

INITIAL SUBMITTAL

V. C. SUMMER NUCLEAR STATION

EXAM NO. 50-395/2000-301
AUGUST 7 - 11, 2000

INITIAL SUBMITTAL

SCENARIO OUTLINES
AND
OPERATOR ACTIONS
(ES-D-1 & D-2)

Facility: **Summer**

Scenario No.:1

Op-Test No.: _____

Examiners: Miller - SROs

Operators:

**Davis, Guerra,
Harris - SRO**

Ernstes, Sykes - ROs, BOP

**Shue, Lindler,
Price - RO**

**Surrogate, Phillips,
Surrogate - BOP**

Objectives: Evaluate applicants' abilities to manuever unit, respond to rod control system and charging system malfunctions, and use EOPs to respond to a SBLOCA with a LOOP and no available high head safety injection.

Initial Conditions: IC-12; 50% power, MOL, equilibrium Xenon and Samarium. "A" charging pump running, PORV 444B inoperable and unable to be cycled (block valve closed and power removed), "C" charging pump racked/tagged out, "B" Charging pump set with sheared shaft, "A" EDG set to fail to load onto bus, "B" SWBP set not to load automatically on the "B" DG (manual start possible).

Turnover: 50% steady state, "C" Charging pump and PCV-444B out of service, severe thunderstorms in area. Ready to commence uppower per GOP-4.0, step 3.17.

Event No.	Malf. No.	Event Type*	Event Description
1	N/A	R (RO) R (BOP) N (SRO)	Increase power to 95%
2	TUR-12	I (RO) I (SRO)	Controlling turbine first stage pressure transmitter fails to 0 over 15 second period.
3	CVC-16	C (RO) C (SRO)	FCV-122 fails closed/sticks closed.
4	EPS-1, RCS-6	M (RO) M (BOP) M (SRO)	LOOP without delay and with "A" EDG failure to load, followed closely by SBLOCA of size to drive operators to EOP-17.0

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Appendix D

Operator Actions

Form ES-D-2

Op-Test No.: _____ Scenario No.: 1		Event No.: 2	Page 1 of 1
Event Description: Controlling first stage pressure transmitter fails to 0 over 15 second period. Initiated while power increase in progress and before 600 MWe.			
Time	Position	Applicant's Actions or Behavior	
	RO	Identify channel failure through either (AOP-401.7): comparison with operable channel noting inward rod motion or its effects Annunciators RCS Tavg/T REF DEV HI/LO Status Lights 1 st STG PRESS CHAN III 1 st STG PRESS CHAN IV PERMISV C-7A PB-447A (1 st STG PRESS) PERMISV C-7B PB-447B 91 st STG PRESS) Arming of steam dump system	
		Place ROD CNTRL BANK SEL Switch in MANUAL [AOP-401.7 step 1]	
		Ensure TREF 1 st STG PRESS Switch positioned to operable channel [AOP-401.7 step 2]	
		Adjust Control Rods until Tavg is within 1 F of Tref [AOP-401.7 step 3]	
		Restore Auto Rod Control [AOP-401.7 step 6]	
	BOP(7)	Check if Main Turbine Load > 10% [AOP-401.7 step 4]	
		Place Steam Dump Mode Selector Switch in STM PRESS [AOP-401.7	
	SRO	Direct/Coordinate operator actions	
		Notify I&C to place AMSAC in Bypass [AOP-401.7 step 8]	
	<i>SRO/RO</i>	<i>within 6 hours, trip bistables PB-474A, 484A, 494A</i>	

Appendix D

Operator Actions

Form ES-D-2

Time	Position	Applicant's Actions or Behavior
Op-Test No.: _____ Scenario No.: 1 Event No.: 4/5		Page 1 of 3
Event Description: Loss of Offsite Power with failure of "A" EDG to load followed closely by SBLOCA		
	SRO	Enter EOP-1 and direct post-trip actions
		Announce plant conditions over page system [EOP-1, step 7]
		Direct transition to EOP-2 [EOP-1.0, step 14]
	RO	Verify reactor trip [EOP-1, step 1]
		Initiate SI if req'd Verify SI equipment - identify no High Head SI (A chg pump deenergized, B chg pump with sheared shaft, C chg pump inop) [EOP-1, step 4/5/6]
		Verify RB pressure < 12 psig [EOP-1, step 8]
		Verify TCS Tcold trending to 557 F [EOP-1, step 9]
		Verify PORVs and Pzr spray valves closed [EOP-1, step 10]
		Verify power available to at least 1 PORV block valve and at least one block valve open [EOP-1, step 10]
		Check if RCS is intact [EOP-1, step 14] Identify SBLOCA
	BOP	Verify turbine trip [EOP-1, step 2]
		Identify ESF bus "A" as deenergized [EOP-1, step 3]
		Attempt to restore the "A" bus per AOP-304.
		Verify no SG faulted [EOP-1, step 12]
		Verify secondary radiation levels indicate SG not ruptured [EOP-1, step 13]

Appendix D

Operator Actions

Form ES-D-2

Time	Position	Applicant's Actions or Behavior
Op-Test No.: _____ Scenario No.: 1 Event No.: 4/5		Page 2 of 3
Event Description: Loss of Offsite Power with failure of "A" EDG to load followed closely by SBLOCA		
	SRO	Direct actions of EOP-2
		Direct transition to EOP ^{17.0} 14/14.4
		<i>Direct transition to EOP-21</i>
	RO	Reset both SI RESET TRAIN A(B) switches [EOP-2, step 4]
		Reset containment isolation [EOP-2, step 5]
		Verify PORVs closed, power available to at least 1 PORV block valve and at least one block valve open [EOP-2, step 7]
		Establish Instrument air to to the RB [EOP-2, step 9]
		Check if RB Spray should be stopped [EOP-2, step 11]
		<i>Check if RB pumps should be stopped [EOP-2.0, step 12]</i>
		<i>Shift Ccw to Fast speed in B loop [EOP-2.0, step 16b]</i>
	BOP	Check intact SG levels [EOP-2, step 3]
		Check if secondary radiation levels are normal [EOP-2, step 6]
		Place both ESF LOADING SEQ A(B) RESETS to NON-ESF LCKOUTS and AUTO-START BLOCKS [EOP-2, step 8]

Appendix D

Operator Actions

Form ES-D-2

Time	Position	Applicant's Actions or Behavior
Op-Test No.: _____ Scenario No.: 1 Event No.: 4/5 Page 3 of 3		
Event Description: Loss of Offsite Power with failure of "A" EDG to load followed closely by SBLOCA		
	SRO	Direct actions of EOP-17.0
		Direct return to EOP-2.0
	RO	Ensure proper SI valve alignment [EOP-14.0 step 1]
		Verify SI flow from all trains [EOP-14.0 step 2]
		Check SI Accumulator Discharge Isolation Valve status [EOP-14.0 step 4]
		Verify core exit thermocouples less than 1200 F [EOP-14.0 step 5]
		Check RVLIS Narrow Range Level [EOP-14.0 step 6]
		Check core exit thermocouples less than 700F [EOP-14.0 step 7]
		Reset both SI RESET TRAIN A(B) switches [EOP-14.0, step 8]
		Reset containment isolation [EOP-14.0, step 9]
		Check RB hydrogen levels [EOP-14.0, step 12]
		Check RCS vent paths [EOP-14.0, step 14]
		Close all SI Accumulator Discharge Isolation Valves [EOP-14.0, step 16]
		Verify SI flow [EOP-14.0, step 19]
		Check core cooling [EOP-14.0, step 20]
	BOP	Place both ESF LOADING SEQ A(B) RESETS to NON-ESF LCKOUTS and AUTO-START BLOCKS [EOP-14.0, step 10]
		Establish instrument air to RB [EOP-14.0 step 11]
		Check intact SG levels [EOP-14.0, step 13]
		Depressurize all intact SGs until RCS and SG pressures < 140 psig [EOP-14.0, step 15]
		Depressurize all intact SGs to atmospheric pressure [EOP-14.0, step 18]

Transition to EOP-2-1

Facility: Summer	Scenario No.: 2	Op-Test No.: _____	
Examiners: _____ _____ _____		Operators: U2, U1, R1 U4, U3, * I, U5, *	
<p>Objectives: Evaluate applicants' abilities to maneuver unit, remove feed pump from service, respond to instrument failures, respond to loss of condensate pump, a steam pressure transmitter failure, a loss of a 120 VAC instrument bus, and a Main Steam Line Break/ATWS.</p>			
<p>Initial Conditions: IC-10; 100% power, MOL, Equilibrium conditions, SGTL below T/S and trending upward on the "C" SG, PCS-9 (Rx Trip Brkrs fail) in, Auto-start failure of TDEFWP disabled.</p>			
<p>Turnover: Plant at 100% steady state. "C" SG has slight tube leak, trending upward over last 7 days. Predictive maintenance has recommended removing A MFP from service for bearing repairs. Crew to reduce power to 88% and remove feed pump from service.</p>			
Event No.	Malf. No.	Event Type*	Event Description
1	N/A	N (RO) N(BOP) N(SRO)	Reduce power to 88%, remove feedwater pump from service
2	MSS-9	I (BOP) I (SRO)	Fail non-controlling steam flow channel high
3	FWM-2	C(BOP) C(SRO)	Condensate pump trip
4		I (RO) I(BOP) I(SRO)	Fail PT-2000 High - "A" SG PORV opens
5	MSS-3	M (RO) M(BOP) M(SRO)	"A" Steamline break inside containment with ATWS (PCS-9) and failure of TDEFWP to auto-start (manual start by operator in EOP possible)

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

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EXAM NO. 50-395/2000-301

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INITIAL SUBMITTAL

**JPMS - ADMIN, SIMULATOR,
& IN-PLANT**

**ADMIN TOPICS OUTLINES,
CONTROL ROOM SYSTEMS &
FACILITY WALK-THROUGH TEST
OUTLINES**

Facility: Summer Exam Level (circle one): RO / SRO(I) / SRO(U)		Date of Examination: _____ Operating Test No.: _____
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. JPS-11 Pressurizer Pressure Control Malfunction	M, A, S	Reactor Press. Cont.
b. JPSF-059 Alternate Isolation of Ruptured S/G	D, S, A	Core Heat Removal (S)
c. NRC-2 Perform FEP Actions	N, S	Plant Service Systems
B.2 Facility Walk-Through		
a. JPP-108 Locally Shed Non-Essential DC Loads	D	Electrical
b. JPP-166 Establish Chilled Water Alternate Cooling to CHPP	D, R	RCS Inv. Cont.
* 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: Summer		Date of Examination: _____	
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: _____	
B.1 Control Room Systems			
System / JPM Title	Type Code*	Safety Function	
a. JPS-11 Pressurizer Pressure Control Malfunction <i>LEAD TO RECALIBRATE STUCK OPEN VALVE RECOMMENDATORY READ. 2 QUE RECOMMEND APPROX. FAILURE IF ANTICIPATED trip.</i>	M, A, S	Reactor Press. Cont.	
b. JPSF-059 Alternate Isolation of Ruptured SIG <i>START @ STOP</i>	D, S, A	Core Heat Removal (S)	
c. NRC-1 Perform FEP Actions <i>FIX</i>	N, S	Plant Service Systems	
d. JPS-082 <u>Align Idle RHR Loop to the RWST</u> <i>TITLE</i>	M, A, S, L	Core Heat Removal (P)	
e. JPS-046 Transfer of In-Service Charging Pump <i>ANNOUNC FIXED 20 SEC DELAY 2 TIME CRITICAL?</i>	M, S, A	RCS Inv. Cont.	
f. JPS-012 Dropped Rod Recovery <i>✓</i>	D, S	Reactivity	
g. JPSF-066 Perform NIS Power Range Heat Balance <i>✓</i>	(M)C	Inst.	
B.2 Facility Walk-Through			
a. JPP-108 Locally Shed Non-Essential DC Loads <i>✓</i>	D	Electrical	
b. JPP-166 Establish Chilled Water Alternate Cooling to CHPP <i>✓</i>	D, R	RCS Inv. Cont.	
c. NRC-3 Loss of SFPC <i>FIX</i>	N, R	Plant Service Systems	
* 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			

for scenario

Facility: Summer		Date of Examination: _____
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: _____
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. JPS-012 Dropped Rod Recovery	D, S	Reactivity
b. JPS-046 Transfer of In-Service Charging Pump	M, S, A	RCS Inv. Cont.
c. JPS-11 Pressurizer Pressure Control Malfunction	M, A, S	Reactor Press. Cont.
d. JPS-082 Align Idle RHR Loop to the RWST	M, A, S, L	Core Heat Removal (P)
e. JPSF-059 Alternate Isolation of Ruptured S/G	D , S, A H	Core Heat Removal (S)
f. NRC-1 Perform FEP Actions	N, S	Plant Service Systems
g. JPSF-066 Perform NIS Power Range Heat Balance	M, C	Inst.
B.2 Facility Walk-Through		
a. JPP-108 Locally Shed Non-Essential DC Loads	D	Electrical
b. JPP-039 Recover from Auto Termination of Waste Gas Release	D, R	Rad Release
c. JPP-144 Start Up the H2 Recombiners (H ₂ <3.5%)	D, R	Containment Integrity
* 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: _____ Exam Level (circle one): RO / SRO(I) / SRO(U)	Date of Examination: _____ Operating Test No.: _____	
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. JPS-11 Pressurizer Pressure Control Malfunction	M, A, S	Reactor Press. Cont.
b. JPSF-059 Alternate Isolation of Ruptured S/G	D, S, A	Core Heat Removal (S)
c. NRC-1 Perform FEP Actions	N, S	Plant Service Systems
d.		
e.		
f.		
g.		
B.2 Facility Walk-Through		
a. JPP-108 Locally Shed Non-Essential DC Loads	D	Electrical
b. JPP-039 Recover from Auto Termination of Waste Gas Release	D, R	Rad Release
c.		
* 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: _____		Date of Examination: _____
Examination Level (circle one): RO / SRO		Operating Test Number: _____
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	Calculate RCS Leak Rate GEN 2.1.25 (3.1)
	Conduct of Operations	Review Tagout for B Charging Pump GEN 2.1.24 (3.1)
A.2	Equipment Control	Ability to Track LCOs GEN 2.2.23 (3.8)
A.3	Radiation Control	Evaluate Worker Exposure GEN 2.3.1 (3.0)
A.4	Emergency Plan	Classify Events GEN 2.4.41 (4.1)

Facility: Summer		Date of Examination: _____
Examination Level (circle one): RO / SRO		Operating Test Number: _____
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	Calculate RCS Leak Rate GEN 2.1.25 (2.8)
	Conduct of Operations	Prepare Tagout for B Charging Pump GEN 2.1.24 (2.8)
A.2	Equipment Control	Ability to Track LCOs GEN 2.2.23 (2.6)
		(Empty)
A.3	Radiation Control	Evaluate Worker Exposure GEN 2.3.1 (2.6)
		(Empty)
A.4	Emergency Plan	Make notification to NRC GEN 2.4.43 (2.8)
		(Empty)

MONDAY 8/7

Travel to site

	<u>SRO</u>	<u>RO</u>	<u>BOP</u>	
11:00 am	U1	R1	U2	Scenario #1
1:00 pm	U3	R2	U4	"
3:00 pm	U5	I	*	"

TUESDAY 8/7

	<u>SRO</u>	<u>RO</u>	<u>BOP</u>	
7:00 am	U2	U1	R1	Scenario #2
9:00 am	U4	U3	R2	"
11:00 am	I	U5	*	"

	<u>4 simulator JPMs</u>	<u>SRO admin</u>
1:00pm	R1	
2:15 pm	R2	
3:30 pm	I	

WEDNESDAY

	<u>2 simulator JPMs</u>	<u>3 In-plant JPMs</u>
7am	U1	U2
8am	R1	U1
9am	U2	R1
10	U3	U4
11	R2	U3
12	U4	R2
1	U5	I
2		U5
3	I	

THURSDAY

Admin

Facility: _____ Date of Examination: _____ Exam Level (circle one): RO / SRO(I) / SRO(U) Operating Test No.: _____		
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. JPSF-012 - DROPPED ROD RECOVERY (WITH FAILURE) REPEAT OF LAST YEAR - COULD GO WITHOUT SECOND ROD DEP	D, S	REACTIVITY 1
b. JPS - 046 TRANSFER IN-SERVICE CHARGING PUMP	D, S, A M	RCS INERT CONTROL 2
c. JPS-11 - PER PRESS CONT MALL (CONSIDER MODIFYING TO KEEP SPRAY VALVE OPEN PROMPTING TRIP ON ATWS MAN Press W) - RORV?	M, A, C of	Rx PRESS CONTROL 3
d. JPS-082 - ALIGN IDLE RHR LOOP TO THE RWST START LAKIN K - 330 - START WITH ALAKH - DO ACP II - (MODIFY STEP 12 TO REG PUMP START)	M, A, S, L	CORE HEAT REMOVAL 4 P
e. JPSF-059 - ALTERNATE ISOLATION OF RUPTURED S/G DO ENTIRE STEP 3 - FORMS NOT QUOTE UNDOE	D, S, A of	CORE HEAT REMOVAL 4 S
f. JPSF-045 - ENSURE CONTAINMENT ISOLATION DIFFERENT VALVE ? - REPLACE w/ FIRE PIST	D, A, S	CONTAINMENT ISOLATION 5
g. JPSF-066 - PERFORM NIS POWER RANGE HEAT BALANCE DO MANUAL CALL OR SWIV WITH LR	D, A, C of 11	INSTRUMENTATION 7
B.2 Facility Walk-Through		
a. JPP-108 - LOCALLY SHED NON-ESSENTIAL DC LOADS	D, of	ELECTRICAL 6
b. JPP-039 - RECOVER FROM W/TP TERMINATION OF WASTE GAS RELEASE * VERIFY SAFETY INDICATION	D, R of	RAD RELEASE 9
c. JPP-106 ESTABLISH CHILLED WATER ALTERNATE COOLING TO CHARGING PUMP **	D, R	7
* 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		

* NEED PROCEDURE
 ** NEED JPM

Facility: Summer		Date of Examination: _____
Examination Level (circle one): RO / SRO		Operating Test Number: _____
Administrative Topic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions	
A.1	Conduct of Operations	Calculate RCS Leak Rate GEN 2.1.25 (2.8)
	Conduct of Operations	Prepare Tagout for B Charging Pump GEN 2.1.24 (2.8)
A.2	Equipment Control	Ability to Track LCOs GEN 2.2.23 (2.6)
A.3	Radiation Control	Evaluate Worker Exposure GEN 2.3.1 (2.6)
A.4	Emergency Plan	Make notification to NRC GEN 2.4.43 (2.8)

Facility: Summer		Date of Examination: _____
Examination Level (circle one): RO / SRO		Operating Test Number: _____
Administrative Topic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions	
A.1	Conduct of Operations	Calculate RCS Leak Rate GEN 2.1.25 (3.1) <i>Fax NUMBERS TO ME</i>
	Conduct of Operations	Review Tagout for B Charging Pump GEN 2.1.24 (3.1) <i>Fax sheets TO PERRY</i>
A.2	Equipment Control	Ability to Track LCOs GEN 2.2.23 (3.8) <i>Fax sheets TO PERRY</i>
A.3	Radiation Control	Evaluate Worker Exposure GEN 2.3.1 (3.0) <i>Fax TO PERRY</i>
A.4	Emergency Plan	Emergency Plan Implementation GEN 2.4.41 (4.1)
		<i>FDG - CONT BE DONE AS SPECIFIED</i>

Realize you'd pretty much have to be in a general emergency. - Phone - distance rather than angular. - on EPP says whenever GE is disturbed, automatically evacuate a number of zones.

recommended 2 - two g's or P4g's - one on auto photo (closed up) one on updated dose projection.

Facility: **Summer**

Date of Examination: _____

Examination Level (circle one): **RO** / SRO

Operating Test Number: _____

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	Calculate RCS Leak Rate GEN 2.1.25 (2.8)
	Conduct of Operations	Prepare Tagout for B Charging Pump GEN 2.1.24 (2.8)
A.2	Equipment Control	Ability to Track LCOs GEN 2.2.23 (2.6)
A.3	Radiation Control	Evaluate Worker Exposure GEN 2.3.1 (2.6)
A.4	Emergency Plan	EP Question - Evacuation GEN 2.4.42 (3.3) <i>XH to Perry</i>
		EP Question - Non-essential personnel definition GEN 2.4.42 (3.3)

V. C. Summer

Job Performance Measure

JPM No: A.1.a

Calculate RCS Leak Rate

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: GEN 2.1.25 (2.8)

10CFR55.45 Reference: (a)13

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Perform an operational leakage test in accordance with STP-114.002.
The IPCS Computerized leak rate program is not available.

EXAMINER'S COPY

JPM No: A.1.a

JPM Title: Calculate RCS leak rate

Required Items: STP-114.002

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Perform an operational leakage test in accordance with STP-114.002.
The IPCS Computerized leak rate program is not available.

Task Standard: Obtain correct value for RCS leak rate given the following:

- Applicant should begin at step 6.5 of the subject procedure
- Cues should be provided as follows:

Parameter	Starting Value	Ending Value
Loop Tavg*	588	588.5
Pzr Level	58	58
VCT Level	48	21.5
PRT Level	37	38
RCDT Level	20	76
After recording initial data, cue applicant that 1 hr has passed.		
* applicant should pick an RCS loop as the common reference for temperature.		

Applicant should correctly determine leak rate and determine that result does not satisfy acceptance criteria to be successful in this JPM

V. C. Summer

Job Performance Measure

JPM No: A.1.b

Prepare Tagout for B Charging Pump

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: GEN 2.1.24 (2.8)

10CFR55.45 Reference: (a)13

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: The B Charging Pump is to be taken out of service for maintenance. The Shift Supervisor has instructed you to prepare a danger tagout which will completely isolate the pump (including any auxiliaries directly associated with the pump). You are to identify the mechanical and electrical components necessary to affect the isolation of the pump, the necessary positions of the components and the order in which the components should be positioned, if such an order is necessary.

EXAMINER'S COPY

JPM No: A.1.b

JPM Title: Prepare Tagout for B Charging Pump

Required Items: AP-201, provide applicant with two sheets of SAP-201, Attachment IC

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: The B Charging Pump is to be taken out of service for maintenance. The Shift Supervisor has instructed you to prepare a danger tagout which will completely isolate the pump (including any auxiliaries directly associated with the pump). You are to identify the mechanical and electrical components necessary to affect the isolation of the pump, the necessary positions of the components and the order in which the components should be positioned, if such an order is necessary.

Task Standard: Correctly identify components and positions/tagout order as shown on key. All component tags shown on key are considered critical except suction header vent valve (may be overlooked as being inside the boundary of the isolation for operation later) and closing and tripping control power breakers, which the applicant may choose to track on the "Component Realignment and Verification Log."

V. C. Summer

Job Performance Measure

JPM No: A.2

Evaluate OOS Equipment Under TS

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: GEN 2.2.23 (2.6)

10CFR55.45 Reference: (a)13

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: You have been assigned by the CRS to perform a review of an R&R checksheet prior to his approval.

EXAMINER'S COPY

JPM No: A.2

JPM Title: Evaluate OOS Equipment Under TS

Required Items: AP-205, R&R index

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: You have been assigned by the CRS to perform a review of an R&R checksheet prior to his approval.

Task Standard: The applicant should identify that the valve work places the unit in TS 3.0.3, as two independent ECCS trains are required which include the B RHR pump and the capability to automatically swap suction sources. The applicant may also identify that the work places the unit in a 2 hour action statement per TS 3.8.1.1 action b.3 (if one DG inop, the SSCs relying on the remaining DG must be operable); however, full credit is given to the identification of 3.0.3 applicability.

V. C. Summer

Job Performance Measure

JPM No: A.3

Evaluate Worker Exposure

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: GEN 2.3.1 (2.6)

10CFR55.45 Reference: (a)10

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Given the following conditions:

- Radiation surveys in the Auxiliary Building are as follows:
 - Letdown Line = 45 mREM/hr
 - C charging pump room = 800 mREM/hr
- The C charging pump is out of service for pump shaft replacement
- The work activity is expected to take 3 individuals 12 hours to complete
- Doses (present quarter) for the individuals are as follows:
 - Worker A = 480 mREM
 - Worker B = 580 mREM
 - Worker C = 1480 mREM

Assuming all three individuals will spend the entire 12 hours in the charging pump room, determine their exposures and any administrative requirements that would have to be satisfied.

EXAMINER'S COPY

JPM No: A.2

JPM Title: Evaluate Worker Exposure

Required Items: calculator, HPP-153

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Given the following conditions:

- Radiation surveys in the Auxiliary Building are as follows:
 - Letdown Line = 800 mrem/hr
 - C charging pump room = 45 mrem/hr
- The C charging pump is out of service for pump shaft replacement
- The work activity is expected to take 3 individuals 12 hours to complete
- Doses (present quarter) for the individuals are as follows:
 - Worker A = 480 mrem
 - Worker B = 580 mrem
 - Worker C = 1480 mrem

Assuming all three individuals will spend the entire 12 hours in the charging pump room, determine their exposures and any administrative requirements that would have to be satisfied.

Task Standard: Calculate the following results:

- Worker A - 1020 mrem - needs extension approved by his supervisor and the manager of HP
- Worker B - 1120 mrem - needs extension approved by his supervisor and the manager of HP
- Worker C - 2020 mrem - needs extension approved by his supervisor, the manager of HP, his manager, and the general manager, nuclear plant operations.

V. C. Summer

Job Performance Measure

JPM No: A.4

Emergency Plan Knowledge Questions

Applicant's Name: _____

Evaluation Date: _____

Completion Time:

Application: _____

K/A Reference: GEN 2.4.39 (3.3)
10CFR55.45 Reference: (a)11

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

Answer the following questions

QUESTION 1: (No Reference)

What do you do if you are working in the RCA and an evacuation is announced?

QUESTION 2: (Reference allowed)

An event is in progress and the emergency plan calls for the evacuation of all non-essential staff. Who are the personnel that do not evacuate?

EXAMINER'S COPY

JPM No: A.4

JPM Title: Emergency Plan Knowledge Questions

Required Items: EPP-002, Attachment IIIA

QUESTION 1: (No Reference)

What do you do if you are working in the RCA and an evacuation is announced?

ANSWER:

Personnel who have evacuated affected areas within the RCA shall remain at the 412 Control Building until monitored for contamination or directed otherwise by HP personnel. (Personnel decontamination as per EPP-010, will be performed as required.)

REFERENCE: EPP-12, Revision 11, page 3, step 5.1.5

KA: 2.4.42: Knowledge of the RO's responsibilities in emergency plan implementation. (3.3)

QUESTION 2: (Reference allowed)

An event is in progress and the emergency plan calls for the evacuation of all non-essential staff. Who are the personnel that do not evacuate?

ANSWER:

Essential Staff - Personnel required by the Emergency Plan Procedures to fill all the positions, for one shift of the Emergency Response Organization.

REFERENCE: EPP-23, Revision 11, page 1, step 3.1.2

KA: 2.4.42: Knowledge of the RO's responsibilities in emergency plan implementation. (3.3)

Facility: Summer		Date of Examination: _____
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: _____
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. JPS-012 Dropped Rod Recovery	D, S	Reactivity
b. JPS-046 Transfer of In-Service Charging Pump	M, S, A	RCS Inv. Cont.
c. JPS-11 Pressurizer Pressure Control Malfunction	M, A, S	Reactor Press. Cont.
d. JPS-082 Align Idle RHR Loop to the RWST	M, A, S, L	Core Heat Removal (P)
e. JPSF-059 Alternate Isolation of Ruptured S/G	D, S, A	Core Heat Removal (S)
f. NRC-1 Perform FEP Actions	N, S	Plant Service Systems
g. JPSF-066 Perform NIS Power Range Heat Balance	M, C	Inst.
B.2 Facility Walk-Through		
a. JPP-108 Locally Shed Non-Essential DC Loads	D	Electrical
b. JPP-039 Recover from Auto Termination of Waste Gas Release	D, R	Rad Release
c. JPP-144 Start Up the H2 Recombiners (H2<3.5%)	D, R	Containment Integrity
* 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		

V. C. Summer
Job Performance Measure
JPM No: B.1.a
JPS-012
Dropped Rod Recovery

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 003AA1.02 (3.6/3.4)
10CFR55.45 Reference: (a)6

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant was operating at 75% power with all controls in automatic when control rod "F2" dropped due to a blown fuse. The blown fuse was replaced in the 1AC power cabinet. Actions of AOP-403.6 have been completed through step 10.

Assigned Task: The CRS has directed you to recover control rod "F-2" per AOP-403.6, starting with step 11.

EXAMINER'S COPY

JPM No: B.1.a

JPM Title: Dropped Rod Recovery

Required Items:

Simulator Setup: 100% steady state

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant was operating at 75% power with all controls in automatic when control rod "F2" dropped due to a blown fuse. The blown fuse was replaced in the 1AC power cabinet. Actions of AOP-403.6 have been completed through step 10.

Assigned Task: The CRS has directed you to recover control rod "F-2" per AOP-403.6, starting with step 11.

Task Standard: Return rod to bank position.

V. C. Summer

Job Performance Measure

JPM No: B.1.b

JPS-046

**Transfer of In-Service Charging Pump
TIME CRITICAL**

Applicant's Name: _____

Evaluation Date: _____

Completion Time: 1minute

Application: _____

K/A Reference: 004A4.08 (3.8/3.4)

10CFR55.45 Reference: (a)8

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Align the "C" charging pump to the "A" train.

EXAMINER'S COPY

JPM No: B.1.b

JPM Title: Transfer of in-service charging pump

Required Items:

Simulator Setup: 100% steady state

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Align the "C" charging pump to the "A" train.

Task Standard: Perform steps of SOP-102. Upon failure of the CCW supply valve to open to the C charging pump, secure the pump within 1 minute from pump start.

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Maintain 100% operation.

EXAMINER'S COPY

JPM No: B.1.c

JPM Title: Pressurizer Pressure Control Malfunction

Required Items:

Simulator Setup: 100% steady state

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Maintain 100% power.

Task Standard: Perform steps of AOP-401.5.

V. C. Summer

Job Performance Measure

JPM No: B.1.c

JPS-011

Pressurizer Pressure Control Malfunction

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 027AA2.15 (3.7/4.0)
10CFR55.45 Reference: (a)3

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

V. C. Summer

Job Performance Measure

JPM No: B.1.d

JPS-082

Align Idle RHR Loop to the RWST

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 005A4.01 (3.6/3.4)
10CFR55.45 Reference: (a)7

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at MODE 5 with the RCS at mid-loop conditions
 The "A" RHR loop is in service
 RCS hot leg level is at approximately 15.5".

Assigned Task: Maintain plant conditions.

EXAMINER'S COPY

JPM No: B.1.d

JPM Title: Align the Idle RHR Loop to the RWST

Required Items:

Simulator Setup: MODE 5, mid loop

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at MODE 5 with the RCS at mid-loop conditions
 The "A" RHR loop is in service
 RCS hot leg level is at approximately 15.5".

Assigned Task: Maintain plant conditions. The unit is at 100% power, steady state.

Assigned Task:: Maintain 100% power.

Task Standard: Perform steps of AOP-115.1. CRS will direct that level be increased per steps 11-13 of the AOP.

V. C. Summer

Job Performance Measure

JPM No: B.1.e

JPSF-059

Alternate Isolation of Ruptured S/G

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 038EA2.01 (4.1/4.7)
10CFR55.45 Reference: (a)6

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The C S/G has experienced a tube rupture.
 The crew has taken actions up to and including step 3.h of EOP-4.0

Assigned Task: Isolate the C S/G per EOP-4.0, step 3 .

EXAMINER'S COPY

JPM No: B.1.e

JPM Title: Alternate Isolation of Ruptured S/G

Required Items:

Simulator Setup: Tube rupture in progress in C S/G

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The C S/G has experienced a tube rupture.
 The crew has taken actions up to and including step 3.h of EOP-4.0

Assigned Task: Isolate the C S/G per EOP-4.0, step 3 .

Task Standard: Perform steps of AOP-115.1. CRS will direct that level be increased per steps 11-13 of the AOP.

V. C. Summer

Job Performance Measure

JPM No: B.1.f

**NRC-1
Perform FEP Actions**

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 067AA2.17 (3.5/4.3)
10CFR55.45 Reference: (a)13

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: 100% Power, steady state.

Assigned Task: The unit is operating at 100% power when a fire is reported in the intermediate building in fire zone IB-25.1.2. The CRS has directed you to perform FEP-2.0, Attachment III, as modified by Part Numbers 40, 43, and 44.

EXAMINER'S COPY

JPM No: B.1.f

JPM Title: Perform FEP Actions

Required Items: FEP-2.0, Attachment III and Part Numbers 40, 43, and 44

Simulator Setup: N/A

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: 100% power, steady state.

Assigned Task: The unit is operating at 100% power when a fire is reported in the intermediate building in fire zone IB-25.1.2. The CRS has directed you to perform FEP-2.0, Attachment III, as modified by Part Numbers 40, 43, and 44.

Task Standard: Perform steps of FEP-2.0, Attachment III, as modified by Part Numbers 40, 43, and 44.

Facility: SummerTask No: **f**Task Title: **Respond to Report of Fire (RO)**

Job Performance Measure No: _____

K/A Reference: **2.4.27**

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

Date: _____

Method of testing:Simulated Performance Actual Performance _____

Classroom _____

Simulator _____

Plant

READ TO THE EXAMINEE

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

Initial Conditions: **The unit is at 100% power.****Task Standard: The applicant must apply the applicable portions of the fire emergency procedures, as modified appropriately for the fire zone in question.**Required Materials: **FEPs**

General References:

Initiating Cue: The unit is operating at 100% power when a fire is reported in the intermediate building in fire zone IB-25.1.2. The CRS has directed you to perform FEP-2.0, Attachment III, as modified by Part Numbers 40, 43, and 44.

Time Critical Task: YES/NO

Validation Time:

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

_____ Performance step:

Standard: **Perform the actions of Part ARO-40:**

- Open disconnect switches DS-10 and DS-11 in XCP-6113, sub-panel 19B.**

Comment:

_____ Performance step:

Standard: **Perform the actions of Part ARO-43:**

- Open disconnect switches DS-5 and DS-6 in XCP-6112, sub-panel 19A.**
- Open disconnect switches DS-8 and DS-9 in XCP-6113, sub-panel 19B.**

Comment:

_____ Performance step:

Standard: **Perform the actions of Part ARO-44:**

- Open disconnect switches DS-3 and DS-4 in XCP-6112, sub-panel 19A.**
- Open disconnect switches DS-7 and DS-12 in XCP-6113, sub-panel 19B.**

Comment:

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 1:**

- Select PWR RLF and close PCV-2000, 2010, and 2020**

Comment:

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 2:**

- Open disconnect switches DS-32 and DS-33 in XCP-6112, sub panel-19A**
- Open disconnect switches DS-31 and DS-13 in XCP-6113, sub panel-19B**

Comment:

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 3:**

- Establish Train A CCW using CCW Pump A or C**

Comment:

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 4:**

- Establish Train A charging using Charging Pump A or C**
 - Open LCV-115B**
 - Open LCV-115D**
 - Open MVT-8109A(C)**
 - Ensure MVG-8106 open**
 - Open MVG-8130A**
 - Open MVG-8130B**
 - Start pump A or C**
 - Close LCV-115E**

Comment:

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 5:**

- On integrated Fire Service Panel, select POWER SELECT to Bus A**

Comment:

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 6:**

- Remove power from Bus 1DB**
 - Verify BUS 1DB DG FEED breaker is open**
 - Verify the IB Operator has reported DG B is disabled (cue: DG B is disabled)**
 - Open Bus 1DB NORM FEED breaker**
 - Open BUS 1DB ALT FEED breaker**

Comment:

_____ Performance step:

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

Standard: **Perform actions of FEP-2.0, Attachment III, step 7:**

- Establish power to Bus 1DA from DG A**
 - Start DG A by pressing EMERG START**
 - Verify normal voltage and frequency indications**
 - Verify BUS 1DA ALT FEED breaker is open**
 - Open BUS 1DA NORM FEED breaker**
 - Verify BUS 1DA DG FEED breaker is closed**

Comment:

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 8:**

- Ensure Train A loads start**
 - charging pump**
 - RHR Pump**
 - SW Pump**
 - HVAC Chilled Water pump**
 - CCW Pump**
 - Motor Driven EFW pump**
 - RBCU 64A and 65A (slow speed)**
 - FHB Exhaust Fan**
 - SWBP**
 - HVAC chiller**
 - XFN-32A, 36A, 38A, 39A, 50, 80A, 106A-81A, 132**

Comment:

_____ Performance step:

Standard: **Perform actions of FEP-2.0, Attachment III, step 9:**

- Ensure ventilation aligned**
 - XFN-46A running**
 - XFN-47 if C charging pump is the Train A pump**
 - XDP-113A open**

Comment:

Terminating cue: Terminate JPM at this point

V. C. Summer

Job Performance Measure

JPM No: B.1.f

JPSF-066

Perform NIS Power Range Heat Balance

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 015A3.03 (3.9/3.9)
10CFR55.45 Reference: (a)4

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant is at 100% power
Initial conditions for performance of STP-102.002 have been met.

Assigned Task: The CRS has directed that you perform a power range heat balance per STP-102.002, 6.1.

EXAMINER'S COPY

JPM No: B.1.g

JPM Title: Perform NIS Power Range Heat Balance

Required Items:

Simulator Setup: N/A

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant is at 100% power
Initial conditions for performance of STP-102.002 have been met.

Assigned Task: The CRS has directed that you perform a power range heat balance per STP-102.002, 6.2 (using main control board readings).

Task Standard: Complete STP-102.002

V. C. Summer

Job Performance Measure

JPM No: B.2.a

JPP-108

Locally Shed Non-Essential DC Loads

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 055EK3.02 (4.3/4.6)

10CFR55.45 Reference: (a)5

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant is at 100% power when a station blackout occurs, with subsequent entry into EOP-6.0.

Assigned Task: The CRS has directed that you strip nonessential DC loads per EOP-6.0, Attachment 2.

EXAMINER'S COPY

JPM No: B.2.a

JPM Title: Locally Shed Non-Essential DC Loads

Required Items:

Simulator Setup: N/A

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions The plant is at 100% power when a station blackout occurs, with subsequent entry into EOP-6.0.

Assigned Task: The CRS has directed that you strip nonessential DC loads per EOP-6.0, Attachment 2.

Task Standard: Perform steps of EOP-6.0, Attachment 2.



Facility: Summer		Date of Examination: _____
Examination Level (circle one): RO / SRO		Operating Test Number: _____
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	Calculate RCS Leak Rate GEN 2.1.25 (3.1)
	Conduct of Operations	Review Tagout for B Charging Pump GEN 2.1.24 (3.1)
A.2	Equipment Control	Ability to Track LCOs GEN 2.2.23 (3.8)
A.3	Radiation Control	Evaluate Worker Exposure GEN 2.3.1 (3.0)
A.4	Emergency Plan	Emergency Plan Implementation GEN 2.4.41 (4.1)

V. C. Summer

Job Performance Measure

JPM No: A.1.a

Calculate RCS Leak Rate

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: **SRO**

K/A Reference: **GEN 2.1.25 (2.8)**

10CFR55.45 Reference: **(a)13**

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Perform an operational leakage test in accordance with STP-114.002.
The IPCS Computerized leak rate program is not available.

EXAMINER'S COPY

JPM No: A.1.a

JPM Title: Calculate RCS leak rate

Required Items: STP-114.002

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Perform an operational leakage test in accordance with STP-114.002. The IPCS Computerized leak rate program is not available.

Task Standard: Obtain correct value for RCS leak rate given the following:

- Applicant should begin at step 6.5 of the subject procedure
- Cues should be provided as follows:

Parameter	Starting Value	Ending Value
Loop Tavg*	588	588.5
Pzr Level	58	58
VCT Level	48	21.5
PRT Level	37	38
RCDT Level	20	76
After recording initial data, cue applicant that 1 hr has passed.		
* applicant should pick an RCS loop as the common reference for temperature.		

Applicant should correctly determine leak rate and determine that result does not satisfy acceptance criteria to be successful in this JPM

V. C. Summer

Job Performance Measure

JPM No: A.1.b

Review Tagout for B Charging Pump

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: GEN 2.1.24 (2.8)

10CFR55.45 Reference: (a)13

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: The B Charging Pump is to be taken out of service for major maintenance. A danger tagout has been prepared which will completely isolate the pump (including any auxiliaries directly associated with the pump). You are to review the tagout component log for accuracy under SAP-201.

EXAMINER'S COPY

JPM No: A.1.b

JPM Title: Review Tagout for B Charging Pump

Required Items: AP-201, provide applicant with prepared sheets of SAP-201, Attachment IC

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: The B Charging Pump is to be taken out of service for major maintenance. A danger tagout has been prepared which will completely isolate the pump (including any auxiliaries directly associated with the pump). You are to review the tagout component log for accuracy under SAP-201.

Task Standard: Correctly identify components and positions/tagout order errors as shown on key. All component tags shown on key are considered critical except suction header vent valve (may be overlooked as being inside the boundary of the isolation for operation later) and closing and tripping control power breakers, which the applicant may choose to track on the "Component Realignment and Verification Log."

Errors:

- XMC1DB2YG8IL, Charging Pump B minimflow isolation, XVT8109-CS, AB 463, Breaker open, not included.
- Tag 6 - "open" should be "closed"
- Tag 7 - "XVG 08471C-CS" should be "XVT 08471B-CS"
- Tag 8 - "closed" should be "open"
- Restoration order steps 3 and 4 should be reversed per SAP-201, Attachment IX.

V. C. Summer

Job Performance Measure

JPM No: A.2

Evaluate OOS Equipment Under TS

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: **SRO**

K/A Reference: **GEN 2.2.23 (2.6)**

10CFR55.45 Reference: **(a)13**

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Perform a review of an R&R checksheet prior to approval.

EXAMINER'S COPY

JPM No: A.2

JPM Title: Evaluate OOS Equipment Under TS

Required Items: AP-205, R&R index

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Perform a review of an R&R checksheet prior to approval.

Task Standard: The applicant should identify that the valve work places the unit in TS 3.0.3, as two independent ECCS trains are required which include the B RHR pump and the capability to automatically swap suction sources. The applicant may also identify that the work places the unit in a 2 hour action statement per TS 3.8.1.1 action b.3 (if one DG inop, the SSCs relying on the remaining DG must be operable); however, full credit is given to the identification of 3.0.3 applicability.

V. C. Summer

Job Performance Measure

JPM No: A.3

Evaluate Worker Exposure

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: **SRO**

K/A Reference: **GEN 2.3.1 (2.6)**

10CFR55.45 Reference: **(a)10**

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Given the following conditions:

- Radiation surveys in the Auxiliary Building are as follows:
 - Letdown Line = 45 mREM/hr
 - C charging pump room = 800 mREM/hr
- The C charging pump is out of service for pump shaft replacement
- The work activity is expected to take 3 individuals 12 hours to complete
- Doses (present quarter) for the individuals are as follows:
 - Worker A = 480 mREM
 - Worker B = 580 mREM
 - Worker C = 1480 mREM

Assuming all three individuals will spend the entire 12 hours in the charging pump room, determine their exposures and any administrative requirements that would have to be satisfied.

EXAMINER'S COPY

JPM No: A.3

JPM Title: Evaluate Worker Exposure

Required Items: calculator, HPP-153

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Given the following conditions:

- Radiation surveys in the Auxiliary Building are as follows:
 - Letdown Line = 800 mrem/hr
 - C charging pump room = 45 mrem/hr
- The C charging pump is out of service for pump shaft replacement
- The work activity is expected to take 3 individuals 12 hours to complete
- Doses (present quarter) for the individuals are as follows:
 - Worker A = 480 mrem
 - Worker B = 580 mrem
 - Worker C = 1480 mrem

Assuming all three individuals will spend the entire 12 hours in the charging pump room, determine their exposures and any administrative requirements that would have to be satisfied.

Task Standard: Calculate the following results:

- Worker A - 1020 mrem - needs extension approved by his supervisor and the manager of HP
- Worker B - 1120 mrem - needs extension approved by his supervisor and the manager of HP
- Worker C - 2020 mrem - needs extension approved by his supervisor, the manager of HP, his manager, and the general manager, nuclear plant operations.

V. C. Summer

Job Performance Measure

JPM No: A.4

Emergency Plan Implementation

Applicant's Name: _____

Evaluation Date: _____

Completion Time:

Application: **SRO**

K/A Reference: **GEN 2.4.39 (3.3)**

10CFR55.45 Reference: **(a)11**

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit was at 100% power, steady state when the following sequence of events occurred:

- 1000 Severe thunderstorms began moving through the area.
- 1025 Tornadoes were spotted within 5 miles of the site
- 1040 A tornado touched down in the switchyard, resulting in a total loss of offsite power
- 1050 Watchstanders report that a tornado-generated missile has penetrated containment (persons outside the reactor building can see into containment)
- 1055 Control room operators diagnose a LOCA
- 1130 Core exit thermocouples indicate approximately 850°F

Assigned Task: Given the sequence of events above, determine what, if any, emergency declarations should have been made and when. Additionally, given the data on the attached sheets, determine what, if any Protective Action Guidelines should be issued.

EXAMINER'S COPY

JPM No: A.4

JPM Title: Emergency Plan Implementation

Required Items: calculator, HPP-153

Simulator Setup:

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit was at 100% power, steady state when the following sequence of events occurred:

- 1000 Severe thunderstorms began moving through the area.
- 1025 Tornadoes were spotted within 5 miles of the site
- 1040 A tornado touched down in the switchyard, resulting in a total loss of offsite power
- 1050 Watchstanders report that a tornado-generated missile has penetrated containment (persons outside the reactor building can see into containment)
- 1055 Control room operators diagnose a LOCA
- 1130 Core exit thermocouples indicate approximately 850°F

Assigned Task: Given the sequence of events above, determine what, if any, emergency declarations should have been made and when. Additionally, given the data on the attached sheets, determine what, if any Protective Action Guidelines should be issued.

Task Standard: The applicant should identify that an Alert should have been declared when a tornado was identified in the switchyard (EPP-1.0, Attachment II, Page 13), and that a General Emergency should have been declared when a LOCA was occurring in conjunction with a breach in containment and CETs > 850°F (EPP-1.0, Attachment II, Page 4).

Facility: Summer Exam Level (circle one): RO / SRO(I) / SRO(U)		Date of Examination: _____ Operating Test No.: _____	
B.1 Control Room Systems			
System / JPM Title	Type Code*	Safety Function	
a. JPS-11 Pressurizer Pressure Control Malfunction	M, A, S	Reactor Press. Cont.	
b. JPSF-059 Alternate Isolation of Ruptured S/G	D, S, A	Core Heat Removal (S)	
c. NRC-2 Perform FEP Actions	N, S	Plant Service Systems	
B.2 Facility Walk-Through			
a. JPP-108 Locally Shed Non-Essential DC Loads	D	Electrical	
* 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			

V. C. Summer

Job Performance Measure

JPM No: B.1.a

JPS-011

Pressurizer Pressure Control Malfunction

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 027AA2.15 (3.7/4.0)
10CFR55.45 Reference: (a)8

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task: Maintain 100% operation.

EXAMINER'S COPY

JPM No: B.1.c

JPM Title: Pressurizer Pressure Control Malfunction

Required Items:

Simulator Setup: 100% steady state

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The unit is at 100% power, steady state.

Assigned Task:: Maintain 100% power.

Task Standard: Perform steps of AOP-401.5. Upon failure of the spray valve to close, manually trip the unit and respond to the ATWS.

V. C. Summer

Job Performance Measure

JPM No: B.1.b

JPSF-059

Alternate Isolation of Ruptured S/G

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 038EA2.01 (4.1/4.7)
10CFR55.45 Reference: (a)8

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The C S/G has experienced a tube rupture.
 The crew has taken actions up to and including step 3.h of EOP-4.0

Assigned Task: Isolate the C S/G per EOP-4.0, step 3 .

EXAMINER'S COPY

JPM No: B.1.e

JPM Title: Alternate Isolation of Ruptured S/G

Required Items:

Simulator Setup: Tube rupture in progress in C S/G

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The C S/G has experienced a tube rupture.
The crew has taken actions up to and including step 3.h of EOP-4.0

Assigned Task: Isolate the C S/G per EOP-4.0, step 3 .

Task Standard: Perform steps of AOP-115.1. CRS will direct that level be increased per steps 11-13 of the AOP.

V. C. Summer

Job Performance Measure

JPM No: B.1.c

NRC-2

Perform FEP Actions

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 067AA2.17 (3.5/4.3)
10CFR55.45 Reference: (a)8

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:

Assigned Task: You are the Shift Supervisor. The control room is informed that a large fire is in progress in the reactor building, elevation _____, azimuth _____, near the _____, the team is exiting the reactor building and the fire zone designation is unknown to them.

SRO

EXAMINER'S COPY

JPM No: B.1.f

JPM Title: Perform FEP Actions

Required Items: FEP-1.0, FEP-2.0, Steam Tables

Simulator Setup: N/A

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:

Assigned Task: **You are the Shift Supervisor. The control room is informed that a large fire is in progress in the reactor building, elevation _____, azimuth _____, near the _____, the team is exiting the reactor building and the fire zone designation is unknown to them.**

Task Standard: **Perform steps of FEP-2.0 and directs activities of watchstanders, identifying correct fire zone, pulling appropriate modifying part numbers and verifying plant conditions with alternate instrumentation specified in FEP-1.0**

Facility: **Summer**

Task No: _____

Task Title: **Respond to Report of Fire (SRO)**

Job Performance Measure No: _____

K/A Reference: **2.4.27**

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

Date: _____

Method of testing:

Simulated Performance **XX** Actual Performance _____

Classroom _____ Simulator _____

Plant **XX**

READ TO THE EXAMINEE

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

Initial Conditions: **The unit is at 100% power.**

Task Standard: **The applicant must successfully apply fire protection procedures to a report of an ongoing fire in the reactor building.**

Required Materials: **Fire Emergency Procedures, E-023-000 series drawings, steam tables**

General References: **As above in "Required Materials"**

Initiating Cue: **You are the Shift Supervisor. The control room is informed that a large fire is in progress in the reactor building, elevation _____, azimuth _____, near the _____, the team is exiting the reactor building and the fire zone designation is unknown to them.**

Time Critical Task: YES/NO

Validation Time: 30 minutes

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

XX Performance step: 1

Standard: Upon receiving the notification, the S/S refers to FEP-1.0 and the E-023-000 series drawings. He determines the fire to be in fire zone RB-1.1.1 from drawing E-023-000-005, 016. [FEP-1.0, Steps 3.1, 3.2, 3.3, 3.4]

Comment:

Start Time: _____

XX Performance step: 2

Standard: The S/S transitions to FEP-2.0 and directs the following:

- Control Room Supervisor is to implement Attachment I of the procedure, as modified by part number 21 [FEP-1.0, 3.4 and FEP 2.0 Step 3.2]
- NROTC is to implement Attachment II of the procedure, as modified by part number 40 [FEP-1.0, 3.4 and FEP 2.0 Step 3.3]
- "A" RO is to implement Attachment III of the procedure [FEP 2.0 Step 3.4]
- IB Operator is to implement Attachment IV of the procedure [FEP 2.0 Step 3.5]
- AB Operator Upper is to implement Attachment V of the procedure, as modified by part number 54 [FEP-1.0, 3.4 and FEP 2.0 Step 3.6]
- Electrical Maintenance personnel are to implement Attachment VI of the procedure [FEP 2.0 Step 3.7]

Comment:

_____ Performance step: 3

Standard: S/S directs that steam generator pressure be maintained between 1000 psig and 1100 psig by throttling PCV-2000, 2010, and 2020 [FEP 2.0 Step 3.8]

Comment:

SRO

PERFORMANCE INFORMATION

SRO

(Denote critical steps with a check mark)

- SRO

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

XX Performance step: 4

Standard: Direct operators to verify natural circulation by:

- RCS subcooling > 30°F as determined from PI-402 (note - this is a *departure* from FEP-2.0; a modification *directed by FEP-1.0*), TI-423, and steam tables.
- Steam generator pressure stable or decreasing as indicated on PI-484 and PI-2010.
- RCS Coolant system Th stable or decreasing as indicated on TI-423
- RCS Tc at saturation temp for SG pressure as indicated on PI-484 via steam tables (note - this is a *departure* from FEP-2.0; a modification *directed by FEP-1.0*).

[FEP 2.0 Step 3.7]

Comment:

Terminating cue: Terminate JPM when applicant completes step 3.7 of FEP-2.0.

V. C. Summer

Job Performance Measure

JPM No: B.2.a

JPP-108

Locally Shed Non-Essential DC Loads

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 055EK3.02 (4.3/4.6)
10CFR55.45 Reference: (a)8

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant is at 100% power when a station blackout occurs, with subsequent entry into EOP-6.0.

Assigned Task: The CRS has directed that you strip nonessential DC loads per EOP-6.0, Attachment 2.

SRO SRO
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SRO SRO
SRO SRO
SRO SRO

EXAMINER'S COPY

JPM No: B.2.a

JPM Title: Locally Shed Non-Essential DC Loads

Required Items:

Simulator Setup: N/A

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: The plant is at 100% power when a station blackout occurs, with subsequent entry into EOP-6.0.

Assigned Task: The CRS has directed that you strip nonessential DC loads per EOP-6.0, Attachment 2.

Task Standard: Perform steps of EOP-6.0, Attachment 2.

V. C. Summer

Job Performance Measure

JPM No: B.2.b

JPP-039

Recover from Auto-Termination of Waste Gas Release

Applicant's Name: _____

Evaluation Date: _____

Completion Time: _____

Application: _____

K/A Reference: 071A4.13 (3.0/3.1)
10CFR55.45 Reference: (a)8

Evaluation Method Performed Simulated

Evaluation Location Simulator Plant

Performance Time: _____

Overall JPM Evaluation

Satisfactory Unsatisfactory

Examiner Comments:

Directions to Operator

This information describes the initial conditions, assigned task, and the task standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:

Assigned Task: The CRS has directed you to recommence waste gas release IAW SOP-119 Att VB. Maximum flow for this release is 8 CFM.

EXAMINER'S COPY

JPM No: B.2.b

JPM Title: Recover from Auto-Termination of Waste Gas Release

Required Items:

Simulator Setup: N/A

Notes to Examiner:

You will be given information describing the initial conditions, assigned task, and the task standard. Please ensure that you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions

Assigned Task: The CRS has directed you to recommence waste gas release IAW SOP-119 Att VB. Maximum flow for this release is 8 CFM.

Task Standard: Complete SOP-119, Att VB