07-~~2~~-91
A1.3

NIAGARA MOHAWK POWER CORPORATION

LICENSED OPERATOR JOB PERFORMANCE MEASURE

Title: Raise RWCU Reject Flowrate Revision: 1

Task Number: 2000060501

Operator:_____(RO/SRO) Evaluator:_____

Directions to operators:

When I tell you to begin you are to manipulate Reactor Water Cleanup Reject Flow Control Valve Manual Control Station to lower vessel water level and verify proper system operation. I will describe general conditions and provide you access to the tools to complete this task. Before you start, I will state the task standards and initiation cues and answer any questions.

Evaluation Method: _____ Perform _____ Simulate

Evaluation Location: _____ Plant _____ Simulator _____ Control Room

Average Completion Time: 5 minutes Actual Completion Time: _____

JPM Overall Rating: Sat/Unsat Questions: # Asked _____ # Correct _____

Comments: (Note: Any grade of Unsat requires a comment. A JPM overall rating of UNSAT shall be given if any critical step is graded as unsat. If all critical steps are performed satisfactorily and the Task Standards met, a JPM overall rating of SAT shall be given.)

Evaluators Signature: _____ Date: _____

Approvals: M Stewart 2/14/90
Training Supervisor - Unit-2

R. T. Rifkind 2/21/90 FOR MTC 4/1/90
Asst. Supt. - Training Supt. of Operations - Unit 2

10

4/29/250

K/A Rating: 4.10

Initial (Task) Conditions:

1. Reactor is shutdown.
2. RWCU is in operation and lined up for reject flow to the main condenser.

General Tools and Equipment:

None

General References:

N2-OP-37, Rev. 3, 12/1/88, "Reactor Water Cleanup System", Section H.3.0

Task Standards:

Increase RWCU reject flowrate to lower vessel water level, RWCU system operation verified to be IAW procedural requirements.

Critical Steps are denoted by (*).

Note: All steps are non-sequence critical unless noted.

Initiating cues:

You are directed by the Shift Supervisor to raise RWCU reject flow and lower vessel water level.

Performance Steps	Standard	Sat/Unsat
Start Time: _____		
1. Obtain current copy of procedure.	Procedure obtained.	Sat/Unsat

Performance Steps		Standard	Sat/Unsat
2.	Verify all applicable precautions and prerequisites.	Precautions/prereqs verified.	Sat/Unsat

NOTE ON PREREQUISITES - EVALUATOR WILL BE SECOND OPERATOR AND GIVE APPROPRIATE INDICATIONS.

*3.	Increase the demand on reject flow control valve FV-135 by using thumbwheel on P602. (Cue: Reject flow increases)	Raise reject flow rate as indicated by 2WCS-FR1602 (2G33-R602) on panel P602.	Sat/Unsat
*4.	Check NRHX temp.	Verify less than 130°F.	Sat/Unsat
5.	Check Reactor Water level lowering.	Verify lowering band and controllable.	Sat/Unsat
6.	Check Reactor Pressure.	Verify unaffected.	Sat/Unsat

Terminating Cue: FV-135 re-positioned and vessel water level lowering with Reactor Pressure unaffected.

Stop Time: _____

QUESTION NUMBER: O2-REQ-SJE-200-2-18-J01

TASK NUMBER: 2000060501
K/A RATING: 4.10
Requal TIF: 3.28

QUESTION:

UNDER WHAT PLANT CONDITIONS IS FULL RWCU REJECT FLOW REQUIRED TO PREVENT FEEDWATER STRATIFICATION?

ANSWER:

1. PRIOR TO REACTOR WATER TEMPERATURE EXCEEDING 200 DEGREES F.

2. PRIOR TO REACTOR POWER DECREASING BELOW 20%.

3. DURING POST SCRAM RECOVERY.

COMMENTS:

SAT / UNSAT

REFERENCES:
N2-OP-37, REV.3, 12/88, "REACTOR WATER CLEANUP SYSTEM," SECTION F.6.0

QUESTION NUMBER: 02-REQ-SJE-200-2-18-J02

TASK NUMBER: 2000060501
K/A RATING: 4.10
Requal TIF: 3.28

QUESTION:

WHAT PART OF THE RWCU SYSTEM IS BEING PROTECTED BY THE 120 DEGREES F LIMIT ON FILTER/DEMIN INLET TEMPERATURE?

ANSWER:

FILTER/DEMIN MEDIA

COMMENTS:

SAT / UNSAT

REFERENCES:
N2-OP-37, REV. 3, 12/88, "REACTOR WATER CLEANUP SYSTEM," SECTION H.5

NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # O2-REQ-SJE-200-2-18-J01	
The Reactor Water Cleanup (RWCU) System is lined up for reject flow to the Main Condenser. What automatic action would occur if the RWCU Pressure Switch, 2WCS-PS181, failed low?	
ANSWER	The RWCU Blowdown Flow Controller, 2WCS-FV135, would fully close.

K/A REFERENCE		
204000 - REACTOR WATER CLEANUP SYSTEM		
A 3.04	APPLICABILITY RO&SRO	IMPORTANCE 3.4/3.5
Ability to monitor automatic operations of the reactor water cleanup system including response to interlocks and trips designed to protect system components.		

NMP2 REFERENCES	
N2-OP-37; Reactor Water Cleanup System; Page 92; Item I.41.0; REV 3	
LESSON PLAN O2-REQ-001-204-2-00-4	OBJECTIVE EO-10.d

NETS COMMENTS		
Replaced question to eliminate direct look up.		
REVALIDATE (Y/N)? Y	AUTHOR - Ross	REVIEWER - Hajek

NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # O2-REQ-SJE-200-2-18-J02	
During a normal plant startup with reactor power at 30%, Reactor Water Cleanup (RWCU) Pressure Switch, 2WCS-PS182, fails high. What effect does this failure have on the RWCU System?	
ANSWER	This failure has no effect. During a normal start-up, RWCU Blowdown Flow Controller, 2WCS-FV135, is closed prior to exceeding 25% reactor power.

K/A REFERENCE		
204000 - REACTOR WATER CLEANUP SYSTEM		
A 3.06	APPLICABILITY RO&SRO	IMPORTANCE 3.1/3.1
Ability to monitor automatic operations of the reactor water cleanup system including lights and alarms.		

NMP2 REFERENCES	
N2-OP-37; Reactor Water Cleanup System; Page 92; Item I.41.3.e; REV 3 N2-OP-101A; Plant Start-Up; Page 30; Item E.5.12; REV 8	
LESSON PLAN O2-REQ-001-204-2-00-4	OBJECTIVE EO-10.5

NETS COMMENTS		
Replacement question.		
REVALIDATE (Y/N)? Y	AUTHOR - Ross	REVIEWER - Hajek

NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # O2-REQ-SJE-200-2-18-J05	
Reactor Water Cleanup (RWCU) Pump 2WCS-P1A has been secured for 40 minutes. The temperature difference between it and the system is 120°F. When placing the pump back in service, what is the maximum time allowed to vent the system?	
ANSWER	15 minutes.

K/A REFERENCE		
204000 - REACTOR WATER CLEANUP SYSTEM		
A 4.01	APPLICABILITY RO&SRO	IMPORTANCE 3.1/3.0
Ability to manually operate and/or monitor system pumps in the control room.		

NMP2 REFERENCES	
N2-OP-37; Reactor Water Cleanup System; Pages 12 & 30; Items E.4.2 & H.2.11.3; REV 3	
LESSON PLAN O2-REQ-001-204-2-00-4	OBJECTIVE EO-10.8.d

NETS COMMENTS		
New question.		
REVALIDATE (Y/N)? Y	AUTHOR - Ross	REVIEWER - Hajek

NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # O2-REQ-SJE-200-2-18-J03	
During a normal plant startup with reactor power at 5%, both Standby Liquid Control System initiation - Reactor Water Cleanup (RWCU) isolation Trip Systems, are determined to be inoperable. What operator action is required?	
ANSWER	Close the RWCU inboard and outboard isolation valves, 2WCS*MOV102 and 2WCS*MOV112, within 1 hour, and declare the RWCU System inoperable.

K/A REFERENCE		
204000 - REACTOR WATER CLEANUP SYSTEM		
SG 05	APPLICABILITY SRO	IMPORTANCE 2.9/3.8
Knowledge of limiting conditions for operations and safety limits.		

NMP2 REFERENCES	
Tech Spec 3.3.2; Table 3.3.2-1; Pages 3/4 3-10 - 3/4 3-16; Actions c and 22	
LESSON PLAN O2-REQ-001-204-2-00-4	OBJECTIVE EO-10.10

NETS COMMENTS		
New question.		
REVALIDATE (Y/N)? Y	AUTHOR - Ross	REVIEWER - Hajek

NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # O2-REQ-SJE-200-2-18-J04	
During a normal plant startup with reactor power at 5%, Reactor Water Cleanup (RWCU) Pump Room Temperature Switches, 2WCS-TS-1601A and 2WCS-TS-1601C are determined to be inoperable. What operator action is required?	
ANSWER	Restore the inoperable channels to operable status within 2 hours.

K/A REFERENCE		
204000 - REACTOR WATER CLEANUP SYSTEM		
SG 05	APPLICABILITY SRO	IMPORTANCE 2.9/3.8
Knowledge of limiting conditions for operations and safety limits.		

NMP2 REFERENCES	
Tech Spec 3.3.2; Table 3.3.2-1; Pages 3/4 3-10 - 3/4 3-16; Actions b and 22 N2-OP-37; Reactor Water Cleanup System; Pages 72 & 74; Items I.29.0 & I.30.0; REV 3	
LESSON PLAN O2-REQ-001-204-2-00-4	OBJECTIVE EO-10.10

NETS COMMENTS		
New question.		
REVALIDATE (Y/N)? Y	AUTHOR - Ross	REVIEWER - Hajek