

INITIAL SUBMITTAL

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

JULY 23 - 27, 2001

DRAFT JPMS + Outlines

INITIAL SUBMITTAL JPMS

ADMINISTRATIVE JPMS/QUESTIONS
SIMULATOR JPMS,
IN-PLANT JPMS, AND
INITIAL ADMIN TOPICS OUTLINE
(ES-301-1),
CONTROL ROOM SYSTEMS &
FACILITY WALK-THROUGH OUTLINE
(ES-301-2)

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 an Emergency Boration CRO-065A Modified	BS	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

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 an Emergency Boration CRO-065A Modified	BS	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: Farley
 Exam Level: SRO(U)

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

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. Perform an Emergency Boration CRO-065A Modified	BS	1
b. Establish letdown as Required in Response to a Spurious Safety Injection CRO-343C Modified	MAS	2
c. CTMT Mini-Purge CRO-NEW	NAS	5
d.		
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

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 ___ DISCUSSEVALUATION LOCATION: X SIMULATOR ___ CONTROL ROOM ___ PLANTPROJECTED 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 an 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 reset, reading normal.)	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. Purge supply and exhaust vlvs, Full Purge supply and exhaust vlvs	S / U

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 fails to start	S / U
CUE: Shift Supervisor directs that Control Room Operator to conduct 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 FE-G5 open)	S / U
*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 indicates MINI-PURGE EXH FAN is being controlled locally at BKR FD-G5 (CUE: Caution Tag is hung.)	S / U
*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, then start the MINI-PURGE FAN	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
*13. Verify R-14, R-22, R-24 A and B operating per FNP-1-SOP-45.0 Radiation Monitoring System	Verifies R-14, R-22, R24 A and B in operation (CUE: Operating per FNP-1-SOP-45.0)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*14. 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
15. 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
16. 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
*17. 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
*18. Locally close BKR FD-G5	Mini-Purge Exhaust fan starts	S / U

____ STOP TIME

Terminate after Control Room Operator closes BKR FD-5G

*** CRITICAL ELEMENTS:**

GENERAL REFERENCES:

1.

2.

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to OPERATE THE MANUAL EMERGENCY BORATE VALVE. The conditions under which this task is to be performed are:

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 an spurious trip on radiation monitor R-24B.

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 XACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSSEVALUATION LOCATION: X SIMULATOR X CONTROL ROOM ___ PLANTPROJECTED 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****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. ESP-1.1 is in progress and has been completed through Step 14.4.
- c. Directed by Shift Supervisor to perform Step 15 of 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	

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

- | | | | |
|---------------------------------|--|--|-------|
| *6. | Manually adjust letdown pressure to 260 – 450 psig | lit/green light is out.)
When PK-145 adjusted. (CUE: Letdown pressure does not change.) Recognize that Normal letdown can not be established. | S / U |
| Establish Excess Letdown | | | |
| *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 when HIK-137 has been adjusted.

* **CRITICAL ELEMENTS:** 6,7,8,10,12

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. ESP-1.1 is in progress and has been completed through Step 14.4.
- c. Directed by Shift Supervisor to perform Step 15 of ESP-1.1 and establish letdown flow.

JOB PERFORMANCE MEASURES**CRO-292B**

TITLE: Return SW System To Normal Operations (Following Emerg. Recirc. Alignment)

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRPACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSSEVALUATION LOCATION: X SIMULATOR X CONTROL ROOM X PLANTPROJECTED TIME: 10 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 5/22/98**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.
- e. Unit 2 service water system is aligned for normal operation.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ 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
*4. Direct SO to open breaker HS-J4 for MOV	SO is directed to open breaker HS-	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
Q1P16V549	J4. (CUE: The SO acknowledges to open breaker HS-J4 then calls back to report breaker HS-J4 is closed.)	
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
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STOP TIME

Terminate when cooling tower blowdown is aligned..

*** CRITICAL ELEMENTS:** 1, 2, 3, 4, 7

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.
- e. Unit 2 service water system is aligned for normal operation.

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

CRO-127A

TITLE: Perform Corrective Actions In Response To A Malfunction Of The Excore NIS - Power Range Failure

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: 10 MIN SIMULATOR IC NUMBER: JPM IC-23

(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

Th This is pre-job brief: is 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. Directed by the Shift Supervisor to perform annunciator FB4 supplementary actions.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ 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 channel current comparator for N-44	N-44 selected channel current comparator 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	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
	switches. (CUE: Annunciators FB4 and FB5 cleared.)	
*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

STOP TIME

Terminate after fuses are removed.

* **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

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. Directed by the Shift Supervisor to perform annunciator FB4 supplementary actions.

JOB PERFORMANCE MEASURES**CRO-065A Modified**

TITLE: Perform An Emergency Boration

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP XACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSSEVALUATION LOCATION: X SIMULATOR X CONTROL ROOM ___ PLANTPROJECTED TIME: 5 MIN SIMULATOR IC NUMBER: JPM IC-11

(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: _____

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 AN EMERGENCY BORATION. The conditions under which this task is to be performed are:

- a. Chemical and Volume Control System is in operation
- b. "A" BAT is on service, "B" BAT is on standby
- c. Plant is in Mode 3 at normal operating temperature and 3 RCP's operating
- d. An error in the shutdown margin calculation has been discovered and it has been determined that the actual shutdown margin is less than the requirement of Technical Specifications
- e. The Shift Supervisor directs you to perform the actions of AOP-27.0

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
____ START TIME		
*1. Start boric acid transfer pump	BAT Pump A or B handswitch taken to start. (CUE: Pump breaker indicator red light lit.)	S / U
*2. Align normal emergency boration flowpath	Handswitch for MOV-8104 taken to open. (CUE: Valve position indicator red light lit/green light out, FI-110A indicates 100 gpm.)	S / U
NOTE: USE ACTUAL PLANT CONDITIONS FOR WHICHEVER CHARGING PUMP IS RUNNING. E.G., IF CHARGING PUMP A IS RUNNING THEN CHARGING PUMP A IS VERIFIED RUNNING.		
3. Verify at least one charging pump started	Charging pump running indications checked. (CUE: Pump breaker indicator red light lit; pump amps are 85.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
4. Establish adequate letdown	45 gpm LTDN orifice isolation valve 8149A and either 8149B or C verified open. (CUE: Valve position indicator red lights lit for 8149A and either 8149B or C letdown flow 125 gpm.)	S / U
5. Verify emergency boration flow adequate	Charging flow checked greater than 40 gpm. (CUE: FI-122 indicates 106 gpm.) Checks emergency boration flow greater than 30 gpm.) (CUE: FI-110 indicates 110 gpm.)	S / U
6. Direct chemistry to secure zinc addition system	Chemistry directed to secure ZAS. (CUE: Chemistry reports ZAS secured.)	S / U
7. Check reactor not critical	Checks reactor trip breakers open, and/or rod bottom lights lit and/or negative SUR. (CUE: For each item checked reactor trip breakers open, all rod bottom lights lit and SUR is negative.)	S / U
8. Check T_{avg} less than 525°	Checks T_{avg} indication. (CUE: TI-412D = 547°F, TI-422D = 547°F, TI-432D = 547°F.)	S / U
CUE: THE SHIFT SUPERVISOR INFORMS YOU THAT RCS BORON CONCENTRATION IS NOW GREATER THAN TECH SPEC REQUIREMENT OF STP-29.1.		
9. Check a RCP running	Checks red light illuminated and/or amps indicated 1A, 1B, and/or 1C RCP. (CUE: For each pump check red light is lit, amps 700.)	S / U
*10. Stop the running boric acid pump	Handswitch for pump started, taken to stop. (CUE: For the pump taken to stop, red light is out, green light is on, EMERG BORATE FLOW 0.)	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*11. Closes EMERG BORATE TO CHG PUMP SUCT Q1E21MOV8104	Handswitch for EMERG BORATE TO CHG PUMP SUCT Q1E21MOV8104 taken to close. (CUE: MOV-8104 red light is out, green light is on.)	S / U

STOP TIME

Terminate when MOV-8104 is closed.

* **CRITICAL ELEMENTS:** 1, 2, 10, 11

GENERAL REFERENCES

1. AOP-27.0
2. Technical Specifications
3. K/As: 004 A2.14 RO-3.8 SRO-3.9
 004 A4.18 RO-4.3 SRO-4.1

GENERAL TOOLS AND EQUIPMENT

None

COMMENTS

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to PERFORM AN EMERGENCY BORATION.
The conditions under which this task is to be performed are:

- a. Chemical and Volume Control System is in operation
- b. "A" BAT is on service, "B" BAT is on standby
- c. Plant is in Mode 3 at normal operating temperature and 3 RCP's operating
- d. An error in the shutdown margin calculation has been discovered and it has been determined that the actual shutdown margin is less than the requirement of Technical Specifications
- e. The Shift Supervisor directs you to perform the actions of AOP-27.0

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 X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSS

EVALUATION LOCATION: X SIMULATOR X CONTROL ROOM ___ PLANT

PROJECTED TIME: 15 MIN SIMULATOR IC NUMBER: JPM IC-38

(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: 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 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.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. 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
*2. Stop A RHR pump	Handswitch for RHR pump A placed to stop. (CUE: Amps indicate zero and pump bkr indicator green light lit.)	S / U

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

NOTE TO EXAMINER: NO VALVE POSITION INDICATOR (VPI) OR "B" TRAIN POWER TO MOV'S 8809B, 8811B, 8812B, 8887B.

- | | | |
|-----------------------------------|--|-------|
| *3. Align RHR for cold leg recirc | Handswitch for RWST to RHR pump A MOV-8809A taken to close. (CUE: VPI green light lit/red light out.) | S / U |
| | Handswitch for CTMT sump to RHR pump A 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 |
| *4. 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 |
| 5. Verify flow stable | FI-605A checked. (CUE: FI-605A stable at 2600 gpm.) | S / U |
| 6. Close RWST to 1B RHR PUMP | 8809B has no power and cannot be closed (RNO- checks B Train Chg Pumps not running) | S / U |

NOTE TO EXAMINER: NO "B" TRAIN POWER TO MOV'S 8130B, 8131B, 8706B, VPI AVAILABLE.

- | | | |
|---|---|-------|
| 7. 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 |
|---|---|-------|

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

- | | | | |
|-----|---|--|-------|
| *8. | 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 |
| *9. | Align RHR supply to charging pump suction | Handswitch for 1A RHR HX TO CHG PUMP SUCT taken to open. (CUE: MOV-8706A VPI red light lit/green light out.) | S / U |
| 10 | 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.

- | | | | |
|-----|---|--|-------|
| *11 | 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 |
|-----|---|--|-------|

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

- | | | | |
|------|--|--|-------|
| 12. | 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 |
| *13. | 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 |

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

14. 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.

* **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: WWhen 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 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: 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: 10 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 FNP-1-ESP-1.2. You are to unload and secure Diesel Generator 2C. 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 of POST LOCA COOLDOWN AND DEPRESSURIZATION FNP-1-ESP-1.2.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ 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 B1J and B1G sequencers.	B1J and 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

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*5. Place DG15 SYNCH SWITCH in manual	DG15 sync switch in manual.	S / U
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 DG15 SYNCH SWITCH in BYPASS	DG15 Synch sw. is in Bypass	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

*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 FNP-1-ESP-1.2. You are to unload and secure Diesel Generator 2C. 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 of POST LOCA COOLDOWN AND DEPRESSURIZATION FNP-1-ESP-1.2.

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 DISCUSSEVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANTPROJECTED 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 suctions 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.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ 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	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
	stems are down.)	
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 suctions 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 X SORP X OLT X LRP X ACCEPTABLE EVALUATION METHOD: PERFORM X SIMULATE DISCUSSEVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANTPROJECTED TIME: 10 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: 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. The conditions under which this task is to be performed are:

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

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*6. Remove DC control power fuses for 1(2)A and 1(2)B containment coolers	Fuses removed for the following. (CUE: Fuses removed.) CTMT cooler fan slow speed BKR ED15 CTMT cooler fan slow speed BKR ED16	S / U
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 |
| | | 058AA2.03 | RO-3.5 |
| | | | SRO-4.4 |
| | | | 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. The conditions under which this task is to be performed are:

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

JOB PERFORMANCE MEASURES**SO-570**

TITLE: Drain PRT (Using The RCDT Pumps)

PROGRAM APPLICABLE: SOT X SORP OLT X LRPACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE DISCUSSEVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANTPROJECTED TIME: 10 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: 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). 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.

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)	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)	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) 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	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)	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)	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	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	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) 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

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*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

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). 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.

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

SO-324

TITLE: Rack In A 600V Load Center Breaker

PROGRAM APPLICABLE: SOT X SORP X OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM ___ SIMULATE ___ DISCUSS

EVALUATION LOCATION: ___ SIMULATOR ___ CONTROL ROOM X PLANT

PROJECTED TIME: 15 MIN. SIMULATOR IC NUMBER: N/A

(IF APPLICABLE)

ALTERNATE PATH ___ TIME CRITICAL ___ PRA

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)
_____ START TIME		
1. 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

NOTE TO EXAMINER: FOR THE FOLLOWING ELEMENT, THE EXAMINER WILL CUE THE EXAMINEE THAT THERE IS NO ALTERNATE DC POWER TO THIS BREAKER.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
2. 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
3. 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
*4. Withdraw breaker from cubicle.	Breaker pulled out to rail stops.	S / U
*5. Align breaker to disconnect position.	Install crank on levering device shaft & turn crank to remove position. (CUE: To indicator aligned with removed position)	S / U
*6. Operate key interlock & turn 180°.	Rod released	S / U
*7. Return breaker to cubicle.	Pushes breaker & rail stops in. (Breaker has stopped moving)	S / U
8. With the breaker in DISCONNECT position, place crank on levering device shaft	Crank successfully engaged on shaft.	S / U
*9. Turn crank clockwise until connected position stop is reached	Breaker in the connected position. (CUE: Breaker position indicator pointer at CONNECTED.)	S / U
10. Remove levering device crank	Levering device removed. (CUE: shutter is closed.)	S / U
11. Close access door	Door closed.	S / U
*12. Reinstall breaker control power fuses	Control power restored. (CUE: Breaker open, green indicating light lit.)	S / U
13. Verify the breaker closing spring is charged	Spring is charged. (CUE: Yellow SPRING CHARGED mechanical indicator target displayed.)	S / U

EVALUATION CHECKLIST**ELEMENTS:****STANDARDS:****RESULTS:
(CIRCLE)****____ 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: WWhen 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 EG02 per SOP-36.6.

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 DISCUSSEVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANTPROJECTED 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. The conditions under which this task is to be performed are:

- a. A loss of all AC power has occurred on Unit 1.
- b. 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 ECP-0.0.

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

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> 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. The conditions under which this task is to be performed are:

- a. A loss of all AC power has occurred on Unit 1.
- b. 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 ECP-0.0.

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

SO-128

TITLE: Shift to A SFP Cooling Loop In Operation with Purification Through the Demineralizer

PROGRAM APPLICABLE: SOT X SORP OLT X LRP

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE
 DISCUSS

EVALUATION LOCATION: SIMULATOR CONTROL ROOM X PLANT

PROJECTED TIME: 30 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: W. D. OLDFIELD 8/20/98
 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 TO A 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 SOP-45.
- e. The RWST is not on recirculation.
- f. B SFP cooling is in service without filtration.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
_____ START TIME		
*1. Stop the "B" SFP pump	Locate the controller and stop the "B" SFP pump. (CUE: The "B" SFP pump green indicating light is on, the red light is off.)	S / U
*2. Close the "B" SFP Hx inlet isolation Q1(2)G31V002B	Locate and close the "B" SFP Hx inlet isolation by turning the handwheel counterclockwise. (CUE: "B" SFP Hx inlet isolation valve is closed.)	S / U
*3. Request the control room to verify open CCW to the "A" SFP Hx Q1(2)P17MOV3094A and associated train CCW pump running	Verify open CCW to the "A" 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 "A" SFP Hx inlet isolation Q1(2)G31V002A	Locate and open the "A" SFP Hx inlet isolation by turning the handwheel counterclockwise. (CUE: The "A" SFP Hx inlet isolation is open.)	S / U
*5. Start the "A" SFP pump	Locate the controller and start the "A" 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 "A" 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 "A" SFP pump differential pressure is 55 psid.)	S / U
*7. Open the "A" SFP cooling loop to SFP purification Q1(2)G31V004A	Locate and open the "A" SFP cooling loop to SFP purification inlet isolation by turning the handwheel counterclockwise. (CUE: The "A" SFP cooling loop to SFP purification inlet isolation is open.)	S / U
*8. Throttle 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 "A" SFP cooling loop is in service with filtration through the demin	Inform the control. (CUE: Control room acknowledges.)	S / U

EVALUATION CHECKLIST**ELEMENTS:****STANDARDS:****RESULTS:
(CIRCLE)****____ STOP TIME**

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 A 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 SOP-45.
- e. The RWST is not on recirculation.
- f. B SFP cooling is in service without filtration.
- g.

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 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: N/A

(IF APPLICABLE)

ALTERNATE PATH X TIME CRITICAL X 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 CLASSIFY AN EMERGENCY EVENT AND 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:

- 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 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.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
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_____ **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
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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

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

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 |
| *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 |

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
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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 AND 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:

- 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 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.

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

NRC-A.4 (RO)

TITLE: Obtain Meteorological Information and Determine Stability Class

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: N/A

(IF APPLICABLE)

ALTERNATE PATH ___ TIME CRITICAL ___ PRA

IF Simulated 30 minute recording of Control Room MET Recorders should be provided

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 obtain meteorological information. The conditions under which this task is to be performed are:

- a. The Unit 1 has experienced SGTR with a leaking atmospheric dump valve.
- b. A radioactive release has been confirmed.
- c. The Shift Supervisor has directed you to obtain meteorological information per EMERGENCY PLAN IMPLEMENTING PROCEDURE 9.2, FNP-0-EIP-9.2 and determine the Stability Class for dose assessment.
- d. Computer methods of obtaining MET data are unavailable.
- e. Wind direction for the 35 ft. elevation in OUT OF SERVICE.

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
<u> </u> START TIME		
1. Obtain Meteorological information using EIP-9.2 Step 5.0	Determines computer methods of obtaining MET data is unavailable IAW initial conditions and uses Step 5.0	S / U
2. Using the Control Room Met Recorders observe and record average wind speed recording for the last 15 minutes	Observes speed recording for the and records a 15 minute average for the 35 ft. elevation in Step 1	S / U
3. Using the Control Room Met Recorders observe and record average wind direction recording for the last 15 minutes	Determines 35 ft elevation wind direction is out of service IAW initial conditions observes the wind direction recording and records a 15 minute average for the 150 ft elevation in Step 2.	S / U

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
4. Determine down wind direction	Adding 180 degrees if WD <180degrees and subtracting 180 degrees if WD \geq 180 Records in Step 3	S / U
5. Using the Control Room Met Recorders observe and record average Delta temperature recording for the last 15 minutes for both channels	Observes the Delta temperature recording between 35' and 200' and records in Step 4 a 15 minute average for both channels.	S / U
6. Determine the stability class for each channel	Records in Step 5 the most conservative class	S / U

STOP TIME

Terminate JPM when stability class is determined.

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

GENERAL REFERENCES:

- | | | | | |
|----|---------|--------|--------|---------|
| 1. | EIP-9.2 | | | |
| 2. | KA | 2.4.12 | RO-3.4 | SRO-3.9 |

GENERAL TOOLS AND EQUIPMENT:

None

COMMENTS:

CONDITIONS

This is pre-job brief: When I tell you to begin, you are to obtain meteorological information. The conditions under which this task is to be performed are:

1. The Unit 1 has experienced SGTR with a leaking atmospheric dump valve.
2. A radioactive release has been confirmed.
3. The Shift Supervisor has directed you to obtain meteorological information per EMERGENCY PLAN IMPLEMENTING PROCEDURE 9.2, FNP-0-EIP-9.2 and determine the Stability Class for dose assessment.
4. Computer methods of obtaining MET data are unavailable.
5. Wind direction for the 35 ft. elevation in OUT OF SERVICE.

JOB PERFORMANCE MEASURES
FORMAL OJT REQUIRED PRIOR TO EVALUATION

NRC-A.3 (RO/SRO)

TITLE: Assess Personnel Exposure

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSS

EVALUATION LOCATION: ___ SIMULATOR ___ CONTROL ROOM ___ PLANT

PROJECTED TIME: 30 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: 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 access personnel exposure to determine if the manual valve can be opened inside containment without exceeding your dose margin limit and which of the two routes is the lowest exposure path.

- a. 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 and locally 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 12 R/hr general field to the valve for 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 12 R/hr general field to the valve for 5 minutes

The two routes as detailed are to be considered separately and are listed as time to reach the manual valve.

- f. Manual operation of the valve is in a 6 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)
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_____ **START TIME**

NOTE: The applicant can perform the calculations in any order.

- | | | |
|---|---|-------|
| *1. Calculate exposure at valve | 6R/hr * 1000 mr/R 1hr/60 min * 5
min = 500 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

Segment 2
12 R/hr * 1000 mr/hr * 1hr/60 min * 5
min * 2 = 2000 mr | S / U |
| | Total Dose
66 2/3 + 2000 + 500 = 2566 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

Segment 2
16 R/hr * 1000 mr/hr * 1hr/60 min * 4
min * 2 = 2133 1/3 mr | S / U |
| | Total Dose
33 1/3 + 2133 + 500 = 2666 2/3 mr | S / U |
| *4. Determine the lowest exposure path | Compared results of calculations and determined that Route 1 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 access personnel exposure to determine if the manual valve can be opened inside containment without exceeding your dose margin limit and which of the two routes is the lowest exposure path.

- f. The crew is attempting to place a system in service, but they are unable to remotely open a valve.
- g. You have been tasked with entering containment and locally opening the valve.
- h. Your allowable dose margin limit is 1850 mr.
- i. Health Physics personnel are currently unavailable to provide assistance.
- j. 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 12 R/hr general field to the valve for 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 12 R/hr general field to the valve for 5 minutes

The two routes as detailed are to be considered separately and are listed as time to reach the manual valve.

- f. Manual operation of the valve is in a 6 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.2 (RO/SRO)

TITLE: Determine Component Positions for Valve Line-ups and Tag Order Performance

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSS

EVALUATION LOCATION: ___ SIMULATOR ___ CONTROL ROOM X PLANT

PROJECTED TIME: 10 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: 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)
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_____ **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

- | | | |
|---|---|--------------|
| <p>*1. Move the handwheel in the closed direction</p> | <p>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.</p> | <p>S / U</p> |
| <p>*2. Return the valve to its original position</p> | <p>2. Return the valve to its original position. (CUE: valve is full open)</p> | <p>S / U</p> |

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.	FN	FP	FO	FR
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

SRO

Question A.1.a.1.

NO REFERENCES ALLOWED

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

SRO

Question A.1.a.2.

NO REFERENCES ALLOWED

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

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:

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

Reference:

FNP-0-AP-6, PROCEDURE ADHERENCE

SRO**Question A.1.b.2.**

Given the following situation:

A senior-level employee has held an SRO license at another facility 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 STA, 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

RO

Question A.1.a.

NO REFERENCES ALLOWED

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

NO REFERENCES ALLOWED

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

1. As you and three visitors are exiting the control room and after two of the visitors have scanned their badges the door opens to allow an operator into the control. 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 are exiting a vital area when your visitor's badge will not receive a red light.
3. Two escorts conducting a plant tour with 3 visitors each want to transfer their visitors to you. Normal plant operations are being conducted in which you are better qualified to explain. You are qualified as an escort and are authorized access to areas the visitors have been granted access to.

Answer:

1. You have permitted a person under escort out of your surveillance this constitutes a security violation. The escort must notify security immediately.
2. No security violation has occurred at this time, but security must be contacted to affect exit if the visitor badge is malfunctioning.
3. You can not escort more than 5 visitors during non-outage periods. You must understand and accept the responsibilities of an escort. You must be briefed on which areas the visitors have been authorized to enter. You must be logged down on the individual's access form as an authorized escort. The escort leaving the visitors must notify security of the new escort's name, transfer the Escort Badge, along with control of the visitors.

Reference:

Security Orientation Training GEN-017 pages 14-16

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

RO**Question A.1.b.2.**

Given the following situation:

A senior-level employee has held an SRO license at another facility 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 STA, 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