### NINE MILE POINT NUCLEAR STATION

### OPERATOR JOB PERFORMANCE MEASURE

Title: Start A Recirc Pump	At Power			Revision:_i	NRC 2006
Task Number: 2020040101					
Approvals:					
	/		NA EXAM	SECURITY	1
General Supervisor	Date		General St		Date
Operations Training (Design	ee)		Operations	(Designee)	
NA EXAM SECURITY		<u> </u>			
Configuration Control	Date				
Performer:		(RO/S	SRO)		
Trainer/Evaluator:					
Evaluation Method: X	_ Perform		_ Simulate		
Evaluation Location:	_ Plant	X	_ Simulator		
Expected Completion Time:	25 min	Time Critical	Task: NO	Alternate P	ath Task: NO
Start Time:	Stop Time:	<del></del>	Completion	n Time:	
JPM Overall Rating:	Pass	Fail			
NOTE: A JPM overall rating unsat or individual of	-		•	•	Any grade of
Comments:					
Evaluators Signature:			Dat	e:	

Recommended Start Location: (Completion time based on the start location)

Unit 1 Simulator

Simulator Set-up (if required):

IC238 For Exam. This setup is for JPM 1 and 2 together. IC20 modified for 4 loop operation Recirc Pump 11 is shutdown, discharge valve closed and controller in MAN.

Core Flow is reduced to 50 Mlbm/hr

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

### Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

#### References:

- 1. NUREG 1123, 202001, A4.01, 3.7/3.7
- 2. N1-OP-1, H.4.0

#### Tools and Equipment:

1. None

Task Standard: Recirc Pump 11 started and controlled by master controller per N1-OP-1.

### Initial Conditions:

- 1. 4 loop power operations are in progress
- 2. Recirc Pump 11 is to be started and placed in service following corrective maintenance.
- 3. The pump is NOT in local manual or local lock.
- 4. All support personnel from Maintenance, I&C and Engineering are available to support the pump start.
- 5. All required briefings are complete.
- 6. Approved RMR is with SM and permission is granted to proceed with pump start.
- 7. Instructor to ask operator for any questions.

### **Initiating Cues:**

RO: "(Operator's name), start Recirc Pump 11 per N1-OP-1, section H.4.0."

SRO: "(Operator's name), start Recirc Pump 11 per normal operating procedures."

Per	ormance Steps		Standard	Grade
1.	Provide repeat back of initiating cue.  Evaluator Acknowledge repeat back providing correction if necessary.		oper communications used for repeat ck (GAP-OPS-01/ CNG-HU-1.01-1001)	Sat/Unsat
REG	CORD START TIME			
2.	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.		-OP-1 is obtained. Precautions & nitations reviewed & section H.4.0	Sat/Unsat
3.	Verify RESET the following:			
	□ 86 GENERATOR LOCKOUT (Aux		Dispatches operator to Aux Control	Sat/Unsat
	CR)		Room to verify lockout is reset.	
Cue	: Report 86 generator lockout is reset.			
	□ PUMP MOTOR VIBRATION		Observes alarm F2-1-1 is cleared.	Sat/Unsat
	RESET (F Panel)			
	JE I ( I BBB : 1 I I I I I I I I I I I I I I I I I I		Name of Control of Con	0 - 1/1 1 1
4.	IF selected RRP is in Local Manual or Local lock		Identifies step as NA	Sat/Unsat
E	Verify the following:			
5.	Verify the following:  □ Depress the RR MG 11 SCOOP  TUBE AIR FAILURE LOCK RESET  pushbutton (F Panel)		Depresses RR MG 11 SCOOP TUBE AIR FAILURE LOCK RESET pushbutton (F Panel)	Sat/Unsat
	RR MG 11 SCOOP TUBE AIR FAILURE LOCK light extinguished.	0	Observes RR MG11 SCOOP TUBE AIR FAILURE LOCK red light extinguished.	Sat/Unsat

Performance Steps	Standard	Grade
Verify Scoop Tube Position Meter (middle meter) is set at 40% by Control Room Indication.	Observe Scoop Tube Position Meter (middle meter) at 40% by Control Room Indication.	Sat/Unsat
6. Confirm approximately 120 VAC across terminals 3 and 4 on Relay 31 VOLT REG REMOTE EXC (aux CR)	Requests voltage reading from Electrical Maintenance (EM) personnel.	Sat/Unsat
Cue: Voltage reading across terminal 3 and 4 is 120 VAC.	Acknowledges report of terminal voltage.	Sat/Unsat
<ol> <li>Check physical condition of Relay 63X, (Aux CR) and verify contacts pulled in (relay energized).</li> </ol>	Directs EM to check relay condition and verify contacts pulled in.	Sat/Unsat
Cue: Relay is energized with contacts pulled in.	Acknowledges report of relay condition and relay energized.	Sat/Unsat
8. Directs the following steps be	Directs performance and	
performed (in any order):	acknowledges status for the following:	
Cue: All conditions below are correct for the		
pump start.		
□ IF pump is isolated	Step NA, pump is not isolated	Sat/Unsat
<ul><li>Loop Flow instrument valved in</li></ul>	Instrument valved in	Sat/Unsat
□ Reactor Engineer notified	Reactor Engineer notified	Sat/Unsat
Confirm exciter brushes not lifted	Exciter brushes are properly installed	Sat/Unsat
□ Confirm I/P air pressure signal > 10 psig	Air pressure is above 10 psig	Sat/Unsat
□ Bailey Scoop tube positioner connected	Positioner is connected	Sat/Unsat
<ol> <li>If placing the 5<sup>th</sup> loop in service, THEN verify electrical and mechanical stops adjusted for 5 loop operation.</li> </ol>	Directs verification of electrical and mechanical stops adjusted for 5 loop operation.	Sat/Unsat
Cue: Electrical and mechanical stops are adjusted for 5 loop operation.	Acknowledges report of stop adjustments.	Sat/Unsat
10. Confirm idle loop temperature is within	Calls up A427 and A428 for loop 11	Sat/Unsat
45°F of an operating loop by checking	Calls up points for any operating loop.	Sat/Unsat
computer points.	Compares temperatures	Sat/Unsat
	Determines loops differential	Sat/Unsat
	temperatures are within 45°F.	

16. IF frequency drop to 0 hz......

Frequency is NOT expected to drop to 0

Sat/Unsat/

NA

í.

11.	Verify recirculation flow is less than 50 x 10 <sup>6</sup> lbm/hr.		Adjust RECIRC MASTER controller to establish flow is less than $50 \times 10^6$ lbm/hr. (E Console)	Pass/Fail		
12.	Verify Recirc Pump M/A station AUTO/BAL/MAN switch to MAN		Observes/checks Verify Recirc Pump 11 M/A station AUTO/BAL/MAN switch in MAN.	Sat/Unsat		
13.	Set RRECIRC PUMP 11 GEMAC OUTPUT (BOTTOM METER) to match running pumps with a maximum of 50%.		Adjust RRECIRC PUMP 11 GEMAC OUTPUT (BOTTOM METER) to match running pumps with a maximum of 50%.	Pass/Fail		
14.	Verify closed REACTOR R PUMP 11 DISCHARGE VALVE		Observe REACTOR R PUMP 11 DISCHARGE VALVE closed by green light indication (F Panel)	Sat/Unsat		
15.	Verify open the following: valves:  □ REACTOR R PUMP 11 SUCTION  VALVE	0	Observe REACTOR R PUMP 11 SUCTION VALVE open by red light indication (F Panel)	Sat/Unsat		
	□ REACTOR R PUMP 11 BYPASS VALVE	0	Observe REACTOR R PUMP 11 BYPASS VALVE open by red light indication (F Panel)	Sat/Unsat		
	CAUTION: Failure to trip the generator when frequency drops to 0 hz could result in damage to the generator slip rings.					

□ IF Frequency drops to 0 Hz when field

REACTOR RP MOTOR 11 switch at F

breaker closes, THEN places

Panel to STOP. (Not expected)

NOTE: During start sequence, alarm F2-1-1 is expected to actuate. IF candidate begins to respond to this alarm inform candidate that a second operator will respond to this alarm.

- 17. Place in START REACTOR RP MOTOR 11 switch at F Panel and observe auto sequencing to confirm proper operation:
- Place REACTOR RP MOTOR 11 switch at F Panel to START

Pass/Fail

- MG MOTOR starts
- MG Generator accelerates to 50-60 hz
- □ Generator Field Breaker closes
- Generator slows down toward 20% or 11.5 hz
- Observes start sequence:

Sat/Unsat

- MG MOTOR starts
- MG Generator accelerates to 50-60 hz
- Generator Field Breaker closes
- ☐ Generator slows down toward 20% or 11.5 hz
- WHEN speed (Frequency Meter) is between 30 and 25 hz, open REACTOR R PUMP 11 DISCHARGE VALVE.
- Open REACTOR R PUMP 11 DISCHARGE VALVE.

Pass/Fail

- 19. IF reverse flow is observed as indicated by increasing Total Recirculation Flow and decreasing reactor power, THEN declare the APRMs inoperable and enter TS 3.6.2 (NOT expected)
- □ IF reverse flow conditions are observed, reports condition to SRO and notifies SRO of TS 3.6.2 entry requirement.

Sat/Unsat/ NA

- 20. IF desired THEN maintain Total Recirc Flow constant by reducing other pumps speeds.
- □ Acknowledges direction

Sat/Unsat/ NA

Cue: CRS does NOT desire to maintain total Recirc flow constant.

- 21. Verify RRP 11 maintained within the following limits:
- □ Observes parameters and ensures they are below values listed.

Sat/Unsat

- ☐ Generator MW < 0.790
- ☐ Generator amps < 240
- RRP Flow < 16.8 X 10<sup>6</sup> lbm/hr continuous
- ☐ Generator Frequency 11.5 to 56 Hz

Performance Steps		Standard	Grade			
22. Adjust pumps speed to match other pumps.		Adjust RECIRC PUMP 11 SPEED CONTROL MAN adjust knob such that pump speed matches speed of other pumps. (Approx 38 to 40Hz)	Pass/Fail			
23. WHEN pump speed matches other pumps AND deviation (top meter) is at zero, place RRECIRC PUMP 11 SPEED CONTROL IN AUTO OR BALANCE, if desired.		WHEN pump speed matches other pumps AND deviation (top meter) is at zero, place RRECIRC PUMP 11 SPEED CONTROL IN BAL.	Pass/Fail			
Cue: Direct speed control placed in BAL						
24. Verify P/F map on E Panel updated to loop requirements.		5 loop P/F map is displayed at E Panel.	Sat/Unsat			
<ol> <li>Verify reset 50 SR PUMP MOTOR STALLED ROTOR target (Aux CR)</li> </ol>	0	Dispatches operator to verify target is reset. Acknowledge report that target is	Sat/Unsat			
Cue: Report target is reset.		reset.				
26 If recovering from 2 loop	_	Cton in NIA	0.54/1.15.5.54			
26. IF recovering from 3 loop		Step is NA	Sat/Unsat			
<ol> <li>Maintain Reactor Recirc MG Set Oil Cooler Outlet Temperatures 110 to 130°F by throttling oil cooler TBCLC outlet valves.</li> </ol>		Dispatches operator to maintain oil temperatures within limits per section F.3.0	Sat/Unsat			
28. Remove any off normal signs previously posted for pump started.		Removes any off normal condition signs.	Sat/Unsat			
29. Report RRP 11 started to SRO.		Reports RRP started to SRO	Sat/Unsat			
END OF JPM						
Terminating Cue: Recirc Pump 11 started and controlled by master controller per N1-OP-1.						
RECORD STOP TIME						

JPM HISTORY

JPM HISTORY PAGE									
Revision	Date	Change Driver	Originator	Description					
0	8/9/06	LC1 05-01 NRC Exam	G. Bobka	Created as new JPM for Unit 1 LC1 05-01 NRC Exam					
	9/20/06			Validated with Ops Meier, Blum					
			10						

RO

## **Initial Conditions:**

- 1. 4 loop power operations are in progress
- 2. Recirc Pump 11 is to be started and placed in service following corrective maintenance.
- 3. The pump is NOT in local manual or local lock.
- 4. All support personnel from Maintenance, I&C and engineering are available to support the pump start.
- 5. All required briefings are complete.
- 6. Approved RMR is with SM and permission is granted to proceed with pump start.
- 7. Instructor to ask operator for any questions.

# **Initiating Cues:**

RO: "(Operator's name), start Recirc Pump 11 per N1-OP-1, section H.4.0."



### **Initial Conditions:**

- 1. 4 loop power operations are in progress
- 2. Recirc Pump 11 is to be started and placed in service following corrective maintenance.
- 3. The pump is NOT in local manual or local lock.
- 4. All support personnel from Maintenance, I&C and engineering are available to support the pump start.
- 5. All required briefings are complete.
- 6. Approved RMR is with SM and permission is granted to proceed with pump start.
- 7. Instructor to ask operator for any questions.

# **Initiating Cues:**

SRO: "(Operator's name), start Recirc Pump 11 per normal operating procedures."

## NINE MILE POINT NUCLEAR STATION

## OPERATOR JOB PERFORMANCE MEASURE

Title: Restore Reactor Bu	lding Ventilatio	n Followin	g Automatic Isolati	on Revision	n: NRC 2006
Task Number:					
Approvals:					
General Supervisor Operations Training (Design	Date pee)	<u>    33  </u>   2007	NA EXAM S General Sup Operations	ervisor	/ Date
NA EXAM SECURITY Configuration Control	/ Date				
Performer:		(	(RO/SRO)		
Trainer/Evaluator:					
Evaluation Method: X	Perform		Simulate		
Evaluation Location:	Plant	>	X Simulator		
Expected Completion Time	: 20 Minutes	Time Cr	ritical Task: No	Alternate Pa	nth Task: No
Start Time:	Stop Time:_		Completion	Time:	
JPM Overall Rating:	Pass	Fail			
NOTE: A JPM overall ration unsat or individual			any critical step is requires a commer		Any grade of
Comments:					
Evaluators Signature:			Date	::	



Recommended Start Location: (Completion time based on the start location)

Unit 1 Simulator

### Simulator Set-up (if required):

- 1. IC238 For Exam. This setup is for JPM 1 and 2 together. Run with JPM 1
- 2. Malfunctions RM6U and 6V RX BLDG VENT RAD MON 100% inserted to isolate system. THEN cleared to allow system reset.
- 3. RB Vent fan switches placed in OFF (OP-10, H.2.0)
- 4. RBEVS system 12 manually secured (OP-10, H.2.0)

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

### Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

### Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - · Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

_		-					
↩	ച	$\alpha$	rΔ	n	ce	C	٠
١,	ᄗ			,,	-c	0	

1. N1-OP-10

Tools and Equipment:

1. None

Task Standard: Reactor Building Normal Ventilation restored and both RBEVS trains returned to standby.

#### Initial Conditions:

- 1. Reactor Building Normal Ventilation System isolated due to high RB Vent monitor radiation levels.
- 2. Actions have been completed for the automatic start of RBEVS system.
- 3. Cause of the high radiation condition is known and the condition is corrected.
- 4. Instructor to ask operator for any questions.

### Initiating Cues:

- RO: "(Operator's name), shutdown RBEVS and restart Reactor Building Normal Ventilation system, with Supply and Exhaust Fan 11 components in SLOW speed per N1-OP-10 section G".
- SRO: "(Operator's name), Restart Reactor Building Normal Ventilation system and return the ventilation system to normal configuration, with Supply and Exhaust Fan 11 components in SLOW speed".

<u>Per</u>	formance Steps	 <u>Standard</u>	Grade
1.	Provide repeat back of initiating cue.  Evaluator Acknowledge repeat back providing correction if necessary.	oper communications used for repeat ck (GAP-OPS-O1/Operations Manual)	Sat/Unsat
RE	CORD START TIME		
2.	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N1-OP-10 obtained. Precautions & limitations reviewed & section G.2.0 (Shutdown RBEVS) and E.1.0 (Place RB Normal Ventilation in Service) referenced.	Sat/Unsat

Performance Steps			Standard	Grade
Man G.2.	ual Shutdown of RBEVS per N1-OP-10 0			
3.	IF RBEVS was automatically initiated AND initiating signal has cleared, THEN push the Reset Buttons on both Reactor Building Ventilation Radiation Monitors simultaneously.		At J Panel (Back panel) locate RX BLDG VENT EXH RAD MON 11 AND 12. Simultaneously depress SYSTEM RESET pushbutton on BOTH	Sat/Unsat Pass/Fail
	When both SYSTEM RESET pushbuttons are depressed, annunciator L1-4-3 REACT BLDG VENT RAD MONITOR OFF NORMAL clears.		radiation monitors	
4.	Notify Rad Protection the normal Reactor Building Ventilation system will be placed in service.	0	Notifes Rad Protection, the normal Reactor Building Ventilation system will be placed in service.	Sat/Unsat
CUI	E: Acknowledge notification as Rad Protection.			
5.	Place Reactor Building Ventilation in service in accordance with Section E	_	Go to section E.1.0 to place Reactor Building Normal Ventilation in service.	Sat/Unsat
6.	Confirm the following:  Ualve lineup complete per Attachment 1  Electrical lineup complete per Attachment 2  Control switch lineup complete		Indicates step complete.	Sat/Unsat

<u>Perf</u>	orm	ance Steps	,	Standard	Grade
		per Attachment 3 Stack Monitoring system operating OR Chemistry is taking grab samples Airborne activity monitor unit operating OR Rad Protection is taking grab samples			
CUE		nform candidate that all of the above prerequisite actions are complete.			
7.	Re	etify Rad Protection, the Normal eactor Building Ventilation system		Notifies Notify Rad Protection, the Normal Reactor Building Ventilation system will be placed in service.	Sat/Unsat/ NA
CUE		Acknowledge notification as Rad Protection.			
8.	OF ver 12 N//	L1-4-3, RB VENT RAD MONITOR FF NORMAL is alarming, THEN rify RB vent rad monitors 11 and reset as follows: A, Annunciator clear( )	0	Step should be now marked N/A, since action was performed earlier (JPM step 3)  If not already performed, THEN  At J Panel (Back panel) locate RX	Sat/Unsat/ NA
	a. b.\	Simultaneously depress  Channel 11 and 12 RB vent  rad monitor reset buttons on J  panel  Verify annunciator L1-4-3 clear		BLDG VENT EXH RAD MON 11 AND 12.  Simultaneously depress SYSTEM RESET pushbutton on BOTH radiation monitors  Verify Annunciator L1-4-3 is clear	Pass/Fail/ NA Sat/Unsat/
		•			20.0 2.1000

NA

Performance Steps	Standard	Grade
<ul> <li>9. Verify open the following blocking valves:</li> <li>202-15, REACTOR BLDG SUPPLY ISOLATION VALVE</li> <li>11</li> </ul>	□ At L Panel place 202-15,  REACTOR BLDG SUPPLY  ISOLATION VALVE 11 control switch to OPEN.	Pass/Fail
<ul> <li>202-16, REACTOR BLDG</li> <li>SUPPLY ISOLATION VALVE</li> <li>12</li> </ul>	□ Observe for BOTH valves: □ 202-15, REACTOR BLDG SUPPLY ISOLATION VALVE 11 red light ON a green light OFF. □ 202-16, REACTOR BLDG SUPPLY ISOLATION VALVE 12 red light ON a green light OFF.	nd Sat/Unsat
<ul> <li>202-32, REACTOR BLDG</li> <li>EXHAUST ISOLATION</li> <li>VALVE 11</li> <li>202-31, REACTOR BLDG</li> <li>EXHAUST ISOLATION</li> <li>VALVE 12</li> </ul>	■ At L Panel place 202-32, REACTOR BLDG EXHAUST ISOLATION VALVE 11 control switch to OPEN.	Pass/Fail
When isolation valves are open annunciators L1-4-3 EMERG VENT SYS CH 11 RELAY OPERATE and L1-4-6 EMERG VENT SYS CH 12 RELAY OPERATE clear.	<ul> <li>Observe for BOTH valves:</li> <li>202-32, REACTOR BLDGEXHAUST ISOLATION</li> <li>VALVE 11 red light ON a green light OFF.</li> <li>202-31, REACTOR BLDGEXHAUST ISOLATION</li> <li>VALVE 12 red light ON a green light OFF.</li> </ul>	nd G Sat/Unsat

Performance	Stens
	OLENS

### Standard

Grade

- 10. Place ventilation fans in service as follows:
  - Start REACTOR BLDGEXHAUST FAN 11 on SLOWspeed
- Place REACTOR BLDG EXHAUST Pass/Fail
   FAN 11 control switch to SLOW.
- □ Confirm open 202-08

  REACTOR BLDG EXHAUST

  FAN 11 OUTLET DAMPER
- Observe middle red light ON and fan samps indicate fan started.

Sat/Unsat

Sat/Unsat

- Observe 202-08 REACTOR BLDG
   EXHAUST FAN 11 OUTLET DAMPER
   red light ON and green light OFF.
- Start REACTOR BLDG
   SUPPLY FAN 11on SLOW
   speed
- □ Place REACTOR BLDG SUPPLY FAN P

  11 control switch to SLOW.

Pass/Fail

□ Confirm open FCV 202-03
REACTOR BLDG SUPPLY

FAN 11 (12) INLET DAMPER

 Observe middle red light ON and fan amps indicate fan started. Sat/Unsat

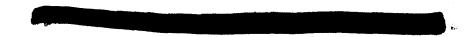
Observe FCV 202-03 REACTOR
 BLDG SUPPLY FAN 11 (12) INLET
 DAMPER red light ON and green light
 may be ON indicating throttling..

Sat/Unsat

- 11. Adjust fan speeds to work in conjunction with the inlet damper (preset to run in Auto) for maintaining Reactor Building/Atmosphere dP from -0.25 to -0.4 inches of water, as well as moderate Reactor Building temperatures.
- □ Indicates step complete. Fans are to remain in SLOW speed.
- □ Return to step G.2.4 to complete shutdown of RBEVS train.

<u>Perf</u>	formance Steps	Standard	Grade
12.	Stop any running RBEVS fans	□ Place 202-53 EVS FN switch to STOP then re	
13.	Verify closed the following valves:  □ 202-34, EM VENT EXHAUST  FAN 11 OUTLET BV	□ Observe 202-34, EM V EXHAUST FAN 11 OU green light ON and red	TLET BV
	□ 202-35, EM VENT EXHAUST FAN 12 OUTLET BV	□ Observe 202-35, EM V EXHAUST FAN 12 OU green light ON and red	TLET BV
14.	Verify the following control switches in AUTO:  □ 202-37, EM VENTILATION  LOOP 11 INLET BV	□ Place 202-37, EM VEN LOOP 11 INLET BV co	
	<ul><li>202-38, EM VENTILATION LOOP</li><li>12 INLET BV</li></ul>	to AUTO  Verify 202-38, EM VEN LOOP 12 INLET BV co AUTO.	
15.	Verify closed the following valves:  □ 202-37, EM VENTILATION  LOOP 11 INLET BV	□ Observe 202-37, EM  VENTILATION LOOP  green light ON and red	
	<ul><li>202-38, EM VENTILATION</li><li>LOOP 12 INLET BV</li></ul>	Observe 202-38, EM V LOOP 12 INLET BV grand red light OFF.	

Performance Steps			Grade	
16.	Verify the following control switches in green flag position:			
	□ 202-53, EVS FAN 11		Verify 202-53, EVS FN 11 control switch is green flagged.	Sat/Unsat
	□ 202-33, EVS FAN 12		Place 202-33, EVS FN 12 control switch to green flagged from PTL position.	Pass/Fail
17.	IF LCO 3.4.4.e (7 day plant shutdown LCO when one train of EVS is inoperable) was entered due to an EVS fan in Pull To Lock, THEN notify the Shift Manager that the LCO may be exited at this time.		Notify Shift Manager that LCO can be exited.	Sat/Unsat
CUE	E: As SM acknowledge LCO can be exited.			
18.	Notify SRO that RBEVS is shutdown and Reactor Building Normal Ventilation is in service.		Proper communications used.	Sat/Unsat
Cue	e: Acknowledge report.			
ENI	O OF JPM			
	minating Cue: Reactor Building Normal adby.	Venti	ilation restored and both RBEVS trains re	turned to
REC	CORD STOP TIME			



### REACTOR OPERATOR CUE SHEET

### **Initial Conditions:**

- 1. Reactor Building Normal Ventilation System isolated due to high RB Vent monitor radiation levels.
- 2. Actions have been completed for the automatic start of RBEVS system.
- 3. Cause of the high radiation condition is known and the condition is corrected.
- 4. Instructor to ask operator for any questions.

## **Initiating Cues:**

RO: "(Operator's name), shutdown RBEVS and restart Reactor Building Normal Ventilation system, with Supply and Exhaust Fan 11 components in SLOW speed per N1-OP-10 section G".

### SENIOR REACTOR OPERATOR CUE SHEET

### Initial Conditions:

- 1. Reactor Building Normal Ventilation System isolated due to high RB Vent monitor radiation levels.
- 2. Actions have been completed for the automatic start of RBEVS system.
- 3. Cause of the high radiation condition is known and the condition is corrected.
- 4. Instructor to ask operator for any questions.

# **Initiating Cues:**

SRO: "(Operator's name), Restart Reactor Building Normal Ventilation system and return the ventilation system to normal configuration, with Supply and Exhaust Fan 11 components in SLOW speed".

## NINE MILE POINT NUCLEAR STATION

### OPERATOR JOB PERFORMANCE MEASURE

Title: Place 11 Shutdown C	cooling Loop in		Revision: NRC 2006		
Task Number: 2050030101					
Approvals:					
General Supervisor Operations Training (Designe	/ Date ee)		NA EXAM S General Su Operations	pervisor	/ Date
NA EXAM SECURITY Configuration Control	/ Date				
Performer:		(RC	/SRO)		
Trainer/Evaluator:					
Evaluation Method: X	_ Perform		Simulate		
Evaluation Location:	_ Plant	X	Simulator		
Expected Completion Time:	15 min	Time Critica	al Task: NO	Alternate	Path Task: NO
Start Time:	Stop Time:		Completion	Time:	
JPM Overall Rating:	Pass	Fail			
NOTE: A JPM overall rating unsat or individual of					l. Any grade of
Comments:					
Evaluators Signature:			Date	e:	

Recommended Start Location: (Completion time based on the start location)

Unit 1 Control Room Simulator

#### Simulator Set-up (if required):

- 1. Initialize Simulator to IC-19 or similar. Use IC-245 for NRC Exam
- 2. Take Simulator out of Freeze.
- 3. Remove SDC from service:
  - a. Close TCVs
  - b. Trip operating SDC pumps
  - c. Close SDC IVs
  - d. Close loop inlet BVs
- 4. Remote SC01 SDC VALVE 38-01 BREAKER PB 17 OPEN
- 5 Remote SC02 SDC VALVE 38-02 FUSES DC VLV BRD 12 PULL
- 6. Remote SC03 SDC VALVE 38-13 BREAKER PB 17 OPEN

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

### Directions to Operators:

Read Before **Every** JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

#### References:

- 1. NUREG 1123, 205000 A4.01 3.7/3.7
- 2. N1-OP-4

Tools and Equipment:

None

### Task Standard:

Shutdown Cooling Loop 11 placed in service and TCS temperature lowering.

#### **Initial Conditions:**

- 1. Reactor is shutdown with all rods in.
- 2. Reactor pressure is less than 120 psig.
- 3. N1-OP-4 has been completed up to and including step E.3.1.
- 4. Fuses and breakers for SDC Valves have not been installed
- 5. RPV level is being monitored by other operators.
- 6. Instructor to ask operator for any questions.

### **Initiating Cues:**

"(Operator's name), place Shutdown Cooling Loop 11 in service and establish a cooldown rate not to exceed 75°F/hr."

Perf	formance Steps		Standard	Grade
1.	Provide repeat back of initiating cue.  Evaluator Acknowledge repeat back providing correction if necessary.		oper communications used for repeat ack (GAP-OPS-01/ CNG-HU-1.01-1001)	Sat/Unsat
REC	CORD START TIME			
•2.	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	lim	1-OP-4 obtained. Precautions & nitations reviewed & section E.3.0 ferenced.	Sat/Unsat
3.	Open the following valves:			
	• 38-03, SDC VALVE 11.	0	Rotate 38-03 switch CW to OPEN.  Observe red light energized; green	Pass/Fail

Per	formance Steps	Standard	Grade
		light extinguished.	
	• 38-04, SDC VALVE 12.	Rotate 38-04 switch CW to OPEN.  Observe red light energized; green light extinguished.	Pass/Fail
	• 38-05, SDC VALVE 13.	Rotate 38-05 switch CW to OPEN.  Observe red light energized; green light extinguished.	Pass/Fail
4.	IF fuses and breakers are NOT installed, THEN perform the following:		
	<ul> <li>□ Remove relay block for 27UV</li> <li>Relay for valve 38-02 at DC Valve</li> <li>Board 12</li> </ul>	Dispatch operator to remove relay block.	Sat/Unsat
	CONTACT SIM OPERATOR FOR		
	REQUIRED REMOTE FUNCTION		
	ACTIVATE F4-3-1 Crywolf (TRG 1)		
	CUE: Report relay block is removed.		
	(Sim operator then put F4-3-1 OFF on TRG2)		
	☐ Install fuses for 38-02, SDC  SYSTEM IN IV 12 DC Valve Board  12	Dispatch operator to install fuses.	Sat/Unsat
	CONTACT SIM OPERATOR FOR		
	REQUIRED REMOTE FUNCTION		
	ACTIVATE Remote SC02 SDC VALVE		
	38-02 FUSES DC VLV BRD 12 PULL		
	AND Annunciator F4-3-1 OFF (TRG 2)		
	CUE: Report fuses are installed.		

- Open 38-02, SDC SYSTEM IN IV 12 (OUTSIDE)
- □ Rotate 38-02 switch CW to OPEN. Pass/Fail
  Observe red light on, green light off.

Pass/Fail

- 6. Open 38-01, SDC SYSTEM IN IV 11 (INSIDE).
- □ Rotate 38-01 switch CW to OPEN.

  Observe red light on, green light off.

Cue: Shutdown cooling pumps.

Porf	ormance	Stens		Standard	Grade
FEII	omiance	Oteps		Otanidard	
10.	•	3-09, SDC Cooling TCV 11, mately 10%.	0	Rotate knob on controller 38-09A CW until 10% valve position is observed.	Pass/Fail
11.	System, selected	or water flashing occurs in SDC reduce reactor water flow via SDC cooling TCV and the RBCLC cooling water flow.		Pump amp indicator observed as steady.	Sat/Unsat
12.	-	SDC COOLING TCV 11 for warmup of the system.		Rotate knob on controller 38-09A CW or CCW as required for a gradual warmup as indicated on 38-136B.	Sat/Unsat
	NOTE:	Opening of TCV 11 will be required to stop the RCS temperature rise and start a cooldown. TCV may have to be opened between 30 and 40% to turn temperature.	0	Establish a cooldown rate below 75°F/hr	Pass/Fail
13.	Inform S	SM Shutdown Cooling Loop 11 ce.	Pr	roper communications used.	Sat/Unsat
	Cue: Ad	cknowledge report.			
ENI	O OF JPM	1			
	<b>minating</b> ering.	Cue: Shutdown Cooling Loop	p 11	is placed in service and RCS temperatur	re is
REC	CORD ST	OP TIME			

JPM HISTORY

JPM HISTORY PAGE						
Revision	Date	Change Driver	Originator	Description		
0	2/13/07	LC1 05-01 NRC Exam	G. Bobka	Updated for Unit 1 LC1 05-01 NRC Exam. Bank JPM O1-OPS-SJE-205-1- 01.		

## **Initial Conditions:**

- 1. Reactor is shutdown with all rods in.
- 2. Reactor pressure is less than 120 psig.
- 3. N1-OP-4 has been completed up to and including step E.3.1.
- 4. Fuses and breakers for SDC Valves have not been installed
- 5. RPV level is being monitored by other operators.
- 6. Instructor to ask operator for any questions.

# **Initiating Cues:**

"(Operator's name), place Shutdown Cooling Loop 11 in service and establish a cooldown rate not to exceed 75°F/hr."

Facility: Nine Mile Point Unit 1  Exam Level: RO SRO-I  Date of Examination: March 12, 2007  Operating Test No.: NRC EXAMINATION						
Control Room Systems <sup>®</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including	Control Room Systems <sup>®</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)					
System / JPM Title	Type Code*	Safety Function				
		45				
JPM 1 Recirc/ Start a Recirc Pump At Power Proc N1-OP-1 H.4.0	S, M	1				
KA 202001 A4.01 3.7/3.7 Bank O1-OPS-SJE-202-1-01 (originally a low power task)		REACTIVITY CONTROL				
JPM 2 RB Vent/ Restore Reactor Building Ventilation Following	S, N	9				
Automatic Isolation Proc N1-OP-10 G.2.0 and E.1.0 KA 288000 A4.01 3.1/2.9		RADIOACTIVITY RELEASE				
JPM 3 Shutdown Cooling/ Place Shutdown Cooling Loop In Service	S, D, L	4				
Proc N1-OP-4 E.3.0 KA 205000 A4.01 3.7/3.7 Bank O1-OPS-SJE-205-1-01		HEAT REMOVAL				
JPM 4 AC Elec/ Loss of Offsite Power With EDG Failures (EDG has failed to autostart and manual start is required. While implementing SOP, an EDG trips and alternate SOP actions are taken to crosstie PB 17B with 17A).  Proc N1-SOP-33A.1  KA 262001 A2.03 3.9/4.3  Bank O1-OPS-SJE-200-1-52	S, M, A	6 ELECTRICAL				
JPM 5 FWLC/ Exercise RPV Level Column Switches (After returning FWLC to automatic control, level transmitter fails downscale, requiring manual level control).  Proc N1-PM-Q8, N1-OP-16 KA 259002 A4.03 3.8/3.6	S, N, A	2 REACTOR WATER INVENTORY CONTROL				
JPM 6 Primary Containment/Vent the Drywell During Power Operation Proc N1-OP-9 H.1.0 KA 223001 A4.03 3.4/3.4	S, N	5 CONTAINMENT INTEGRITY				
JPM 7 RPS/ Reset RPS Scram and ARI After High Drywell Pressure	S, N, L	7				
Scram RO Only. This JPM is not performed by SRO-I Proc N1-SOP-1 KA 212000 A4.14 3.8/3.8		INSTRUMENTATION				
JPM 8 Main Steam/ Perform N1-ST-Q26 Partial Stroke Test of Two MSIVs at Power Proc N1-ST-Q26, Sections 8.2 and 8.3 KA 239001 A4.01 4.2/4.0	S, M	3 REACTOR PRESSURE CONTROL				
		I A				

	r 2 for SRO-	J)					
							100 h 2014 2014 2014
JPM 9 Liquid Poison/ RPV Injection From LP Proc N1-EOP-1 Attachment 12 KA 295031 EA1.08 3.8/3.9 Bank/Previous O1-OPS-PJE-1-21/NRC 2002 JPI				R, P, E, L	D,		1 CTIVITY NTROL
							Si.
JPM 10 UPS/ Transfer RPS Bus 11 from UPS162A to 162B (RPS Bus 11 load will fail to transfer to UPS162B, resulting in Loss of RPS Bus 11. SOP-40.1 is entered which directs entry into N1-OP-40 to transfer RPS Bus 11 to alternate supply, I&C Bus 130) Proc N1-OP-40 F.1.0 and H.1.0 and N1-SOP-40.1 KA 212000 A2.02 3.7/3.9 Bank O1-OPS-PJE-212-1-08 (Modified)						INSTRUI	7 MENTATION
JPM 11 EDG/ Perform Control Room E (RO) Actions for Control Room Evacuation (During local EDG operation a HOT ENGINE condition occurs, requiring local engine shutdown).  Proc N1-SOP-21.2 Control Room E Actions KA 295016 AA1.04 3.1/3.2 Bank O1-OPS-PJE-200-1-78					A	ELEC	6 CTRICAL
@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.							
	Criteria	RO	Criteria	SROI	Criter	ia "	SROU
room. * Type Codes	Criteria 4-6	RO 4	Criteria 4-6	SROI 4	Criter 2-3		SROU NA
* Type Codes  (A)Iternate path  (C)ontrol room	<del></del>						
* Type Codes  (A)Iternate path  (C)ontrol room  (D)irect from bank	<del></del>						
* Type Codes  (A)Iternate path  (C)ontrol room  (D)irect from bank  (E)mergency or abnormal in-plant	4-6	4	4-6	4	2-3		NA 1
room.	4-6 ≤9	3	4-6 ≤8	3	2-3 ∴ ≤4		NA NA

≤3

≥1

1

3

8

≤3

≥1

1

3

7

Planned Simulator JPM Combinations

(P)revious two exams (randomly selected\*)

JPM 1 and 2

(R)CA

(S)imulator

JPM 5 and 6

JPM 7 standalone (RO Only)

JPM 4 standalone

JPM 3 standalone

JPM 8 standalone

## NINE MILE POINT NUCLEAR STATION

## OPERATOR JOB PERFORMANCE MEASURE

Title: Loss of Offsite Power	with EDG Fail	ures (Alternate	e Path)	Revision:_ <u>f</u>	NRC 2006
Task Number:					
Approvals:					
	1		NA EXAM	SECURITY	/
General Supervisor Operations Training (Designe	Date ee)		General S	Supervisor s (Designee)	Date
NA EXAM SECURITY Configuration Control	/ Date				
Performer:		(RO/	SRO)		
Trainer/Evaluator:					
Evaluation Method: X	_ Perform		_ Simulate		
Evaluation Location:	_ Plant	X_	_ Simulato	r	
Expected Completion Time:	20 min	Time Critical	Task: NO	O Alternate P	ath Task: YES
Start Time:	Stop Time:		Completio	on Time:	
JPM Overall Rating:	Pass	Fail			
NOTE: A JPM overall rating unsat or individual of			<del>-</del>	-	Any grade of
Comments:					
Evaluators Signature:			Da	ate:	

Recommended Start Location: (Completion time based on the start location)

Unit 1 Simulator

### Simulator Set-up (if required):

NRC Exam IC 239. IC-20 with the following:

ED01A, LOSS OF OFSSITE 115KV LINE 4, (PRESET)

ED01B, LOSS OF OFFSITE 115KV LINE 1, (PRESET)

DG04A, EDG102 AUTO START FAILURE, (PRESET)

DG02B, DIESEL GENERATOR TRIP 103, TRG 2

**Ensure BOTH 86-16 and 86-17 are tripped**. Manually trip the devices inside the panel, if necessary.

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

#### Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - · Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

#### References:

1. N1-SOP-33A.1

### Tools and Equipment:

1. None

Task Standard: PB 17B cross tied and reenergized from PB 17A and waiting for a 115KV line to be returned to service.

#### Initial Conditions:

- 1. The plant is operating at power.
- 2. A loss of Offsite Power occurred.
- 3. Actions are complete for the tripped Recirc Pump.
- 4. No other actions have been taken for the power loss.
- 5. Instructor to ask operator for any questions.

### **Initiating Cues:**

"(Operator's name), execute the Special Operating Procedure for the loss of offsite power".

Performance Steps	Standard	Grade
Provide repeat back of initiating cue.  Evaluator Acknowledge repeat back providing correction if necessary.	Proper communications used for repeat back (GAP-OPS-01/ CNG-HU-1.01-1001)	Sat/Unsat
RECORD START TIME		
<ol> <li>Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.</li> </ol>	■ N1-SOP-33A.1 is obtained and entered.	Sat/Unsat
Notify SM to review EPIP-EPP-01 for classification of emergency	<ul> <li>Notifies SM to review EPIP-EPP-01 for classification of emergency.</li> </ul>	Sat/Unsat
Cue: Acknowledge direction to review for classification of emergency.		
4. Verify start of both Emergency Diesel Generators AND confirm the following has occurred:		

Performance Steps	Standard	Grade
(ALTERNATE PATH)		
DG04A EDG102 has failed to start during		
the power loss.		
□ EDG 102 SUPPLY BKR R1022 has	<ul><li>□ Observe and report the following for EDG 102:</li><li>□ EDG 102 SUPPLY BKR R1022 is</li></ul>	Sat/Unsat
closed  Powerboards 102 AND 16B are energized	open  Powerboards 102 AND 16B are deenergized	Sat/Unsat
	□ EDG 102 is NOT running	Sat/Unsat
After manually starting EDG 102, voltage and frequency rise and EDG 102 SUPPLY	<ul> <li>Manually start EDG 102 from A Panel by placing control switch to START</li> <li>Observe and report the following for EDG 102:</li> </ul>	Pass/Fail
BKR 1022 automatically closes. Power is restored to PB102 and PB16B.	□ EDG 102 SUPPLY BKR R1022 is closed	Sat/Unsat
rodiored to 1 B102 and 1 B10B.	<ul> <li>Powerboards 102 AND 16B are energized</li> </ul>	Sat/Unsat
	□ EDG 102 is running	Sat/Unsat
	Observe the following for EDG 103:	
■ EDG 103 SUPPLY BKR R1032 has closed	■ EDG 103 SUPPLY BKR R1032 is closed	Sat/Unsat
<ul><li>Powerboards 103 AND 17B are energized</li></ul>	<ul><li>Powerboards 103 AND 17B are energized</li></ul>	Sat/Unsat
	□ EDG 103 is running	Sat/Unsat

NOTE: Per the override step: IF Main Generator OR any Diesel Generator trips THEN re-enter N1-SOP-33A.1 at this point. (Before the step to determine if PB11 and

Performance Steps		Standard	Grade
PB 12 are energized).			
5. Are PB 11 AND 12 energized?	_	Determine PB11 and PB12 are energized by observing volt meters on panels A4 and A5 <u>OR</u> observe Circuit Breakers R113 and R122 are closed.	Sat/Unsat
6. Is any EDG running?	0	Determines BOTH EDG's are running from performance of previous steps.  Continues at "E" on SOP page 6 for "PB 11 & 12 ENERGIZED BOTH EDGs RUNNING"	Sat/Unsat Sat/Unsat
<ul> <li>7. Restore PB 16B and PB 17B loads as follows:</li> <li>Reset Lockout 86-16</li> <li>Annunciator K3-4-3 PWR BD 16 BKR LOCKOUT RELAY 86-16 clears.</li> </ul>		At K Panel rotates 86-16 handle clockwise to reset device.	Pass/Fail
□ Reset Lockout 86-17  Annunciator K3-4-8 PWR BD 17 BKR  LOCKOUT RELAY 86-17 clears.		At K Panel rotates 86-17 handle clockwise to reset device.	Pass/Fail
□ Start RBCLC 12 and/or 13	0	At H Panel, starts RBCLC Pump 12 or 13.	Pass/Fail

## **ALTERNATE PATH**

After starting an RBCLC pump and silencing the cleared alarms, Simulator Console Operator inserts malfunction DG02B, DIESEL GENERATOR TRIP 103, by activating TRG 2

- Verify the following:
  - MG Set 167, Transfers back to AC drive.
  - □ UPS 162 re-energizes.
- May place CONTROL ROD DRIVE
   PUMP 11 switch to AUTO AFTER
   START (red flagged).

Sat/Unsat/

Sat/Unsat

NA

- Annunciators F1-3-8 extinguished.
- □ 162A mimic white and red lights are lit

Performance Steps	 Standard	Grade
□ SBC 161 re-energizes.	Annunciator A3-3-2 extinguished.	Sat/Unsat
G SBC TOTTE-effetgizes.	Observe SBC 161 A-B AC BKR closed	Sat/Unsat
Cue: Aux Operator will reset trouble alarm on UPS 162		
Simulator Operator: Toggle remote RP21 to RESET annunciator.		
11. Verify CRD Pump 12 in PTL.	At F Panel rotate c/s CCW and pull lock.	Pass/Fail
	Observe red and green lights OFF.	Sat/Unsat
12. Verify IAC 12 in PTL.	At L Panel rotate c/s CCW and pull lock.	Pass/Fail
	Observe red and green lights OFF.	Sat/Unsat
<ul> <li>13. At PB 176 verify the following:</li> <li>□ B to C Tie Bkr open</li> <li>□ A to B Tie Bkr closed.</li> <li>Cue: In-plant operator dispatched to complete in-plant actions. Report these actions complete.</li> </ul>	Dispatch operator to verify electrical lineup.	Sat/Unsat
14. Restore PB 17B loads as follows:		
<ul><li>Place PB103 Supply breaker R-1013 in PTL.</li></ul>	At A5 Panel rotate c/s CCW and pull to lock.	Pass/Fail
Annunciator A5-1-2 TRANS 101S AUX FDR 103 R1013 TRIP clears	Observe red and green lights OFF on PTL.	Sat/Unsat

Perfor	Standard	Grade			
		eset Lockout 86-17.		Rotate c/s CW.	Pass/Fail
Ar	nur	nciator K3-4-8 PWR BD 17 BKR		Observe K3-4-8 clear.	Sat/Unsat
LOCKOUT RELAY 86-17 clears.					
	Tr	ip R-1053, PB17B Supply breaker.		At A5 Panel rotate c/s CCW until	Pass/Fail
				green light flagged.	
				Observe red light OFF and green light	Sat/Unsat
				ON.	
		ose R-1052, PB17A-B Tie		At A5 Panel rotate c/s CW until red	Pass/Fail
		eaker.		flagged.	
		nciator A5-4-7 POWER BD 17		Observe red light ON and green light	Sat/Unsat
LC	)W	BUS VOLT		OFF.	
				Observe volts on PB17B on A5	Sat/Unsat
_	١/-	and the second second		Panel.	
		erify the following:			
		MG Set 167 transfer back to AC		Observe F1-3-8 clear.	Sat/Unsat
	_	Drive (if on PB17B).	_	Displayed and the second of	0.444
		UPS 172 re-energizes.		Dispatch operator to reset alarms on	Sat/Unsat
			_	UPS 172.	0 -4/1 14
		CDC 171A re energines (efter		Observe A3-1-3 clear.	Sat/Unsat
		SBC 171A re-energizes (after		SBC 171A-B AC breaker red light ON	Sat/Unsat
		100 seconds).		and green light OFF.	0-4/11
				Observe A3-2-4 and A3-3-3 clear.	Sat/Unsat
15. Notify CRS/SM that waiting for 115 KV □ Proper communications used. Sa					
		returned to service.	_		Sat/Unsat
	•				

END OF JPM

**Terminating Cue:** PB 17B cross tied and reenergized from PB 17A and waiting for a 115KV line to be returned to service.

R	E	CC	RD	STOR	P TIME
	_			$\circ$	

- 1. The plant is operating at power.
- 2. A loss of Offsite Power occurred.
- 3. Actions are complete for the tripped Recirc Pump.
- 4. No other actions have been taken for the power loss.
- 5. Instructor to ask operator for any questions.

# **Initiating Cues:**

"(Operator's name), execute the Special Operating Procedure for the loss of power".

# NINE MILE POINT NUCLEAR STATION

## OPERATOR JOB PERFORMANCE MEASURE

Title: Exercising RPV Pressure/L	evel Column Control S	witches	Revision: 1	IRC 2006
Task Number: 2590060101				
Approvals:				
(A) B	1 2/23/2007	NA EXAM SE	CURITY	/
General Supervisor Operations Training (Designee)	Daté	General Supe Operations (E	ervisor	Date
NA EXAM SECURITY Configuration Control	/ Date			
Performer:	(RO/S	SRO)		
Trainer/Evaluator:				
Evaluation Method: X Perf	orm	Simulate		
Evaluation Location: Plan	tX	Simulator		
Expected Completion Time: 20 m	in Time Critical	Task: NO	Alternate P	ath Task: YES
Start Time: Stop	Time:	Completion T	ime:	
JPM Overall Rating: Pass	Fail			
NOTE: A JPM overall rating of fa unsat or individual compe				Any grade of
Comments:				
Evaluators Signature:		Date:		

Recommended Start Location: (Completion time based on the start location)

Unit 1 Simulator

#### Simulator Set-up (if required):

IC230 is equivalent to IC20. For Exam run with JPM 6 Run bat n06jpm5.bat file to setup triggers listed below.

RR55 trigger from ZDFWMST3==1 (MASTER in BAL). See attached bat file for 2 conditional trigger.

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

#### Directions to Operators:

Read Before **Every JPM Performance**:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

### Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

## Read Before Each <u>Training</u> JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- Critical steps are identified in grading areas Pass/Fail. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

#### References:

- 1. N1-PM-Q8, Section 8.13
- 2. N1-OP-16, Section F.10.0

### Tools and Equipment:

1. None

Task Standard: RPV level control established in manual and high level turbine trip and low level scram is avoided.

#### Initial Conditions:

- 1. Plant is at rated conditions.
- 2. Feedwater Level Control is in normal automatic three element control
- 3. Whenever RPV water level is being controlled in manual, the level band is 70 to 75 inches.
- 4. Instructor to ask operator for any questions.

## **Initiating Cues:**

"(Operator's name), perform N1-PM-Q8 section 8.13 for exercising RPV Pressure/Level Columns and Feedwater Mode Control switches."

Performance Steps			Standard	Grade
1.	Provide repeat back of initiating cue.  Evaluator Acknowledge repeat back providing correction if necessary.		oper communications used for repeat ck (GAP-OPS-01/ CNG-HU-1.01-1001)	Sat/Unsat
REC	CORD START TIME			
2.	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.		-PM-Q8, 8.13 and N1-OP-16, F.10.0 obtained and reviewed.	Sat/Unsat
FRO	DM N1-PM-Q8 8.13			
3.	Confirm 29-01, Turbine Driven Feed Water Pump 13 is running		Observes FWP 13 is running at F Panel  FEEDWATER PUMP 13 FLO FWP 13 VALVE CONTROL signal Red Clutch Engagement lights	Sat/Unsat
5.	Record initial control switch positions for:  Feedwater Level Column 11 or 12  Reactor Pressure Column 11 or 12		Record initial control switch positions for (E Console):  □ FEEDWATER LEVEL COL as 11 □ REACT PRESS as 11	Sat/Unsat
	□ Feedwater Mode 3		□ FEEDWATER MODE as 3	

Per	formance Steps		Ştandard	Grade
5.	Perform Section F.10 of N1-OP-16 Steps 10.1 through 10.6		Go to N1-OP-16 Steps 10.1 through 10.6	Sat/Unsat
6.	Perform the following:			
	□ IF three Feedwater pumps running		Indicates step 10.1.1 is NA, since three pumps are not running.	Sat/Unsat
	□ IF shaft driven FWP in service		Verifies and indicates in step 10.1.2	
			□ Only one motor FWP is running	Sat/Unsat
			<ul> <li>Standby FWP 11 VALVE CONTROL is in MAN and fully closed.</li> </ul>	Sat/Unsat
Cue	e: When asked report MFLCPR is 0.872		□ MFLCPR is less than 1.0	Sat/Unsat
7.	Balance the FWP VALVE CONTROL M/A station (13) which is in AUTO by performing the following:	At	F panel	
	<ul> <li>Place respective FWP 13 Pump VALVE CONTROL M/A station mode switch to BAL.</li> </ul>		Rotate FWP 13 Pump VALVE CONTROL M/A station mode switch to BAL.	Pass/Fail
	■ Null respective deviation meter to 50% (red dot) with manual knob.		Adjust FWP 13 VALVE CONTROL M/A station manual knob to get needle to 50% (nulled).	Pass/Fail
8.	Take manual control of vessel level by placing FWP 13 VALVE CONTROL M/A station mode switch to MAN.		Rotate FWP 13 VALVE CONTROL M/A station mode switch to MAN.	Pass/Fail
9.	Control reactor vessel level by adjusting FWP 13 VALVE CONTROL M/A station manual knob as necessary.	_	Control reactor vessel level by adjusting FWP 13 VALVE CONTROL M/A station manual knob as necessary. No adjustment should be necessary.	Pass/Fail/ NA
	NOTE: Switching level columns may result in Annunciator F2-3-3 REACT VESSEL LEVEL HIGH-LOW, due to circuit interruption.			

Perf	orm	ance Steps		Standard	Grade
10.	Sh Fe : If a	e same channel of level and essure should be selected.  ift reactor pressure/level columns or edwater modes as necessary.  asked direct each switch cycled IREE times and restore to original sitions.	0	This should be the actual exercising of the switches step. Cycles switches and returns to original positions.  □ FEEDWATER LEVEL COL as 11 □ REACT PRESS as 11 □ FEEDWATER MODE as 3	Pass/Fail/NA Pass/Fail/NA Pass/Fail/NA
11.	be pre mo	nintenance and/or testing can now conducted on feedwater essure/level columns or feedwater ode with no effect on level control.  OTE:  If will direct final position of RPV		THEN returns to N1-PM-Q8 at step 8.13.3 and initials as complete.	Sat/Unsat
Cue	: If r Pro	essure/Level Control Switches. necessary, direct RPV essure/Level Control Switches urned to their original positions.			
	-	ed in JPM step 10, THEN skip step proceed to JPM step 13.			
12.		ercise RPV Pressure/Level Control vitches as follows:	10	switches were not cycled in JPM step , they are PASS/FAIL critical steps	
	0	Record final RPV Pressure/Level Control Switch positions  Feedwater Level Column 11 or 12	ne	If not cycled in JPM step 10, cycles switches here leaves in column 11 position and records final position.	Sat/Unsat/ NA or PASS/FAIL
	_	<ul> <li>Reactor Pressure Column 11 or 12</li> <li>Cycle Feedwater Mode Control Switch Position</li> </ul>	_	If not cycled in JPM step 10, cycles switches here leaves "3" position and	/NA Sat/Unsat/ NA or
		☐ Feedwater Mode 3		records position.	PASS/FAIL /NA

Perf	orm	ance Steps	 ;: Standard	Grade
13.		omplete N1-OP-16, Section F.10 by rforming Step F.10.7.	Go to N1-OP-16 and performs 10.7 (all steps). These are listed below in JPM step 14.	
14.	rea	HEN testing is complete return actor vessel level control to AUTO by rforming the following:		
		Place FEEDWATER MASTER CONTROL M/A station mode to MAN.	Rotate FEEDWATER MASTER CONTROL M/A station mode to MAN. (E Console)	Pass/Fail
		Null out FWP 13 VALVE CONTROL by adjusting the FEEDWATER MASTER CONTROL M/A station output with the manual knob UNTIL the deviation meter indicates 50% (red dot) on FWP 13 VALVE CONTROL GEMAC.	Adjust FEEDWATER MASTER CONTROL M/A station (E Console) output with the manual knob UNTIL the deviation meter indicates 50% (red dot) on FWP 13 VALVE CONTROL GEMAC (F Panel).	Sat/Unsat
		Place FWP 13 VALVE CONTROL M/A station mode to BAL.	Rotate FWP 13 VALVE CONTROL M/A station mode to BAL. (F panel NOT E Console)	Pass/Fail
		Control reactor vessel level with manual knob at FEEDWATER MASTER LBS/HR controller in MAN mode	Control reactor vessel level with manual knob at FEEDWATER MASTER LBS/HR controller in MAN mode (E Console)	Pass/Fail
		Null FEEDWATER MASTER CONTROL setpoint error by adjusting the thumb/setpoint tape to align manual setpoint (orange	Adjust the thumb/setpoint tape to align manual setpoint (orange arrow) directly under automatic setpoint (green band) (E Console)	Sat/Unsat

- arrow) directly under automatic setpoint (green band).
- □ Place FEEDWATER MASTER CONTROL M/A station mode to AUTO or BAL. Level is now controlled automatically by Master Controller.
- □ Rotate FEEDWATER MASTER CONTROL M/A station mode to AUTO or BAL (E Console)

Pass/Fail

## ALTERNATE PATH

WHEN FEEDWATER MASTER CONTROL M/A station mode is moved to AUTO or BAL, malfunction RR55 Level transmitter

FAILS DOWNSCALE activates.

Level Transmitter and indication ID59A goes downscale. Annunciator F2-2-2 REACTOR WATER LEVEL HIGH LOW alarms. Feedwater flow rises and actual level begins to rise.

- 15. Recognize and report rising water level condition.
- 16. Enter N1-SOP-16.1

Note: IF ARP F2-2-2 actions are taken, manual control would also be established. This is also an acceptable basis for taking manual control. The SOP is the higher tier document.

WHEN either controller is placed in MAN, an immediate reduction in feedwater flow occurs because the MAN signal is still at the correct signal for the pre-transient condition, since deviation meters were nulled.

- Performs one of the following to prevent high level turbine trip and scram:
  - □ Place FEEDWATER MASTER CONTROL M/A station mode to MAN. (E Console)

Pass/Fail/

OR

 Place FWP 13 VALVE CONTROL M/A station mode to MAN. (F Panel). Pass/Fail/ NA

- 17. Controls RPV water level in MANUAL to prevent high RPV water level trips and low RPV water scram.
- Adjusts FEEDWATER MASTER CONTROL, FWP 13 VALVE CONTROL or FWP 12 VALVE CONTROL M/A station mode in MAN to prevent high and low RPV water level trips.

Pass/Fail

18. Notify SRO that Feedwater level Control is in MANUAL and level is stabilized.

Proper communications used.

Sat/Unsat

**END OF JPM** 

**Terminating Cue:** scram is avoided.

RPV level control established in manual and high level turbine trip and low level

RECORD STOP TIME

^jpm 5 bat file n06jpm5.bat

^to auto trigger the rr55 malfunction to be true when master controller is

^placed back in auto, a double condtion must occur.

^first, the master must be placed in MAN (zdfwmst4==1), per the test. When this happens ^the green light on A Panel MOD 93 turns on by override (2a4ds7lo0219)

^^now, with the green light hzlegmodo on when the master is placed in AUTO zdfwmst2 or BAL zdfwmst3, the rr55 activates failing the transmitter downscale.

^rst 20

trgset 1 "zdfwmst4==1" trg 1 "ior 2a4ds7lo0219 (1 0) on"

trgset 2 "zdfwmst3==1 && hzlegmodo(2)==1" trg 2 "imf rr55 (2 0:02)"

^!! zdfwmst2==1
^end setup

- 1. Plant is at rated conditions.
- 2. Feedwater Level Control is in a normal automatic three element control
- 3. Whenever RPV water level is being controlled in manual, the level band is 70 to 75 inches.
- 4. Instructor to ask operator for any questions.

# **Initiating Cues:**

"(Operator's name), perform N1-PM-Q8 section 8.13 for exercising RPV Pressure/Level Columns and Feedwater Mode Control switches."



## OPERATOR JOB PERFORMANCE MEASURE

Title: Vent the Drywell Duri	ng Power Ope	ration		Revision: NRC 2006
Task Number: 2239010401				
Approvals:				
	/		NA EXAM SE	ECURITY /
General Supervisor Operations Training (Designe	Date ee)		General Supe Operations (I	ervisor Date
NA EXAM SECURITY Configuration Control	/ Date			
Performer:		(RO/S	RO)	
Trainer/Evaluator:				
Evaluation Method: X	_ Perform		_ Simulate	
Evaluation Location:	_ Plant	X	_ Simulator	
Expected Completion Time:	20 min	Time Critical	Task: NO	Alternate Path Task: NO
Start Time:	Stop Time:	<del></del>	Completion T	îme:
JPM Overall Rating:	Pass	Fail		
NOTE: A JPM overall rating unsat or individual o				
Comments:				
Evaluators Signature:			Date:	

Recommended Start Location: (Completion time based on the start location)

Unit 1 Simulator

Simulator Set-up (if required):

IC20

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

### Directions to Operators:

Read Before **Every** JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each **Evaluated** JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

#### References:

1. N1-OP-9, H.1.0

#### Tools and Equipment:

1. None

Task Standard: Drywell vent lineup is established per N1-OP-9.

- 1. Drywell Pressure is 1.75 psig
- 2. N1-ST-V1, VENTING/PURGING PRIMARY CONTAINMENT THROUGH REACTOR BUILDING VENTILATION SYSTEM is in progress and is being performed by another operator.
- 3. Instructor to ask operator for any questions.

## **Initiating Cues:**

"(Operator's name), Vent the Drywell using RBEVS train 11, in accordance with N1-OP-9. Establish flow rate between 500 and 1600 scfm. Lower Drywell pressure to 1.2 psig, then secure the lineup."

Per	formance Steps		Standard	Grade
1.	Provide repeat back of initiating cue. Evaluator Acknowledge repeat back providing correction if necessary.		oper communications used for repeat ck (GAP-OPS-01/ CNG-HU-1.01-1001)	Sat/Unsat
RE	CORD START TIME			
2.	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.		I-OP-9 is obtained. Precautions & mitations reviewed & section H.1.0	Sat/Unsat
3.	Perform N1-ST-V1 within 4 hours PRIOR to the start and at least once every 12 hours during venting/purging.	0	Check off step complete. Initial conditions are N1-ST-V1 is complete.	Sat/Unsat
4.	Vent the primary containment as follows:  Drywell venting, refer to "Drywell	0	Proceeds to step 1.3, Drywell Venting	Sat/Unsat
	Venting" section			
5.	Verify in STOP position 201-35 DRYWELL & TORUS VENT & PURGE FAN control switch.		201-35 DRYWELL & TORUS VENT & PURGE FAN control switch in STOP	Sat/Unsat
7.	Notify SM to enter LCO 3.4.4 (f) in SM Log Book.		Notifies SM of requirement to enter LCO in log book.	Sat/Unsat
CU	E: As SM, acknowledge requirements to enter LCO and enter in the log book.			
8.	Verify closed the following valves:		Closed by observing green position indicating lights	
	<ul><li>201-21 DRYWELL &amp; TOR VENT &amp;</li><li>PURGE FAN INLET BV</li></ul>		<ul><li>201-21 DRYWELL &amp; TOR VENT</li><li>&amp; PURGE FAN INLET BV</li></ul>	Sat/Unsat

Perform	ance Steps	Stand	Grade	
0	201-22 DRYWELL & TOR VENT & PURGE FAN OUTLET BV		201-22 DRYWELL & TOR VENT & PURGE FAN OUTLET BV	Sat/Unsat
	201.2-33 TORUS N2 MAKE-UP & BLEED ISOL VALVE 11		201.2-33 TORUS N2 MAKE-UP & BLEED ISOL VALVE 11	Sat/Unsat
	201.2-06 TORUS N2 MAKE-UP & BLEED ISOL VALVE 12	0	201.2-06 TORUS N2 MAKE-UP & BLEED ISOL VALVE 12	Sat/Unsat
	201.2-32 DRYWELL N2 MAKE-UP & BLEED ISOL VALVE 11	۵	201.2-32 DRYWELL N2 MAKE- UP & BLEED ISOL VALVE 11	Sat/Unsat
0	201.2-03 DRYWELL N2 MAKE-UP & BLEED ISOL VALVE 12	0	201.2-03 DRYWELL N2 MAKE- UP & BLEED ISOL VALVE 12	Sat/Unsat
	201.2-136 P SYS DISCH ROUTE		201.2-136 P SYS DISCH ROUTE	Sat/Unsat
	201-11 TORUS VENT TO CONDENSER	0	201-11 TORUS VENT TO CONDENSER	Sat/Unsat
NOTE:	Candidate will likely identify			
•	ent label in simulator is as			
"TORUS	S/DRYWELL"			
	201-47EM VENTILATION TIE BV		201-47EM VENTILATION TIE BV	Sat/Unsat
	202-36 EM VENTILATION FROM REACTOR BLDG BV		Closes 202-36 EM VENTILATION FROM REACTOR BLDG BV using control switch observes green light on and red light off.	Pass/Fail

<u>Perf</u>	ormance Steps	Standard	Grade
	<ul><li>201-16 TORUS N2 VENT &amp;</li><li>PURGE ISOLATION VALVE 11</li></ul>	<ul> <li>201-16 TORUS N2 VENT &amp;</li> <li>PURGEISOLATION VALVE</li> </ul>	
	<ul><li>201-17 TORUS N2 VENT &amp;</li><li>PURGE ISOLATION VALVE 12</li></ul>	<ul><li>201-17 TORUS N2 VENT &amp;</li><li>PURGE ISOLATION VALVE</li></ul>	
9.	Open 201-18 EM VENTLATION FROM DW & TORUS BV	201-18 EM VENTLATION FRO DW & TORUS BV open using o	
10.	Open EM VENTILATION LOOP INLET BV of selected system (System 11):	□ 202-37 EM VENTILATION LOC INLET BV open	OP 11 Pass/Fail
	<ul><li>202-37 EM VENTILATION LOOP</li><li>11 INLET BV</li></ul>		
11.	Open 201-32 DW N2 VENT & PURGE ISOLATION VALVE 11	<ul> <li>201-32 DW N2 VENT &amp; PURGE ISOLATION VALVE 11 open</li> </ul>	Pass/Fail
12.	Start EM VENT EXHAUST FAN of selected system (System 11)	□ EM VENT EXHAUST FAN starte	d Pass/Fail
13.	Throttle open 201-31 DW N2 VENT & PURGE ISOLATION VALVE 12, using Pull-to-Stop feature.	201-31 DW N2 VENT & PURGE ISOLATION VALVE 12 throttles of and establishes flow between 50 1600 scfm.	
14.	Verify flow rate ≤ 1600 CFM	<ul> <li>201-31 DW N2 VENT &amp; PURGE ISOLATION VALVE 12 throttled with &lt;1600 CFM established.</li> </ul>	Sat/Unsat open
15.	WHEN pressure in torus is in the normal range (refer to Att 6), close the following valves:	□ When DW pressure is 1.2 psig, of valves to stop purge:	loses
	201-32 DW N2 VENT & PURGE ISOLATION VALVE 11	201-32 DW N2 VENT & PURG ISOLATION VALVE 11 clos	
	201-31 DW N2 VENT & PURGE ISOLATION VALVE 12	201-31 DW N2 VENT & PURGI ISOLATION VALVE 12 clos	
16.	Stop EM VENT EXHAUST FAN (System 11)	□ EM VENT EXHAUST FAN stopp	ed Sat/Unsat

Perf	orm	ance Steps		Standard	Grade			
17.		HEN Drywell venting is complete, rify closed the following valves:						
		201-18 EM VENTLATION FROM DW & TORUS BV		201-18 EM VENTLATION FROM DW & TORUS BV	Pass/Fail			
		202-37 EM VENTILATION LOOP 11 INLET BV		202-37 EM VENTILATION LOOP 11 INLET BV	Pass/Fail			
		202-38 EM VENTILATION LOOP 12 INLET BV		202-38 EM VENTILATION LOOP 12 INLET BV	Pass/Fail			
18.		oen 202-36 EM VENTILATION ROM REACTOR BUILDING BV		202-36 EM VENTILATION FROM REACTOR BUILDING BV open	Pass/Fail			
19.		otify SM to exit LCO 3.4.4 (f) in SM og Book		SM notified to exit LCO	Sat/Unsat			
20.	Re	eport status to SRO.		Reports completion of DW venting to SRO.	Sat/Unsat			
EN	END OF JPM							
Terr	Terminating Cue: Drywell vent lineup is established per N1-OP-9.							
REC	RECORD STOP TIME							

JPM HISTORY

JPM HISTORY										
	JPM HISTORY PAGE									
Revision	Date	Change Driver	Originator	Description						
0	8/3/06	LC1 05-01 NRC Exam	G. Bobka	Created as new JPM for Unit 1 LC1 05-01 NRC Exam						
	8/18/06			Test ran with Ops. Have sim support check 201-31 response to throttling. It's awful touchy and sensitive. Hard to establish flow, even with a wide band. Also, figure out best way to handle ST-V1 surveillance. Michaud/Dann.						
	9/19/06			Validated Meier, Blum						

- 1. Drywell Pressure is 1.75 psig
- 2. N1-ST-V1, VENTING/PURGING PRIMARY CONTAINMENT THROUGH RESCTOR BUILDING VENTILATION SYSTEM is in progress and is being performed by another operator.
- 3. Instructor to ask operator for any questions.

# **Initiating Cues:**

"(Operator's name), Vent the Drywell using RBEVS train 11, in accordance with N1-OP-9. Establish flow rate between 500 and 1600 scfm. Lower Drywell pressure to 1.2 psig, then secure the lineup."

## NINE MILE POINT NUCLEAR STATION

## OPERATOR JOB PERFORMANCE MEASURE

Title: Reset RPS and ARI lo	ogic After High	Drywell Pressu	ure Scram	Revision:_	NRC 2006
Task Number: 2000330401					
Approvals:					
General Supervisor Operations Training (Designe	Date (ee)	<u> 23 </u> 2w7	NA EXAM SE General Supe Operations (E	ervisor	/ Date
NA EXAM SECURITY Configuration Control	/ Date				
Performer:		(RO/S	RO)		
Trainer/Evaluator:					
Evaluation Method: X	_ Perform		_ Simulate		
Evaluation Location:	_ Plant	X	_ Simulator		
Expected Completion Time:	15 min	Time Critical	Task: NO	Alternate F	Path Task: NO
Start Time:	Stop Time:		Completion T	ime:	
JPM Overall Rating:	Pass	Fail			
NOTE: A JPM overall rating unsat or individual of					. Any grade of
Comments:					
Evaluators Signature:			Date:		

Recommended Start Location: (Completion time based on the start location)

Unit 1 Simulator

### Simulator Set-up (if required):

IC229. Post scram conditions stabilized
High DWP pressure scram received and DWP is now below 3.0 psig
ARI manually initiated
Ensure Feedpump is operating for level control with low flow valve in auto
SOP-1 should be marked up indicating which actions are completed.
An instructor should be on the floor to monitor level and acknowledge any other alarms

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

## Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

### Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - Self checking shall be demonstrated.
  - Peer checking shall be demonstrated.

#### References:

- 1. N1-SOP-1
- 2. ARP F1

## Tools and Equipment:

1. None

Task Standard: RPS and ARI logic channels reset and the SDV is draining. All rods settled to position 00.

#### Initial Conditions:

- 1. Plant scram from full power occurred on high drywell pressure about 20 minutes ago.
- 2. Three control rods did not insert, so ARI was manually initiated.
- 3. The three rods did insert.
- 4. N1-SOP-1 Reactor Scram is being implemented.
- 5. All immediate actions are complete.
- 6. Scram confirmation actions are complete.
- 7. IRM and SRM detectors were just inserted.
- 8. Recovery actions are in progress and conditions have stabilized.
- 9. Instructor to ask operator for any questions.

## **Initiating Cues:**

"(Operator's name), Reset the scram and verify all rods at position 00."

Perl	ormance Steps	Standard	Grade
1.	Provide repeat back of initiating cue. Evaluator Acknowledge repeat back providing correction if necessary.	Proper communications used for repeat back (GAP-OPS-01/ CNG-HU-1.01-1001)	Sat/Unsat
REC	CORD START TIME		
2.	Obtain a copy of the reference procedure and review/utilize the	N1-SOP-1 is obtained.	Sat/Unsat
	correct section of the procedure.	THESE may be performed out of sequence. Acceptable to reset RPS before resetting ARI, as long as both are reset and rods are verified to be at position 00.	
•3.	(SOP-1) IF ARI initiated, THEN Reset ARI. (SOP-1)	<ul> <li>At F Panel, reset ARI using pushbutton</li> </ul>	Pass/Fail
Wh	en ARI is reset, the following occurs:		
	□ ARI INITIATION CH 11 and CH12 red lights extinguish.		
	□ VALVE POSITION SOV113-229A red VENT light extinguishes and		

F4-1-4).

□ At M Panel When CONTAINMENT HIGH PRESSURE A and C are reset, relay 11K10 resets (energizes). Annunciator F1-1-5, RPS CH 11 DRYWELL PRESS HIGH clears. F1-3-5 RPS CH 11 CONTAINMENT ISOLATION F1-4-5 CONTAINMENT ISOLATION PURGE VALVES and F1-4-6 RPS CH 11 CORE SPRAY AUTO OPERATION also clear.

one or more of the following:

□ At M Panel When CONTAINMENT HIGH PRESSURE B and D are reset, relay 12K10 resets (energizes). Annunciator F4-1-4 RPS CH 12 DRYWELL HIGH PRESS clears. F4-3-4 RPS CH 12 CONTAINMENT Isolation and F4-4-3 RPS CH 12 CORE SPRAY AUTO OPERATION also clear.

Douf			o Chang		Standard	Grade
Pend	<u> </u>	<u>anc</u>	e Steps		Statidard	Graue
		li ii	When RPS is reset, White Pilot ights on M and F Panels Iluminate. All rods indicate 00 position on Full Core Display.		<ul> <li>At E Console, depress         REACTOR TRIP RESET         pushbutton</li> <li>All rods verified into at least         position 04 by observing one         or more of the following:</li> </ul>	Pass/Fail
			Full Core Display		□ Full Core Display ( <i>All rods</i>	Sat/Unsat
			Demand new OD-7 Option 2		<ul><li>indicate 00 position)</li><li>□ Demand new OD-7 Option 2</li></ul>	
			K104A&B red LED lights lit (1S20 Aux CR) (NOT EXPECTED)		<ul> <li>K104A&amp;B red LED lights lit (1S20 Aux CR) (NOT EXPECTED)</li> </ul>	
			All Rods In light illuminated (Remote Shutdown Panel) (NOT EXPECTED)		<ul> <li>All Rods In light illuminated (Remote Shutdown Panel) (NOT EXPECTED)</li> </ul>	
		Cc	onfirm the following valves open:		At F Panel observes:	Sat/Unsat
			44.2-15 and 44.2-16 CONTROL ROD DRIVE DUMP VOL VENT VALVE		44.2-15 and 44.2-16 CONTROL ROD DRIVE DUMP VOL VENT VALVE red lights on.	Sat/Unsat
			44.2-17 and 44.2-18 CONTROL ROD DUMP VOL DRAIN IV		44.2-17 and 44.2-18 CONTROL ROD DUMP VOL DRAIN IV red lights on.	Sat/Unsat
			onfirm F3-2-4 CRD DRAIN-VENT ALVE CLOSED clear.		Observes F3-2-4 CRD DRAIN-VENT VALVE CLOSED clear.	
6.	Re	por	ts status to SRO.		Report complete.	Sat/Unsat
END	O F	= JF	PM			
<b>Terr</b> posi			•	nels	s reset and the SDV is draining. All rods s	settled to
DEC	·	D C	STOR TIME			

- 1. Plant scram from full power occurred on high drywell pressure about 20 minutes ago.
- 2. Three control rods did not insert, so ARI was manually initiated.
- 3. The three rods did insert.
- 4. N1-SOP-1 Reactor Scram is being implemented.
- 5. All immediate actions are complete.
- 6. Scram confirmation actions are complete.
- 7. IRM and SRM detectors were just inserted.
- 8. Recovery actions are in progress and conditions have stabilized.
- 9. Instructor to ask operator for any questions.

# **Initiating Cues:**

"(Operator's name), Reset the scram and verify all rods at position 00."

## NINE MILE POINT NUCLEAR STATION OPERATOR JOB PERFORMANCE MEASURE

Title: MSIV Stroke Test and	26)	Revision:_	NRC 2006		
Task Number: 2399010201					
Approvals:  General Supervisor Operations Training (Designations)		<u> 23 </u> 2w7	N/A, NRC EX General Supe Operations (D	ervisor	ITY / Date
N/A, NRC EXAM SECURITY Configuration Control	/ / Date				
Performer:		(RO/S	RO)		
Trainer/Evaluator:					
Evaluation Method: X	_ Perform		_ Simulate		
Evaluation Location:	_ Plant	X	_ Simulator		
Expected Completion Time:	20 Min.	Time Critical	Task: NO	Alternate F	Path Task: NO
Start Time:	Stop Time:		Completion T	ime:	
JPM Overall Rating:	Pass	Fail			
NOTE: A JPM overall ration unsat or individual	_				. Any grade of
Comments:					
Evaluators Signature:			Date:		

Recommended Start Location: (Completion time based on the start location)

Unit 1 Control Room Simulator

### Simulator Set-up (if required):

- 1. Initialize the simulator to IC-20 or equivalent.
- 2. Take the simulator out of freeze.
- 3. An instructor may be used on simulator floor, if allowed, to perform as an extra operator, for confirming some indications during valve stroking. Monitoring the valve mimic, as an extra operator is appropriate.

#### Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CSO permission.

### Directions to Operators:

Read Before **Every JPM Performance**:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

## Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

#### Read Before Each Training JPM Performance:

During this Training JPM, the use of applicable methods of verification and checking are expected. Therefore, either another individual or I will act as the independent verifier or peer checker.

#### Notes to Instructor / Evaluator:

- 1. Critical steps are identified in grading areas **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
- 2. During Evaluated JPM:
  - Self checking shall be demonstrated.
- 3. During Training JPM:
  - Self checking shall be demonstrated.
  - · Peer checking shall be demonstrated.

#### References:

- 1. NUREG 239001 A4.01 RO 4.2 SRO 4.0
- 2. NMP Unit One Task Analysis 2399010201, 3.0 (RO)

## 3. N1-ST-Q26

Tools and Equipment:

None

Task Standard: N1-ST-Q26 completed for MSIV 01-03, Main Steam Isolation Valve 112.

#### Initial Conditions:

- 1. Plant is operating at 100% power with no inoperable equipment.
- 2. All prerequisites for the test are completed.
- 3. Instructor to ask operator for any questions.

## **Initiating Cues:**

"(Operator's name), test Main Steam Line Isolation Valve 112 & 121 in accordance with N1-ST-Q26, Section 8.2 & 8.3."

Performance Steps			 Standard	Grade
1.	Provide repeat back of initiating cue.  Evaluator Acknowledge repeat back providing correction if necessary.		oper communications used for repeat ck (GAP-OPS-O1/Operations Manual)	Sat/Unsat
REC	ORD STA	RT TIME		
2.	procedure	copy of the reference e and review/utilize the ection of the procedure.	N1-ST-Q26 obtained and applicable sections reviewed.	Sat/Unsat
3.	Prepare t	to initiate a half scram on EL 11.		
	□ Verify	no RPS Half Scram exists	Verify by all scram solenoid lights energized	Sat/Unsat
		the CSO that the following will initiate the half scram on	Proper communications used.	Sat/Unsat
4.		ain Steam Isolation Valve 7% tch to the 112 position.	Test switch is rotated to the 112 position.	Pass/Fail
•5.	Confirm 01-03 MSIV 112 white test light ON.		White test light for MSIV 112 is verified energized.	Sat/Unsat
•6.	Confirm ( light OFF	01-03 MSIV 112 yellow test	Yellow light is extinguished for MSIV 112.	Sat/Unsat

Standard Grade Performance Steps

### NOTE to Evaluator:

JPM steps 7 to 14 will occur in rapid sequence. An additional person may

- perform as an extra operator as necessary for verifications. 7. Momentarily place control switch for □ Rotate switch for MSIV 112 Pass/Fail MSIV 112 to CLOSE position. momentarily to CLOSE then release. •8. Check RPS Channel 11 half scram ■ Verify the following: indications as follows: CH 11 SCRAM SOLENOID ☐ CH 11 SCRAM SOLENOID Sat/Unsat GROUPS 1,2,3,4 White Light GROUPS 1.2.3.4 White Light OFF. OFF. ☐ CH 11 B.U. SCRAM S.D.V. VENT AND DRAIN VALVE Light OFF ☐ CH 11 B.U. SCRAM S.D.V. VENT Sat/Unsat ☐ Annunciator F1-1-7, RPS CH 11 AND DRAIN VALVE Light OFF ■ Annunciator F1-1-7, RPS CH 11 Sat/Unsat MNSM LINE II ISOL Valve MNSM LINE II ISOL Valve CLOSED, alarms. CLOSED, alarms. ☐ Annunciator F1-2-1, RPS CH 11 ☐ Annunciator F1-2-1, RPS CH 11 AUTO REACTOR TRIP, alarms. Sat/Unsat AUTO REACTOR TRIP, alarms. 9. Confirm 01-03, MSIV-112 automatic □ Verify the following: partial closure indications as follows: □ 01-03 MSIV-112 Green Light ON □ 01-03 MSIV-112 Green Light ON Sat/Unsat □ 01-03 MSIV-112 Red Light ON □ 01-03 MSIV-112 Red Light ON □ 01-03 MSIV-112 Mimic Light ON □ 01-03 MSIV-112 Mimic Light ON 10. Confirm after approximately 20 Yellow light for MSIV is verified Sat/Unsat seconds Yellow light for MSIV 112 is BRIGHT. brightly illuminated. 11. Confirm 01-03 MSIV-112 automatic Verify the following: opening indications as follows: □ 01-03 MSIV-112 Green Light OFF □ 01-03 MSIV-112 Green Light OFF □ 01-03 MSIV-112 Red Light ON □ 01-03 MSIV-112 Red Light ON □ 01-03 MSIV-112 Mimic Light OFF □ 01-03 MSIV-112 Mimic Light OFF 12. Place MSIV 7% Test Switch to the □ Rotate Test Switch to OFF. Pass/Fail OFF position. 13. Confirm 01-03 MSIV 112 White Test □ Observe White Test Light for MSIV-Sat/Unsat
- Light OFF.
- 14. Confirm 01-03 MSIV 112 Yellow Light
- 15. Depress REACTOR TRIP RESET at Panel E.
- 112 is OFF.
- □ Observe Yellow Light for MSIV-112 is

Sat/Unsat

Pass/Fail

□ Depress Rx Trip RESET Button on Econsole.

Perf	ormance Steps		Standard	Grade
16.	Check RPS Channel 11 Half-Scram is CLEARED:	Ve	rify the following:	
	□ CHANNEL 11 SCRAM SOLENOID		CHANNEL 11 SCRAM SOLENOID	Sat/Unsat
	Groups 1,2,3,4 White Light ON.  CHANNEL 11 BACKUP SCRAM  VALVE Red Light ON.		Groups 1,2,3,4 White Light ON. CHANNEL 11 BACKUP SCRAM VALVE Red Light ON.	Sat/Unsat
	Annunciator F1-1-7, RPS CH 11 MN STM LINE 11 ISOL VALVE CLOSED, Clear		Annunciator F1-1-7, RPS CH 11 MN STM LINE 11 ISOL VALVE CLOSED, Clear	Sat/Unsat
	<ul> <li>Annunciator F1-2-1, RPS CH 11 AUTO REACTOR TRIP, Clear</li> </ul>		Annunciator F1-2-1, RPS CH 11 AUTO REACTOR TRIP, Clear	Sat/Unsat
17.	Condition Monitoring Group confirm all scram pilot valve solenoids are energized by thermography.	0	Contact Condition Monitoring Group for confirmation that all scram pilot valve solenoids are energized by thermography.	Sat/Unsat
Cue	e: As Condition Monitoring Group, report all scram solenoids have been confirmed to be energized by thermography.		шетподгарну.	
18.	Prepare to initiate a half scram on CHANNEL 12.			
	□ Verify no RPS Half Scram exists		Verify by all scram solenoid lights energized	Sat/Unsat
	□ Notify the CSO that the following steps will initiate the half scram on RPS CH 12.		Proper communications used.	Sat/Unsat
19.	Place Main Steam Isolation Valve 7% Test Switch to the 121 position.		Test switch is rotated to the 121 position.	Pass/Fail
20.	Confirm 01-02 MSIV 121 white test light ON.		White test light for MSIV 121 is verified energized.	Sat/Unsat
21.	Momentarily place 01-02 MSIV-121 control switch to CLOSE position.		Rotate switch for MSIV 121 momentarily to CLOSE then release.	Pass/Fail

Perf	ormance Steps		Standard	Grade					
•22.	<ul> <li>Check RPS Channel 12 half scram indications as follows:</li> <li>CH 12 SCRAM SOLENOID GROUPS 1,2,3,4 White Light OFF.</li> <li>CH 12 B.U. SCRAM S.D.V. VENT AND DRAIN VALVE Light OFF</li> <li>Annunciator F4-1-2, RPS CH 12 MNSM LINE I2 ISOL Valve CLOSED, alarms.</li> <li>Annunciator F4-2-8, RPS CH 12 AUTO REACTOR TRIP, alarms.</li> </ul>		Verify the following:  □ CH 12 SCRAM SOLENOID GROUPS 1,2,3,4 White Light OFF. □ CH 12 B.U. SCRAM S.D.V. VENT AND DRAIN VALVE Light OFF □ Annunciator F4-1-2, RPS CH 12 MNSM LINE I2 ISOL Valve CLOSED, alarms. □ Annunciator F4-2-8, RPS CH 12 AUTO REACTOR TRIP, alarms.	Sat/Unsat					
23.	Confirm 01-02, MSIV-121 automatic partial closure indications as follows:  □ 01-02 MSIV-121 Green Light ON  □ 01-02 MSIV-121 Red Light ON  □ 01-02 MSIV-121 Mimic Light ON		Verify the following:  □ 01-02 MSIV-121 Green Light ON □ 01-02 MSIV-121 Red Light ON □ 01-02 MSIV-121 Mimic Light ON	Sat/Unsat					
24.	Place MAIN STEAM ISOLATION VALVE 7% TEST switch to OFF position.	0	Test switch is rotated to the OFF position	Pass/Fail					
25.	Confirm 01-02 MSIV 121 White Test Light OFF.		White Test Light for MSIV-121 is OFF.	Sat/Unsat					
26.	Depress REACTOR TRIP RESET at Panel E.		Depress REACTOR TRIP RESET Button on E-console.	Pass/Fail					
27.	Check RPS Channel 12 half scram are cleared:		Verify the following:						
	GROUPS 1,2,3,4 White Light ON.		☐ CH 12 SCRAM SOLENOID GROUPS 1,2,3,4 White Light ON.	Sat/Unsat					
	CH 12 B.U. SCRAM S.D.V. VENT AND DRAIN VALVE Light ON		☐ CH 12 B.U. SCRAM S.D.V. VENT AND DRAIN VALVE Light ON	Sat/Unsat					
	<ul> <li>Annunciator F4-1-2, RPS CH 12</li> <li>MNSM LINE I2 ISOL Valve</li> <li>CLOSED, clear.</li> </ul>		<ul> <li>Annunciator F4-1-2, RPS CH 12</li> <li>MNSM LINE I2 ISOL Valve</li> <li>CLOSED, clear.</li> </ul>	Sat/Unsat					
	Annunciator F4-2-8, RPS CH 12 AUTO REACTOR TRIP, clear.		Annunciator F4-2-8, RPS CH 12 AUTO REACTOR TRIP, clear.	Sat/Unsat					
28.	Notifies SRO of status.	Pr	oper communication used	Sat/Unsat					
ENE	O OF JPM								
Terr	minating Cue: N1-ST-Q26 completed	for	MSIV 01-03 & MSIV 01-02						
REC	CORD STOP TIME	RECORD STOP TIME							

- 1. Plant is operating at 100% power with no inoperable equipment.
- 2. All prerequisites for the test are completed.
- 3. Instructor to ask operator for any questions.

# **Initiating Cues:**

"(Operator's name), test Main Steam Line Isolation Valve 112 & 121 in accordance with N1-ST-Q26, Section 8.2 & 8.3."