CHECK SW Header pressure > 60 psig on 41503 and 41506 * DETERMINE Train B Header pressure is low (41506). * POSITION Service Water Pump Preferred Selector to 1A. * VERIFY SW-4A/CV-31084 OPENS. (red light ON, green light OFF) * VERIFY SW-4B/CV-31085 CLOSES. (red light OFF, green light ON) 		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
22.	<p>If pressure in service water header aligned to Turbine Bldg remains below 60 psig:</p> <ol style="list-style-type: none"> 1. If PR Perm P-10 (44905-0201) is lit, trip the reactor and go to E-0 2. If PR Perm P-10 (44905-0201) is NOT lit, trip the turbine. 3. Position Turbine Bldg SW Header Selector to ISOL. 	* CHECK SW Header pressure > 60 psig on 41503 (Train A SW Header)		
23.	<p>REPORT Service Water Pump B2 trip to CRS</p> <p>Cue[Floor]: Acknowledge.</p>	* REPORT trip of SW Pump B2, manual start of SW Pump A1, and realignment of Turbine Bldg SW Header. (If not reported previously.)		

Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-058A-B.1.c REV. G
	TITLE: START AND LOAD THE DIESEL GENERATOR
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	25 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0100040101
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	010, DG
CRITICAL STEPS:	(C) = CRITICAL	6, 12, 17, 18, 21, 22, 26, 27, 28 and 30
	(S) = SEQUENCE CRITICAL	6, 17, and 26
	(T) = TIME CRITICAL	N/A
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	N-DGM-10B, Rev F Alarm Response Sheet

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

NOTE: THIS JPM IS PERFORMED CONCURRENTLY WITH JPM B.1.d AND JPM B.1.e.
Ensure All SETUP information reviewed.

1. INITIALIZE to IC5, HSD BOC.
[Input SET UP conditions for JPM B.1.d (O-LRQ-JPM-056)]
2. UNFREEZE
3. Ensure simulator is stable
4. Place B Diesel unit parallel switch (Remote function EG1, line 4) to 30/parallel.
5. ACKNOWLEDGE and RESET all annunciators
6. FREEZE
7. SNAP a temporary IC if Desired
8. When D/G reaches approximately 1000 KW, INSERT "EG05B" to trip D/G

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

YOU ARE THE Balance of Plant Operator.

THE PLANT IS ~~AT 100% MOL.~~ *IN HOT SHUTDOWN* *DW 12/8/00*

N-DGM-10-CLB is complete.

The A D/G is operable.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The Control Room Supervisor directs you to start and load B D/G to 2600 KW using N-DGM-10B, Diesel Generator B Manual Operation.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

YOU ARE THE Balance of Plant Operator.

THE PLANT IS ~~AT 100% MOL~~ *IN HOT SHUTDOWN* *Dep 12/8/00*

N-DGM-10-CLB is complete.

The A D/G is operable.

INITIATING CUE:

The Control Room Supervisor directs you to start and load B D/G to 2600 KW using N-DGM-10B, Diesel Generator B Manual Operation.

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to N-DGM-10B, Diesel Generator Manual Operation.	* REFER to N-DGM-10B.		
2.	VERIFY following: a. Plant initial conditions, SATISFIED. b. 4160 Bus 1-6 ENERGIZED by off-site power. c. Diesel Generator A is OPERABLE	* DETERMINE Initial Conditions satisfied per the JPM Task Conditions. * VERIFY Bus 6 4160 Volt meter Voltage 44619 reads 4100-4300 AC Kilovolts. * VERIFY BKR 1-601 RAT to BUS 6 red light ON. VERIFY Bus 6 4160 Volt white light ON. * DETERMINE A Diesel Generator operable per the JPM Task Conditions.		
3.	LOG Diesel Generator B out-of-service. Cue[Floor]: DG 'B' logged out-of-service in control room operator log Cue[Floor]: Shift Supervisor informed to log Diesel Generator 'B' out of service.	* LOG Diesel Generator 'B' out-of-service in control room operator log. * Inform SHIFT Supervisor to log diesel generator out of service.		
4.	REQUEST maintenance perform Step 4.1.3. Cue[Floor]: DG B has been run within past 24 hours.	* DETERMINE Step 4.1.3 of N-DGM-10B need NOT be performed.		
5.	Verify Diesel Engine 1B Control Switch is in AUTO	* VERIFY Diesel Engine B C/S in AUTO.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 6. (S1)	DIRECT NAO to perform step 4.1.5 and 4.1.6. Cue[Booth]: NAO reports step 4.1.5 and 4.1.6 completed with Governor Speed Droop at 30.	* DIRECT NAO to perform step 4.1.5 and 4.1.6 of N-DGM-10B.		
7.	VERIFY the following annunciators OFF: <ul style="list-style-type: none"> • DIESEL GEN B LOCKOUT (47091-D) • DIESEL GEN B MECH LOCKOUT (47091-E) • DIESEL GEN B ABNORMAL (47091-F) • DIESEL GEN B NEUTRAL GND CURRENT (47092-D) • DIESEL GEN B LOCAL CONTROL(47092-E) • DIESEL GEN B CONTROL SWITCH IN PULLOUT (47092-F) • DIESEL GEN B CONTROL VOLT LOW (47093-D) • DIESEL GEN B GOV IN MAN (47093-E) • DIESEL GEN B FUEL OIL LEVEL ABNORMAL (47093-F) • DIESEL GEN B EXCITATION VOLT DEENERGIZED (47094-D) • BUS 6 VOLTAGE LOW (47091-K) • BUS 6 VOLT RESTORING BLOWN FUSE (47092-J) • BUS 6 VOLT RESTORING ABNORMAL (47092-K) • BUS 6 SOURCE BKR 43 SW IN MAN (47093-K) 	* VERIFY Annunciator: 47091-D OFF 47091-E OFF 47091-F OFF 47092-D OFF 47092-E OFF 47092-F OFF 47093-D OFF 47093-E OFF 47093-F OFF 47094-D OFF 47091-K OFF 47092-J OFF 47092-K OFF 47093-K OFF		
8.	POSITION Diesel Generator B Governor Mode Selector switch to MAN.	* POSITION Diesel Generator B Governor Mode Selector switch to MAN.		
9.	VERIFY annunciator DIESEL GEN B GOV IN MAN (47093-E), ON.	* VERIFY annunciator 47093-E ON.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
10.	POSITION Diesel Generator B Speed Control switch to lower for ≥ 3 minutes to adjust governor to low limit position. NOTE: This step must be performed for time indicated and CANNOT be time compressed.	* POSITION Diesel Generator B Speed Control switch to lower for ≥ 3 minutes		
11.	ANNOUNCE starting the Diesel.	* MAKE Announcement for starting B Diesel Generator		
(C) 12.	START Diesel Generator 1B. CUE[Booth](After the D/G is running): SW-301B has opened.	* POSITION Diesel Engine B control switch to START Red light ON, green light OFF.		
13.	VERIFY the following: <ul style="list-style-type: none"> a. Diesel Engine B red indicating light ON. b. Diesel Engine B Speed of 450-550 rpm. c. Status light, Diesel B On, (44910-0105), ON. d. Status light, DG B Room Vent Fan On, (44910-0106), ON. e. Status light, DG Room B Damper OPEN, (44910-0107), ON. 	* VERIFY: <ul style="list-style-type: none"> Diesel Engine B red indicating light ON. Diesel Generator B Speed (4462004) at 450-550 rpm. Status light 44910-0105 ON. Status light 44910-0106 ON. Status light 44910-0107 ON. 		
14.	DIRECT NAO to perform step 4.1.14. Cue[Booth]: NAO reports step 4.1.14 completed and normal operation exists.	* DIRECT NAO to perform step 4.1.14 of N-DGM-10B		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
15.	Run Diesel Engine B at low idle speed for ≥ 3 minutes. Cue[Floor]: Diesel Engine B has run for 3 minutes at low idle speed.	* Diesel Engine B runs 3 minutes at low idle speed.		
16.	ADJUST Diesel Engine B speed to 900 rpm with Speed Control switch.	* Diesel Generator B Speed (4462004) at 890-950 rpm. Diesel Generator B Frequency 4462101 at 60-63.3 Hertz.		
(C) 17. (S1)	DIRECT NAO to perform step 4.1.17. Cue[Booth]: NAO reports step 4.1.17 completed with parallel/unit switch in parallel.	* DIRECT NAO to perform step 4.1.17 of N-DGM-10B.		
(C) 18.	POSITION Diesel Generator B Governor Mode Selector switch to AUTO.	* POSITION Diesel Generator B Governor Mode Selector switch to AUTO.		
19.	VERIFY annunciator DIESEL GEN B GOV IN MAN (47093-E), OFF.	* VERIFY annunciator 47093-E OFF.		
20.	NOTIFY System Operating the Diesel is being paralleled to the grid. CUE[Booth]: System Operating acknowledges.	* NOTIFY System Operating.		
(C) 21.	POSITION BKR-1-603, DG B to Bus 6, 43 Switch to MAN.	* POSITION BKR 1-603 43 switch to MANUAL. Annunciator 47093-K BUS 6 SOURCE BKR 43 SW IN MAN. alarms.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 22.	POSITION Bkr 1-603 Sync switch to ON.	<p>* POSITION Bkr 1-603 Sync Switch to ON.</p> <p>VERIFY synchronizing lamps cycling on and off.</p> <p>VERIFY INCOMING and RUNNING voltmeters indicating approximately 120 volts.</p> <p>VERIFY synchroscope indication rotating.</p>		
23.	ADJUST Diesel Generator voltage with the Voltage Control switch until Incoming A-C volts matches Running A-C volts.	* ADJUST Incoming vs. Running A-C Volts within \pm 2 A-C Volts, by positioning Voltage Control switch to Lower or Raise as required		
24.	ADJUST Diesel Generator speed with Speed Control switch until the synchroscope rotates slowly (>0-5 rpm) in the fast (clockwise) direction.	* POSITION Speed Control Switch to Lower or Raise as required so Synchroscope rotating slowly (>0-5 rpm) in the Fast (clockwise) direction		
25.	REPEAT steps 4.1.20.d and 4.1.20.e to ensure Incoming A-C volts is matched with Running A-C volts and diesel is slightly higher in frequency.	<p>* VERIFY diesel generator voltage is matched with bus voltage.</p> <p>* VERIFY diesel generator frequency is slightly higher.</p>		
(C) 26. (S2)	<p>With the synchroscope slowly rotating in the clockwise direction, PARALLEL Diesel Generator with Bus 1-6.</p> <ol style="list-style-type: none"> At 10 o'clock CLOSE and HOLD Bkr 1-603 control switch. VERIFY only red indicating light ON and Release Bkr 1-603 control switch. 	<p>* At 10 o'clock position to CLOSE, and HOLD in close, Bkr 1-603 control switch.</p> <p>* Red light ON, Green light OFF</p> <p>Release Bkr 1-603 control switch.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 27.	INCREASE the Diesel Generator Kilowatts incrementally with the Speed Control switch until the required load is reached.	* POSITION Speed Control Switch to Raise or Lower as required until Diesel Generator B Power meter 4462103 indicates 2500-2700 Kilowatts. NOTE: JPM steps 27 and 28 may be performed concurrently.		
(C) 28.	RAISE Kilovars proportionally by adjusting Voltage Control switch. (see Figure 1)	* POSITION Voltage Control Switch to Raise or Lower as required until Diesel Generator B React Pwr meter 4462104 indicates 1550-1800 Kilovars.		
29.	Respond to annunciators 47091E and 47091F for diesel engine failure.	* Respond to annunciators 47091E and 47091F for diesel engine failure. Acknowledge annunciators 47091E and 47091F		
(C) 30.	OPEN Bkr 1-603 DG B to Bus 6.	* POSITION Bkr 1-603 control switch to OPEN * VERIFY green light ON, red light OFF		
31.	INFORM Control Room Supervisor of the D/G malfunction. CUE[Floor]: The Control Room Supervisor directs you to stop the D/G test.	* INFORM CRS of D/G malfunction.		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-056D-B.1.d REV. ORIG(G)
	TITLE: CONTROL PRZR PRESSURE USING HEATERS AND/OR SPRAY MANUALLY
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	15 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0360020201
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	036, RCS
CRITICAL STEPS:	(C) = CRITICAL	3, 4, 7, 9, 10, 15, 17, 19 and 21
	(S) = SEQUENCE CRITICAL	NONE
	(T) = TIME CRITICAL	NONE
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	NONE
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	SP 36-018, Rev. P

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

**NOTE: THIS JPM IS PERFORMED CONCURRENTLY WITH JPM B.1.c AND
CONSECUTIVELY WITH JPM B.1.e. Ensure All SETUP information reviewed.**

1. INITIALIZE to IC5, HSD BOC.
2. TRIP the Reactor.
3. PERFORM a 25° cooldown using the S/G PORVs.
4. REDUCE primary system pressure to 2000 psig using a Przr PORV.
[See SET UP conditions for JPM B.1.c]
5. PLACE the master controller in MANUAL.
6. PLACE PRZR Heater Group A control switch to OFF
7. ALLOW the Simulator to stabilize at 2000 psig using PRZR Heater Groups C, D &/or E.
8. ACKNOWLEDGE and RESET all annunciators
9. FREEZE
10. SNAP a temporary IC if Desired

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

YOU ARE THE Reactor Operator

THE PLANT IS AT Intermediate Shutdown with a steam bubble in the PRZR.

PRZR backup heater group A double throw safety switch is in the Bus 1-52 position.

PS-1A/CV-31112 and PS-1B/CV-31111 controllers PCV-431A and PCV-431B spray valve controls are in AUTO.

PRZR master control setpoint controller, HC-431K, PRZR pressure control is in MANUAL.

PRZR pressure is approximately 2000 psig.

SP 36-018, PRZR backup heater groups A and B operability test is in progress, step 6.1 has just been completed.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

You are directed by the Control Room Supervisor to perform SP 36-018, PRZR Backup Heater Groups A and B Operability Test, steps 6.2 through 6.7. The Balance of Plant operator will collect the data.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

YOU ARE THE Reactor Operator

THE PLANT IS AT Intermediate Shutdown with a steam bubble in the PRZR.

PRZR backup heater group A double throw safety switch is in the Bus 1-52 position.

PS-1A/CV-31112 and PS-1B/CV-31111 controllers PCV-431A and PCV-431B spray valve controls are in AUTO.

PRZR master control setpoint controller, HC-431K, PRZR pressure control is in MANUAL.

PRZR pressure is approximately 2000 psig.

SP 36-018, PRZR backup heater groups A and B operability test is in progress, step 6.1 has just been completed.

INITIATING CUE:

You are directed by the Control Room Supervisor to perform SP 36-018, PRZR Backup Heater Groups A and B Operability Test, steps 6.2 through 6.7. The Balance of Plant operator will collect the data.

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to SP 36-018, PRZR Backup Heater Groups A and B Operability Test.	* REFER to N-RHR-34.		
2.	RE-ESTABLISH Pressurizer pressure stable or slowly decreasing. (EVALUATOR NOTE: Use of Honeywell computer points in any mode that shows a trend is also acceptable in any method of monitoring PRZR pressure.)	* ENERGIZE PRZR heaters as necessary to obtain stable PRZR pressure. * ADJUST HC-431K in manual as necessary to control PRZR spray flow. * MONITOR PI-420, PI-419 or RCS WR Pressure recorder 42556 and DETERMINE that pressure is stable or decreasing slowly.		
(C) 3.	POSITION the Pressurizer Heater Group A control switch to ON	* POSITION PRZR Heater Group A control switch to ON. VERIFY PRZR Heater Group A red light ON, green light OFF.		
(C) 4.	OBSERVE a pressure increase. (EVALUATOR NOTE: Use of Honeywell computer points in any mode that shows a trend is also an acceptable method for monitoring PRZR pressure.)	* MONITOR PI-420, PI-419 OR RCS WR pressure recorder 42556 (red loop A hot leg WR pressure, green loop B hot let WR pressure) for an increase.		
5.	Request electricians to perform steps 6.3.1 and 6.3.2. Cue[Booth]: Electricians have completed steps 6.3.1 and 6.3.2.	* Electricians requested to perform steps 6.3.1 and 6.3.2.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
6.	Verify data collection complete. Cue[Floor]: All required data has been collected.	* Verify BOP has required data and electricians have the required data.		
(C) 7.	Turn OFF Pressurizer Heater Group A.	* POSITION PRZR Heater Group A control switch to OFF. VERIFY PRZR Heater Group A green light ON, red light OFF.		
8.	RE-ESTABLISH Pressurizer pressure stable or slowly decreasing.	* ENERGIZE PRZR heaters as necessary to obtain stable PRZR pressure. * ADJUST HC-431K in manual as necessary to control PRZR spray flow. * MONITOR PI-420, PI-419 or RCS WR pressure recorder 42556 (red loop A hot leg WR pressure, green loop B hot leg WR pressure).		
(C) 9.	Position the Pressurizer Heater Group B control switch to ON.	* POSITION PRZR Heater Group B control switch to ON. VERIFY PRZR Heater Group B red light ON, green light OFF.		
(C) 10.	OBSERVE a pressure increase.	* MONITOR PI-420, PI-419 OR RCS WR pressure recorder 42556 (red loop A hot leg WR pressure, green loop B hot let WR pressure) for an increase.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
11.	Request electricians to perform steps 6.6.1 and 6.6.2. Cue[Booth]: Electricians have completed steps 6.6.1 and 6.6.2.	* Electricians requested to perform steps 6.6.1 and 6.6.2.		
12.	Verify data collection complete. Cue[Floor]: All required data has been collected.	* Verify BOP has required data and electricians have the required data.		
13.	ESTABLISH normal Pressurizer pressure control per N-RC-36C Cue[Floor]: [If required] There were <u>NO</u> problems during the test.)	* ESTABLISH normal Pressurizer pressure control per N-RC-36C		
14.	REFER to N-RC-36C, section 4.2.6.c	* REFER to N-RC-36C, section 4.2.6.c		
(C) 15.	Position PRZR Spray Control Master Controller to automatic: ADJUST Master Controller setpoint until deviation meter nulls (top meter)	* ADJUST Master Controller setpoint dial until deviation meter nulled out.		
16.	Verify Master Controller setpoint matches PRZR pressure Channel selected for control	* VERIFY Master Controller setpoint reads approximately the same value as PT-431 (Channel 3).		
(C) 17.	Position AUTO-BAL-MAN switch to MAN-BAL	* POSITION AUTO-BAL-MAN switch to MAN-BAL		
18.	Verify deviation meter is centered	* VERIFY deviation meter is centered.		
(C) 19.	Position AUTO-BAL-MAN switch to MAN-BAL	* POSITION AUTO-BAL-MAN switch to AUTO		
20.	Verify PRZR Spray valves and heater controls working properly to maintain PRZR pressure	* VERIFY Spray valves and heaters operate per Setpoint demand to control PRZR pressure.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 21.	ADJUST Master Controller setpoint dial to slowly raise PRZR pressure to 2235 psig while maintaining RCS pressure within limits of RD-11.1 CUE : (WHEN satisfactory pressure increase observed) PRZR pressure is stable at 2235 psig.	* ROTATE Master Controller dial to raise PRZR pressure towards 2235 psig. * MAINTAIN RCS pressure within limits of RD-11.1		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWB.1.c REV. ORIG
	TITLE: RESTORE LEVEL IN THE PRESSURIZER RELIEF TANK
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0360210101
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	036, RCS
CRITICAL STEPS:	(C) = CRITICAL	3, 4 and 6
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	N-RC-36B, Rev. N

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

**NOTE: THIS JPM IS PERFORMED CONCURRENTLY WITH JPM B.1.c AND
CONSECUTIVELY WITH JPM B.1.d. Ensure All SETUP information reviewed.**

1. INITIALIZE to IC5, HSD BOC.
[Input SET UP conditions for JPM B.1.d (O-LRQ-JPM-056)]
2. Lower PRT level just until annunciator 47043-B PRESSURIZER RELIEF TANK ABNORMAL alarms (71.5%)
3. Allow the Simulator to stabilize
4. ACKNOWLEDGE and RESET all annunciators
5. FREEZE
6. SNAP a temporary IC if Desired

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator.

Annunciator 47043-B PRESSURIZER RELIEF TANK ABNORMAL has alarmed on low level.

Conditions are now stable.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The Control Room Supervisor directs you restore PRT level to clear the annunciator.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator.

Annunciator 47043-B PRESSURIZER RELIEF TANK ABNORMAL has alarmed on low level.

Conditions are now stable.

INITIATING CUE:

The Control Room Supervisor directs you restore PRT level to clear the annunciator.

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Refer to Alarm Response Sheet for 47043B, PRESSURIZER RELIEF TANK ABNORMAL.	* REFER to Alarm Response Sheet		
2.	Refer to N-RC-36B, Pressurizer Relief Tank Operations, step 4.5.	* REFER to N-RC-36B		
(C) 3.	Open MU-1010-1/CV-31261, Przr Relief Tank Makeup Water Isol	* TAKE C/S for MU-1010-1 to OPEN.		
(C) 4.	Open MU-1012/CV-31258, Przr Relief Tank Make Up Water Isol	* TAKE C/S for MU-1012 to OPEN.		
5.	Cycle MG(R)-549/CV-31256, Przr Relief Tank Vent Isol	* MAINTAIN PRT pressure less than 7 psig PI-440/4155201 * TAKE C/S for MG(R)-549 to OPEN/CLOSE as necessary.		
(C) 6.	When PRT level reaches 72%, close MU-1012	* MONITOR PRT level LI-442/4155203. * TAKE C/S for MU-1012 to CLOSE when PRT level is between 71.5% and 76%.		
7.	Close MU-1010-1	* TAKE C/S for MU-1010-1 to CLOSE.		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-NEWB.1.f REV. ORIG
	TITLE: SHIFT COOLING TRAINS OF RHR
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	10 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	0340050101
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	034, RHR
CRITICAL STEPS:	(C) = CRITICAL	3, 5 and 7
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	N-RHR-34, Rev. AN

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

1. Initialize to IC-4, BBL, RHR ON
2. UNFREEZE
3. ENTER I/O 1, 47033:0403,,CW to actuate TLA-18, RHR SYSTEM MONITOR ABNORMAL
4. ACKNOWLEDGE and RESET all annunciators
5. FREEZE
6. SNAP a temporary IC if Desired

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator.

The plant is in Intermediate Shutdown at 362°F and 338 psig.

RHR Pump B is providing RCS cooling

RHR Pump A is in standby

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

The Control Room Supervisor directs you to shift RHR Pumps per N-RHR-34, step 4.2.7. (All applicable Precautions and Limitations for N-RHR-34 are satisfied.)

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator.

The plant is in Intermediate Shutdown at 362°F and 338 psig.

RHR Pump B is providing RCS cooling

RHR Pump A is in standby

INITIATING CUE:

The Control Room Supervisor directs you to shift RHR Pumps per N-RHR-34, step 4.2.7. . (All applicable Precautions and Limitations for N-RHR-34 are satisfied.)

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Refer to N-RHR-34, Residual Heat Removal System Operation, step 4.2.7.	* REFER to N-RHR-34.		
2.	Verify RHR-101/CV-31116, RHR Flow Control Bypass is in MAN	* CHECK Selector for RHR-100 in MAN		
(C) 3.	Start Standby Pump	* TAKE RHR Pump A C/S to START/AUTO. VERIFY RHR Pump A red light ON, green light OFF. * VERIFY RHR A Motor Current meter 41335 peg high then return to nominal amps. <u>OR</u> VERIFY RHR Pump A Disch Press meter PI-629 indicates 438-513 psig.		
4.	Verify Pump Pit Fan Coil Unit on	* CHECK SI Active Status Panel 49101-0303 RHR PUMP FAN COIL A ON light LIT.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 5.	Stop operating Pump	<p>* TAKE RHR Pump B C/S to STOP/AUTO.</p> <p>VERIFY RHR Pump B red light OFF, green light ON.</p> <p>* VERIFY RHR B Motor Current meter 41336 indicates \approx 0 amps.</p> <p><u>OR</u></p> <p>VERIFY RHR Pump B Disch Press meter PI-628 indicates \approx 0 psig.</p>		
6.	<p>Verify (associated) Pump Pit Fan Coil Unit stopped</p> <p>CUE[Booth]: Acknowledge and toggle RF CH1 Line 4, CH104 RHR Pump B Pump Pit FCU.</p>	<p>* DIRECT NAO to stop RHR Pump Fan Cooler B.</p> <p>* CHECK SI Active Status Panel 49101-0307 RHR PUMP FAN COIL B ON light not LIT.</p>		
(C) 7.	<p>Position the following as required to maintain RCS temperature:</p> <ul style="list-style-type: none"> • RHR-101/CV-31116, RHR Flow Control Bypass • RHR-8A/CV-31114, RHR Flow Control HX A Outl • RHR-8B/CV-31115, RHR Flow Control HX B Outl 	<p>* MONITOR RCS WR Temperature TR-410/42555.</p> <p>MONITOR Computer cooldown rate.</p> <p>ADJUST RHR-101, RHR-8A and/or RHR-8B to maintain temperatures stable.</p>		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-115MA-B.1.g REV. ORIG(I)
	TITLE: OPERATE SAFETY INJECTION SYSTEM IN RECIRC MODE
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	SIMULATOR
EVALUATION METHOD:	PERFORM/SIMULATE	PERFORM
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	15 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO
TASK NUMBER:	FROM OPS TRNG DATABASE	E010040501
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	033, SI
CRITICAL STEPS:	(C) = CRITICAL	5, 6, 7, 10, 11, 12, 13, 14 and 16
	(S) = SEQUENCE CRITICAL	5 and 6
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	None
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	ES-1.3, Rev. R

FOR SIMULATOR USE ONLY

IF the operator is present when setting up for the JPM, THEN read the following:

PLEASE STANDBY WHILE WE ESTABLISH CONDITIONS FOR THE NEXT JPM.
--

SET UP:

1. Initialize to IC-12, 100%, MOL
2. INSERT Malf RC04A at 10% severity.
3. Insert Override 46355 NORMAL (or CLOSE), SI-350A Cntmt Sump B Supply to RHR Pump A, fails to open.
4. UNFREEZE
5. PULLOUT TD AFW pump and BOTH RXCPs
6. RESET SI and ICS
7. CLOSE LD-4A, B and C and RESET Containment Isolation
8. ALIGN Charging Pump suction to VCT, THEN START A and B Charging pumps and INCREASE to MAXIMUM speed
9. ADJUST CVC-7 as necessary
10. STOP BOTH Diesel Generators
11. TURN ON power (SI2, line 9) and CLOSE SI-20A and SI-20B
12. OPEN CC-400A and CC-400B.
13. WHEN problem time is 15 minutes, DECREASE RWST level to 36% (SI2, line 1)
14. ACKNOWLEDGE and RESET all annunciators
15. FREEZE
16. SNAP a temporary IC if Desired

ENSURE SIMULATOR IS CLEAR OF ALL UNAUTHORIZED INDIVIDUALS AND CONDUCTIVE TO CONDUCTING THE EXAMINATION.

ENSURE THAT ALL PROCEDURES AND OTHER MATERIALS NECESSARY TO CONDUCT THE JPM EXAMINATION ARE IN THE PROPER LOCATIONS.

GO TO THE NEXT PAGE.

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator.

A large break LOCA has occurred.

All safeguards equipment is running as designed.

RCS pressure is at Containment pressure.

RWST level is at 36%.

THE STEPS IN THIS JPM SHOULD BE: PERFORMED.

INITIATING CUE:

You are directed by the CRS to align SI system for recirculation using ES-1.3, "Transfer to Containment Sump Recirculation", steps 5 through 6c.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Control Operator.

A large break LOCA has occurred.

All safeguards equipment is running as designed.

RCS pressure is at Containment pressure.

RWST level is at 36%.

INITIATING CUE:

You are directed by the CRS to align SI system for recirculation using ES-1.3, "Transfer to Containment Sump Recirculation", steps 5 through 6c.

FOR SIMULATOR USE ONLY

Take the simulator out of freeze.

Use the JPM evaluation form to mark the operator's performance as the task is being done.

Provide any necessary cues that the JPM calls for which are NOT provided by the Simulator feedback.

Take notes to support the resulting pass/fail grade.

For unsatisfactory grades, documentation must be noted in the comment section of the JPM evaluation form.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to ES-1.3, step 5, Transfer to Containment Sump Recirculation.	* REFER to ES-1.3, step 5.		
2.	Check both Trains of SI and RHR capable of establishing a flow path from Sump B to RCS.	GIVEN in Initial Conditions that all Safeguards Equipment is running per design	N/A	
3.	VERIFY Train B SI/RHR and ICS pumps RUNNING AS NECESSARY WITH FLOW INDICATED. 1) RHR Pump B - F928 INDICATES FLOW 2) SI Pump B - PUMP AMPS INDICATE FLOW 3) ICS Pump B- INSTR 41341 INDICATES FLOW	* VERIFY SI pump B, red light ON, green light OFF. VERIFY SI pump B current meter 4131303 indicates amps. * VERIFY RHR pump B, red light ON, green light OFF. VERIFY RHR flow meter FI-928 indicates flow. * VERIFY ICS Pump A red light ON, green light OFF. VERIFY ICS flow meter 41341 indicates 1400 flow.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
4.	STOP Train A SI, RHR, and ICS pumps.	<p>* POSITION SI Pump A C/S to STOP/AUTO.</p> <p>VERIFY SI Pump A green light ON, red light OFF.</p> <p>* VERIFY SI Motor A Current meter 4131303 indicates \approx 0 amps.</p> <p><u>OR</u></p> <p>VERIFY SI Pump A Disch Press meter PI-922 indicates \approx 0 psig.</p> <p>* POSITION RHR Pump A C/S to STOP/AUTO.</p> <p>VERIFY RHR Pump A green light ON, red light OFF.</p> <p>* VERIFY RHR Motor A Current meter 41335 indicates \approx 0 amps.</p> <p><u>OR</u></p> <p>VERIFY RHR Pump A Disch Press meter PI-629 indicates \approx 0 psig.</p> <p>* POSITION ICS Pump A C/S to OFF.</p> <p>VERIFY ICS Pump A green light ON, red light OFF.</p> <p>VERIFY ICS Pump A disch flow meter 41340 indicates \approx 0.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 5. (S1)	CLOSE SI-208/MV-32131 <u>AND</u> SI-209/MV-32130, SI pumps recirculation to RWST isolation valves	* POSITION control switches for SI-208 and SI-209 to CLOSE, VERIFY red lights OFF, green lights ON.		
(C) 6. (S2)	OPEN SI-350A, CNTMT Sump B Supply to RHR Pump A CUE: Acknowledge, and direct continuing with actions of ES-1.3.	* POSITION control switch for SI-350A to OPEN DETERMINE red light OFF, green light ON. * REPORT to CRS that valve failed to open.		
(C) 7.	Restart the ECCS Pumps previously running.	* POSITION SI Pump A C/S to START/AUTO. VERIFY SI Pump A green light ON, red light OFF. * VERIFY SI Motor A Current meter 4131303 pegs high then return to nominal amps. <u>OR</u> VERIFY SI Pump A Disch Press meter PI-922 indicates 1000-1100 psig.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 7. (cont.)	Restart the ECCS Pumps previously running. (cont.)	<p>* POSITION RHR Pump A C/S to START/AUTO.</p> <p>* VERIFY RHR Pump A green light ON, red light OFF.</p> <p>* VERIFY RHR Motor A Current meter 41335 pegs high then return to nominal amps.</p> <p style="text-align: center;"><u>OR</u></p> <p>VERIFY RHR Pump A Disch Press meter PI-629 indicates 100-175 psig.</p> <p>* POSITION ICS Pump A C/S to START/AUTO.</p> <p>* VERIFY ICS Pump A green light ON, red light OFF.</p> <p>* VERIFY ICS Disch Press meter 4131701 indicates \approx 200 psig.</p> <p style="text-align: center;"><u>OR</u></p> <p>VERIFY ICS Pump 41340 indicates \approx 1400 gpm flow.</p>		
8.	<p>(GO TO Step 7) Align Operating Train for Recirculation at 10% RWST level.</p> <p>CUE: (Time Compression) RWST level is now reading 10%.</p>	<p>* DETERMINE next actions are at 10% level in RWST.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
9.	If SI Pump A or B is NOT running, then start SI Pump A or B	<ul style="list-style-type: none"> * DETERMINE SI Pump A and B running: * VERIFY SI Pump A green light ON, red light OFF. * VERIFY SI Pump B green light ON, red light OFF. 		
(C) 10.	Stop the RHR and ICS Pumps	<ul style="list-style-type: none"> * POSITION RHR Pump A C/S to STOP/AUTO. VERIFY RHR Pump A green light ON, red light OFF. * POSITION RHR Pump B C/S to STOP/AUTO. VERIFY RHR Pump B green light ON, red light OFF. * POSITION ICS Pump A C/S to OFF. VERIFY ICS Pump A green light ON, red light OFF. * POSITION ICS Pump B C/S to OFF. VERIFY ICS Pump B green light ON, red light OFF. 		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 11.	Close SI-208 and SI-209 SI Recirculation to RWST	* POSITION SI-208 C/S to CLOSE VERIFY SI-208 green light ON, red light OFF. * POSITION SI-209 C/S to CLOSE VERIFY SI-208 green light ON, red light OFF.		
(C) 12.	Open SI-305B CNMT Sump B Supply to RHR Pump B (NOTE: Only B train components are applicable hereafter since the A Train valve has already failed to open.)	* POSITION SI-305B C/S to OPEN VERIFY SI-305B green light OFF, red light ON.		
(C) 13.	Close SI-300B RWST Supply to RHR Pump B	* POSITION SI-300B C/S to CLOSE VERIFY SI-300B green light ON, red light OFF.		
(C) 14.	Open SI-351B CNMT Sump B Supply to RHR Pump B	* POSITION SI-351B C/S to OPEN VERIFY SI-351B green light OFF, red light ON.		
15.	Close RHR-8B RHR Heat Exchanger B Flow CV	* POSITION HC-625 to CLOSE (0%) position.		

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-099D-B.2.a REV. F	
	TITLE:	OPERATE AND MONITOR THE POST LOCA HYDROGEN CONTROL SYSTEM
	DATE:	PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	PLANT
EVALUATION METHOD:	PERFORM/SIMULATE	SIMULATE
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	13 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO/NAO
TASK NUMBER:	FROM OPS TRNG DATABASE	0180010104
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	018, RBV
CRITICAL STEPS:	(C) = CRITICAL	2, 3, 4, 5, 6, and 7
	(S) = SEQUENCE CRITICAL	NONE
	(T) = TIME CRITICAL	NONE
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	NONE
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	N-RBV-18C, Rev. K

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Auxiliary Operator.

The plant is at Cold Shutdown following a LOCA and cooldown.

Instrument Air is available.

N-RBV-18-CL is complete.

Chemistry reports Containment hydrogen concentration is 2.0%.

THE STEPS IN THIS JPM SHOULD BE: SIMULATED.

INITIATING CUE:

You are directed by the CRS to perform the Train B lineup for hydrogen dilution of Containment per N-RBV-18C, "Post-LOCA Hydrogen Control", step 4.1.1.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Auxiliary Operator.

The plant is at Cold Shutdown following a LOCA and cooldown.

Instrument Air is available.

N-RBV-18-CL is complete.

Chemistry reports Containment hydrogen concentration is 2.0%.

INITIATING CUE:

You are directed by the CRS to perform the Train B lineup for hydrogen dilution of Containment per N-RBV-18C, "Post-LOCA Hydrogen Control", step 4.1.1.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to N-RBV-18C, "Post-LOCA Hydrogen Control", step 4.1.1.	* REFER to N-RBV-18C, step 4.1.1.		
(C) 2.	REMOVE sealing device from SA-7003B/MV-32148, H ₂ Dilution to Contmt, Local/Remote switch. Cue: Sealing device is removed.	* REMOVE sealing device on SA-7003B Local/Remote switch.		
(C) 3.	REMOVE sealing device from SA-7003B control switch. Cue: Sealing device is removed.	* REMOVE sealing device on SA-7003B control switch.		
(C) 4.	POSITION SA-7003B Local/Remote switch to LOCAL. Cue: Local/Remote switch is in LOCAL.	* POSITION SA-7003B Local/Remote switch to LOCAL.		
(C) 5.	OPEN SA-7003B. Cue: Green light OFF, Red light ON.	* POSITION SA-7003B control switch to OPEN.		
(C) 6.	OPEN IA-1002B, Instrument Air Supply - Post LOCA Hydrogen. (Main Steam Penetration A Area) Cue: Valve handle is vertical.	* POSITION IA-1002B knife handle to the vertical position.		
(C) 7.	THROTTLE OPEN IA-1001B/CV-31392, Post LOCA Air Supply Control Valve, and ESTABLISH 25 SCFM air flow as indicated on FI-18238, Post LOCA Instrument Air Supply flow indication. Cue: FI-18238 indication increases to approx. 25 SCFM.	* TURN the knob on top of IA-1001B, while observing FI-18238 increases to approx. 25 SCFM.		
8.	INFORM CRS that Containment hydrogen dilution has begun. Cue: CRS is informed.	* INFORM CRS that Containment hydrogen dilution has begun.		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT JOB PERFORMANCE MEASURE	NO. O-LRQ-JPM-162A-B.2.b REV. ORIG(C)
	TITLE: PERFORM ACTIONS NECESSARY FOR CONTROL ROOM EVACUATION (CHARGING FLOW)
	DATE: PAGE: 1

APPROVED BY:

Nuclear Training Supervisor - Operations

Assistant Manager - Plant Operations

PERFORMED BY:

Trainee

Evaluator

EVALUATION LOCATION:	PLANT/SIMULATOR/CONTROL ROOM	PLANT
EVALUATION METHOD:	PERFORM/SIMULATE	SIMULATE
AVE. COMPLETION TIME:	AVE. TIME FOR THIS JPM	5 MINUTES
TIME CRITICAL TASK:	YES/NO	NO
MAX. COMPLETION TIME:	N/A FOR NON-TIME CRITICAL TASKS	N/A
PERFORMANCE LEVEL:	SRO/RO/NAO	SRO/RO/NAO
TASK NUMBER:	FROM OPS TRNG DATABASE	E060010501
TASK TYPE:	INITIAL/CONTINUING (FROM OPSTRNG DATABASE)	CONTINUING
PLANT SYSTEM:	NUMBER AND NAME	35, CVCS
CRITICAL STEPS:	(C) = CRITICAL	7, 9, 10 and 11
	(S) = SEQUENCE CRITICAL	None
	(T) = TIME CRITICAL	None
SPECIAL TOOLS AND EQUIPMENT:	SPECIAL ITEMS REQUIRED TO COMPLETE JPM	Radio
REFERENCES:	REFERENCES USED FOR PERFORMANCE OF JPM	E-0-06, Rev. M

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Control Operator A.

The plant is tripped due to a fire in an alternate fire zone.

E-0-06, "Fire in Alternate Fire Zone", is being performed.

THE STEPS IN THIS JPM SHOULD BE: SIMULATED.

INITIATING CUE:

You are directed by E-0-06, step 21 to establish Charging flow from the DSP.

NOTE: All steps of E-0-06 up to step 21 have been completed.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Control Operator A.

The plant is tripped due to a fire in an alternate fire zone.

E-0-06, "Fire in Alternate Fire Zone", is being performed.

INITIATING CUE:

You are directed by E-0-06, step 21 to establish Charging flow from the DSP.

NOTE: All steps of E-0-06 up to step 21 have been completed.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	REFER to E-0-06, "Fire in Alternate Fire Zone", step 21. CUE (at DSP) All the appropriate REMOTE/LOCAL switches are in LOCAL and the associated indicating lights are lit.	* REFER to E-0-06, step 21.		
2.	REQUEST Control Operator B to VERIFY RXCP seal supply line valves CLOSED per Step 11.g. Cue: Control Operator B reports Step 11.g complete and the valves are CLOSED.	* USE radio to contact Control Operator B and REQUEST status of actions of Step 11.g.		
3.	VERIFY CVC-301/MV-32056, Refueling Water Reac Emerg Makeup LCV OPEN. Cue: Control switch in OPEN. Red light is ON. Green light is OFF.	* VERIFY CVC-301 C/S in OPEN VERIFY CVC-301 Red light ON, Green light OFF		
4.	VERIFY CVC-1/MV-32057, Volume Control Tank Otl Isol Mv CLOSED. Cue: Control switch in CLOSE. Green light is ON. Red light is OFF.	* VERIFY CVC-1 control switch in CLOSE. VERIFY CVC-1 Green Light ON, Red Light OFF.		
5.	VERIFY CVC-7/MV-31103, Chg Line Flow Cont Vlv OPEN. Cue: CVC-7 at 0%.	* CVC-7 demand at 0% CVC-7 controller rotated fully in the downward direction.		
6.	VERIFY CVC-11/MV-31229, Chg Line to Cold Leg LP-B RCS Isol Vlv OPEN. Cue: Control Switch in OPEN and Red Light ON, Green Light OFF.	* VERIFY CVC-11 control switch in OPEN. VERIFY CVC-11 Red Light ON, Green Light OFF.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 7.	<p>START Charging Pump 1C: 1) CLOSE supply breaker by POSITIONING Charging Pump 1C control switch to START.</p> <p>Cue: Charging Pump 1C control switch to START and, Amber light ON, Red and Green lights OFF.</p>	<p>* POSITION Charging Pump 1C control switch to START.</p> <p>VERIFY Amber light ON, red and green lights OFF.</p>		
8.	<p>START Charging Pump 1C: 2) DEPRESS Reset pushbutton and VERIFY annunciator, CHG PMP 1C DRIVE CONT TROUBLE (87220-24), OFF.</p> <p>Cue: Charging Pump 1C Reset PB depressed and annunciator, CHG PMP 1C DRIVE CONT TROUBLE, OFF.</p>	<p>* DEPRESS Charging Pump 1C Reset PB.</p> <p>* VERIFY annunciator, 87220-24, OFF</p>		
(C) 9.	<p>START Charging Pump 1C: 3) START Charging Pump 1C by POSITIONING Charging Pump 1C control switch to START.</p> <p>Cue: Charging Pump 1C control switch to START and Green, Amber and Red lights OFF.</p>	<p>* POSITION Charging Pump 1C control switch to START.</p> <p>VERIFY red light ON, amber and green lights OFF.</p> <p>DETERMINE pump did NOT start</p>		
(C) 10.	<p>REPLACE control power fuses (SD-100, ckt. 39 & 40).</p> <p>Cue[at SD-100]: Lights are OFF for Ckt 39 & 40.</p> <p>Cue[at Appendix R Box]: You have fuse puller & replacement fuses.</p> <p>Cue[at SD-100]: Fuses removed.</p> <p>Cue[at SD-100]: Fuses replaced.</p> <p>Cue[at DSP(front)]: Amber light is ON for Charging Pump C.</p>	<p>* OBTAIN replacement fuses and fuse puller from Appendix R box.</p> <p>REMOVE fuses 39 & 40 at SD-100.</p> <p>REPLACE fuses 39 & 40 at SD-100.</p>		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 11.	START Charging Pump 1C by POSITIONING Charging Pump 1C control switch to START. Cue: Charging Pump 1C control switch to START and Red light ON, Amber and Green lights OFF.	* POSITION Charging Pump 1C control switch to START. VERIFY red light ON, amber and green lights OFF.		
12.	ADJUST Chg Pump 1C Speed Control to increase Przr Cold Cal Level to 20-50%. Cue: PRZR level is slowly increasing to 20%.	* ADJUST Chg Pump 1C Speed Control to increase Przr Cold Cal Level to 20-50%.		
15.	REQUEST Control Operator B VERIFY 195 gpm CC return flow from each RXCP (FI-613/26620 and FI-609/26621 by 1B SI Pump). Cue: Control Operator B reports 195 gpm CC return flow from each RXCP.	* USE Radio and REQUEST Control Operator B VERIFY 195 gpm CC return flow from each RXCP		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS:

READ THE FOLLOWING TO THE OPERATOR:

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Auxiliary Operator.

The plant is at 100% power.

THE STEPS IN THIS JPM SHOULD BE: SIMULATED.

INITIATING CUE:

The Control Room Supervisor directs you to perform the local functional test of MS-103, T/D AFW Pump Trip and Throttle valve per RT-FW-05B, Turbine Driven AFW Pump Local Manual Operation, Step 4.1.

DO YOU HAVE ANY QUESTIONS BEFORE WE BEGIN?

Answer any questions the Operator may have, THEN read the following to the Operator to initiate the JPM performance:

LET'S BEGIN

THIS TASK IS NOT TIME CRITICAL

THE TASK CONDITIONS ARE:

You are the Nuclear Auxiliary Operator.

The plant is at 100% power.

INITIATING CUE:

The Control Room Supervisor directs you to perform the local functional test of MS-103, T/D AFW Pump Trip and Throttle valve per RT-FW-05B, Turbine Driven AFW Pump Local Manual Operation, Step 4.1.

LOG START TIME:

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
1.	Refer to RT-FW-05B, Turbine Driven AFW Pump Local Manual Operation, step 4.1.	* REFER to RT-FW-05B.		
(C) 2.	Trip MS-103 by depressing Emergency Push Trip Lever Located on top of turbine	* INDICATE DEPRESSING Emergency Push Trip Lever		
3.	Verify Latch-Up Lever releases and MS-103 closes. (CUE: Valve Latch Up Lever is released and valve is closed.)	* CHECK Latch up lever released. * VERIFY MS-103 CLOSED		
(C) 4.	RESET Emergency Push Trip Lever by MOVING Trip Connecting Rod against spring tension until the Trip Lever latches. (CUE: Trip Lever is latched.)	* RESET Emergency Push Trip Lever by latching Trip Lever. PUSH trip connecting rod to the left until the trip lever latches.		
(C) 5.	RESET MS-103 by ROTATING handwheel clockwise until Latch-Up Lever engages the Trip Hook. (CUE: The Latch-Up Lever is ENGAGED with the Trip Hook.)	* RESET MS-103 with Latch-Up Lever engaged with Trip Hook. ROTATE MS-103 handwheel in the clockwise direction until the Latch-up Lever engages the Trip Hook.		

STEP	PERFORMANCE ITEM	* STANDARD	SAT/ UNSAT	
			S	U
(C) 6.	OPEN MS-103 by ROTATING handwheel counterclockwise. (CUE: MS-103 handwheel is turned fully counterclockwise and the Sliding Nut is in the full up position)	* MS-103 turned fully counterclockwise. VERIFY Sliding nut is moving towards the full up position.		
7.	WHEN MS-103 is open, ROTATE handwheel 1/4 turn in CLOSE direction to allow for thermal expansion.	* ROTATE MS-103 Handwheel 1/4 turn clockwise.		
8.	Perform Independent Verification of MS-103 position. (CUE: Independent verification is complete.)	* Request Independent Verification.		

* Indicates required items for satisfactory completion of performance items.

LOG STOP TIME:

When the operator completes the performance portion of the JPM, then read the following:

THAT COMPLETES THIS PORTION OF THE JPM.

Ask any required follow-up questions and note the questions and answers in the JPM evaluation comments section.

When done with any required follow-up questions, then read the following:

THAT COMPLETES THIS JPM.

Make sure your documentation on the next page is complete.

	YES	NO	N/A
Were all of the critical steps performed correctly?			
<u>IF</u> the JPM was time critical, <u>THEN</u> was the JPM completed in the designated time?			
<u>IF</u> the JPM was NOT time critical, <u>THEN</u> was acceptable progress made in performing the task?			
Was the task standard met?			

IF any of the above questions was answered with a NO response, THEN this JPM must be evaluated as UNSATISFACTORY.

THE TASK STANDARD FOR THIS JPM IS:

Job Performance Measure was:

SATISFACTORY _____ UNSATISFACTORY _____

EVALUATOR SIGNATURE: _____ DATE: _____

COMMENTS: