

	JOB PERFORMANCE MEASURE (JPM)
---	-------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: RESPOND TO INADVERTENT ADS INITIATION

JPM NUMBER: JPM-C.4-G-001 **REV.** 0

RELATED PRA INFORMATION: None

TASK NUMBERS / TASK TITLE(S): CR200.204
Perform the procedure for an inadvertent ECCS initiation

K/A NUMBERS: 218000 A4.02 **Rating: SRO/RO:** 4.2/4.2
ADS Logic initiation

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION: In-Plant: Control Room:
 Simulator: Other:
 Lab:

Time for Completion: 10 Minutes Time Critical: No

Alternate Path: Yes

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:	Developer	Date
Validated by:	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	Training Supervisor	Date

JPM-C.4-G-001 (Respond To Inadvertent ADS Initiation) Rev. 0

JPM Number: JPM-C.4-G-001

JPM Title: Respond To Inadvertent ADS Initiation (2010 ILT NRC SIM 1)

Examinee: _____

Evaluator: _____

Job Title: _____

Date: _____

Start Time _____

Finish Time _____

PERFORMANCE RESULTS:

SAT:

UNSAT:

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM-C.4-G-001 (Respond To Inadvertent ADS Initiation) Rev. 0

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- You are the BOP.
- The plant is at rated power.
- RCIC Quarterly Surveillance is scheduled for later in your shift
- It has been determined that Core Spray needs to be placed in service in the Torus Mixing Mode

INITIATING CUES (IF APPLICABLE):

- Place "A" Core Spray Loop in Torus Mixing Mode.

EVALUATOR NOTE: When the Core Spray pump is started and AC INTERLOCK alarm received, the ADS Timer will inadvertently initiate. This will require immediate entry into C.4-G and placement of the ADS inhibit switches to the INHIBIT position.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM PERFORMANCE INFORMATION

- Required Materials:** • None
- General References:** • B.03.01-05.G.4, C.4-G
- Task Standards:** • Respond to an inadvertent ECCS Initiation IAW C.4-G

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step SHALL result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 1	Locate and review procedure B.03.01-05 G.4
Critical: N	
Standard:	Locate and review procedure B.03.01-05 G.4
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 2	Procedure Step 1
Critical: N	
	Verify MO-1753, 11 CS INJECTION INBOARD, is CLOSED.
Standard:	Uses light indication to verify MO-1753 CLOSED
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-C.4-G-001 (Respond To Inadvertent ADS Initiation) Rev. 0

Performance Step: 3 Critical: N	<p>Procedure Step 2</p> <p>Perform the following:</p> <ol style="list-style-type: none"> a. Verify 11 CS Pump Suction Pressure PI-14-36A (Local) indicates ≥ 0 psig. b. Verify Div I CS Pump Pressure PI-14-48A (Panel C-03) indicates ≥ 30 psig. <p style="text-align: center;">CAUTION:</p> <p>Do <u>NOT</u> start pump if system is <u>NOT</u> pressurized, as damage could result from suddenly filling and pressurizing an unfilled pipe.</p>
Standard:	<p>Contacts Rx Bldg NLO to verify PI-14-36A indicates ≥ 0 psig. Verifies PI-14-48A indicates ≥ 30 psig.</p>
Evaluator Cue:	As the Out Plant Operator, report that PI-14-36A indicates 5 psig.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 4 Critical: Y	<p>Procedure Step 3</p> <p>START 11 Core Spray Pump by placing 14A-S5A, 11 Core Spray Pump, control switch in START position.</p>
Standard:	<p>Starts 11 Core Spray Pump by placing 14A-S5A in START position.</p> <p><u>Non-Critical Portion of Standard:</u></p> <ul style="list-style-type: none"> • Prior to starting Pump, announces over plant PA system that they will be cycling a breaker in the lower 4 KV Room • Acknowledges and reports Annunciator C-03-A-41, AC Interlock.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

0

JPM-C.4-G-001 (Respond To Inadvertent ADS Initiation) Rev. 0

Performance Step: 5 Critical: N	Respond to annunciator C03-A-25 (Auto Blowdown Timer Activated).
Standard:	Responds to annunciator and notifies Shift Supervision.
Evaluator Cue:	As CRS, acknowledge the report.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 6 Critical: N	Recognizes entry into C.4.G (Inadvertent ECCS Initiation). Auto Blowdown Timers are timing down but Confirmatory Indications from C03-A-25 are NOT present: <ul style="list-style-type: none"> • Low RPV water level on LI-2-3-85A & B on C05 • Annunciator C03-A-38 (Reactor Low Low Level) • Annunciator C05-B-24 (Reactor Water Level Hi/Lo)
Standard:	Entry into C.4.G recognized (Alternate Path).
Evaluator Cue:	As CRS, acknowledge the initiation of the ADS timers and entry into C.4-G.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 7 Critical: N	C.4-G Procedure Step 2 Using all available information sources, determine if the initiation is the result of an inadvertent or spurious actuation signal and manual override is allowed. a. <u>If</u> the initiation CAN NOT be determined to be the result of an inadvertent or spurious actuation signal, <u>Then</u> EXIT this procedure and control the plant in accordance with appropriate procedures.
Standard:	Verifies annunciator 3-A-38 (Reactor Low Low Level) is not in alarm and that the initiation is spurious.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-C.4-G-001 (Respond To Inadvertent ADS Initiation) Rev. 0

Performance Step: 8	C.4-G Procedure Step 4
Critical: Y	<u>If</u> the ADS timer has started, <u>Then</u> place both ADS INHIBIT switches in the <u>INHIBIT</u> position.
Standard:	Places both inhibit switches in the INHIBIT position before an Auto Blowdown is initiated.
Evaluator Cue:	As CRS, acknowledge placing the ADS Inhibit switches to the INHIBIT position.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues: Inform the examinee that the JPM is complete once ADS is inhibited.

Stop Time: _____

Historical Record:

- This JPM was newly developed for the 2010 NRC ILT Exam. It is based on Core Spray
- B.03.01-05 Rev. 30 and Inadvertent ECCS Initiation C.4.G Rev. 8

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- You are the BOP.
- The plant is at rated power.
- It is August and upstream river temperature is high.
- It has been determined that Core Spray needs to be placed in service in the Torus Mixing Mode

INITIATING CUES (IF APPLICABLE):

- Place "A" Core Spray Loop in Torus Mixing Mode.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

	JOB PERFORMANCE MEASURE (JPM)
---	--------------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: MANUAL INITIATION OF RCIC

JPM NUMBER: JPM-B.02.03-010 **REV.** 0

RELATED PRA INFORMATION: None

TASK NUMBERS / TASK TITLE(S): CR217.107
Manually Initiate RCIC

K/A NUMBERS: 217000 A4.04 **Rating: SRO/RO:** 3.6 / 3.6

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION: In-Plant: Control Room:
 Simulator: Other:
 Lab:

Time for Completion: 15 Minutes Time Critical: No

Alternate Path: Yes

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:	Developer	Date
Validated by:	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	Training Supervisor	Date

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A reactor scram has occurred due to a LONOP.
- HPCI is unavailable.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to restore and maintain RPV Water Level to +9 to +48 inches by manually initiating RCIC IAW the Hard Card.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM PERFORMANCE INFORMATION

- Required Materials:** • None
- General References:** • B.02.03-05
- Task Standards:** • Inject with RCIC into the RPV

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step **SHALL** result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 1	At any time while performing this procedure,
Critical: N	<u>If</u> conditions permit, <u>Then</u> place RHR in torus Cooling for cooling/mixing the Torus water, per Ops Man Section B.03.04-05.
Standard:	Informs CRS of step to place Torus Cooling in service.
Evaluator Cue:	Acknowledge report and state that another operator will be directed to place Torus Cooling in service.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 2	Verify flow controller FIC-13-91 is in AUTO, <u>And</u> set to 400 gpm.
Critical: N	
Standard:	Verifies flow controller FIC-13-91 is in AUTO, <u>And</u> set to 400 gpm.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.02.03-010 (Manual Initiation of RCIC) Rev. 0

Performance Step: 3	OPEN MO-2096, RCIC Cooling Water Supply Valve.
Critical <u>Y</u>	
Standard:	Opens MO-2096, RCIC Cooling Water Supply Valve.
	<u>Non-Critical Portion of Standard:</u> Verifies red light on and green light off.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 4	Place P-211 (RCIC Barometric Condenser Vacuum Pump) Handswitch, 13A-S15, in the START position.
Critical <u>Y</u>	
Standard:	Places Handswitch, 13A-S15, in the START position.
	<u>Non-Critical Portion of Standard:</u> Verifies red light on and green light off.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 5	OPEN CV-2104, RCIC Pump Minimum flow Valve.
Critical <u>Y</u>	
Standard:	Opens CV-2104, RCIC Pump Minimum flow Valve.
	<u>Non-Critical Portion of Standard:</u> Verifies red light on and green light off.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.02.03-010 (Manual Initiation of RCIC) Rev. 0

Performance Step: 6	OPEN the following:
Critical: Y	<ul style="list-style-type: none"> a. MO-2107, RCIC Pump Disch Inbd valve b. MO-2106, RCIC Pump Disch Otbd valve
Standard:	Opens MO-2107 and MO-2106.
	<u>Non-Critical Portion of Standard:</u> Verifies red light on and green light off.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 7	OPEN MO-2078, RCIC Turbine Steam Supply.
Critical: Y	
Standard:	Opens MO-2078, RCIC Turbine Steam Supply.
	<u>Non-Critical Portion of Standard:</u> Verifies red light on and green light off.
<u>EVALUATOR NOTE:</u>	The Exhaust Diaphragm High Pressure annunciator is triggered to be received 15 seconds after MO-2078 is opened. The next four steps of the RCIC startup are verification steps and are NOT critical. They may be marked as Not Applicable (N/A) if they not performed before the annunciator activates.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 8	Verify the following valves are closed:
Critical: N	<ul style="list-style-type: none"> a. CV-2848 and CV-2849, RCIC Cond Pump Discharge to CRW b. CV-2082A and CV-2082B RCIC Steam Line Drain to Main Condenser
Standard:	CV-2848, CV-2849, CV-2082A, and CV-2082B verified CLOSED.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.02.03-010 (Manual Initiation of RCIC) Rev. 0

Performance Step: 9	Verify SI-7321, RCIC Turbine Speed Indicator is increasing, indicating that unit is rolling.
Critical: N	
Standard:	Verifies that SI-7321, RCIC Turbine Speed Indicator is increasing.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 10	Verify AO-13-22, RCIC Injection Testable Ckv, is open.
Critical: N	
Standard:	Verifies AO-13-22, RCIC Injection Testable Ckv, is open.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 11	Verify RCIC pump flow is maintained at desired level.
Critical: N	
Standard:	Verifies RCIC pump flow is maintained at desired level.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 12	Respond to annunciator C04-A-10 (RCIC Turbine Exhaust Diaphragm Hi Press).
Critical: N	
Standard:	Notifies the CRS of the unexpected alarm and references C.6-04-A-10.
Evaluator Cue:	Role Play CRS as necessary to acknowledge the unexpected alarm.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	This begins the Alternate Path portion of the JPM

JPM-B.02.03-010 (Manual Initiation of RCIC) Rev. 0

Performance Step: 13	ARP C-4-A10 Step 1.a, Perform the following: Depress 13A-S17 RCIC TURBINE TRIP Pushbutton.
Critical: Y	
Standard:	RCIC TURBINE TRIP Pushbutton depressed.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 14	ARP C-4-A10 Step 1.b, Perform the following: CLOSE the following Steam Isolation Valves 1) MO-2075 2) MO-2076
Critical: Y	
Standard:	MO-2075 and MO-2076 CLOSED.
	<u>Non-Critical Portion of Standard:</u> Verifies red lights off and green lights on.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues: When the Steam Isolation Valves are CLOSED, state that the JPM is completed.

Stop Time: _____

Historical Record:

- This JPM was newly developed for the 2010 NRC ILO Exam. It is based on RCIC B.02.03-05 Rev. 21

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A reactor scram has occurred due to a LONOP.
- HPCI is unavailable.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to restore and maintain RPV Water Level to +9 to +48 inches by manually initiating RCIC IAW the Hard Card.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM-E.4-07-001 (Restore LC-103 From LC-104) Rev. 5

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A LONOP occurred 45 minutes ago.
- C.4-B.09.02.B (Loss of Normal Off-Site Power) has been performed up to Step 13.
- No. 12 EDG is running, supplying 16 Bus and LC-104.
- No. 11 EDG failed to start and 15 Bus is dead.
- Reactor water level is being maintained using RCIC.
- There are NO Faults on LC-103.

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to restore LC-103 from LC-104 using procedure E.4-07.
 - Steps 1 and 2 have been performed.
 - You are to perform Steps 3 through 8 to energize LC-103.
 - The remaining steps will be performed by an Outplant operator at a later time.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM PERFORMANCE INFORMATION

- Required Materials:** • Simulator
- General References:** • None
- Task Standards:** • E.4-07, Rev 1

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step SHALL result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 1	(Procedure STEP 3)
Critical: Y	Place 52-301/CS, 103 LOAD CTR SEC ACB-52-301, to TRIP.
Standard:	Trips ACB 52-301, 103 LC SEC ACB. Verifies Red light OFF and Green light ON for ACB 52-301.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 2	(Procedure STEP 4)
Critical: Y	Verify 103/104 LC BUS TIE ACB-52-309 is OPEN.
Standard:	Verifies or OPENS ACB-52-309, 103/104 LC BUS TIE. <u>NON-CRITICAL PORTION OF STANDARD:</u> Verifies Green light ON and Red light OFF for ACB 52-309.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-E.4-07-001 (Restore LC-103 From LC-104) Rev. 5

Performance Step: 3 (Procedure STEP 5)
Critical: Y Place 52-409/CS, 103/104 LC BUS TIE ACB-52-409, to CLOSE.

Standard: Closes 52-409 ACB, 103/104 LC BUS TIE.

NON-CRITICAL PORTION OF STANDARD:
 Verifies Red light ON and Green light OFF for ACB 52-409.

Performance: **SATISFACTORY** **UNSATISFACTORY**

Comments:

Performance Step: 4 (Procedure STEP 6)
Critical: Y Place 52-309/SS, SYNC 103/104 LC BUS TIE ACB-52-309, to ON.

Standard: Places 52-309/SS to ON.

Performance: **SATISFACTORY** **UNSATISFACTORY**

Comments:

Performance Step: 5 (Procedure STEP 7)
Critical: Y **NOTE: ACB 5-309 will not CLOSE unless ACB-52-409 is CLOSED.**

Place 52-309/CS, 103/104 LC BUS TIE ACB-52-309, to CLOSE

Standard: Closes 52-309ACB, 103/104 LC BUS TIE.

(NON-CRITICAL PORTION OF STANDARD)
 Observes 103 LC amperage meter for indication.

Performance: **SATISFACTORY** **UNSATISFACTORY**

Comments:

Performance Step: 6 (Procedure STEP 8)
Critical: N Place 52-309/SS, SYNC 103/104 LC BUS TIE ACB-52-309, to OFF.

Standard: Turns OFF 52-309/SS, Sync 103/104 LC BUS TIE.

Performance: **SATISFACTORY** **UNSATISFACTORY**

Comments:

Performance Step: 7	INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED
Critical: N	
Standard:	Operator informs evaluator that the task is completed.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues:

Stop Time: _____

Historical Record:

- MNGP JPM Bank; Minor edits for 2009 NRC Exam
- Minor edits for 2010 NRC Exam. Updated to current JPM Template, QF-107501 Rev.3
- Updated to current revisions of procedures: C.4-B.09.02.B Rev.12 and E.4.07 Rev. 1

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A LONOP occurred 45 minutes ago.
- C.4-B.09.02.B (Loss of Normal Off-Site Power) has been performed up to Step 13.
- No. 12 EDG is running, supplying 16 Bus and LC-104.
- No. 11 EDG failed to start and 15 Bus is dead.
- Reactor water level is being maintained using RCIC.
- There are NO Faults on LC-103.

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to restore LC-103 from LC-104 using procedure E.4-07.
 - Steps 1 and 2 have been performed.
 - You are to perform Steps 3 through 8 to energize LC-103.
 - The remaining steps will be performed by an Outplant operator at a later time.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

	JOB PERFORMANCE MEASURE (JPM)
---	--------------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: APRM GAIN ADJUSTMENT WITHOUT THE PLANT COMPUTER

JPM NUMBER: JPM-C.2-05.B.04-001 **REV.** 1

RELATED PRA INFORMATION: None

TASK NUMBERS / TASK TITLE(S): CR200.130
APRM Gain Adjustment Factor Monitoring

K/A NUMBERS: 215005 A1.07 APRM (gain adjustment factor) **Rating: SRO/RO:** 3.0/3.4

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION: In-Plant: Control Room:
 Simulator: Other:
 Lab:

Time for Completion: 15 Minutes Time Critical: No

Alternate Path: No

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:		
	Developer	Date
Validated by:		
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant computer is OOS for maintenance and APRM 3 is bypassed for maintenance.
- APRM #3 is ready to be unbypassed.
- The plant is operating at 100% power.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to adjust the gain on APRM #3 to read 100% power IAW C.2-05 B.4 **Part D** AND remove the bypass from APRM 3.

JPM PERFORMANCE INFORMATION

- Required Materials:** • None
- General References:** • C.2-05 (Power Operation - System Operation)
- Task Standards:** • C.2-05 B.4 Part D

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step **SHALL** result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

<p>Performance Step: 1 Critical N</p>	<p>Procedure Step 24. Bypass APRM to be adjusted by placing switch 7B-S3 (APRM Bypass) in the associated APRM number and verify associated white Bypassed lamp is ON or associated APRM ODA display header display indicates BYP in inverse video. [M76053A]</p>
<p>Standard:</p>	<p>Verifies APRM #3 is bypassed</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 2 Critical: N</p>	<p>Procedure Step 25 & 25.a. At Panel C-37, on APRM, Navigate to (press ETC softkey as necessary) and Press <u>ENTER SET MODE</u> softkey, enter password 4221 (with numeric keypad) and press <u>ENT</u> key on keypad.</p>
<p>Standard:</p>	<p>Press ENTER SET MODE softkey, enter password 4221 with numeric keypad and press ENT key on keypad. Multiple attempts to successfully enter password within 10 seconds are allowed.</p>
<p>Evaluator Note:</p>	<p>Step 26 must be completed within 10 seconds or display will revert to main display.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

Performance Step: 3	Procedure Step 26. Using cursor keys, select APRM GAIN.
Critical: N	
Standard:	Using cursor keys, selects APRM GAIN.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 4	Procedure Step 27. Press SET PARAMETERS softkey.
Critical: Y	
Standard:	Press SET PARAMETERS softkey.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 5	Procedure Step 28. Adjust APRM gains per the following:
Critical: Y	<ul style="list-style-type: none"> a. Use left/right cursor keys for desired digit(s) changes. b. Use up/down cursor keys for attaining projected flux values equal to desired power as determined by nomogram of C.2-06, Control Room Core Power Nomogram at 1000 psig. c. Repeat Steps 28.a and 28.b for other digit(s) changes.
Standard:	Adjusts APRM gain so projected flux is within 2% of 100% power.
Evaluator Note:	Expected gain range is 2.44-2.56.
Evaluator Cue:	Inform operator that core thermal power from the Control Room Core Power Nomogram is 100%.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 6	Procedure Step 29. Press ACCEPT softkey to change the APRM gain.
Critical: Y	
Standard:	Press ACCEPT softkey to change the APRM gain after verifying reading is within 2% of 100% CTP.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 7	Procedure Step 30. Press EXIT softkey.
Critical: N	
Standard:	Press EXIT softkey.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 8	Procedure Step 31. Press EXIT SET MODE softkey.
Critical: N	
Standard:	Press EXIT SET MODE softkey.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 9	Procedure Step 32. Press YES softkey.
Critical: N	
Standard:	Presses YES.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 10	Procedure Step 33. Place switch 7B-S3 (APRM Bypass) in the neutral position and verify associated white Bypassed lamp is OFF or associated APRM ODA display header does <u>NOT</u> indicate BYP in inverse video. [M76053A]
Critical: Y	
Standard:	7B-S3 placed in the neutral position. <u>Non-critical portion of the Standard:</u> Verifies that APRM 3 is not bypassed.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 11	Informs evaluator APRM #3 gains are adjusted and that JPM is complete.
Critical: N	
Standard:	Informs evaluator APRM #3 gains are adjusted.
Evaluator Cue:	Acknowledge report, and inform candidate that JPM is complete.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues: Gain on APRM 3 has been adjusted and APRM 3 is unbypassed

Stop Time: _____

Historical Record:

- Minor edits for 2010 NRC Exam.
- Updated to current JPM Template, QF-107501 Rev.3.
- Updated to current revisions of procedures: C.2-05 Rev. 37.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant computer is OOS for maintenance and APRM 3 is bypassed for maintenance.
- APRM #3 is ready to be unbypassed.
- The plant is operating at 100% power.

INITIATING CUES (IF APPLICABLE):

The CRS directs you to adjust the gain on APRM #3 to read 100% power IAW C.2-05 B.4 **Part D** AND remove the bypass from APRM 3.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

	JOB PERFORMANCE MEASURE (JPM)
---	--------------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: PERFORM THE AREA RADIATION MONITOR FUNCTIONAL TEST

JPM NUMBER: JPM-B.05.12-001 **REV.** 1

RELATED PRA INFORMATION: None

TASK NUMBERS / TASK TITLE(S): CR272.102
Perform the Area Radiation Monitor Functional Test

K/A NUMBERS: 272000 **Rating: SRO/RO:** 3.0/3.0
A4.02

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION:

In-Plant:	<input type="checkbox"/>	Control Room:	<input type="checkbox"/>
Simulator:	<input checked="" type="checkbox"/>	Other:	<input type="checkbox"/>
Lab:	<input type="checkbox"/>		

Time for Completion: 25 Minutes Time Critical: No

Alternate Path: No

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:		
	Developer	Date
Validated by:		
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Plant is operating at 100% power.
- Maintenance was performed on ARM Channel A1 and it requires PMT.

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to perform Test 1025-A (Area Radiation Monitor Functional), Steps 1, 2, 4 and 6 for ONLY Channel A1.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM PERFORMANCE INFORMATION

- Required Materials:** Copy of Test 1025-A (Area Radiation Monitor Functional)
- Initiating Approval to commence
 - In the comments state the performance of this test is for ONLY Detector A1 to satisfy PMT following maintenance.
 - Check “other” as the reason for performing.
 - STEPS 3, 5, and 7-11 should be marked N/A.

- General References:**
- Ops Manual B.05.12
 - ARM Alarm Setpoint Sheet (Operator Aid posted on panel)

- Task Standards:**
- Test 1025-A (Area Radiation Monitor Functional)

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step SHALL result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 1 Obtains copy of Test 1025-A, APRM Functional
Critical: N

Standard: Obtains copy of Test 1025-A, most recent revision.

Evaluator Cue: Provides an initiated copy of the current revision of Test 1025-A.

Performance: SATISFACTORY UNSATISFACTORY

Comments:

Performance Step: 2 Procedure Step 1:
Critical: N Makes plant announcement that Area Radiation Monitor testing will begin.

Standard: Makes plant announcement

Performance: SATISFACTORY UNSATISFACTORY

Comments:

JPM-B.05.12-001 (Perform The Area Radiation Monitor Functional Test) Rev. 1

<p>Performance Step: 3 Critical: N</p>	<p>Procedure Step 2.a: Turn the "TRIP CHECK ADJUST" knob on the power supply fully counter-clockwise, <u>And</u> then ¼ turn clockwise.</p>
<p>Standard:</p>	<p>Turn the "TRIP AND ADJUST" knob on the power supply fully counter-clockwise, <u>And</u> then ¼ turn clockwise.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 4 Critical: Y</p>	<p>Procedure Step 2.b: Simultaneously depress the "TRIP CHECK" button on the Indicator and Trip unit <u>And</u> turn the "TRIP CHECK ADJUST" knob on the power supply unit slowly counter-clockwise until the downscale trip occurs.</p>
<p>Standard:</p>	<p>Simultaneously depress the "TRIP CHECK" button on the Indicator and Trip unit <u>And</u> turn the "TRIP CHECK ADJUST" knob on the power supply unit slowly counter-clockwise until the downscale trip occurs.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 5 Critical: N</p>	<p>Procedure Step 2.c: Record the meter reading at which the downscale trip occurred in the column labeled "mr/hr" under SECTION I of Figure 1.</p>
<p>Standard:</p>	<p>Record the meter reading at which the downscale trip occurred in the column labeled "mr/hr" under SECTION I of Figure 1.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 6 Critical: N</p>	<p>Procedure Step 2.d: Verify that the downscale alarm light on the Indicator and Trip unit is ON by recording initials in the column labeled "LT" under SECTION I of Figure 1.</p>
<p>Standard:</p>	<p>Records initials under "LT" column.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

JPM-B.05.12-001 (Perform The Area Radiation Monitor Functional Test) Rev. 1

<p>Performance Step: 7 Critical: N</p>	<p>Procedure Step 2.e: Verify that annunciator 4-A-31 (Area Monitor Downscale) is in ALARM by recording initials in the column labeled "ANN" under SECTION I of Figure 1.</p>
<p>Standard:</p>	<p>Records initials.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 8 Critical: Y</p>	<p>Procedure Step 2.f: Turn the "TRIP CHECK ADJUST" knob on the power supply unit clockwise to just above the low trip set point, <u>AND</u> leave in this condition.</p>
<p>Standard:</p>	<p>Adjusts trip check adjust knob.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 9 Critical: Y</p>	<p>Procedure Step 2.g: Depress the "RESET" button on the Indicator and Trip unit, <u>AND</u> verify the downscale light is OFF and annunciator 4-A-31 (Area Monitor Downscale) is RESET.</p>
<p>Standard:</p>	<p>Verifies annunciator is reset.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 10 Critical: N</p>	<p>Procedure Step 2.h: Circle all downscale meter readings that do not fall within the acceptance criteria of $\pm 50\%$ of the downscale setpoint on posted ARM setpoint sheet.</p>
<p>Standard:</p>	<p>Circles out of acceptance readings.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

JPM-B.05.12-001 (Perform The Area Radiation Monitor Functional Test) Rev. 1

Performance Step: 11	Procedure Step 4.a:
Critical: Y	Simultaneously depress the "TRIP CHECK" button on the Indicator and Trip unit, <u>And</u> turn the "TRIP CHECK ADJUST" knob on the power supply unit slowly clockwise until the upscale trip occurs.
Standard:	Adjusts until upscale trip occurs.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 12	Procedure Step 4.b:
Critical: N	Record the meter reading at which the upscale trip occurred in the column labeled "mr/hr" under SECTION II of Figure 1.
Standard:	Records meter reading.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 13	Procedure Step 4.c:
Critical: N	Verify the upscale light on the Indicator and Trip unit is <u>ON</u> by recording initials in the column labeled "LT" under SECTION II of Figure 1.
Standard:	Verifies upscale light is ON.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 14	Procedure Step 4.d:
Critical: N	Verify the appropriate annunciator is in ALARM by recording initials in column labeled "ANN" under SECTION II of Figure 1.
Standard:	Verifies alarm and initials form.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.05.12-001 (Perform The Area Radiation Monitor Functional Test) Rev. 1

Performance Step: 15	Procedure Step 4.e:
Critical: N	From the SPDS display, record the meter readings in the column labeled "mr/hr" under SECTION III of Figure 1.
Standard:	Records readings from SPDS.
Evaluator Note:	For the performance of this JPM SPDS may be OOS for other JPMs. If so provide the following cue:
Evaluator Cue:	SPDS reads 20 mr/hr.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 16	Procedure Step 4.f:
Critical: Y	Turn the "TRIP CHECK ADJUST" knob on the power supply unit counter-clockwise to just below the high trip set-point, <u>AND</u> leave in this condition.
Standard:	Adjusts trip check adjust knob.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 17	Procedure Step 4.g:
Critical: Y	Depress the "RESET" button on the Indicator and Trip unit, <u>AND</u> verify the upscale light is OFF and appropriate annunciator is RESET.
Standard:	Resets the annunciator.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 18	Procedure Step 4.h:
Critical: N	Circle all upscale meter readings that do not fall within the acceptance criteria of $\pm 30\%$ of the upscale setpoint on posted ARM setpoint sheet.
Standard:	Circles out of acceptance readings.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.05.12-001 (Perform The Area Radiation Monitor Functional Test) Rev. 1

Performance Step: 19	Procedure step 6
Critical: N	Announce over the page that Area Radiation Monitor testing is complete.
Standard:	Makes plant announcement.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 6	INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.
Critical: N	
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	JPM Complete
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues: Candidate informs evaluator “JPM is complete.”

Stop Time: _____

Historical Record:

- Rev.1 deletes the statement “All operator actions are to be simulated” from the Initiating Cues. It is based on Test 1025-A Rev. 15.

TURNOVER SHEET

INITIAL CONDITIONS:

- Plant is operating at 100% power.

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to perform Test 1025-A (Area Radiation Monitor Functional), Steps 1, 2, 4 and 6 for ONLY Channel A1.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

	JOB PERFORMANCE MEASURE (JPM)
---	--------------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: CRD COUPLING TEST

JPM NUMBER: JPM-B.01.03-008 **REV.** 7

RELATED PRA INFORMATION: None

TASK NUMBERS / TASK TITLE(S): CR201.102
Perform the Control Rod Drive Coupling Test

K/A NUMBERS: 201003 **Rating: SRO/RO:** 3.7/3.8
A2.02

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION: In-Plant: Control Room:
 Simulator: Other:
 Lab:

Time for Completion: 20 Minutes Time Critical: No

Alternate Path: No

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:	
	Developer
	Date
Validated by:	
	Validator
	(See JPM Validation Checklist, Attachment 1)
	Date
Approved by:	
	Training Supervisor
	Date

JPM-B.01.03-008 (CRD Coupling Test) Rev. 7

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The Plant is in Mode 4.
- Preparation for a plant startup is in progress with all control rod drives fully inserted.

INITIATING CUES:

- Shift Supervision directs you to perform CRD coupling check on **Rod 22-27** IAW Test 0075.
- The prerequisites for the test have been met and the Mode Switch is in REFUEL.
- OSP-CRD-0539 PART A has been completed for rod 22-27.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM-B.01.03-008 (CRD Coupling Test) Rev. 7

JPM PERFORMANCE INFORMATION

- Required Materials:**
- Initialize to any startup IC with all rods inserted and at <212°F.
 - Fill out Procedure 0075 (Control Rod Drive Coupling Test) as follows:
 - CRS approval on coversheet
 - Reason to perform – other
 - Comment section should read:
 - Perform the coupling check for only CRD 22-27 to satisfy drive replacement PMT.
 - Complete the prerequisites.
- General References:**
- Procedure 0075
- Task Standards:**
- Performs the CRD coupling test

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step **SHALL** result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 1	(Procedure STEP 1)
Critical: N	
	Place RWM mode select switch (C-05) to BYPASS position.
Standard:	Places RWM keyswitch in BYPASS.
Evaluator Cue:	RWM mode switch has been witnessed to be in the BYPASS position.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.03-008 (CRD Coupling Test) Rev. 7

Performance Step: 2	(Procedure STEP 3)
Critical: N	<u>If</u> plant is in Mode 4, <u>Then</u> verify OSP-CRD-0539 (Special Operations Checklist For Tech Spec LCO 3.10.4) Part A is complete for control rod to be tested.
Standard:	OSP-CRD-0539 verified complete.
Evaluator Cue:	As CRS, inform candidate that OSP-CRD-0539 is complete for rod 22-27.
Evaluate Note:	Procedure Step 2 is not applicable in Mode 4.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 3	(Procedure STEP 4)
Critical: Y	Fully withdraw CRD and observe that the control rod drive does not go to the overtravel position by verifying both: <ol style="list-style-type: none"> 1. The alarm 5-A-11 (Rod Overtravel) does not annunciate when attempting to withdraw the drive beyond position 48. 2. The selected rod position is not blank when the drive is fully withdrawn.
Standard:	<ol style="list-style-type: none"> 1. Selects Rod 22-27. 2. Fully withdraws rod to position 48 by simultaneously using the ROD MOVEMENT CONTROL switch (3A-S2) in the ROD OUT NOTCH position and ROD OUT NOTCH OVERRIDE switch (3A-S3) in the NOTCH OVERRIDE position. <p><u>Non-Critical portion of the Standard:</u></p> <ol style="list-style-type: none"> 1. Verifies ROD OVERTRAVEL alarm 5-A-11 does not annunciate. 2. Verifies rod position indication for 22-27 does not go blank.
Evaluator Note:	When control rod has settled at position 48, the operator may attempt to withdraw the control rod by simultaneously using the rod movement control switch 3A-S2 in the rod out notch position and rod out notch override with 3A-S3 in the notch override position.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.03-008 (CRD Coupling Test) Rev. 7

Performance Step: 4	(Procedure STEP 5)
Critical: Y	
	<u>If</u> both conditions in STEP 4 are verified, <u>Then</u> initial the appropriate square on Figure 1 (signifying a satisfactory coupling check for that control rod drive), <u>And</u> fully insert CRD.
Standard:	Fully inserts Control Rod 22-27 to position 00 using the ROD MOVEMENT CONTROL switch (3A-S2) in the ROD IN position.
	<u>Non-Critical portion of Standard:</u> Initials the proper location on Figure 1 of Test 0075.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 5	(Procedure STEP 6)
Critical: N	
	<u>If</u> both conditions in STEP 2 are NOT verified, <u>And</u> only one attempt has been made at recoupling, <u>Then</u> perform the following: <ol style="list-style-type: none"> 1. Note this situation in the COMMENTS section. 2. Attempt to couple the drive by fully inserting the control rod. 3. Perform the coupling check again by returning to STEP 2 and re-performing the procedure.
Standard:	None – Step will be N/A
Evaluator Note:	This step is not applicable. All rods are coupled.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 6	(Procedure STEP 7)
Critical: N	
	<u>If</u> the second attempt to verify control rod coupling is unsatisfactory, <u>Then</u> perform Procedure B.01.03-05.H.3 (Control Rod System Failure).
Standard:	None – Step will be N/A
Evaluator Note;	This step is not applicable. All rods are coupled.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.03-008 (CRD Coupling Test) Rev. 7

Performance Step: 7	(Procedure STEP 8)
Critical: N	Repeat STEPs 2 through 7 for each CRD to be tested.
Standard:	None
Evaluator Note:	Step is N/A'd.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 8	(Procedure STEP 9)
Critical: N	Place RWM mode select switch (C-05) to OPERATE position.
Standard:	Operator places keylock handswitch to OPERATE.
Evaluator Cue:	RWM mode switch has been witnessed to be in the OPERATE position.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 9	INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.
Critical: N	
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	JPM Complete
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues:

Stop Time: _____

Historical Record:

- Rev.7 deletes the statement “All operator actions are to be simulated” from the Initiating Cues. It is based on Test 0075 Rev. 17, in which Steps 2 and 3 are newly added from a previous revision.

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The Plant is in Mode 4.
- Preparation for a plant startup is in progress with all control rod drives fully inserted.

INITIATING CUES:

- Shift Supervision directs you to perform CRD coupling check on **Rod 22-27** IAW Test 0075.
- The prerequisites for the test have been met and the Mode Switch is in REFUEL.
- OSP-CRD-0539 PART A has been completed for rod 22-27.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

	JOB PERFORMANCE MEASURE (JPM)
---	--------------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: MANUALLY ISOLATE SCTMT

JPM NUMBER: JPM-B.04.02-005 **REV.** 1

RELATED PRA INFORMATION: None

TASK NUMBERS / TASK TITLE(S): CR261.108
Manually Isolate SCTMT

K/A NUMBERS: 290001 / A3.01 **Rating: SRO/RO:** 4.0/3.9
Secondary Containment Isolation

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION: In-Plant: Control Room:
 Simulator: Other:
 Lab:

Time for Completion: 20 Minutes Time Critical: No

Alternate Path: Yes

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:	
	Developer
	Date
Validated by:	
	Validator (See JPM Validation Checklist, Attachment 1)
	Date
Approved by:	
	Training Supervisor
	Date

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant is nearing the end of a refuel outage and is in Mode 4.
- I & C has replaced an isolation relay for Secondary Containment.
- No OPDRVs or fuel movements are in progress.
- PMT requires that a manual secondary containment isolation be performed.
- A SBTG has been verified in AUTO/STANDBY

INITIATING CUES (IF APPLICABLE):

- Manually isolate Secondary Containment IAW the B-Manual procedure.

JPM-B.04.02-005 (Manually Isolate SCTMT) Rev. 1

JPM PERFORMANCE INFORMATION

- Required Materials:**
- Simulator
- General References:**
- B.04.02-005.D.2
- Task Standards:**
- Manually isolate secondary containment, recognize the improper startup of SBGT B, place SBGT in manual and inform CRS to enter appropriate Technical Specification.

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step **SHALL** result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Qualification Program Examinations.

Performance Step: 1	Locates procedure B.04.02-05.D2 (Manually Isolate SCTMT)
Critical: N	
Standard:	Locates procedure B.04.02-05.D2 (Manually Isolate SCTMT), reviews PURPOSE and PRECAUTIONS AND LIMITATIONS
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 2	PREREQUISITES 1
Critical: N	At least one SBGT Train is in Auto/Standby.
Standard:	Verifies SBGT Train A is in Auto/Standby.
Evaluator Cue:	As stated in the initial conditions, state that A SBGT has been verified in AUTO/STANDBY.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.04.02-005 (Manually Isolate SCTMT) Rev. 1

Performance Step: 3	PREREQUISITES 2
Critical: N	Either: <ul style="list-style-type: none"> a. No painting has occurred within Reactor Building for at least 32 hours (online) or 48 hours (outage), <u>Or</u> b. <u>If</u> painting has occurred within 32 hours (online) or 48 hours (outage) of SBTG operation, <u>Then</u> notify the SCTMT System Engineer to evaluate the effect on the charcoal filters
Standard:	Verifies no painting has occurred within Reactor Building for at least 32 hours.
Evaluator Cue:	Inform operator that no painting has occurred within Reactor Building for at least 48 hours.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 4	Procedure Step 1:
Critical: N	<u>If</u> this procedure is being initiated in response to rising radioactive releases from the Reactor Building, <u>Then</u> perform this procedure concurrently with Abnormal Procedure C.4-B.02.04.A (Steam Leaks Outside Primary Containment), <u>And, Or</u> C.4-B.04.01.B (Primary Containment Group 2 – Isolation).
Standard:	Based on initial conditions and initiating cue this step is N/A
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.04.02-005 (Manually Isolate SCTMT) Rev. 1

Performance Step: 5 Critical: Y	<p>Procedure Step 2: <u>If</u> the Turbine Building ventilation is to remain operating, <u>Then</u> perform the following:</p> <ol style="list-style-type: none"> a. Evaluate Tech Spec 3.3.6.2 and enter applicable Condition for inoperable Secondary Containment Instrumentation. b. Evaluate Tech Spec 3.6.4.1 and enter applicable Condition for SCTMT inoperable. c. On Panel C-24A, place HS-4887 in BYPASS. d. On Panel C-24B, place HS-4888 in BYPASS.
Standard:	<ol style="list-style-type: none"> a. On Panel C-24A, places HS-4887 in BYPASS. b. On Panel C-24B, places HS-4888 in BYPASS. <p>NON-CRITICAL PORTION OF STANDARD:</p> <ul style="list-style-type: none"> • Evaluate Tech Spec 3.3.6.2 and enter applicable Condition for inoperable Secondary Containment Instrumentation. • Evaluate Tech Spec 3.6.4.1 and enter applicable Condition for SCTMT inoperable. • Acknowledges expected alarms
Evaluator Cue:	Inform operator Turbine Building ventilation IS to remain operating. Tech Spec 3.3.6.2 and 3.6.4.1 have been evaluated by the CRS.
Evaluator Note:	Both Tech Specs do not require entry based on the initial conditions.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 6 Critical: Y	<p>Procedure Step 3: <u>Isolate</u> SCTMT by pushing both TEST pushbuttons on Panels C-24A and C-24B.</p>
Standard:	<p>Isolates SCTMT by pushing both TEST pushbuttons on Panels C-24A and C-24B.</p> <p>NON-CRITICAL PORTION OF STANDARD: Acknowledges alarms</p>
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.04.02-005 (Manually Isolate SCTMT) Rev. 1

Performance Step: 7	NOTE: Only SBT A Train should start by using the TEST pushbuttons.
Critical: Y	
Standard:	Candidate should recognize that SBT A failed to start and SBT B started (Alternate Path)
	NON-CRITICAL PORTION OF STANDARD: Acknowledges alarms
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 8	Procedure Step 4:
Critical: N	<u>If</u> SBT A Train and SBT B Train automatically start, <u>Then</u> attempt to determine the reason for the start of B Train, <u>And</u> either:
Standard:	This step is N/A
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 9	Procedure Step 5:
Critical: N	<u>If</u> SBT B Train remained in AUTO/STANDBY condition, <u>Then</u> verify the following indications:
Standard:	This step is N/A
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.04.02-005 (Manually Isolate SCTMT) Rev. 1

<p>Performance Step: 10 Critical: N</p>	<p>Procedure Step 6.a (Alternate Path) <u>If</u> SBTG A Train failed, <u>And</u> SBTG B Train initiated, <u>Then</u> perform the following:</p> <ol style="list-style-type: none"> a. Verify the following indications at Panel C-24B: <ol style="list-style-type: none"> 1) DPI-4424 \leq-0.25 WC (more negative) 2) V-EF-17B ON 3) FILTER HEATER E-34B-1 ON 4) AO-2944 OPEN 5) AO-2978 OPEN 6) CV-2942 100% OPEN 7) FIC-2942 \geq 3150 cfm and \leq4000 cfm
<p>Standard:</p>	<ol style="list-style-type: none"> a. Verifies the following indications at Panel C-24B: <ol style="list-style-type: none"> 1) DPI-4424 \leq-0.25 WC (more negative) 2) V-EF-17B ON 3) FILTER HEATER E-34B-1 ON 4) AO-2944 OPEN 5) AO-2978 OPEN 6) CV-2942 100% OPEN 7) FIC-2942 \geq3150 cfm and \leq4000 cfm
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 11 Critical: N</p>	<p>Procedure Step 6.b: Declare SBTG A Train INOPERABLE, AND enter Tech Spec 3.6.4.3 Condition A.</p>
<p>Standard:</p>	<ol style="list-style-type: none"> b. Informs CRS to declare SBTG A Train INOPERABLE, <u>And</u> evaluate Tech Spec 3.6.4.3 Condition A.
<p>Evaluator Cue:</p>	<p>Acknowledge as CRS the inoperability of SBTG A.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

JPM-B.04.02-005 (Manually Isolate SCTMT) Rev. 1

<p>Performance Step: 12 Critical: Y</p>	<p>Procedure Step 6.c: Investigate cause of SBGT A Train failure and perform the following at Panel C-24A:</p> <ol style="list-style-type: none"> 1) Place HS-2988A to Position 1 (MANUAL) and verify blue light is ON. 2) Verify the following indications: <ol style="list-style-type: none"> a) V-EF-17A OFF b) FILTER HEATER E-34A-1 OFF c) AO-2945 CLOSED d) AO-2979 CLOSED
<p>Standard:</p>	<p>c. Investigates cause of SBGT A Train failure and perform the following at Panel C-24A:</p> <ol style="list-style-type: none"> 1) Places HS-2988A to Position 1 (MANUAL) and verifies blue light is ON. 2) Verifies the following indications <u>NON-CRITICAL PORTION OF STANDARD:</u> <ol style="list-style-type: none"> a) V-EF-17A OFF b) FILTER HEATER E-34A-1 OFF c) AO-2945 CLOSED d) AO-2979 CLOSED
<p>Evaluator Cue:</p>	<p>Inform candidate that another operator will continue the investigation and that they should complete the procedure.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

<p>Performance Step: 13 Critical: N</p>	<p>Procedure Step 6.d: Notify CRS.</p>
<p>Standard:</p>	<p>Notifies CRS.</p>
<p>Evaluator Cue:</p>	<p>Acknowledge the notification as CRS and terminate the JPM.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

Terminating Cues: The remaining portion of the procedure is notifications and verifications (not all modeled in the simulator). When operator informs CRS, terminate JPM.

Stop Time: _____

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant is nearing the end of a refuel outage and is in Mode 4.
- I & C has replaced an isolation relay for Secondary Containment.
- No OPDRVs or fuel movements are in progress.
- PMT requires that a manual secondary containment isolation be performed.
- A SGBT has been verified in AUTO/STANDBY

INITIATING CUES (IF APPLICABLE):

- Manually isolate Secondary Containment IAW the B-Manual procedure.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

	JOB PERFORMANCE MEASURE (JPM)
---	--------------------------------------

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: COLD STARTUP OF NO. 11 RECIRC PUMP

JPM NUMBER: JPM-B.01.04-004 **REV.** 4

RELATED PRA INFORMATION:

TASK NUMBERS / TASK TITLE(S): 202.106
Cold Startup of 11 (12) Recirc Pump

K/A NUMBERS: 202001 A4.01 **Rating: SRO/RO:** 3.7/3.7

APPLICABLE METHOD OF TESTING:

Discussion: Simulate/walkthrough: Perform:

EVALUATION LOCATION: In-Plant: Control Room:
 Simulator: Other:
 Lab:

Time for Completion: 20 Minutes Time Critical: No

Alternate Path: Yes

TASK APPLICABILITY: SRO: RO: NLO

Additional site-specific signatures may be added as desired.

Developed by:	Developer	Date
Validated by:	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	Training Supervisor	Date

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A Reactor startup is planned for next shift.
- All control rods are fully inserted and reactor water level is above 30".
- 2R is supplying all 4.16KV busses.
- Temperature difference between reactor coolant temperature and the Recirc loop is $\leq 50^{\circ}\text{F}$ AND SR 3.4.9.3 was just completed satisfactorily.
- The 2114 Form (REACTOR RECIRC PRESTART CHECKLIST) has already been completed by another operator

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to perform a Cold Start No. 11 Recirculation Pump.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JPM PERFORMANCE INFORMATION

- Required Materials:** • See Simulator Setup
- General References:** • B.01.04-05.D.1
 • C.6-004-B-25
- Task Standards:** • Perform and Cold Startup of 11 Recirc Pump

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step **SHALL** result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 1	Locates procedure B.01.04-05.D.1 and verifies all prerequisites are met.
Critical: N	
Standard:	Locates procedure and <u>Reads</u> precaution that SR 3.4.9.3 must be logged within 15 minutes prior to starting 11 Recirc pump, and <u>Verifies</u> form 2114 has been completed as a prerequisite.
Evaluator Note:	Both of these are complete IAW the JPM Initial Conditions.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 2	(Procedure STEP 1)
Critical: N	<u>If</u> power to Bus 11 is being supplied from 2R, <u>Then</u> check knife switch 4 in Panel C-31 CLOSED.
Standard:	Verifies knife switch 4 CLOSED.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

Performance Step: 3	(Procedure STEP 2)
Critical: N	<u>If</u> power to Bus 11 is being supplied from 1R, <u>Then</u> check knife switch 16 or Knife Switch 4 in Panel C-31 OPEN.
Standard:	None – This step is N/A
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 3	(Procedure STEP 3)
Critical: N	Verify the following for start of 11 Recirc Pump: <ul style="list-style-type: none"> a. Valve MO-2-53A (11 Recirc Pump Discharge Closed). b. Valve MO-2-43A (11 Recirc Pump Suction Open). c. Position Indicator 2-184-22A reads approximately 2.55 (2.45 - 2.65) for 11 Recirc Pump. d. Scoop tube lock is reset for 11 Recirc Pump. e. The recirculation system annunciation on Panel C-04 is normal for 11 Recirc Pump. f. Valve SV-2-2-11A (11 Recirc Pmp Seal Leakoff) is CLOSED as indicated on Panel C-04 (green light on). g. Verify approximately 3 gpm seal injection flow to P-200A, 11 Recirc Pump.
Standard:	<ul style="list-style-type: none"> a. Verifies valve MO-2-53A is closed. b. Verifies valve MO-2-43A is open. c. Verifies that No. 11 Recirc pump Position Indicator 2-184-22A reads approx 2.55 (2.45 - 2.65). d. Verifies alarm C04-C-05 is not in the alarm condition. e. Verifies no abnormal or unexpected annunciators are in the alarm. f. Verifies green light on. g. Calls Reactor Building Operator(RBO) to verify 3 gpm seal injection flow to 11 Recirc Pump.
Evaluator Cue:	Respond as RBO that 3 gpm seal injection flow has been established to 11 Recirc Pump.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

<p>Performance Step: 4 Critical: N</p>	<p><u>NOTE:</u> Reactor Coolant Temperature can be obtained using any of the suction temperatures (e.g. RWCU, RHR Shutdown Cooling, or Running Loop of Recirc) provided there is flow present.</p> <p>(Procedure STEP 4) <u>If</u> in MODES 1, 2, 3 or 4, <u>Then</u> perform SR 3.4.9.3 within 15 minutes prior to Recirc Pump start by confirming that the idle loop temperature is within 50°F of reactor coolant temperature.</p> <ol style="list-style-type: none"> a. <u>IF</u> the temperature difference is greater than 50°F, <u>THEN</u> DO NOT restart the isolated pump AND Enter B.01.04-05.H.6 (Stratification Recovery). b. <u>IF</u> the temperature difference is less than or equal to 50°F, <u>THEN</u> Log completion time of SR 3.4.9.3 within 15 minutes prior to starting 11 Recirc Pump.
<p>Standard:</p>	<p>Reads and acknowledges this requirement.</p>
<p>Evaluator Cue:</p>	<p>IAW JPM initial conditions, differential temperature is < 50°F and another operator will log the completion of SR 3.4.9.3.</p>
<p>Performance:</p>	<p>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></p>
<p>Comments:</p>	

Performance Step: 5
Critical: Y

NOTE: Actuation of relay 2A-K34A, 11 Recirc MG Overcurrent Sensing Relay, may occur upon start of Recirc Pump and result in alarm of 4-C-6 (RECIRC PUMP MOTOR A LOCKED ROTOR TRIP).

CAUTION:

The RECIRC PUMP DISCHARGE valve must be at least 20-25% open within 66 seconds of MG Set start or a trip will occur. 20-25% open corresponds to a 6-8 second open signal with the valve control switch.

(Procedure STEP 5)

Place 11 MG Set drive motor control switch to START and observe:

- a. Generator speed peaks between 80 to 100% speed (because field generator breaker is OPEN).
- b. Generator field breaker CLOSED approximately 6 seconds after drive motor breaker is CLOSED.
- c. Generator speed lowers to about 40% speed and then lowers to minimum speed.

Standard:

Places #11 Recirc MG Set drive motor handswitch (2A-S1A) to the START position momentarily.

Non-Critical portion of Standard:

Verifies pump start by the following:

- 1. MG Set Drive Motor light indication changes from green to red,
And
- 2. Generator speed peaks at a point between 80 and 100% speed, as indicated on meter SI 2-184-16A, Pump Speed.
And
- 3. Generator field breaker closes about 6 seconds after the drive motor breaker is closed, as indicated by the indicating light changing from green to red,
And
- 4. After the field breaker closes, generator speed slowly decreases to 40% speed and then lowers to minimum (approx. 30%).

Performance:

SATISFACTORY UNSATISFACTORY

Comments:

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

Performance Step: 6

(Procedure STEP 6)

Critical: Y

When 10 seconds have passed after MG Set start,
Then OPEN MO-2-53A (11 Recirc Pump Discharge),
And observe the following:

- a. Loop flow rises to 6500 gpm.
- b. Pump speed remains constant.
- c. Jet pump flow rises to 20% of rated (6×10^6 lb/Hr).
- d. Pump Current - 50 (Normal for 25% speed)
- e. Pump Volts – 900V (Normal for 25% speed)
- f. Drive Motor Amps – 150A (Normal for 25% speed)
- g. Valve SV-2-2-11A, 11 RECIRC PMP SEAL LEAKOFF, is OPEN as indicated on Panel C-04 (green light off).

Standard:

Opens #11 recirc pump discharge valve by holding handswitch 2A-S7A, CW to the OPEN position, until the valve position indication changes from green to red.

Non-Critical portion of Standard:

- 1. Performs required observations and verifications:
 - a. Loop Flow - min 6500 gpm on FI-2-159A.
 - b. Pump speed remains constant SI-2-184-16A.
 - c. Jet Pump Flow - Flow on FI-2-3-92B is dependent on plant condition.
 - d. Pump Amps - min 50A on 2-184-22A
 - e. Pump Volts - min 900V on 2-184-23A.
 - f. Drive Motor Amps - min 150A on 2- 184-24A.
 - g. Seal Leakoff Block valve light indication, SV-2-2-11A, is no longer lit.

Performance:

SATISFACTORY **UNSATISFACTORY**

Comments:

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

Performance Step: 7	NOTE: The pumps will be operated at minimum speed until reactor power is increased to approximately 60% by control rod withdrawal per Ops. Manual C.1 (Startup Procedure).
Critical: N	(Procedure STEP 7) Monitor and adjust service water at 11 MG Set oil cooler to maintain lube oil temperature at approximately 100°F leaving the cooler.
Standard:	Calls APEO to monitor temperature and adjust it as necessary to maintain 100°F.
Evaluator Cue:	Outlet of lube oil heat exchanger is 100°F.
Evaluator Note:	The high vibration alarm will activate 30 seconds after the pump is started. This step may be omitted if the candidate is responding to C04-B-25.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 8	(Procedure STEP 8)
Critical: N	Increase speed to the maximum allowed by the Feedwater interlocks, about 30%.
Standard:	11 Recirc Pump speed should already be about 30%
Evaluator Cue:	The high vibration alarm will activate 30 seconds after the pump is started. This step may be omitted if the candidate is responding to C04-B-25.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

Performance Step: 9	Respond to annunciator C.6-004-B-25 (Recirc Pump MTR A Hi Vibration)
Critical: N	
Standard:	Procedure C.6-004-B-25 referenced and CRS informed of the unexpected alarm.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 10	(Procedure C.6-004-B-25 STEP 1)
Critical: N	Monitor A Pump Motor temperatures and vibration via SPDS an R-2-2-31 (C-21)
Standard:	A Recirc Pump Motor temperatures monitored. (TR-2-2-31, Points 1 & 2; SPDS screen 510, point REC126.)
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 11	(Procedure C.6-004-B-25 STEP 2)
Critical: N	Monitor A Pump Motor run speed via SI-2-184-16A, Recirc Pump 11 Speed (C-04).
Standard:	A Recirc Pump speed monitored.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

Performance Step: 12	(Procedure C.6-004-B-25 STEP 3)
Critical: N	Dispatch an operator to the Recirc MG Set Room to determine A Recirc Pump Motor vibration as indicated on local indicator VM-5602.
Standard:	Operator dispatched.
Evaluator Cue:	When candidate dispatches RBO to MG Set Room, inform him vibration on No. 11 pump motor is at <u>6 mils and rising</u>, and oil flow and temperature appear to be normal.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Performance Step: 13	(Procedure C.6-004-B-25 STEP 5)
Critical: N	<u>If</u> the pump motor speed is less than or equal to 50%, <u>And</u> motor vibration is at or above 5 mils, <u>Then</u> shutdown A Recirc MG Set using B.01.04-05 (Reactor Recirculation System-System Operation).
Standard:	B.01.04-05 referenced for shutdown of the Recirc Pump.
Evaluator Cue:	The procedure to be used is B.01.04-05 F.1.
Evaluator Note:	Procedure C.6-004-B-25 STEP 4 is not applicable because the pump speed will be less than 50%.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

JPM-B.01.04-004 (Cold Startup Of No. 11 Recirc Pump) Rev. 4

Performance Step: 14	B.01.04-05. F.1. Steps 1-3 are N/A
Critical: Y	(Procedure STEPS 4-7)
	<ol style="list-style-type: none"> 4. Place the MG Set drive motor control switch for one pump to STOP. 5. Verify the drive motor breaker OPENED. 6. Verify the generator field breaker OPENED. 7. CLOSE the stopped pump RECIRC PUMP DISCHARGE valve. <ol style="list-style-type: none"> a) MO-2-53A, <li style="text-align: center;"><u>Or</u> b) MO-2-53B.
Standard:	<ol style="list-style-type: none"> 4. Places the MG Set drive motor control switch for 11 recirc pump to STOP. <p><u>Non-Critical portion of Standard:</u></p> <ol style="list-style-type: none"> 5. Verify the 11 recirc pump drive motor breaker OPENED. 6. Verify the 11 recirc pump generator field breaker OPENED. 7. CLOSE 11 RECIRC PUMP DISCHARGE valve MO-2-53A.
Evaluator Cue:	After completion of these steps inform the candidate, "This JPM is complete."
Evaluator Note:	The high vibration malfunction will reinsert and then delete on Event Trigger 4 when the Pump handswitch is taken to STOP.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	

Terminating Cues: See Evaluator Cue in Performance Step 14

Stop Time: _____

TURNOVER SHEET

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A Reactor startup is planned for next shift.
- All control rods are fully inserted and reactor water level is above 30".
- 2R is supplying all 4.16KV busses.
- Temperature difference between reactor coolant temperature and the Recirc loop is < 50°F AND SR 3.4.9.3 was just completed satisfactorily.
- The 2114 Form (REACTOR RECIRC PRESTART CHECKLIST) has already been completed by another operator

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to perform a Cold Start No. 11 Recirculation Pump.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.