

INITIAL SUBMITTAL OF THE WALKTHROUGH JPMS

FOR THE MONTICELLO INITIAL EXAMINATION - OCT 2002

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.01.03-006
TITLE:	CRD OPERABILITY	Revision 8a
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JOB PERFORMANCE MEASURE

SRO: _____	SRO/RO: <u>X</u>	SRO/RO/NLO: _____	NLO: _____
Plant Reference: Procedure No. 0074, Rev 30; B.01.03-05.H.4, Rev 14			
Task Standard: Perform Weekly Control Rod Drive Exercise No. 0074			
K/A Reference: 201003	Task No: A2.01 A4.02	Rating RO/SRO: 3.4/3.6 3.5/3.5	
Recent Events: RE: 92-069, Control Rod 26-27 double notched in and had slow withdrawal time.			
Probabilistic Risk Assessment Human Error: None			
Monticello Specific Task List Reference: CR201.101			
METHOD OF TESTING		TIME FOR COMPLETION	
Simulator: <u>X</u>	Normal: _____	Estimated Time to Complete: <u>10 Min</u>	
In-Plant: _____	Alternate Path: <u>X</u>	Maximum Time to Complete: <u>30 Min</u>	
		Time Critical: _____ Yes <u>X</u> No	

Prepared By: <i>Kurt Markely</i>	Date: <i>06/28/02</i>
Reviewed By: <i>[Signature]</i>	Date: <i>7/1/02</i>
Shift Supv/Shift Mgr Review By: <i>Kurt Markely</i>	Date: <i>07/01/02</i>
Approved By: <i>MR Eng</i>	(Supt Ops Trng) Date: <i>13 July 02</i>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: _____			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.01.03-006	Doc Type: 8505	Admin Initials: _____	Date: _____

I/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.01.03-006
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JPM SET-UP

Simulator Setup:

Initialize to any IC which places the reactor at 100% power and the CRD system operable.

Enter Malfunction CH02 for Control Rod 02-31 on Remote Trigger 1 to prevent the first rod from being withdrawn after it is inserted one notch. Be prepared to remove the malfunction while STEP 6 is being performed.

Obtain a Control Rod Position printout from the Process Computer and place on C-05.

Have Control Room Log accessible.

Fill out 0074 as follows:

- Write in Comments, "Perform PART A, Steps 3-8, for CRDs 02-31, 02-27, 02-23 for training."
- Reason for Performing: Other X
- Initial prerequisites.
- N/A all CRDs on page12 except the first three.

Initial Conditions:

The plant is at 100% power.

The Control Room Supervisor directs you to perform the Weekly Control Rod Drive Exercise No. 0074 for the first three rods only, using the current rod position printout at the operator console. Steps 1 and 2 have been completed.

Initiating Cues:

The Control Room Supervisor directs you to perform the Weekly Control Rod Drive Exercise No. 0074 for the first three rods only, using the current rod position printout at the operator console. Steps 1 and 2 have been completed.

Provide the operator a copy of Procedure 0074.

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PERFORMANCE INFORMATION

Performance Objective	Standard
<p>STEP 1 "C" (Procedure STEP 3)</p> <p>NOTE: Reactor Manual Control anomalies (i.e., the inability to select a rod on the first or subsequent tries, rod selects but spurious alarms are received) SHALL be considered abnormal conditions and recorded in Table 2, Control Rod Exercise Abnormalities.</p> <p>Select a withdrawn or partially withdrawn control rod by depressing the appropriate rod select pushbutton. Verify that the selected rod select pushbutton is illuminated and the selected rod indicates selection on the full-core display.</p>	<p>Standard:</p> <p>Selects CRD 02-31.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 2 "C" (Procedure STEP 4)</p> <p>CAUTION:</p> <p>PCRAT should be below the value indicated in PREREQUISITE 1 to perform STEPS 4 and 5 on partially withdrawn rods.</p> <p>Insert the selected rod one notch and verify the rod position indication for the selected control rod in the single rod and the four rod group display changes to the next lower latched position.</p>	<p>Standard:</p> <p>Operator inserts the selected control rod one notch position by placing Rod Movement Control switch 3A-S2 to the ROD IN position, releases the switch.</p> <p>Cue:</p> <p>If asked by the candidate or if candidate refers to the computer, PCRAT indicates 0.986.</p> <p>Operator should observe the following:</p> <p>Rod position indication changes to the next lower position on the single-rod and four rod group.</p> <p>Cue:</p> <p>If the operator looks at the computer printer, tell them the rod moved from 48 to 46.</p> <p>Comments:</p> <ol style="list-style-type: none"> 1. Insert Malfunction on Remote No. 1 <u>after</u> the rod is inserted but <u>before</u> the next step. 2. The simulator computer does not print out each CRD change.

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Performance Objective	Standard
<p>STEP 3 "C" (Procedure STEP 5)</p> <p>NOTE: The RWM uses the Rod Select and Drive signal to detect completion of the rod motion cycle. Because this signal does not always drop out long enough for the RWM to detect completion of the rod motion, allow enough time for the settle cycle to occur to ensure that all control rods are logged properly.</p> <p>Withdraw the selected rod one notch and verify the rod position indication for the selected control rod in the single rod and the four rod group display changes to the next higher latched position.</p>	<p>Standard:</p> <p>Operator attempts to withdraw the selected control rod one notch position by placing Rod Movement Control Switch 3A-S2 to the ROD OUT NOTCH position, releases the switch.</p> <p>(Non-Critical portion of Standard)</p> <p>Operator should observe the following:</p> <ol style="list-style-type: none"> 1. Rod position indication does not change to the next higher position on the single-rod and the four rod display, as rod withdrawal is attempted. <p>Cue: None</p> <p>Comments: None</p> <p>NOTE: Operator may attempt to reposition control rod a second time.</p>
<p>STEP 4 (Procedure STEP 6)</p> <p>After completion of the first control rod, verify computer acknowledgment of the rod's change in position. (Alarm typer print-out of rod identification and position changes.)</p>	<p>Standard: None</p> <p>Cue: None</p> <p>Comments: None</p>

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Performance Objective	Standard
<p>STEP 5 "C" (Procedure Step 7)</p> <p>NOTE: For the purposes of this procedure, drives which require drive pressure greater than 265 psid to insert or withdraw, all occurrences of double notching, and unusually fast, slow, or erratic drive speeds, SHALL be considered an abnormal condition. See BASES.</p> <p>IF an abnormal condition is detected as a result of exercising a rod, <u>THEN</u> notify the Control Room Supervisor, <u>AND</u> record what the abnormality was (i.e., Double Notch insert, Double Notch withdraw, increase drive pressure to ____ psi) on Table 2 Control Rod Exercise Abnormalities.</p>	<p>Standard:</p> <p>Operator should notify the Control Room Supervisor of the failure of the control rod to move.</p> <p>(Non-Critical portion of Standard)</p> <p>Records the abnormal indication in Control Room Log and on Table 2, Control Rod Exercise Abnormalities.</p> <p>Cue:</p> <p>The Control Room Supervisor has notified the Nuclear Engineer, and directs the operator to attempt withdrawal of the CRD using higher drive pressure per approved procedures.</p> <p>Comments: None</p>
<p>STEP 6 (B.01.03-05.H.4)</p> <p>Locates Procedure B.01.03-05.H.4 (WITHDRAWAL OF A CRD UNDER HIGH DRIVE PRESSURE).</p>	<p>Standard:</p> <p>Locates correct procedure.</p> <p>Cue: None</p> <p>Comments: None</p>

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Performance Objective	Standard
<p>STEP 7 "C" (B.01.03-05.H.4, STEP 1)</p> <p>GENERAL NOTE: This procedure may be terminated at any step when CRD withdrawal is accomplished.</p> <p>NOTE: STEPS 1, 2, and 3 may be performed in any order.</p> <p>Perform the following:</p> <ol style="list-style-type: none"> Raise drive water pressure in increments up to 30 psid, to a maximum of 400 psid and give the drive a withdraw signal after each increment. IF data is not recorded per procedure 0074, THEN leave a message for CRD System Engineer including CRD location and drive pressure required for withdrawal. Before moving a different CRD, return drive water pressure to approximately 265 psid. 	<p>Standard:</p> <p>Increases drive water pressure, and attempts to withdraw the rod WITHOUT EXCEEDING 400 psid. Does not attempt to insert the rod with increased drive pressure.</p> <p>(Non-Critical portion of Standard)</p> <p>Attempts to withdraw the rod every 30 psid increase in pressure.</p> <p>Cue: None</p> <p>Comments:</p> <p>Cue Simulator Operator to clear malfunction after 2 drive water pressure increases.</p>

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Performance Objective	Standard
<p>STEP 8 "C" (B.01.03-05.H.4, STEP 2)</p> <p><u>IF</u> the drive does not unlatch, <u>THEN</u> perform the following:</p> <ol style="list-style-type: none"> Hold the Notch Override Switch in the NOTCH OVERRIDE Position. Hold the Rod Movement Control Switch in the ROD OUT Position. Give the drive a rapid series of emergency ROD IN and NOTCH OVERRIDE signals with the rod NOTCH OVERRIDE Switch. 	<p>Standard:</p> <p>Operator gives a rapid series of insert and withdraw signals, then gives the drive a withdraw signal. Returns the rod to its pre-exercise position.</p> <p><u>(Non-Critical portion of Standard)</u></p> <p>Exits the B.01.03 procedure per the General Note.</p> <p>Documents Table 2 Control Rod Exercise Abnormalities.</p> <p>Cue: None</p> <p>Comments:</p> <p>Remove the malfunction to allow the rod to move.</p>
<p>STEP 9 "C" (Procedure STEP 8)</p> <p>Acknowledge completion of the rod exercise on Table 1.</p>	<p>Standard:</p> <p>Operator initials the appropriate blank on the Control Rod Exercise Data Sheet after the rod is returned to its original position.</p> <p>Cue:</p> <p><u>PRE-APPROVED PROMPT:</u></p> <p>Inform the operator that the JPM has been completed.</p> <p>Comments:</p> <p>End the JPM without withdrawing the other two control rods.</p>

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CANDIDATES COPY

Initial Conditions:

The plant is at 100% power.

The Control Room Supervisor directs you to perform the Weekly Control Rod Drive Exercise No. 0074 for the first three rods only, using the current rod position printout at the operator console. Steps 1 and 2 have been completed.

INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.01-002
TITLE:	ISOLATE CORE SPRAY LOOP A	Revision 5a
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JOB PERFORMANCE MEASURE

SRO: _____ SRO/RO: X SRO/RO/NLO: _____ NLO: _____

Plant Reference: B.3.1-05.E.2, Rev 11

Task Standard: Isolate Core Spray Loop A

K/A Reference: 209001 Task No: A4.03 Rating RO/SRO: 3.7/3.6

Recent Events: None

Probabilistic Risk Assessment Human Error: None

Monticello Specific Task List Reference: CR209.108

METHOD OF TESTING		TIME FOR COMPLETION
Simulator: <u>X</u>	Normal: <u>X</u>	Estimated Time to Complete: <u>5 Min</u>
In-Plant: _____	Alternate Path: _____	Maximum Time to Complete: <u>10 Min</u>
		Time Critical: _____ Yes <u>X</u> No

Prepared By: <u>Kurt Markley</u>	Date: <u>06/28/02</u>
Reviewed By: <u>Ed M. Allen</u>	Date: <u>7/1/02</u>
Shift Supv/Shift Mgr Review By: <u>Kurt Markley</u>	Date: <u>07/01/02</u>
Approved By: <u>MR Egan</u>	(Supt Ops Trng) Date: <u>1 July 02</u>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: _____			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.03.01-002	Doc Type: 8505	Admin Initials: _____	Date: _____

I/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.01-002
TITLE:	ISOLATE CORE SPRAY LOOP A	Revision 5a
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JPM SET-UP	
Plant Setup:	Initialize to any IC that places the plant at 100% power with the Core Spray System operable.
Initial Conditions:	The plant is at 100% power. No. 11 Core Spray pump failed to start during the performance of an operability test.
Initiating Cues:	The Control Room Supv directs you to isolate Core Spray Loop "A" per the operations manual.

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.01-002
TITLE:	ISOLATE CORE SPRAY LOOP A	Revision 5a
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PERFORMANCE INFORMATION

Performance Objective	Standard
STEP 1 Locate procedure B.03.01-05.E.2. (11 Core Spray Loop Isolation).	Standard: Locates appropriate procedure. Cue: None Comments: None
STEP 2 "C" (Procedure STEP 1) NOTE: The following steps may be performed in any order. Place 14A-S5A, 11 Core Spray Pump, control switch (Panel C-03) in PULL-TO-LOCK position.	Standard: Places 11 CS pump control switch 14A-S5A, in PULL-TO-LOCK. (Non-Critical portion of Standard) Operator should observe that annunciator C03-A-14, CORE SPRAY PUMP 11 OL/MAN-OVRD alarms. Cue: None Comments: None
STEP 3 (Procedure STEP 2) CLOSE MO-1753 using 14A-S1A, MO-1753 Div I CS Injection Inboard, control switch.	Standard: Verifies MO-1753 is closed by observing that the green position indication is lit. Cue: None Comments: MO-1753 is normally closed.
STEP 4 "C" (Procedure STEP 3) Place 14A-S16A, MO-1751 Div I CS Injection Bypass, keylocked switch in BYPASS position, <u>AND</u> CLOSE MO-1751 using 14A-S2A, MO-1751 Div I CS Injection Outboard, control switch.	Standard: 1. Places MO-1751 CS INJ. OTBD BYP switch 14A-S16A in BYPASS, <u>AND</u> 2. Closes MO-1751 using HS-14A-S2A. (Non-Critical portion of Standard) Operator should observe the following: 1. C03-A-47, CORE SPRAY ISOL VLV 1751 BYPASS alarms. 2. Valve position indication changes from red to green. Cue: None Comments: None

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.01-002
TITLE:	ISOLATE CORE SPRAY LOOP A	Revision 5a
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Performance Objective	Standard
STEP 5 (Procedure STEP 4) Declare 11 Core Spray inoperable.	Standard: Operator informs Shift Supv that 11 Core Spray is inoperable. Cue: None Comments: Operator may/may not log Core Spray inoperable in Simulator Control Room Log.
STEP 6 INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.	Standard: Operator informs evaluator that the task is completed. Cue: None Comments: DO NOT PROMPT!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.01-002
TITLE:	ISOLATE CORE SPRAY LOOP A	Revision 5a
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CANDIDATES COPY

Initial Conditions:

The plant is at 100% power. No. 11 Core Spray pump failed to start during the performance of an operability test.

The Control Room Supv directs you to isolate Core Spray Loop "A" per the operations manual.

INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.02.04-003
TITLE:	MSIV EXERCISE TEST	Revision 7a
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JOB PERFORMANCE MEASURE

SRO: _____ SRO/RO: X SRO/RO/NLO: _____ NLO: _____

Plant Reference: Test No. 0160-A, Rev. 2

Task Standard: Perform MSIV Exercise Test No. 0160-A

K/A Reference: 2.1 Conduct of Operations Task No: 2.1.23 Rating RO/SRO: 3.9/4.0
239001 A4.01 4.2/4.0

Recent Events: None

Probabilistic Risk Assessment Human Error: None

Monticello Specific Task List Reference: CR240.101

METHOD OF TESTING		TIME FOR COMPLETION
Simulator: <u>X</u>	Normal: _____	Estimated Time to Complete: <u>5 Min</u>
In-Plant: _____	Alternate Path: <u>X</u>	Maximum Time to Complete: <u>15 Min</u>
		Time Critical: _____ Yes <u>X</u> No

Prepared By: <u>Kurt Markely</u>	Date: <u>06/28/02</u>
Reviewed By: <u>Steve Allen</u>	Date: <u>7/1/02</u>
Shift Supv/Shift Mgr Review By: <u>Kurt Markely</u>	Date: <u>07/01/02</u>
Approved By: <u>MR Engen</u>	(Supt Ops Trng) Date: <u>1 July 02</u>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated:			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.02.04-003	Doc Type: 8505	Admin Initials:	Date:

I/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.02.04-003
TITLE:	MSIV EXERCISE TEST	Revision 7a
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JPM SET-UP	
<p>Simulator Setup:</p> <p>Initialize to any IC with the Reactor at 100% power and all MSIVs open to allow the MSIV Exercise test to be performed. Override the light indications for MSIV AO-2-80A by entering the following IOS's:</p> <p>DS111-02 Digital value to ON DS112-02 Digital value to OFF</p> <p>Fill in Test 0160-A as follows:</p> <ul style="list-style-type: none"> Reason for Performing - Other: <u> X </u> Write in Comments, "Perform STEPS 1 through 4 for AO-2-80A and AO-2-86A only." Initial Prereq 1 stating no other half scram procedures are in progress. Sign Shift Supv approval to commence on cover sheet. N/A for all other valves on Table 1 and Table 2. 	
<p>Initial Conditions:</p> <p>The plant is operating normally at power. No abnormal conditions exist.</p>	
<p>Initiating Cues:</p> <p>The Control Room Supv directs you to perform MSIV Exercise Test No. 0160-A only on Main Steam Line "A".</p> <p>Provide the operator with a marked up copy of Test No. 0160-A.</p>	

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.02.04-003
TITLE:	MSIV EXERCISE TEST	Revision 7a
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PERFORMANCE INFORMATION

Performance Objective	Standard
<p>STEP 1 (Procedure STEP 1)</p> <p>GENERAL NOTE:</p> <p>MSIV movement is verified by sequentially exercising each valve while observing position indication and protective relay status.</p> <p>Verify MSIVs are open by observing that red position indicating lights (Panel C-03) only are ON.</p>	<p>Standard:</p> <p>Verifies red lights are ON and green lights are OFF for MSIVs.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 2 (Procedure STEP 2)</p> <p>Station an operator by Control Room Panels C-15 and C-17 to provide status of protective relay position during performance of subsequent steps.</p>	<p>Standard:</p> <p>Requests operator to be stationed at panels C-15 and C-17.</p> <p>Cue:</p> <p>Operator is at panels C-15 and C-17.</p> <p>Comments: None</p>
<p>STEP 3 "C" (Procedure STEP 3.a)</p> <p>CAUTION</p> <p>A half scram may occur during performance of this step if an RPS limit switch is currently inoperable or becomes inoperable during test.</p> <p>Perform the following for each inboard MSIV, AND document completion of substeps by initialing appropriate boxes in Table 1:</p> <p>Depress and hold Steam Line Isolation Test pushbutton (Panel C-03) for the respective inboard MSIV until green indicating light comes ON or until protective relays de-energize.</p>	<p>Standard:</p> <p>Depresses and holds pushbutton, notes that the green light doesn't come on and the relays do not de-energize. Releases the TEST button <u>BEFORE</u> full closure of the MSIV and informs Control Room Supervisor of light indication and protection relay failure.</p> <p>Cue:</p> <p>(Provide ONLY if relay status is asked for by the operator):</p> <p>Protective relays have not de-energized.</p> <p>Comments:</p> <p>Reactor scram will not occur with complete closure of a MSIV. Examinee should identify failure of the MSIV light indication and protective relays to de-energize and notify Control Room Supervisor. Examinee may check light bulb. Should request CRS permission to retest.</p>

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TITLE:	MSIV EXERCISE TEST	Revision 7a
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Performance Objective	Standard
<p>STEP 4 (Procedure STEP 3.b)</p> <p>Verify MSIV returns to full open position by observing that red indicating light only is on.</p>	<p>Standard:</p> <p>Verifies that only the red indicating light is on.</p> <p>Cue: None</p> <p>Comments:</p> <p>Sometime before the end of the JPM the operator should fill in comments for results of test.</p>
<p>STEP 5 "C"</p> <p>Notifies Shift Supervisor.</p>	<p>Standard:</p> <p>Notifies Shift Supv.</p> <p>Cue:</p> <p>Shift Supv will notify appropriate personnel, Shift Supv directs the operator to continue with the test procedure.</p> <p>Comments: None</p>
<p>STEP 6 (Procedure STEP 3.c)</p> <p>Verify protective relays are energized.</p>	<p>Standard:</p> <p>Operator verifies the protective relays are energized.</p> <p>Cue:</p> <p>Protective relays are energized.</p> <p>Comments: None</p>
<p>STEP 7 (Procedure STEP 3.d)</p> <p><u>IF</u> half scram is received, <u>THEN</u> reset using handswitch 5A-S9, Scram Logic Reset, <u>AND</u> notify Shift Supervisor and Main Steam System Engineer.</p>	<p>Standard:</p> <p>Operator resets half scram <u>AND</u> notifies the Shift Supervisor and Main Steam System Engineer, if necessary</p> <p>Cue: None</p> <p>Comments: None</p>

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Performance Objective	Standard
<p>STEP 8 "C" (Procedure STEP 4.a)</p> <p><u>CAUTION 1</u></p> <p>Opening an outboard MSIV when main air pressure is initially less than 255 psig could cause other open outboard MSIVs to drift closed, thereby resulting in a Reactor scram.</p> <p><u>CAUTION 2</u></p> <p>A half scram may occur during performance of this step if an RPS limit switch is currently inoperable or becomes inoperable during test.</p> <p><u>NOTE:</u> Main air supply pressure for outboard MSIVs can be read from computer point AIR100.</p> <p>Perform the following for each outboard MSIV, <u>AND</u> document completion of substeps by initialing appropriate boxes in Table 2:</p> <p>Verify main air pressure supply to outboard MSIVs is 255-285 psig.</p>	<p>Standard:</p> <p>Operator reads supply pressure from computer point AIR100.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 9 "C" (Procedure STEP 4.b)</p> <p>Depress and hold Steam Line Isolation Test pushbutton (Panel C-03) for the respective outboard MSIV until green indicating light comes on, or until protective relays de-energize.</p>	<p>Standard:</p> <p>Depresses and holds pushbutton until green light comes on or relays de-energize then releases pushbutton.</p> <p>Cue:</p> <p>(Provide only if relay status is asked for by the operator.)</p> <p>Protective relays have de-energized.</p> <p>Comments: None</p>
<p>STEP 10 (Procedure STEP 4.c)</p> <p>Verify MSIV returns to full open position by observing that red indicating light only is on.</p>	<p>Standard:</p> <p>Verifies that only the red indicating light is on. Operator initials Table 2 for AO-2-86A for valve exercised and valve open.</p> <p>Cue: None</p> <p>Comments: None</p>

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TITLE:	MSIV EXERCISE TEST	Revision 7a
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Performance Objective	Standard
STEP 11 (Procedure STEP 4d) Verify protective relays are energized.	Standard: Operator verifies the protective relays are energized. Cue: Protective relays are energized. Comments: None
STEP 12 (Procedure STEP 4.e) <u>IF</u> half scram is received, <u>THEN</u> reset using handswitch 5A-S9, Scram Logic Reset, <u>AND</u> notify Shift Supervisor and Main Steam System Engineer.	Standard: None Cue: None Comments: None
STEP 13 INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.	Standard: Operator informs evaluator that the task is completed. Cue: None Comments: DO NOT PROMPT!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.02.04-003
TITLE:	MSIV EXERCISE TEST	Revision 7a
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CANDIDATES COPY
<p>Initial Conditions:</p> <p>The plant is operating normally at power. No abnormal conditions exist.</p> <p>The Control Room Supv directs you to perform MSIV Exercise Test No. 0160-A only on Main Steam Line "A".</p>
INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.02-05.G.1
TITLE:	REACTOR VESSEL PRESSURE CONTROL USING HPCI	Revision 0
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JOB PERFORMANCE MEASURE

SRO: _____ SRO/RO: X SRO/RO/NLO: _____ NLO: _____

Plant Reference: B.03.02-05, G.1 Part C, Rev. 17

Task Standard: Place HPCI in Service for Controlling Reactor Pressure

K/A Reference: 206000 Task No.: A1.02 Rating RO/SRO: 4.2/4.2

Recent Events: None

Probabilistic Risk Assessment Human Error: None

Monticello Specific Task List Reference: CR206.111

METHOD OF TESTING		TIME FOR COMPLETION
Simulator: <u> X </u>	Normal: _____	Estimated Time to Complete: <u> 15 min. </u>
In-Plant: _____	Alternate Path: <u> X </u>	Maximum Time to Complete: <u> 20 min. </u>
		Time Critical: _____ Yes <u> X </u> No

Prepared By: <i>Kurt Markley</i>	Date: <i>06/28/02</i>
Reviewed By: <i>Ellen M. Allen</i>	Date: <i>7/1/02</i>
Shift Supv/Shift Mgr Review By: <i>Kurt Markley</i>	Date: <i>07/01/02</i>
Approved By: <i>J. R. [Signature]</i>	Date: <i>1 July 02</i>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.03.02-05.G.1
TITLE:	REACTOR VESSEL PRESSURE CONTROL USING HPCI	Revision 0
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JPM SET-UP	
<p>Simulator Setup: IC-247</p> <p>Initialize to IC 247</p> <p>The plant is shutdown following and inadvertent Group I, MSIVs are closed, reactor pressure controlled with Low Low Set, and all available RHR Torus Cooling in service.</p> <p>IOS alarm 3-B-18 with 15 second time delay</p> <p>Malfunction HP06 stuck open SW relief valve open</p>	
<p>Initial Conditions:</p> <p>The plant has experienced a spurious Group 1. All plant actions have occurred as expected. The Low Low Set System is currently controlling reactor pressure from 1052 to 972 psig.</p>	
<p>Initiating Cues:</p> <p>The Control Room Supervisor has requested that you start HPCI for reactor pressure control. Reactor pressure should be controlled between 800 to 1000 psig.</p>	

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PERFORMANCE INFORMATION

Performance Objective	Standard
<p>STEP 1 (Proc. Sect. G, Part A, Step 1)</p> <p><u>IF</u> conditions permit at any time while performing this procedure,</p> <p><u>THEN</u> place RHR in Torus Cooling per Ops Man B.03.04-05.</p>	<p>Standard:</p> <p>Recognizes that all available Torus Cooling is in service.</p> <p>Cue: None.</p> <p>Comments: None</p>
<p>STEP 2 "C" (Proc. Sect. G, Part A, Step 2)</p> <p><u>IF</u> HPCI is in service</p> <p><u>THEN</u> proceed to PART B</p>	<p>Standard:</p> <p>Proceeds to PART C</p> <p>Cue: None</p> <p>Comments: HPCI is in standby.</p>
<p>STEP 3 "C" (Proc. Sect. G, Part A, Step 3)</p> <p><u>IF</u> HPCI is not in service</p> <p><u>THEN</u> proceed to PART C</p>	<p>Standard:</p> <p>Proceeds to PART C</p> <p>Cue: None</p> <p>Comments: HPCI is in standby.</p>
<p>STEP 4 "C" (Proc. Sect. G, Part C, Step 7)</p> <p>OPEN CV-2065, HPCI Min Flow Valve.</p>	<p>Standard:</p> <p>Places handswitch for CV-2065 to the OPEN position and observes position indicating lights: red comes on and green goes off.</p> <p>Cue: None</p> <p>Comments: None</p>

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Performance Objective	Standard
<p>STEP 5 "C" (Proc. Sect. G, Part C, Step 8)</p> <p>START HPCI Turbine Gland Seal Condenser Blower.</p>	<p>Standard:</p> <p>Places handswitch for the GLAND SEAL CONDENSER BLOWER to RUN and observes the red light comes on and the green light goes off.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 6 "C" (Proc. Sect. G, Part C, Step 9)</p> <p>OPEN MO-2071, HPCI Test Return</p>	<p>Standard:</p> <p>Places handswitch for MO-2071 to the OPEN position and observes position indicating lights: red comes on and green goes off.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 7 "C" (Proc. Sect. G, Part C, Step 10)</p> <p>Set CV-3503, HPCI Test Return Flow, to approximately 47%.</p>	<p>Standard:</p> <p>Adjusts controller to approximately 47%.</p> <p>Cue: None</p> <p>Comments: Bases Step 2: setpoint of 47% ensures sufficient margin is maintained to ensure that pump discharge overpressure conditions will not occur.</p>
<p>STEP 8 (Proc. Sect. G, Part C, Step 11)</p> <p>Verify FIC-23-108, HPCI Pump Flow Control, is in AUTO and set at 87%.</p>	<p>Standard:</p> <p>Verifies that FIC-23-108 is in AUTO and set at 87%.</p> <p>Cue: None</p> <p>Comments: None</p>

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Performance Objective	Standard
<p>STEP 9 "C" (Proc. Sect. G, Part C, Step 12a)</p> <p>Perform the following in quick succession:</p> <p>a START HPCI Turbine Aux Oil Pump</p>	<p>Standard:</p> <p>Places handswitch for AUX OIL PUMP to the RUN position and observes indicating lights: red comes on and green goes off.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 10 "C" (Proc. Sect. G, Part C, Step 12b)</p> <p>b. OPEN MO-2036, HPCI Turbine Steam Supply.</p>	<p>Standard:</p> <p>Places handswitch for MO-2036 to the OPEN position and observes position indicating lights: red comes on and green goes off.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 11 "C" (Proc. Sect. G Part C, Step 12c)</p> <p>c. OPEN MO-2067, HPCI Disch Otbd Isolation.</p>	<p>Standard:</p> <p>Places handswitch for MO-2067 to the OPEN position and observes position indicating lights: red comes on and green goes off.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 12</p> <p>As system flow increases to 3000 gpm, Alarm C03-B-18 (HPCI OIL FILTER HI DIF PRESS) will annunciate.</p>	<p>Standard:</p> <p>Announces alarm "C03-B-18 HPCI OIL FILTER HI DIF PRESS unexpected" to the Control Room Supervisor and enters ARP C03-B-18.</p> <p>Cue:</p> <p>As the Control Room Supervisor acknowledge report of alarm as follows "C03-B-18 HPCI OIL FILTER HI DIF PRESS unexpected".</p> <p>Comments: None</p>

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Performance Objective	Standard
<p>STEP 13 (ARP 3-B-18 HPCI OIL FILTER HI DIF PRESS Step 1)</p> <p>1 Dispatch an operator to the HPCI Room to determine HPCI OIL Filter DP based on the comparison of PI-7257, HPCI Oil Filter Inlet Pressure Indicator and PI-7253, HPCI Oil Filter Outlet Pressure Indicator at HPCI turbine.</p>	<p>Standard:</p> <p>Operator dispatches an out plant operator to HPCI Room to determine HPCI Oil Filter DP</p> <p>Cue: An out plant operator has been dispatched to the HPCI Room to determine HPCI Oil Filter DP.</p> <p>Comments: None</p>
<p>STEP 14 (ARP 3-B-18 HPCI OIL FILTER HI DIF PRESS Step 2)</p> <p>2 Monitor HPCI turbine bearing temperature on TR-23-115 points 4,5,6,14,15,and 16 on panel C-21.</p>	<p>Standard:</p> <p>Operator monitors HPCI bearing temperatures on TR-23-115 and determines HPCI bearing temps are increasing.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 15 "C" (ARP 3-B-18 HPCI OIL FILTER HI DIF PRESS Step 3)</p> <p>3 <u>IF</u> any HPCI turbine bearing temperature begins to increase, <u>THEN</u> Immediately trip the turbine</p> <p><u>AND</u> refer to B.3.2.-05 (HPCI – SYSTEM OPERATION),</p> <p><u>AND</u> refer to Tech Spec 3.5.A</p>	<p>Standard:</p> <ul style="list-style-type: none"> Operator trips HPCI by depressing the HPCI Turbine Trip push button 23A-S22 until the turbine is shutdown then places HPCI Aux Oil Pump in the Pull-To-Lock position. <p>Cue: None</p> <p>Comments: Placing HPCI Aux Oil Pump in PTL not required to pass this JPM.</p>
<p>STEP 16</p> <p>INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.</p>	<p>Standard: None</p> <p>Cue: <u>APPROVED PROMPT</u></p> <p>Inform the candidate that the task has been completed.</p> <p>Comments: None</p>

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TITLE:	REACTOR VESSEL PRESSURE CONTROL USING HPCI	Revision 0
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CANDIDATES COPY

Initial Conditions:

The plant has experienced a spurious Group 1. All plant actions have occurred as expected. The Low Low Set System is currently controlling reactor pressure from 1052 to 972 psig.

The Control Room Supervisor has requested that you start HPCI for reactor pressure control. Reactor pressure should be controlled between 800 to 1000 psig.

INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-C.4-B.04.01.B- Part A
TITLE:	RESET A GROUP 2 ISOLATION	Revision 0
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JOB PERFORMANCE MEASURE

SRO: _____ SRO/RO: X SRO/RO/NLO: _____ NLO: _____

Plant Reference: C.4-B.04.01.B, Part A, Step 5, Rev. 17

Task Standard: Reset a Group 2 Isolation

K/A Reference: 223002 Task No.: A4.03 Rating RO/SRO: 3.6/3.5

Recent Events: None

Probabilistic Risk Assessment Human Error: None

Monticello Specific Task List Reference: CR200.158

METHOD OF TESTING		TIME FOR COMPLETION
Simulator: <u> X </u>	Normal: <u> X </u>	Estimated Time to Complete: <u> 10 min. </u>
In-Plant: _____	Alternate Path: _____	Maximum Time to Complete: <u> 15 min. </u>
		Time Critical: _____ Yes <u> X </u> No

Prepared By: <i>Kurt Markely</i>	Date: <i>06/28/02</i>
Reviewed By: <i>Steve M. Allen</i>	Date: <i>7/1/02</i>
Shift Supv/Shift Mgr Review By: <i>Kurt Markely</i>	Date: <i>07/01/02</i>
Approved By: <i>MR Enger</i>	Date: <i>1 July 02</i>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-C.4-B.04.01.B- Part A
TITLE:	RESET A GROUP 2 ISOLATION	Revision 0
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JPM SET-UP	
Simulator Setup:	Initialize to IC 247 the plant shutdown from an inadvertent Group I, a Reactor low Level condition has caused a Group 2 Isolation. The condition should be cleared and steps 1 through 4 of C.4-04.01.B (GROUP II) Part A have been completed.
Initial Conditions:	The plant has experienced a transient that caused a reactor level to decrease to minus 20 (-20) inches and then return to normal. All plant actions have occurred as expected. Reactor level has been restored and the Group 2 isolation is ready to be reset. Steps 1 through 4 of C.4-B.04.01.B, Part A have been completed.
Initiating Cues:	The Control Room Supervisor has requested that you perform the reset actions for Group 2 identified in Ops Man C.4-B.04.01.B, Part A.

MONTICELLO NUCLEAR GENERATING PLANT		JPM-C.4-B.04.01.B- Part A
TITLE:	RESET A GROUP 2 ISOLATION	Revision 0
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PERFORMANCE INFORMATION

Performance Objective	Standard
<p>STEP 1 "C" (Procedure, Part A, Step 5.a)</p> <p><u>WHEN</u> the cause of the isolation is corrected, <u>THEN</u> reset the Group 2 signal as follows:</p> <p>a. Momentarily place the GROUP 2/SCTMT ISOLATION RESET switch on Panel C-04 to the following positions:</p> <p>1) INBD</p> <p>2) OUTBD</p>	<p>Standard:</p> <p>Momentarily places the GROUP 2/SCTMT ISOLATION RESET switch to the INBD and OUTBD position.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 2 "C" (Procedure, Part A, Step 6)</p> <p>Depress the TIP ISOLATION LOGIC RESET pushbutton on Panel C-13.</p>	<p>Standard:</p> <p>Depresses the TIP ISOLATION LOGIC RESET pushbutton.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 3 (Procedure, Part A, Step 6.a)</p> <p>Verify both Purge Lights are ON.</p>	<p>Standard:</p> <p>Verifies both Purge lights are ON.</p> <p>Cue: Both Purge lights are ON.</p> <p>Comments: Simulator models only one Tip system.</p>
<p>STEP 4 "C" (Procedure, Part A, Step 7)</p> <p>Place the following valve handswitches on C-04 in the AUTO/OPEN position:</p> <p>a. 16A-S18, AO-2541 A/B DW Floor Drain Isolation</p> <p>b. 16A-S19, AO-2561 A/B DW Equip Drain Isolation</p>	<p>Standard:</p> <p>Places handswitches for AO-2541 and AO-2561 to the AUTO/OPEN position and observes position indicating lights: red comes on and green goes off.</p> <p>Cue: None</p> <p>Comments: None</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-C.4-B.04.01.B- Part A
TITLE:	RESET A GROUP 2 ISOLATION	Revision 0
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Performance Objective	Standard
<p>STEP 5 "C" (Procedure, Part A, Step 8)</p> <p>Place the following switches on C-26 in AUTO/OPEN position:</p> <ul style="list-style-type: none"> a. HS-3307 SV3307 Sample Point 2 (DW) OTBD Isol b. HS-3311 CV-3311 Sample Point 4 (Torus) OTBD Isol c. HS-3313 CV-3313 Sample Return OTBD Isol d. HS-3308 SV-3308 Sample Point 2 (DW) INBD Isol e. HS-3312 CV-3312 Sample Point 4 (Torus) INBD Isol f. HS-3314 CV-3314 Sample Return INBD Isol 	<p>Standard:</p> <p>Places handswitches in the AUTO/OPEN position and observes the red light comes on and the green light goes off.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 6 (Procedure, Part A, Step 9)</p> <p>Notify Shift Chemist to restore Drywell CAM to service.</p>	<p>Standard:</p> <p>Directs the Shift Chemist to restore Drywell CAM to service.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 7 (Procedure, Part A, Step 10)</p> <p><u>IF</u> RHR system was operating in Shutdown Cooling when the isolation occurred, <u>THEN</u> RESET isolation by using the following pushbuttons:</p> <ul style="list-style-type: none"> a. 10A-S24B, MO-2015, Shutdown Cooling Group 2 Isolation Reset b. 10A-S24A, MO-2014, Shutdown Cooling Group 2 Isolation Reset 	<p>Standard: None</p> <p>Cue: None</p> <p>Comments: RHR was not operating in Shutdown Cooling prior to the Group 2 Isolation.</p>
<p>STEP 8</p> <p>INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.</p>	<p>Standard:</p> <p>Operator informs evaluator that the task is completed.</p> <p>Cue: None</p> <p>Comments: DO NOT PROMPT!</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-C.4-B.04.01.B- Part A
TITLE:	RESET A GROUP 2 ISOLATION	Revision 0
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CANDIDATES COPY
<p>Initial Conditions:</p> <p>The plant experienced a transient that caused a reactor level to decrease to minus 20 (-20) inches and then return to normal. All plant actions have occurred as expected. Reactor level has been restored and the Group 2 isolation is ready to be reset.</p> <p>The Control Room Supervisor has requested that you perform the reset actions for Group 2 identified in Ops Man C.4-B.04.01.B, Part A, steps 1 through 4 have been completed.</p>
INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.09.08-001
TITLE:	MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS)	Revision 6a
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JOB PERFORMANCE MEASURE		
SRO: _____	SRO/RO: <u>X</u>	SRO/RO/NLO: _____ NLO: _____
Plant Reference: B.09.08-05.D.1, Rev 11		
Task Standard: Manually Start and Load the No. 11 EDG to 2500 KW		
K/A Reference: 264000 Task No.: A4.04 Rating RO/SRO: 3.7/3.7 Recent Events: RE 92-007, Concern with loading sequence for Emergency Diesel Generator Probabilistic Risk Assessment Human Error: None Monticello Specific Task List Reference: CR264.109		
METHOD OF TESTING		TIME FOR COMPLETION
Simulator: <u>X</u> In-Plant: _____	Normal: <u>X</u> Alternate Path: _____	Estimated Time to Complete: <u>15 Min</u> Maximum Time to Complete: <u>30 Min</u> Time Critical: _____ Yes <u>X</u> No

Prepared By: <u>Kurt Markely</u>	Date: <u>06/28/02</u>
Reviewed By: <u>Del M. Allen</u>	Date: <u>7/1/02</u>
Shift Supv/Shift Mgr Review By: <u>Kurt Markely</u>	Date: <u>07/01/02</u>
Approved By: <u>MR Egan</u>	(Supt Ops Trng) Date: <u>1 July 02</u>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: _____			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.09.08-001	Doc Type: 8505	Admin Initials: _____	Date: _____

I/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.09.08-001
TITLE:	MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS)	Revision 6a
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JPM SET-UP	
Simulator Setup:	Initialize to IC-16. The No. 11 EDG-ESW pump must be running prior to commencing JPM.
Initial Conditions:	The Reactor is operating at 100% power. The Emergency Diesel Generator System Engineer has requested that No. 11 EDG be started and loaded to 2500 KW to perform an in-service inspection.
Initiating Cues:	Control Room Supv directs you to manually start and load No. 11 EDG to 2500 KW per the Operations Manual, B.9.8-05. The Turbine Building operator has already completed EDG in-plant pre-start checks. Procedure steps 1 through 8 of the Operations Manual have been completed.

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TITLE:	MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS)	Revision 6a
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PERFORMANCE INFORMATION

Performance Objective	Standard
STEP 1 Locate procedure B.09.08-05 D.1., 11 Emergency Diesel Generator Startup.	Standard: Locates appropriate procedure. Cue: None Comments: None
STEP 2 "C" (Procedure STEP 9) Perform the following simultaneously: <ol style="list-style-type: none"> Place the DIESEL GEN CONTROL switch to START. Verify the following annunciators did ALARM: <ol style="list-style-type: none"> 8-B-24 (NO. 11 DIESEL ENG CRANKING) 8-B-34 (NO. 11 DIESEL ENG RUNNING) 	Standard: Places DIESEL GEN CONTROL switch (D-G1/CS) to START and releases. (Non-Critical portion of Standard) The operator should observe the following as the diesel Generator starts: <ol style="list-style-type: none"> C08-B-24, No. 11 DIESEL ENG CRANKING annunciator momentarily alarms and then clears. C08-B-34, NO.11 DIESEL ENG RUNNING alarms. 8-B-3 (#11 DESL GEN NOT AUTO DGI/152/502) Cue: None Comments: None
STEP 3 (Procedure STEP 10) Check Oil Pressure (PI-7005). It should build up within 90 seconds to above 44 psig.	Standard: Contacts Turbine Building APEO to obtain status of Oil Pressure. Cue: APEO reports that Oil Pressure is 50 psig. Comments: None
STEP 4 (Procedure STEP 11) Allow the engine to idle for 10 minutes. While idling: <ol style="list-style-type: none"> Check cylinder vent cocks for leakage. Check crankcase inspection covers for leakage. Check engine oil level. Observe engine, listen for any abnormal indications. 	Standard: Monitors Control Room EDG indications and contacts APEO in No. 11 EDG Room and request status of Diesel after 10 minutes of run time. Cue: APEO reports that all EDG local parameters are normal at idle speed. No. 11 EDG has been running at idle speed for 10 minutes. Comments: None

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Performance Objective	Standard
STEP 5 (Procedure STEP 12) Perform the following to check the air box drain for proper operation: <ul style="list-style-type: none"> a. Remove the air box drain plug. b. Slowly crack OPEN the drain valve. c. Verify air flow from the air box drain line. d. CLOSE the air box drain valve. e. Re-install the air box drain plug. 	Standard: Contacts APEO to check the air box drain. Cue: Procedure Step 12 has been satisfactorily completed. Comments: None
STEP 6 "C" (Procedure STEP 13) Place 11 EDG SPEED DROOP knob to the scribe mark between 40 and 50 on the governor dial plate.	Standard: Instructs APEO to place 11 EDG Speed Droop knob to scribe mark between 40-50 on governor dial plate. Cue: Speed Droop knob is at requested position. Comments: None
STEP 7 (Procedure STEP 14) Independently verify 11 EDG SPEED DROOP knob is at the scribe mark between 40 and 50 on the governor dial plate and log entry.	Standard: Requests for independent verification of previous step, and logs completion. Cue: Independent verification is complete and is logged. Comments: None
STEP 8 "C" (Procedure STEP 15) Raise engine speed using SPEED ADJUST switch on C-08. WHEN generator frequency meter comes on-scale, <u>THEN</u> release SPEED ADJUST switch.	Standard: Turns No. 11 EDG SPEED ADJUST (GSC-1/CS) to RAISE and holds in RAISE until frequency meter comes on-scale, then releases. Cue: None Comments: None
STEP 9 (Proc STEP 16.a) Parallel 11 EDG with 15 bus per the following: <ul style="list-style-type: none"> a. Adjust diesel speed until the frequency is approximately 60 Hz. 	Standard: Turns 11 EDG SPEED ADJUST until frequency indicates approximately 60 Hz. Cue: None Comments: None

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Performance Objective	Standard
<p>STEP 10 "C" (Proc STEP 16.b)</p> <p>b. Turn on synchronizing switch as frequency nears 60 Hz.</p>	<p>Standard:</p> <p>Inserts synchronizing switch handle and turns ACB 152-502/SS to ON.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 11 "C" (Proc STEP 16.c)</p> <p>NOTE: The incoming indicates the diesel generator voltage. The running voltmeter indicates the bus voltage.</p> <p>c. Adjust the 11 EDG VOLTAGE ADJUST and SPEED ADJUST (C-08) to synchronize unit.</p>	<p>Standard:</p> <ol style="list-style-type: none"> Using No. 11 EDG Voltage adjust switch (190-DG-1/CS), raise or lower voltage to match No. 11 EDG voltage (incoming voltage) to No. 15 Bus Voltage (running voltage) within 2 volts <u>AND</u> Using No. 11 EDG speed adjust switch (GSC-1/CS), raise or lower No. 11 EDG speed until synchroscope rotates clockwise at a rate of once every 20 - 120 seconds. <p>Cue: None</p> <p>Comments:</p> <p>The voltage mismatch and synchroscope rate are not critical values, but are values for good operating practice.</p>
<p>STEP 12 "C" (Proc STEP 16.d)</p> <p><u>CAUTION 1</u></p> <p>Allow only one EDG to be paralleled to the system at a time. At no time should an EDG be tied to an off-site power system in anticipation of a loss of off-site power.</p> <p><u>CAUTION 2</u></p> <p>The Emergency Diesel Generator does not have synchroscope interlock and therefore can be paralleled out of phase. Ensure synchronous conditions are met when closing the EDG output breaker.</p> <p><u>IF</u> 12 EDG is NOT paralleled to the system, <u>THEN</u> close breaker 152-502 by operating breaker switch to CLOSE when synchronous conditions are met.</p>	<p>Standard:</p> <p>Places ACB 152-502/CS to CLOSE position when meter synchronous conditions are met.</p> <p><u>(Non-Critical portion of Standard)</u></p> <p>Operator should observe the following indications:</p> <ol style="list-style-type: none"> Breaker indication changes from green to red. No. 11 EDG AC Kilowatt meter indication slightly above 0 Kw. Synchroscope stops at 12 o'clock <p>Cue: None</p> <p>Comments:</p> <p>If the breaker does not close on the first attempt, tell the operator (as the Shift Supv and System Engineer) that they can try one more time to put the EDG on line.</p>

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Performance Objective	Standard
<p>STEP 13 "C" (Procedure STEP 17)</p> <p>Using SPEED ADJUST switch, pickup load to 1875 KW. Hold at this load until local operator verifies engine is operating properly and temperature regulating valve opens.</p>	<p>Standard:</p> <ol style="list-style-type: none"> Holds SPEED ADJUST switch (GSC-1/CS) in RAISE position until KW reaches 1700 - 2050 KW <p>(Non-Critical portion of Standard)</p> <p>Operator should observe the following as load is increased:</p> <ol style="list-style-type: none"> KW indication increases to about 1875 KW. AC Amps increases to ~255 amps. <ol style="list-style-type: none"> Directs operator to perform local inspections. <p>Cue:</p> <ol style="list-style-type: none"> No. 11 EDG is operating properly. Temperature regulating valve is open. <p>Comments: None</p>
<p>STEP 14 "C" (Procedure STEP 18)</p> <p>Increase load as desired up to 2500 KW maximum. Adjust voltage until amperage reading is reduced to minimum (to prevent overload on generator).</p>	<p>Standard:</p> <ol style="list-style-type: none"> Holds SPEED ADJUST switch (GSC-1/CS) in RAISE position until KW reaches 2400 - 2500 KW, <u>AND</u> Adjusts VOLTAGE ADJUST switch (190-DG-1/CS) until Amperage indication is at minimum. <p>Cue: None</p> <p>Comments: Approximately 330 amps indicated.</p>
<p>STEP 15</p> <p>INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.</p>	<p>Standard:</p> <p>Operator informs evaluator that the task is completed.</p> <p>Cue: None</p> <p>Comments: DO NOT PROMPT!</p>

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TITLE:	MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS)	Revision 6a
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CANDIDATES COPY

Initial Conditions:

The Reactor is operating at 100% power. The Emergency Diesel Generator System Engineer has requested that No. 11 EDG be started and loaded to 2500 KW to perform an in-service inspection.

Control Room Supv directs you to manually start and load No. 11 EDG to 2500 KW per the Operations Manual, B.09.08-05. The Turbine Building Operator has already completed EDG in-plant pre-start checks. Procedure steps 1 through 8 of the Operations Manual have been completed.

INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
		Page 1 of 8

JOB PERFORMANCE MEASURE

SRO: _____ SRO/RO: X SRO/RO/NLO: _____ NLO: _____

Plant Reference: Plant Procedure No. 0212, Rev 21

Task Standard: Perform Part A (Reactor Startup) of Test No. 0212

K/A Reference: 201006 Task No.: A3.02 Rating RO/SRO: 3.5/3.4

Recent Events: None

Probabilistic Risk Assessment Human Error: None

Monticello Specific Task List Reference: CR201.104

METHOD OF TESTING		TIME FOR COMPLETION
Simulator: <u> X </u>	Normal: <u> X </u>	Estimated Time to Complete: <u> 15 Min </u>
In-Plant: _____	Alternate Path: _____	Maximum Time to Complete: <u> 30 Min </u>
		Time Critical: _____ Yes <u> X </u> No

Prepared By: <i>Kurt Markely</i>	Date: <i>06/28/02</i>
Reviewed By: <i>Bill M. Allen</i>	Date: <i>7/1/02</i>
Shift Supv/Shift Mgr Review By: <i>Kurt Markely</i>	Date: <i>07/01/02</i>
Approved By: <i>MR Egan</i>	(Supt Ops Trng) Date: <i>1 July 02</i>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: _____			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.05.02-001	Doc Type: 8505	Admin Initials: _____	Date: _____

l/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
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JPM SET-UP

Simulator Setup:

Initialize to any startup IC which places the CRD system in service, the Reactor shutdown, and the Reactor Mode Switch in the REFUEL position.

Fill out 0212 as follows:

- Sign Shift Supv approval to commence.
- Initial all prerequisites, Rod Sequence is A1, Rev 0
- Reason for Performing - Reactor Startup: X
- N/A STEPS 12 through 31.

Have a copy of RWM sequence steps listing ready for STEP 1.

Initial Conditions:

A Reactor startup is to begin next shift. The Prestart Checklist states that a RWM Operability Test is to be performed.

Initiating Cues:

The Control Room Supervisor directs you to perform PART A of Test No. 0212 (ROD WORTH MINIMIZER OPERABILITY TEST). The Nuclear Engineer will perform STEP 1 when requested.

Provide operator with a copy of Test No. 0212.

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
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PERFORMANCE INFORMATION

Performance Objective	Standard
<p>STEP 1 (Procedure STEP 1)</p> <p>GENERAL NOTE:</p> <p>PART A steps are to be completed if this test is being done prior to reactor STARTUP, or for OTHER instances when the reactor is below 10% power.</p> <p>Manually obtain the sequence loaded in the RWM, OR utilizing the RWM services function, print the sequence desired at a local printer by performing the following:</p>	<p>Standard:</p> <p>Requests Nuclear Engineer to perform STEP 1.</p> <p>Cue:</p> <p>Provide operator with a copy of the loaded sequence.</p> <p>Comments:</p> <p>STEPS 1a through 1m are performed by Nuclear Engineer. These steps will not work on the simulator.</p>
<p>STEP 2 (Procedure STEP 2)</p> <p>Verify the sequence loaded in the RWM is identical to the sequence on the roller tape.</p>	<p>Standard:</p> <p>Compares RWM printed sequence and sequence on the roller tape, verifying no discrepancies.</p> <p>Cue: None</p> <p>Comments:</p> <p>Evaluator should stop the operator after proficiency has been demonstrated.</p>
<p>STEP 3 (Procedure STEP 3)</p> <p>At the RWM Operators Display (OD), top status line, verify that SELF TEST: is followed by OK.</p>	<p>Standard:</p> <p>Verifies that RWM OD "SELF TEST" is followed by "OK".</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 4 (Procedure STEP 4)</p> <p>On the OD, top status line, verify that SEQUENCE: is followed by the specified (in PREREQUISITE 2) Control Rod Sequence identifier (ie, A1R0, B2R1).</p>	<p>Standard:</p> <p>Verifies that RWM OD "SEQUENCE" is followed by proper sequence identifier (A1R0).</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 5 (Procedure STEP 5)</p> <p><u>IF</u> a benchmark critical sequence is loaded, <u>THEN</u> place the RWM OD keylock switch in TEST, <u>AND</u> select the Special Test mode.</p>	<p>Standard:</p> <p>N/A step and initial.</p> <p>Cue:</p> <p>Benchmark critical sequence is NOT loaded.</p> <p>Comments: None</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
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Performance Objective	Standard
<p>STEP 6 "C" (Procedure STEP 6)</p> <p>Verify the reactor MODE SWITCH is in STARTUP (Panel C-05).</p>	<p>Standard:</p> <p>Places Reactor Mode Switch in the STARTUP position.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 7 "C" (Procedure STEP 7)</p> <p>Withdraw the first permissible rod to Position 02.</p>	<p>Standard:</p> <p>Selects rod 22-27 by depressing pushbutton on the rod select matrix, <u>AND</u> places Rod Movement Control switch to the Rod Out Notch position, releases the switch, and withdraws the rod to position 02.</p> <p>Pauses at STEP 7 until rod position is verified.</p> <p><u>(Non-Critical portion of Standard)</u></p> <p>Prior to rod movement, the operator should verify the CRDH system indication and operation as normal. During and after the operator moves the control rod, he should verify the proper cycling of the RMCS lights located above the Rod Movement Control switch on C-05.</p> <p>Cue:</p> <p>Rod 22-27 (STEP 7) is verified at position 02.</p> <p>Comments:</p> <p>Rod 22-27 is first rod in Group No. 1.</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
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Performance Objective	Standard
<p>STEP 8 "C" (Procedure STEP 8)</p> <p>Attempt to withdraw the first rod in the next group in the sequence.</p>	<p>Standard:</p> <p>Select rod 14-27 by depressing pushbutton on the rod select matrix, <u>AND</u> places Rod Movement Control switch to the Rod Out Notch position, and releases the switch in an attempt to withdraw the selected rod.</p> <p>Pauses at STEP 8 until action is verified.</p> <p>(Non-Critical portion of Standard)</p> <p>Prior to rod movement, the operator should verify the CRDH System indication and operation is normal. During and after the operator moves the control rods, he should verify the proper cycling of the RMCS lights located above the Rod Movement Control switch on C-05.</p> <p>Cue:</p> <p>Attempted rod withdrawal (STEP 8) is verified.</p> <p>Comments:</p> <p>Rod 14-27 is the first rod in Group No. 2.</p>
<p>STEP 9 (Procedure STEP 9a)</p> <p>Verify the following:</p> <p>a. Rod movement is prevented.</p>	<p>Standard:</p> <p>Verifies no rod movement on the four-rod, full-core, and RWM displays after the Rod Movement Control Switch is released in the previous step.</p> <p>Cue: None</p> <p>Comments: None</p>
<p>STEP 10 (Procedure STEP 9b)</p> <p>On the RWM OD top status line BLOCKS: is followed by WITHDRAW.</p>	<p>Standard:</p> <p>Verifies that RWM OD "BLOCKS:" is followed by "WITHDRAW".</p> <p>Cue: None</p> <p>Comments:</p> <p>Simulator RWM indicates Insert and Withdraw. This will be verified after exam. If candidate questions Insert, inform them to continue and this will be investigated by another operator.</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
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Performance Objective	Standard
<p>STEP 11 (Procedure STEP 9c)</p> <p>The first line of the RWM OD lower display shows the selected rod, followed by SE WB (Select Error and Withdraw Block).</p>	<p>Standard:</p> <p>Verifies that lower display of RWM OD shows the same rod selected as on the rod select pushbutton matrix, <u>AND</u> that it's followed by SE and WB (Select Error and Withdraw Block).</p> <p>Cue: None</p> <p>Comments:</p> <p>Simulator RWM indicates SE IB WB. This will be verified after exam. If candidate questions IB, inform them to continue and this will be investigated by another operator.</p>
<p>STEP 12 "C" (Procedure STEP 10)</p> <p>Using the printed sequence obtained in STEP 1:</p> <ol style="list-style-type: none"> Select one rod from each ROD GROUP, except group presently permitted to be withdrawn (listed in left hand vertical column). Verify first line of RWM OD lower display shows selected rod followed by SE WB (select Error and Withdraw Block). 	<p>Standard:</p> <p>Selects rod in group not presently permitted to be withdrawn by depressing the associated pushbutton on the Rod Select pushbutton matrix.</p> <p>(Non-Critical portion of Standard)</p> <p>Verifies the first line of the RWM OD displays the rod currently selected, followed by SE and WB (Select Error and Withdraw Block).</p> <p>Cue: None</p> <p>Comments:</p> <p>Evaluator may stop operator after satisfactory demonstration on a minimum of three (3) rod groups.</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
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Performance Objective	Standard
<p>STEP 13 "C" (Procedure STEP 11)</p> <p>Insert all withdrawn control rods to 00.</p> <p>NOTE: This completes all requirements for RWM operability prior to pulling rods.</p>	<p>Standard:</p> <p>Selects rod 22-27 by depressing the pushbutton on the rod select matrix, <u>AND</u> places the Rod Movement Control switch to the Rod In position, releases the switch, and inserts the rod one notch to position 00.</p> <p>Requests STEP 11 to be verified.</p> <p>(Non-Critical portion of Standard)</p> <p>Prior to rod movement, the operator should verify the CRDH System indication and operation as normal. During and after the operator moves the control rod, he should verify the proper cycling of the RMCS lights located above the Rod Movement Control switch on C-05.</p> <p>Cue:</p> <p>STEP 11 has been verified.</p> <p>Comments: None</p>
<p>STEP 14</p> <p>INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.</p>	<p>Standard:</p> <p>Operator informs evaluator that the task is completed.</p> <p>Cue: None</p> <p>Comments: DO NOT PROMPT!</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.02-001
TITLE:	ROD WORTH MINIMIZER OPERABILITY	Revision 5a
		Page 8 of 8

CANDIDATES COPY
<p>Initial Conditions:</p> <p>A Reactor startup is to begin next shift. The Prestart Checklist states that a RWM Operability Test is to be performed.</p> <p>The Control Room Supervisor directs you to perform PART A of Test No. 0212 (ROD WORTH MINIMIZER OPERABILITY TEST). The Nuclear Engineer will perform STEP 1 when requested.</p>
INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.08.01.03-001
TITLE:	MANUAL CONTROL OF RHRSW CV-1729	Revision 8a
		Page 1 of 6

JOB PERFORMANCE MEASURE

SRO: _____	SRO/RO: _____	SRO/RO/NLO: <u> X </u>	NLO: _____
Plant Reference: B.08.01.03-05.H.3, Rev 20			
Task Standard: Taking Manual Control of RHR Heat Exchanger RHRSW Control Valve CV-1729			
K/A Reference: 205000 400000	Task No: A2.08 A1.01	Rating RO/SRO: 3.3/3.5 2.8/2.8	
Recent Events: None			
Probabilistic Risk Assessment Human Error: None			
Monticello Specific Task List Reference: NL205.118			
METHOD OF TESTING		TIME FOR COMPLETION	
Simulator: _____	Normal: <u> X </u>	Estimated Time to Complete: <u> 10 Min </u>	
In-Plant: <u> X </u>	Alternate Path: _____	Maximum Time to Complete: <u> 20 Min </u>	
		Time Critical: _____ Yes <u> X </u> No	

Prepared By: <i>Kurt Markley</i>	Date: <i>06/28/02</i>
Reviewed By: <i>Jill H. Allen</i>	Date: <i>7/1/02</i>
Shift Supv/Shift Mgr Review By: <i>Kurt Markley</i>	Date: <i>07/01/02</i>
Approved By: <i>M. R. Engen</i>	(Supt Ops Trng) Date: <i>1 July 02</i>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: _____			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.08.01.03-001	Doc Type: 8505	Admin Initials: _____	Date: _____

I/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.08.01.03-001
TITLE:	MANUAL CONTROL OF RHR SW CV-1729	Revision 8a
		Page 2 of 6

JPM SET-UP	
Plant Setup:	Have a copy of B.08.01.03-06, Figure 2.
Initial Conditions:	The Reactor is shutdown and <212°F. The No. 12 RHR Heat Exchanger Control valve CV-1729 solenoid valve SV-1729 has failed. The No. 11 and No. 13 RHR pump breakers have been previously removed for breaker maintenance. Shutdown cooling is desired at this time.
Initiating Cues:	<p>The Control Room Supervisor directs you to assume manual control of RHR Heat Exchanger RHR SW control valve CV-1729.</p> <p>ALL OPERATOR ACTIONS ARE TO BE SIMULATED!</p>

PERFORMANCE INFORMATION

Performance Objective	Standard
STEP 1 Locate Procedure B.08.01.03-05.H.3, "Taking Manual Control of RHRSW Control Valves, CV-1728 and CV-1729 Upon Failure of SV-1728 or SV-1729."	Standard: Locates the appropriate procedure. Cue: Provide operator with a copy of procedure. Comments: None
STEP 2 "C" (Proc PART B, STEP 11) Obtain key to unlock handwheel on CV-1729, 12 RHR HX RHRSW Outlet.	Standard: Obtains key No. 41 from SS Office or from operator key ring. Cue: Shift Supv gives you key No. 41 or operator key ring. Comments: None
STEP 3 (Procedure STEP 12) Establish communications between B RHR Room and Control Room	Standard: Establishes radio communication between the Control Room and himself from the B RHR room. Cue: Radio communication is established between Control Room and B RHR room. Comments: May simulate radio communication to the Control Room after operator exhibits knowledge of obtaining and using a radio.
STEP 4 "C" (Procedure STEP 13) NOTE: Completion of following step will result in CV-1729's brass handwheel screw holding valve closed via engagement with valve stem. Unlock the handwheel on CV-1729 (see Ops Man Section B.08.01.03-06, Figure 2 - RHRSW Control Valve), <u>AND</u> turn it clockwise until resistance is felt.	Standard: <ol style="list-style-type: none"> 1. Unlocks the valve handwheel. 2. Rotates the valve handwheel clockwise until resistance is felt. Cue: <ol style="list-style-type: none"> 1. Handwheel is unlocked. 2. Resistance is felt on the valve handwheel. Comments: Operator does not have to examine figure in Ops Manual if they are familiar with the equipment.

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.08.01.03-001
TITLE:	MANUAL CONTROL OF RHRSW CV-1729	Revision 8a
		Page 4 of 6

Performance Objective	Standard									
<p>STEP 5 "C" (Procedure STEP 14)</p> <p><u>CAUTION</u></p> <p>Do not dead head pumps for more than 7 minutes.</p> <p>Turn the air supply valve to the "MANUAL" position. (See Ops Man Section B.08.01.03-06, Figure 2 - RHRSW Control Valve for location of the air supply valve).</p>	<p>Standard:</p> <p>Turns the air supply valve to the MANUAL position.</p> <p>Cue:</p> <p>Air supply valve is in the MANUAL position.</p> <p>Comments:</p> <p>Operator does not have to examine Ops Manual figure if they are familiar with the equipment.</p>									
<p>STEP 6 (Procedure STEP 15)</p> <p>Notify Control Room of the following:</p> <p>a. Control valve CV-1729 is ready for manual operation,</p> <p>b. RHRSW pump may be started.</p>	<p>Standard:</p> <p>1. Notifies the Control Room CV-1729 is ready for manual operation, <u>AND</u></p> <p>2. Notifies the Control Room, the RHRSW pump is ready to be started.</p> <p>Cue:</p> <p>Control Room is notified CV-1729 is ready for manual operation and the RHRSW pump may be started.</p> <p>Comments: None</p>									
<p>STEP 7 (Procedure STEP 16)</p> <p>START an RHRSW pump per Ops Man B.08.01.03-05.D.1, Startup Procedure - Startup of RHRSW Pumps.</p>	<p>Standard: None</p> <p>Cue:</p> <p>Control Room Operators have started the No. 12 RHRSW pump.</p> <p>Comments:</p> <p>It is not the intent of this JPM for the operator to perform action in the Intake for starting of a RHRSW pump.</p>									
<p>STEP 8 "C" (Procedure STEP 17)</p> <p>OPEN CV-1729 to obtain the desired flow rate by turning the valve handwheel in the counterclockwise direction.</p> <table><tr><th>No. of Pumps</th><th>Flowrate</th><th>Approximate Valve Position</th></tr><tr><td>1</td><td>3500 gpm</td><td>60% open</td></tr><tr><td>2</td><td>7000 gpm</td><td>85% open</td></tr></table>	No. of Pumps	Flowrate	Approximate Valve Position	1	3500 gpm	60% open	2	7000 gpm	85% open	<p>Standard:</p> <p>Simulates opening CV-1729 by turning the valve handwheel CCW until valve position is at 60%.</p> <p>Cue:</p> <p>Valve position indicates approximately 60%. Flow rate is 3500 gpm.</p> <p>Comments: None</p>
No. of Pumps	Flowrate	Approximate Valve Position								
1	3500 gpm	60% open								
2	7000 gpm	85% open								

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.08.01.03-001
TITLE:	MANUAL CONTROL OF RHR SW CV-1729	Revision 8a
		Page 5 of 6

Performance Objective	Standard
STEP 9 (Procedure STEP 18) Verify that RHR HX tube-to-shell side dP is greater than 20 psid by checking DPIS-10-92B (local instrument rack), <u>AND</u> adjust valve position, as required.	Standard: Verifies DP is greater than 20 psid by checking DPIS-10-92B. Cue: DPIS indicates 40 psid. Comments: None
STEP 10 "C" (Procedure STEP 19) Lock handwheel for CV-1729 in position.	Standard: Locks the handwheel in position. Cue: Handwheel is locked in position. Comments: The valve position may drift unless the handwheel is locked.
STEP 11 (Procedure STEP 20) NOTE: Valve CV-1729 is now locked in position at desired flow rate. An operator does not need to be stationed at valve continuously. Monitor system flowrate from Control Room.	Standard: None Cue: Flowrate is being monitored from the Control Room. Comments: None
STEP 12 INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.	Standard: Operator informs evaluator that the task is completed. Cue: None Comments: DO NOT PROMPT!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.08.01.03-001
TITLE:	MANUAL CONTROL OF RHRSW CV-1729	Revision 8a
		Page 6 of 6

CANDIDATES COPY

Initial Conditions:

The Reactor is shutdown and <212°F. The No. 12 RHR Heat Exchanger Control valve CV-1729 solenoid valve SV-1729 has failed. The No. 11 and No. 13 RHR pump breakers have been previously removed for breaker maintenance. Shutdown cooling is desired at this time.

The Control Room Supervisor directs you to assume manual control of RHR Heat Exchanger RHRSW control valve CV-1729.

INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.07-002
TITLE:	FWCV CONTROL	Revision 6a
		Page 1 of 5

JOB PERFORMANCE MEASURE	
SRO: _____	SRO/RO: _____ SRO/RO/NLO: <u>X</u> NLO: _____
Plant Reference: B.05.07-05, Rev 10	
Task Standard: Take Local Manual Control of Feedwater Reg Valve	
K/A Reference: 259001 Task No.: A2.07 Rating RO/SRO: 3.7/3.8 Recent Events: None Probabilistic Risk Assessment Human Error: None Monticello Specific Task List Reference: NL259.101	
METHOD OF TESTING	TIME FOR COMPLETION
Simulator: _____ In-Plant: <u>X</u>	Estimated Time to Complete: <u>5 Min</u> Maximum Time to Complete: <u>10 Min</u> Time Critical: _____ Yes <u>X</u> No
Normal: <u>X</u> Alternate Path: _____	

Prepared By: <i>Kurt Markley</i>	Date: <i>06/28/02</i>
Reviewed By: <i>Ed McAllister</i>	Date: <i>7/1/02</i>
Shift Supv/Shift Mgr Review By: <i>Kurt Markley</i>	Date: <i>07/01/02</i>
Approved By: <i>MR Zepher</i>	(Supt Ops Trng) Date: <i>1 July 02</i>

FOR ADMINISTRATIVE USE ONLY			
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: _____			
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs
ARMS: JPM-B.05.07-002	Doc Type: 8505	Admin Initials: _____	Date: _____

I/cmb

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.07-002
TITLE:	FWCV CONTROL	Revision 6a
		Page 2 of 5

JPM SET-UP	
Plant Setup:	None
Initial Conditions:	The Plant is operating at 50% power with the Main Feedwater Regulating valves in service. Local manual control of the "A" FWCV, CV-6-12A is required to replace its controller MTS-6-84A on C-05.
Initiating Cues:	The Shift Supv directs you to take local manual control of "A" Main Feed Reg valve CV-6-12A.
ALL OPERATOR ACTIONS ARE TO BE SIMULATED!	

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.07-002
TITLE:	FWCV CONTROL	Revision 6a
		Page 3 of 5

PERFORMANCE INFORMATION

Performance Objective	Standard
STEP 1 Locate procedure B.05.07-05.G.1, "Local Manual Control of Feedwater Valves".	Standard: Locates appropriate procedure. Cue: Provide operator with a copy of the procedure. Comments: None
STEP 2 "C" (Procedure STEP 1.a) <u>IF</u> necessary to engage the handwheel, <u>THEN</u> perform the following: Turn (clockwise) the large handwheel until it is snug at its limit of travel.	Standard: Turns large handwheel on CV-6-12A CW until snug. Cue: Large handwheel is snug. Comments: None
STEP 3 "C" (Procedure STEP 1.b) Turn (counterclockwise) the small handwheel until it is tight.	Standard: Turns small handwheel on CV-6-12A CCW until it is tight. Cue: Small handwheel is tight. Comments: None
STEP 4 "C" (Procedure STEP 1.c) Turn the Bailey positioner bypass valve from CLOSED-AUTO to OPEN-HAND to equalize the pressure across the valve actuator.	Standard: Turns positioner bypass valve to the OPEN-HAND position. Cue: Positioner bypass valve is pointing to the OPEN-HAND position. Comments: None
STEP 5 "C" (Procedure STEP 1.d) OPEN the actuator equalizing valve at the top of the Fw Reg Valve actuator to equalize pressure during valve lock-up.	Standard: Turns actuator equalizing valve CCW until it is tight. Cue: Actuator equalizing valve is full CCW and tight. Comments: None

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.07-002
TITLE:	FWCV CONTROL	Revision 6a
		Page 4 of 5

Performance Objective	Standard
<p>STEP 6 "C" (Procedure STEP 1.e)</p> <p>Turn the Bailey positioner air supply valve from AUTO-OPEN to HAND-CLOSED to remove supply air from the operator.</p>	<p>Standard:</p> <p>Turns positioner air supply valve to the HAND-CLOSED position.</p> <p>Cue:</p> <p>Positioner air supply valve is pointing to HAND-CLOSED position.</p> <p>Comments: None</p>
<p>STEP 7 "C" (Procedure STEP 1.f)</p> <p>Adjust valve position locally by operation of the large handwheel.</p>	<p>Standard:</p> <p>Turns large handwheel clockwise to CLOSE.</p> <p>Cue:</p> <ol style="list-style-type: none"> 1. Tell them that Control Room requests the operator to slowly close the valve. 2. CV-6-12A changes position as handwheel is turned. 3. If asked, inform them CV-6-12B is opening slowly to control RPV level. <p>Comments: None</p>
<p>STEP 8</p> <p>INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.</p>	<p>Standard:</p> <p>Operator informs evaluator that the task is completed.</p> <p>Cue: None</p> <p>Comments: DO NOT PROMPT!</p>

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.05.07-002
TITLE:	FWCV CONTROL	Revision 6a
		Page 5 of 5

CANDIDATES COPY

Initial Conditions:

The Plant is operating at 50% power with the Main Feedwater Regulating valves in service. Local manual control of the "A" FWCV, CV-6-12A is required to replace its controller MTS-6-84A on C-05.

INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!

MONTICELLO NUCLEAR GENERATING PLANT		JPM-B.06.03-002
TITLE:	START THE MECHANICAL VACUUM PUMP (MVP)	Revision 7
		Page 1 of 8

JOB PERFORMANCE MEASURE

SRO: _____ SRO/RO: _____ SRO/RO/NLO: X NLO: _____

Plant Reference: B.06.03-05, Rev 12

Task Standard: Placing the MVP in service due to decreasing Condenser Vacuum.

K/A Reference: 295002 Task No.: AA1.02 Rating RO/SRO: 2.9/2.9

Recent Events: None

Probabilistic Risk Assessment Human Error: "FPMVACPMPY"

Monticello Specific Task List Reference: NL255.101, CR255.109

METHOD OF TESTING		TIME FOR COMPLETION
Simulator: _____	Normal: <u>X</u>	Estimated Time to Complete: <u>15 Min</u>
In-Plant: <u>X</u>	Alternate Path: _____	Maximum Time to Complete: <u>30 Min</u>
		Time Critical: _____ Yes <u>X</u> No

Prepared By: <u>K. Kitzinger</u>	Date: <u>1/7/02</u>
Reviewed By: <u>Thomas W. White</u>	Date: <u>1-7-02</u>
Shift Supv/Shift Mgr Review By: <u>J. White</u>	Date: <u>1-10-02</u>
Approved By: <u>G. Lashin</u>	(Supt Ops Trng) Date: <u>1-11-02</u>

FOR ADMINISTRATIVE USE ONLY				
3087 (DOCUMENT CHANGE, HOLD, AND COMMENT FORM) incorporated: <u>None</u>				
Resp Supv: OTRNG	Assoc Ref: MTCP-03.32	SR: N	Freq: 0 yrs	
ARMS: JPM-B.06.03-002	Doc Type: 8505	Admin Initials: <u>je</u>	Date: <u>1/15/02</u>	

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JPM SET-UP	
Plant Setup:	None
NOTE:	It is not necessary to enter a posted contaminated area to reach all the components. It is permissible for the operator to point them out if not accessible.
Initial Conditions:	Reactor startup in progress at approximately 2% power on IRMs. Reactor pressure is 750 psig and increasing in preparation for rolling turbine-generator. Startup checklists have been completed.
Initiating Cues:	Both OG recombiner trains have tripped due to H ₂ analyzer problems and cannot be restarted. Condenser vacuum is decreasing and C.4-B.06.03.A has been entered. The SS directs you to start the Mechanical Vacuum Pump (MVP) in order to recover condenser vacuum, using approved procedures. ALL OPERATOR ACTIONS ARE TO BE SIMULATED!!

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PERFORMANCE INFORMATION

Performance Objective	Standard
STEP 1 Operator locates appropriate procedure for starting MVP.	Standard: Operator locates procedure B.06.03-05.D.1, "Startup of the Mechanical Vacuum Pump." Cue: None Comments: Provide operator with copy after locating the procedure.
STEP 2 (Procedure STEP 1) <u>GENERAL NOTE</u> The following sequence for starting various components of the Mechanical Vacuum Pump should be followed to avoid damage to the Turbine and/or parts of the Condensing System. Verify Service Water Pump(s) in service per B.08.01.01 (SERVICE WATER).	Standard: Operator verifies either by observing indications on C-06, or by contacting Turbine Building operator. Cue: (If asked), Turbine Building operator reports normal operation of the Service Water system. Comments: None
STEP 3 (Procedure STEP 2.a) To start the Mechanical Vacuum Pump (MVP): <u>NOTE:</u> This step prevents radioactive gases from escaping from the MVP Separator while the MVP is in operation. (NRC Commitment M71031A). a. CLOSE OG-66, MVP SEPARATOR OVERFLOW TO CRW.	Standard: Operator proceeds to OG-66 and closes the valve. Cue: Handwheel on OG-66 turns CW and becomes tight. Comments: None
STEP 4 (Procedure STEP 2.b) b. IF directed by Shift Supervisor, THEN verify valve checklist Form 2154-16 (OFF-GAS SYSTEM PRESTART VALVE CHECKLIST) has been completed.	Standard: None Cue: None Comments: Initial conditions stated all Startup Checklists were complete.

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Performance Objective	Standard
<p>STEP 5 "C" (Procedure STEP 2.c)</p> <p>c. OPEN CST-24, MVP MU WTR STOP.</p>	<p>Standard:</p> <p>Operator opens CST-24, MVP MU WTR STOP.</p> <p>Cue:</p> <p>CST-24 handwheel turns CCW and flow is heard.</p> <p>Comments: None</p>
<p>STEP 6 (Procedure STEP 2.d)</p> <p>d. Verify seal water level in the separator is between 1/4 and 3/4 of the height of sight glass LG-2452, MVP MOISTURE SEPARATOR TANK LEVEL SIGHT GLASS.</p>	<p>Standard:</p> <p>Operator observes level in sight glass.</p> <p>Cue:</p> <p>Sight glass is 1/2 full.</p> <p>Comments: None</p>
<p>STEP 7 (Procedure STEP 2.e)</p> <p>e. Verify the following MVP trip relays are energized.</p> <p>1) 16A-K45 (Panel C-41)</p> <p>2) 16A-K46 (Panel C-42)</p> <p>3) 16A-K23 (Panel C-41)</p> <p>4) 16A-K24 (Panel C-42)</p>	<p>Standard:</p> <p>Operator determines the status of the MVP trip relays.</p> <p><u>Pre-Approved Prompt</u></p> <p>All 4 MVP trip relays are energized.</p> <p>Cue: None</p> <p>Comments:</p> <p>This would normally be done by operators from the Control Room.</p>
<p>STEP 8 (Procedure STEP 2.f)</p> <p>f. IF one or more of the relays listed in step 2.e are de-energized, THEN reset GROUP 2/SCTMT ISOLATION RESET HANDSWITCH 16A-S56 (Panel C-04).</p>	<p>Standard: None</p> <p>Cue: None</p> <p>Comments:</p> <p>Per Step 2.e all relays are energized.</p>

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Performance Objective	Standard
<p>STEP 9 (Procedure STEP 2.g)</p> <p>NOTE: OG-28 must be closed in order for the MVP to be started. Because of this, Condensate Demineralizer backwashing cannot be performed when the MVP is being placed in service (OG-28 is required to be open for Condensate Demineralizer backwashing).</p> <p>g. Verify CLOSED OG-28, COND BW REC TANK (T-33) VENT ISOL</p>	<p>Standard:</p> <p>Operator verifies CLOSED OG-28, COND BW REC TANK (T-33) VENT ISOL.</p> <p>Cue:</p> <p>OG-28 indicates closed.</p> <p>Comments: None</p>
<p>STEP 10 "C" (Procedure STEP 2.h)</p> <p>h. Verify OPEN OG-24, MVP DISCHARGE VLV.</p>	<p>Standard:</p> <p>Operator verifies OPEN OG-24 MVP DISCHARGE VLV.</p> <p>Cue:</p> <p>OG-24 indicates OPEN.</p> <p>Comments: None</p>
<p>STEP 11 "C" (Procedure STEP 2.i)</p> <p>i. START the MVP from local pushbutton station (PB-52-104 MVP START/STOP CONTROL).</p>	<p>Standard:</p> <p>Operator starts the MVP from local pushbutton station and observes MVP start.</p> <p>Cue:</p> <p>The MVP has started and sounds normal.</p> <p>Comments: None</p>
<p>STEP 12 (Procedure STEP 2.j)</p> <p>j. Verify OPEN AO-1825A and AO-1825B VACUUM PUMP SUCTION ISOLATION valves.</p>	<p>Standard:</p> <p>Operator verifies valves AO-1825A and AO-1825B OPEN.</p> <p>Cue:</p> <p>MVP suction isolation valves have moved to the OPEN position</p> <p>Comments: None</p>

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Performance Objective	Standard
STEP 13 (Procedure STEP 2.k) k. Verify operation of P-70, MVP RECIRC SEAL PUMP.	Standard: Operator verifies operation of P-70. Cue: MVP Recirc Seal Pump sounds normal and feels cool. Comments: None
STEP 14 (Procedure STEP 2.l) l. Verify that seal water inlet pressure (PI-7246, MECHANICAL VACUUM PUMP SEAL WATER INLET PRESS, Local) is >0 psig and constant.	Standard: Operator verifies seal water inlet pressure. Cue: Seal water pressure is 15 psig and steady. Comments: None
STEP 15 (Procedure STEP 2.m) m. Regulate service water to the cooler by throttling SW-38, MVP SEAL CLR SW OUT, to maintain outlet temperature <100°F. (TI-1597, MVP SEAL WATER COOLER OUTLET TEMPERATURE, Local).	Standard: Operator adjusts service water to the cooler as needed. Cue: SW-38 valve turns CCW and outlet temperature is 75°F. Comments: None
STEP 16 "C" (Procedure STEP 2.n) n. Slowly OPEN the following valves: 1) OG-22-1 11 CDSR MVP SUCTION 2) OG-22-2, 12 CDSR MVP SUCTION	Standard: Operator opens OG-22-1, 11 CDSR MVP SUCTION and OG-22-2, 12 CDSR MVP SUCTION. Cue: OG-22-1 and OG-22-2 chain operated valves turn counter clockwise. The stems rise, meet resistance and are tight. Comments: None
STEP 17 (Procedure STEP 2.o) o. Verify pump and motor operating properly before leaving unattended.	Standard: Operator verifies pump and motor operating properly. Cue: MVP sounds, looks and feels normal. Comments: None

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Performance Objective	Standard
<p>STEP 18 (Procedure STEP 2.p)</p> <p>p. Check the water level in the moisture separator sight glass hourly, <u>AND</u> drain level to normal, as required.</p>	<p>Standard:</p> <p>Operator may question if someone will monitor water level.</p> <p>Cue:</p> <p>Another operator will monitor and drain the sight glass as necessary.</p> <p>Comments: None</p>
<p>STEP 19 "C" (Procedure STEP 2.q)</p> <p>q. Throttle OG-22-1 and OG-22-2 to minimize spray from MVP packing. Throttle to suction pressure of 15 to 25 in. Hg Vac on PI-7451, MVP Suction Pressure, then adjust as needed. Valves may be opened fully if required for pump performance.</p>	<p>Standard:</p> <p>Operator observes PI-7451, MVP Suction Pressure, and MVP Seal Leakage.</p> <p>Cue:</p> <p>PI-7451, MVP Suction Pressure, indicates 21 in. Hg Vac. Minimal leakage is observed from the MVP packing. Throttling of OG-22-1 and OG-22-2 is not needed.</p> <p>Comments: PI-7451 is in the MVP Room.</p>
<p>STEP 20</p> <p>INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.</p>	<p>Standard:</p> <p>Operator informs evaluator that the task is completed.</p> <p>Cue: None</p> <p>Comments: DO NOT PROMPT!</p>

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CANDIDATES COPY
<p>Initial Conditions:</p> <p>Reactor startup in progress at approximately 2% power on IRMs. Reactor pressure is 750 psig and increasing in preparation for rolling turbine-generator. Startup checklists have been completed.</p>
INFORM THE EVALUATOR WHEN YOU HAVE COMPLETED THE TASK!!!