

EXAMINATION OUTLINE CROSS-REFERENCE:	Level:	RO	SRO
	Tier #		2
	Group #		3
	K/A#	005-K5.09	
	Importance Rating		3.4
Proposed Question: See Attached			
Proposed Answer: See attached			
Explanation (Why the distractors are incorrect): A flow rate of 2800 gpm is required during boron dilution. The low flow alarm for the LPI pump is 2800 gpm.			
Technical Reference(s): T.S. 3.1.1.2, Boron Dilution		Reference Attached: _____ (Attach if not previously provided)	
Proposed references to be provided to applicants during examination:			
Learning Objective (As available): OPS-GOP-431-01K			
Question Source:	Bank # _____ Modified Bank # _____ New <u> X </u>	(Note changes or attach parent)	
Question History	Previous NRC Exam _____ Previous Quiz / Test _____		
Question Cognitive Level:	Memory or Fundamental Knowledge _____ Comprehension or Analysis <u> X </u>		
10 CFR Part 55 Content:	55.41 _____ 55.43 <u> X </u>		
Comments (Why is it an upper level question): The examinee needs to determine that the low flow alarm is less than 2800 gpm so boron dilution is required to be stopped per Tech. Spec. 3.1.1.2.			

Question:

The following plant conditions exist:

- The plant is in Mode 5.
- Boron concentration of the RCS is being reduced for a startup.
- RCS temperature is 125°F.
- RCS pressure is 50 psig
- DH Pump 1 is in operation.
- The following annunciator has just come in alarm: 3-1-H, LP INJ 1 FLOW LO.
Indicated Decay Heat System flow is 2700 gpm.

Which one of the following actions should be taken?

- a. Stop DH Pump 1 and place DH Pump 2 in service from the BWST.
- b. Shift suction on DH Pump 1 to the BWST.
- c. Verify shutdown margin greater than 1% $\Delta K/K$.
- d. Close MU 39, Batch Flow Controller.

Answer:

- d.

EXAMINATION OUTLINE CROSS-REFERENCE:	Level:	RO	SRO
	Tier #		2
	Group #		3
	K/A#	007-A3.01	
	Importance Rating		2.9
Proposed Question: See Attached			
Proposed Answer: See attached			
Explanation (Why the distractors are incorrect): The quench tank can only discharge to the RC drain tank.			
Technical Reference(s): Dwg. OS-001A, Sht. 3		Reference Attached: _____ (Attach if not previously provided)	
Proposed references to be provided to applicants during examination:			
Learning Objective (As available): OPS-SYS-104-03K			
Question Source: OLC-6463	Bank # Modified Bank # New	_____ <u> X </u> _____	(Note changes or attach parent)
Question History	Previous NRC Exam Previous Quiz / Test	_____ _____	
Question Cognitive Level:	Memory or Fundamental Knowledge Comprehension or Analysis	<u> X </u> _____	
10 CFR Part 55 Content:	55.41 55.43	<u> X </u> _____	
Comments (Why is it an upper level question):			

Question:

A small leak in the PORV results in a rising quench tank level. Quench tank level is normally controlled by discharging excess water to which one of the following destinations?

- a. RC drain tank
- b. Miscellaneous waste drain tank
- c. Containment normal sump
- d. Primary water storage tank

Answer:

- a.

Question:

A leak in the PORV results in a increase in quench tank temperature and level. Quench tank level is normally controlled by discharging excess water to which one of the following?

- a. RC drain tank
- b. Miscellaneous waste drain tank
- c. Containment normal sump
- d. Clean waste receiver tank

Answer:

- a.

EXAMINATION OUTLINE CROSS-REFERENCE:	Level:	RO	SRO
	Tier #		2
	Group #		3
	K/A#	008-K4.02	
	Importance Rating		2.7

Proposed Question:
See Attached

Proposed Answer: See attached

Explanation (Why the distractors are incorrect):

- Makeup header CC1460 isolates at 35".
- HPI pump comes off essential header.
- CTMT header isolates at 35".

Technical Reference(s): DB-OP-02523.02

Reference Attached: _____
(Attach if not previously provided)

Proposed references to be provided to applicants during examination:

Learning Objective (As available): OPS-SYS-304-02K

Question Source:	Bank #	_____	(Note changes or attach parent)
	Modified Bank #	_____	
	New	<u> X </u>	

Question History	Previous NRC Exam	_____
	Previous Quiz / Test	_____

Question Cognitive Level:	Memory or Fundamental Knowledge	_____
	Comprehension or Analysis	<u> X </u>

10 CFR Part 55 Content:	55.41	<u> X </u>
	55.43	_____

Comments (Why is it an upper level question):

The examinee must be able to determine that Auxiliary Building non-essential header is isolated at 45" and it supplies cooling to the waste gas compressor.

Question:

The following plant conditions exist:

- The plant is operating at 100% power.
- Annunciator Alarm 11-3-A, CCW SURGE TK LVL LO, has just come in.
- CCW surge tank level indicates 42 inches.

Which one of the following pieces of equipment would be of concern if operating?

- a. MU Pump 1
- b. HPI Pump 1
- c. RCP 1-1
- d. Waste Gas Compressor 1

Answer:

- d.

EXAMINATION OUTLINE CROSS-REFERENCE:	Level:	RO	SRO
	Tier #		2
	Group #		3
	K/A#	041-A3.02	
	Importance Rating		3.4
Proposed Question: See Attached			
Proposed Answer: See attached			
Explanation (Why the distractors are incorrect): b. Reactor power will not increase. c. Steam pressure control remains at 870 psig. d. Steam pressure control remains at 870 psig.			
Technical Reference(s): Dwg. M-533-175, ICS Integrated Master Digital		Reference Attached: _____ (Attach if not previously provided)	
Proposed references to be provided to applicants during examination:			
Learning Objective (As available): OPS-SYS-202-06K			
Question Source:	Bank # _____ Modified Bank # _____ New <u> X </u>	(Note changes or attach parent)	
Question History	Previous NRC Exam _____ Previous Quiz / Test _____		
Question Cognitive Level:	Memory or Fundamental Knowledge _____ Comprehension or Analysis <u> X </u>		
10 CFR Part 55 Content:	55.41 <u> X </u> 55.43 _____		
Comments (Why is it an upper level question): The examinee must be able to predict plant response on a closure of MSIVs and the effects it has on reactor power and steam pressure control.			

Question:

Reactor power is 4% when the MSIVs inadvertently close.

Which one of the following describes plant response?

- a. Steam pressure control shifts to the AVVs at 870 psig, reactor power remains the same
- b. Steam pressure control shifts to the AVVs at 870 psig, reactor power will increase.
- c. Steam pressure control shifts to the AVVs at 995 psig, reactor power remains the same.
- d. Steam pressure control shifts to the AVVs at 995 psig, reactor power will increase.

Answer:

- a.