TASK TITLE: **Call Out For Shift Staffing**

JPM No.: **S-103**
TPO No.: T.AM05-01
TASK No.: S-AM-029, Ensure minimum shift staffing and authorize additional shift staffing as necessary.

REV: **NRC2006301**
K&A No.: 2.1.5
K&A IMP: 2.3/3.4

TRAINEE:_____ SRO

EVALUATOR:_____ DATE:_____

The Trainee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____
TIME FINISHED:_____

CRITICAL ELEMENTS: **(*) 2, 3**

JPM TIME:_____

CRITICAL TIME: **NA**

APPROX COMPLETION TIME: **25 MINUTES**

EVALUATION METHOD:

__X__ PERFORM
___ SIMULATE

LOCATION:

__X__ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. LS-AA-119 OVERTIME CONTROLS Rev 3
2. BwAP 320-1 SHIFT STAFFING. Rev 16

MATERIALS:

1. Overtime Tracking list, attachment 1
2. LS-AA-119, Rev. 3
3. BwAP 320-1, Rev.16

TASK STANDARDS:

1. Determine required shift staffing.
2. Determine from staffing list which person is available to be forced to work overtime to ensure shift staffing requirements met.

TASK CONDITIONS:

1. You are a Unit Supervisor.
2. Both Units are at 100% power.
3. The current date and time is: 05/14/2006, 0900.

INITIATING CUES:

1. A fire brigade qualified NLO for shift N, May 16, 2006 has called in sick.
2. Without the NLO above, manning for shift N, May 16, 2006 is 4 non-fire brigade qualified NLOs, 3 fire brigade qualified NLOs, and the fire chief qualified field supervisor.
3. The Shift Manager has directed you to evaluate shift staffing for shift N, May 16, 2006.
4. Inform the Shift Manger of your results.

RECORD START TIME:_____
NOTE: These steps may be performed in any order.

Performance Step	Standard	Circle Applicable
1. Refers to LS-AA-119 Overtime Controls main body. **CUE: If examinee locates LS-AA-119 provide copy.** **CUE: If examinee locates BwAP 320-1 provide copy.**	Perform the following: o Locates copy of LS-AA-119 o Identifies step 4.1.2 requirements for work hours.	SAT UNSAT N/A **Comments:**
***2. Determine one additional fire brigade member required** **Note: Hand examinee copy of JPM Attachment 1, overtime tracking list, (JPM pages 6 & 7) and provide the following cue.** **CUE: The shift manager directs you to determine who is eligible for overtime to cover the vacancy.** **CUE: All personnel on the overtime tracking list are fire brigade qualified.**	Determine one additional fire brigade member required: o Refer to BwAP 320-1 • Determine 1 additional NLO required due to vacancy	SAT UNSAT N/A **Comments:**

Performance Step	Standard	Circle Applicable
*3. **Determines NLO 3 is the only NLO that can be forced.**	Checks each person's work hours: o NLO 1 would violate the 72 hour limit. o NLO 2 (NO) would violate 24 hour in 48 hour limit. • NLO 3 (YES) is available. o NLO 4 (NO) would violate 24 hour in 48 hour limit and would violate the 72 hour limit. o NLO 5 (NO) would violate 72 hour limit. o NLO 6 (NO) would violate the 24 hour in 48 hour limit. o NLO 7 (NO) is already working shift N 5/16/06 o NLO 8 (NO) would violate 72 hour limit. • Informs Shift manager that ONLY NLO 3 is available to be forced.	SAT UNSAT N/A **Comments:**

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME:_____

COMMENTS:

TASK CONDITIONS:

1. You are a Unit Supervisor.
2. Both Units are at 100% power.
3. The current date and time is: 05/14/2006, 0900.

INITIATING CUES:

1. A fire brigade qualified NLO for shift N, May 16, 2006 has called in sick.
2. Without the NLO above, manning for shift N, May 16, 2006 is 4 non-fire brigade qualified NLOs, 3 fire brigade qualified NLOs, and the fire chief qualified field supervisor.
3. The Shift Manager has directed you to evaluate shift staffing for shift N, May 16, 2006.
4. Inform the Shift Manger of your results.

SIMULATOR SETUP GUIDE:

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST. (N/A if JPM NOT performed in simulator)

COMMENTS:

- Provide copy of LS-AA-119, Rev 3
- BwAP 320-1, Rev 16

Crew 1	May 8 Mon			May 9 Tue			May 10 Wed			May 11 Thurs			May 12 Fri			May 13 Sat			May 14 Sun		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
NLO 1 266 1-01			xx1		xx 2			xx 1		12 N1C			12 NX			12 NX			12 NX		
NLO 2 200 1-02		xx 1			xx 2			xx 1			xx 1		12 NX			12 NX			12 NA		
NLO 3 251 1-03		xx 1			xx 2			xx 1			xx 1		12 NA			12 NA			12 NB		
NLO 4 910 1-04		xx 1			xx 2			xx 1			xx 1		12 NB			12 NB			12 NC		
NLO 5 233 1-05		xx 1			xx 2			xx 1			xx 1		12 NC			12 NC			12 ND		
NLO 6 924 1-06		xx 1			xx 2			xx 1			xx 1		12 ND			12 ND			12 NE		
NLO 7 724 1-07 1		xx 1			xx 2			xx 1			xx 1		12 NE			12 NE			12 NX		
NLO 8 323 1-08		xx 1			xx 2		N1A			12 N2X			12 NX			12 NX			12 NX		

Crew 1	May 15 Mon			May 16 Tue			May 17 Wed			May 18 Thurs			May 19 Fri			May 20 Sat			May 21 Sun		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
NLO 1 266 1-01	12 NA				xx1		12 N2X			12 N1A				12 DB			12 DC			12 DD	
NLO 2 200 1-02	12 NB				12 D1X			xx2			xx 1			12 DC			12 DD			12 DE	
NLO 3 251 1-03	12 NC				xx 1			xx2			12 D1A			12 DD			12 DE			12 DX	
NLO 4 910 1-04	12 ND				12 D1X			12 D2X			xx 1			12 DE			12 DX			12 DX	
NLO 5 233 1-05	12 NE				xx1			12 D2C			12 D2D			DX			DX			DX	

NLO 6 924	1-06	12 NX	12 D1B	 xx2	 xx 1	12 DX	12 DX	12 DA
NLO 7 724	1-07 1	12 NX	12 N1A	 xx 2	12 D1X	12 DX	12 DA	12 DB
NLO 8 323	1-08	12 NX	 xx 1	 xx 2	12 N1X	12 DX	12 DB	12 DC

Crew 1		May 22	May 22	May 22	May 23	May 23	May 23	May 24	May 24	May 24	May 25	May 25	May 25	May 26	May 26	May 26	May 27	May 27	May 27	May 28	May 28	May 28
		Mon			Tue			Wed			Thurs			Fri			Sat			Sun		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
NLO 1 266	1-01	N2X			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 2 200	1-02	 xx 1			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 3 251	1-03	 xx 1			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 4 910	1-04	 xx 1			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 5 233	1-05	 xx 1			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 6 924	1-06	 xx 1			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 7 724	1-07 1	 xx 1			8 T			8 T			8 T			8 T			xx1			xx2		
NLO 8 323	1-08	12 N1B			8 T			8 T			8 T			8 T			xx1			xx2		

TASK TITLE: **Respond to a Fire Detection/Suppression System Alarm**

JPM No.: **S-105** REV: **NRC2006301**
TPO No.: 8.E.AM-200 K&A No.: 2.1.14
TASK No.: S-AM-200, Supervise actions for combating a plant fire K&A IMP: 2.5/3.3

TRAINEE: _____ SRO

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: **(*) 1, 3, 4, 8-10** APPROX COMPLETION TIME **15 MINUTES**

CRITICAL TIME: **NA**

EVALUATION METHOD:
_____ PERFORM
__X__ SIMULATE

LOCATION:
__X__ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. BwAR 0-37-A4, Rev. 13, UNIT 1 AREA FIRE.
2. BwAP 1100-16, Rev. 22, Fire/Hazardous Spill and/or Injury Response.

MATERIALS:

1. BwAR 0-37-A4, Rev. 13.
2. Partially completed BwAP 1100-16, Rev. 22, Appendix A.

TASK STANDARDS:

1. Perform Shift Manager designee required actions in response to a Fire Detection/Suppression System Alarm.
2. Complete Shift Manager designee applicable actions of Fire/Haz-Mat Response/Checklist (Appendix A).

TASK CONDITIONS:

1. You are the Shift Manager’s Designee.
2. Both Units are at full power.

INITIATING CUES:

1. Annunciator 0-37-A4 for Unit 1 actuated a few minutes ago and has been acknowledged by the Unit 1 Admin NSO. An Alarm on 1PM09J has also been acknowledged. An NSO has completed the Unit Admin NSO portion of the Fire/Haz-Mat Response/Checklist and has just forwarded it to you.
2. Another SRO is currently evaluating EALs related to the event.
3. Route the completed checklist to the Station Duty Officer when it is completed.

RECORD START TIME _____

Note: Hand the examinee a copy of the BwAP 1100-16 Appendix A Checklist with the NSO portion completed. Pages 8-9 contain key of correctly filled out form.

	PERFORMANCE STEP	STANDARD	Circle applicable
***1.**	**Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, steps 1 & 2.** **CUE: All Prerequisites, Precautions, Limitations and Actions have been met.** **CUE: As Security Shift Supervisor, acknowledge the report of the fire, and request for personnel.**	Locate and Open BwAP 1100-16. Review / perform the required actions of the SM or designee: • Contact Security Supervisor o Phone o Plant Page o Radio • NOTIFY the Security Shift Supervisor • Location of the fire • Dispatch security personnel to the equipment cages • Dispatch security personnel to fire area to control access • Initial in block 1 • NOTIFY security to OPEN any Security Barriers as needed • Initial in block 2	SAT UNSAT N/A **Comments:**
2.	Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 3. **CUE: As NSO, or Fire Brigade, confirm notification/dispatch of fire brigade.**	Review / perform the required actions of the SM or designee: o VERIFY the fire brigade has been notified/dispatched o Contact Admin NSO to verify fire brigade dispatched o Contact Fire Chief and/or fire brigade members. o Phone o Plant Page o Radio • Initial in block 3	SAT UNSAT N/A **Comments:**

	PERFORMANCE STEP	STANDARD	Circle applicable
*3.	**Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 4.** **CUE: As Rad Protection acknowledge request for dispatch.**	Review / perform the required actions of the SM or designee: • Contact Rad Protection o Phone o Plant Page • Initial in block 4 • Initial indicating the notification method used in block 4, other methods marked N/A.	SAT UNSAT N/A **Comments:**
*4.	**Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 5.** **CUE: As Fire Chief, report that the fire was wood that was staged for an upcoming outage. The fire is out, no injuries, small fire, no equipment damaged, no outside assistance is necessary.** **If asked report that access to the ESF switchgear rooms is not impeded.**	Review / perform the required actions of the SM or designee: • Contact Fire Chief o Phone o Plant Page o Radio o Communicates via Admin NSO • COMMUNICATE with the Fire Chief to determine the following: • Conditions/status at fire scene • Injuries • Extent of fire • Equipment damaged • Assistance requirements • Record applicable information block 5 • Initial each sub step in block 5 (Assistance required information and initial is not required to be filled in)	SAT UNSAT N/A **Comments:**
5.	Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 6.	Review / perform the required actions of the SM or designee: • Determine that step 6 is not required to be performed	SAT UNSAT N/A **Comments:**

	PERFORMANCE STEP	STANDARD	Circle applicable
6.	Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 7. **CUE: SM will review EALs.**	Review / perform the required actions of the SM or designee: • Determine if EALs have been evaluated o Review EALs	SAT UNSAT N/A **Comments:**
7.	Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 8. **CUE: Inform examinee notifications have already been performed by another SRO.** **CUE: OP-AA-106-101 will be reviewed by another SRO.**	Review / perform the required actions of the SM or designee: • NOTIFY the Station Fire Marshal, Station Duty Officer, and Chemistry • Initial each sub step in block 8 (Notify Others and Notify other Fire Departments and initial is not required to be filled in)	SAT UNSAT N/A **Comments:**
***8.**	**Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 9.** **Note: If examinee determines update not required at this time (due to 20 minute time limit on updates), provide the following cue** **CUE: 20 minutes have elapsed since you last spoke with Fire Chief** **CUE: As Fire Chief provide the following info as an update:** **The fire is out, the only visible damage is charred paint/floor, and no assistance necessary.**	Request periodic status reports from the Exelon Fire Chief at no more than 20 minute intervals and note on the checklist: • Contact Fire Chief o Phone o Plant Page o Radio o COMMUNICATE with the Fire Chief to determine the following: o Conditions/status at fire scene o Injuries o Extent of fire o Equipment damaged o Assistance requirements Record update from Exelon Fire Chief • Initial in block 9	SAT UNSAT N/A **Comments:**

	PERFORMANCE STEP	STANDARD	Circle applicable
***9.**	**Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 10.** **CUE: Acknowledge notifications as WEC.**	Perform the following • Contact the Work Execution Center o Phone o Plant Page o Radio • Notify WEC to perform the following: • 0BwOS FP-Q5, Fire Brigade Cages Equipment Area Check surveillance • Initial in block 10	SAT UNSAT N/A **Comments:**
***10.**	**Perform BwAP 1100-16 Appendix A, Shift Manager/Designee section, step 11.** **CUE: Team members are Chief: Dave Mills,** **Members: Morgan, Davito, Bannon, and Verchimak.**	List Fire Brigade Team Members on the checklist: • Contact Fire Chief o Phone o Plant Page o Radio • Request roster of Fire Brigade Members • List Fire Brigade Chief and Fire Brigade Team Members in block 11. • Initial in block 11	SAT UNSAT N/A **Comments:**
11.	Route the completed checklist **CUE: Acknowledge request to route completed checklist.**	Route the completed checklist for review • Contact Station Duty Officer o Phone o Plant Page o Radio • Route checklist to Station Duty Officer	SAT UNSAT N/A **Comments:**

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

TASK CONDITIONS:

1. You are the Shift Manager’s Designee.
2. Both Units are at full power.

INITIATING CUES:

1. Annunciator 0-37-A4 for Unit 1 actuated a few minutes ago and has been acknowledged by the Unit 1 Admin NSO. An Alarm on 1PM09J has also been acknowledged. An NSO has completed the Unit Admin NSO portion of the Fire/Haz-Mat Response/Checklist and has just forwarded it to you.
2. Another SRO is currently evaluating EALs related to the event.
3. Route the completed checklist to the Station Duty Officer when it is completed.

SIMULATOR SETUP GUIDE:

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST. (N/A if JPM NOT performed in simulator)

- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon. (N/A if JPM NOT performed in simulator)

- Complete items on Simulator Ready for Training Checklist. (N/A if JPM NOT performed in simulator)

- Place simulator in RUN. (N/A if JPM NOT performed in simulator)

- Insert **IMF PN0749 ON**(N/A if JPM NOT performed in simulator)

COMMENTS:

- Provide marked up copy of BwAP 1100-16, Appendix A, completed through step 15 (page 4, NSO actions)
- Provide copy of BwAR 0-37-A4.
- The fire is on the 426’ elevation of the U-1 Turbine Building outside of ESF Bus 141 room. The fire is a small fire and was in wood that was being staged for an upcoming outage.

APPENDIX A
FIRE/HAZ-MAT RESPONSE/CHECKLIST

Nuclear Station Operator

__JN__ 1. Name of Caller/Informant: Tom NLO

__JN__ 2. Phone Number of Informant (if available): 7588

__JN__ 3. Date: Today

__JN__ 4. Time: __5 minutes ago

__JN__ 5. Location of Fire/Spill (Bldg/Elev/Area): Turbine Building 426' outside ESF Bus 141 room

__JN__ 6. Size of Fire/Spill: Small

__JN__ 7. Type of Fire Spill (Circle/Explain):
Wood/Trash/Rubbish: Wood staged for outage
~~Flammable/Combustible Liquid:~~
Plant Equipment:
Other: _____
Type of Chemical: _____

__JN__ 8. Notify the Shift Manager or designee of the situation.

__JN__ 9. Radio Announcement of location Fire/Spill (Include fire type/size or Chemical if known).

__JN__ 10. Sound Plant Fire Siren (10-15 seconds).

__JN__ 11. P.A. Announcement of location, type and size of fire/spill (Use 'EMER PAGE" button and handset button concurrently).

__JN__ 12. Sound Plant Fire Siren (10-15 seconds).

__JN__ 13. P.A. Announcement of location, type and size of fire/spill (Use 'EMER PAGE" button and handset button concurrently).

_N/A__ 14. Notify Unit Operator(s) to refer to BwOP FP-100, Fire Response Guidelines for a fire in any of the following areas:

- O VCT Room (11.6A-_)
- O Aux Bldg. 426' Chemistry Lab/Office (11.6B-0)
- O Kitchen/Locker Room Area (18.5-1)
- O RH Heat Exchanger Room (11.3_-_)
- O Letdown Heat Exchanger Room (11.4C-_)
- O DG Room/Switchgear Room Air Shaft (18._-_)
- O Radwaste Drumming Station and Radwaste Tunnel (14.1-0)

__JN__ 15. Relay information to the Shift Manager.

NSO/Time _Joe NSO_____/__Current Time_____

APPENDIX A (Cont)
FIRE/HAZ-MAT RESPONSE/CHECKLIST

Shift Manager/Designee

__SM__ 1. Notify the Security Shift Supervisor of the incident location in order to dispatch security personnel to the fire/spill area and fire equipment/Haz-Mat Equipment cages and to provide access control as necessary.

__SM__ 2. Have Security OPEN any Security Barriers as needed (Track Way Gates, Doors, etc.)

__SM__ 3. Verify the fire brigade has been notified/dispatched.

NOTE
Appendix E contains information on the duties and requirements for Rad Protection Personnel.

__SM__ 4. Notify Rad Protection.

__*SM**__ ○ x2240 **Examinee initials in space denoting notification method (only 1 method required)*
__*SM**__ ○ x2241
__*SM**__ ○ Plant Page

5. Communicate with the Fire Chief/Incident Commander to determine the following:

__SM__	●	Conditions/status at the fire scene	Small wood fire_
__SM__	●	Injuries	No injuries, None, or N/A
__SM__	●	Extent of fire	Fire is out, extinguished, etc.
__SM__	●	Equipment damaged	No equipment damaged, none, or N/A
__SM__	●	Assistance required	No outside assistance required, none, or N/A__

NOTE
Reported Fires in buildings outside the Protected area shall be handled by the off-site Fire Department. At Braidwood's owner controlled area at the Plant, notify Braidwood Fire Department (9-911 or 9-458-2121). At River Screen House, call Custer Twp. Fire Department (9-458-2119).

6. If Off-Site Assistance Required:

NOTE
INFORM the Braidwood Fire Department with as much information as possible, i.e., type of fire/spill, size, location of fire/spill, point of plant entry, etc.

__N/A__ ○ CALL Braidwood Fire Dept. (9-911 or 9-458-2121).
__N/A__ ○ CALL Custer Twp Fire Dept. (9-458-2119) for River Screen House.
● NOTIFY Security Shift Supervisor of the following:
__N/A__ ● Off-Site Fire Dept. responding.
__N/A__ ● Desired Plant Access Point.
__N/A__ ● Location of Command Post Area.
● Refer to the Exelon Nuclear Radiological Emergency Plan, Braidwood Annex, for emergency action levels.
__N/A__ ● Fire Chief notified of Off-Site response.
__N/A__ ● Site Communications Director notified of Off-Site response.

APPENDIX A (Cont)
FIRE/HAZ-MAT RESPONSE/CHECKLIST

Shift Manager/Designee

__SM__ 7, Refer to the Exelon Nuclear Radiological Emergency Plan, Braidwood Annex, for emergency action levels if not already referred to.

8. Notify the following:

__SM__ ● Station Fire Marshal
__SM__ ● Station Duty Officer
__SM__ ● Chemistry
__*___ ● Others per OP-AA-106-101 (*will be completed by another SRO)
__N/A__ ● Notify other Fire Departments or other assistance as requested by the Exelon Fire Chief.

__SM__ 9. Request periodic status/damage reports from the Exelon Fire chief at no more than twenty (20) minute intervals.

The fire is out, the only visible damage is charred paint/floor, no assistance necessary ---_____
_____
_____
_____
_____

__SM__ 10. Notify the WEC to perform the following:

- ● 0BwOS FP-Q5, Fire Brigade Cages Equipment Area Check Surveillance, must be performed for all Fire Brigade cage equipment used during a fire.
- ○ 0BwOS HM-Q1, Operations Hazardous Materials Emergency Response Equipment Inventory, must be performed for each cage used during a Hazardous Material Spill.

__SM__ 11. List Fire Brigade/Hazmat Team Members:

- ● Fire Brigade Chief: Mills
- ● Members: Morgan
  Davito
  Smith
  Verchimak

12. The completed Fire Checklist SHALL be routed in the following order for review:

____ _ a. Station Duty Officer.

NOTE
The Fire Marshal will make copies of the Checklist for:
1. Rad Protection Supervisor.
2. EP Coordinator (if an Emergency Event declared).
3. **Environmental Supervisor.**

__ ___ b. Fire Marshal.

_____ c. Operations Clerk.

TASK TITLE: **Initiate a LCOAR**

JPM No.: **S-204**
TPO No.: 8.E.AM-120
TASK No.: S-AM-073: Initiate/Terminate an AAR/LCOAR

REV: **NRC2006301**
K&A No.: 2.2.23
K&A IMP: 2.6/3.8

TRAINEE: _____ SRO

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____
TIME FINISHED: _____
JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: **(*) 2, 3, 4**

APPROX COMPLETION TIME: **20 MINUTES**

CRITICAL TIME: **NA**

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
__X__ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 1BwOL 3.7.8, Rev 4, LCOAR Essential Service Water (SX) System Tech Spec 3.7.8.
2. 1BwVSR 5.5.8.SX.1, Rev 5, ASME Surveillance Requirements for 1A Essential Service Water Pump.

MATERIALS:

1. 1BwOL 3.7.8 Rev 4.

TASK STANDARDS:

1. Initiate LCOAR 3.7.8 for a failure of the 1A SX pump to perform it’s intended function.

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. Both units are at full power.

INITIATING CUES:

1. The Engineering staff notified you that the 1A SX pump has failed surveillance 1BwVSR 5.5.8.SX.1 ASME Surveillance Requirements for 1A Essential Service Water Pump, due to inadequate pump delta-P (10 minutes ago). Initiate the LCOAR. An IR (# 123456) and a WR (# 123456) have been written.
2. No other inoperable equipment exists on either Unit.
3. Inform the Shift Manager when you have completed initiating the LCOAR.

RECORD START TIME _____

	PERFORMANCE STEP	STANDARD	Circle applicable
1.	Refer to the LCOAR **CUE: After the examinee demonstrates he/she can locate the LCOAR, provide a copy.** **Note: If the examinee requests to review 1BwVSR 5.5.8.SX.1, provide the attached copy.**	Locate 1BwOL 3.7.8	SAT UNSAT N/A **Comments:**
Examiner's note: A correctly completed LOCAR form is included on pages 6-9. LCOAR completion steps may be performed in any order.			

***2.**	**Complete Section A, Notification, of 1BwOL 3.7.8**
	Note: Underlined phrases or words to that effect are acceptable for completion of LCOAR paperwork.
		Complete Section A. Notification, of 1BwOL 3.7.8:
		• Present Mode: 1
		• Initiating Event: Failure of 1BwVSR 5.5.8.SX.1 ASME due to inadequate pump ΔP
		• SFD Performed: Performs SFD per page 2 and determines no loss of safety function exists
		  • Check No box (B.1.a) on page 2
		  • Checks YES box on page 1 and initials next to YES
		• Does this inoperability invalidate any previous SFD: No
			SAT UNSAT N/A
			Comments:

	PERFORMANCE STEP	STANDARD	Circle applicable
*2	**Step 2 Continued** **CUE: As Shift Manager, acknowledge LCOAR entry. Provide name of SM – Craig Ingold.** **Note: From cue sheet, IR (#123456) and WR #123456 written.** **CUE: C/O will be prepared at later time.** **CUE: Examiner sign for Unit NSO.**	• Notify Shift Manager of LCOAR entry (Craig Ingold) • Time Date: (notification time and today's date) • Was an IR written: Yes, #123456 • Related WRs: Yes, #123456 o Related C/O(s): No • SRO Signature: (examinee's signature) • Unit NSO signature: (Unit NSO name signed by examiner)	SAT UNSAT N/A **Comments:**
*3.	**Complete LCOAR Index Essential Service Water (SX) System**	On page 6 of 1BwOL 3.7.8, sign and date Condition A line and refer to page 7: • Examinee's signature • Today's date	SAT UNSAT N/A **Comments:**
*4.	**Initiate LCOAR 1BwOL 3.7.8** **Note: If examinee attempts to update LCO database, provide the following cue.** **CUE: Another SRO will update LCO database.**	On page 7 of 1BwOL 3.7.8, enter time, date and signature in Condition column: • JPM start time - 10 minutes. • Today's date • Examinee's signature • Notify SM LOCAR entry complete	SAT UNSAT N/A **Comments:**

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. Both units are at full power.

INITIATING CUES:

1. The Engineering staff notified you that the 1A SX pump has failed surveillance 1BwVSR 5.5.8.SX.1 ASME Surveillance Requirements for 1A Essential Service Water Pump, due to inadequate pump delta-P (10 minutes ago). Initiate the LCOAR. An IR (# 123456) and a WR (# 123456) have been written.
2. No other inoperable equipment exists on either Unit.
3. Inform the Shift Manager when you have completed initiating the LCOAR.

SIMULATOR SETUP GUIDE:

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST. (N/A if JPM NOT performed in simulator)

- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon. (N/A if JPM NOT performed in simulator)

- Complete items on Simulator Ready for Training Checklist. (N/A if JPM NOT performed in simulator)

- Place simulator in RUN. (N/A if JPM NOT performed in simulator)

COMMENTS:

- Provide copy of 1BwOL 3.7.8, Rev 4.
- Provide marked up copy of 1BwVSR 5.5.8.SX.1, Rev 5.

KEY

KEY

LCOAR
ESSENTIAL SERVICE WATER (SX) SYSTEM
TECH SPEC LCO 3.7.8

A. NOTIFICATION

If it is discovered that a Surveillance was not performed within its specified Surveillance Frequency, complete Action Z (SR 3.0.3) prior to declaring the LCO not met.

PRESENT MODE: **1**	APPLICABLE MODE(S): 1, 2, 3, and 4
INITIATING EVENT(S): **Failure of 1BwVSR 5.5.8.SX.1 ASME due to inadequate pump ΔP**	
SAFETY FUNCTION DETERMINATION (SFD) PERFORMED? (Page 2)	☒ **YES, Examinee init. (SRO)**
DOES THIS INOPERABILITY INVALIDATE ANY PREVIOUS SFD?	☐ YES ☒ NO
LCO 3.0.3: **APPLICABLE**	MODE CHANGE ALLOWED?: **YES** – Action C.2
SEPARATE CONDITION ENTRY ALLOWED: **NO**	
COMPLETION TIME EXTENSION ALLOWED: **NO**	
NAME OF SHIFT MANAGER NOTIFIED: **C. Ingold**	TIME/DATE: **Current time/date**

WAS AN ISSUE WRITTEN? ☒ YES ☐ NO

RELATED WR(S):

☒ WR **123456**	☐ WR _____
☐ WR _____	☐ WR _____
☐ WR _____	☐ WR _____
☐ WR _____	☐ WR _____
☐ WR _____	☐ WR _____

RELATED C/O(S): **NONE**

_____	_____	_____
_____	_____	_____
_____	_____	_____

SRO signature: **Examinee signature**	TIME/DATE: **Current time/date**
Unit NSO signature: **Examiners signature**	TIME/DATE: **Current time/date**

Deleted: 2

KEY

KEY

B. SAFETY FUNCTION DETERMINATION PROGRAM REQUIREMENTS

1. LOSS OF SAFETY FUNCTION (LOSF) EVALUATION:

Is there any inoperable or degraded SUPPORT SYSTEM or SUPPORTED SYSTEM equipment on the opposite/redundant train that, when coupled with this inoperable equipment, might result in a complete loss of a Tech Spec required safety function.

☒ a. No - No LOSF exists. No further evaluation is necessary.

☐ b. Yes - A LOSF may exist. Using the SFDP and BwAP 340-1, evaluate which of the following conditions apply:

Deleted: 1

☐ 1) The SSC is part of an LCO with multiple subsystems and the LCO specified function is intact. No LOSF exists.

☐ 2) The SSC will still perform its required safety function as defined in the Safety Analysis Report (SAR). No LOSF exists.

☐ 3) A LOSF exists. Perform the Required Actions of the SSC LCO in which the LOSF exists for the specific Condition(s) that apply.

2. LCO 3.0.6 - DELAYED LCOAR ENTRY CALCULATION.

Perform this step only if No LOSF exists and it is desired to delay SUPPORTED SYSTEM LCOAR entry as allowed by LCO 3.0.6. A LOSF does not exist if the redundant train of the inoperable SUPPORTED SYSTEM(S) equipment is OPERABLE.

a. Rules of Use:

1) Rule 1: With a single SUPPORT SYSTEM inoperable, the affected SUPPORTED SYSTEM(s) LCOAR entry(s) is not required to be entered unless directed by the SUPPORT SYSTEM Required Actions.

2) Rule 2: In the event additional SUPPORT SYSTEM(s) become inoperable during the Completion Time for restoration of the first SUPPORT SYSTEM, the LCOAR entry(s) of the SUPPORTED SYSTEM may be delayed by either the maximum allowed Completion Time of the SUPPORT SYSTEM(s), or 2 times the Completion Time for restoration of the SUPPORTED SYSTEM (applied at the time the second SUPPORT SYSTEM becomes inoperable), whichever is less.

KEY

KEY

LCOAR INDEX
ESSENTIAL SERVICE WATER (SX) SYSTEM

SRO Sign and Date	Content	Description	Page
SRO: **Examinee signature** Date: **Today's date**	Condition A	One unit-specific SX train inoperable.	7
SRO: _____ Date:	Condition B	One unit-specific SX train inoperable.	8
SRO: _____ Date:	Condition C	Opposite-unit SX train inoperable.	9
SRO: _____ Date:	Condition D	Required Action and associated Completion Time of Condition A or B not met.	10
SRO: _____ Date:	Condition Z	SR 3.0.3	11
SRO: _____ Date:	N/A	Risk Assessment required by LCO 3.0.4.b complete to allow MODE change.	N/A

Deleted: sk Assessment required by LCO 3.0.4.b comple

KEY

KEY

LCOAR ACTION CHART
ESSENTIAL SERVICE WATER (SX) SYSTEM

CONDITION	REQUIRED ACTION	COMPLETION TIME	ACTION MET
**********NOTE********** Not applicable to Unit 1 during replacement of the SX suction isolation valves during Unit 2 Refueling 11 while Unit 2 is in MODE 5, 6, or defueled. **********	A.1 ********NOTES******** 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," for Emergency Diesel Generator made inoperable by SX. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for Residual Heat Removal loops made inoperable by SX. ********** Restore unit-specific SX train to OPERABLE status.	72 hours	_____/_____ Time/Date SRO
A. One unit-specific SX train inoperable. JPM start time minus 10 minutes/Today's date Time/Date Examinee signature SRO			

TASK TITLE: **Prepare/Perform a Liquid Radwaste Release**

JPM No.: **S-303** REV: **NRC2006301**
TPO No.: 8C.HP-001 K&A No.: 2.3.6
TASK No.: S-HP-001, Authorize a liquid radwaste release K&A IMP: 2.1/3.1

TRAINEE: _____ SRO

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: **(*) 3, 5** APPROX COMPLETION TIME: **30 MINUTES**

CRITICAL TIME: **NA**

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. BwOP WX-501T1, Rev. 38, Liquid Release Tank 0WX01T Release Form
2. BwOP WX-501T2, Rev 5, Liquid Release Window Determination
3. BwOP WX-501T3, Rev 1, Authorization to Release Outside of Release Window

MATERIALS:

1. BwOP WX-501T1, Rev. 38, Liquid Release Tank 0WX01T Release Form
2. BwOP WX-501T2, Rev 5, Liquid Release Window Determination
3. BwOP WX-501T3, Rev 1, Authorization to Release Outside of Release Window

TASK STANDARDS:

1. Complete Section G of a liquid release tank release form in accordance with BwOP WX-501T1.
2. Determine release start time is outside release start time window.

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. Both Units are at full power.

INITIATING CUES:

1. The Shift Manager has handed you a portion of a 0WX01T liquid release package, #L-06-100, completed through section F.5, and has directed you to complete Section G. **(Hand examinee copy of BwOP WX-501T1)**. All previous sections of the release package have been successfully completed.
2. The current time is 0700 today. Due to scheduled work on the liquid release line, the release must be COMMENCED by 0900 today.
3. Release duration per BwOP WX-501T1 step D.6.g.2) is 120 minutes.
4. The dechlorination skid is in operation.
5. Notify the Shift Manager when Section G of the release package is complete.

RECORD START TIME _____

Note: Provide the examinee with a copy of Section G of BwOP WX-501T1 completed through Step F.5.

	PERFORMANCE STEP	STANDARD	Circle applicable
1.	Obtain and record current Kankakee River flow data **NOTE: The USGS internet site can be accessed from the computer desk top from workgroup apps menu or by using normal internet access.** **NOTE: After examinee locates Kankakee river flow on usgs web site, indicator, provide following cue:** **CUE: Kankakee river discharge flow is 5680 cfs at current date and time.** **NOTE: If examinee attempts to access the Unit 1 US turnover, provide the following cue:** **CUE: Kankakee river flow has been logged in the Unit 1 US turnover.**	Obtain and record current Kankakee River flow data by performing the following: • Access the United States Geological Survey internet site (usgs.gov). • Access water watch-current stream flow conditions for Illinois • Access USGS 05527500 Kankakee River near Wilmington Il flow • Record discharge flow o Record Kankakee River flow in Unit 1 US turnover	SAT UNSAT N/A **Comments:**
2.	Determine CW blowdown flow **NOTE: After examinee locates CW blowdown flow indicator, provide following cue:** **CUE: CW blowdown flow is 22,000 gpm.**	Determine CW blowdown flow per BwOP WX-501T2 as follows: o Record liquid release #L-06-100 • Obtain and record current Kankakee River flow (5680 cfs) • Record CW blowdown flow o F2400 o OUR-CW032	SAT UNSAT N/A **Comments:**

	PERFORMANCE STEP	STANDARD	Circle applicable

*3	**Determine the Liquid Release Window per BwOP WX-501T2**
	CUE: After examinee locates correct procedure, provide copy.
	NOTE: After examinee locates liquid release spread sheet, inform student to use spreadsheet on computer desktop.
	NOTE: A completed copy of the liquid release spread sheet is located on page 7.
		Determine the Liquid Release Window per BwOP WX-501T2 as follows:
		• Access Liquid Release Window spread sheet (k:/shift/excel/liquid release)
		o Enter arrival date at Wilmington (tomorrow's date)
		• Enter river flow rate (5680 cfs)
		• Enter release duration (120 mins from initial cue)
		• Enter blowdown flow rate (22,000 gpm)
		• Record the Liquid Release Window times on BwOP WX-501T1
		  • Target start time (1630)
		  • Start after time (1300)
		  • Start before time (2000)
			SAT UNSAT N/A
			Comments:

4.	Evaluate the expected time of release **CUE: Dechlorination skid is in operation. (from initial cue)**	Evaluate the expected time of release so that both biocide treatment and the release can be accommodated by performing the following: • Check if dechlorination skid in operation • Verify CW blowdown flow ≥ 8000 gpm (22,000 from previous cue)	SAT UNSAT N/A **Comments:**

	PERFORMANCE STEP	STANDARD	Circle applicable
***5.**	**Identify release will not start within desired time** **CUE: Acknowledge as SM notification of release performed outside start time window. Inform examinee another supervisor will perform BwOP WX-501T3.**	Perform the following: • Determine release will be performed outside of release start time window (from initiating cue, release must start at 0900) • Determine BwOP WX-501T3 must be completed prior to authorizing release o Notify SM release will be performed outside of release start time window OR o Notify SM to delay release until work completed OR o Notify SM to delay work until release completed within desired time window.	SAT UNSAT N/A **Comments:**

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. Both Units are at full power.

INITIATING CUES:

1. The Shift Manager has handed you a portion of a 0WX01T liquid release package, #L-06-100, completed through section F.5, and has directed you to complete Section G. All previous sections of the release package have been successfully completed.
2. The current time is 0700 today. Due to scheduled work on the liquid release line, the release must be COMMENCED by 0900 today.
3. Release duration per BwOP WX-501T1 step D.6.g.2) is 120 minutes.
4. The dechlorination skid is in operation.
5. Notify the Shift Manager when Section G of the release package is complete.

SIMULATOR SETUP GUIDE:

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon.
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Verify/copy Liquid Release Window spreadsheet to computer desktop prior to administering JPM. Spreadsheet is located at k:/shift/excel/liquid release.
- Clear data from INPUTS field of Liquid Release Window spread sheet prior to administering JPM.
- Clear computer history of recently accessed documents, programs, and web sites visited prior to administering JPM by performing the following:
  - Right mouse click on task bar
  - Select properties
  - Select advanced tab
  - Select clear
- **Delete Liquid Release Window spreadsheet from computer desktop after administering JPM to all candidates.**

COMMENTS:

- BwOP WX-501T1, Rev. 38.
- BwOP WX-501T2, Rev 5.
- BwOP WX-501T3, Rev 1.

KEY KEY

Braidwood Release Time Calulator

BwOP WX-501 and/or BwOP WX-526

Enter data into blue cells only.

INPUTS		
Arrival Date at Wilmington	mm/dd/yyyy	Tomorrow
River Flow Rate	CFS	5680
Release Duration	Minutes	120
Blowdown Rate (F2400)	GPM	22000

CALCULATED RESULTS		
Blowdown Time To River	Minutes	120
River Time To Wilmington Intake	Minutes	420
Blowdown Peak Time To Wilmington Intake	Minutes	600
Margin	Minutes	420
Start After Time (= Peak Arrives at 10 PM)	Time	Today 1300
Normal Start (= Center of Peak occurs at 2:30 AM)	Time	Today 1630
Start BeforeTime (= Peak Departs at 7 AM)	Time	Today 2000

KEY KEY

TASK TITLE: **Screen an Event for Reportability**

JPM No.: **S-402** REV: **NRC2006301**
TPO No.: 8E.AM-102 K&A No.: (2.4.30)
TASK No.: S-AM-102: Screen Reportable or Significant Events for Reportability K&A IMP: 2.2/3.6

TRAINEE: _____ SRO

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: **(*) 2, 3** APPROX COMPLETION TIME: **25 MINUTES**

CRITICAL TIME: **NA**

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. LS-AA-1010, Rev. 9; Exelon Reportability Reference Manual Table of Contents.
2. LS-AA-1020, Rev. 8, Exelon Reportability Reference Manual Operations Decision Tree.
3. LS-MW-1110, Rev. 6, Exelon Reportability Reference Manual SAF 1.

MATERIALS:

1. Copies of the references listed above.

TASK STANDARDS:

1. Determine all reporting requirements of $\leq$ 8 hours per the Exelon Reportability Reference Manual.

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. Unit 1 was at 100% power
3. A RCS LOCA occurred and the reactor tripped and SI actuated.
4. All systems functioned as designed.
5. No release is in progress.
6. An Alert has been declared
7. A NARS form has been transmitted to the state

INITIATING CUES:

1. The Shift Manager has directed you to screen the event and determine **ALL** reporting requirements that are LESS THAN OR EQUAL TO 8 HOURS per the Exelon Reportability Reference Manual.
2. Inform the Shift Manager of applicable reporting requirements.

RECORD START TIME _____

	PERFORMANCE STEP	STANDARD	Circle applicable
1.	Refer to Exelon Reportability Reference Manual **Note: If JPM is performed in simulator, examinee will use simulator copy of Exelon Reportability Manual. If JPM NOT performed in simulator, provide examinee with a copy of Exelon Reportability Manual.**	Perform the following: • Locate and open Exelon Reportability Reference Manual LS-AA-1020	SAT UNSAT N/A **Comments:**
***2.**	**Screen Event** **Note: See pages 6-9 for a key of the operations decision trees.**	Refer to Operations Decision Trees (LS-AA-1020, page 89) Determine the following apply: • SAF 1.1 - Emergency Plan Activated • SAF 1.5 – ECCS Injection/Actuation • SAF 1.6 – RPS Actuation with the reactor critical • SAF 1.7 – System Actuation Not Including RPS o SAF 1.23 – Occurrence of an Incident	SAT UNSAT N/A **Comments:**

	PERFORMANCE STEP	STANDARD	Circle applicable
*3.	**Determine Notification**	Use Operations Decision Trees to determine the following: • SAF 1.1 (LS-AA-1110, page 1) o 15 minute State and Local Notification (already performed per initial cue) • 1 hr NRC Notification required o 2 hr ANI and INPO Notification required • SAF 1.5 (LS-AA-1110, page 16) • 4 hr NRC Notification required • SAF 1.6 (LS-AA-1110, page 20) • 4 hr NRC Notification required • SAF 1.7 (LS-AA-1110, page 24) • 8 hr NRC Notification required o SAF 1.23 LS-AA-1110 page 68) o Notify NEIL ASAP via telephone o Evaluate other notifications and determine they do not apply	SAT UNSAT N/A **Comments:**

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. Unit 1 was at 100% power
3. A RCS LOCA occurred and the reactor tripped and SI actuated.
4. All systems functioned as designed.
5. No release is in progress.
6. An Alert has been declared
7. A NARS form has been transmitted to the state

INITIATING CUES:

1. The Shift Manager has directed you to screen the event and determine **ALL** reporting requirements that are LESS THAN OR EQUAL TO 8 HOURS per the Exelon Reportability Reference Manual.
2. Inform the Shift Manager of applicable reporting requirements.

SIMULATOR SETUP GUIDE:

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST. (N/A if JPM NOT performed in simulator)
- If it is desired to simulate actual plant conditions, perform the following (otherwise N/A)

    - Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon. (N/A if JPM NOT performed in simulator)

    - Complete items on Simulator Ready for Training Checklist. (N/A if JPM NOT performed in simulator)

    - Place simulator in RUN. (N/A if JPM NOT performed in simulator)

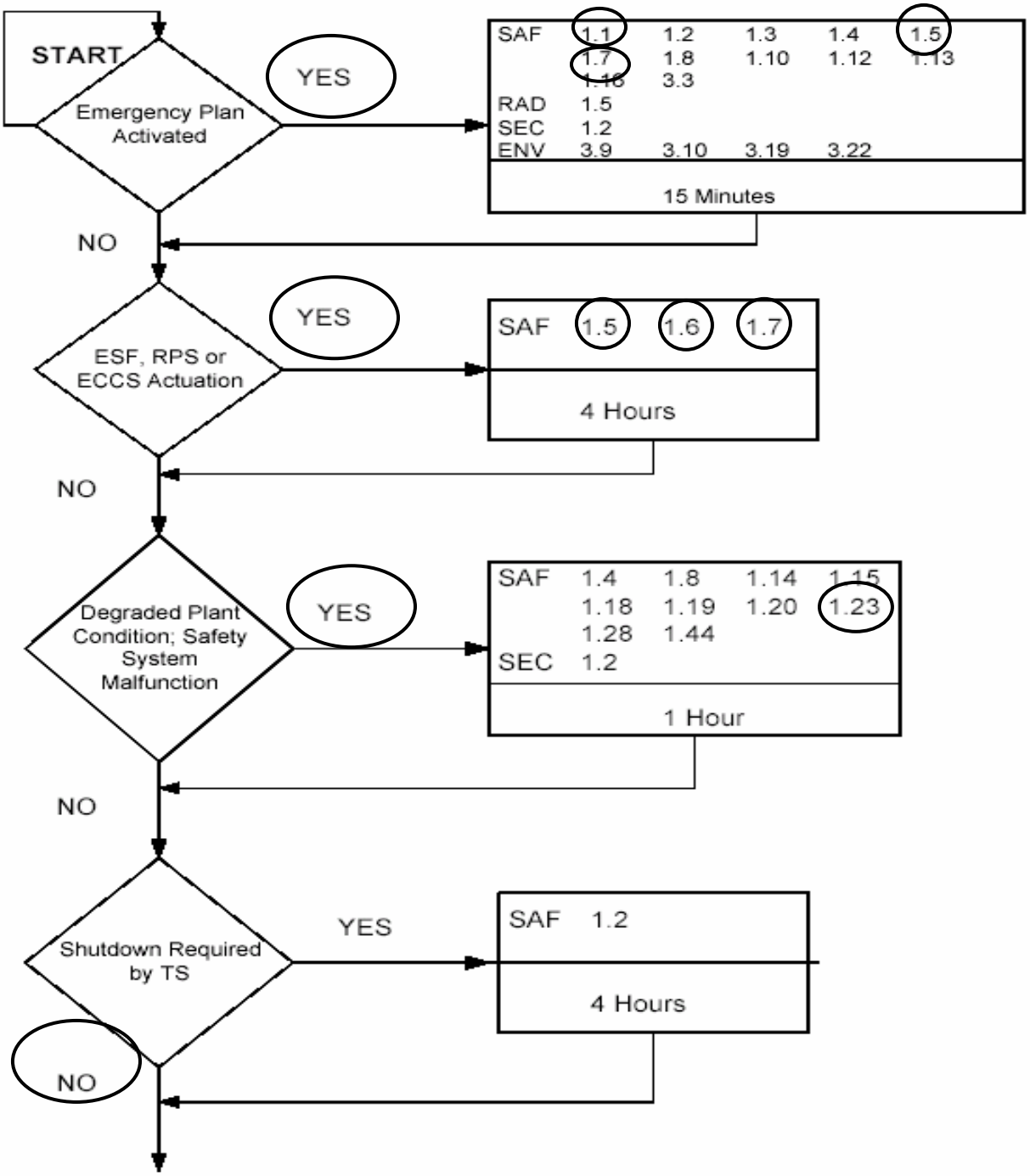
    - Insert **IMF TH06D 540000**(N/A if JPM NOT performed in simulator)

COMMENTS:

Go to Operations Tree # 2

KEY EXAM MATERIAL

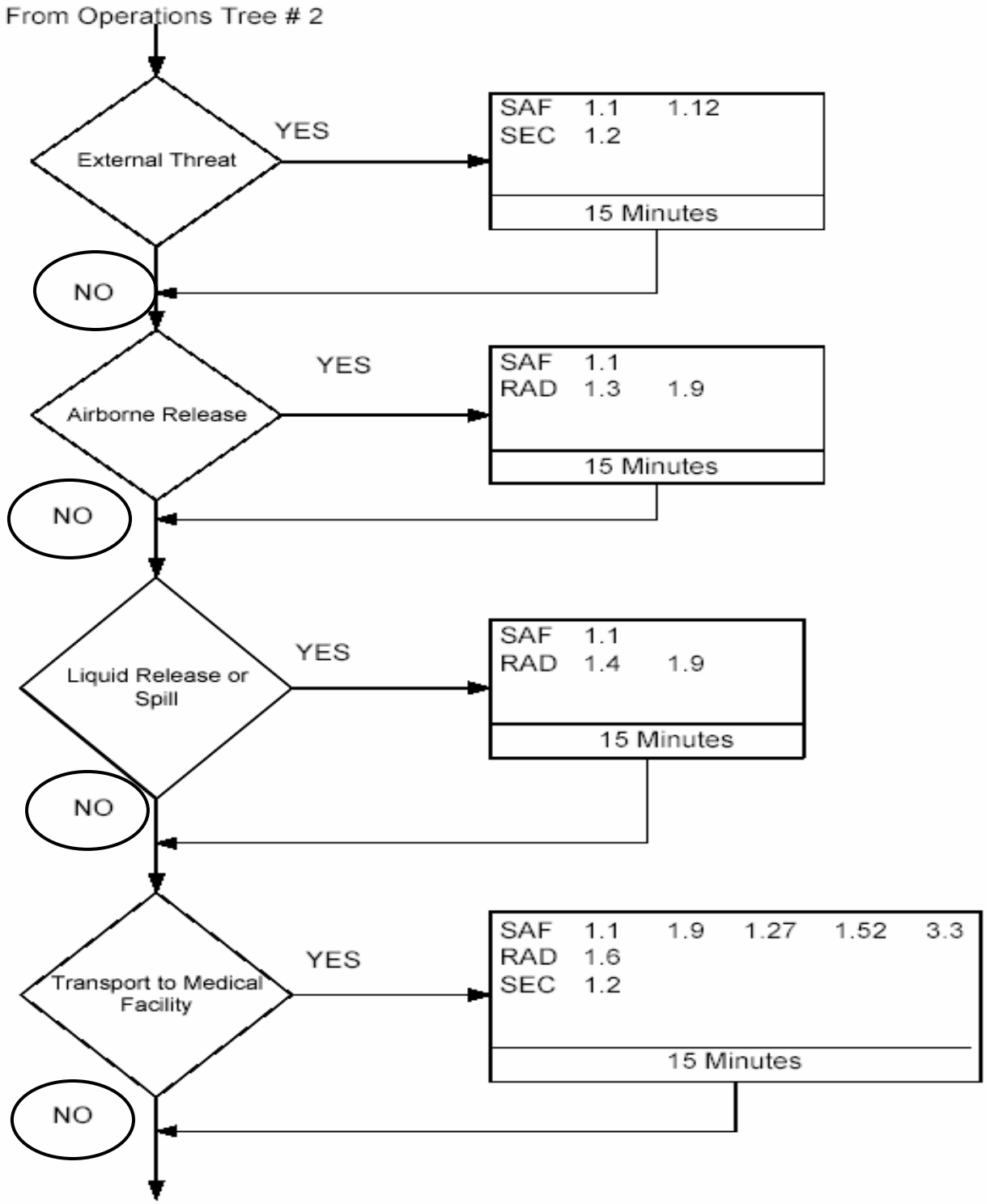
OPERATIONS DECISION TREE #1



Go to Operations Tree # 2

KEY

OPERATIONS DECISION TREE #3



OPERATIONS DECISION TREE #4