

FINAL SUBMITTAL

FARLEY INITIAL EXAM
50-348 & 50-364/2001-301

JULY 23 - 27, 2001

FINAL AS-GIVEN JPMs FOR EACH

WALK-THROUGH TEST

& OUTLINES

Facility: Farley
Exam Level: SRO(I)

Date of Examination: 7/23-26/01
Operating Test No.: _____

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. Perform the Recovery Actions in response of the Rod Control System for a Misaligned Rod CRO-033B	DS	1
b. Establish letdown as Required in Response to a Spurious Safety Injection CRO-343C Modified	MAS	2
c. Perform required actions for Cold Leg Recirc CRO-333D	DAS	4
d. CTMT Mini-Purge CRO-NEW	NAS	5
e. Removing a Diesel Generator from Operation CRO-NEW	NAS	6
f. Perform required actions for NIS-PR failure CRO-127A	DS	7
g. Return SW to Normal Ops CRO-292B	LDS	8

B.2 Facility Walk-Through

a. Defeat Auto Start of Safeguards Equipment SO-610C	D	2
b. Drain PRT (Using the RCDT Pumps) SO-570	DR	5
c. Rack-in 600V Load Center Breaker SO-324	D	6

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

Facility: <u>Farley</u> Exam Level: <u>SRO(U)</u>	Date of Examination: <u>7/23-26/01</u> Operating Test No.: _____	
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. Perform the Recovery Actions in response of the Rod Control System for a Misaligned Rod CRO-033B	DS	1
b. Establish letdown as Required in Response to a Spurious Safety Injection CRO-343C Modified	MAS	2
c. N/A		
d. CTMT Mini-Purge CRO-NEW	NAS	5
e.		
f.		
g.		
B.2 Facility Walk-Through		
a. Performed the Required Actions to Minimize DC Loads SO-607	MR	6
b. Shift to A SFP cooling loop in operation SO-128	DR	8
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

Facility: Farley
 Exam Level : RO

Date of Examination: 7/23-26/01
 Operating Test No.: _____

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. Perform the Recovery Actions in response of the Rod Control System for a Misaligned Rod CRO-033B	DS	1
b. Establish Letdown As Required In Response To A Spurious Safety Injection CRO-343C Modified	MAS	2
c. Perform required actions for Cold Leg Recirc CRO-333D	DAS	4
d. CTMT Mini-Purge CRO-NEW	NAS	5
e. Removing a Diesel Generator from Operation CRO-NEW	NAS	6
f. Perform required actions for NIS-PR failure CRO-127A	DS	7
g. Return SW to Normal Ops CRO-292B	LDS	8

B.2 Facility Walk-Through

a. Shift Auxiliary Feed Pump Suction to Emergency Supply SO-311	D	4
b. Drain PRT (Using the RCDT Pumps) SO-570	DR	5
c. Rack-in 600V Load Center Breaker SO-324	D	6

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

CRO-033B	
TITLE: Perform The Recovery Actions In Response Of The Rod Control System For A Misaligned Rod	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP <u>X</u>	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS	
EVALUATION LOCATION: <u>X</u> SIMULATOR <u>X</u> CONTROL ROOM ___ PLANT	
PROJECTED TIME: <u>15 MIN</u> SIMULATOR IC NUMBER: <u>JPM IC-2</u>	
(IF APPLICABLE)	
ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: W. D. OLDFIELD 7/30/98
 Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM THE RECOVERY ACTIONS IN RESPONSE OF THE ROD CONTROL SYSTEM FOR A MISALIGNED ROD. The conditions under which this task is to be performed are:

- a. Plant is in Mode 1, ramping from 100% to 15%
- b. The ramp has been stopped at $\approx 70\%$ pwr
- c. Rod H-2 is misaligned
- d. Rod H-2 lift coil fuse was blown and has been replaced
- e. All actions of AOP-19.0 for recovery of the misaligned rod have been completed
- f. Directed by Shift Supervisor to perform Attachment 1 of AOP-19.0

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<p>NOTE: THE FOLLOWING ELEMENT MAY BE SATISFIED BY EXAMINEE LOCATING THE REACTOR OPERATOR'S LOGBOOK AND SIMULATING RECORDING CBD1 STEP COUNTER POSITION.</p>		
<p>_____ START TIME</p>		

1. Record the step counter position for CBD1 in the reactor operator's logbook	Step counter position for rod group CBD1 checked. (CUE: CBD1 step counter reads 202 steps, position value is recorded.)	S / U
*2. Open the lift coil disconnect switches of all but the affected rod in control bank D	Lift coil disconnect switches for rods B-8, H-14, P-8, F-6, F-10, K-10, K-6 opened. (CUE: All disconnect switches operated are in up position.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*3. Adjust misaligned rod to agree with associated group DRPI indication	In-Hold-Out switch to the IN position. (CUE: CBD1 step counter counting down, annunciator FF1 alarms.)	S / U
4. Lower turbine load as misaligned rod is inserted	Tavg - Tref checked. (CUE: Tavg +1°F above Tref.)	S / U
*5. Stop insertion of misaligned rod	Check rod H-2 DRPI. (CUE: Rod H-2 DRPI indicates 198 steps.)	S / U
*6. Close the lift coil disconnect switches on all rods in control bank D	Switches for rods B-8, H-14, P-8, F-6, F-10, K-10, K-6 closed. (CUE: All disconnect switches operated are closed.)	S / U
7. Reset the rod control urgent failure alarm	Rod control urgent failure alarm reset pushbutton depressed. (CUE: Annunciator FF1 not lit.)	S / U
*8. Adjust control bank D group step counters to position recorded in reactor operator logbook	Control bank D step counter adjusted to position recorded in logbook. (CUE: Step counter reads 202.)	S / U

STOP TIME

Terminate when control bank D step counters reset.

* **CRITICAL ELEMENTS:** Critical steps indicated with *.

GENERAL REFERENCES

1. FNP-1-AOP-19.0
2. Technical Specifications
3. K/As: 001A2.03 RO-3.5SRO-4.2
 001A3.05 RO-3.5SRO-3.5
 001A4.06 RO-2.9SRO-3.2
 001A4.14 RO-3.0SRO-3.4

GENERAL TOOLS AND EQUIPMENT

None

COMMENTS

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM THE RECOVERY ACTIONS IN RESPONSE OF THE ROD CONTROL SYSTEM FOR A MISALIGNED ROD. The conditions under which this task is to be performed are:

- a. Plant is in Mode 1, ramping from 100% to 15%
- b. The ramp has been stopped at $\approx 70\%$ pwr
- c. Rod H-2 is misaligned
- d. Rod H-2 lift coil fuse was blown and has been replaced
- e. All actions of AOP-19.0 for recovery of the misaligned rod have been completed
- f. Directed by Shift Supervisor to perform Attachment 1 of AOP-19.0

JOB PERFORMANCE MEASURES

CRO-343C Modified

TITLE: Establish Letdown As Required In Response To A Spurious Safety Injection

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSS

EVALUATION LOCATION: X SIMULATOR X CONTROL ROOM ___ PLANT

PROJECTED TIME: 20 MIN SIMULATOR IC NUMBER: JPM IC-47 (Note 1)

(IF APPLICABLE)

ALTERNATE PATH X TIME CRITICAL ___ PRA ___

NOTE 1: PCV-145 remains shut PK-145 has not affect on PCV-145

Q1E221HV8149C is failed closed

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/>	
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: _____

Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to ESTABLISH LETDOWN AS REQUIRED IN RESPONSE TO A SPURIOUS SAFETY INJECTION. The conditions under which this task is to be performed are:

- a. Plant has experienced a spurious safety injection.
- b. FNP-1-ESP-1.1, SI Termination, is in progress and has been completed through Step 14.4.
- c. Directed by Shift Supervisor to perform Step 15 of FNP-1-ESP-1.1 and establish letdown flow.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ START TIME		
1. Open LTDN LINE PENE RM ISO Q1E21HV8175A and B	SO directed to PRIP to open HV-8175A, B. (CUE: SO reports valves are open.)	S / U
2. Open LTDN LINE CTMT ISO Q1E21HV8152	Handswitch for HV-8152 taken to open. (CUE: Valve position indicator red light is lit/green light is out.)	S / U
3. Open LTDN LINE ISO Q1E21LCV459/460	Handswitch for LCV-459 and LCV-460 taken to open. (CUE: LCV-459 red light is lit/green light is out, LCV-460 red light is lit/green light is out.)	S / U
4. Manually adjust LP LTDN PRESS PK 145 TO 50%	Controller output set to 50% open (CUE: PK 145 indicated 50% open)	S / U
5. Open LTDN ORIF ISO Q1E221HV8149A and B or C	Handswitch for HV-8149A and B or C taken to open. (CUE: For valves taken to open red light is lit/green light is out.) IF 8149C IS	

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
6. Manually adjust letdown pressure to 260 – 450 psig	USED IT WILL NOT OPEN IF 8149B WILL OPEN When PK-145 adjusted. (CUE: Letdown pressure does not change.) Recognize that Normal letdown can not be established.	S / U
Establish Excess Letdown	Start Alternate Path	
*7. Open CCW TO EXC LTDN/RCDT HXS Q1P17HV3095	Valve HV-3095 handswitch taken to open. (CUE: Valve position indicator red light lit/green light is out.)	S / U
*8. Open CCW FROM EXC LTDN / RCDT HXS Q1P17HV3067/3443	Handswitches for valves HV-3067 and HV-3443 taken to open. (CUE: Valve position indicators' red light lit/green light out.)	S / U
9. Adjust EXC LTDN HX DISCH HIK 137 closed	HIK-137 adjusted closed. (CUE: HIK-137 controller indicates zero (0).)	S / U
*10. Open EXC LTDN ISO Q1E21HV8153/8154	Handswitches for valves HV-8153 and HV-8154 taken to open. (CUE: Valve position indicators' red light lit/green light out.)	S / U
11. Align EXC LTDN DIVERT VLV Q1E21HV8143 to VCT	Valve HV-8143 checked in VCT position. (CUE: Valve position indicator light lit for VCT position.)	S / U
CUE: SHIFT SUPERVISOR DIRECTS MAXIMUM ALLOWED EXCESS LETDOWN FLOW.		
*12. Adjust EXC LTDN HX DISCH HIK 137 as required	HIK-137 adjusted; excess letdown heat exchanger outlet temperature remains less than 165°F. (CUE: TI-139 indicates 160°F.)	S / U

STOP TIME

Terminate after Excess Letdown Flow is adjusted to maximum allowed.

* **CRITICAL ELEMENTS:** critical steps indicated by *

GENERAL REFERENCES:

1. ESP-1.1
2. K/As 004A2.07 RO-3.4 SRO-3.7
004A4.05 RO-3.6 SRO-3.1

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to ESTABLISH LETDOWN AS REQUIRED IN RESPONSE TO A SPURIOUS SAFETY INJECTION. The conditions under which this task is to be performed are:

- a. Plant has experienced a spurious safety injection.
- b. FNP-1-ESP-1.1 SI Termination is in progress and has been completed through Step 14.4.
- c. Directed by Shift Supervisor to perform Step 15 of FNP-1-ESP-1.1 and establish letdown flow.

**JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION**

CRO-333D	
TITLE: Perform The Required Actions For Cold Leg Recirculation	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP <u>X</u>	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS ___	
EVALUATION LOCATION: <u>X</u> SIMULATOR <u>X</u> CONTROL ROOM ___ PLANT ___	
PROJECTED TIME: <u>15 MIN</u> SIMULATOR IC NUMBER: <u>JPM IC-38</u>	
(IF APPLICABLE)	
ALTERNATE PATH <u>X</u> TIME CRITICAL ___ PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: _____ W. D. Oldfield 9/29/00
 Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM THE REQUIRED ACTIONS FOR COLD LEG RECIRCULATION. The conditions under which this task is to be performed are:

- a. A safety injection is in progress following a LOCA.
- b. 1B DG is tagged out for annual maintenance.
- c. An electrical fault on the 1G 4160V bus caused the startup xfmr supply bkr to bus 1G to trip open.
- d. 1G 4160V bus remains de-energized.
- e. ESP-1.3, Transfer to Cold Leg Recirculation, has been entered and all steps through Step 5 have been completed.
- f. 1B charging pump is aligned to A train.
- g. Directed by Shift Supervisor to align ECCS for cold leg recirc starting at Step 6 of ESP-1.3.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. Align ECCS for cold leg recirculation: Check containment sump level greater than 2.4 ft. (3.0ft)	LI-3594A and LR-3594B containment sump level indicators verified greater than 2.4ft (3.0 ft) CUE: CTMT sump level is 3.2 ft)	S / U

NOTE: If applicant questions Attachment 1

CUE: the attachment Step 1 and 2

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
2. Verify recirc vlv disconnects closed	Per attachment 1. (CUE: White power available light lit for MOV-8132A, MOV-8886, MOV-8808A, MOV-8808C, MOV-8130A, MOV-8131A, and MOV-8133A. White power available light not lit for MOV-8132B, MOV-8889, MOV-MOV-8884, MOV-8808B, MOV-8130B, MOV-8131B, MOV-8133B.)	S / U
*3. Stop 1A RHR pump	Handswitch for RHR pump 1A placed to stop. (CUE: Amps indicate zero and pump bkr indicator green light lit.)	S / U
NOTE TO EXAMINER: NO VALVE POSITION INDICATOR (VPI) OR "B" TRAIN POWER TO MOV'S 8809B, 8811B, 8812B, 8887B.		
*4. Align RHR for cold leg recirc	Handswitch for RWST to RHR pump 1A MOV-8809A taken to close. (CUE: VPI green light lit/red light out.)	S / U
	Handswitch for CTMT sump to RHR pump 1A taken to open. (CUE: MOV-8811A and 8812A VPI red light lit.)	S / U
	Handswitch for RHR to RCS hot legs XCONN taken to close. (CUE: MOV-8887A VPI green light lit.)	S / U
*5. Start A RHR pump	Handswitch for RHR pump A taken to start. (CUE: Pump amp meter indicates 35 amps, pump bkr indicator red light lit.)	S / U
6. Verify flow stable	FI-605A checked. (CUE: FI-605A stable at 2600 gpm.)	S / U

EVALUATION CHECKLIST**RESULTS:
(CIRCLE)****ELEMENTS:****STANDARDS:**

7. Close RWST to 1B RHR PUMP

8809B has no power and cannot be closed (RNO- checks B Train Chg Pumps not running)

S / U

ALTERNATE PATH STARTS HERE**NOTE TO EXAMINER: NO "B" TRAIN POWER TO MOV'S 8130B, 8131B, 8706B, VPI AVAILABLE.**

8. B chg to A trn suction valves checked open

Position indicator for CHG PMP HDR ISO VLV MOV-8130A & B checked. (CUE: MOV-8130A and MOV-8130B VPI red light lit.)

S / U

*9. Isolate B chg pump suction from B train

Handswitch for CHG PMP SUCTION HDR ISO VLV 8131A taken to close. (CUE: VPI green light lit.)

S / U

*10. Align 1A RHR HX to charging pump suction MOV-8706A

Handswitch for 1A RHR HX TO CHG PUMP SUCT taken to open. (CUE: MOV-8706A VPI red light lit/green light out.)

S / U

11. Verify VCT level is > 5%

LI-112 and LI-115 are checked. (CUE: LI-115/112 indicates 40% level.)

S / U

NOTE TO EXAMINER: IF EXAMINEE OBSERVES CHG PUMP AMPS - CUE: A CHG PUMP AMPS 170 AND STABLE.**NOTE TO EXAMINER: NO VPI OR "B" TRAIN POWER TO MOV'S LCV-115D, 8885, FI-940 INDICATES 0 GPM FLOW.**

*12. Close RWST to charging pump header valves

Handswitch for RWST TO CHG PMP HDR LCV-115B taken to close. (CUE: LCV-115B VPI green light lit/red light out.)

S / U

13. Verify B train CHG PUMP stopped

B Train has no power and is therefore stopped.

S / U

NOTE TO EXAMINER: NO "B" TRAIN POWER TO MOV'S 8132B, 8133B, VPI AVAILABLE.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
14. Check chg pump to A train discharge valves	Position indication for CHG PMP DISCH HDR MOV-8132A & B checked. (CUE: MOV-8132A and MOV-8132B VPI red light lit.)	S / U
*15. Isolate B charging pump discharge to B train	Handswitch for CHG PMP DISCH HDR MOV-8133A taken to close. (CUE: MOV-8133A VPI green light lit.)	S / U
16. Verify SI flow stable	Flow checked on FI-943, 940, HHSI Flow A (B) train recirc flow and FI-605A/605B RHR HDR flow. (CUE: FI-943 stable at 600 gpm. FI-940 at zero, FI-605B at zero. FI-605A stable at 2600 gpm.)	S / U

STOP TIME

Terminate JPM after SI flow verified stable.

* **CRITICAL ELEMENTS:** Steps with * indicates critical elements

GENERAL REFERENCES:

1. EEP-1.0
2. ESP-1.3
3. K/A 011 EA1.11 RO-4.2 SRO-4.2

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM THE REQUIRED ACTIONS FOR COLD LEG RECIRCULATION. The conditions under which this task is to be performed are:

- a. A safety injection is in progress following a LOCA.
- b. 1B DG is tagged out for annual maintenance.
- c. An electrical fault on the 1G 4160V bus caused the startup xfmr supply bkr to bus 1G to trip open.
- d. 1G 4160V bus remains de-energized.
- e. ESP-1.3, Transfer to Cold Leg Recirculation, has been entered and all steps through Step 5 have been completed.
- f. 1B chg pump is aligned to A train.
- g. Directed by Shift Supervisor to align ECCS for cold leg recirc starting at Step 6 of ESP-1.3.

JOB PERFORMANCE MEASURES

CRO-NEW

TITLE: Restore CTMT Mini-Purge Following a Hi Hi Radiation Signal

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT ___ LRP ___

ACCEPTABLE EVALUATION METHOD: X PERFORM ___ SIMULATE ___ DISCUSS

EVALUATION LOCATION: X SIMULATOR ___ CONTROL ROOM ___ PLANT

PROJECTED TIME: 10 MIN SIMULATOR IC NUMBER: N/A

(IF APPLICABLE)

ALTERNATE PATH X TIME CRITICAL ___ PRA ___

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance:	Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: _____

Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: The conditions under which this task is to be performed are:

- a. Plant is in Mode 1.
- b. Directed by the Shift Supervisor to restore CTMT Mini-Purge following a spurious trip on radiation monitor R-24B.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
START TIME		
1. Containment Purge and Pre-access Filtration system FNP-1-SOP-12.2 Step 4.9	Selects the correct procedure and proper action step 4.9.	S/U
2. Verify Hi Hi radiation has been reset	RE-24B Hi Hi has been reset. (CUE: Alarm FH4 reset, reading normal, all alarm lights normal on front of panel.)	S / U
3. Place CTMT PURGE DMPRS HS-3196 and HS-31898 to CLOSE for at least 2 seconds	Mini-Purge supply and exhaust vlvs, Purge supply and exhaust vlvs, and Full Purge supply and exhaust vlvs; penetration room Mini-Purge supply and exhaust fan isolation vlvs and Full Purge supply and exhaust duct vlvs are closed.	S / U
*4. Place CTMT PURGE DMPRS HS-3196 and HS-3198 to MINI.	Mini-Purge supply and exhaust vlvs and penetration room Mini-Purge supply and exhaust fan isolation vlvs are open.	S / U
	Purge supply and exhaust vlvs, Full Purge supply and exhaust vlvs	

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
	and penetration room Full Purge supply and exhaust duct vlvs are closed.	
*5. Start MINI PURGE SUPP/EXH FAN	Recognizes MINI PURGE SUPP FAN starts	S / U
SIMULATOR OPERATOR: PANEL MCB/BF3/ALARM – MAKE BF3 COME INTO ALARM		
5A. Secures MINI PURGE SUPP/EXH FAN	MINI PURGE SUPP/EXH FAN is secured (CUE: green light lit)	S / U
CUE: Call Rad Side SO to check fan – reports back that supply fan is not rotating belt broken		
CUE: Shift Supervisor directs that Control Room Operator to conduct Appendix 1 Contingency Operation of CTMT MINI-PURGE with the supply fan unavailable		
*6. Operator obtains current revision of FNP-1-SOP-12.2 Appendix I	Current revision verified. (CUE: revision latest)	S / U
*7. Locally open BKR FD-G5	SO reports BKR FD-G5 open (CUE: BKR FD-G5 open)	S / U
SIMULATOR OPERATOR: PANEL MINIPURGE SUPP/EXH FAN/CMF/SUPPLY FAN/42B/OPEN		
*8. Direct EM to jumper the 42 interlock contact (C2 to X1) for BKR FD-G5	Request EM to install jumper per FNP-0-EMP-1906.1 “Installation And Removal Of Temporary Jumpers”. (CUE: Jumper installed on 42 interlock per FNP-0-EMP-1906.1)	S / U
9. Place caution tag on MINI PURGE SUPP/EXH FAN MCB HS	Caution tag being prepared MINI-PURGE EXH FAN is being controlled locally at BKR FD-G5 (CUE: Caution Tag is hung.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
10. Monitor computer pt. PDT-3317 and log CTMT to atmosphere Delta P.	Indicates use of FNP-1-SOP-12.2 Data sheet 1 to record data hourly	S / U
*11. When CTMT to atmosphere Delta P approaches +0.2 psid	Monitors Delta P (CUE: Delta P is > +0.2 psid)	S / U
*12. Verify AUX BLDG MAIN EXH SYS in service	Verifies AUX BLDG MAIN EXH SYS in service CUE: Verify in service when asked	S / U
NOTE: R-24 A and B are not in the simulator and must be cued.		
*13. Verify R-14, R-22, R-24 A and B operating per FNP-1-SOP-45.0 Radiation Monitoring System (NOTE: R-24 A and B not in simulator.)	Verifies R-14, R-22, R24 A and B in operation (CUE: R-14, R-22, R24 A and B Operating per FNP-1-SOP-45.0, Radiation Monitoring System)	S / U
14. Verify CTMT PURGE SUPP/EXH FANS & DAMPERS handswitch selected to stop	CTMT PURGE SUPP/EXH FANS & DAMPERS handswitch checked (CUE: Handswitch in stop)	
15. Verify recorders RR14, RR22, RR24A and B are in operation.	Recorders RR14, RR22, RR24A and B are checked. (CUE: all are in operation.)	
*16. Verify gaseous waste release permit has been issued for CTMT mini-purge operation	Verifies permit issued (CUE: permit has been issued and R24 A and B alarm setpoints are less than or equal to the max allowable listed in Part II of permit)	S / U
17. Verify FNP-1-STP-18.5 CONTAINMENT MINIPURGE AND EXH VLV INSERVICE TEST, and FNP-1-STP-18.6 CONTAINMENT MINIPURGE AND EXH ISOLATION TEST MODES 1,2,3,4 are current	Verifies STPs current (CUE: both STPs are current.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
18. Locally Close CTMT purge filter cooling vlvs N1P13V293 and N1P13V294	CTMT purge filter cooling vlvs N1P13V293 and N1P13V294 are Closed (CUE: SO reports valves closed.)	S / U
19. Place CTMT PURGE DMPRS HS-3196 and HS-3198 to MINI.	Mini-Purge supply and exhaust vlvs and penetration room Mini-Purge supply and exhaust fan isolation vlvs are open. Purge supply and exhaust vlvs, Full Purge supply and exhaust vlvs and penetration room Full Purge supply and exhaust duct vlvs are closed.	S / U
*20. Locally close BKR FD-G5	Mini-Purge Exhaust fan starts	S / U

SIMULATOR OPERATOR: panels/minipurge supp/exh fan/CMF/supply fan/42a/closed

21. Notify the Shift Radiochemist that Mini-Purge is in service	Shift Radiochemist notified of Mini-purge exhaust fan start	S / U
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____ STOP TIME

Terminate after Control Room Operator notifies Shift Radiochemist.

* **CRITICAL ELEMENTS:** All steps beginning with a *.

GENERAL REFERENCES:

1. SOP-12.2

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: The conditions under which this task is to be performed are:

- a. Plant is in Mode 1.
- b. Directed by the Shift Supervisor to restore CTMT Mini-Purge following a spurious trip on radiation monitor R-24B.

JOB PERFORMANCE MEASURES

CRO-NEW

TITLE: Removing a Diesel Generator from Operation

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSS

EVALUATION LOCATION: X SIMULATOR ___ CONTROL ROOM ___ PLANT

PROJECTED TIME: 12 MIN SIMULATOR IC NUMBER: IC-? (Note 1)

(IF APPLICABLE)

ALTERNATE PATH X TIME CRITICAL ___ PRA

NOTE 1: Diesel Generator Output Breaker trips immediately after paralleling to offsite.

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/>	
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: _____

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: The Unit is in Post LOCA cooldown and depressurization per FNP-1-ESP-1.2. You are to realign Emergency busses to Offsite Power on 1G 4160 volt bus and restore the 2C D/G to Auto start conditions. The conditions under which this task is to be performed are:

1. Recovery from a Station Blackout and SI is in progress.
2. Diesel Generator 2C is carrying 1J, 1G, and 1L buses.
3. Startup Transformer 1B is available.
4. You are directed by the Shift Supervisor to perform Step 28.2 of POST LOCA COOLDOWN AND DEPRESSURIZATION FNP-1-ESP-1.2.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. Obtain FNP-0-SOP-38.0 DIESEL GENERATOR per FNP-1-ESP-1.2. Step 28.2	Use FNP-0-SOP-38.0 DIESEL GENERATOR step 4.4 to remove the Diesel Generator from operation	S / U
2. Request SBO START RESET pushbutton depressed on B1J sequencer.	B1J sequencer SBO reset. (CUE: Report B1J sequencer SBO reset)	S / U
*3. Request ESS STOP RESET pushbutton depressed on B1G sequencers.	B1G sequencers ESS Stop reset. (CUE: Report ESS Stop reset)	S / U
*4. Reset DIESEL EMERG START RESET pushbutton	Reset Diesel Emergency start signal. (CUE: DG Emerg start reset)	S / U
*5. Place DG15 SYNCH SWITCH in manual	DG15 sync switch in manual.	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
6. Adjust DG voltage to match incoming	DG voltage matches incoming voltage	S / U
7. Adjust DG frequency to establish a slow synchroscope speed in the FAST direction	Synchroscope moving slow in the Fast direction	S / U
*8. Place and hold DG15 SYNCH SWITCH in BYPASS	DG15 Synch sw. is in Bypass and held in place for 2 seconds	S / U
*9. Parallel DG and Startup Xfmr 1B and shut DG15	Shut DG15 when synchroscope reaches 12:00 position	S / U

NOTE: Simulator Operator Trip open breaker DJ06 ALT PATH STARTS HERE

9A. Report to SS that DJ06 tripped open	SS acknowledges that DJ06 tripped open	S / U
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Continue DG shutdown in accordance with SOP-38

*10. Place Mode selector switch in Mode 2	Mode selector switch in Mode 2	S / U
11. Ensure DG ready for automatic operation following shutdown	Adjust DG voltage to 4160V and frequency to 60 Hz	S / U
12. After 2 minutes, stop DG	Depress Diesel stop pushbutton (CUE: DG stop light illuminated)	S / U
*13. Place Mode selector switch in Mode 1	Mode selector switch in Mode 1	S / U
*14. Place 2C DG Unit selector switch to Test	2C DG Unit selector switch in Test	S / U

____ STOP TIME

Terminate when 2C DG Unit selector in Test

*** CRITICAL ELEMENTS:**

GENERAL REFERENCES

1. POST LOCA COOLDOWN AND DEPRESSURIZATION FNP-1-ESP-1.2.
2. DIESEL GENERATOR FNP-0-SOP-38.0

GENERAL TOOLS AND EQUIPMENT

None

COMMENTS

CONDITIONS

This is pre-job brief: The Unit is in Post LOCA cooldown and depressurization per FNP-1-ESP-1.2. You are to realign Emergency busses to Offsite Power on 1G 4160 volt bus and restore the 2C D/G to Auto start conditions. The conditions under which this task is to be performed are:

1. Recovery from a Station Blackout and SI is in progress.
2. Diesel Generator 2C is carrying 1J, 1G, and 1L buses.
3. Startup Transformer 1B is available.
4. You are directed by the Shift Supervisor to perform Step 28.2 of POST LOCA COOLDOWN AND DEPRESSURIZATION FNP-1-ESP-1.2.

**JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION**

CRO-127A	
TITLE: Perform Corrective Actions In Response To A Malfunction Of The Excure NIS - Power Range Failure	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP <u>X</u>	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS	
EVALUATION LOCATION: <u>X</u> SIMULATOR <u>X</u> CONTROL ROOM ___ PLANT	
PROJECTED TIME: <u>10 MIN</u> SIMULATOR IC NUMBER: <u>JPM IC-23</u>	
(IF APPLICABLE)	
ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	



JPM Approved: W. D. OLDFIELD 6/11/98
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM CORRECTIVE ACTIONS IN RESPONSE TO A MALFUNCTION OF THE EXCORE NIS - POWER RANGE FAILURE.

The conditions under which this task is to be performed are:

- a. Plant is in Mode 1, 95% power, ramp on hold for calorimetric.
- b. N44 upper detector current indicator failed low
- c. You are directed by the Shift Supervisor to perform annunciator FB4 supplementary actions.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. Verify rod control in manual	Rod control in manual. (CUE: Rod control switch taken to manual.)	S / U
*2. Defeat the rod stop bypass for N-44	Rod stop bypass switch taken to N-44. (CUE: Selector switch in N-44 position.)	S / U
*3. Defeat the current channel defeat selector for N-44	N-44 selected current channel defeat selector switch. (CUE: Annunciator FC5 cleared.)	S / U
*4. Defeat the upper and lower detector on the detector current comparator drawer for N-44	N-44 selected on the upper and lower detector current comparator switches. (CUE: Annunciators FB4 and FB5 cleared.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*5. Remove the control power fuses from the "A" drawer N-44	Correct fuses removed. (CUE: Annunciators FC1 alarm, drawer bistable lights go dark.)	S / U
*6. Trip the associated Bistable in the 7300 system cabinet identified in Table 1	Table 1 reviewed, determination made that no associated Bistables need to be tripped.	S / U
*7. Refer to Tech Specs 3.3.1 and 3.2.4 for LCO's	Inform SS of need to refer to T.S.	S / U

STOP TIME

Terminate after SS informed.

* **CRITICAL ELEMENTS:** Indicated an * prior to the element number

GENERAL REFERENCES

1. ARP-1.6
2. K/As: 015A4.02 RO-3.9SRO-3.9
015A2.01 RO-3.5SRO-3.9

GENERAL TOOLS AND EQUIPMENT**COMMENTS**

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM CORRECTIVE ACTIONS IN RESPONSE TO A MALFUNCTION OF THE EXCORE NIS - POWER RANGE FAILURE. The conditions under which this task is to be performed are:

- a. Plant is in Mode 1, 95% power, ramp on hold for calorimetric.
- b. N44 upper detector current indicator failed low
- c. You are directed by the Shift Supervisor to perform annunciator FB4 supplementary actions.

JOB PERFORMANCE MEASURES

CRO-292B	
TITLE: Return SW System To Normal Operations (Following Emerg. Recirc. Alignment)	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP ___	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS ___	
EVALUATION LOCATION: <u>X</u> SIMULATOR <u>X</u> CONTROL ROOM <u>X</u> PLANT	
PROJECTED TIME: <u>10 MIN</u> SIMULATOR IC NUMBER: <u>N/A</u>	
(IF APPLICABLE)	
ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: Joel L. Deavers 5/22/98
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to RETURN SW SYSTEM TO NORMAL OPERATIONS (FOLLOWING EMERG. RECIRC. ALIGNMENT). The conditions under which this task is to be performed are:

- a. Plant is in Mode 5.
- b. "A" train SW was previously aligned for emergency recirculation for maintenance on "A" train RW.
- c. The "A" train RW system has been returned to service.
- d. The Shift Supervisor has directed you to return the service water system to normal operation per Step 3.7 of FNP-1-ARP-1.1 annunciator AD2 (RW PRESS A TRN LO).
- e. Unit 2 service water system is aligned for normal operation.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
*1. Open SW to DILUTION LINE Q1P16V549	SW TO DILUTION LINE Q1P16V549 is opened. (CUE: V549 indicates open.)	S / U
*2. Direct SO to close breaker FN-G2 for Q1P16V539 and FT-N4 for Q1P16V538	SO is directed to close breakers FN-G2 and FP-A6. (CUE: The SO acknowledges to close FN-G2 and FT-N4 then calls back to report FN-G2 and FT-N4 are closed.)	S / U
*3. Close SW "A" HDR and "B" HDR EMERG RECIRC TO POND Q1P16V539 and Q1P16V538	SW "A" HDR and "B" HDR EMERG RECIRC TO POND Q1P16V539 and Q1P16V538 are closed. (CUE: V539 and V538 indicate closed.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*4. Direct SO to open breaker HS-J4 for MOV Q1P16V549	SO is directed to open breaker HS-J4. (CUE: The SO acknowledges to open breaker HS-J4 then calls back to report breaker HS-J4 is closed.)	S / U
5. (On Unit 2 MCB) Verify open SW TO POND EAST and WEST HDR ISO valves QSP16V507 and QSP16V508	SW TO POND EAST and WEST HDR ISO are verified open. (CUE: QSP16V507 and QSP16V508 indicate open.)	S / U
6. (On Unit 2 MCB) Verify closed SW TO WET PIT EAST and WEST HDR ISO valves QSP16V505 and QSP16V506	SW TO WET PIT EAST and WEST HDR ISO valves are verified closed. (CUE: QSP16V505 and QSP16V506 indicate closed.)	S / U

NOTE TO EXAMINER: CUE: COOLING TOWER BLOWDOWN IS REQUIRED

7. Direct SO to open UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N (in 1B DG room)	SO is directed to open UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N. (CUE: The SO acknowledges to open U-1 CTBD then calls back to report UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N is open.)	S / U
--	--	-------

STOP TIME

Terminate when cooling tower blowdown is aligned..

* **CRITICAL ELEMENTS:** 1, 2, 3, 4

GENERAL REFERENCES:

- | | | | |
|----|---------------|----------|-------------------------------------|
| 1. | FNP-1-ARP-1.1 | | |
| 2. | K/A | 076A4.02 | RO-2.6 SRO-2.6 |

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to RETURN SW SYSTEM TO NORMAL OPERATIONS (FOLLOWING EMERG. RECIRC. ALIGNMENT). The conditions under which this task is to be performed are:

- a. Plant is in Mode 5.
- b. "A" train SW was previously aligned for emergency recirculation for maintenance on "A" train RW.
- c. The "A" train RW system has been returned to service.
- d. The Shift Supervisor has directed you to return the service water system to normal operation per Step 3.7 of FNP-1-ARP-1.1 annunciator AD2 (RW PRESS A TRN LO).
- e. Unit 2 service water system is aligned for normal operation.

JOB PERFORMANCE MEASURES

SO-311

TITLE: Shift Auxiliary Feed Pump Suction To Emergency Supply

PROGRAM APPLICABLE: SOT X SORP X OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE DISCUSS

EVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANT

PROJECTED TIME: 20 MIN SIMULATOR IC NUMBER: N/A

(IF APPLICABLE)

ALTERNATE PATH TIME CRITICAL PRA

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: Joel L. Deavers 5/4/98
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to SHIFT AUXILIARY FEED PUMP SUCTION TO EMERGENCY SUPPLY. The conditions under which this task is to be performed are:

- a. AFW pump suction has been shifted to service water because of CST low level alarm.
- b. A loss of A train SW has occurred.
- c. Directed by control room operator to perform Step 4.7.4.1 of SOP-22.0.

Unit 1 valves hard to reach.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. Obtain keys for "A" train and "B" train service water to TDAFWP suction	Keys obtained. (NOTE: This standard may be satisfied by simulating checking out keys from Shift Foreman.) (CUE: Keys Z-142, Z-159, Z-158, and Z-149 have been obtained.)	S / U
*2. Unlock and open "B" train service water to TDAFWP suction Q1N23V015C and Q1N23V015D	"B" train service water to TDAFWP suction valves are unlocked and turned counterclockwise until opened. (CUE: Q1N23V015C and Q1N23V015D travel have stopped and stems are full out.)	S / U
*3. Unlock and close "A" train service water to TDAFWP suction Q1N23V015A and Q1N23V015B	"A" train service water to TDAFWP suction valves are unlocked and turned clockwise until closed. (CUE: Q1N23V015A and Q1N23V015B travel have stopped and valve stems are down.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
4. Notify control room "B" train service water is aligned to TDAFWP suction per Step 4.7 of SOP-22.0	Control room is notified. (CUE: Control room is notified.)	S / U

STOP TIME

Terminate when the control room has been notified.

* **CRITICAL ELEMENTS:** 2, 3

GENERAL REFERENCES:

1. SOP-22.0
2. K/A: 061A1.04 RO-3.9 SRO-3.9

GENERAL TOOLS AND EQUIPMENT:

1. Keys
2. Gloves
3. Safety spanner

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to SHIFT AUXILIARY FEED PUMP SUCTION TO EMERGENCY SUPPLY. The conditions under which this task is to be performed are:

- a. AFW pump suction have been shifted to service water because of CST low level alarm.
- b. A loss of A train SW has occurred.
- c. Directed by control room operator to perform Step 4.7.4.1 of SOP-22.0.

JOB PERFORMANCE MEASURES

SO-610C	
TITLE: Defeat Auto Start of Safeguards Equipment	
PROGRAM APPLICABLE: SOT <u> X </u> SORP <u> X </u> OLT <u> X </u> LRP <u> X </u>	
ACCEPTABLE EVALUATION METHOD: <u> </u> PERFORM <u> X </u> SIMULATE <u> </u> DISCUSS <u> </u>	
EVALUATION LOCATION: <u> </u> SIMULATOR <u> </u> CONTROL ROOM <u> X </u> PLANT	
PROJECTED TIME: <u> 10 MIN </u> SIMULATOR IC NUMBER: <u> N/A </u>	
(IF APPLICABLE)	
ALTERNATE PATH <u> </u> TIME CRITICAL <u> </u> PRA <u> </u>	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: W. D. OLDFIELD 6/11/98
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to DEFEAT AUTO START OF SAFEGUARDS EQUIPMENT on unit 1. The conditions under which this task is to be performed are:

- a. A loss of all A/C has occurred
- b. FNP-1-ECP0.0 has been entered
- c. You are directed by the control room operator to perform Attachment 1 of FNP-1-ECP-0.0

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ START TIME		
1. Place LOCAL/REMOTE switches for "A" TRN ESF equipment in LOCAL	Switches for the following in local. (CUE: Switches are in local.) A HSDP CHG PUMP A CHG PUMP B (A TRN) CCW PUMP C CCW PUMP B (A TRN) MDAFW PUMP	S / U
2. Place LOCAL/REMOTE switches for "B" TRN ESF equipment in LOCAL	Switches for the following in local. (CUE: Switches are in local.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
	C HSDP CHG PUMP C CHG PUMP B (B TRN) CCW PUMP A CCW PUMP B (B TRN) MDAFW PUMP	
*3. Turn off control power for 1(2)B RHR pump and 1(2)B CS pump	Control power BKRS opened for the following. (CUE: green light is off.) RHR PUMP BKR DG09 CS PUMP BKR DG11	S / U
*4. Remove DC control power fuses for 1(2)C and 1(2)D containment coolers	Fuses removed for the following. (CUE: Fuses removed.) CTMT cooler fan slow speed BKR EE08 CTMT cooler fan slow speed BKR EE16	S / U
*5. Turn off control power for 1(2)A RHR pump and 1(2)A CS pump	Control power BKRS opened for the following. (CUE: BKRS are opened.) RHR PUMP BKR DF09 CS PUMP BKR DF11	S / U
*6. Remove DC control power fuses for 1(2)A and 1(2)B containment coolers	Fuses removed for the following. (CUE: Fuses removed.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
	CTMT cooler fan slow speed BKR ED15	
	CTMT cooler fan slow speed BKR ED16	
7. Notify control room that Attachment 1 is complete	Control room notified. (CUE: Control room acknowledges Attachment 1 is complete.)	S / U

STOP TIME

Terminate when JPM is completed.

* **CRITICAL ELEMENTS:** 3, 4, 5, 6

GENERAL REFERENCES:

- 1. ECP-0.0
- 2. K/A 068AA1.12 RO-4.4 SRO-4.4
058AA2.03 RO-3.5 SRO-3.9

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to DEFEAT AUTO START OF SAFEGUARDS EQUIPMENT on unit 1. The conditions under which this task is to be performed are:

1. A loss of all A/C has occurred
2. FNP-1-ECP0.0 has been entered
3. You are directed by the control room operator to perform Attachment 1 of FNP-1-ECP-0.0

JOB PERFORMANCE MEASURES

SO-607 Modified

TITLE: Perform the Required Actions to Minimize DC Loads

PROGRAM APPLICABLE: SOT X SORP X OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE DISCUSS

EVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANT

PROJECTED TIME: 12 MIN. SIMULATOR IC NUMBER: N/A

(IF APPLICABLE)

ALTERNATE PATH TIME CRITICAL PRA

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: _____

Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM THE REQUIRED ACTIONS TO MINIMIZE DC LOADS on Unit 1. The conditions under which this task is to be performed are:

- a. A loss of all AC power has occurred on Unit 1.
- b. FNP-1-ECP-0.0 is in progress
- c. You are directed by the control room to de-energize non-essential DC loads in the rad side of the auxiliary building using Attachment 3 of FNP-1-ECP-0.0, Step 1.6.

NOTE TO THE EXAMINER: THIS JPM REQUIRES SHIFT SUPERVISOR'S APPROVAL PRIOR TO OPENING BREAKER PANEL DOORS.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ START TIME		
*1. Open DC breakers at DC distribution panel 1C.	Breaker 1, 3, 4, 5, and 6 taken in the OFF position. (CUE: For each breaker operated the breaker indicates OFF.)	S / U
*2. Open DC breakers at DC distribution panel 1F.	Breakers 1, 5, 6, 7 10 taken to the OFF position. (CUE: For each breaker operated the breaker indicates OFF.)	S / U
3. Notify control room that attachment 3 is complete.	Control room notified that attachment 3 complete.	S / U

_____ STOP TIME

Terminate when control room notified that attachment 3 is complete

*** CRITICAL ELEMENTS: 1, 2**

GENERAL REFERENCES:

1. ECP-0.0
2. K/A 055EA1.04 RO-3.5 SRO-3.9

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM THE REQUIRED ACTIONS TO MINIMIZE DC LOADS on Unit 1. The conditions under which this task is to be performed are:

- a. A loss of all AC power has occurred on Unit 1.
- b. FNP-1-ECP-0.0 is in progress
- c. You are directed by the control room to de-energize non-essential DC loads in the rad side of the auxiliary building using Attachment 3 of FNP-1-ECP-0.0, Step 1.6.

JOB PERFORMANCE MEASURES

SO-570	
TITLE: Drain PRT (Using The RCDT Pumps)	
PROGRAM APPLICABLE: SOT <u> X </u> SORP <u> </u> OLT <u> X </u> LRP <u> </u>	
ACCEPTABLE EVALUATION METHOD: <u> X </u> PERFORM <u> X </u> SIMULATE <u> </u> DISCUSS <u> </u>	
EVALUATION LOCATION: <u> </u> SIMULATOR <u> </u> CONTROL ROOM <u> X </u> PLANT	
PROJECTED TIME: <u> 10 MIN </u> SIMULATOR IC NUMBER: <u> N/A </u>	
(IF APPLICABLE)	
ALTERNATE PATH <u> </u> TIME CRITICAL <u> </u> PRA <u> </u>	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: W. D. OLDFIELD 5/28/98
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to DRAIN PRT (USING THE RCDT PUMPS) on Unit 1. The conditions under which this task is to be performed are:

- a. The plant operator has requested assistance with lowering the level in the PRT using the RCDT pumps per FNP-1-SOP-1.2, Step 4.3.2.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. Verify closed PRT vent to GDT 1-RC-V-8025 (Q1B13V064) 121'	Handwheel for 1-RC-V-8025 (V064) turned in clockwise direction. (CUE: Valve is closed.)	S / U
2. Verify closed PRT vent to S/D gas decay tanks 1-GWD-V-7935 (Q1G22V237), 83'	Handwheel for 1-GWD-V-7935 (V237) turned in clockwise direction. (CUE: Valve is closed.)	S / U
3. Verify closed nitrogen/hydrogen supply to S/D GDT's isolation valve 1-GWD-V-7849 (Q1G22V040) 121'	Handwheel for 1-GWD-V-7849 (V040) turned in clockwise direction. (CUE: Valve is closed.)	S / U
4. Verify open nitrogen supply from bulk storage to PRT valve 1-GWD-V-7920 (Q1G22V215) 121'	Handwheel for 1-GWD-V-7920 (V215) turned in counterclockwise direction. (CUE: Valve is open.)	S / U
5. Verify PRT regulator 1-RC-PCV-8034 (Q1B13V042) 121' adjusted to 3 psig	PRT regulator PCV-8034 (V042) adjusted for 3 psig. Control room called for PRT pressure. (CUE: Regulator adjusted, PRT pressure ≈ 3 psig.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
6. Verify open PRT nitrogen supply valves Q1B13HV8047 and Q1B13HV8033	Control room called to verify HV-8047 (V037) and HV-8033 (V039) are open. (CUE: Valves are open.)	S / U
*7. Stop all RCDT pumps (Liquid waste processing panel)	RCDT pumps A/B handswitches placed in TRIP-PULL OUT (or verified to be in TRIP-PULL OUT position.) (CUE: RCDT pump A/B handswitches in TRIP-PULL OUT position with red and green indicating lights off. If a pump was running then the RCDT recirc lo flow annunciator will alarm.)	S / U
*8. Close RCDT outlet isolation 1-LWP-HV-7127 (N1G21V006) (Liquid waste processing panel)	Handswitch for RCDT outlet isolation 1-LWP-HV-7127 (N1G21V006) taken to close position. (CUE: Handswitch is in closed position with red light off and green light on.)	S / U
*9. Close RCDT recirculation isolation 1-LWP-HV-7144 (N1G21V106) (Liquid waste processing panel)	Handswitch for RCDT recirculation isolation 1-LWP-HV-7144 (N1G21V106) taken to close position. (CUE: Handswitch is in closed position with red light off and green light on.)	S / U
*10. Open PRT drain valve N1B13HV8031 (MCB)	Plant operator called to open PRT drain valve N1B13HV8031. (CUE: Plant operator reports that valve has been opened.)	S / U
*11. Start a RCDT pump(Liquid waste processing panel)	Handswitch for RCDT pump A(B) taken from TRIP-PULL OUT to CLOSE. (CUE: Handswitch is in neutral position with red light on and green light off.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*12. Regulate RCDT level control valve 1-LWP-LCV-1003 (Q1G21V064) (Liquid waste processing panel) in MANUAL as necessary to drain PRT	Controller for RCDT level control valve 1-LWP-LCV-1003 (Q1G21V064) placed/verified in MANUAL and opened. (CUE: Controller is in MANUAL and positioned approximately 50% open.)	S / U
NOTE TO EXAMINER: AT THIS TIME PROVIDE THE FOLLOWING CUE: THE PLANT OPERATOR HAS NOTIFIED YOU THAT THE PRT IS AT THE DESIRED LEVEL.		
*13. Stop the running RCDT pump and close level control valve 1-LWP-LCV-1003 (Q1G21V064)	RCDT pump A(B) handswitch taken to TRIP-PULL OUT and RCDT level control valve 1-LWP-LCV-1003 (Q1G21V064) positioned to 0% demand. (CUE: RCDT pump handswitch in TRIP-PULL OUT with the red and green lights out and valve is in manual with 0% demand.)	S / U
*14. Close pressurizer relief tank drain valve N1B13HV8031	Plant operator called to close pressurizer relief tank drain valve N1B13HV8031. (CUE: Plant operator advises that drain valve is closed.)	S / U
*15. Open RCDT recirculation ISO 1-LWP-HV-7144 (N1G21V106)	Handswitch for RCDT recirculation ISO 1-LWP-HV-7144 (N1G21V106) taken to open. (CUE: Handswitch is in open position with red light on and green light off.)	S / U
*16. Open RCDT outlet ISO 1-LWP-HV-7127 (N1G21V006)	Handswitch for RCDT outlet ISO 1-LWP-HV-7127 (N1G21V006) taken to open. (CUE: Handswitch is in open position with red light on and green light off.)	S / U
*17. Place RCDT level control valve 1-LWP-LCV-1003 (Q1G21V064) in AUTO	Controller for RCDT level control valve 1-LWP-LCV-1003 (Q1G21V064) placed in AUTO . (CUE: Controller is in AUTO .)	S / U

EVALUATION CHECKLIST

**RESULTS:
(CIRCLE)**

ELEMENTS:

STANDARDS:

____ STOP TIME

Terminate when LCV-1003 returned to auto.

*** CRITICAL ELEMENTS: 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17**

GENERAL REFERENCES:

1. SOP-1.2

2. K/As: 008 AA1.08 RO-3.8 SRO-3.8

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to DRAIN PRT (USING THE RCDT PUMPS) on Unit 1. The conditions under which this task is to be performed are:

- a. The plant operator has requested assistance with lowering the level in the PRT using the RCDT pumps per FNP-1-SOP-1.2, Step 4.3.2.

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to SHIFT TO 1A SFP COOLING LOOP IN OPERATION WITH PURIFICATION THROUGH THE DEMINERALIZER. The conditions under which this task is to be performed are:

- a. The SFP cooling and purification system is aligned per its checklist.
- b. The SFP level is 153' 8".
- c. CCW is available to the SFP Hx.
- d. Radiation monitor R-25A and B are in operation per FNP-1-SOP-45.
- e. The RWST is not on recirculation.
- f. B SFP cooling is in service without filtration.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
*1. Stop the "1B" SFP pump	Locate the controller and stop the "B" SFP pump. (CUE: The "1B" SFP pump green indicating light is on, the red light is off.)	S / U
*2. Close the "1B" SFP Hx inlet isolation Q1(2)G31V002B	Locate and close the "1B" SFP Hx inlet isolation by turning the handwheel counterclockwise. (CUE: "1B" SFP Hx inlet isolation valve is closed.)	S / U
*3. Request the control room to verify open CCW to the "1A" SFP Hx Q1(2)P17MOV3094A and associated train CCW pump running	Verify open CCW to the "1A" SFP Hx and associated train CCW pump running. (CUE: Control room reports that MOV-3094A is open and associated CCW pump is running.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*4. Open the "1A" SFP Hx inlet isolation Q1(2)G31V002A	Locate and open the "1A" SFP Hx inlet isolation by turning the handwheel counterclockwise. (CUE: The "A" SFP Hx inlet isolation is open.)	S / U
*5. Start the "1A" SFP pump	Locate the controller and start the "1A" SFP pump by depressing the start pushbutton. (CUE: SFP pump controller red light is on and green light is off.)	S / U
*6. Throttle SFP cooling loop return valve Q1(2)G31V006 to establish a 55 psi differential pressure across the SFP pump (55 psid minimum)	Locate the "1A" SFP pump suction and discharge gauges and the cooling loop return valve. Then, throttle SFP cooling loop return valve Q1(2)G31V006 to establish a 54 psi differential pressure across the SFP pump by cycling the valve either open or closed. (CUE: The "1A" SFP pump differential pressure is 55 psid.)	S / U
Open valve will decrease pressure. N1G31PI652B and A – Suction and Discharge PIs		
*7. Open the "1A" SFP cooling loop to SFP purification Q1(2)G31V004A	Locate and open the "1A" SFP cooling loop to SFP purification inlet isolation by turning the handwheel counterclockwise. (CUE: The "1A" SFP cooling loop to SFP purification inlet isolation is open.)	S / U
*8. Throttle Open (Initially closed) SFP purification outlet to SFP Q1(2)G31V005 to establish 100 gpm on the SFP demineralizer FI-654	Locate and throttle SFP purification outlet to SFP Q1(2)G31V005 to establish 100 gpm on the SFP demineralizer FI-654 (must locate FI-654). (CUE: FI-654 indicates 100 gpm.)	S / U
9. Inform the control room that "1A" SFP cooling loop is in service with filtration through the demin	Inform the control. (CUE: Control room acknowledges.)	S / U

STOP TIME

EVALUATION CHECKLIST**ELEMENTS:****STANDARDS:****RESULTS:
(CIRCLE)**

Terminate when all elements of the task have been completed.

* **CRITICAL ELEMENTS:** 1, 2, 3, 4, 5, 6, 7, 8

GENERAL REFERENCES:

- | | | | |
|----|----------------|--------|---------|
| 1. | SOP-54.0 | | |
| 2. | K/As: 033A4.04 | RO-2.4 | SRO-2.9 |
| | 033A2.02 | RO-2.7 | SRO-3.0 |
| | 033A4.02 | RO-2.3 | SRO-2.1 |
| | 033A4.05 | RO-2.4 | SRO-2.9 |

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to SHIFT TO 1A SFP COOLING LOOP IN OPERATION WITH PURIFICATION THROUGH THE DEMINERALIZER. The conditions under which this task is to be performed are:

- a. The SFP cooling and purification system is aligned per its checklist.
- b. The SFP level is 153' 8".
- c. CCW is available to the SFP Hx.
- d. Radiation monitor R-25A and B are in operation per FNP-1-SOP-45.
- e. The RWST is not on recirculation.
- f. B SFP cooling is in service without filtration.

**JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION**

SO-324	
TITLE: Rack In A 600V Load Center Breaker	
PROGRAM APPLICABLE: SOT <u> X </u> SORP <u> X </u> OLT <u> X </u> LRP <u> X </u>	
ACCEPTABLE EVALUATION METHOD: <u> X </u> PERFORM <u> </u> SIMULATE <u> </u> DISCUSS	
EVALUATION LOCATION: <u> </u> SIMULATOR <u> </u> CONTROL ROOM <u> X </u> PLANT	
PROJECTED TIME: <u> 15 MIN. </u> SIMULATOR IC NUMBER: <u> N/A </u>	
(IF APPLICABLE)	
ALTERNATE PATH <u> </u> TIME CRITICAL <u> </u> PRA <u> </u>	
JPM MUST BE PERFORMED - NOT SIMULATED	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: W. D. Oldfield 2/16/99
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to RACK IN A 600V LOAD CENTER BREAKER. The conditions under which this task is to be performed are:

- a. An LOSP has occurred and LCC G must be energized from LCC F to restore instrument air.
- b. The plant electrical system is in operation.
- c. The DC electrical system is in operation.
- d. You have been directed by the control room operator to rack in 600V load center breaker EG03-1 per SOP-36.6.

NOTE TO EXAMINER: EXAMINER WILL DESIGNATE THAT THE 600V LOAD CENTER BREAKER IN THE TRAINING CENTER MAINTENANCE SHOP BE USED FOR THIS JPM. EXAMINER SHOULD ENSURE THIS BREAKER IS AVAILABLE AND RACKED TO THE REMOVE POSITION PRIOR TO ADMINISTERING THIS JPM.

NOTE TO EXAMINER: EXAMINER WILL PROVIDE THE RACKING TOOL TO EXAMINEE. EXAMINEE WOULD NORMALLY OBTAIN RACKING TOOL FROM THE SHIFT FOREMAN.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
Examiner NOTE: Starts at step 4.3.4 (4.3.4 rather than 4.4.4)		
START TIME		
*1. Flame retardant coverall and Glasses and Hard hat	Uses coveralls, glasses, and hardhat (Required to use coveralls, management expectations – glasses and hardhat)	S / U
2. Verify control power off	Breaker control power off. Fuse block removed or in off position. (CUE: Breaker open, indicator green light not lit.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
NOTE TO EXAMINER: FOR THE FOLLOWING ELEMENT, THE EXAMINER WILL CUE THE EXAMINEE THAT THERE IS NO ALTERNATE DC POWER TO THIS BREAKER.		
3. Determine <u>IF</u> breaker power has alternate DC control power	Examinee refers to Table. (CUE: Breaker does not have alternate DC supply.)	S / U
4. Open the access door to the breaker. Verify mechanical indicator shows breaker open	Breaker mechanical indicator is checked. (CUE: Mechanical indicator green, BREAKER OPEN target displayed.)	S / U
*5. Withdraw breaker from cubicle.	Breaker pulled out to rail stops.	S / U
*6. Align breaker to Remove position.	Install crank on levering device shaft & turn crank to remove position. (CUE: To indicator aligned with removed position)	S / U
*7. Operate key interlock & turn 180°.	Rod released	S / U
*8. Return breaker to cubicle.	Pushes breaker & rail stops in. (Breaker has stopped moving)	S / U
9. With the breaker in DISCONNECT position, place crank on levering device shaft	Crank successfully engaged on shaft.	S / U
*10. Turn crank clockwise until connected position stop is reached	Breaker in the connected position. (CUE: Breaker position indicator pointer at CONNECTED.)	S / U
11. Remove levering device crank	Levering device removed. (CUE: shutter is closed.)	S / U
12. Close access door	Door closed.	S / U
*13. Reinstall breaker control power fuses	Control power restored. (CUE: Breaker open, green indicating light lit.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
14. Verify the breaker closing spring is charged	Spring is charged. (CUE: Yellow SPRING CHARGED mechanical indicator target displayed.)	S / U

STOP TIME

Terminate when breaker closing spring is charged.

CRITICAL ELEMENTS: CRITICAL ELEMENTS ARE DENOTED BY AN ASTERISK (*) IN FRONT OF THE ELEMENT NUMBER.

GENERAL REFERENCES:

1. SOP-36.6, SOP-36.3
2. K/A 062A2.11 RO-3.7 SRO-4.1
191008K1.04 RO-2.9 SRO-3.0

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to RACK IN A 600V LOAD CENTER BREAKER.

The conditions under which this task is to be performed are:

- a. An LOSP has occurred and LCC G must be energized from LCC F to restore instrument air.
- b. The plant electrical system is in operation.
- c. The DC electrical system is in operation.
- d. You have been directed by the control room operator to rack in 600V load center breaker EG03-1 per SOP-36.6.

Facility: <u>Farley</u>		Date of Examination: <u>7/23-26/01</u>
Examination Level (circle one): RO		Operating Test Number: _____
Administrative Topic/Subject Description		Describe method of evaluation:
		1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Security	Question on Security Building Alert immediate actions
		Question on Escort Duties
	Procedures	Question on deviation from plant procedures
		Question on who may manipulate reactor controls
A.2	Tagging and Clearances	JPM NRC-A.2 (RO/SRO) Determine Component Positions for Valve Line-ups and Tag Order Performance
A.3	Radiation Control	JPM NRC-A.3 (RO/SRO) Assess Personnel Exposure
A.4	Emergency Plan	Question on the required actions IAW EIP-13.0
		Question on obtaining Meteorological information per EIP-9.2

Facility: <u>Farley</u>		Date of Examination: <u>7/23-26/01</u>
Examination Level (circle one): SRO (I/U)		Operating Test Number: _____
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Security	Question on Security Building Alert immediate actions and
		Question on Supplementary Action for Security Building Alert.
	Procedures	Question on deviation from Technical Specifications
		Question on who may manipulate reactor controls
A.2	Tagging and Clearances	JPM NRC-A.2 (RO/SRO) Determine Component Positions for Valve Line-ups and Tag Order Performance
A.3	Radiation Control	JPM NRC-A.3 (RO/SRO) Assess Personnel Exposure
A.4	Emergency Plan	JPM NRC-A.4 (SRO) Classify an Emergency Event and Make Initial Notifications as required

RO

Question A.1.a.1.

What are the immediate actions for the SECURITY BUILDING ALERT alarm according to procedure FNP-1-ARP-1.13?

Answer:

Secure access to the control room.

Reference:

FNP-1-ARP-1.13 NE4

K/A 2.1.20 Ability to execute procedural step

RO 4.3

SRO 4.2

Operations Policy does not require knowledge of immediate actions for most ARPs removed no references allowed.

RO

Question A.1.a.2.

NO REFERENCES ALLOWED

When acting as an escort for visitors, how are the following situations handled?

1. As you and three visitors are entering the control room and after two of the visitors have scanned their badges the door opens to allow an operator out of the control room. While the door is opened, one of the visitors, thinking you opened the door, steps through and the door is closed before anything can be said.
2. You and your visitor are exiting a vital area when your visitor's badge will not receive a red light as expected.
3. Two escorts conducting a plant tour with 3 visitors each want to transfer their visitors to you. Normal plant operations are being conducted. You are qualified as an escort and are authorized access to areas the visitors have been granted access to.

Answer:

4. You have permitted a person under escort out of your surveillance this constitutes a security violation. The escort must notify security immediately.
5. No security violation has occurred at this time, but security must be contacted to inform them that the visitor badge is malfunctioning.
6. You can not escort more than 5 visitors during non-outage periods.

Reference:

Security Orientation Training GEN-017 pages 14-16

K/A 2.1.1 Knowledge of conduct of operation requirements

RO 3.7

SRO 3.8

RO

Question A.1.b.1.

During an emergency it has been determined a deviation from plant procedures is required, what four actions or activities can the deviation be authorized for and is Shift Supervisor approval required?

Answer:

Injury to personnel
Danger to the public
Damage to the facility
Stabilize and/or mitigate a transient

All personnel are authorized with approval of the Shift Supervisor, if time allows, to depart from plant procedures.

Reference:

FNP-0-AP-6, PROCEDURE ADHERENCE

K/A 2.1.7 Ability to evaluate plant performance and make operational judgements based on operational judgements based on operating characteristics, reactor behavior, and instrument interpretation

RO 3.7

SRO 4.4

RO

Question A.1.b.2.

Given the following situation:

A Birmingham Engineering and Licensing Support employee who has held an SRO license at Plant Vogtle is participating in a six week familiarization training program to qualify him in his new position in the corporate office. He has been shadowing the Shift Supervisor since the beginning of the shift. After calculating an expected dilution with the Unit Operator, the individual asks if he can start the dilution under the Operator-At-The-Control's direction.

What answer is given to the individual and why?

Answer:

The individual may not start the dilution. The reactor controls will be manipulated only by personnel who possess an active RO or SRO license except for individuals who manipulate the controls of the reactor as part of training to qualify for an operator's license and such manipulation is under the direction of and in the presence of a licensed reactor operator or senior reactor operator.

Reference:

FNP-0-AP-16, CONDUCT OF OPERATION - OPERATIONS GROUP step 4.7.1

K/A 2.1.10 Knowledge of Conditions and Limits in the facility license RO 2.7 SRO 3.9

SRO

Question A.1.a.1.

What are the immediate actions for the SECURITY BUILDING ALERT alarm according to procedure FNP-1-ARP-1.13?

Answer:

Secure access to the control room.

Reference:

FNP-1-ARP-1.13 NE4

K/A 2.1.20 Ability to execute procedural step

RO 4.3

SRO 4.2

**Operations Policy does not require knowledge of immediate actions for most ARPs.
Removed no references allowed.**

SRO

Question A.1.a.2.

The SECURITY BUILDING ALERT alarm immediate actions have been taken according to procedure FNP-1-ARP-1.13 and the alarm has been validated where can the "Control Room Emergency Security Procedure" FNP-0-SP-27 be obtained for your reference as required by FNP-1-ARP-1.13 NE4 supplementary action?

Answer:

CAS

Reference:

FNP-1-ARP-1.13 NE4

K/A 2.1.21 Ability to obtain and verify controlled procedure copy RO 3.1

SRO 3.2

SRO

Question A.1.b.1

During an emergency it has been determined a deviation from Technical Specifications is required, the deviation is authorized subject to the what three conditions?

Answer:

1. Action is needed immediately to protect the public health and safety.
2. No action consistent with Technical Specifications that can provide adequate or equivalent protection is immediately apparent.
3. The Shift Supervisor, Operations Shift Superintendent, Operations Manager or Emergency Director approves the action.

Reference:

FNP-0-AP-6, PROCEDURE ADHERENCE

K/A 2.1.12 Ability to apply technical specifications for a system RO 2.9 SRO 4.0

SRO

Question A.1.b.2.

Given the following situation:

A Birmingham Engineering and Licensing Support employee who has held an SRO license at Plant Vogtle is participating in a six week familiarization training program to qualify him in his new position in the corporate office. He has been shadowing the Shift Supervisor since the beginning of the shift. After calculating an expected dilution with the Unit Operator, the individual asks if he can start the dilution under the Operator-At-The-Control's direction.

What answer is given to the individual and why?

Answer:

The individual may not start the dilution. The reactor controls will be manipulated only by personnel who possess an active RO or SRO license except for individuals who manipulate the controls of the reactor as part of training to qualify for an operator's license and such manipulation is under the direction of and in the presence of a licensed reactor operator or senior reactor operator.

Reference:

FNP-0-AP-16, CONDUCT OF OPERATION - OPERATIONS GROUP step 4.7.1

K/A 2.1.10 Knowledge of Conditions and Limits in the facility license RO 2.7 SRO 3.9

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

NRC-A.2 (RO/SRO)	
TITLE: Determine Component Positions for Valve Line-ups and Tag Order Performance	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP <u>X</u>	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS ___	
EVALUATION LOCATION: ___ SIMULATOR ___ CONTROL ROOM <u>X</u> PLANT	
PROJECTED TIME: <u>10 MIN</u> SIMULATOR IC NUMBER: <u>N/A</u>	
(IF APPLICABLE)	
ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: NRC. 06/19/01
 Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to demonstrate how the following component positions are determined during valve line-ups and Tag Order performance:

- a. Normally Open Manual Valve
- b. Locked Closed Manual Valve
- c. Normally Throttled Manual Valve
- d. Tagged Open Manual Valve

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		

NOTE TO EXAMINER: THE JPM MAY BE CONDUCTED AT THE LOCATION FOR EACH TYPE OF VALVE OR IN PLANT AT THE LOCATION OF ONE VALVE. Applicant should indicate confidence of actual valve movement without preconceived expectation as to the existing valve position or based solely on stem or handwheel movement.

Determine the position of a normally open manual valve

*1. Move the handwheel in the closed direction	1. Attempt to move the handwheel in the closed direction. (CUE: Stem movement moves indicating the valve is open. The applicant should indicate use of other indication of valve movement – changes in process flow, changes in valve handwheel movement resistance, observation of valve stem movement.	S / U
*2. Return the valve to its original position	2. Return the valve to its original position. (CUE: valve is full open)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
Determine the position of a locked closed manual valve		
1. Move the handwheel in the closed direction	1. Attempt to move the handwheel or operator in the closed position. (CUE: The locking device will not permit handwheel movement.)	S / U
*2. Remove the locking device	2. Remove the locking device (CUE: Locking device removed)	S / U
*3. Move the handwheel in the closed direction	3. Move the handwheel in the closed direction (CUE: handwheel will not move)	S / U
*4. Re-install the locking device	4. Re-install the locking device (CUE: Locking device installed)	S / U
*5. Have an independent verification of the locking device	5. Verification of the locking device installation is required by an individual who did not verify the valve position (CUE: When applicant request verification provide that verification – Locking device is securely locked and in good condition)	S / U
Determine the position of a normally throttled manual valve		
*1. Visually verify valve stem is in the intermediate position	1. Visually verify valve stem is in intermediate position. Valve stem is not moved. (CUE: Valve is in intermediate position)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
Determine the position of a Tagged Open manual valve		
*1. Verify the hold tag attached to the valve	1. Verification of hold tag attached to valve (CUE: Hold tag attached to valve specifies valve and open position)	S / U
*2. Attempt to close valve	2. Attempt to move the handwheel in the closed direction only enough to verify valve movement. (CUE: Stem movement moves indicating the valve is open. The applicant should indicate use of other indication of valve movement – changes in process flow, changes in valve handwheel movement resistance, observation of valve stem movement.	S / U
*3. Return the valve to its original position	3. Return the valve to its original position. (CUE: valve is full open)	S / U

STOP TIME

Terminate JPM when Tagged open valve position is verified and returned to original position.

* **CRITICAL ELEMENTS:** Those indicated by an asterisk * preceding the step number

GENERAL REFERENCES:

1.	FNP-0-AP-16, Conduct of Operation – Operations Group			
2.	KA	2.1.1	RO-3.7	SRO-3.8
3.		2.1.29	RO-3.4	SRO-3.3
4.		2.2.1	RO-3.7	SRO-3.6
5.		2.2.13	RO-3.6	SRO-3.8

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to demonstrate how the following component positions are determined during valve line-ups and Tag Order performance:

1. Normally Open Manual Valve
2. Locked Closed Manual Valve
3. Normally Throttled Manual Valve
4. Tagged Open Manual Valve

RO

Question A.4.1

NO REFERENCES ALLOWED

What actions are required of an individual who discovers a fire IAW EIP-13.0, Fire Emergencies?

Answer:

1. Contact the Control Room (Provide the following information location, Type, Size).
2. Attempt to extinguish (To the best of your ability and judgement)

Reference:

EIP-13.0, Step 4.1

K/A 2.4.12 Knowledge of general operating crew responsibilities during emergency operations
RO 3.4 SRO 3.9

RO

Question A.4.2

The Shift Supervisor instructs you to obtain the following information for use on FNP-0-EIP-9.2, Obtaining Meteorological Information, Figure 2:

Wind Speed
Wind Direction
Δ Temperature Channel 1 & 2

If you are unable to obtain the Meteorological information from ERDS, Data Acquisition (per FNP-0-CCP-1300), plant computer, Control Room recorders, where can this information be obtained?

Answer:

The information can be obtained at the Met Tower or the backup Met Tower.

Reference:

EIP-9.2, Step 5.1

K/A 2.4.12 Knowledge of general operating crew responsibilities during emergency operations
RO 3.4 SRO 3.9

**JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION**

NRC-A.3 (RO/SRO)	
TITLE: Assess Personnel Exposure	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP <u>X</u>	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS	
EVALUATION LOCATION: ___ SIMULATOR ___ CONTROL ROOM ___ PLANT	
PROJECTED TIME: <u>30 MIN</u> SIMULATOR IC NUMBER: <u>N/A</u>	
(IF APPLICABLE)	
ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	

JPM Approved: NRC. 06/19/01
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to determine if total personnel exposure for a containment entry is acceptable without exceeding your dose margin limits and which route allows the lowest exposure.

- a. Unit 1 is shutdown and the crew is attempting to place a system in service, but they are unable to remotely open a valve.
- b. You have been tasked with entering containment alone and manually opening the valve.
- c. Your allowable dose margin limit is 1850 mr.
- d. Health Physics personnel are currently unavailable to provide assistance.
- e. Two routes are available to the valve:
 - Route 1 consists of two segments.
 - Segment 1 has you walk through a 4 R/hr general field for 0.5 minutes.
 - Segment 2 has you walk in a 6 R/hr general field to the valve for 5 minutes
 - Total time to reach valve is 5.5 minutes
 - Route 2 consists of two segments.
 - Segment 1 has you walk through a 1 R/hr general field for 1 minute.
 - Segment 2 has you walk in a 6 R/hr general field to the valve for 5 minutes
 - Total time to reach valve is 6 minutes
- f. Manual operation of the valve is in a 12 R/hr field and you should be able to open the valve in 5 minutes.

See drawing for illustration of the two separate routes that can be used.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
NOTE: The applicant can perform the calculations in any order.		
*1. Calculate exposure at valve	12R/hr * 1000 mr/R 1hr/60 min * 5 min = 1000 mr	S / U
*2. Calculate exposure from using Route 1	Segment 1 4 R/hr * 1000 mr/hr * 1hr/60 min * 0.5 min * 2 = 66 2/3 mr	S / U
	Segment 2 6 R/hr * 1000 mr/hr * 1hr/60 min * 5 min * 2 = 1000 mr	S / U
	Total Dose 66 2/3 + 1000 + 1000 = 2066 2/3 mr	S / U
*3. Calculate exposure from using Route 2	Segment 2 1 R/hr * 1000 mr/hr * 1hr/60 min * 1 min * 2 = 33 1/3 mr	S / U
	Segment 2 6 R/hr * 1000 mr/hr * 1hr/60 min * 5 min * 2 = 1000 mr	S / U
	Total Dose 33 1/3 + 1000 + 1000 = 2033 mr	S / U
*4. Determine the lowest exposure path	Compared results of calculations and determined that Route 2 to be the lowest exposure.	
*5. Compare calculated exposure to margin	Compared exposure to margin and determined alignment could not be made within allowable margin of 1850 mr.	

 STOP TIME

Terminate JPM when it is determined that no success path exists without exceeding dose margin limits.

* **CRITICAL ELEMENTS:** Those indicated by an asterisk * preceding the step number

GENERAL REFERENCES:

1. GEN-004 Radiation Worker Training/Retraining

2. KA 2.3.1 RO 2.6 SRO 3.0

GENERAL TOOLS AND EQUIPMENT:

Calculator

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to determine if total personnel exposure for a containment entry is acceptable without exceeding your dose margin limits and which route allows the lowest exposure.

- a. Unit 1 is shutdown and the crew is attempting to place a system in service, but they are unable to remotely open a valve.
- b. You have been tasked with entering containment alone and manually opening the valve.
- c. Your allowable dose margin limit is 1850 mr.
- d. Health Physics personnel are currently unavailable to provide assistance.
- e. Two routes are available to the valve:

Route 1 consists of two segments.

Segment 1 has you walk through a 4 R/hr general field for 0.5 minutes.

Segment 2 has you walk in a 6 R/hr general field to the valve for 5 minutes

Total time to reach valve is 5.5 minutes

Route 2 consists of two segments.

Segment 1 has you walk through a 1 R/hr general field for 1 minute.

Segment 2 has you walk in a 6 R/hr general field to the valve for 5 minutes

Total time to reach valve is 6 minutes

The two routes as detailed are to be considered separately.

- f. Manual operation of the valve is in a 12 R/hr field and you should be able to open the valve in 5 minutes.

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

NRC-A.4 (SRO)	
TITLE: Classify An Emergency Event And Make Initial Notifications As Required	
PROGRAM APPLICABLE: SOT ___ SORP ___ OLT <u>X</u> LRP <u>X</u>	
ACCEPTABLE EVALUATION METHOD: <u>X</u> PERFORM <u>X</u> SIMULATE ___ DISCUSS	
EVALUATION LOCATION: <u>X</u> SIMULATOR <u>X</u> CONTROL ROOM ___ PLANT	
PROJECTED TIME: <u>20 MIN</u> SIMULATOR IC NUMBER: <u>N/A</u>	
(IF APPLICABLE)	
ALTERNATE PATH <u>X</u> TIME CRITICAL <u>X</u> PRA ___	

JPM DIRECTIONS:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If the trainee is significantly deficient in knowledge or does not adhere to management expectations as outlined below, then a re-examination of the JPM is warranted.
 - Potential physical harm could occur to the trainee or others
 - Potential damage to equipment could occur
 - A procedure step is missed in a continuous use procedure
 - Significant margin to reactor safety is eroded
 - Wrong unit/train/component is potentially operated
4. All unsuccessful attempts, deficiencies, and other comments must be documented in the space below and forwarded to a Training Administrative Assistant for tracking.

Evaluator/Date:	Trainee:
Overall JPM Performance: Satisfactory <input type="checkbox"/>	Unsatisfactory <input type="checkbox"/>
Evaluator Comments (attach additional sheets if necessary)	
In order to satisfy Section A.4 the applicant must classify an event and make a notification correctly.	
The grading for A.4 is 0.2 for classification of the scenario event, 0.2 for classification of the JPM event, and 0.6 for the notification made for the JPM. If the applicant incorrectly classifies the JPM then use the contingency sheet.	

JPM Approved: NRC. 06/19/01
Supervisor - Operations Training

STANDARDS

Apply the following criteria during the performance of this JPM:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.
- c. Management expectations regarding human performance tools (three way communications, STAR, procedural adherence, etc.), radiological controls, and industrial safety.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to CLASSIFY AN EMERGENCY EVENT PER THE EIP'S. The conditions under which this task is to be performed are:

- a. Both Units are at 100%.
- b. The 2C Service Water Pump is tagged out for bearing replacement.
- c. The Outside System Operator reports there is smoke coming from 2E and 2D Service Water Pumps.
- d. AOP-29.0 has been entered, and the Fire Brigade has been dispatched.
- e. The Shift Supervisor has directed you to Classify the event, and make the appropriate notifications.

NOTE to Examiner: When the applicant correctly classifies the event, cue the applicant to make initial notifications. If applicant incorrectly classifies the event, then have the applicant perform the contingency for A.4.

This is pre-job brief: When I tell you to begin, you are to MAKE INITIAL NOTIFICATIONS INCLUDING PREPARATION OF THE MESSAGE AS REQUIRED PER THE EIP'S. The conditions under which this task is to be performed are:

1. Both Units are at 100%.
2. The 2C Service Water Pump is tagged out for bearing replacement.
3. The Outside System Operator reports there is smoke coming from 2E and 2D Service Water Pumps.
4. AOP-29.0 has been entered, and the Fire Brigade has been dispatched.
5. The Shift Supervisor has directed you to make the appropriate notifications for a NOUE per EIP-9.0.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
------------------	-------------------	------------------------------

____ **START TIME**

NOTE TO EXAMINER: THE TIME IT TAKES TO CLASSIFY THE EVENT IS TIME CRITICAL AND SHOULD BE COMPLETED IN 15 MINUTES.

CRITICAL ELEMENT START TIME _____

*1. Classify the event	Event classified as a NOUE per EIP-9.0.	S / U
------------------------	---	-------

CRITICAL ELEMENT STOP /START TIME _____

NOTE TO EXAMINER: THE TIME IT TAKES TO PERFORM STEPS 2 AND 3 IS TIME CRITICAL AND SHOULD BE COMPLETED WITHIN 15 MINUTES OF THE DECLARATION TIME

NOTE TO EXAMINER: ACCURATE COMPLETION OF CERTAIN STEPS EIP-9.0, NOUE NOTIFICATION FORM, ARE ESSENTIAL TO ENSURE ADEQUATE NOTIFICATION OF STATE AND LOCAL AGENCIES. THESE STEPS ARE SHOWN AS THE STANDARDS FOR ELEMENT NUMBER 2.

WHEN THE CANDIDATE HAS SHOWN/EXPLAINED HOW THEY WOULD OBTAIN MET TOWER INFORMATION THEN CUE WIND SPEED IS 2.5 MPH, WIND DIRECTION IS FROM 355 DEGREES AND DELTA T IS -0.1 DEGREES F.

*2. Complete EIP-9.0, Notification Of Unusual Event Notification Form	Identifies N.7.7 as criteria for NOUE .	S / U
	Completes declaration time date	S / U
	Completes met tower data	S / U
	Approves the declaration form	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*3. Initiate initial notifications using the Emergency Notification Network (ENN)	Dial CC9907 then ALL CALL (**) to alert all stations, then wait 10 seconds for audible tone to stop. Appropriate message announcement made over ENN. ("This is ____..." per EIP-9.0, NOUE Notification of Unusual Event (BLUE) Notification Form.)	S / U
_____ CRITICAL ELEMENT STOP TIME		
*4. Verify manning of ENN by state agencies	Evaluate at least one agency in each state acknowledges. (CUE: "Alabama Office of Radiation Control (AORC) and GEMA acknowledges manning the ENN.")	S / U
5. Pre-message announcement made	Initial notification preparation message is read per EIP-9.0, NOUE Notification of Unusual Event Notification Form.	S / U
*6. Slowly read initial notification message over the ENN	EIP-9.0, NOUE Notification Form read.	S / U
NOTE TO EXAMINER: IN STEP 7, THE EXAMINEE MAY ENSURE THE TELECOPIERS ARE READY TO RECEIVE. IF SO, PROVIDE THE APPROPRIATE CUE.		
*7. Verifies acknowledgment from AORC	Ensures AORC and GEMA acknowledges receipt of initial notification message. (CUE: "AORC and GEMA acknowledges receipt of initial notification message <u>OR</u> AORC and GEMA acknowledges receipt of initial notification message and telecopier is ready to receive".)	S / U
8 Closes ENN speakers	With headset picked up dials CC9900	S / U

_____ STOP TIME

Terminate JPM when initial notification message when the ENN speakers are closed..

* **CRITICAL ELEMENTS:** Those indicated by an asterisk * preceding the step number

GENERAL REFERENCES:

- 1. EIP-8.1
- 2. EIP-9.0
- 3. KA 2.4.38 RO-2.2 SRO-4.4

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to CLASSIFY AN EMERGENCY EVENT PER THE EIP'S. The conditions under which this task is to be performed are:

- a. Both Units are at 100%.
- b. The 2C Service Water Pump is tagged out for bearing replacement.
- c. The Outside System Operator reports there is smoke coming from 2E and 2D Service Water Pump.
- d. AOP-29.0 has been entered, and the Fire Brigade has been dispatched.
- e. The Shift Supervisor has directed you to Classify the event, and make the appropriate notifications.

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to MAKE INITIAL NOTIFICATIONS INCLUDING PREPARATION OF THE MESSAGE AS REQUIRED PER THE EIP'S. The conditions under which this task is to be performed are:

6. Both Units are at 100%.
7. The 2C Service Water Pump is tagged out for bearing replacement.
8. The Outside System Operator reports there is smoke coming from 2E and 2D Service Water Pumps.
9. AOP-29.0 has been entered, and the Fire Brigade has been dispatched.
10. The Shift Supervisor has directed you to make the appropriate notifications for a NOUE per EIP-9.0.