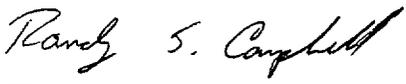


TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.a

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: REMOVE A MFP FROM SERVICE WITH ICS HAND CONTROL NOT RESPONDING

TASK NUMBER: 0598050101 TIF: 2.84

K/A REFERENCE: System: 059
K/A: A2.11
Rating: 3.0/3.3

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: Main feedwater Pump 2B is established at 1000 ± 100 RPM using the Motor Speed Changer.

APPROXIMATE COMPLETION TIME: 10 minutes

TIME-CRITICAL TASK COMPLETION TIME: NA

REQUIRED TOOLS OR MATERIALS: None.

REFERENCES: ARP M-1-3, FWP A/B VIBR/ECC HI
1106-3, Feedwater System

ALTERNATE PATH JPM? YES

SIMULATOR SETUP: Reset to IC 16, reduce power to 50%.
Secure MOPs.
Start AUX OIL Pumps for both MFW pumps.
Secure both heater drain pumps.
Display computer point A0321 on the PPC.

INITIALIZATION: IC-16

EVENT TRIGGERS: NA

MALFUNCTIONS: NA

REMOTE FUNCTIONS: NA

OVERRIDES: 01A5A04-ZDIICS36BMSC(4) LO OFF
01A5S21-ZDIPBTFTB OFF

MONITOR: NA

READ TO STUDENT

When I tell you to begin, you are to **TRANSFER THE LOAD FROM FW-P-1B TO FW-P-1A, AND ESTABLISH FW-P-1B SPEED AT 1000 +/- 100 RPM**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

Plant startup is in progress.

The plant is stable at 50% power on a hold for Chemistry.

FW-P-1B has just been started.

All ICS stations are in automatic.

The Auxiliary Operator has reported that FW-P-1B is making an unusual noise.

The Director, Operations has directed that FW-P-1B be taken off line. While removing the pump from service, hold speed at approximately 1000 RPM so that Engineering can take vibration readings, then secure the pump.

The Auxiliary Operator is standing by at FW-P-1B with a radio.

INITIATING CUE:

Transfer the load from FW-P-1B and establish FW-P-1B speed at 1000 ± 100 RPM.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **TRANSFER THE LOAD FROM FW-P-1B TO FW-P-1A, AND ESTABLISH FW-P-1B SPEED AT 1000 ± 100 RPM.** Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

Plant startup is in progress.

The plant is stable at 50% power on a hold for Chemistry.

FW-P-1B has just been started.

All ICS stations are in automatic.

The Auxiliary Operator has reported that FW-P-1B is making an unusual noise.

The Director, Operations has directed that FW-P-1B be taken off line. While removing the pump from service, hold speed at approximately 1000 RPM so that Engineering can take vibration readings, then secure the pump.

The Auxiliary Operator is standing by at FW-P-1B with a radio.

INITIATING CUE:

Transfer the load from FW-P-1B and establish FW-P-1B speed at 1000 ± 100 RPM.

*Denotes Critical Elements
#Denotes Sequential Step

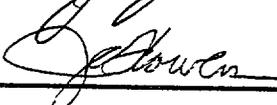
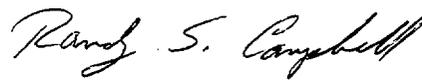
#	STEP	STANDARD	S/U
<p>NOTE: Examinee may or may not use the procedure to perform this evolution. The procedure is Level 2, which allows the operator to perform actions from memory.</p> <p>NOTE: The ICO will role play as the AO standing by at FW-P-1B.</p> <p>INITIATING CUE: As Control Room Supervisor, direct the examinee to transfer the load from FW-P-1B to FW-P-1A, and establish FW-P-1B speed at 1000 ± 100 RPM.</p>			
1	Place the ICS FP B TURBINE SPEED CONTROL station in HAND.	HAND pushbutton on the ICS FP B TURBINE SPEED CONTROL station is depressed, AUTO light goes off, HAND light comes on.	
2	REDUCE load and speed of the pump to be secured, while VERIFYING valve ΔP is maintained by the other pump.	<p>Toggle switch on the ICS FP B TURBINE SPEED CONTROL station is depressed downward, no response is observed by the examinee.</p> <p>Examinee may report this condition to the CRS.</p> <p>CUE: Acknowledge as CRS. If the Examinee asks for direction, require the examinee to provide a recommendation. Agree with the recommendation.</p> <p style="text-align: center;">OR</p> <p>As CRS, state the following, "The system engineer and the In Plant Supervisor at the pump have advised me to get the pump unloaded as soon as possible. What do you recommend?"</p> <p>NOTE: THIS IS WHERE THE ALTERNATE PATH BEGINS.</p>	
<p>NOTE: IF THE EXAMINEE ELECTS TO TRIP THE FEED PUMP TURBINE, THE TRIP PB WILL NOT OPERATE. LOAD WILL HAVE TO BE REDUCED USING THE MOTOR SPEED CHANGER.</p>			
3	Examinee may direct the AO to trip FW-P-1B locally.	ICO CUE: As AO, if directed to trip FW-P-1B locally, report that the attempt to trip FW-P-1B locally was unsuccessful.	
*4	Lower the motor speed changer setting by placing the 1B FPT Governor Control Switch in the "Slow Lower" or "Fast Lower" position until a small drop in speed (100 to 200 RPM) is observed on the speed recorder or on computer point A0321.	Speed Changer setting reduced using the 1B FPT Governor Control Switch in the "Slow Lower" or "Fast Lower" position until a small drop in speed (100 to 200 RPM) is observed on the speed recorder or on computer point A0321.	
5	Turn the switch for "FP1B Full Range Manual Speed Control" to "ON".	Switch for "FP1B Full Range Manual Speed Control" is turned to "ON" position.	

#	STEP	STANDARD	S/U
*6	REDUCE load and speed of the pump to be secured, while VERIFYING valve ΔP is maintained by the other pump.	Speed reduced using the motor speed changer while VERIFYING valve ΔP is maintained by the other pump.	
*7	When all load has been transferred to FW-P-1A, then establish FW-P-1B at 1000 ± 100 RPM using the Governor switch in the "Slow Lower" or "Fast Lower" position.	Speed is established at 1000 ± 100 RPM.	
END OF TASK			

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.b

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: EMERGENCY DIESEL GENERATOR FAILS TO AUTO LOAD ON A BLACKOUT

TASK NUMBER: 0640030101 TIF: 2.63

K/A REFERENCE: System: 064
K/A: A4.06
Rating: 3.9/3.9

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: EG-Y-1B output breaker, G11-02, is closed and supplying power to the 1E 4160V Bus between 59Hz to 61Hz and voltage is maintained between 4000V to 4300V.

APPROXIMATE COMPLETION TIME: 5 minutes

TIME-CRITICAL TASK COMPLETION TIME: NA

REQUIRED TOOLS OR MATERIALS: EP 1202-2, Loss of Station Power, Attachment 1.

REFERENCES: EP 1202-2, Loss of Station Power, Attachment 1.

ALTERNATE PATH JPM? YES

SIMULATOR SETUP: Trip the reactor and stabilize plant conditions. Perform and sign off follow-up actions of 1202-2, steps 3.1 through 3.6, 4.1 through 4.18, and Attachment 1, Section II, step 1.

INITIALIZATION: IC-16

EVENT TRIGGERS: NA

MALFUNCTIONS: EGR12 0%

REMOTE FUNCTIONS: NA

OVERRIDES: 03A6556-ZDIG1102(3) NAP OFF

MONITOR: NA

READ TO STUDENT

When I tell you to begin, you are to **ENERGIZE THE 1E 4160V BUS**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The plant was stable at 100% power when the following sequence of events occurred:

The reactor tripped when a Loss of Off Site Power occurred.

EG-Y-1B started but failed to energize the 1E 4160V Bus.

The IMAs of 1210-1, Reactor Trip, have been verified, and 1202-2, Loss of Station Power is being referenced.

INITIATING CUE:

You are to energize the 1E 4160V Bus using EG-Y-1B IAW 1202-2, Attachment 1, Section II, Step 5.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **ENERGIZE THE 1E 4160V BUS**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The plant was stable at 100% power when the following sequence of events occurred:

The reactor tripped when a Loss of Off Site Power occurred.

EG-Y-1B started but failed to energize the 1E 4160V Bus.

The IMAs of 1210-1, Reactor Trip, have been verified, and 1202-2, Loss of Station Power is being referenced.

INITIATING CUE:

You are to energize the 1E 4160V Bus using EG-Y-1B IAW 1202-2, Attachment 1, Section II, Step 5.

*Denotes Critical Elements
#Denotes Sequential Step

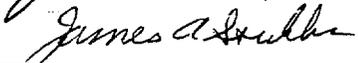
#	STEP	STANDARD	S/U
INITIATING CUE: As Control Room Supervisor, provide 1202-2, Attachment 1 to the examinee and direct the examinee to energize the 1E 4160V Bus in accordance with section II step 5.			
1	Verify 1SA-E2, 1SB-E2, and T1-E2 breakers are open.	Examinee verifies that the extension controls for 1SA-E2, 1SB-E2, and T1-E2 have Green Flags, and that the breaker Green Open Lights are LIT and the Red Closed lights are OFF. Candidate may place these in PTL as a "good practice", but not required.	
*2	Verify READY TO LOAD lamp is lit for EG-Y-1B on CR.	Examinee observes that the READY TO LOAD lamp is NOT LIT.	
NOTE: Next step is alternate path.			
*#3	Place EG-Y-1B exciter in manual and adjust voltage from CR as necessary to obtain 4000 to 4300 volts.	EG-Y-1B exciter is in manual AND voltage is adjusted to obtain between 4000 and 4300 Volts.	
*#4	Adjust EG-Y-1B speed using governor control on CR as necessary to obtain 59 to 61 Hz.	EG-Y-1B speed is adjusted to establish 59-61 Hz.	
NOTE: Next step is alternate path.			
*#5	If G11-02 does not automatically close, manually close G11-02 using control switch on CR.	G11-02 is manually closed using control switch on CR.	
6	Monitor voltage and adjust as necessary after starting/stopping any load.	Voltage is monitored and adjusted as necessary to maintain 4000V to 4300V. No additional loading is required to complete this task.	

END TASK

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.c

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: PERFORM REGULATING GROUP TRANSFER OPERATIONS TO/FROM THE
AUXILIARY POWER SUPPLY.

TASK NUMBER: 0010110101 TIF: 2.49

K/A REFERENCE: System: 001
K/A: K4.13
Rating: 3.4/3.4

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: Group 6 control rods are on their normal power supply, the Diamond rod control station is in manual sequence mode of operation, and RUN speed is selected.

APPROXIMATE COMPLETION TIME: 10 minutes

TIME-CRITICAL TASK COMPLETION TIME: n/a minutes

REQUIRED TOOLS OR MATERIALS: None.

REFERENCES: OP-1105-9, Control Rod Drive System, Section 3.2.3.

ALTERNATE PATH JPM? NO

SIMULATOR SETUP:

INITIALIZATION: IC-16

On the console, transfer the following ICS stations to HAND;

A Feedwater LOOP master
B Feedwater LOOP master
Reactor Master
Diamond (Manual)
S/G / Rx master

Place all Group-6 control rods on the auxiliary power supply, and return the Diamond rod control panel to manual sequence mode of operation in RUN speed.

EVENT TRIGGERS: N/A

MALFUNCTIONS: N/A

REMOTE FUNCTIONS: N/A

OVERRIDES: N/A

MONITOR: N/A

READ TO STUDENT

When I tell you to begin, you are to **RETURN ALL GROUP-6 RODS TO THEIR NORMAL POWER SUPPLY, AND MAINTAIN THE DIAMOND ROD CONTROL PANEL IN MANUAL.** Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The Reactor is at 100% power.

ICS is in track with the following ICS stations in HAND:

- SG/Rx Master
- BOTH Feedwater Loop Masters
- Reactor Master
- Diamond Rod Control Panel

Group-6 control rods are on the auxiliary power supply.

Maintenance on the Group-6 normal programmer has been completed.

INITIATING CUE:

The Control Room Supervisor directs you to return all Group-6 rods to their normal power supply, and maintain the diamond rod control panel in manual.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **RETURN ALL GROUP-6 RODS TO THEIR NORMAL POWER SUPPLY, AND MAINTAIN THE DIAMOND ROD CONTROL PANEL IN MANUAL**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The Reactor is at 100% power.

ICS is in track with the following ICS stations in HAND:

- SG/Rx Master
- BOTH Feedwater Loop Masters
- Reactor Master
- Diamond Rod Control Panel

Group-6 control rods are on the auxiliary power supply.

Maintenance on the Group-6 normal programmer has been completed.

INITIATING CUE:

The Control Room Supervisor directs you to return all Group-6 rods to their normal power supply, and maintain the diamond rod control panel in manual.

TIME-CRITICAL: NO

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
*1	VERIFY or SELECT SEQ-OR	<p>"SEQ/SEQ OR" pushbutton depressed, and "SEQ OR" lamp illuminated.</p> <p>NOTE: "SEQ" lamp will remain illuminated after SEQ OR is selected.</p>	
*2	SELECT the group to be transferred on the GROUP SELECTSWITCH, OR verify the proper group selected	"GROUP SELECT" switch rotated to the "6" position.	
*3	SELECT ALL or desired rod on the SINGLE SELECT SWITCH OR verify the correct Rod or All selected.	"SINGLE SELECT" switch rotated to the "ALL" position.	
*4	SELECT AUXIL. On the GROUP-AUXIL switch.	"GROUP - AUXIL" pushbutton depressed, "GROUP" lamp extinguished, and "AUXIL" lamp illuminated.	
*5	SELECT JOG	"JOG/RUN" speed selector switch rotated to the "JOG" position.	
6	VERIFY that the SY (synch) lamp comes ON.	"SY" lamp illuminated.	
7	VERIFY the GROUP OUT-LIMIT on the Diamond Rod Control Panel for the GROUP transferred is ON.	GROUP 6 OUT-LIMIT on the Diamond Rod Control Panel is ON.	
*8	PRESS CLAMP and verify that the lamp comes ON in the CLAMP portion of the switch.	"CLAMP / CLAMP REL" push-button depressed, "CLAMP" lamp illuminated, and "CLAMP REL" lamp extinguished.	
*9	<p>PRESS MAN TRANS and verify the following:</p> <p>___ TR CF lamp – "OFF"</p> <p>___ CONTROL ON lamp(s) on PI panel – "OFF"</p>	<p>"MAN TRANS" pushbutton depressed, "TR CF" lamp on the Diamond control panel and the individual "CONTROL ON" lamps for all Group-6 control rods on the PI panel on PC extinguish.</p>	

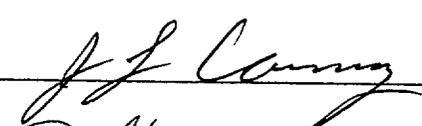
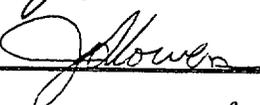
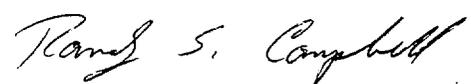
#	STEP	STANDARD	S/U
*10	PRESS CLAMP REL VERIFY that the CLAMP REL lamp comes ON.	"CLAMP / CLAMP REL" push-button depressed, "CLAMP REL" lamp illuminated, and "CLAMP" lamp extinguished.	
*11	SELECT GROUP on the GROUP-AUXIL switch. VERIFY that the GROUP light comes ON.	"GROUP - AUXIL" push-button depressed, "AUXIL", and "SY" lamps extinguish, and "GROUP" lamp illuminated.	
12	PLACE the GROUP SELECT SWITCH to OFF.	"GROUP SELECT" selector switch rotated to the "OFF" position.	
13	PLACE the SINGLE SELECT SWITCH to OFF.	"SINGLE SELECT" selector switch rotated to the "OFF" position.	
*14	PRESS TRANS RESET and VERIFY : ____ CONTROL ON lamp(s) on Diamond Rod Control panel goes OFF for the GROUP that was selected ____ TRANS RESET backlight comes ON	"TRANS RESET" push-button depressed, and CONTROL ON lamp(s) on Diamond Rod Control panel goes OFF for the GROUP that was selected and TRANS RESET backlight comes ON	
*15	SELECT RUN	"RUN / JOG" speed selector switch rotated to the "RUN" position.	
*16	SELECT SEQ	"SEQ / SEQ OR" pushbutton depressed, "SEQ OR" lamp extinguished, Group-6 "CONTROL ON" lamp illuminated, and individual "CONTROL ON" lamps for all Group-6 control rods on the "PI" panel on PC illuminated.	

END TASK

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.d

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: RM-A-1 HI ALARM, AUTO ACTIONS FAIL TO OCCUR.

TASK NUMBER: 0000610501 TIF: 3.23

K/A REFERENCE: System: 072
K/A: A3.01
Rating (RO/SRO): 2.9/3.1

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: Control tower is in recirculation mode with 36000 to 44000 CFM flow established.

APPROXIMATE COMPLETION TIME: 10 minutes

TIME-CRITICAL TASK COMPLETION TIME: n/a minutes

REQUIRED TOOLS OR MATERIALS: None.

REFERENCES: Main Annunciator Panel C-1-1.

ALTERNATE PATH JPM? YES

SIMULATOR SETUP:

INITIALIZATION:	IC-??
EVENT TRIGGERS:	N/A
MALFUNCTIONS:	RM01G RM04A ON EVENT 1
REMOTE FUNCTIONS:	N/A
OVERRIDES:	N/A
MONITOR:	N/A

READ TO STUDENT

When I tell you to begin, you are to **RESPOND TO PLANT CONDITIONS**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The plant has been tripped in response to an OTSG tube leak.

The immediate actions of 1210-1 and 1210-5 are complete, and the crew is preparing to initiate a plant cooldown.

INITIATING CUE:

The Control Room Supervisor directs you to respond to plant conditions as required.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **RESPOND TO PLANT CONDITIONS**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The plant has been tripped in response to an OTSG tube leak.

The immediate actions of 1210-1 and 1210-5 are complete, and the crew is preparing to initiate a plant cooldown.

INITIATING CUE:

The Control Room Supervisor directs you to respond to plant conditions as required.

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
INITIATING CUE: WHEN DIRECTED BY EXAMINER, ICO ACTIVATES EVENT TRIGGER 1.			
1	IDENTIFY RM-A-1 is in HI Alarm	MAP C-1-1 alarm is received Alarm is acknowledged and RM-A-1 is observed in HI Alarm	
2	REVIEW Alarm Response Procedure for MAP C-1-1.	The ARP for MAP C-1-1 is located and the section for RM-A-1 is reviewed.	
3	Announce alarm over GAI-Tronics Paging System	Note: Do not allow the examinee to make the announcement. This will prevent cueing the other candidate. Examinee indicates they would make the announcement.	
4	Refer to EP 1202-12, Excessive Radiation Levels	Either states that he/she will refer to it following addressing ARP, or obtains 1202-12 and refers to IMAs in 1202-12. CUE: State the following, "Continue actions of alarm response C-1-1, I will refer to 1202-12 later."	
<p>NOTE: This is where the alternate path begins. The next step is alternate path. Subsequent steps are normal response.</p> <p>NOTE: The following actions are dependent on which train is in operation. Performance should be verified based on current train in operation.</p>			

#	STEP	STANDARD	S/U
*5	Verify Auto Action: ___ 1 Normal ventilation in the Control Tower is stopped on gaseous Hi Alarm. 2. The following fans trip: ___ AH-E-21 ___ AH-E-93A(B) ___ AH-E-94A(B) ___ AH-E-17 A or B ___ AH-E-95 A or B ___ AH-E-20 A or B ___ AH-E-26 3. The following dampers close: ___ AH-D-28 ___ AHD-617	Auto actions are verified. The Auto Actions are identified as having NOT occurred. The EXAMINEE takes manual actions to place the components in the required condition as follows: Stop running AH-E-17 A or B Trip the following Fans: ___ AH-E-21 (Not on panel. Located in CR, front right corner. Not simulated.) CUE: Inform examinee that AH-E-21 is OFF. ___ AH-E-93A(B) ___ AH-E-94A(B) ___ AH-E-17 A or B ___ AH-E-95 A or B ___ AH-E-20 A or B ___ AH-E-26 (Not on panel. Switch located on 305 level in the AUX building.) CUE: Inform examinee that AH-E-26 is OFF. Close the following Dampers: ___ AH-D-28 ___ AHD-617 CUE: Inform EXAMINEE that AHD-617 is Closed. AHD 617 is a plant mod that is not yet in place on the simulator.	
*6	Stop operating AH-E-19 fan	AH-E-19 A or B is located on H&V panel and the control switch is rotated to the TRIP position. The red running light extinguishes and the green stop light illuminates.	
*7	Start AH-E-18 in opposite loop of the tripped AH-E-17 fan.	AH-E-18 A or B is located on H&V panel and control switch is rotated to the START position. The red running light illuminates and the green stop light extinguishes.	
*8	Verify or start the AH-E-19 fan started in loop that the AH-E-18 fan was started in.	AH-E-19 A or B which coincides with the AH-E-18 fan started in the previous step is located on H&V panel and control switch is rotated to the START position. The red running light illuminates and the green stop light extinguishes.	

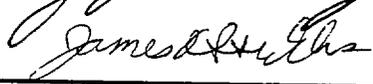
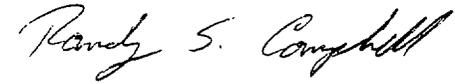
#	STEP	STANDARD	S/U
9	Verify Control Tower is in recirc mode with proper flow established (36,000 – 44,000 CFM)	Control Tower flow is verified between 36,000 – 44,000 CFM	
10	If alarm is due to spill or increase of radiation in a work area, contact Radiological Controls.	Radiological Controls is notified or examinee indicates they would contact Radiological Controls.	
11	Refer to 1203-34, Control Building Ventilation System.	1203-34 is obtained and reviewed or examinee indicates they would.	
<p>CUE: After Examinee completes performance of “Manual Action Required” for the Hi Alarm, inform him/her that the task is complete.</p>			

END TASK

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.e

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: SHIFT EMERGENCY FEEDWATER SUCTION TO ALTERNATE SOURCE.

TASK NUMBER: 0610070101 TIF: 3.8

K/A REFERENCE: System: 061
K/A: A1.04
Rating (RO/SRO): 3.9/3.9

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: Reactor River Water is supplying the EFW pumps via EF-V-4 and EF-V-5.

APPROXIMATE COMPLETION TIME: 5 minutes

TIME-CRITICAL TASK COMPLETION TIME: n/a minutes

REQUIRED TOOLS OR MATERIALS: None.

REFERENCES: 1210-10, Abnormal Transients Rules, Guides and Graphs.

ALTERNATE PATH JPM? NO

SIMULATOR SETUP:

INITIALIZATION: IC-16
Trip the reactor and perform actions to stabilize the plant. Perform actions of 1210-10 to align Emergency Feedwater suction to the Million Gallon Tank. Restore power to EF-V-4 and EF-V-5 using the remote functions below.

EVENT TRIGGERS: N/A

MALFUNCTIONS: N/A

REMOTE FUNCTIONS: FWR10 IN EF-V-4 BREAKER immediately
FWR11 IN EF-V-5 BREAKER immediately

OVERRIDES: N/A

MONITOR: N/A

READ TO STUDENT

When I tell you to begin, you are to **SHIFT EMERGENCY FEEDWATER SUCTION TO REACTOR BUILDING RIVER WATER**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The plant was tripped in response to high conductivity in the feedwater system.

All immediate and follow-up actions of 1210-1 have been performed with the exception that the reactor reset and cooldown to hot shutdown have not yet been performed.

Due to the chemistry problems in the condensate and feed system, the Demineralized Water Storage Tank, DW-T-2, currently supplies the Emergency Feedwater System. The condensate system is not expected to be returned to service for at least 12 hours.

The spectacle flange for EF-V-4/5 has been positioned to the THRU position.

The breakers for EF-V-4 and EF-V-5 have been unlocked and closed.

An Auxiliary Operator (AO) is stationed at the EFW system with a radio to monitor suction pressure.

INITIATING CUE:

The Control Room Supervisor directs you to **SHIFT EMERGENCY FEEDWATER SUCTION TO REACTOR BUILDING RIVER WATER**.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **SHIFT EMERGENCY FEEDWATER SUCTION TO REACTOR BUILDING RIVER WATER**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The plant was tripped in response to high conductivity in the feedwater system.

All immediate and follow-up actions of 1210-1 have been performed with the exception that the reactor reset and cooldown to hot shutdown have not yet been performed.

Due to the chemistry problems in the condensate and feed system, the Demineralized Water Storage Tank, DW-T-2, currently supplies the Emergency Feedwater System. The condensate system is not expected to be returned to service for at least 12 hours.

The spectacle flange for EF-V-4/5 has been positioned to the THRU position.

The breakers for EF-V-4 and EF-V-5 have been unlocked and closed.

An Auxiliary Operator (AO) is stationed at the EFW system with a radio to monitor suction pressure.

INITIATING CUE:

The Control Room Supervisor directs you to **SHIFT EMERGENCY FEEDWATER SUCTION TO REACTOR BUILDING RIVER WATER**.

TIME-CRITICAL: NO

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
<p>ICO CUE: WHEN THE EXAMINER IS READY TO BEGIN, AS THE AO STATIONED AT THE EFW SYSTEM, REPORT TO THE CONTROL ROOM THAT SUCTION PRESSURE FOR THE EMERGENCY FEEDWATER PUMPS HAS DROPPED TO 2.0 PSIG.</p> <p>EXAMINER CUE: AS CRS, DIRECT THE EXAMINEE TO SHIFT EMERGENCY FEEDWATER SUCTION TO REACTOR BUILDING RIVER WATER. PROVIDE A COPY OF 1210-10 TO THE EXAMINEE.</p>			
1	Determines correct section of 1210-10 to implement.	Obtains 1210-10 and refers to section 2.17.5.	
2	Verify spectacle flange between EF-V-4/5 has been turned to the THRU position.	Examinee contacts AO to verify that the spectacle flange for EF-V-4/5 is in the THRU position. ICO CUE: If contacted by the examinee to verify the spectacle flange, inform the examinee that "The spectacle flange for EF-V-4/5 has been positioned to the THRU position."	
*3	Start RR-P-1A or RR-P-1B (if not already running) to satisfy the opening interlock of EF-V-4 and ef-v-5.	Examinee verifies that either RR-P-1A or RR-P-1B is in operation by observing Red indicating light above the extension control is lit.	
*4	Unlock and close breakers for EF-V-4 and V-5 on 1C E.S. Valves M.C.C.	Examinee directs an AO to unlock and close breakers for EF-V-4 and EF-V-5 on 1C ES Valves MCC.	
*5	Open EF-V-4 and EF-V-5	___ EF-V-4 open ___ EF-V-5 open by depressing the red OPEN pushbuttons on CC for each valve and observing the green CLOSED pushbutton de-energizing, and the red OPEN pushbutton lit.	
*6	Open RR-V-1A or RR-V-1B (if not already open)	RR-V-1A or RR-V-1B is opened by observing red OPEN indicator for the associated valve is lit.	
*7	Close CO-V-13	CO-V-13 is located on CC, the green CLOSE pushbutton is depressed and the red OPEN indicating light de-energizes, and .the green CLOSE indicating light is lit,	

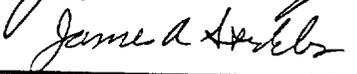
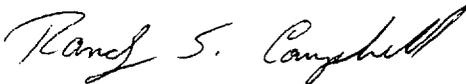
#	STEP	STANDARD	S/U
8	Close CO-V-14A and CO-V-14B	CO-V-14A and CO-V-14B are located on CC, the green CLOSE pushbuttons are depressed, the red OPEN indicating light de-energizes, and the green CLOSE indicating light is lit,	
CUE: After Examinee completes performance of "Shifting emergency feedwater suction to the Reactor Building River water supply", inform him/her that the task is complete.			

END TASK

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.f

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: RESPOND TO A FAILURE OF LPI

TASK NUMBER: 000C240501 TIF: 3.85

K/A REFERENCE: System: E08
K/A: EA1.3
Rating (RO/SRO): 3.3/3.8

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: LPI flow is established to both trains with total flow between 3000 gpm and 3300 gpm, minimum flow in either train is not less than 1000 gpm.

APPROXIMATE COMPLETION TIME: 20 minutes

TIME-CRITICAL TASK COMPLETION TIME: N/A

REQUIRED TOOLS OR MATERIALS: ATP 1210-7, Large Break LOCA Cooldown
ATP 1210-10, Abnormal Transients Rules, Guides and Graphs

REFERENCES: ATP 1210-7, Large Break LOCA Cooldown
ATP 1210-10, Abnormal Transients Rules, Guides and Graphs

ALTERNATE PATH JPM? YES

SIMULATOR SETUP:

INITIALIZATION:	Reset to IC 16. Insert malfunction TH06 at 25%. Perform IMAs of 1210-1 and 1210-2.
EVENT TRIGGERS:	EVENT 1 DHR14 OPEN opens DH-V-38A and DH-V-38B
MALFUNCTIONS:	N/A
REMOTE FUNCTIONS:	N/A
OVERRIDES:	03A6S34-ZDICSDHP1B(2) STR OFF immediately 03A6S34-ZDICSDHP1B(3) NAT OFF immediately
MONITOR:	N/A

READ TO STUDENT

When I tell you to begin, you are to **RESPOND TO PLANT CONDITIONS**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

You are the only CRO in the Control Room.

The reactor tripped due to a Loss of Coolant Accident.

The Immediate Manual Actions of 1210-1 and 1210-2 have been completed. Follow-up actions of 1210-2 are in progress.

INITIATING CUE:

The Control Room Supervisor directs you perform the Immediate Manual Actions of 1210-7, Large Break LOCA Cooldown

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **RESPOND TO PLANT CONDITIONS**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

You are the only CRO in the Control Room.

The reactor tripped due to a Loss of Coolant Accident.

The Immediate Manual Actions of 1210-1 and 1210-2 have been completed. Follow-up actions of 1210-2 are in progress.

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
<p>CUE: As the Control Room Supervisor, state the following: "Based on the fact that Core Flood Tanks are emptying, we are transitioning to 1210-7. Perform the Immediate Manual Actions of 1210-7."</p>			
1	Verify both trains of HPI are injecting flow into the RCS.	<p>Verifies both trains of HPI are operating by observing</p> <p>HPI pumps operating</p> <p>Flow meters on Console Right</p>	
<p>NOTE: Alternate path starts here. LPI will not be in operation.</p>			
*2	Verify both LPI trains operating. If not, refer to 1210-10 Section 2.18 "Actions for failure of LPI".	<p>Verifies both trains of LPI are NOT operating by observing</p> <p>LPI pumps operating</p> <p>Flow meters FI-802A on Console Center, and FI-803A on Console Right</p> <p>Examinee identifies that DH-P-1B is not operating.</p>	
3	Attempt to start DH-P-1B.	Examinee attempts to start DH-P-1B, and identifies that the pump would not start.	
<p>CUE: IF EXAMINEE RECOMMENDS PERFORMING THE ACTIONS OF 1210-10, CONCUR AND PROVIDE A COPY OF 1210-10. DIRECT THE EXAMINEE TO PERFORM SECTION 2.18. (THE CRS WOULD PROVIDE THIS SPECIFIC DIRECTION SINCE IT IS SPECIFICALLY IDENTIFIED IN 1210-7)</p>			
<p>Note: Steps 4 and 5 MUST be performed in order to establish control of ESAS equipment. They may be performed in any order.</p>			
<p>CUE: WHEN PERMISSION IS REQUESTED TO BYPASS ESAS, STATE "YOU HAVE PERMISSION TO BYPASS ESAS SIGNALS."</p>			

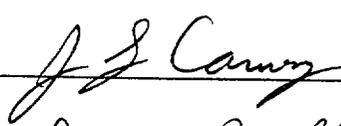
#	STEP	STANDARD	S/U
*4	<p>Establish control of ES components for Train A ON CONSOLE CENTER by performing the following:</p> <p>1600 psig ESAS, presses all 3 of the following BYPASS switches:</p> <p>RC1A RC2A RC 3A</p> <p>500 psig ESAS, presses all 3 of the following BYPASS switches:</p> <p>RC4A RC5A RC6A</p> <p>4psig RB, pressed ONLY any 2 of the following DEFEAT switches:</p> <p>RB1A RB2A RB3A</p>	<p>Depresses all 3 1600 psig BYPASS switches, and all 3 channels indicate BYPASSED.</p> <p>Depresses all 3 1600 psig BYPASS switches, and all 3 channels indicate BYPASSED.</p> <p>Depresses ONLY 2 of the 3 DEFEAT switches, and 2 of the 3 channels indicate DEFEATED.</p>	
*5	<p>Establish control of ES components for Train B ON CONSOLE CENTER by performing the following:</p> <p>1600 psig ESAS, presses all 3 of the following BYPASS switches:</p> <p>RC1B RC2B RC 3B</p> <p>500 psig ESAS, presses all 3 of the following BYPASS switches:</p> <p>RC4B RC5B RC6B</p> <p>4psig RB, pressed ONLY any 2 of the following DEFEAT switches:</p> <p>RB1B RB2B RB3B</p>	<p>Depresses all 3 1600 psig BYPASS switches, and all 3 channels indicate BYPASSED.</p> <p>Depresses all 3 1600 psig BYPASS switches, and all 3 channels indicate BYPASSED.</p> <p>Depresses ONLY 2 of the 3 DEFEAT switches, and 2 of the 3 channels indicate DEFEATED.</p>	

#	STEP	STANDARD	S/U
<p>NOTE: Examinee may recognize that Train A LPI flow exceeds 3300 gpm prior to continuing with actions in 1210-10. The examinee may desire to throttle flow to less than 3300 gpm for equipment protection. This direction is provided in the follow-up actions of 1210-7, and is also identified as a limit in 1210-10, section 2.18. Train A of ESAS ONLY is required to be bypassed to accomplish this task. This action is NOT required to successfully complete this JPM at this time. The guidance for maximizing flow without exceeding 3300 gpm does become critical when procedurally directed.</p> <p>CUE: IF THE EXAMINEE DESIRES TO REDUCE TRAIN A FLOW BELOW 3300 GPM, THEN PROVIDE THE FOLLOWING DIRECTION AS CRS, "MAXIMIZE LPI FLOW WHILE MAINTAINING FLOW LESS THAN 3300 GPM"</p>			
6	Throttle LPI flow to the A train by using the CLOSE and STOP pushbuttons for DH-V-4A.	Examinee throttles DH-V-4A while observing FI-802A and establishes 1000 gpm to 3300 gpm on Train A LPI as indicated on FI-802A. N/A this step if not performed.	
*7	<p>IF One LPI PUMP fails <u>and</u> all other LPI equipment is operable;</p> <p style="text-align: center;">OR</p> <p>IF DH-V-6A or B fails to open and all other equipment is operable;</p> <p>THEN perform the following:</p> <p>Close DH-V-4A or B in the IDLE LPI train,</p> <p style="text-align: center;">OR</p> <p>Secure the LPI pump in the affected train if DH-V-6A/B would not open.</p>	<p>Closes DH-V-4B by pushing the CLOSE pushbutton/indication.</p> <p>The valve will travel to the closed position, as evidenced by the red CLOSED indication on, and the green closed indication off.</p>	
8	IF DH-V-38A or B inaccessible, then go to step 2.18.2.	<p>DH-V-38A/B are accessible in this condition. RB sump recirculation has not started, and radiation levels would not prohibit access to DH-V-38A or B.</p> <p>CUE: If accessibility condition is requested, state the following as CRS: "The GRCS has reported that the entire AUX Building is accessible at this time."</p>	
*9	Open DH-V-38A and DH-V-38B. (Examinee should contact an AO to perform this action.)	ICO CUE: When directed, open DH-V-38A and DH-V-38B by activating Event Trigger 1. When DH-V-38A and DH-V-38B are open, report the action complete to the Control Room.	
*10	Balance the flow between the two trains while maximizing LPI flow (total < 3300 gpm) using the CLOSE, STOP and OPEN pushbuttons for DH-V-4A and DH-V-4B.	Examinee balances flow between the trains, establishing 3000 to 3300 gpm TOTAL flow as indicated on FI-802A and FI-803A. Minimum flow to any one train is 1000 gpm in order to meet balance requirements.	
END TASK			

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.1.g

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: ENERGIZE THE REACTOR PROTECTION SYSTEM

TASK NUMBER: 0120010101 TIF: 3.08

K/A REFERENCE: System: 012
K/A: A4.04
Rating (RO/SRO): 3.3/3.3

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: "D" RPS channel is re-energized, subsystem trip relay is re-energized, and the channel is not in manual bypass.

APPROXIMATE COMPLETION TIME: 7 minutes

TIME-CRITICAL TASK COMPLETION TIME: n/a minutes

REQUIRED TOOLS OR MATERIALS: Copy of 1107-2B, Section 3.7, signed off up to 3.7.7, "Restoring VBD Loads"

REFERENCES: 1107-2B, 120 Volt Vital Electrical System

ALTERNATE PATH JPM? NO

SIMULATOR SETUP:

INITIALIZATION: IC-17,

Trip CB3, CB4 and the F Trip by momentarily placing protective subsystem 1,2 switches to trip (D RPS Cabinet)

Open (2) RPS DC Power Supplies (Bakelite tag)

Open 1 System AC Supply (Bakelite Tag)

Select OFF on PWR Supplies:

(2) NI-4 (Auxiliary Power Supply and Detector Power Supply)

(1) NI-8 (Detector Power Supply) and

(1) Contact Monitor (Contact Monitor Power Supply)

Place the "D" RPS channel in Manual Bypass

Remove the Shutdown Bypass Key if installed.

EVENT TRIGGERS: N/A

MALFUNCTIONS: N/A

REMOTE FUNCTIONS: RDR81 3 and 4, to reset CB3 and CB4.

OVERRIDES: N/A

MONITOR: N/A

READ TO STUDENT

When I tell you to begin, you are to **RESET THE 'D' RPS CABINET**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The Reactor is at 100% power.

During the last shift, a planned power outage of VBD occurred.

VBD has been restored.

Section 3.7 has been completed up to Step 3.7.7 "Restoring VBD Loads" section of OP 1107-2B.

MAP alarms are as indicated.

There is a CRO available in the Relay Room.

INITIATING CUE:

The Control Room Supervisor directs you to reset the "D" RPS channel per Section 3.7.7 of 1107-2B.

ARE THERE ANY QUESTIONS?

TIME CRITICAL

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **RESET THE 'D' RPS CABINET**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task.

INITIAL CONDITIONS:

The Reactor is at 100% power.

During the last shift, a planned power outage of VBD occurred.

VBD has been restored.

Section 3.7 has been completed up to Step 3.7.7 "Restoring VBD Loads" section of OP 1107-2B.

MAP alarms are as indicated.

There is a CRO available in the Relay Room.

INITIATING CUE:

The Control Room Supervisor directs you to reset the "D" RPS channel per Section 3.7.7 of 1107-2B.

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
NOTE: Label designations are included in parentheses where there are differences noted between procedure descriptions.			
1	Verify the power AVAILABLE light is on.	Power Available light is located on the inside left cabinet at the upper left of the cabinet and is verified ON.	
2	Verify closed the system AC power breaker (1 set of 2 switches) to the right of the available light.	The System AC Power breakers are located on the inside left cabinet at the upper left of the cabinet just to the right of the Power available light and are verified closed (ON).	
3	Verify closed the SYSTEM FAN breakers (1 set of 2 switches).	Both system fan breakers are located on the inside top of the left cabinet and are verified closed (ON).	
*4	Close the RPS DC POWER SUPPLY BREAKERS (1 in each cabinet - per the Bakelite tags, located between the DC volt and ammeters).	The DC power supply breakers are located on the inside left and right cabinets and are closed by pushing the switches up (ON). CUE: No change in conditions in the cabinet are observed at this time.	
*5	Close the AC SUPPLY breaker (in left cabinet per the Bakelite tag).	The AC supply breaker is located on the inside left cabinet and is closed by pushing the switch up. The RPS DC Power Supply Breaker for the left and right cabinets will energize. MAP G-1-2 Resets and MAP G-3-1 Alarms. NOTE: Have EXAMINEE reset MAP alarms personally.	
*6	Close DC Hold Trip Breakers CB3 and CB4 locally by depressing the close pushbutton.	Contact the CRO in the relay room to close the DC Hold Trip Breakers CB3 and CB4 by pressing the CLOSE pushbutton. NOTE: When CRO is contacted to close CB-3 and CB-4, ICO will reset "DC BREAKER RESET" on RDR81 #3 & #4. MAP G-1-3 will reset. CUE: Notify the control room that CB3 and CB4 have been CLOSED.	

#	STEP	STANDARD	S/U
*7	Reset the UV relay target for the DC trip breakers CB3 and CB4.	Contact the CRO to reset the UV relay target for DC trip breakers CB3 and CB4. CUE: Inform the Control Room that the UV relay target for CB3 and CB4 have been reset	
*8	Reset the main electronic trips by pressing the "FAULT RESET" on the CRD Diamond Panel. Hold the "Fault Reset" for several seconds to avoid getting a "Motor Fault".	FAULT RESET pushbutton is located and depressed to reset the "F" electronic trip, white light illuminates while FAULT RESET pushbutton is depressed, Programmer Lamp Fault "B" de-energizes, and the FAULT RESET pushbutton is released.	
*9	Energize and reset NI-8 and verify NI-8 is operable.	NI-8 Detector Power Supply (DETECTOR P.S. NI-8) is located, the toggle switch is placed in the "ON" position and the RESET toggle is depressed.	
*10	Energize and reset NI-4 Auxiliary power supply.	NI-4 Auxiliary Power Supply (P.S. NI-4) is located, the toggle switch is placed in the "ON" position and the RESET toggle is depressed.	
*11	Energize and reset NI-4 DETECTOR POWER SUPPLY.	NI-4 Detector Power Supply (DETECTOR P.S. NI-4) is located, the toggle switch is placed in the "ON" position and the RESET toggle is depressed. CRD OUTMOTION INHIBIT (MAP G-2-3) alarms and resets NI DET PWR SUPPLY FAULT (MAP G-2-4) resets.	
*12	Energize and reset the CONTACT MONITOR POWER SUPPLY.	Contact Monitor Power Supply (CONTACT MONITOR P.S.) is located, the toggle switch is placed in the "ON" position and the RESET toggle is depressed. Contact Monitor power supply indicator moves upscale and the Contact Monitor Contact State lights will dim.	

#	STEP	STANDARD	S/U
*13	Reset "D" RPS tripped bistables, as appropriate.	<p>The following bistables are reset:</p> <p>NOTE: To reset the bistable, the output state must be reset prior to the output memory being reset.</p> <p>SUR ROD/WD INHIBIT (output memory) will dim</p> <p>FLUX/PN TRIP (output state/memory) will dim</p> <p>POWER IMBALANCE FLOW (output state/memory) will dim</p> <p>FWP Trip Bypass (output state/memory) will dim</p> <p>HIGH FLUX TRIP (output state/memory) will dim</p> <p>HIGH PRESS TRIP (output state/memory) will dim</p> <p>LO PRESS TRIP (output state/memory) will dim</p> <p>PRESS/TEMP TRIP (output state/memory) will dim</p> <p>HI TEMP TRIP (output state/memory) will dim</p> <p>NOTE: Turb Trip Bypass, FWP Trip Bypass, Flux > 10% and Shutdown Bypass will NOT reset at normal pwr ops.</p>	
*14	Reset RB Pressure Contact Module. (Labeled HIGH BLDG PRESS. RESET)	The HIGH BLDG PRESS RESET "TEST RESET" toggle is depressed. The INPUT STATE lights for TEST TRIP and TEST RESET will go off.	
*15	Verify all applicable Bistables are reset in "D" RPS cabinet.	All applicable Bistables are verified reset in the "D" RPS cabinet by observing applicable Output state/Output memory status indications are dim.	
16	Remove the "D" RPS Channel from Manual Bypass.	<p>The Reactor Trip Module is located in the right cabinet. The Manual Bypass key is rotated counterclockwise and the key is removed.</p> <p>The Subsystem Trip lamp will go dim.</p> <p>The Channel Bypass light at the top of the RPS channel will dim.</p> <p>MAP G-1-2 will clear.</p>	

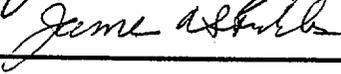
#	STEP	STANDARD	S/U
17	If applicable, restore ICS to FULL AUTO per 1105-4.	EXAMINEE may ask if it is desired to place ICS in FULL AUTO. This is not necessary for this task.	
CUE: After Examinee completes restoring the "D" RPS to normal, inform him/her that the task is complete.			

END TASK

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.2.a

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: MANUALLY OPERATE R.B. EMERGENCY COOLER PRESSURE CONTROL (RR-V-6)

TASK NUMBER: 0228000504 TIF: 4.3

K/A REFERENCE: System: 022
K/A: A1.04
Rating (RO/SRO): 3.2/3.3

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: Local Manual control of RR-V-6 has been established.

APPROXIMATE COMPLETION TIME: 5 minutes

TIME-CRITICAL TASK COMPLETION TIME: n/a minutes

REQUIRED TOOLS OR MATERIALS: None

REFERENCES: 1104-38 Enclosure 6 Operator Aids for RR-V-6

ALTERNATE PATH JPM? NO

SIMULATOR SETUP:

INITIALIZATION:	N/A
EVENT TRIGGERS:	N/A
MALFUNCTIONS:	N/A
REMOTE FUNCTIONS:	N/A
OVERRIDES:	N/A
MONITOR:	N/A

READ TO STUDENT

When I tell you to begin, you are to **RESPOND TO A LOSS OF INSTRUMENT AIR**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task. **DO NOT OPERATE OR MANIPULATE ANY PIECE OF PLANT EQUIPMENT. ALL ACTIONS ARE TO BE SIMULATED.**

INITIAL CONDITIONS:

The Plant has experienced a LOCA that resulted in a Reactor Trip, 1600 psig RCS and 4 psig RB ESAS actuation.

After a considerable amount of time, RR-V-6 failed open due to loss of Instrument Air and 2 hour air system supplies causing R.B. Emergency Cooling Coil pressure to drop below the limit of 55 – 60 psig.

INITIATING CUE:

The Control Room Supervisor directs you to establish communications with the control room and take manual control of RR-V-6.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: NO

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **RESPOND TO A LOSS OF INSTRUMENT AIR**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task. **DO NOT OPERATE OR MANIPULATE ANY PIECE OF PLANT EQUIPMENT. ALL ACTIONS ARE TO BE SIMULATED.**

INITIAL CONDITIONS:

The Plant has experienced a LOCA that resulted in a Reactor Trip, 1600 psig RCS and 4 psig RB ESAS actuation.

After a considerable amount of time, RR-V-6 failed open due to loss of Instrument Air and 2 hour air system supplies causing R.B. Emergency Cooling Coil pressure to drop below the limit of 55 – 60 psig.

INITIATING CUE:

The Control Room Supervisor directs you to establish communications with the control room and take manual control of RR-V-6.

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
CUE: DIRECT THE EXAMINEE TO GO TO RR-V-6 AND ESTABLISH COMMUNICATIONS WITH THE CONTROL ROOM.			
1	Examinee proceeds to RR-V-6 in the Intermediate Building basement in room that contains NS-FI-76 and establishes communications with the control room.	RR-V-6 is located in the Intermediate Building. CUE: Inform the EXAMINEE that communications are established. Direct the examinee to take local handwheel control of RR-V-6.	
*2	Utilizing the posted Operator Aid at RR-V-6 the EXAMINEE performs the following: Fail open RR-V-6 by placing RR-V-2825 to vent. RR-V-6 should fail open to 64 degrees as indicated by the pointer on the valve stem.	RR-V-6 fails open following placement of RR-V-2825 to the vent position by rotating clockwise 180°. CUE: Inform EXAMINEE that RR-V-2825 has been positioned to the vent position.	
*3	Open the cylinder bypass valve	The cylinder bypass valve is opened by rotating in the counterclockwise direction. CUE: Inform EXAMINEE that the cylinder bypass valve is open.	
*4	Remove the tie wire between the manual coupling lever and the right stop stud on the manual operator.	The wire has been removed. CUE: Inform EXAMINEE that the wire has been removed.	
*5	Hand crank the handwheel until the coupling lever lines up with the slot in the engaging coupling on the valve stem.	The coupling lever lines up with the slot in the engaging coupling on the valve stem. CUE: Inform EXAMINEE that the coupling lever lines up with the slot in the engaging coupling on the valve stem. NOTE: When RR-V-6 is failed open (Fails open to 64 degrees), the collar will rotate and expose the slot in the engaging coupling.	

#	STEP	STANDARD	S/U
*6	Push the coupling lever into the slot in the engaging coupling.	The coupling lever is inserted into the slot in the engaging coupling. CUE: Inform the EXAMINEE that the coupling lever is inserted into the slot in the engaging coupling.	
*7	Remove the pin from the air actuator stem, jockey the handwheel as necessary.	The pin is removed.	
*8	Hand crank the valve to the desired position.	Examinee contacts Control Room to determine desired position for RR-V-6. CUE: When requested, direct the examinee to establish 55 psig to 60 psig using RR-PI-7. As the examinee closes the valve, provide verbal cues to indicate pressure is rising. Examinee should stop when you indicate pressure is between 55 psig and 60 psig. Examinee positions RR-V-6 as directed by the Control Room to control Emergency Cooler pressure using RR-PI-7 (located above this valve). Valve must be operated in the CLOSED direction in order to accomplish this.	
CUE: After Examinee demonstrates control of RR-V-6, inform him/her that the task is complete.			

END TASK

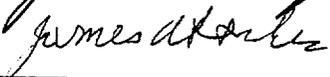
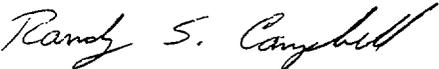
JPM CHANGE HISTORY PAGE

REVISION	DATE	REFERENCE TITLE	DESCRIPTION (Include AI # if Appropriate)
0	06/01/99	NA	Original.
1	06/03/2001	NA	Reformatted JPM, updated material to match existing procedure, included reference to 1104-38.

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.2.b

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

READ TO STUDENT

When I tell you to begin, you are to **PERFORM IMMEDIATE MANUAL ACTIONS FOR 1202-9A AS DIRECTED BY THE CONTROL ROOM OPERATOR**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task. **DO NOT OPERATE OR MANIPULATE ANY PIECE OF PLANT EQUIPMENT. ALL ACTIONS ARE TO BE SIMULATED.**

INITIAL CONDITIONS:

The plant is at 100% power, steady-state, nothing out of service.

A loss of the entire "A" DC distribution system has just occurred, and EP 1202-9A has been implemented.

EG-Y-1A was not operating prior to the loss of the "A" DC system.

INITIATING CUE:

PROVIDE COPY OF 1202-9A TO EXAMINEE, AND DIRECT THEM TO PERFORM IMMEDIATE MANUAL ACTION STEPS 1.B AND 1.D. IF EXAMINEE REQUESTS KEY 22, INFORM THEM THAT KEY 22 WILL BE SIMULATED.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: No

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **PERFORM IMMEDIATE MANUAL ACTIONS FOR 1202-9A AS DIRECTED BY THE CONTROL ROOM OPERATOR**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task. **DO NOT OPERATE OR MANIPULATE ANY PIECE OF PLANT EQUIPMENT. ALL ACTIONS ARE TO BE SIMULATED.**

INITIAL CONDITIONS:

The plant is at 100% power, steady-state, nothing out of service.

A loss of the entire "A" DC distribution system has just occurred, and EP 1202-9A has been implemented.

EG-Y-1A was not operating prior to the loss of the "A" DC system.

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
<p>CUE: AS CONTROL ROOM SUPERVISOR, PROVIDE A COPY OF 1202-9A TO EXAMINEE, AND DIRECT THEM TO PERFORM THE IMMEDIATE MANUAL ACTION STEPS 1.B AND 1.D.</p> <p>NOTE: IF AT ANY TIME THE EXAMINEE REQUESTS KEY 22, INFORM THEM THAT KEY 22 WILL BE SIMULATED.</p>			
*1	Close EG-V-15A to allow lube oil booster pump to refill and starting air receiver to re-pressurize.	<p>EG-V-15A is located and is closed by rotating the handle 90°</p> <p>CUE: Inform EXAMINEE that EG-V-15A is closed if the EXAMINEE correctly locates EG-V-15A and demonstrates how to properly close the valve.</p>	
2	Verify starting air pressure gauges (EG-PI-535A/B labeled "Starting Air Pressure" on the Engine Mounted Instrument Panel) decrease to 0 psig.	<p>EG-PI-535A/B labeled "Starting Air Pressure" on the Engine Mounted Instrument Panel is located and pressure is verified decreasing to 0 psig.</p> <p>CUE: Provide indications to EXAMINEE that EG-PI-535A/B pressure is decreasing to 0 psig.</p> <p>NOTE: There are 2 "Starting Air Pressure" gauges located on the EMIP. One is labeled EG-PI-535A and one is labeled EG-PI-535B.</p>	
*3	Then trip EG-Y-1A fuel rack.	<p>EG-Y-1A fuel rack trip pushbutton is located and the pushbutton is depressed.</p> <p>CUE: Inform EXAMINEE that the fuel rack is tripped if the EXAMINEE correctly locates the fuel rack and demonstrates the proper method of tripping the fuel rack.</p>	

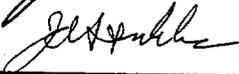
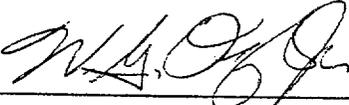
#	STEP	STANDARD	S/U
*4	<p>Go to the Alterrex Cabinet on the 322' elevation south end of the turbine building in the 4KV switchgear room with controlled key #22 to transfer the "Excitation Cntrl Alt Power Supply" to the "B" side DC power.</p>	<p>Obtain Key #22 from the controlled key locker in the control room.</p> <p>CUE: INFORM EXAMINEE THAT CONTROLLED KEY #22 WILL BE SIMULATED.</p> <p>NOTE: DO NOT ALLOW the EXAMINEE to open the Alterrex Cabinet. Have him/her describe the actions while viewing through the grate screen at the back of the cabinet.</p> <p>Locate the Alterrex Cabinet in the 4KV switchgear room on the back side of the Alterrex panel in the left most cabinet. The switch can be seen through the grate in the upper left.</p> <p>Transfer the "Excitation Cntrl Alt Power Supply" from "A 125 VDC Normal" to "B 125 VDC Alternate" power by rotating the switch in the clockwise direction.</p> <p>CUE: Inform the EXAMINEE that the switch has been transferred to the "B" DC power position if he/she properly locates and describes the actions required</p>	
<p>CUE: After Examinee completes transfer of "Excitation Cntrl Alt Power Supply" to the "B" side DC power, inform him/her that the task is complete.</p>			

END TASK

TMI-1 OPERATOR TRAINING

JOB PERFORMANCE MEASURE

B.2.c

	SIGNATURE	DATE
Submitted By:		6-3-01
Validated By:		6-3-01
Reviewed by: Lead Exam Developer		6/3/01
Approved By: Facility Representative		6-3-01

TASK TITLE: RESPOND TO A LOSS OF INSTRUMENT AIR (MANUAL CONTROL OF MU-V-3)

TASK NUMBER: 0000650504 TIF: 3.94

K/A REFERENCE: System: 004
K/A: A2.11
Rating (RO/SRO): 3.6/4.2

POSITION: SRO RO NLO

EVALUATION METHOD: PERFORM SIMULATE

EVALUATION LOCATION: SIMULATOR IN-PLANT CONTROL ROOM OTHER

TASK STANDARDS: Local manual control of MU-V-3 has been established.

APPROXIMATE COMPLETION TIME: 5 minutes

TIME-CRITICAL TASK COMPLETION TIME: n/a minutes

REQUIRED TOOLS OR MATERIALS: Flashlight.

REFERENCES: EP 1202-36 Loss of Instrument Air
OP 1104-2 Makeup and Purification System

ALTERNATE PATH JPM? NO

SIMULATOR SETUP:

INITIALIZATION: NONE

EVENT TRIGGERS: N/A

MALFUNCTIONS: N/A

REMOTE FUNCTIONS: N/A

OVERRIDES: N/A

MONITOR: N/A

READ TO STUDENT

When I tell you to begin, you are to **TAKE MANUAL CONTROL OF MU-V-3 AS DIRECTED BY THE CONTROL ROOM OPERATOR**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task. **DO NOT OPERATE OR MANIPULATE ANY PIECE OF PLANT EQUIPMENT. ALL ACTIONS ARE TO BE SIMULATED.**

INITIAL CONDITIONS:

The Reactor is critical

Reactor Coolant Pumps are operating.

Instrument Air pressure in the Auxiliary Building is decaying.

INITIATING CUE:

The Control Room Operator directs you to go to MU-V-3 and establish communication with the Control Room.

ARE THERE ANY QUESTIONS?

TIME CRITICAL: No

JPM INSTRUCTION SHEET

DIRECTIONS TO STUDENT:

When I tell you to begin, you are to **TAKE MANUAL CONTROL OF MU-V-3 AS DIRECTED BY THE CONTROL ROOM OPERATOR**. Before you start, I will describe the general plant conditions, state the initiating cues, and answer any questions. Perform procedure steps and make notifications as if you were actually performing the task. **DO NOT OPERATE OR MANIPULATE ANY PIECE OF PLANT EQUIPMENT. ALL ACTIONS ARE TO BE SIMULATED.**

INITIAL CONDITIONS:

The Reactor is critical

Reactor Coolant Pumps are operating.

Instrument Air pressure in the Auxiliary Building is decaying.

INITIATING CUE:

The Control Room Operator directs you to go to MU-V-3 and establish communication with the Control Room.

*Denotes Critical Elements
#Denotes Sequential Step

#	STEP	STANDARD	S/U
1	Establish Communications with the Control Room.	<p>Communications is established with the Control Room.</p> <p>CUE: Inform the Examinee that Communications have been established.</p>	
CUE: As the CRO, direct the Examinee to take Manual Control of MU-V-3.			
*2	Isolate IA to MU-V-3 by closing IA-V-837 or IA-V-2363 & 2365	<p>IA-V-837 is located and isolated by rotating IA-V-837 handwheel in the clockwise direction.</p> <p>CUE: Inform the EXAMINEE that IA-V-837 is isolated if EXAMINEE describes the proper method of isolation.</p> <p>NOTE: IA-V-837 is located 6" below platform below MU-V-3.</p> <p>OR</p> <p>IA-V-2363 & 2365 are located and isolated by rotating IA-V-2363 & 2365 handwheel in the clockwise direction.</p> <p>CUE: Inform the EXAMINEE that IA-V-2363 & 2365 are isolated if EXAMINEE describes the proper method of isolation.</p> <p>NOTE: IA-V-2363 & IA-V-2365 are located above the mezzanine south end near penetration #308 (Just to the right of MU-V-3).</p>	
*3	Align holes in MU-V-3 handwheel assembly with the hole at the top of the valve stem and insert pin.	<p>MU-V-3 handwheel assembly is adjusted to align with the hole at the top of the valve stem.</p> <p>CUE: Inform the EXAMINEE that the holes are aligned.</p> <p>Pin is inserted in hole</p> <p>CUE: Inform the EXAMINEE that the Pin is inserted in the hole.</p>	

#	STEP	STANDARD	S/U
*4	OPEN IA-V-2832 (actuator equalizing valve)	<p>IA-V-2832 is located and rotated counterclockwise to the open position.</p> <p>CUE: Inform the EXAMINEE that IA-V-2832 is opened if EXAMINEE describes the proper method of opening valve.</p> <p>NOTE: IA-V-2832 is located above platform near MU-V-3.</p>	
5	Use handwheel to operate MU-V-3 as directed by Control Room Personnel.	The Control Room is notified that manual control of MU-V-3 is established.	
<p>CUE: After Examinee completes taking manual control of MU-V-3, inform him/her that the task is complete.</p>			

END TASK

