Perry January 2001

PROPOSED WRITTEN EXAMINATION

QUESTION 1

A. 4

In MODES 1, 2, and 3, compliance with LCO 3.6.2.1, Suppression Pool Average Temperature, and LCO 3.6.2.3, RHR Suppression Pool Cooling System, is required to ______.

	ensure the Drywell peak temperature and pressure remain below design
	ensure the Drywell peak temperature and pressure and
А.	limits following a DBA-LOCA.

- B. ensure the Primary Containment peak temperature and pressure remain below design limits following a DBA-LOCA.
- C. maintain a sufficient amount of cooled water to condense the steam from the SRV quenchers or RCIC turbine exhaust line during all modes of plant operation.
- D. maintain an adequate suppression pool heat sink volume to ensure Primary Containment pressure and temperature remain within design limits.

ANSWER: B

		1.				
		Level:		RO	SRO	
	D.C.	Tier # Group #	ŧ	<u> </u>	1	
Examination Outline Cro	ss-Keterence	K/A#	<u></u>	295013	AK2.01	
			nce Rating		3.7	
Proposed Question: See	e attached					
Proposed Answer: See	attached					
Explanation (Why the distract	ors are incorrect):	_	_			
A – Bases for LCO 3.6.5.5, D		ture				
	•		1002604	1 and 2 6 9 4	3	
C – Function of the Suppress		Dases IO.	i LUU 3.0.2."	i anu 3.0.2.	υ.	
D – Bases for LCO 3.6.2.4, S	PMU System.					
				A 44		
Technical Reference(s): TS 3 3.6.2.3 LCO & Bases	3.6.2.1 LCO & Base	es, LCO	Reference		X	
J.D.Z.J LOU & Bases			(Attach if no	ot previously	/ provided	
Proposed references to be pr	rovided to applicant	s during e	xamination: I	None		
		0.2				
•						
Loorning Objective (As suci-	bla): OT 2027 004					
Learning Objective (As availa	. UI-3037-001-					
Question Source:	Bank # Modified Bank # New	•	(Note	changes or	attach parent)	
Question History:	Previous NRC E Previous Quiz /					
Question Cognitive Level: Memory or Fundamental Knowledge X Comprehension or Analysis						
10 CFR Part 55 Content:	55.41 _X 55.43 _X					
Comments (Why is it an uppe	er level auestion):					

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QUESTION 2

In response to which one of the following events will fuel temperature act <u>first</u> to change the reactivity addition to the core?

- A. A control rod drop during reactor power operation.
- B. The tripping of the Main Turbine at 45% reactor power.
- C. A safety relief valve opening during reactor power operation.
- D. The loss of a feedwater heater (extraction steam isolated) during reactor power operation.

ANSWER: A

		Level:		RO	SRO
		Tier #			1
Examination Outline Cro	oss-Reference	Group	<u>#</u>		1
		K/A#		295014	AK2.03
		Importa	ance Rating		3.4
Proposed Question: Se	e attached				
•					
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):	· · · · · · · · · · · · · · · · · · ·			
B/C/D – Each affects reactivi changes first. Therefore, fuel effect is seen.					
Technical Reference(s): GP	Reactor Theory,	USAR	Reference /	Attached:	X
Section 15.4	•		(Attach if no		nrovided
					provided
Proposed references to be p	rovided to applicar	nts during e	xamination: N	lone	
Learning Objective (As availa	 able): OT-3301-00	3-08 Obj 2 [/]	0 . OT-3401-(005-11 Obj	D
	· · · · · · · · · · · · · · · · · · ·		- ,	•	
Question Source:	Bank # Modified Bank New	#	(Note (changes or a	attach pare
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fun Comprehensior		ínowledge s	_X_(A)	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 <u>X</u>				
Comments (Why is it an upp determine whether positive of will be the first reactivity coef	or negative reactivit	ty is added			

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QUESTION 3

A CAUTION in the Plant Emergency Instructions states, "Operation of LPCS or RHR with suction from the Suppression Pool and Suppression Pool level less than 5.75 feet may result in equipment damage."

Select the statement below that describes the application of this limit.

- A. The equipment damage is expected to be immediate. Operation of the pumps at a Suppression Pool less than 5.75 feet is NEVER permitted unless a 50.54(x) determination is made.
- B. The equipment damage is expected to be immediate Never the less, operation of the pumps at a Suppression Pool level less than 5.75 feet is permitted under certain circumstances even without a 50.54(x) determination.
- C. The equipment damage is NOT expected to be immediate. The importance of the pumps to plant safety requires that operation of the pumps at a Suppression Pool level less than 5.75 feet is NEVER permitted unless a 50.54(x) determination is made.
- D. The equipment damage is NOT expected to be immediate. Thus, even though the pumps are important to plant safety, operation of the pumps at a Suppression Pool level less than 5.75 feet is permitted under certain circumstances even without a 50.54(x) determination.

ANSWER: D

		Level:		RO	SRO
Examination Outline Cross-		Tier #			1
	oss-Reference	Group	¢		1
		K/A#		295030	
·	· · · · · ·	Importa	nce Rating		3.8
Proposed Question: Se	e attached				
Proposed Answer: See	attached		·····		
Explanation (Why the distract	· · · · · · · · · · · · · · · · · · ·				
A - The damage is not expect is threatened.			imit may be dis	sregarded i	f core coo
		4			
B - The damage is not expect	cted to be immediat	te.			
C - This limit may be disrega	arded if core cooling	g is threater	ied.		
Technical Reference(s): PEI	Bases Document		Reference At	tached:	_X
			(Attach if not	previously	provided)
Proposed references to be p	rovided to applicat	its during e.			
Learning Objective (As avail	able): OT-3402-00	5-01 Obi D			
Learning Objective (As avail	able): OT-3402-00	5-01 Obj D			
Learning Objective (As avail Question Source:	able): OT-3402-00 Bank <i>#</i> Modified Bank New		(Note ch	anges or a	ittach pare
	Bank <i>#</i> Modified Bank	# > Exam	(Note ch	anges or a	ittach pare
Question Source:	Bank # Modified Bank New Previous NRC	#	nowledge	Anges or a	ittach pare
Question Source: Question History:	Bank # Modified Bank New Previous NRC Previous Quiz	#	nowledge		ittach pare
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Func Comprehension 55.41 _X_ 55.43 _X_	#	nowledge		ittach pare
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Func Comprehension 55.41 _X_ 55.43 _X_	# Exam / Test damental K	nowledge		ittach pare

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QUESTION 4

The plant is operating at 5% power and a test of RCIC has just been completed. In accordance with the power ascension schedule, a test of the Safety Relief Valves (SRVs) is now in progress. Testing is in progress when the Control Room Operators notice that Suppression Pool average water temperature has inadvertently increased to 106 °F.

What is the MINIMUM action required?

Α.	Enter PEI-T23, Containment Control and suspend testing of SRVs.
В.	Enter LCO 3.6.2.1, Suppression Pool Average Temperature and suspend testing of SRVs.
С.	Enter PEI-T23, Containment Control and LCO 3.6.2.1, Suppression Pool Average Temperature.
D.	Enter PEI-T23, Containment Control and LCO 3.6.2.1, Suppression Pool Average Temperature and suspend testing of SRVs.

ANSWER: B

		Level:		RO	SRO
		Tier #			1
Examination Outline Cro	oss-Reference	Group #	£		11
		K/A#		295013	AA2.01
······································		Importa	nce Rating		4.0
Proposed Question: Se	e attached				
Proposed Answer: See	attached				· · · · · · · · · · · · · · · · · · ·
Explanation (Why the distrac	tors are incorrect)	:			
A/C/D – The LCO must be encause of the temperature inc	rease was due to	pre-planned	testing.		
Technical Reference(s): LCC	0 3.6.2.1. PAP-05	28	Reference A	ttached:	x
		20	I Veletence A		
Proposed references to be n			(Attach if not	previously	
Proposed references to be p Learning Objective (As avail	rovided to applica	nts during e	(Attach if not xamination: N	previously one	provided)
Proposed references to be p Learning Objective (As avail Question Source:	rovided to applica	nts during e 01-10 Obj A	(Attach if not xamination: N & & C, OT-303	previously one 39-001-04	provided)
Learning Objective (As avail	rovided to applica able): OT-3037-0 Bank <i>#</i> Modified Bank	nts during e 01-10 Obj / # Exam	(Attach if not xamination: N & & C, OT-303	previously one 39-001-04	oprovided) Obj A & D
Learning Objective (As avail Question Source:	rovided to applica able): OT-3037-00 Bank # Modified Bank New Previous NRC	nts during e 01-10 Obj / # Exam / Test	(Attach if not xamination: N & & C, OT-303	previously one 39-001-04	oprovided) Obj A & D
Learning Objective (As avail Question Source: Question History:	rovided to applica able): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fur	nts during e 01-10 Obj / # Exam / Test	(Attach if not xamination: N & & C, OT-303	previously one 39-001-04 hanges or	oprovided) Obj A & D
Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	rovided to applica able): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fur Comprehensio 55.41 55.43X	nts during e 01-10 Obj / # Exam / Test ndamental k n or Analysi	(Attach if not xamination: N & & C, OT-303	previously one 39-001-04 hanges or	oprovided) Obj A & D
Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	rovided to applica able): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fur Comprehensio 55.41 55.43X	nts during e 01-10 Obj / # Exam / Test ndamental k n or Analysi	(Attach if not xamination: N & & C, OT-303	previously one 39-001-04 hanges or	oprovided) Obj A & D

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QUESTION 5

The Unit Supervisor ordered the Control Room to be abandoned due to toxic fumes. The plant is being operated from the Remote Shutdown Panel (C61-P001). Plant cool down is in progress with preparations being made to place RHR Loop 'A' in the Shutdown Cooling mode of operation. The Unit Supervisor directs the operator to verify that reactor pressure is less than 135 psig prior to placing shutdown cooling into operation.

What is the reason for this direction to ensure reactor pressure is less than 135 psig?

A	If reactor pressure exceeds 135 psig with shutdown cooling in operation, then shutdown cooling will isolate.
В.	If reactor pressure exceeds 135 psig with shutdown cooling in operation, then RHR pump seals could be damaged.
C.	The relief valve on the RHR pump suction line is designed to lift at 135 psig.
D.	The relief valve on the Shutdown Cooling suction line is designed to lift at 135 psig.

ANSWER: B

	· · · · ·	Level:		RO	SRO		
		Tier #			1		
	T A	Group #	4				
Examination Outline Cro	ss-Reference	K/A#	F	295016 /	<u> </u>		
			neo Botina	2900107	4.0		
Importance Rating 4.0 Proposed Question: See attached							
Proposed Answer: See	attached		·····				
Explanation (Why the distract	ors are incorrect):						
A - Interlocks/automatic funct	tions are hypassed	due to on	aration from the	RSP			
	•••	uue to op					
C and D - The setpoint for this	s relief is 200 psig.						
Technical Reference(s): IOI-1	1, SDM-E12 (Table	e E12-5)	Reference Att				
			(Attach if not p	previously	provided)		
Proposed references to be pr	ovided to applicant	s during e	xamination: No	ne			
Learning Objective (As availa	ble): OT-3036-003	3-C61 Obj	E, OT-3036-0	04-E12 OI	bj C		
Question Source:	Bank# Modified Bank# New	ŧ	(Note ch	anges or a	ttach parent)		
Question History:	Previous NRC E Previous Quiz /						
Question Cognitive Level: Memory or Fundamental Knowledge Comprehension or Analysis							
10 CFR Part 55 Content:	55.41X 55.43						
Comments (Why is it an uppe determine that an isolation wi		3tudent mι	ıst analyze plan	t condition	is to		

QUESTION 6

A plant transient has resulted in a reactor scram.

Plant conditions are as follows:

- No systems can be aligned for injection.
- MSIVs are closed.
- Containment pressure is 2.1 psig.
- Drywell pressure is 7.5 psig.
- All control rods are fully inserted.

Given these plant conditions, which one of the following conditions assure adequate core cooling?

А.	Reactor water level is unknown, no SRVs are open, and reactor pressure is 265 psig.
В.	Reactor water level is unknown, 8 SRVs are open, and reactor pressure is 45 psig.
C.	Reactor water level is -40 inches, no SRVs are open, and reactor pressure is 800 psig
D.	Reactor water level is -40 inches, 5 SRVs are open, and reactor pressure is 25 psig.

ANSWER: C

<u> </u>		1				
		Level:			RO	SRO
		Tier #				1
Examination Outline Cro	ss-Reference	Group	#			1
		K/A#			295031	
		Importa	ance R	ating		4.8
Proposed Question: Se	e attached					
Proposed Answer: See	attached				· · · · · · · · · · · · · · · · · · ·	
Explanation (Why the distract	tors are incorrect):					
A & B – When water level is u must be open and reactor pre Flooding)	unknown, in order to essure must be at lea	ast 60 psi	ig abov	ve Contai	nment pres	ssure. (RPV
D – The opening of SRVs priv	or to reaching MZIW	L reduce	s the e	ffectivene	ess of stea	m cooling.
Technical Reference(s): PEI	Bases Document, PI	EI-	Refei	ence Atta	ached:	Х
Technical Reference(s): PEI Bases Document, PEI- B13,RPV Control(Non-ATWS), PEI-B13, RPV Flooding Reference Attached:X (Attach if not previously provided)						
Proposed references to be pr Learning Objective (As availa						
						• • • •
Question Source:	Bank # Modified Bank # New			(Note cha	anges or a	ttach parent)
Question History:	Previous NRC Ex Previous Quiz / T					
Question Cognitive Level:	Memory or Funda Comprehension of				_(C)_	
10 CFR Part 55 Content:	55.41 55.43X					
Comments (Why is it an uppe determine when there is adeo		equires st	tudent	to analyz	e plant cor	nditions to

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QUESTION 7 .

A plant event is in progress. PEI-N11, Containment Leakage Control, has been entered.

In the Auxiliary Building, 574', area radiation monitors indicate as follows:

٠	D21-K112, AB EL 574' East	4.2 Rem/hr
•	D21-K122, AB EL 574' West	4.1 Rem/hr

The Maximum Safe Operating Condition Value for this area is 4.0 Rem/hr. The Unit Supervisor directs that the reactor be shutdown even though **NO** primary system is discharging into the area.

What is the bases for the Unit Supervisor's decision to shutdown the reactor?

A	Systems required to assure adequate core cooling are required to be isolated.
B. .	Two or more areas have exceeded their Maximum Safe Operating Conditions Value for Area Radiation; therefore, a direct threat to continued safe operation exists.
С.	One area has exceeded its Maximum Safe Operating Conditions Value for Area Radiation; therefore, a direct threat to personnel safety exists.
D	Area radiation levels of this magnitude prohibit personnel access to the Auxiliary Building that may be required to support operation of systems required to maintain the reactor shutdown.

ANSWER: B

		Level:		RO	S
		Tier #			1
Examination Outline Cr	oss-Reference	Group a	t	205022	
		K/A#	nce Rating	295033	3
Proposed Question: Se	e attached				
Proposed Answer: See	attached	<u>.</u>			
Explanation (Why the distrac	ctors are incorrect):				
A – Systems required to ass	ure adequate core	cooling are	not required	to be isolate	ed.
C / D –The reactor is directe direct threat to personnel sat reactor.	fety is not mentione	ed in the ba	ses as a rea	son to shutde	own t
Technical Reference(s): PEI	-N11, PEI-N11 Ba	ses	Reference	Attached: _	_X_
Proposed references to be p	provided to applicar	· · · · · · · · · · · · · · · · · · ·		ot previously None	prov
Proposed references to be p Learning Objective (As avail	able): OT-3402-00	nts during e	xamination:		prov
Proposed references to be p		nts during e 01-17 Obj (xamination:		
Proposed references to be p Learning Objective (As avail	able): OT-3402-00 Bank <i>#</i> Modified Bank	nts during e	xamination:	None	
Proposed references to be p Learning Objective (As avail Question Source:	able): OT-3402-00 Bank <i>#</i> Modified Bank New Previous NRC	nts during e	xamination: & D (Note nowledge	None	

QUESTION 8

A plant startup is in progress with reactor power at 5%. The Unit Supervisor has been directed to raise reactor power to 20%. The on-shift Chemistry Technician reports the following results for the SLC Storage Tank sample:

Net Tank Volume 4475 gallons
Solution Concentration-WT % Boron 2.8%

Select the correct response for the indicated conditions.

Technical Specification Section 3.1 is provided for reference.

A.	The SLC System is OPERABLE. Reactor startup to 20% power can continue.
В.	Restore at least one SLC subsystem to OPERABLE within 8 hours or be in Hot Shutdown within the next 12 hours. Reactor startup to 20% power can continue.
C.	Restore at least one SLC subsystem to OPERABLE within 7 days or be in Hot Shutdown within the next 12 hours. Reactor startup to 20% power <u>cannot</u> continue.
D.	Restore at least one SLC subsystem to OPERABLE within 8 hours or be in Hot Shutdown within the next 12 hours. Reactor startup to 20% power <u>cannot</u> continue.

ANSWER: D

		Level:		RO	SRO
		Tier #			2
Examination Outline Ci	ross-Reference	Group	#		1
		_K/A#		GEN 2.	1.12/211000
		Importa	ance Rating		4.0
Proposed Question: So	ee attached				
					<u> </u>
Proposed Answer: See	e attached				
	····				
Explanation (Why the distra					
A – Net Tank Volume is bel	ow minimum; theref	ore, SLC S	ystem is inope	erable.	
B - Reactor startup cannot	continue to 20% per	r LCO 3.0.4			
C – Not in Condition A, will I	be in Condition B be	cause bot	SLC subsyst	ems are in	operable due
to the common SLC Storage	e Tank.				
Technical Reference(s): LC	0 3.1.7		Reference A	ttached [.]	x
	0 0.1.7			-	
			(Attach if not	previously	provided)
Proposed references to be	provided to applican	its during e	xamination: L0	CO 3.1.7 ai	nd Bases,
Tech Spec Section 3.0 (LCC	D/SR Applicability)				
Learning Objective (As avai	lable): OT-3036-005	5-C41 Obj	G, OT-3037-0)06-05 Ob	j D
				· · · · · · · · · · · · · · · · · · ·	
Question Source:	Bank #		906		
	Modified Bank a New	#	(Note c	nanges or a	attach parent)
Question History:	Previous NRC I	Exam		-	
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Question Cognitive Level:	Memory or Fund	amental K	nowledge		<u></u>
	Comprehension			X (A)_	
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10 CER Part 55 Content	55 41				
10 CFR Part 55 Content:	55.41 55.43 X				
10 CFR Part 55 Content:	55.41 55.43X	<u> </u>	<u></u>		
Comments (Why is it an upp	55.43 X			LCO 3.1.7	7 for the SLC
	55.43 X			LCO 3.1.7	7 for the SLC
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QUESTION 9

The Division 2 Diesel Generator (DG) received an automatic start signal due to a bus undervoltage condition.

Ten (10) seconds later the undervoltage condition still exists, starting air pressure has decreased to 150 psig, and DG speed is 100 rpm.

Which one of the following describes the current status of the Division 2 DG?

The Division 2 DG starting air valves are _____.

А.	open and the Division 2 DG will continue to roll for another 20 seconds unless its speed reaches 441 rpm.
В.	open and the Division 2 DG will continue to roll for another 5 seconds unless its speed reaches 200 rpm.
C.	closed because starting air pressure has decreased to 150 psig.
D.	closed and the Division 2 DG has successfully started.

ANSWER: B

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cro	oss-Reference	Group	¥	1	1
		K/A#	Mar	264000	
		Importa	nce Rating	3.0	3.1
Proposed Question: Se					
Proposed Answer: See	attached		· · · · · · · · · · · · · · · · · · ·		
Explanation (Why the distrac	tors are incorrect):				
A – The starting air valves re 200 rpm.	main open on an U	JV start for	15 seconds o	or until DG s	peed reach
C - The starting air valves do	o not close on an L	IV start if st	arting air pre	ssure reach	ed 150 psig
D – A successful start is defin considered to rolling.					
Technical Reference(s): SDN	1-R43		Reference	Attached:	_x
• •			(Attach if n	- ot previously	provided)
Proposed references to be proposed reference					<u>.,</u>
	Bank #		(Niata		
Question Source:	Modified Bank	#`		changes or a	attach pare
Question Source: Question History:		 Exam		changes or a	attach pare
	New Previous NRC	Exam / Test damental k	((C)	attach pare

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QUESTION 10

The plant is operating at power. The Motor Feed Pump is tagged out due to a motor ground. Reactor Feed Pump 'B' has just been removed from service for corrective maintenance.

What is the current operating guideline for reactor power based on the present status of the Feedwater System?

A. 63%

B. 66%

C. 68%

D. 71%

ANSWER: A

		Level:		RO	SRO
		Tier #		3	3
Examination Outline Cro	oss-Reference	Group #	i antar	Cat 1	Cat1
		K/A#		GEN 2.1	
		Importa	nce Rating	3.4	3.8
Proposed Answer: See	attached	<u> </u>			
Explanation (Why the distrac	tors are incorrect):				
B - This value is 5% below th	he recommended p	ower limit l	pefore power i	uprate.	
C – This is the 'max' power li	imit after power up	rate			
D – This is the 'max' power li					
		prate			
Tachairal Deference (a): SOI	024 COLNI27 ON		Boforonoo A	ttoohod	×
Technical Reference(s): SOI	-034, 501-1127, 01	NI-INZ /	Reference A		
<u></u>			(Attach if not	previously	provided)
Learning Objective (As availa	able): OT-3036-006	5-C34 Obj	F OT-3036-0	04-N27 Ob	j G and I
Learning Objective (As availa Question Source:	able): OT-3036-006 Bank # Modified Bank New		(Note c		j G and I attach parent
	Bank# Modified Bank	#	(Note c		
Question Source:	Bank # Modified Bank New Previous NRC	#	(Note c		
Question Source: Question History:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fund	#	(Note c	hanges or a	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Func Comprehension 55.41X_ 55.43	# Exam / Test damental K o or Analysi	(Note c	hanges or a	
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Func Comprehension 55.41X_ 55.43	# Exam / Test damental K o or Analysi	(Note c	hanges or a	

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QUESTION 11

The plant is in MODE 4 preparing for a refueling outage.

What is/are the MINIMUM action(s) that must be performed to enter into MODE 5?

A. De-tension one reactor vessel head closure bolt.

B. Place the Reactor Mode Switch in the REFUEL position.

C. Place the Reactor Mode Switch in the REFUEL position <u>and</u> de-tension one reactor vessel head closure bolt.

D. Place the Reactor Mode Switch in the REFUEL position <u>and</u> de-tension all the reactor vessel head closure bolts.

ANSWER: A

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		Level:	····· ···· ··· ··· ··· ··· ··· ··· ···	RO	SRO
		Tier #			3
Examination Outline Cro	ss-Reference	Group #	#		Cat 1
		K/A#		GEN 2.1.2	
	· · · · · · · · · · · · · · · · · · ·	I Importa	nce Rating		3.3
Proposed Question: See	e attached	_			
		,			
Proposed Answer: See	attached				
Explanation (Why the distract	tors are incorrect):				
		hain MO			
B – This will not satisfy the er	·				
C / D- This will place the plan	nt in MODE 5 but it i	is not the	minimum requi	red action.	
Technical Deference (a). Te-	h Chao Table 4.4.4		Poforonaa At	tachad:	,
Technical Reference(s): Tec	in Spec rable 1.1-1		Reference At		
			(Attach if not	previously pr	ovided)
Proposed references to be pr	rovided to applicant	s durina e	xamination [.] No	ne	
r roposed references to be pi	onded to applicant	s uunny c			
Learning Objective (As availa	able): OT-3037-005-	-02 Obi A			
Question Source:	Bank #				
	Modified Bank #		(Note ch	anges or atta	ach parent)
	New	$ \rightarrow $	<u> </u>	÷	. ,
Question History:	Previous NRC E	xam _			
	Previous Quiz /				
				v	
Question Cognitive Level:	Memory or Fund			_X	
	Comprehension	or Analysi	s _		
					· • •
10 CFR Part 55 Content:	55.41				
	55.43 X				
·					
Comments (Why is it an upp	er level question). N	I/A			
Comments (why is it an upp					

~_____

QUESTION 12

The plant is operating during an emergency. The Operations crew determines that conditions are such that there is <u>no</u> appropriate action to be taken which would be in compliance with the Perry Operating License.

Whose permission, at a <u>minimum</u>, is required to take reasonable action(s) to maintain the plant in a safe condition **AND** when must the NRC be notified of such reasonable action(s)?

A. Operations Shift Supervisor; notify the NRC within one (1) hour.
B. NRC Resident Inspector; notify the NRC within one (1) hour.
C. Operations Manager; notify the NRC within thirty (30) days in a written report.
D. Licensed Supervising Operator; notify the NRC within thirty (30) days in a written report.

ANSWER: A

		Level: Tier #		RO	SRO 3
Examination Outline Cro	an Dafaranaa	Group 7	4		Cat 1
Examination Outline Cro	55-IXCICI CIICE	K/A#		GEN 2.	
			ince Rating		4.0
Proposed Question: See Proposed Answer: See Explanation (Why the distrac B – The action requires the c C / D – This action requires t	attached tors are incorrect): oncurrence of an s	SRO only, r			to the NPC
within one hour in accordanc	e with CFR50.72		.,		
Technical Reference(s): PAF PAP-1604	-0201, 10CFR50	.54x & y,	Reference A (Attach if no	-	
Learning Objective (As availa 3039-007-01 Obj B & C	able): OT-3039-00	08-02 Obj /	A & C, OT-30	35-003-01	Obj G, OT-
Question Source:	Bank # Modified Bank New	#	(Note c	hanges or	attach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fun Comprehension			_x	
10 CFR Part 55 Content:	55.41 55.43X				

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QUESTION 13

The plant is operating at 100% reactor power when annunciators MAIN TURB & FDW TRIP RCIC/L8 and RPS RX LEVEL HI L8 on panel H13-P680 alarm. <u>All</u> Reactor Narrow Range Level meters indicate that reactor water level is 225 inches.

The Main Turbine did NOT trip and the reactor did NOT automatically scram.

As the Unit Supervisor, which one of the following directions should be given to the Operator-at-the-Controls?

- A. Take manual control of feedwater flow and slowly return reactor water level to its normal band, and then commence a normal plant shutdown.
- B. Manually trip the Main Turbine and carryout the Immediate Actions of ONI-N32, Turbine and/or Generator Trip.
- C. Manually scram the reactor and carryout the Immediate Actions of ONI-C71-1, Reactor Scram.
- D. Enter PEI-B13, RPV Control (Non-ATWS) and manually scram the reactor.

ANSWER: D

		T							
		Level:		RO	SRO				
		Tier #			3				
Examination Outline Cro	ss-Reference	Group #	<u> </u>		Cat 1				
		K/A#	ince Rating	GEN 2.1	./				
Proposed Question: See attached									
Proposed Answer: See									
Explanation (Why the distract	ors are incorrect):								
A / B / C – PEI-B13, RPV Control (Non –ATWS) is required to be entered when a reactor scram is required and power is greater than 4%. This PEI is the higher tier document is relation to either ONI-N32 or ONI-C71-1. Also it is definitely not appropriate to take manual control of fdw to restore level and then perform a normal shutdown. The failure of the automatic actions to occur (i.e., reactor scram) dictates entry specifically into PEI-B13.									
Technical Reference(s): PEI-I ATWS)	313, RPV Control (I	Non-	Reference At						
			(Attach if not	previously	providea)				
Proposed references to be pr	ovided to applicants	s during e	xamination: No	one					
Learning Objective (As availa	ble): OT-3402-005-	02 Obj A	, B and F						
Question Source:	Bank # Modified Bank # New		(Note cf	anges or a	ttach parent)				
Question History:	Previous NRC Ex Previous Quiz / 1								
Question Cognitive Level:	Memory or Funda Comprehension o			<u>X_(A</u>)					
10 CFR Part 55 Content:	55.41 55.43X								
Comments (Why is it an upper recognize the failure of autom reactor.	r level question): R atic actions to occu	equires stur, and the	tudent to analy en make a dec	ze plant cor ision to shul	nditions, tdown the				

24 - 19**4** 19

QUESTION 14

Per PAP-1105, Surveillance Test Control, the Unit Supervisor, depending on plant conditions and amount of time available, can permit Contingent SVIs to be performed without the use of a Data Package Cover Sheet (DPCS).

Which one of the following is **NOT** a guideline that the must be adhered to if a Contingent SVI is to be performed without a DPCS?

- A. A DPCS is properly completed following performance of the SVI.
- B. An updated or current working copy of the SVI is used to perform the SVI.
- C. A Plant Narrative Log entry is made annotating the SVI number, the sections of the SVI actually performed, results, and the name(s) of the test performer(s) upon completion of the SVI.
- D. The Shift Supervisor signs the Plant Narrative Log entry, acknowledging the completion of the SVI and approval of and concurrence with the results.

ANSWER: D

		Level:		RO	SRO
		Tier #	· . ·	<u> </u>	3
	D.f	Group #			Cat 2
Examination Outline Cros	ss-keierence	K/A#		GEN 2.	2.12
		Importance	Rating		3.4
roposed Question: See	attached				
Proposed Answer: See	attached				
xplanation (Why the distract	ors are incorrect)	•			
A / B / C - These are all guide			wed.		
Technical Reference(s): PAP		(<i>F</i>	ttach if no		X y provided)
Proposed references to be pr	ovided to applica	nts during exar	ttach if no	ot previous	
	ovided to applica	(A Ints during exar 08-03 Obj A	ttach if no	ot previous	
Proposed references to be pr	ovided to applica	(A Ints during exar 08-03 Obj A _394_	ttach if no	ot previous i None	
Proposed references to be pr Learning Objective (As availa	ovided to applica able): OT-3039-0 Bank # Modified Bank New Previous NRC	(<i>A</i> Ints during exar 08-03 Obj A (#	<u>ttach if no</u> nination: I	ot previous i None	y provided)
Proposed references to be pr Learning Objective (As availa Question Source:	ovided to applica able): OT-3039-0 Bank # Modified Bank New Previous NRC Previous Quiz	(<i>A</i> nts during exar 08-03 Obj A 08-03 Obj A 	ttach if no nination: I	ot previous i None	y provided)
Proposed references to be pr Learning Objective (As availa Question Source: Question History:	ovided to applica able): OT-3039-0 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fu	(A Ints during exar 08-03 Obj A 08-03 Obj A 394_ 394_ 2 Exam 2 / Test90-0 ndamental Kno on or Analysis	ttach if no nination: I	ot previous None changes or	y provided)
Proposed references to be pr Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	rovided to applica able): OT-3039-0 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fu Comprehensio 55.41 55.43 _X	(A Ints during exar 08-03 Obj A (#	ttach if no nination: I	ot previous None changes or	y provided)
Proposed references to be pr Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	rovided to applica able): OT-3039-0 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fu Comprehensio 55.41 55.43 _X	(A Ints during exar 08-03 Obj A (#	ttach if no nination: I	ot previous None changes or	y provided)
Proposed references to be pr Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	rovided to applica able): OT-3039-0 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fu Comprehensio 55.41 55.43 _X	(A Ints during exar 08-03 Obj A (#	ttach if no nination: I	ot previous None changes or	y provided)

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QUESTION 15

A refueling outage is in progress. Currently, the reactor pressure vessel has been defueled in preparation for in-vessel work.

Select the condition that would require <u>continuous</u> communication between the Control Room and the Refuel Floor.

- A. Replacement of a fuel support piece from the Vessel Platform.
- B. Replacement of an entire LPRM assembly from the Auxiliary Platform.
- C. Replacement of a Feedwater Sparger nozzle while standing on the top guide.
- D. Replacement of the RPV vessel head O-rings from the Vessel Platform.

ANSWER: C

		Level:		RO	SRO
		Tier #			3
Examination Outline Cros	Doforance	Group #	<u>L</u>		Cat 2
Examination Outline Cros	ss-Reference	K/A#		GEN 2	
			nce Rating		3.7
Proposed Question: See	attached				
Proposed Answer: See a	attached	<u></u>			
Explanation (Why the distract	ors are incorrect):				
A / B / D – In-vessel work is a circumference of the Ve communications is esta in-vessel work to ensur	essel Flange <u>and</u> b blished between t	below the to he Control	p of the Ves Room and t	ssel Flange. he Refuel Fl	Continuous loor during
Technical Reference(s): IOI-	9			Attached:	
			(Attach if r	ot previous	ly provided)
Proposed references to be pr	ovided to applicar	nts during e	xamination:	None	
Learning Objective (As availa	ble): None				
Question Source:	Bank # Modified Bank New	#	(Note	changes o	r attach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fun Comprehensior	damental k n or Analysi	(nowledge is	_X_(A)	
10 CFR Part 55 Content:	55.41 55.43X				
Comments (Why is it an uppe (answer) for location of work order to determine which cor	to be performed a	and then ap	ply the defir	nition of in-ve	essel work in

20-5-1-1-1-1-5-39 5 Art - 1-1-

QUESTION 16

During Day 26 of a refueling outage, the plant remains in a shutdown condition with reactor temperature and pressure being maintained at 150 °F and 0 psig respectively.

The RPV has been re-assembled. Refueling personnel are moving spent fuel bundles from the Containment to the FHB Spent Fuel Storage Pool with the Inclined Fuel Transfer System (IFTS).

What are the requirements for Primary Containment and Fuel Handling Building integrity during spent fuel movement?

- A. Primary Containment integrity <u>and</u> Fuel Handling Building integrity are required.
- B. Primary Containment integrity is required and Fuel Handling Building integrity is NOT required.
- C. Primary Containment integrity is NOT required and Fuel Handling Building integrity is required.
- D. Primary Containment integrity and Fuel Handling Building integrity are NOT required.

ANSWER: D

				1 =	
		Level:		RO	SRO
		Tier #			3
Examination Outline Cros	s-Reference	Group #	¢		Cat 2
		K/A#	noo Dotina	GEN 2.2	
		Importa	nce Rating		4.1
Proposed Question: See	attached				
Proposed Answer: See a	attached	<u> </u>			e
Explanation (Why the distracto	ors are incorrect):				
A / B / C – Applicability of both fuel being moved has not occu of these answers is incorrect.	LCOs is during r upied part of a crit	novement d ical reactor	of recently irrac	liated fuel. : 7 days. Th	The spent herefore, each
Technical Reference(s): LCO	3.6.10, LCO 3.7.	8	Reference At		
			(Attach if not	previously	provided)
Proposed references to be pro	ovided to applican	its during e	xamination: No	one	
Learning Objective (As availa	ble): OT-3037-00	1-10 Obj A	A, OT-3037-00	01-11 Obj I	3
Question Source:	Bank # Modified Bank New	#	(Note cl	nanges or a	attach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fun Comprehensior	damental k n or Analysi	nowledges	X_(A)	
10 CFR Part 55 Content:	55.41 55.43 _X_				
Comments (Why is it an uppe order to determine Tech Spec	r level question): : integrity requirer	Requires s nents durin	tudent to analy g movement o	ze plant co f spent fue	onditions in I.

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QUESTION 17

In accordance with PAP-0905, Work Order Process, who may initiate the Troubleshooting Log in order to avert an imminent plant shutdown?

- A. Responsible System Engineer
- B. Shift Supervisor
- C. Unit Supervisor
- D. Operations Manager

ANSWER: B

)					
1		Level:		RO	SRO
1		Tier#	an a		3
Examination Outline Cro	ss-Reference	Group #			Cat 2
sxamination Outline Cros		K/A#		GEN 2.2	2.20
			nce Rating		3.3
Proposed Question: See	attached				
Proposed Answer: See a	attached				
Explanation (Why the distractor	ors are incorrect).				
Troubleshooting Log.					<u></u>
Technical Reference(s): PAP-0905			Reference /		
			(Attach if no	ot previously	y provided
Proposed references to be pr Learning Objective (As availa					<u></u>
T Parning Chiecuve (AS 3VAUA					
			/Note	changes or	attach par
Question Source:	Bank <i>#</i> Modified Bank New	# _37			
	Modified Bank	 Exam			
Question Source:	Modified Bank New Previous NRC	Exam / Test			
Question Source:	Modified Bank New Previous NRC	 Exam			

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QUESTION 18

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The Unit Supervisor has authorized tags to be cleared for a Clearance on the Main Steam System (B21). Numerous tags on manual valves are located in the Aux. Steam Tunnel in a Level 1 Locked High Radiation Area.

Which one of the following describes the tag removal independent verification requirements for the Main Steam System Clearance?

Independent Verification may _____.

А.	be waived by the Clearance Authority based on ALARA concerns.
В.	be waived by the Clearance Authority based on personnel safety concerns.
C.	be waived by the Operations Foreman based on ALARA concerns.
D.	not be waived by the Clearance Authority based on ALARA concerns.

ANSWER: D

		Level:		RO	SRO
		Tier #		<u> </u>	3
Examination Outline Cr	oss-Reference	Group #	ŧ		Cat 2
		K/A#		GEN 2.2	.13
·····		Importa	nce Rating		3.8
Proposed Question: Se Proposed Answer: See Explanation (Why the distrated	e attached				
			Asta ad to DAT		
A / B / C– Standing Inst over therefore, the IV may not be could previously waive this I'	waived for ALARA	concerns. /	Also, only the		
Technical Reference(s): Sta	nding Instruction. P	AP-0205.	Reference A	ttached:	<u>х</u>
PAP-1401	0	,	(Attach if not		
Proposed references to be p				one	
Learning Objective (As avail	able): 01-3039-00				
Learning Objective (As avail Question Source:	Bank # Modified Bank # New		(Note c	hanges or a	ttach parent)
	Bank# Modified Bank#	#X	(Note c	hanges or a	ttach parent)
Question Source:	Bank # Modified Bank # New Previous NRC E	#X Exam Test damental K	nowledge _	hanges or a 	ttach parent)
Question Source: Question History:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	#X Exam Test damental K	nowledge _		ttach parent)
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43X_	#X ExamX Test damental K or Analysis	nowledge _		ttach parent)
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43X_	#X ExamX Test damental K or Analysis	nowledge _		ttach parent)

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QUESTION 19

As the Shift Supervisor, you may authorize radiological activities to occur <u>without</u> an approved Radiation Work Permit (RWP) during an urgent situation provided that ______.

- A. the entry is into a High Radiation Area, Level 1 Locked High Radiation Area, or a Level 2 Locked High Radiation Area.
- B. the entry is into a Very High Radiation Area (VHRA).
- C. authorization is also granted by the Plant Manager.
- D. authorization is for access to High Radiation Areas only by the Non-Licensed Operators.

ANSWER: A

Examination Outline Cross-		Tier # Group #			3 Cat 3
				1	
Pronosed Question: See a				OFNO	
Proposed Question: See at	Г	K/A# Importance	Rating	GEN 2.3	3.7
	ttached				
Proposed Answer: See atta	ached				
Explanation (Why the distractors	are incorrect):				
B – Entry into VHRA is not allowe		.			
C – Rad Protection Supervisor p			t manada		
			-		
O – condition does not fit the guid	uennes for an urge	ant situation	RVVP.	`	
Technical Reference(s): HPI-C00	005	Re	ference At	tached: _	X
				previously	
	had to onelize the				
Proposed references to be provid	ueu to applicants o	iunny exam	mation. NO		
Learning Objective (As available		1 Ohi B & C		· · · · · · · · · · · · · · · · · · ·	<u></u>
	,. CT 0000-007-0		-		· · · · · · · · · · · · · · · ·
	Bank # Modified Bank # New	X	(Note cl	nanges or a	attach parent)
	Previous NRC Exa Previous Quiz / Te		• • •		
	lemory or Fundam Comprehension or		ledge _	_X	
	5.41X 5.43X		·		
Comments (Why is it an upper le	vel question): N/A	<u> </u>	•		******
Somments (with is it an upper le	Nor question). N/A				

QUESTION 20

Access to the IFTS Valve Room in the Containment is required for surveillance purposes.

The IFTS Valve Room is controlled by a locking device providing for ______.

- A. one uniquely keyed lock whose key is maintained by the Radiation Protection Section.
- B. one uniquely keyed lock whose key is maintained by the Control Room Shift Supervisor.
- C. two uniquely keyed locks, of which one key is maintained by the Radiation Protection Section and the other key is maintained by the Control Room Shift Supervisor.
- D. two uniquely keyed locks, of which one key is maintained by the Radiation Protection Section and the other key is maintained by the Control Room Unit Supervisor.

ANSWER: C

		Level:		RO	SRO
		Tier #			3
Examination Outline Cross	s-Reference	Group #	- 		Cat 3
		K/A#		GEN 2.	<u>3.1</u>
		Importa	nce Rating		3.0
Proposed Question: See	attached				
	м.				
Proposed Answer: See a	ttached				
Explanation (Why the distracto	rs are incorrect):				
A / B - IFTS Valve Room uses	two uniquely key	yed locks.			
D – One key is maintained by the US.	RPS and the othe	er key is ma	intained by t	ne Control	Room SS, not
Technical Reference(s): PAP-	0123		Reference	Attached:	X
			(Attach if no	ot previously	y provided)
Proposed references to be pro				None	
Question Source:	Bank# Modified Bank New	#	(Note	changes or	attach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fun Comprehension	idamental K n or Analysi	nowledge s	X	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 <u>X</u>				
Comments (Why is it an uppe	r level question):	N/A			

QUESTION 21

The plant has entered a Site Area Emergency. No emergency facilities are operational. Two PPOs are in the plant performing PEI-SPI actions as directed by the Control Room.

To provide accountability of the two PPOs in the plant, the Shift Supervisor must _____.

А.	direct the PPOs in the plant to promptly return to the Unit 2 Control Room and use the designated Accountability Card Reader.
B.	provide the names and badge numbers of the PPOs in the plant to the OSC Coordinator, when the OSC becomes operational.
C.	provide the names and badge numbers of the PPOs in the plant to the Security Shift Supervisor.
D.	complete the Personnel Accountability Checklist for the PPOs in the plant and forward to the Central Alarm Station (CAS).

ANSWER: D

		Level:		RO	SRO
		Tier #			.3
Examination Outline C	ross-Reference	Group	¢;		Cat 4
		K/A#		GEN 2.	
· · ·		Importa	nce Rating		4.0
Proposed Question: S					
Proposed Answer: Se	e attached	· · · · · · · · · · · · · · · · · · ·			
Explanation (Why the distra	actors are incorrect):				
A – Applies to all Control R accountability is initiated.		-			ol Room when
B – Applies once the OSC	is operational and th	e PPOs ha	ve been relo	cated there.	
C – Not a method specified	l in EPI-B5.				
Technical Reference(s): EF		· · ·		A 11 B B	
recimical Reference(3). Er	-1-00		Reference	Attached: _	_X 1
		its durina e	(Attach if n	ot previously	
Proposed references to be Learning Objective (As ava	provided to applican		(Attach if n kamination:	ot previously	
Proposed references to be	provided to applican	08-01 Obj B-1	(Attach if n kamination: D	ot previously None	
Proposed references to be Learning Objective (As ava	provided to applican ilable): EPL-0804-0 Bank <i>#</i> Modified Bank :	08-01 Obj # Exam	(Attach if n kamination: D	ot previously None	provided)
Proposed references to be Learning Objective (As ava Question Source:	provided to applican ilable): EPL-0804-0 Bank # Modified Bank : New Previous NRC I	08-01 Obj	(Attach if n camination: D 173 (Note	ot previously None	provided)
Proposed references to be Learning Objective (As ava Question Source: Question History:	provided to applican ilable): EPL-0804-0 Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund	08-01 Obj	(Attach if n camination: D 173 (Note	ot previously None changes or a	provided)
Proposed references to be Learning Objective (As ava Question Source: Question History: Question Cognitive Level:	provided to applican ilable): EPL-0804-0 Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41	08-01 Obj B-1 # Exam 7 Test damental K	(Attach if n camination: D 173 (Note	ot previously None changes or a	provided)
Proposed references to be Learning Objective (As ava Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	provided to applican ilable): EPL-0804-0 Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41	08-01 Obj B-1 # Exam 7 Test damental K	(Attach if n camination: D 173 (Note	ot previously None changes or a	provided)

QUESTION 22

The plant is operating at 100% reactor power when alarm ANN PWR SUPPLY FAIL is received on panel H13-P680. A Supervising Operator reports Bus D-1-A indicates 0 volts on meter R42-R011, DC VOLTS BUS D-1-A.

Additional indications on panel H13-P680 include:

- RECIRC A PUMP DIFF PR, 1B33-R605A indicates downscale
- RECIRC B PUMP DIFF PR, 1B33-R605B indicates downscale
- RFPT 'B' speed has increased to the high-speed stop
- RFPT 'A' speed has decreased after initially increasing

Which one of the following sets of Immediate Operator Actions should the Unit Supervisor verify are performed by the Supervising Operators?

Α.	Select NARROW RANGE LEVEL CH 'A' and transfer control of RFPT 'A' to the Manual Speed Control Dial.
Β.	Select NARROW RANGE LEVEL CH 'A' and transfer control of RFPT 'B' to the Manual Speed Control Dial.
C.	Select NARROW RANGE LEVEL CH 'B' and transfer control of RFPT 'A' to the Manual Speed Control Dial.
D.	Select NARROW RANGE LEVEL CH 'B' and transfer control of RFPT 'B' to the Manual Speed Control Dial.

ANSWER: B

· · · · · · · · · · · · · · · · · · ·					
		Level:		RO	SRO
Enomination O d' C	DC	Tier #			3
Examination Outline Cr	oss-Reference	Group	#		Cat 4
		<u>K/A#</u>	Dette	GEN 2.4	
· · · · · · · · · · · · · · · · · · ·		Import	ance Rating		4.0
Proposed Question: Se Proposed Answer: See					
Explanation (Why the distrac	tors are incorrect):				
A – RFPT B is the affected R	FPT that must be to	ransforred	to the Manus	al Sneed Co	ntrol Dial
C / D – Narrow Range Level for a loss of Bus D-1-A.				-	
Technical Reference(s): ONI	-R42-4			Attached:	
					provided)
Proposed references to be pr Learning Objective (As availa				· · · · · · · · · · · · · · · · · · ·	j D
Question Source:	Bank # Modified Bank # New		(Note o	changes or a	attach parent)
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_X (A)	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 X				
Comments (Why is it an uppe determine the correct off-norr	er level question): R nal instruction to er	equires st nter and th	udent to anal e appropriate	yze plant co actions to b	nditions to e performed.

· · · · ...

QUESTION 23

A Loss of Coolant Accident (LOCA) occurred and Containment pressure has increased above the Primary Containment Limit (PCL). PEI-T23, Containment Control, directs the Control Room Operators to vent Containment.

Which one of the following is the bases for the requirement to vent Containment?

If Containment pressure exceeds PCL, the

A. Containment pressure can no longer be determined since all Containment pressure indicators are off-scale high.

- B. design pressure limit for the Containment Equipment Hatch has been exceeded.
- C. Containment Vent Valves <u>cannot</u> be opened and closed.

D. RPV Vent Valves <u>cannot</u> be opened.

ANSWER: B

		Level:		RO	SRO
		Tier#		3	3
Examination Outline Cr	oss-Reference	Group # K/A#	K. Salar	GEN 2.4	Cat 4
			ce Rating	2.7	3.6
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
	······································				
Explanation (Why the distrac					
A – Cont pressure indicators		e (indicators	go to 60 ps	ig on P883).	
C – Cont Vent Valves can st	•				
D – RPV Vent Valves can sti	Il be operated.				
Technical Reference(s): PEI	-T23, PEI Bases D	Document		Attached: _>	
Proposed references to be p	rovided to applicar	nts during ex			
					<u></u>
Proposed references to be p Learning Objective (As availa Question Source:		4-09 Obj C	amination: N		tach parent;
Learning Objective (As avail Question Source:	able): OT-3402-004 Bank # Modified Bank	4-09 Obj C #X Exam	amination: N	lone	tach parent
Learning Objective (As avail	able): OT-3402-004 Bank # Modified Bank New Previous NRC	4-09 Obj C #X Exam / Test damental Kr	amination: N	lone	tach parent,
Learning Objective (As avail Question Source: Question History:	able): OT-3402-004 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fund	4-09 Obj C #X Exam / Test damental Kr	amination: N	lone changes or at	tach parent;
Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): OT-3402-004 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fund Comprehension 55.41X_ 55.43	4-09 Obj C #X ExamX / Test damental Kn n or Analysis	amination: N	lone changes or at	tach parent;
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	able): OT-3402-004 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fund Comprehension 55.41X_ 55.43	4-09 Obj C #X ExamX / Test damental Kn n or Analysis	amination: N	lone changes or at	tach parent)

QUESTION 24

The plant is conducting a refueling outage when the following alarms are received in the Control Room:

- CNTMT VENT EXH RAD HI
- CNTMT VENT EXH RAD A/D HI HI / INOP
- CNTMT VENT EXH RAD B/C HI HI / INOP

In addition to directing the evacuation of the Containment, which one of the following identifies an additional required Immediate Action to be performed in accordance with ONI-D17, High Radiation Levels Within the Plant?

- A. Notify Health Physics and Chemistry.
- B. Notify state and local authorities if an Emergency Action Level (EAL) has been exceeded.
- C. Direct the insertion of any withdrawn control rod.
- D. Direct the continued monitoring of the affected area by Control Room personnel to determine the extent of the radiation problem.

ANSWER: A

		Level:	RO	SRO
		Tier#		3
Examination Outline Cr	oss-Reference	Group #		Cat 4
		K/A#	GEN 2	
		Importance Ra	ting	3,6
Proposed Question: Se				
Proposed Answer: See	attached			<u>.</u>
Explanation (Why the distrac	ctors are incorrect):			
B / C / D - Although each of	these is a possible	answer; they are r	not an Immediate	e Action
specified in ONI-D17 that an	SRO is required to	o complete.		
lechnical Reference(s): ON	II -D17		ence Attached:	
		(Attac	h if not previous	
Technical Reference(s): ON Proposed references to be p	provided to applicar	(Attac	h if not previous	
Proposed references to be p	provided to applicar	(Attac nts during examinat 4-D17A Obj F _497	h if not previous	y provided)
Proposed references to be p Learning Objective (As avail	orovided to applicar able): OT-3036-00 Bank # Modified Bank New Previous NRC	(Attac nts during examinat 14-D17A Obj F 497((n if not previous ion: None	y provided)
Proposed references to be p Learning Objective (As avail Question Source:	orovided to applicar able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz A	(Attac its during examinat 4-D17A Obj F 4-D17A Obj F (1) (1) (1) (2) (2) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4	h if not previous ion: None Note changes or	y provided)
Proposed references to be p Learning Objective (As avail Question Source: Question History:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz	(Attac its during examinat 4-D17A Obj F 4-D17A Obj F (1) (1) (1) (2) (2) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4	n if not previous ion: None Note changes or	y provided)
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun- Comprehension 55.41 _X_ 55.43 _X_	(Attac its during examinat 4-D17A Obj F # (Exam / Test99-004 damental Knowled n or Analysis	n if not previous ion: None Note changes or	y provided)
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun- Comprehension 55.41 _X_ 55.43 _X_	(Attac its during examinat 4-D17A Obj F # (Exam / Test99-004 damental Knowled n or Analysis	n if not previous ion: None Note changes or	y provided)

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QUESTION 25

An Override step in PEI-B13, RPV Control (Non-ATWS) asks, "Can Suppression Pool temperature be maintained below HCL?" If the response is NO, then the PEI directs the RPV be rapidly depressurized using the Main Turbine Bypass Valves.

According to this Override step, the RPV must be depressurized ______.

Α.	when Suppression Pool average temperature equals HCL.
B.	when Suppression Pool average temperature exceeds HCL.
C.	when any one Suppression Pool temperature indicator exceeds HCI
D.	before Suppression Pool average temperature exceeds HCL.

ANSWER: D

		Level:		RO	SRO
	Ď ¢	Tier # Group #	ła stara Ara	_	3
Examination Outline Cr	oss-Reference	K/A#	F	GEN 2	Cat 4
			nce Rating		4.0
Proposed Question: Se	ee attached	Timporte	ince realing	I	
	·				
Proposed Answer: See	e attached				
Explanation (Why the distra- In applying the 'Can/cannot performance, trend and valu- must exceed the limit.	be maintained abov	/e/below' st			
A / B – "cannot be maintaine exceeds the limit.	ed below" indicates	the action s	hould be take	n before tl	ne value
C – average SP temperatur	e must be used to n	nake this de	cision, not a	single indic	ator.
Technical Reference(s): PE ATWS), PEI Bases Docume		(Non-	Reference A (Attach if not	-	
Proposed references to be p	provided to applican	ts during e			
Learning Objective (As avai	lable): OT-3402-00	5-04a Obj	F		
Question Source:	Bank # Modified Bank : New	#	(Note c	hanges or	attach parent)
Question History:	Previous NRC I Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_X	
·					
10 CFR Part 55 Content:	55.41 55.43X				
	55.43 <u>X</u>	N/A			
10 CFR Part 55 Content:	55.43 <u>X</u>	N/A			

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QUESTION 26

An electrical transient has occurred and Service Water Pump 'D' is lost. Which bus normally powers this pump?

- A. Bus H12
- B. Bus XH12
- C. Bus XH21
- D. Bus XH22

ANSWER: C

		Level:	RO	SRO
	-	Tier #	2	2
Examination Outline Cros	ss-Reference	Group #	2	2
		K/A# Importance Rating	<u>400000</u> 2.9	3.0
Proposed Question: See	e attached		2.5	
Proposed Answer: See	attached		· · · ·	
Explanation (Why the distract	ors are incorrect):			
A – Bus H12 is the power sup	ply to SW Pump	٩		
B – Bus XH12 is the power su	upply to SW Pump	B		
D – Bus XH22 is the previous			P)	
Technical Reference(s): DC	P 99-5019	Reference	Attachad	X
Proposed references to be pr			ot previously	(provided)
Learning Objective (As availa Question Source:	<u></u>			
	Modified Bank New	# (Note	changes or	attach parent)
Question History:	Previous NRC Previous Quiz			
Question Cognitive Level:	Memory or Fun Comprehensior	damental Knowledge n or Analysis	X	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43			
		NΔ		
Comments (Why is it an uppe	er lever question).			
Comments (Why is it an uppe	er lever question).			

QUESTION 27

The reactor power 8-hour average limit is 3700 MWt.

What is the basis for this limitation?

А.	To prevent exceeding the maximum steady state Main Generator real load.
В.	To prevent exceeding the maximum steady state licensed reactor power level.
C.	To minimize Recirculation Flow Control Valve (FCV) oscillations.
D.	To minimize Main Turbine Control Valve oscillations.

ANSWER: D

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cros	s-Reference	Group #	ŧ		1 22 (24400
		K/A#	neo Poting	<u>GEN 2.</u> 3.4	<u>1.32 / 24100</u> 3.8
		Importa	nce Rating	0.4	
Proposed Question: See	attached				
Dramond Anower: Soo (ottached				
Proposed Answer: See a					
Explanation (Why the distractor	ors are incorrect):			•	
A - Max steady state Main Ge			n Capability	Curve.	
B - Max steady state licensed					L
C - Recirc FCV operation is c	apable of suppor	ting the lice	nsed reacto	or power leve	1 UT 31 50 IVIV
		<u></u>	Deference	e Attached:	x
Technical References: IOI-3					
		<u></u>	(Attach if	not previousl	y provided)
Proposed references to be pr	ovided to applica	nts during e	examination	: None	
		·			
Learning Objective (As avails					
Learning Objective (As availa					
Question Source:	Bank #				
	Modified Bank	.#	(Not	e changes or	attach pare
	New		_^		
Question History:	Previous NRC	Exam			·
Question history.	Previous Quiz				
Question Cognitive Level:	Memory or Fu	ndamental	Knowledge		
QUESTION COQUILIVE LEVEL	Comprehensio	on or Analys	sis	_X_(C)	
	•	•			
1					
10 CEP Part 55 Content	55.41 X			<u> </u>	<u> </u>
10 CFR Part 55 Content:	55.41X 55.43				
	55.43				
Comments (Why is it an upp	55.43	: Requires	student to	understand th	ne basis for t
Comments (Why is it an upp Admin limit (even though the	55.43 er level question) licensed max ste	: Requires eady state p	ower is 37		
Comments (Why is it an upp	55.43 er level question) licensed max ste	: Requires eady state p	ower is 37		

QUESTION 28

The following plant conditions exist:

- An ATWS is in progress
- HPCS injection prevention has been performed per PEI-SPI-5.1
- RPV level is being maintained at + 75 inches

A loss of Bus EH13 occurs.

Which one of the following describes the response of the HPCS Pump breaker?

- A. The HPCS Pump breaker remains closed at all times.
- B. The HPCS Pump breaker remains open at all times.
- C. The HPCS Pump breaker initially opens and, upon re-energization of Bus EH13, re-closes after a 10 second time delay.
- D. The HPCS Pump breaker initially opens and, upon re-energization of Bus EH13, re-closes immediately.

ANSWER: A

		Level:			RO	SRO
		Tier #	·		1	1
Examination Outline Cro	oss-Reference	Group #	£	3. A.	2	1
		K/A#			295003	AK2.04
		Importa	<u>nce Ratir</u>	ng	3.4	3.5
Proposed Question: Se	e attached				·	
Proposed Answer: See	attached					
Explanation (Why the distrac	tors are incorrect):					
B – HPCS Pump breaker ren	nains closed at all t	imes becau	ise there	is no U	V trip.	
C – Same as above / 10 seco						auma.
D – During HPCS injection pl injection valve is overridden of	revention, the HPC		-			
Technical Reference(s): SDI	M-E22B		Referen	ce Atta	ched: _	_x
			(Attach	if not pr	reviously	provided)
Proposed references to be proposed references to be proposed learning Objective (As availad Question Source:				. 1401		
	Modified Bank # New	#		ote cha	nges or	attach parent,
Question History:	Previous NRC E Previous Quiz /					
Question Cognitive Level:	Memory or Fund Comprehension				<u>(</u> C)	
10 CFR Part 55 Content:	55.41X 55.43					
Comments (Why is it an upp HPCS Pump breaker based			tudent to	predict	the res	oonse of the

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and the

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QUESTION 29

<u>IMMEDIATELY</u> following a reactor scram from full power, what would be the expected indication observed on the Intermediate Range Monitors?

A. Range 3 due to delayed neutrons dominating from longer-lived delayed neutron precursors.
B. Range 3 due to delayed neutrons dominating from shorter-lived delayed neutron precursors.
C. Range 5 due to delayed neutrons dominating from shorter-lived delayed neutron precursors.
D. Range 5 due to delayed neutrons dominating from longer-lived delayed neutron precursors.

ANSWER: C

		Level:		RO	SRO
		Tier # Group #	<i>¥</i>	1	1
Examination Outline Cro	oss-Reference	K/A#	en State	295006	
			nce Rating	4.2	4.2
Proposed Question: Se	e attached				
•					
Proposed Answer: See	attached				
Explanation (Why the distrac					
A – Range 3 is the range the			/I detectors hav	ve been wi	thdrawn fror
the core during reactor startu					
B - Range 3 is the range the		hen the IRN	A detectors hav	ve been wi	thdrawn fror
the core during reactor startu	-				
C - Delayed neutrons from s	horter-lived DNPs	dominate t	ne neutron pop	ulation.	
Technical Reference(s): ONI			ne neutron pop Reference At		_x
C – Delayed neutrons from s Technical Reference(s): ONI Text				tached:	
Technical Reference(s): ONI Text	-C71-1, GP React	or Theory	Reference At (Attach if not	tached: _ previously	
Technical Reference(s): ONI	-C71-1, GP React	or Theory	Reference At (Attach if not	tached: _ previously	
Technical Reference(s): ONI Text Proposed references to be p	-C71-1, GP React	or Theory nts during e	Reference At (Attach if not xamination: N	tached: _ previously one	provided)
Technical Reference(s): ONI Text	-C71-1, GP React	or Theory nts during e	Reference At (Attach if not xamination: N	tached: _ previously one	provided)
Technical Reference(s): ONI Text Proposed references to be p	-C71-1, GP React	or Theory nts during e	Reference At (Attach if not xamination: No 7, OT-3035-00	tached: _ previously one 3-01 Obj /	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank	or Theory nts during e 3-08 Obj 1	Reference At (Attach if not xamination: No 7, OT-3035-00	tached: _ previously one 3-01 Obj /	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank #	or Theory nts during e 3-08 Obj 1	Reference At (Attach if not xamination: No 7, OT-3035-00	tached: _ previously one 3-01 Obj /	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC	or Theory <pre>nts during e 3-08 Obj 1 #</pre>	Reference At (Attach if not xamination: No 7, OT-3035-00	tached: _ previously one 3-01 Obj /	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New	or Theory <pre>nts during e 3-08 Obj 1 #</pre>	Reference At (Attach if not xamination: No 7, OT-3035-00	tached: _ previously one 3-01 Obj /	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source: Question History:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC Previous Quiz	or Theory nts during e 3-08 Obj 1 # Exam / Test	Reference At (Attach if not xamination: No 7, OT-3035-00	tached: _ previously one 3-01 Obj / nanges or a	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC	or Theory nts during e 3-08 Obj 1 #	Reference At (Attach if not xamination: Not 7, OT-3035-00	tached: _ previously one 3-01 Obj /	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source: Question History:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun	or Theory nts during e 3-08 Obj 1 #	Reference At (Attach if not xamination: Not 7, OT-3035-00	tached: _ previously one 3-01 Obj / nanges or a	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source: Question History:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehension 55.41X_	or Theory nts during e 3-08 Obj 1 #	Reference At (Attach if not xamination: Not 7, OT-3035-00	tached: _ previously one 3-01 Obj / nanges or a	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehension	or Theory nts during e 3-08 Obj 1 #	Reference At (Attach if not xamination: Not 7, OT-3035-00	tached: _ previously one 3-01 Obj / nanges or a	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehension 55.41X_ 55.43	or Theory nts during e 3-08 Obj 1 # Exam / Test ndamental k n or Analysi	Reference At (Attach if not xamination: Not 7, OT-3035-00	tached: _ previously one 3-01 Obj / nanges or a	provided)
Technical Reference(s): ONI Text Proposed references to be p Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	-C71-1, GP React rovided to applicar able): OT-3001-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehension 55.41X_ 55.43	or Theory nts during e 3-08 Obj 1 # Exam / Test ndamental k n or Analysi	Reference At (Attach if not xamination: Not 7, OT-3035-00	tached: _ previously one 3-01 Obj / nanges or a	provided)

QUESTION 30

The plant is operating at 100% reactor power when all inboard Main Steam Line Isolation Valves inadvertently isolate. The MSIV closure signal to the Reactor Protection System (RPS) failed to scram the reactor

Which one of the following describes the response of the reactor?

Assume NO operator action is taken.

- A. Reactor power will increase and stabilize at a higher power. RPV water level will decrease and return to normal level.
- B. Reactor power will increase and cause a reactor scram on power. RPV level will decrease and then stabilize at a higher level.
- C. Reactor power will decrease and stabilize at a lower power. RPV water level will increase and then return to normal level.
- D. Reactor power will increase and cause a reactor scram on power. RPV water level will increase and then return to normal level.

ANSWER: B

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cro	ss-Reference	Group #	• • • • • • • • • • • • • • • • • • •	1	1
	33-110101 UHUU	K/A#		295007	
·		Importa	nce Rating	3.7	3.7
Proposed Question: See	e attached				
Proposed Answer: See	attached				
Explanation (Why the distract	ors are incorrect):	:			
A – Reactor power will decrea	ase due to scram	on high pow	/er.		
C – Reactor power will not sta	abilize at a lower p	power due t	o scram.		
D – Reactor water level will n will stabilize at a higher level	ot increase (decre due to ECCS inje	eases due to ction.	o void collapse	following s	scram) and
Technical Reference(s): AT8	AA Text Chapter	2 (USAR	Reference A		
15B.5.2.2)	•		(Attach if not	previously	provided)
Proposed references to be pr	ovided to applica	nts during e	xamination: N		
Learning Objective (As availa	ble): OT-3401-0	05-12 Obj A	۱	·	
Question Source:	Bank # Modified Bank New	#	(Note c	hanges or a	attach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fur Comprehensio			_X_(A)	
10 CFR Part 55 Content:	55.41X 55.43		· · · · · · · · · · · · · · · · · · ·		
Comments (Why is it an uppe based on a single event (MS	er level question): IV closure).	Requires	student to prec	lict a plant	wide response

QUESTION 31

1.4

The plant was operating at 50 % power with both RFPTs on the Master Level Controller when a Feedwater rupture in the Turbine Building caused reactor water level to decrease.

Reactor water level decreased to + 80 inches before HPCS and RCIC were able to restore reactor water level to normal.

Which one of the following correctly describes the status of the Recirculation System?

A.	Recirculation Pumps are tripped with their flow control valves in their pre-transient positions.
В.	Recirculation Pumps are in slow speed with their flow control valves in their pre-transient positions.
С.	Recirculation Pumps are tripped with their flow control valves locked up (motion inhibited).
D.	Recirculation Pumps are in slow speed with their flow control valves locked up (motion inhibited).

ANSWER: A

		Level:		RO	SR
		Tier #	· · ·	1	1
Examination Outline Cro	ss-Reference	Group	#	1	1
		K/A#			AA1.03
		Importa	ance Rating	3.0	3.1
Proposed Question: See					
Proposed Answer: See	attached				
Explanation (Why the distract	tors are incorrect):				
B - Recirculation Pumps trip	off at RPV Level 2 (+130 inch	nes).		
C – There is no given condition	on that would cause	the FCV	s to lock up.		
D - Recirculation Pumps trip of would cause the FCVs to lock		130 inch	es) and there	e is no given	conditic
Technical Reference(s): SDM	M-B33, SDM-B21(N	3PI)	Reference	Attached:	х
		,		ot previously	
					provide
Proposed references to be pr Learning Objective (As availa		-			3PI) Obj
Question Source:	Bank #				
	Modified Bank # New	 	(Note	changes or a	attach pa
Question History:	Previous NRC Ex Previous Quiz / 1				
Question Cognitive Level:	Memory or Funda Comprehension of			_X_(C)_	
·					
10 CFR Part 55 Content:	55.41X 55.43				

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QUESTION 32

The plant is at 100% power. Since the beginning of shift, Control Room Operators have observed the following Drywell parameter trends:

٠	Drywell Pressure:	Increasing
٠	Drywell Average Temperature	Increasing
٠	Drywell Air Cooler Drain Flow Rate	Increasing
		~

Drywell Floor Drain Sump Fill Rate
 Increasing

Which one of the following could be the cause of these indications?

A.	There is an accumulator air leak on an inboard MSIV.
В.	There is a cooling coil leak on the lower drywell cooler air handling unit.
C.	There is an instrument line leak on a water level condensing chamber
D.	There is an outer seal leak on a Reactor Recirculation Pump.

ANSWER: C

		Level:	RO	SRO
		Tier #	1	1
Examination Outline Cr	oss-Reference	Group #	1	1
		K/A# Importance Rating	295010	AA2.05 3.3
Proposed Question: Se	ee attached			
		<u></u>		
Proposed Answer: See	attached			
Explanation (Why the distrac	ctors are incorrect):			
A – An instrument air leak wi FDS fill rate to increase.	ill not cause DW ter	mperature, DW air cool	er drain flowra	ate and DW
B – A lower DW air cooler co DW air cooler drain flowrate	ooling coil leak will r to increase.	not cause DW pressure	e, DW tempera	ature, and
D – A Recirculation Pump ou air coloer drain flowrate and			and would no	ot cause DW
Technical Reference(s): SD	M-F31 TS 347	Reference	Attached:	X
	Willon, 10 0.4.1		ot previously	
		(Attach if n	ot previously	
	provided to applican	(Attach if n ts during examination:	ot previously None	provided)
Proposed references to be p	provided to applican	(Attach if n ts during examination: -E31 Obj B&C , OT-30	ot previously None	provided) bj B&C
Proposed references to be p Learning Objective (As avail	able):OT-3036-003 Bank # Modified Bank #	(Attach if n ts during examination: -E31 Obj B&C , OT-30 # (Note X	ot previously None 137-006-08 O	provided) bj B&C
Proposed references to be p Learning Objective (As avail Question Source:	able):OT-3036-003 Bank # Modified Bank # New Previous NRC E Previous Quiz /	(Attach if n ts during examination: -E31 Obj B&C , OT-30 # (Note X Exam Test damental Knowledge	ot previously None 137-006-08 O	provided) bj B&C
Proposed references to be p Learning Objective (As avail Question Source: Question History:	able):OT-3036-003 Bank # Modified Bank # New Previous NRC E Previous Quiz /	(Attach if n ts during examination: -E31 Obj B&C , OT-30 # (Note X Exam Test damental Knowledge	None 037-006-08 O	provided) bj B&C

C

r A

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QUESTION 33

An ATWS is in progress. The following plant conditions exist:

- Reactor power is 25%.
- Reactor pressure is at rated pressure.
- Reactor water level is at +180 inches and stable.

Which one of the following describes the effect of reducing reactor pressure?

A. Reactor power will decrease due to the voiding of the core and remain lower than the original power.
B. Reactor power will initially decrease due to the voiding of the core and then increase due to the lowering moderator temperature.
C. Reactor power will increase due to the collapsing of the voids in the core resulting in increased neutron thermalization.
D. Reactor power will decrease due to the concentration of boron in the core absorbing fast neutrons.

ANSWER: B

		Lavali			RO	SRO
		Level: Tier #			1	1
E	n Defense	Group #	¥	and the second second		<u> </u>
Examination Outline Cro	ss-Reference	K/A#	r		295015	
		Importa	ince l	Rating	3.8	3.8
Proposed Question: Se	e attached					
Proposed Answer: See	attached					
Explanation (Why the distrac	tors are incorrect):	:				
A – Reactor power will increa temperature.	ise due to the posi	itive reactivi	ty ad	ded by the	e lowering	moderator
C – Voids will not collapse wi	nen reactor pressu	ure is lowere	ed; vo	oids will in	crease.	
D – There is no effect or related absorbs thermal neutrons, no		reactor pres	sure	and boror	n in the coi	e. Also, boron
Technical Reference(s):GP F	Reactor Theory Te	xt. PEI	Ref	erence At	tached: _	_X
Bases Document			(Att	ach if not	previously	provided)
Proposed references to be p	rovided to applicar	nts during e	xami	nation: No	one	
Learning Objective (As availa	able): OT-3301-00	3-08 Obj 2	3 , O	T-3402-00	04-04b Ob	j D
Question Source:	Bank # Modified Bank New	#	<u> </u>	(Note ch	anges or a	attach parent)
Question History:	Previous NRC Previous Quiz		;			
Question Cognitive Level:	Memory or Fun Comprehension			edge	X_(A)_	
10 CFR Part 55 Content:	55.41X_ 55.43			-		
Comments (Why is it an upp during an ATWS in response (i.e., moderator temperature)	to changing core	Requires s reactivity d	stude ue to	nt to predi a reductio	ict final rea on in react	actor power or pressure

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QUESTION 34

Concerning the operation of the MSL & MSIV BYP OTBD ISOL, 1B21-F019, local transfer switches located at MCC EF1A07, select the correct statement.

- A. Switches are not active until control transfer to the Division 1 Remote Shutdown Panel is completed.
- B. Switches are not active until the control transfer to the Division 2 Remote Shutdown Panel is completed.
- C. Switches are always active and if placed in EMERGENCY, will cause 1B21-F019 to close on an MSIV isolation signal.
- D. Switches are always active and if placed in EMERGENCY, will cause 1B21-F019 to close (if open).

ANSWER: D

<u></u>	· · · · · · · · · · · · · · · · · · ·	Level:	5.4 <u>1</u> 4	in the sec	RO	SRO	
		Tier #			1	1	
Examination Outline Cr	oss-Doforonoo	Group	#		2		
Examination Outline Cit	USS-IXEIEI EIICE	K/A#				AK2.02	
			ance Ratir	na	4.0	4.1	· · · ·
Proposed Question: Se	e attached						
Proposed Answer: See	attached						
Explanation (Why the distrac	tors are incorrect):						
A and B – Switches are alwa Remote Shutdown Panel.	ys active and do no	ot require o	ontrol to I	oe trans	sferred to	o either	
C – In EMERGENCY, there a	are no contacts in t	he valve 'c	lose' logic	for an	MSIV is∉	olation sigi	nal.
Technical Reference(s): SDN	<i>I</i> -C61		Referen	ce Atta	ched:	_x	
			(Attach i	if not pr	eviously	provided)	
Proposed references to be pr		-		n: None	9		
Learning Objective (As availa		3-C61 Obj	B&E				
Question Source:	Bank # Modified Bank # New	#	_	ote char	nges or a	attach pare	ent)
Question History:	Previous NRC E Previous Quiz /						
Question Cognitive Level:	Memory or Fund Comprehension				_(C)_		
10 CFR Part 55 Content:	55.41X 55.43						
Comments (Why is it an uppe the local transfer switches an				underst	and the	operation	of

4 . . .

QUESTION 35

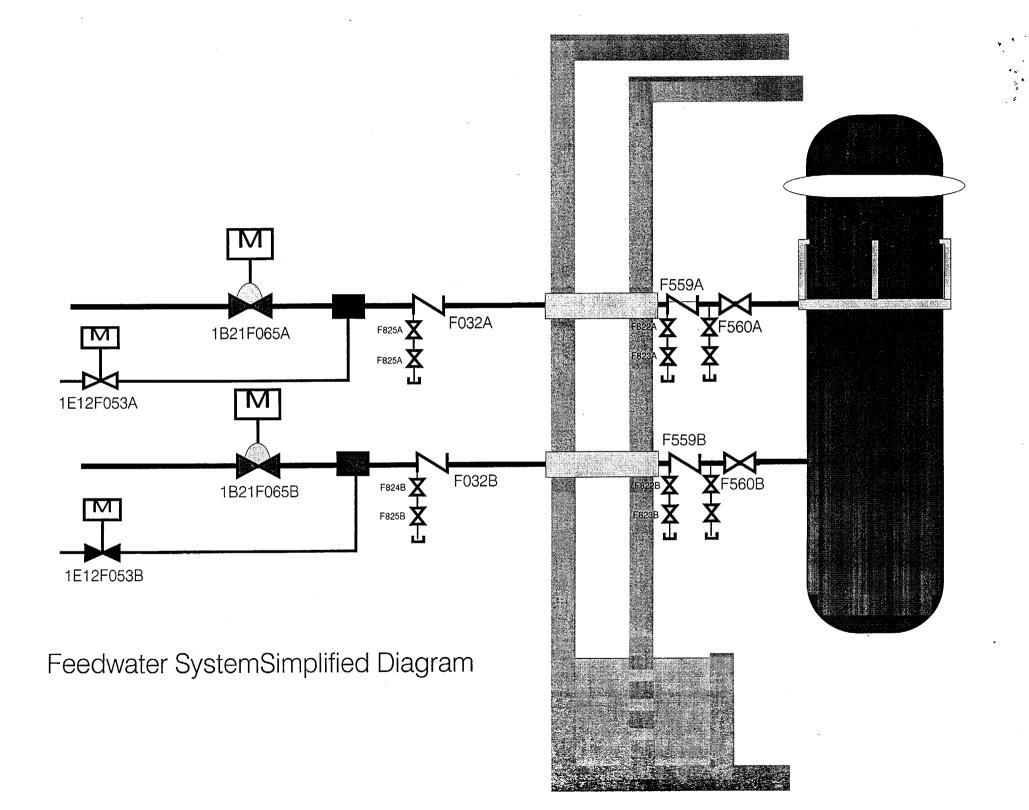
The Feedwater Leakage Control System has been initiated following a Loss of Coolant Accident when the Feedwater System was no longer required for adequate core cooling.

Which one of the following describes the location where the Feedwater Leakage Control System injects seal water?

A simplified diagram of the Feedwater System is attached.

Α.	Between the inboard (F559A/B) and the outboard (F032A/B) feedwater check valves.
В.	Between the outboard feedwater check valves (F032A/B) and the feedwater header shutoff valves (F065A/B).
С.	Through the bonnets of the shutdown cooling to feedwater shutoff valves (E12-F053A/B).
D.	Through the bonnets of the feedwater header shutoff valves (F065A/B).

ANSWER: D



		Level:	<u></u>	RO	SRO
		Tier #		1	1
Examination Outline Cros	ss-Reference	Group #		2	<u> </u>
Laummunon Cathine CIU.		K/A#			.28 / 295038
		Importa	nce Rating	3.2	3.3.
Proposed Question: See					
Proposed Answer: See	attached	. <u></u>			
Explanation (Why the distract	ors are incorrect):				
A – This is the injection location			VLCS.		
B – This is the injection locati	on of the previous	s outboard F	VVLUS.		
D - Incorrect valve bonnet loc	ation.				
	·····				
Technical Reference(s): SDN	I-N27		Reference A	Attached: _	_X
			(Attach if no	t previously	provided)
Proposed references to be pr Feedwater System Learning Objective (As availa				-	
					·
Question Source:	Bank # Modified Bank	#	(Note	changes or a	attach parent
Question Source:		#	(Note (changes or	attach parent
Question Source:	Modified Bank	` Exam		changes or a	attach parent
· · ·	Modified Bank New Previous NRC	Exam / Test ndamental k		changes or : 	attach parent
Question History:	Modified Bank New Previous NRC Previous Quiz Memory or Fur	Exam / Test ndamental k n or Analysi			attach parent
Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank New Previous NRC Previous Quiz Memory or Fur Comprehensio 55.41X_ 55.43	Exam / Test ndamental k n or Analysi			attach parent
Question History: Question Cognitive Level:	Modified Bank New Previous NRC Previous Quiz Memory or Fur Comprehensio 55.41X_ 55.43	Exam / Test ndamental k n or Analysi			attach pareni
Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank New Previous NRC Previous Quiz Memory or Fur Comprehensio 55.41X_ 55.43	Exam / Test ndamental k n or Analysi			attach parent

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QUESTION 36

Fuel element failure is indicated by increasing plant radiation levels.

Upscale alarms are received on all Main Steam Line Radiation Monitors.

Upscale Trip alarms are received on Main Steam Line Radiation Monitors A and B.

Which one of the following action(s) will automatically occur based on these indications <u>only</u>?

A	Off-Gas Discharge Isolation Valve N64-F632 closes.
В.	Reactor Water Sample Isolation Valves B33-F019 and B33-F020 close.
C.	Main Steam Line Isolation Valves B21-F022A-D and B21-F028A-D close.
D.	Mechanical Vacuum Pump Suction Valves N62-F130A and N62-F130B close.

ANSWER: D

Examination Outline Cross-Referenc	e Group # K/A#	RO SRO 1 1 2 1 295017 AA1.06 3.2
Proposed Question: See attached		
Proposed Answer: See attached		
Explanation (Why the distractors are incom A – Isolation signal for N64-F632 comes fro B – B33-F019 logic is channels B and C an logic). C – MSIVs do not isolate on MSL high rad.	om OG Post-Treat Rad Monito d B33-F020 logic is channels	
Technical Reference(s): SDM-N62, SDM-	(Attach if not	ttached:X previously provided)
Proposed references to be provided to app	licants during examination: N	one
Learning Objective (As available): OT-303	6-003-N62 Obj D, OT-3036-0	004-D17A Obj D
Question Source: Bank # Modified B New	ank # (Note c	hanges or attach parent)
Question History: Previous N Previous C		
	Fundamental Knowledge sion or Analysis	<u>X_(C)_</u>
	<	
	ision or Analysis	<u>X_(C)_</u>

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QUESTION 37

Describe the safety function of the Containment Ventilation Exhaust Radiation Monitor (D17-K609A-D) during a refueling outage.

- A. Detect a fuel bundle rupture <u>inside</u> Containment which causes the CVDWP (M14) System to isolate to ensure <u>off-site</u> dose limits are not exceeded.
- B. Detect a fuel bundle rupture <u>outside</u> Containment which causes the CVDWP (M14) System to isolate to ensure <u>off-site</u> dose limits are not exceeded.
- C. Detect a fuel bundle rupture <u>inside</u> Containment which causes the CVDWP (M14) System to isolate to ensure <u>on-site</u> dose limits are not exceeded.
- D. Detect a fuel bundle rupture <u>inside</u> Containment which actuates the Containment Evacuation alarm to ensure personnel evacuate Containment.

ANSWER: A

		Level:	in the second	RO	SRC
		Tier #		1	1
Examination Outline Cros	ss-Reference	Group #	· · · · · · · · · · · · · · · · · · ·	3	1 AK3.02
		K/A#	nce Rating	3.3	<u>ARS.02</u> 3.6
Proposed Question: See	e attached				
Proposed Answer: See Explanation (Why the distract					
B - Rad monitor detects fuel	bundle rupture ins	side Contain	ment (not out	side i.e., F	HB).
C – LCO Bases and USAR an not specifically analyzed. D – Containment Evacuation Exhaust ABRM or Containme	alarm is activated	d by the ABF			
			Reference A	Attached.	x
Technical Reference(s): SDM , USAR 15.7.6	M-017A, 10 0.0.0	J. 1 DUGUG	(Attach if no	-	
Learning Objective (As availa Question Source:	able): OT-3036-0 Bank # Modified Bank			7-005-07	
	New	···	<u> </u>	-	
Question History:	Previous NRC Previous Quiz				
Question History: Question Cognitive Level:	Previous NRC	/ Test ndamental k	<pre> Constant Constant</pre>	X	
	Previous NRC Previous Quiz Memory or Fu	ndamental k	(nowledge	X	

QUESTION 38

Which one of the following describes the bases for the 'Drywell Pressure-High' function for the Reactor Protection System Instrumentation?

A. Decrease the probability of fuel damage during an Anticipated Transient Without Scram.
B. Decrease the probability of fuel damage during a break in the Reactor Coolant Pressure Boundary.
C. Decrease the amount of energy transferred to the coolant and Drywell during an Anticipated Transient Without Scram.
D. Increase the amount of energy transferred to the coolant and Drywell during a break in the Reactor Coolant Pressure Boundary.

ANSWER: B

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cros	ss-Reference	Group #	E	1	
		K/A#	nce Rating	295024 4.0	<u>EK3.00</u> 4.1
Proposed Question: See	e attached				
Proposed Answer: See	attached				
Explanation (Why the distract	ors are incorrect):			,	
A / C- No relation to an ATW			sure is indica	tion of a LC	CA.
transferred to increase	A-C71 CO 3 3 1	1 Bases	Reference A	.ttached:	X
rechnical Reference(s). SDM	<i>I-01</i> 1, L00 0.0.1	.1 00303	(Attach if no		
Learning Objective (As availa	bie): OT-3036-00	05-C71 Ob	F, OT-3037-0	005-07 Ob	jG
Learning Objective (As availa Question Source:	ble): OT-3036-00 Bank # Modified Bank New	······································			j G attach parent)
	Bank # Modified Bank	# Exam			
Question Source:	Bank # Modified Bank New Previous NRC	# Exam / Test	(Note o		
Question Source: Question History:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun	# Exam / Test	(Note o	changes or	

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QUESTION 39

F

Alternate Rod Insertion (ARI) on high reactor pressure counteracts the reactor pressure increase by reducing reactor power.

Which one of the following describes the bases for Alternate Rod Insertion due to high reactor pressure?

- A. ARI reduces the challenge to the integrity of the Reactor Coolant Pressure Boundary.
- B. ARI reduces the capability to cool the reactor fuel.
- C. ARI reduces unwanted safety relief valve operation resulting in undesired voiding of the core.
- D. ARI reduces unwanted safety relief valve operation resulting in undesired heatup of the Suppression Pool.

ANSWER: A

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cros	s-Deference	Group #	าสารปฏิภาพเป็นสารได้	1	1
Examination Outline Cros	55-ICICI CHCC	K/A#		295025	EK3.06
		Importa	nce Rating	4.2	4.4
Proposed Question: See	e attached				
Proposed Answer: See	attached				
Explanation (Why the distract	ors are incorrect):				
B - low water level threatens	adequate core co	oling.			
C/D – SRV operations are 'wa the SRVs on high reactor pres		e of ARI is	not to deter inc	lependent	operation of
*The key words are 'high read reactor power which causes r	ctor pressure'. All eactor pressure to	the RRCS of decrease	control signals which, in turn,	are meant reduces th	to reduce ne probability
Technical Reference(s): SDM LCO 3.3.4.2 Bases	1-C22, LCO 3.3.1	.1. Bases,	Reference At (Attach if not		X provided
Proposed references to be pr					
Learning Objective (As availa	ble): OT-3036-00	1-C22 Obj	A & B, OT-303	37-005-07	Obj G
Question Source:	Bank # Modified Bank New	#	(Note c	hanges or	attach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fur Comprehensio			_x	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppe	er level question):	NA			

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QUESTION 40

The following plant conditions exist:

- Reactor power 5%
- Reactor level -10 inches using LPCI 'A' outside the shroud
- Reactor pressure 20 psig
- Supp Pool temperature 75 degrees F
- Supp pool level 19 feet 4 inches

During a walkdown of panel H13-P601, the Control Room operator notes that RHR Pump 'A' amps and discharge pressure is wildly fluctuating.

These indications for RHR Pump 'A' indicate

A. pump runout

B. pump seizure

C. pump cavitation

D. pump seal leakage

ANSWER: C

		Level:		RO	SR
		Tier #		1	1
Examination Outline Cr	oss-Reference	Group	<u>‡</u>		1
		K/A#	nee Deting	295026	
		Importa	nce Rating	3.0	3.4
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac					
A – pump runout indications	are high amps and	high flow (steady).		
B - Pump seizure indication	s are zero amps an	d discharge	e pressure.		
D - Pump seal leakage indic	ations would not be	e observabl	e on the nur	nn amn and i	discha
pressure meters.		C 00301 Vab	e on the pu	np amp and	uischa
•					
Technical Reference(s): Su	nn Pool Temperatu		Reference	Attached:	х
Bases, GP Components Tex				ot previously	
	····		(Auach in h		provid
Proposed references to be p	provided to applicar	nts during ex	camination:	None	
	• •	-	•		
Loorning Objective (As avail		12.02 Obi 3	OT 2402 0		
Learning Objective (As avail	able): OT-3303-00	13-02 Obj 3	, OT-3402-0	04-06 Obj B	
Learning Objective (As avail Question Source:	Bank #				
• • • •	Bank # Modified Bank			04-06 Obj B changes or a	
• • • •	Bank #				
Question Source:	Bank # Modified Bank New	#			
• • • •	Bank # Modified Bank New Previous NRC I	# X Exam			
Question Source:	Bank # Modified Bank New	# X Exam			
Question Source: Question History:	Bank # Modified Bank New Previous NRC I Previous Quiz /	#×	(Note		
Question Source:	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund	#X ExamX / Test damental K	(Note	changes or a	
Question Source: Question History:	Bank # Modified Bank New Previous NRC I Previous Quiz /	#X ExamX / Test damental K	(Note		
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X ExamX / Test damental K	(Note	changes or a	
Question Source: Question History:	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X ExamX / Test damental K	(Note	changes or a	
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X ExamX / Test damental K	(Note	changes or a	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X Exam / Test damental K n or Analysis	(Note	changes or a	attach p
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X 55.43 ber level question):	#X ExamX / Test damental K n or Analysis Requires st	(Note	changes or a	ormal
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X 55.43 per level question): cause. Increasing S	#X Exam / Test / Test damental K n or Analysis Requires st Supp Pool t	(Note	changes or a	orma
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp indications to determine the	Bank # Modified Bank New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X 55.43 per level question): cause. Increasing S	#X Exam / Test / Test damental K n or Analysis Requires st Supp Pool t	(Note	changes or a	ormal

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QUESTION 41

The plant is shutting down to perform maintenance. Because of fuel cladding leaks, plant management has decided not to scram the reactor, but rather, to conduct a controlled insertion of control rods to minimize the potential increase in radioactivity release from the fuel.

As rod insertion progresses, the reactor goes subcritical. The Control Room Operator stops insertion of control rods with the intent to slow down the reactor depressurization and cooldown. Practically all of the heat generation at this point is from decay heat.

Thirty (30) minutes later the Control Room Operator notes that IRM flux levels are increasing on a long, stable positive reactor period.

Which one of the following describes the next action the Control Room Operator should take?

- A. Insert control rods to a position that causes reactor period to be 60 150 seconds.
- B. Withdraw the next in-sequence control rod to maintain the power rise to reach the point of adding heat.
- C. Manually scram the reactor to terminate the power rise.
- D. Monitor IRMs and range them according to the power increase to keep them on-scale.

ANSWER: C

		Level:			RO	SRO
		Tier #			1	1
Examination Outline Cros	ss-Reference	Group #	<u>.</u>	Sec. Carl	1	1
	55 ACICI CHICO	K/A#				AK3.01
		Importa	nce Ra	ating	4.1	4.1
Proposed Question: See	e attached					
Proposed Answer: See	attached					<u> </u>
Explanation (Why the distract						
A- Recommended reactor pe	eriod range during	g a reactor s	tartup	and cri	ticality per	10 1-1 .
B – Possible operator actions during a plant shutdown.	during a startup a	and criticalit	y, but i	not for	an inadver	tent criticality
D – Possible operator actions during a plant shutdown.	during a startup	and criticali	y, but	not for	an inadver	tent criticality
Technical Reference(s): Lime Caution, PAP-0201, Section (erick Event 4/9/88 3.4.5	3 , IOI-4			Attached: ht previousl	X y provided)
Proposed references to be pr	ovided to applica	nts during e	xamina	ation: N	lone	
Learning Objective (As availa	able): OT-3046-00)0-09a Obj /	λ, OT-:	3038-0	08-02 Obj /	٩
Question Source:	Bank # Modified Bank New	:#	×	(Note	changes or	attach parent
Question History:	Previous NRC Previous Quiz					-
Question Cognitive Level:	Memory or Fur Comprehensio			dge	_X_(A)	
10 CFR Part 55 Content:	55.41X 55.43					
Comments (Why is it an upp scram the reactor) based on	er level question) plant indications	: Requires s for an inadv	tudent ertent	to mal critical	ke a decisio ity during s	on (manually hutdown.

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QUESTION 42

A Loss of Coolant Accident (LOCA) has occurred. From the conditions below, select the set of conditions that would <u>preclude</u> the use of one or more ranges of RPV Water Level Instrumentation to determine reactor water level.

Α.	Reactor Pressure Drywell Temperature Containment Temperature	0 psig 190 °F 215 °F
В.	Reactor Pressure Drywell Temperature Containment Temperature	0 psig 190 °F 145 °F
C.	Reactor Pressure Drywell Temperature Containment Temperature	50 psig 205 °F 160 °F
D.	Reactor Pressure Drywell Temperature Containment Temperature	50 psig 160 °F 210 °F

ANSWER: A

		Level:	•	RO	SRO
		Tier #		1	1
	D oforman	Group #		2	1
Examination Outline Cross-I	Kelerence	K/A#		295027	EK2.02
		Importar	ice Rating	3.2	3.3
Proposed Question: See at	tached				
Proposed Answer: See att					
Explanation (Why the distractors	are incorrect)	:			
B/C/D – Both Drywell and Conta temperature (212 degrees for o	inment temper psig).	ratures are le	ess than the R	PV satura	
Technical Reference(s): PEI Ba	ses Document	t	Reference A		
			(Attach if no	t previous	sly provided)
Proposed references to be prov Learning Objective (As availabl				one	
Question Source:	Bank # Modified Ban New	.k#	(Note (changes of	or attach parent)
Question History:	Previous NR Previous Qui				
Question Cognitive Level:	Memory or Fu Comprehens	undamental ion or Analys	Knowledge sis	_X _(C) _	
10 CFR Part 55 Content:	55.41X_ 55.43				·
Comments (Why is it an upper instrument indications are inva analyze the information and re satisfies this condition.	r level question alid above satu ecognize that C	n): Requires iration tempo Containment	student to rec erature for RP temperature a	ognize th V pressur above 212	at all water level re. Student must 2 degrees F

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QUESTION 43

Plant Emergency Instruction PEI-13, RPV Control (ATWS) specifies that, under certain conditions, injection into the RPV be terminated and prevented except for boron and CRD.

The reason that injection into the RPV is terminated and prevented is to ______.

A. DECREASE the suppression pool heatup rate.

B. DECREASE the rate and magnitude of power oscillations.

C. INCREASE the thermal driving head.

D. INCREASE core inlet subcooling.

ANSWER: A

		Level:		RO	SRC	
		Tier #		1	1	
Examination Outline Cro	oss-Reference	Group #		1	11	
		K/A#	Detine:	295031		
		Importance I	Rating	3.7	4.1	
Proposed Question: Se	e attached					
·						
	· · · · · ·					
Proposed Answer: See	attached		_			
Explanation (Why the distrac	tors are incorrect):					
B - Lowering water level is e	expected to increase	e power oscillati	ons (PEI- E	ases).		
C - Lowering water level will	decrease thermal	driving head.				
D - Lowering water level will	decrease core inle	t subcooling.				
-		-				
Toobnical Deference (a): DEL	Ronon Dealiment	Def		abad.	~	
Technical Reference(s): PEI	Dases Document		Reference Attached:X (Attach if not previously provided)			
		•			provided	
Proposed references to be p	rovided to applican	ts during exami	nation: Non	е		
Learning Objective (As availa	able): OT-3402-006	6-11 Obj D				
Learning Objective (As availa	able): OT-3402-006 Bank #	6-11 Obj D				
	Bank # Modified Bank		(Note cha	nges or a	attach pa	
	Bank #		(Note cha	nges or a	attach pa	
	Bank # Modified Bank	#	(Note cha	nges or a	attach pa	
Question Source:	Bank # Modified Bank : New	# X	(Note cha	nges or a	attach pa	
Question Source: Question History:	Bank # Modified Bank : New Previous NRC I Previous Quiz /	# X Exam Test			attach pa	
Question Source:	Bank # Modified Bank : New Previous NRC I	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	#X Exam Test lamental Knowle			attach pa	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank : New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	#X Exam Test lamental Knowle			attach pa	

n - 1 = 50 4 - 4 = 60 4 - 4

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QUESTION 44

Following a turbine trip at 40% reactor power, reactor pressure spiked to 1095 psig and then immediately decreased to 960 psig. The reactor did NOT scram.

Assuming control rods did NOT insert but all other systems performed as designed, what plant conditions would be observed 10 seconds after the turbine trip?

- A. Feedwater flow controllers in MANUAL, Reactor Recirculation pumps operating in SLOW speed with pump breakers CB 3A/B and CB 4A/B CLOSED.
- B. Feedwater flow controllers in MANUAL, Reactor Recirculation pumps TRIPPED off with pump breakers CB 3A/B and CB 4A/B OPEN.
- C. Feedwater flow controllers in AUTO, Reactor Recirculation pumps operating in SLOW speed with pump breakers CB 3A/B and CB 4A/B OPEN.
- D. Feedwater flow controllers in AUTO, Reactor Recirculation pumps operating in SLOW speed with pump breakers CB 3A/B and CB 4A/B CLOSED.

ANSWER: C

	<u></u>	Level:		RO	SRO
		Tier #		1	1
	an Defenerae	Group #	t	1	1
Examination Outline Cro	ss-Reference	K/A#		295037	EK2.02
			nce Rating	4.0	4.2
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A There is no FWRB and B	reakers CB 3A/B an	d CB 4A/	B will be open		•
B – There is no FWRB and R	ecirc Pumps will be	runnina i	n Slow speed.		
D - Breakers CB 3A/B and C			· · · · · ·		
	•				<i>cc</i>
*The 25 second time delay ha	as not timed out so t	the FWRE	and Recirc P	ump trip to	off will not
Technical Reference(s): SDN	1-C22		Reference A	ttached:	_X
			(Attach if not	previously	provided)
Proposed references to be p	rovided to applicants	s during e	xamination: No	one	
Learning Objective (As availa	able): OT-3036-001-	C22 Obj I	0		<u></u>
Question Source:	Bank # Modified Bank # New		(Note c	hanges or a	attach parent)
Question History:	Previous NRC Ex Previous Quiz /				
Question Cognitive Level:	Memory or Funda Comprehension of			_X_(A)_	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an upp should have occurred based	er level question): R on the given conditi	equires s ons.	tudent to pred	ict the plant	t response that

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QUESTION 45

Following a LOCA, the following plant conditions exist:

RPV water level 35 inches
Containment pressure 10 psig
Containment hydrogen concentration 8.7%
Drywell hydrogen concentration 8.9%
Hydrogen igniters Failed to operate in either division

What is the hydrogen control equipment configuration required under these conditions?

PEI-M51/56, Hydrogen Control, flowchart is provided for reference.

А.	Combustible Gas Mixing System OPERATING; Hydrogen Recombiners OPERATING.
В.	Combustible Gas Mixing System SECURED; Hydrogen Recombiners OPERATING.
C.	Combustible Gas Mixing System OPERATING; Hydrogen Recombiners SECURED.
D.	Combustible Gas Mixing System SECURED; Hydrogen Recombiners SECURED.

ANSWER: D

Examination Outline Cross-Reference Iteve:			Lovali		RO	SR
Examination Outline Cross-Reference Group # 500000 EK Mathematical Reference Importance Rating 500000 EK Proposed Question: See attached Explanation (Why the distractors are incorrect): A – The CGMS and Hydrogen Recombiners are required to be secured. B - Hydrogen Recombiners are required to be secured. B - Hydrogen Recombiners are required to be secured. C - CGMS is required to be secured. X (Attach if not previously pr Proposed reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously pr Proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #			Level:			- 01
Proposed Question: See attached Proposed Answer: See attached Explanation (Why the distractors are incorrect): A – The CGMS and Hydrogen Recombiners are required to be secured. B - Hydrogen Recombiners are required to be secured. C - CGMS is required to be secured. Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously pr Proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #					<u> </u>	1
Importance Rating Proposed Question: See attached Proposed Answer: See attached Explanation (Why the distractors are incorrect): A - The CGMS and Hydrogen Recombiners are required to be secured. B - Hydrogen Recombiners are required to be secured. C - CGMS is required to be secured. Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously pr Proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #	xamination Outline Cros	ss-Keterence		<u></u>	50000	
Proposed Question: See attached Proposed Answer: See attached Explanation (Why the distractors are incorrect): A - The CGMS and Hydrogen Recombiners are required to be secured. B - Hydrogen Recombiners are required to be secured. C - CGMS is required to be secured. Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously pr Proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #				nce Rating		3.9
Explanation (Why the distractors are incorrect): A - The CGMS and Hydrogen Recombiners are required to be secured. B - Hydrogen Recombiners are required to be secured. C - CGMS is required to be secured. Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously pr Proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank # (Note changes or atta New Question History: Previous NRC Exam Previous Quiz / Test Question Cognitive Level: Memory or Fundamental Knowledge	roposed Question: See	e attached	`			
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C - CGMS is required to be secured. Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously pr Proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #	- The CGMS and Hydroger	n Recombiners ar	e required to	be secured		
Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously p	- Hydrogen Recombiners a	re required to be s	secured.			
Technical Reference(s): PEI-M51/56 Reference Attached:X (Attach if not previously p	- CGMS is required to be so	ecured.				
(Attach if not previously proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank # Modified Bank # New Question History: Previous NRC Exam Previous Quiz / Test Question Cognitive Level: Memory or Fundamental Knowledge						
(Attach if not previously proposed references to be provided to applicants during examination: PEI-M51/56 Flo Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank # Modified Bank # New Question History: Previous NRC Exam Previous Quiz / Test Question Cognitive Level: Memory or Fundamental Knowledge			I			
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Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #				(Attach if no	ot previous	ly provid
Learning Objective (As available): OT-3402-006-10 Obj C Question Source: Bank #	ronosed references to be pr	ovided to applica	nts during ex	amination. I	PEI-M51/50	6 Flowch
Question Source: Bank #	roposed references to be pr	oraca to applied	nio danny of			
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Modified Bank #		·····				
Question Cognitive Level: Memory or Fundamental Knowledge	≀uestion Source:	Modified Bank	#X	(Note	changes o	r attach
Question Cognitive Level: Memory or Fundamental Knowledge Comprehension or Analysis(A)	Question History:					
	Question Cognitive Level:	Memory or Fur Comprehensio	ndamental K n or Analysis	nowledge s	_X_(A)	
10 CFR Part 55 Content: 55.41X 55.43X						

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QUESTION 46

During a Main Turbine trip, reactor pressure peaked at 1115 psig. The reactor scrammed and reactor pressure is now 900 psig.

Select the item that describes the operation of the Safety Relief Valves (SRVs) during and following this transient.

Assume NO operator action is taken with respect to the SRVs.

- A. One SRV opened and remained open until pressure decreased to 936 psig. If pressure increases to 1100 psig, one SRV will re-open.
 B. Ten (10) SRVs opened. One SRV remained open until pressure decreased to 926 psig. If pressure increases to 1100 psig, two SRVs will re-open.
- C. Ten (10) SRVs opened. Ten (10) SRVs remained open until pressure decreased to 936 psig. If pressure increases to 1100 psig, one SRV will re-open.
- D. Nineteen (19) SRVs opened. Ten (10) SRVs remained open until pressure decreased to 936 psig. If pressure increases 1100 psig, two SRVs will re-open

ANSWER: B

		Level:		RO	SRO
		Tier # Group a	4	1	1
Examination Outline Cro	ss-Reference	K/A#	#	. M	25 EA1.03
			ance Rating		4.4
Proposed Question: See	e attached				
Proposed Answer: See Explanation (Why the distract					
A/C/D – Ten SRVs will open open until pressure decrease re-open (one at 1033 and one	(one at 1103 and s to 926 psig. If pr	9 at 1113 p			
Technical Reference(s): SDM	I-B21/N11		Referenc	e Attached:	X
		<u>.</u>	(Attach if	not previous	sly provided)
· · · ·			xaminatior		sly provided)
Proposed references to be pr Learning Objective (As availa			xaminatior		sly provided)
· · ·)5-B21/N11	Xamination Obj E	: None	sly provided) r attach parent)
Learning Objective (As availa	able): OT-3036-00 Bank # Modified Bank)5-B21/N11 # Exam	Xamination Obj E	: None	· · · · · · · · · · · · · · · · · · ·
Learning Objective (As availa Question Source:	able): OT-3036-00 Bank # Modified Bank New Previous NRC)5-B21/N11 # Exam / Test damental K	Cobj E	: None	· · · · · · · · · · · · · · · · · · ·
Learning Objective (As availa Question Source: Question History:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun)5-B21/N11 # Exam / Test damental K	Cobj E	: None	· · · · · · · · · · · · · · · · · · ·

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QUESTION 47

Plant Conditions are as follows:

- Reactor is shutdown
- Reactor pressure
- Reactor water level
- Suppression Pool temperature
- Suppression Pool level
- Drywell pressure
- Containment pressure
- RHR Loops A and B

all rods are in 600 psig 210 inches 115°F 14.0 feet 1.1 psig 0.8 psig Suppression Pool Cooling mode

What action is required to be performed?

А.	Reduce reactor pressure to provide a wider operating margin to HCL.
В.	Spray Containment.
C.	Emergency Depressurize.
D.	These conditions require no further actions be initiated.

ANSWER: C

		Level:		RO	S
	·	Tier #		1	1
Examination Outline Cro	oss-Reference	Group # K/A#	at in the	2	
			nce Rating	<u>295030</u> 3.9	3.
Proposed Question: Se	e attached				
Proposed Answer: See	······································		<u></u>		
Explanation (Why the distract					
A - Plant conditions do not re Rather, emergency depressu					ow H(
B - Plant conditions do not re depressurization is required			/ed. Rather, e	emergency	
D - Plant conditions require	emergency depres	surization to	be performe	ed.	
Technical Reference(s): PEI- PEI-B13, RPV Control (Non- Document			Reference A (Attach if no	_	
Proposed references to be p Control, PEI-B13, RPV Cont		ts during ex	amination: P	El-T23, Col	ntainr
Learning Objective (As availa	able): OT-3402-00	5-05 Obj C	OT-3402-00)4-06 Obj (2
Question Source:	Bank # Modified Bank : New	#×	(Note c	hanges or a	attach
Question History:	Previous NRC I Previous Quiz /				
Question History: Question Cognitive Level:		' Test damental K		_X_(A)	

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QUESTION 48

The plant is operating at 100% reactor power when one Reactor Recirculation pump trips. All systems respond as designed to this event. How will RPV water level <u>initially</u> respond and what is the reason for this response?

RPV water level will ______.

Α.	INCREASE due to the displacement of water into the downcomer by increased steam voiding.
В.	DECREASE due to the lack of coolant velocity to sweep voids into the steam separator.
C.	INCREASE due to the continuing addition of feedwater at 100% rated feedwater flow.
D.	DECREASE due to the runback of feedwater pumps to minimum speed.

ANSWER: A

		Level:		RO	
	D A	Tier # Group #	i	2	
Examination Outline Cr	oss-Reference	K/A#	t	295001	
<u></u>	<u>. ,</u>		nce Rating	3.6	
Proposed Question: Se	ee attached				
Proposed Answer: See	e attached				
Explanation (Why the distra	ctors are incorrect):				
B - RPV water level will initi	ally increase, not de	ecrease.			
C – RPV water level will initi due to the fdw level control of		e fdw pump	s will not ren	nain at 100%	fee
D - RPV water level will initia	-	crease.			
	· · · · · · · · · · · · · · · · · · ·				
Technical Reference(s): AT	&AA Text Chapter	5 (USAR	Reference	Attached: _	_X_
15.3.1)			(Attach if no	ot previously	pro
Proposed references to be p	provided to applicar	ts during e	xamination: N	lone	
		5-12 Ohi F			
Learning Objective (As avai	lahla) OT_3401_00		, 	<u>.</u>	
Learning Objective (As avai					attao
Learning Objective (As avai Question Source:	Bank #		(Note	changes or a	
				changes or a	
Question Source:	Bank # Modified Bank New	#		changes or a	
	Bank # Modified Bank	#		changes or a	<u></u>
Question Source:	Bank # Modified Bank New Previous NRC Previous Quiz	#	< <u> </u>		
Question Source:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fund	#	nowledge	changes or a	
Question Source: Question History:	Bank # Modified Bank New Previous NRC Previous Quiz	#	nowledge		
Question Source: Question History:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehension	#	nowledge		
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fund	#	nowledge		

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QUESTION 49

The plant is operating at 35% reactor power when the Control Room operators observe Main Condenser vacuum is decreasing (increasing absolute pressure) and Off-Gas System after-filter discharge flowrate is increasing.

Which one of the following could be the cause of these indications?

- A. Main Steam to Steam Jet Air Ejector supply pressure is less than 125 psig.
- B. Steam Seal header pressure is 1.0 psig.
- C. Steam Seal header pressure is 4.0 psig.
- D. Steam Seal exhaust vacuum is greater than 12.0 inches water vacuum.

ANSWER: B

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cro	oss-Reference	Group #	t		2
		K/A#			AK2.11
		Importa	nce Rating	2.6	2.7
Proposed Question: Se					
Proposed Answer: See	attached				
Explanation (Why the distrac	-				
A – This is an abnormally low be less efficient and extract I would decrease.	w Mn Stm to SJAE less air from the Ma	supply pres ain Condens	sure which ser, hence C	would cause)ff-Gas disch	the SJAE to arge flow rate
C – This is a normal Steam S	Seal header pressu	ire.			
D - This is an abnormally high	nh Stoom Sool oxh		املي من المناط	not contribut	to to a loss of
Main Condenser vacuum.	gii Stealli Searexii				
				Attached: _	
Main Condenser vacuum. Technical Reference(s): ON	I-N62		Reference (Attach if n	Attached: _ ot previously	X
Main Condenser vacuum.	I-N62 provided to applicar	nts during e	Reference (Attach if n xamination:	Attached: _ ot previously None	_X / provided)
Main Condenser vacuum. Technical Reference(s): ONI Proposed references to be p Learning Objective (As avail	I-N62 provided to applicar	nts during e 1-N33 Obj	Reference (Attach if n xamination: E, OT-3036	Attached: _ ot previously None 003-N62, OI	_X / provided)
Main Condenser vacuum. Technical Reference(s): ON Proposed references to be p Learning Objective (As avail 3035-001-05b Obj A	I-N62 provided to applicar able): OT-3036-00 Bank # Modified Bank	nts during e 1-N33 Obj # Exam	Reference (Attach if n xamination: E, OT-3036	Attached: _ ot previously None 003-N62, OI	_X / provided) bj E and I, OT-
Main Condenser vacuum. Technical Reference(s): ONI Proposed references to be p Learning Objective (As avail 3035-001-05b Obj A Question Source:	I-N62 provided to applicar able): OT-3036-00 Bank # Modified Bank New Previous NRC	nts during e 1-N33 Obj #	Reference (Attach if n xamination: E, OT-3036 (Note	Attached: _ ot previously None 003-N62, OI	_X / provided) bj E and I, OT-

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QUESTION 50

The plant is operating at 100% reactor power. A Maintenance Electrician reports that a Division 3 Battery pilot cell specific gravity is 1.188 (corrected for electrolyte temperature and level) and the specific gravity of one of the battery cells is 1.189.

Which one of the following Required Actions is the Unit Supervisor required to perform?

Technical Specification Section 3.8 is provided for reference.

- A. Declare the Division 3 Battery inoperable <u>and</u> be in MODE 4 within 37 hours.
- B. Verify pilot cell parameters are within the Table 3.8.6-1 Category C limits within 1 hour and once per 7 days thereafter, and restore battery cell parameters to Category A and B limits of Table 3.8.6-1 within 31 days.
- C. Verify pilot cell's electrolyte level and float voltage is within the Table 3.8.6-1 Category C limits within 1 hour <u>and</u> verify battery cell parameters meet Table 3.8.6-1 Category C limits within 24 hours and once per 7 days thereafter, <u>and</u> restore battery cell parameters to Category A and B limits of Table 3.8.6-1 within 31 days.
- D. Verify pilot cell's electrolyte level and float voltage and battery cell parameters meet the Table 3.8.6-1 Category C limits within 24 hours and once per 7 days thereafter, and restore battery cell parameters to Category A and B limits of Table 3.8.6-1 within 31 days.

ANS: C

		Level:		RO	
		Tier #			
Examination Outline Cro	ss-Reference	Group #	der in etter	295004	
		K/A#	ce Rating	295004	<u>~</u>
Proposed Question: See	e attached				
<u></u>					
Proposed Answer: See	attached				
Explanation (Why the distract	ors are incorrect):				
A - The battery is not inoperal	ble, the Required	Action is to v	erify pilot an	d cell condi	tio
B - The battery cell parameter					
D - Pilot cell electrolyte level is				•	
D - L HOL CELL ELECTIONISIE IEAGLIS	required to be encor				
<u></u>		T			
Technical Reference(s): Tech	Spec 3.8.6		Reference A	ttached: _	_x
• •			(Attach if no	t previously	nn
			Villaon II No		PI
Dranagad references to be an	ovided to applican				
Proposed references to be pr	ovided to applicar				
Proposed references to be pr	ovided to applicar				
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Proposed references to be pr Learning Objective (As availa		its during ex			
	ble): OT-3037-00 Bank #	its during ex	amination: T	ech Spec 3.	8.
Learning Objective (As availa	ble): OT-3037-00 Bank # Modified Bank	its during ex	amination: T		8.
Learning Objective (As availa	ble): OT-3037-00 Bank #	its during ex	amination: T	ech Spec 3.	8.0
Learning Objective (As availa	ble): OT-3037-00 Bank # Modified Bank	ts during ex 1-12 Obj C #X	amination: T	ech Spec 3.	8.
Learning Objective (As availa Question Source:	ble): OT-3037-00 Bank # Modified Bank New	ts during ex 1-12 Obj C # X Exam	amination: T	ech Spec 3.	8.
Learning Objective (As availa Question Source: Question History:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz	1-12 Obj C 	amination: T	ech Spec 3.	8.0
Learning Objective (As availa Question Source:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun	1-12 Obj C 1-12 Obj C # Exam / Test damental Kr	amination: T	ech Spec 3.	8.
Learning Objective (As availa Question Source: Question History:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz	1-12 Obj C 1-12 Obj C # Exam / Test damental Kr	amination: T	ech Spec 3.	8.
Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior	1-12 Obj C 1-12 Obj C # Exam / Test damental Kr	amination: T	ech Spec 3.	8.0
Learning Objective (As availa Question Source: Question History:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior	1-12 Obj C 1-12 Obj C # Exam / Test damental Kr	amination: T	ech Spec 3.	8.0
Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior	1-12 Obj C 1-12 Obj C # Exam / Test damental Kr	amination: T	ech Spec 3.	8.0
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an uppe	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41 55.43X er level question):	ts during ex 1-12 Obj C # Exam / Test damental Kr or Analysis damental stu	amination: T	ech Spec 3. changes or a _X_(A) pret given b	8.4
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41 55.43X er level question):	ts during ex 1-12 Obj C # Exam / Test damental Kr or Analysis damental stu	amination: T	ech Spec 3. changes or a _X_(A) pret given b	8.0
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an uppe	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41 55.43X er level question):	ts during ex 1-12 Obj C # Exam / Test damental Kr or Analysis damental stu	amination: T	ech Spec 3. changes or a _X_(A) pret given b	8.6
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an uppe	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41 55.43X er level question):	ts during ex 1-12 Obj C # Exam / Test damental Kr n or Analysis damental stu	amination: T	ech Spec 3. changes or a _X_(A) pret given b	8.0
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an uppe	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41 55.43X er level question):	ts during ex 1-12 Obj C # Exam / Test damental Kr n or Analysis damental stu	amination: T	ech Spec 3. changes or a _X_(A) pret given b	8.6
Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an uppe	ble): OT-3037-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41 55.43X er level question):	ts during ex 1-12 Obj C # Exam / Test damental Kr n or Analysis damental stu	amination: T	ech Spec 3. changes or a _X_(A) pret given b	8.0

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QUESTION 51

Plant conditions are as follows:

MODE

MODE 1 25 %

Reactor power

Which one of the following describes the response of the RC&IS System if the Main Turbine were to trip with no reactor scram?

RC&IS will

- A. implement the constraints of the Rod Pattern Controller, and depending on the control rod pattern, initiate Insert and/or Withdraw blocks.
- B. implement the constraints of the Rod Withdrawal Limiter allowing control rods to be withdrawn up to 4 notches.
- C. Implement <u>no</u> constraints on control rod motion since reactor power is at the Low Power Alarm Point between the Rod Pattern Controller and the Rod Withdrawal Limiter.
- D. implement the constraints of the Rod Withdrawal Limiter allowing control rods to be withdrawn up to 2 notches.

ANSWER: A

		Level: Tier #		RO 1	
Examination Outline Cr	oss-Reference	Group K/A#	# ance Rating	295005 2.8	AA1
Proposed Question: Se	e attached			2.0	
Proposed Answer: See	attached				
B / C / D – when the Main Tu initiate because sensed ther	urbine trips, first sta mal power is < 20%	ige shell pi 6.	ressure goes	to zero psig.	LP
Technical Reference(s): SD	M-C11(RCIS)			Attached: _	
Technical Reference(s): SD Proposed references to be p		its during e	(Attach if n	ot previously	
	provided to applicar		(Attach if n	ot previously	
Proposed references to be p	provided to applicar	4-C11(RCI	(Attach if n examination: S) Obj H	ot previously	pro
Proposed references to be p Learning Objective (As avail	provided to applicar able): OT-3036-004 Bank <i>#</i> Modified Bank	4-C11(RCI # 	(Attach if n examination: S) Obj H	ot previously None	pro
Proposed references to be p Learning Objective (As avail Question Source:	provided to applicar able): OT-3036-004 Bank # Modified Bank New Previous NRC	4-C11(RCI # Exam / Test damental I	(Attach if n examination: S) Obj H (Note X (Note	ot previously None	pro

QUESTION 52

The plant was operating at 20% reactor power when a malfunction of the Feedwater Level Control System (C34) caused RPV water level to increase to 224 inches before Control Room Operators could restore RPV level back to normal.

Which one of the following is the plant response to this event?

А.	There would be no noticeable plant response at this reactor power level.
В.	Reactor power increased <u>but</u> reactor water level decreased due to shrink caused by the cold water injection. Reactor power and reactor water level returned to normal after approximately one minute.
C.	The Main Turbine tripped but the reactor did not scram.
D.	The Main Turbine tripped and the reactor scrammed.

ANSWER: D

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cr	oss-Reference	Group	#	2	2
		K/A#		295008	AK1.01
		Importa	ance Rating	3.0	3.2
Proposed Question: Se	e attached				
Proposed Answer: See	attached		.		
Explanation (Why the distrac	tors are incorrect):				
A/B/C – At RPV Level 8, the and the reactor will scram du moderation.					
Technical Reference(s): SDI SDM-B21(NBPI)	M-C71, SDM-N32/	C85,	Reference	Attached: _	_x_
			(Attach if n	ot previously	provided)
Proposed references to be p Learning Objective (As avail 3036-004-B21(NBPI) Obj B					35 Obj I, OT-
Question Source:	Bank # Modified Bank ; New	#	(Note	changes or a	attach parent)
Question History:	Previous NRC I Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_X_(C)_	<u></u>
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43			-	
Comments (Why is it an upp to a high RPV level conditior neutron moderation) while th	(causes high mois	sture carryc			

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QUESTION 53

Va Let

A high containment temperature has occurred and the Control Room Operators have entered PEI-T23, Containment Control. The PEI directs the Control Room Operators to "operate all available containment cooling".

Plant conditions are as follows:

- No BOP isolation has occurred.
- CVCW Chiller 'A' is operating.
- CVCW Chill Water Pump 'A' is operating.
- Containment Vessel Cooling Fans 'A', 'C', 'D', and 'F' are operating.

What action can be taken to "operate all available containment cooling"?

- A. Start CVCW Chiller 'C'.
- B. Start CVCW Chill Water Pump 'C'.
- C. Start Containment Vessel Cooling Fans 'B' and 'E'.
- D. Manually close the CVCW three-way value to isolate any chill water bypass flow around the Containment Vessel Cooling Air Handling Unit cooling coils.

ANSWER: C

	<u>.</u>	Level:			RO	SRO
		Tier#	يلغ	<u></u>	1	1
Examination Outline Cro	ss-Reference	Group #	¥		2	2
Examination Outline Cro	55-10101 01100	K/A#			295011 AK2.0	
		Importa	ince Rati	ing	3.7	4.0
Proposed Question: Se	e attached					
Proposed Answer: See	attached			<u>.</u>		
Explanation (Why the distract	tors are incorrect):					
A/B – Only one CVCW chiller or chill water pump 'C' would	/chill water pump cause CVCW chil	can be ope ller/chill wat	ration. S er pump	tarting e A to tri	either CV o.	′CW chiller 'C
D – CVCW three-way valves high containment temperatur		the full flow	to the co	ooling c	oil positio	on due to the
Technical Reference(s): PEI-	T23 PEL Bases [Document	Refere	nce Atta	ached:	Х
SDM-M11, SOI-M11	120, 1 El Dases i	boournent,	l I		-	
			(Attacr	n if not p	reviousi	y provided)
Proposed references to be p	rovided to applica	nts during e	xaminati	ion: Nor)e	
Learning Objective (As availa	able): OT-3402-00	04-07 Obj (C, OT-3	036-005	5- M 11 O	bj F
Question Source:	Bank <i>#</i> Modified Bank New		() X	Note cha	anges or	attach parent
Question History:	Previous NRC Previous Quiz					
Question Cognitive Level:	Memory or Fur Comprehensio			geX	(A)_	
10 CFR Part 55 Content:	55.41X 55.43					
Comments (Why is it an upp determine the correct action containment temperature co	to be taken in ord	Requires s ler to maxim	tudent to nize cont	o analyz ainmen	e plant o t cooling	conditions and during a high

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QUESTION 54

What condition will cause the standby fan in the Lower Drywell Cooler Air Handling Unit to automatically start?

- A. High Differential Pressure across the running fan.
- B. Low Differential pressure across the running fan.
- C. High temperature (>120°F) in the Reactor Vessel Skirt Area.
- D. High vibration on the running fan.

ANSWER: B

Examination Outline C	ross-Reference	Level: Tier # Group # K/A# Importance F	RO 1 2 295012 A tating 3.6	SRO 1 2 K2.02 3.7
Proposed Question: S	ee attached			
	,		14 14	
	•			
Proposed Answer: See	e attached	<u></u>		
Explanation (Why the distra	ctors are incorrect):	<u>, , , , , , , , , , , , , , , , , , , </u>	· · · · · · · · · · · · · · · · · · ·	
A - High d/p does not cause	· · · · ·		•	
C – High temperature does	not cause an auto s	tart of the standb	y fan.	
D – High vibration does cau				oy fan.
			1	
Technical Reference(s): SD	M-M13	Refe	rence Attached: X	(
Technical Reference(s): SD Proposed references to be p		(Atta	rence Attached:X ch if not previously pr ation: None	
Proposed references to be p Learning Objective (As avai	provided to applicant lable): OT-3036-004	(Attaits during examina	ch if not previously pr	
Proposed references to be p	provided to applicant	(Attaits during examina 4-M13 Obj F	ch if not previously pr	ovided)
Proposed references to be p Learning Objective (As avai	brovided to applicant able): OT-3036-004 Bank # Modified Bank #	(Attaints during examinates du	ch if not previously pr ation: None	ovided)
Proposed references to be p Learning Objective (As avai Question Source:	provided to applicant lable): OT-3036-004 Bank # Modified Bank # New Previous NRC E	(Attaints during examinates du	ch if not previously pr ation: None (Note changes or atta	ovided)
Proposed references to be p Learning Objective (As avai Question Source: Question History:	provided to applicant lable): OT-3036-004 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	(Attaints during examinates du	ch if not previously pr ation: None (Note changes or atta	ovided)
Proposed references to be p Learning Objective (As avai Question Source: Question History: Question Cognitive Level:	Drovided to applicant lable): OT-3036-004 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	4-M13 Obj F 	ch if not previously pr ation: None (Note changes or atta	ovided)
Proposed references to be p Learning Objective (As avai Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Drovided to applicant lable): OT-3036-004 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	4-M13 Obj F 	ch if not previously pr ation: None (Note changes or atta	ovided)
Proposed references to be p Learning Objective (As avai Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Drovided to applicant lable): OT-3036-004 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	4-M13 Obj F 	ch if not previously pr ation: None (Note changes or atta	ovided)

QUESTION 55

The plant is operating at 90% reactor power when both Nuclear Closed Cooling System Heat Exchanger temperature control valves malfunction. Plant operators are unable to operate the temperature control valves manually. The standby NCC Heat Exchanger is drained for maintenance. As a result, alarm NCC HX OUTLET TEMP HIGH is received and NCC Heat Exchanger outlet temperature is 86 °F and slowly increasing.

Which one of the following operator actions is required to be performed?

A. Start an additional Service Water Pump.
B. Enter PEI-T23, Containment Control.
C. Perform a rapid manual shutdown of the Reactor Water Cleanup System.
D. Close both Recirculation Loop A and B Flow Control Valves until total core flow is 58 Mlbm/hr.

	Level:	RO	SRO
	Tier #	1	1
Examination Outline Cross-Reference	Group #		2
	_K/A#	29501	8 AK2.01
	Importance R		3.4
Proposed Question: See attached			
r ropolocu Question. Oce allacheu			
Proposed Answer: See attached			· · · · · · · · · · · · · · · · · · ·
Toposed Answer. Dee allached			
Explanation (Why the distractors are incorrect):			
A – Starting an additional SW Pump is not an Im	mediate Action of	of ONL-D42 and a	hould have no
effect on NCC temperature control Since the TC	Vs are stuck in a	fixed position	iouio nave no
·		•	
B – There are no PEI-T23 entry conditions speci	tied in the given	plant conditions.	
C - This is not an immediate operator action spe	cified in ONI-P4	3.	
· · ·			
Technical Reference(s): SOI-B33, ONI-P43	Refe	rence Attached:	x
· · · · · · · · · · · · · · · · · · ·	(Atta	ch if not previous	y provided)
Proposed references to be provided to applicant	s during examina	ation: None	
	-		
Learning Objective (As sucilable): OT 2022 000			
Learning Objective (As available): OT-3036-006		1-3030-004-P43	Орран
Question Source: Bank#			
Modified Bank #		(Note changes or	attach paren
New	X		situen paron
Question History: Previous NRC E			
Previous Quiz /	Test		
Question Cognitive Level: Memory or Fund	amental Knowled	lae	
Comprehension			
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			· · · · · · · · · · · · · · · · · · ·
	•		
10 CFR Part 55 Content: 55.41X 55.43			
55.43		quidence et this	
55.43 Comments (Why is it an upper level question): T			
55.43	s and conclude t	hat the proper ac	tion to take is

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QUESTION 56

With the plant at power, Instrument Air and Service Air header pressures are slowly decreasing. The following annunciators are received:

- INSTRUMENT AIR HEADER PRESSURE LOW
- PARALLEL IA AIR HEADER PRESSURE LOW
- SERVICE AIR HEADER PRESSURE LOW
- SA/IA XCONN CLOSE IA RECEIVER PRESSURE LOW

SA/IA XCONN VALVE, 1P52-F050, has automatically closed.

Which one of the following conditions will occur due to the low system air pressure?

- A. ADS SRVs will be inoperable.
- B. MSIVs will be inoperable.
- C. SDV Vent and Drain Valves will fail open.
- D. CRD drive water flow will increase.

ANSWER: B

	····	Level:		RO	SRO
		Tier #		1	1
Examination Outline Cro	ss-Reference	Group #	L		2
		K/A#		295019	AA2.02
		Importa	nce Rating	1	3.7
Proposed Question: See	e attached				
Proposed Answer: See Explanation (Why the distract		:			
A – ADS SRVs receive air fro			instrument ai	r).	
		aroly rolated	and annotic un		
C – SDV vent and drain valve					
D – CRD FCV will fail closed,	therefore, CRD c	drive water f	ow will decrea	ISE.	
	D52		Reference A	ttached:	X
Technical Reference(s): ONI-	-M02				
			(Attach if not	previously	provided)
Proposed references to be pr	ovided to applica	nts during e	xamination: No	one	
Learning Objective (As availa	able): OT-3036-0	04-P51/52	Obj E & G		· · · · · · · · · · · · · · · · · · ·
Question Source:	Bank # Modified Bank New		(Note c	hanges or	attach parer
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fur Comprehensio	ndamental k n or Analysi	(nowledge _ s _	<u>X_(C)</u> _	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 <u>X</u>	•			
Comments (Why is it an upp between instrument air and s setpoints and Tech Specs in	safety related syst	tems in conj	unction with ki	v the interr nowledge o	elationships of various al

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QUESTION 57

The following plant conditions exist:

- The reactor is in MODE 4
- RHR Loop A is in the Shutdown Cooling mode
- RHR Loop B is in the Suppression Pool Cooling mode

A valid RPV Level 1 reactor water level condition occurs.

Which one of the following describes the automatic response of the RHR system?

A.	RHR Pumps A and B trip; RHR Loop B shifts to the LPCI mode; RHR Pump B restarts.
B. ,	RHR Pump A trips; RHR Loop B continues to operate in the Suppression Pool Cooling mode.
C.	RHR Pump A trips; RHR Loop B realigns to the LPCI mode.
D.	RHR Pump A continues to operate in the Shutdown Cooling mode; RHR Loop B realigns to the LPCI mode.

ANSWER: C

		Level:		R0 [,]	SRO
		Tier #		1	1
	D	Group	#	2	2
Examination Outline Cros	s-Reference	K/A#		29502	20 AK2.09
		Import	ance Rati		3.3
Proposed Question: See	attached				•
Proposed Answer: See a	attached				
Explanation (Why the distract					
A – RHR Pump B does not tri		ι.			
B - RHR Loop B realigns to the	ne LPCI mode.				
D RHR Pump A trips.					
Technical Reference(s): SDM	I-E12		Refere	nce Attached	X
		_	(Attack	n if not previou	isly provided
Proposed references to be pr	ovided to applica	nts during	examinat	ion: None	
Proposed references to be pr	ovided to applica	nto during			
	blo). OT-3036 0	04-E12 ∩	bi E & F		
Learning Objective (As availa	able). 01-3030-0				
Question Source:	Bank <i>#</i> Modified Banl New		1279_ ((Note changes	or attach pa
Question History:	Previous NRC Previous Quiz	Exam _ z / Test _	99-006		
Question Cognitive Level:	Memory or Fu Comprehensio	ndamental on or Analy	l Knowled /sis	ge(C)_	•
10 CFR Part 55 Content:	55.41X_ 55.43				
				to predict the	response of
			· cturant ·		
Comments (Why is it an upp various E12 modes of opera	er level question): Requires	A signal	occurs.	esponse of

A Contraction

QUESTION 58

IOI-12, Maintaining Cold Shutdown, specifies that when Reactor Recirculation Pumps are <u>not</u> operating, reactor water level should be maintained greater than 250 inches on the Reactor Shutdown Range Level.

Maintaining reactor water level in a range of 250 to 260 inches on the Reactor Shutdown Range Level will ______.

- A. prevent undetected boiling locally in the core.
- B. provide adequate NPSH for the RHR pumps during shutdown cooling operation.
- C. provide sufficient water volume to prevent a loss of shutdown cooling due to a low reactor water level isolation.
- D. provide sufficient water volume to flood the Main Steam lines.

ANSWER: A

		Level:		RO		I SI
		Tier #		1		1
Examination Outline Cu	ross-Reference	Group #		<u>.</u> 3		2
		K/A#	- D-6	295	021 Ak	
		Importance	e Ratir	ng 3.6		3
Proposed Question: Se	ee attached					
Proposed Answer: See	e attached					
Explanation (Why the distra	ctors are incorrect):					
B/C - these reasons are n						
D - Maintaining water level	-	s will prevent	floodin	a the MSI e		
		5 mil provenc	noouin	g the MOLS.		
Technical Reference(s): IOI	-12	· F	eferen	ce Attached	: X	
Technical Reference(s): IOI	-12			ce Attached		
		(.	Attach i	f not previou		
Technical Reference(s): IOI Proposed references to be p		(.	Attach i	f not previou		
		(.	Attach i	f not previou		
Proposed references to be p	provided to applican	ts during exa	Attach i	f not previou		
Proposed references to be p Learning Objective (As avail	provided to applican lable): OT-3046-00	ts during exa	Attach i	f not previou		
Proposed references to be p	brovided to applican lable): OT-3046-00 Bank #	ts during exa 3-01b Obj A	Attach i minatio	f not previou n: None	usly pro	
Proposed references to be p Learning Objective (As avail	provided to applican lable): OT-3046-00	ts during exa 3-01b Obj A	Attach i minatio	f not previou	usly pro	
Proposed references to be p Learning Objective (As avail Question Source:	brovided to applican lable): OT-3046-00 Bank # Modified Bank a New	ts during exa 3-01b Obj A #	Attach i minatio	f not previou n: None	usly pro	
Proposed references to be p Learning Objective (As avail	brovided to applican lable): OT-3046-00 Bank # Modified Bank #	ts during exa 3-01b Obj A #	Attach i minatio	f not previou n: None	usly pro	
Proposed references to be p Learning Objective (As avail Question Source:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E	ts during exa 3-01b Obj A #	Attach i minatio	f not previou n: None	usly pro	
Proposed references to be p Learning Objective (As avail Question Source:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	ts during exa 3-01b Obj A # #X Exam Test lamental Kno	Attach i minatio	f not previou n: None ote changes	usly pro	<u>ovi</u>
Proposed references to be p Learning Objective (As avail Question Source: Question History:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz /	ts during exa 3-01b Obj A # #X Exam Test lamental Kno	Attach i minatio	f not previou n: None ote changes	usly pro	
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Func Comprehension	ts during exa 3-01b Obj A # #X Exam Test lamental Kno	Attach i minatio	f not previou n: None ote changes	usly pro	<u>ovi</u>
Proposed references to be p Learning Objective (As avail Question Source: Question History:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Func Comprehension	ts during exa 3-01b Obj A # #X Exam Test lamental Kno	Attach i minatio	f not previou n: None ote changes	usly pro	
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Func Comprehension	ts during exa 3-01b Obj A # #X Exam Test lamental Kno	Attach i minatio	f not previou n: None ote changes	usly pro	
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	ts during exa 3-01b Obj A 4 Exam Test lamental Kno or Analysis	Attach i minatio	f not previou n: None ote changes	usly pro	<u>ovi</u>
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	brovided to applican lable): OT-3046-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	ts during exa 3-01b Obj A 4 Exam Test lamental Kno or Analysis	Attach i minatio	f not previou n: None ote changes	usly pro	

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QUESTION 59

A reactor startup is in progress with reactor pressure at 650 psig when CRD Pump 'A' trips. While preparing to start CRD Pump 'B', four HCU accumulator faults are received; three of which are associated with withdrawn control rods. CRD charging water pressure is 1375 psig, as read on 1C11-R601, CRD PRESSURE CHARGING WATER.

Which one of the following operator actions is required to be performed?

А.	The Reactor Mode Switch must be placed in SHUTDOWN immediately.
В.	The Reactor Mode Switch must be placed in SHUTDOWN if the conditions above still exist after 20 minutes.
C.	A fast reactor shutdown must be commenced immediately.
D.	A fast reactor shutdown must be commenced if the conditions above still exist after 20 minutes.

ANSWER: B

Examination Outline Cr		Level:		RO	SRO
Examination Outline Cr		Tier #	·	1	1
	oss-Reference	Group 7	ŧ	2	2
		K/A#		295022	
		Importa	nce Rating	3.6	3.7
Proposed Question: Se	ee attached				
Proposed Answer: See	attached				
Explanation (Why the distra	ctors are incorrect):				
A / C / D – Per Tech Specs, immediately. Also, a fast rea reactor.	the Reactor Mode S actor shutdown is no	Switch need t the metho	d not be place od directed to	d in SHUTE be used to s	OWN shutdown the
Technical Reference(s): ON	NI-C11-1, Tech Spec	3.1.5	Reference A (Attach if no		
Proposed references to be p	provided to applicant	ts during e	kamination: N	one	
·	lable): OT-3037-006	-05 Obj B	& D, OT-303	6-007-C11(CRDH) Obj
Learning Objective (As avai G & H	lable): OT-3037-006	-05 Obj B	& D, OT-303	6-007-C11((CRDH) Obj
Learning Objective (As avai	lable): OT-3037-006 Bank # Modified Bank # New		••••••••••••••••••••••••••••••••••••••		CRDH) Obj ttach parent)
Learning Objective (As avai G & H	Bank # Modified Bank #	ŧ >	••••••••••••••••••••••••••••••••••••••		
Learning Objective (As avai G & H Question Source:	Bank # Modified Bank # New Previous NRC E	# Exam Test lamental K	(Note c		

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QUESTION 60

PEI-T23, Containment Control, directs the operator to Emergency Depressurize if Suppression Pool level cannot be maintained below 24.5 feet.

Why does the PEI direct emergency depressurization at this point?

Above this Suppression Pool level, _____.

A	the operation of SRVs may cause failure of the Containment.
B.	the pressure rise in the Containment could cause overflow of the weir wall.
C.	boron would be diluted below the Hot Shutdown Boron Weight if boron was being injected.
D.	the NPSH for pumps taking suction on the Suppression Pool would be insufficient.

ANSWER: A

•		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cr	and Deferrence	Group #	ŧ · · · · ·	2	2
Examination Outline Cr	oss-Reference	K/A#			EK3.01
			nce Rating	3.5	3.9
Proposed Question: Se	e allached				
Proposed Answer: See					- 11/2 - 11
Explanation (Why the distrac					
B – this is a true statement b	out it is not the reas	on for ED.			
C – There is no relationship	between ED due to	high SP le	vel and boron	injection.	
D – This is the reason to ED					
D = This is the reason to ED				2011.	
Technical Reference(s): PRI	T22 DEL Bases	Document	Reference A	ttached:	Y
Technical Reletence(s). Fin	1-12J. FLIDASCS L				
		/ooument		_	
		<u> </u>	(Attach if no	t previously	
Proposed references to be p		<u> </u>	(Attach if no	t previously	
Proposed references to be p		<u> </u>	(Attach if no	t previously	
Proposed references to be p Learning Objective (As avail	provided to applicar	nts during e	(Attach if no xamination: N	t previously	
·	provided to applicar	nts during e 5-05 Obj C #	(Attach if no xamination: N	t previously lone	
Learning Objective (As avail	provided to applicar lable): OT-3402-00 Bank <i>#</i> Modified Bank	nts during e 5-05 Obj C # Exam	(Attach if no xamination: N	t previously lone	provided)
Learning Objective (As avail Question Source:	provided to applicar lable): OT-3402-00 Bank # Modified Bank New Previous NRC	nts during e 5-05 Obj C # Exam / Test damental K	(Attach if no xamination: N	t previously lone	provided)
Learning Objective (As avail Question Source: Question History:	provided to applicar lable): OT-3402-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun	nts during e 5-05 Obj C # Exam / Test damental K	(Attach if no xamination: N	t previously lone hanges or	provided)
Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	provided to applicar lable): OT-3402-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	ats during e 5-05 Obj C # Exam / Test damental K	(Attach if no xamination: N	t previously lone hanges or	provided)
Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	provided to applicar lable): OT-3402-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	ats during e 5-05 Obj C # Exam / Test damental K	(Attach if no xamination: N	t previously lone hanges or	provided)
Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	provided to applicar lable): OT-3402-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	ats during e 5-05 Obj C # Exam / Test damental K	(Attach if no xamination: N	t previously lone hanges or	provided)

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QUESTION 61

The plant is operating at 100% reactor power. AEGTS Train 'A' is in operation with its associated Annulus Differential Pressure Controller in the AUTO mode.

Which one of the following describes the response of AEGTS Train 'A' if the absolute pressure in the Annulus <u>decreases below</u> the desired pressure?

- A. The standby AEGTS Train 'B' will automatically start and restore Annulus pressure to the desired value.
- B. The associated Annulus Differential Pressure Controller setpoint will automatically increase to match the higher Annulus pressure.
- C. The AEGTS Train 'A' exhaust damper will throttle open while the recirculation damper will throttle close until the Annulus pressure is restored to the desired value.
- D. The AEGTS Train 'A' exhaust damper will throttle close while the recirculation damper will throttle open until Annulus pressure is restored to the desired value.

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cr	oss-Reference	Group K/A#	#	3 295035	2
			ance Rating	3.8	3.8
Proposed Question: Se	e attached				
Proposed Answer: See					
Explanation (Why the distract					
A – For a high d/p (low absol		•			
B – The controller tapeset va	alue cannot automat	tically adju	st itself.		
C - This will occur for a low o	d/p.				
Technical Reference(s): SDM			Boforonos A	ttachad	×
			Reference A		
	· · · · · · · · · · · · · · · · · · ·		(Attach if not		provided)
Proposed references to be p	rovided to applicant	ts during e	xamination: No	one	
Learning Objective (As availa	able): OT-3036-004		iF		
· · · · · · · · · · · · · · · · · · ·					,
Question Source:	Bank # Modified Bank # New	ŧ _13	61_ (Note cl	hanges or a	ttach parent
Question History:	Previous NRC E Previous Quiz /		001		
Question Cognitive Level:	Memory or Fund Comprehension			X_(C)_	
10 CFR Part 55 Content:	55.41X 55.43				<u></u>
			udant ta pradi		
Comments (Why is it an uppe AEGTS due to a change in A		equires st	udent to predi	ct the respo	nse of the

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a the second second

QUESTION 62

et e

PEI-N11, Containment Leakage Control, has been entered due to a high area water level in the LPCS Pump Room. A primary system is not discharging into the area.

Which one of the following is the EARLIEST time you are REQUIRED to shutdown the reactor?

A. When there is a third entry condition into PEI-N11.

- B. When there is a second entry condition into PEI-N11 for the same plant parameter.
- C. When there is an entry condition and an area greater than its Maximum Safe Operating Conditions Value.
- D. When two areas for the same plant parameter are greater than their Maximum Safe Operating Conditions Value.

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cro	ss-Reference	Group #		3	2
Examination Outline Cro	55 Reference	K/A#		295036	5 EK3.02
- · · · · · ·		Importa	nce Rating	2.8	2.8
Proposed Question: See Proposed Answer: See Explanation (Why the distract A/B/C – The specific condition 'two or more areas for the san Conditions Value'. These ans	attached fors are incorrect): n which must be sa me plant paramete	atisfied in or	der to procee	d past the	+ HOLD step is
Technical Reference(s): PEI-	N11, PEI Bases Do	ocument	Reference A (Attach if not		
Proposed references to be pr	ovided to applican	ts during e>	amination: No	one	· ····
Learning Objective (As availa	able): OT-3402-001	I-17 Obj C	& D		
Question Source:	Bank # Modified Bank a New	#×	(Note c	hanges or	attach parent)
Question History:	Previous NRC I Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_x	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppo	er level question): I	N/A			

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QUESTION 63

A fire exists in Reactor Recirculation Pump 'A'. The fire was reported at 1358. The CNTMT CO2 SUPPLY OUTBOARD ISOL VALVE, 1P54-F340, was opened by the Control Room Operators at 1440.

Which one of the following describes the current status of the CO2 system?

CO₂ for the Reactor Recirculation Pump fire was ______.

A.	automatically released into the Drywell and was discharged for the required amount of time.
В.	automatically released into the Drywell and was <u>not</u> discharged for the required amount of time.
С.	<u>not</u> automatically released into the Drywell; therefore, the CO_2 System will need to be manually discharged.
D.	<u>not</u> automatically released into the Drywell; therefore, a Drywell entry will be required to suppress the fire.

ANSWER: C

		Level:		RO	SRO
		Tier #		1	1
Examination Outline Cr	oss-Reference	Group	#	2	2
		K/A#		GEN 2	4.27 / 60000
			ance Rating	3.0	3.5
Proposed Question: Se	ee attached				
Proposed Answer: See	attached		·····		
Explanation (Why the distrac	ctors are incorrect):				
A / B – The CO2 System wil discharge once P54-F340 w	l have timed out after as opened.	r 40 minul	es, therefore, i	t will not a	utomatically
D – The CO2 System may s required.	till be manually initiat	ted, there	fore, a Drywell	entry woul	d not be
Technical Reference(s): ON	I-P54		Reference At	tached:	_x
			(Attach if not	previously	provided)
Proposed references to be p Learning Objective (As avail Obj D					P54(CO2)
Question Source:	Bank # Modified Bank # New		(Note ch	anges or a	uttach parent)
Question History:	Previous NRC Ex Previous Quiz / T				
Question Cognitive Level:	Memory or Funda Comprehension c			(_(C)_	44, <u>-</u>
10 CFR Part 55 Content:	55.41X 55.43			<u> </u>	
Comments (Why is it an upp has transpired in order to det minimum dump time or if a m	termine if the Recirc	CO2 Syst	em automatica	ate the time Illy dischar	e period that ged for the

1.00

QUESTION 64

When a control rod is selected, the Control Room Operator observes that the control rod has an "Insert Block" and "Insert Inhibit" light.

This means that the control rod **cannot** be _____.

- A. INSERTED since this might allow the LHGR or MCPR limit to be exceeded.
- B. INSERTED or WITHDRAWN since this might allow the LHGR or MCPR limit to be exceeded.
- C. INSERTED since this might allow a control rod to have excessive rod worth.
- D. INSERTED <u>or</u> WITHDRAWN since this might allow a control rod to have excessive rod worth.

ANSWER: C

	······································	Level:			RO	SRO
		Tier #			2	2
	D. (Group #			1	1
Examination Outline Cross	-Reference	K/A#			201005	A2.03
		Importa	nce Ra	ting	3.2	3.2
Proposed Question: See a						
Proposed Answer: See at	ttached					
Explanation (Why the distractor A – the control rod cannot be in B / D – the control rod cannot does not change the fact that th	nserted but the r be inserted but i	eason is no it be withdra	wn; the	o LHGR oi e extra wo	MCPR	limits. plausible but
Technical Reference(s): SDM- C11(RCIS)	C11(RCIS), SO) -		rence Atta ch if not p		_X / provided)
Proposed references to be pro	vided to applica	nts during e	examina	ation: Non	e	
Learning Objective (As availab	ole): OT-3036-0	04-C11(RC	IS) Obj	j B & C		
Question Source:	Bank # Modified Banł New		 X	(Note cha	inges or	attach parent
Question History:	Previous NRC Previous Quiz					
	Memory or Fu	indamental	Knowle sis	edge	X	
Question Cognitive Level:	Comprehensio	on or Analys				
Question Cognitive Level: 10 CFR Part 55 Content:	Comprehensio 55.41X_ 55.43					

QUESTION 65

Given the following conditions for Reactor Recirculation Hydraulic Power Unit 'B':

- Subloop 1 READY, LEAD, OPERATIONAL, PRESSURIZED
- Subloop 2 READY

Alarm 'FCV B HPU NEEDS MAINTENANCE" is received at panel H13-P680. A Control Room Operator reports that an amber 'OIL WARM' light is illuminated on panel H13-P614 for HPU 'B'.

Which one of the following describes the operational status of HPU 'B'?

- A. Subloop 1 and Subloop 2 are in the Maintenance mode.
- B. Subloop 1 remains in operation and Subloop 2 remains in Standby.
- C. Subloop 1 is in the Maintenance mode and Subloop 2 is in operation but <u>not</u> in LEAD.
- D. Subloop 1 is in the Maintenance mode and Subloop 2 is in operation but is in LEAD.

		Level:	····· · · · · · · · ·	RO	SRO
		Tier #		2	2
Examination Outline Cre	oss-Reference	Group	#	1	1
		K/A#		202002	A3.02
		Importa	ance Rating	3.4	3.4
Proposed Question: Se	e attached				
Proposed Answer: See	attached			<u> </u>	
Explanation (Why the distrac	tors are incorrect):				
A - 'OIL HOT' would place be	oth Subloops in the	Maintena	nce mode.		
B – Subloop 1 shifts to Maint	enance mode and	Subloop 2	auto starts.		
C – Subloop 2 does shift to L LEAD pushbutton (as directe		it does not	come on un	til operator d	epresses
Technical Reference(s): SDN	/ -B33, ARI-H13-P6	80-4(B5)	Reference (Attach if ne	Attached: ot previously	X provided)
Proposed references to be p	rovided to applican	ts during e	xamination: I	None	
Learning Objective (As availa	able): OT-3036-00	6-B33 Obj	D&E		
Question Source:	Bank # Modified Bank ≠ New	ŧ>	(Note	changes or a	attach parent)
Question History:	Previous NRC E Previous Quiz /		······		
Question Cognitive Level:	Memory or Func Comprehension		•	_X_(C)	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppo B33 HPU based on given co	• •	Requires st	tudent to ana	lyze the resp	oonse of the

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QUESTION 66

A 44

The Control Room has been evacuated and plant control has been established at the Division 1 Remote Shutdown Panel.

Select the correct statement concerning operation of the Residual Heat Removal (RHR) System under these conditions.

- A. The RHR PUMP A MIN FLOW VALVE, E12-F064A, will auto open when flow is less than 1650 gpm for 8 seconds when the RHR Pump is running.
- B. The RHR A TEST VALVE TO SUPR POOL, E12-F024A, will auto close if a LPCI initiation signal is received.
- C. The RHR A Pump, E12-C002A. will auto start if a LPCI initiation signal is received.
- D. The RHR A TO RADWASTE ISOLATION VALVE, E12-F049, will auto close if drywell pressure is > 1.68 psig.

		Level:	RO	SF
		Tier #	2	2
Examination Outline Cro	oss-Reference	Group #	1	1
		K/A# Importance Rating	<u>203000</u> 3.6	<u>K4.14</u> 3.
Proposed Question: See	e attached			
Proposed Answer: See Explanation (Why the distrac A/B/C – Interlock is bypassed	tors are incorrect):		RSP.	
·				
Technical Reference(s): IOI- C61	-11, Attachment 1,		e Attached: _	
Proposed references to be p			1: None	
Learning Objective (As availa	, 			
Learning Objective (As availa Question Source:	Bank # Modified Bank New	# (No	te changes or	attach
	Modified Bank	X Exam	te changes or	attach
Question Source:	Modified Bank New Previous NRC Previous Quiz	Exam / Test damental Knowledge		attach
Question Source: Question History:	Modified Bank New Previous NRC Previous Quiz Memory or Fur	Exam / Test damental Knowledge		attac

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QUESTION 67

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Assume that all required conditions have been met for an Automatic Depressurization <u>AND</u> that depressurization is in progress. If <u>ALL</u> the Low Pressure ECCS pumps trip off, which one of the following describes how the Automatic Depressurization System is affected?

А.	Automatic Depressurization will stop and can be recommenced by depressing the ADS Manual Initiation pushbuttons.
В.	Automatic Depressurization will stop and can be recommenced by restarting a Low Pressure ECCS pump.
C.	Automatic Depressurization will stop and can only be reestablished by manually opening SRVs.
D.	Automatic Depressurization will continue without interruption.

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cro	oss-Reference	Group #		1	1
	· · · · · · · · · · · · · · · · · · ·	K/A#		209000	
		Importance	e Rating	3.8	3.9
Proposed Question: Se Proposed Answer: See Explanation (Why the distrac	attached		• 		
A/B/C – Automatic Depressu ECCS pump has no effect or			logic seals	-in, ioss of a	a low pressure
Technical Reference(s): SD	M-B21C (ADS)			ttached: _	
Proposed references to be public to be public. The public to be public. The public to be public. The public to be public. The public to be public. The public to be public. The public to be public. The public to be				lone	
Question Source:	Bank # Modified Bank # New	628	<u></u>	hanges or a	attach parent)
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension		wledge _	_X_(C)_	
10 CFR Part 55 Content:	55.41X 55.43	<u></u> , ,			
Comments (Why is it an upp ADS based upon a loss of lo	er level question): I w pressure ECCS	Requires stud	ent to pred	ict the resp	onse of the

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QUESTION 68

If HPCS automatically initiates due to receipt of BOTH the Low Reactor water Level and High Drywell Pressure signals, the initiation signal will seal-in.

It may/will be reset _____.

- A. automatically when both initiation signals clear.
- B. manually only after both initiation signals clear.
- C. manually after the Low Reactor Water Level initiation signal clears.
- D. manually after the High Drywell Pressure initiation signal clears.

ANSWER: C

		Level:			RO	SRO
		Tier #			2	2
Examination Outline Cross	s-Reference	Group	#		1	1
		K/A#			209002 A4	1.15
		Importa	ance R	ating	3.6	3.6
Proposed Question: See	attached					
Proposed Answer: See a	ttached					
Explanation (Why the distracto	rs are incorrect):					
A – Once sealed in, the logic m	nust be manually re	eset.				
B and D – Only the Low React	-		lear be	efore the I	logic can be	reset.
Technical Reference(s): SDM-	E22A		Refe	rence Atta	ached:X	<u> </u>
			(Atta	ch if not p	reviously pr	ovided)
Proposed references to be pro	vided to applicants	during e	xamina	ation: Nor	ie	
Learning Objective (As availab	le): OT-3036-004-	-E22A O	bj E			
Question Source:	Bank # Modified Bank # New	2	25	(Note cha	anges or atta	ach parent)
Question History:	Previous NRC Ex Previous Quiz / T					
Question Cognitive Level:	Memory or Funda Comprehension o			dge	X	
10 CFR Part 55 Content:	55.41X 55.43					-
Comments (Why is it an upper	level question): N/	/A				

QUESTION 69

The plant is operating at 35% reactor power. MSIV B21-F022A has a faulty limit switch which is generating a '< 92% open' signal.

Which one of the following MSIVs, if closed, would cause a 1/2 scram?

- A. MSIV B21-F028A
- B. MSIV B21-F028B
- C. MSIV B21-F022C
- D. MSIV B21-F028C

ANSWER: B

		Level:		RO	SRO
77 1 1 10 11		Tier #		2	2
Examination Outline (Cross-Reference	Group	#	1	1
		<u>K/A</u> #		212000) K6.05
· · · · · · · · · · · · · · · · · · ·		Import	ance Rating	3.5	3.8
Proposed Question: \$					
Proposed Answer: Se	e attached			<u> </u>	
Explanation (Why the distr	actors are incorrect):				
A – Combination of F022A scram.	,	e-energize	RPS channel	A or B to c	ause a ½
C - Combination of F022A	and E022C will not de	e_eneraizo	any PDS abor	nol to and	00 0 1/
D - Combination of F022A	and F028C will not de	e-energize	any RPS char	inel to cau	se a ½ scrar
Technical Reference(s): SI	DM-C71		Reference At	tached:	_X
Technical Reference(s): SI Proposed references to be		ts during e	(Attach if not	- previously	
Proposed references to be	provided to applicant		(Attach if not xamination: No	- previously	
	provided to applicant		(Attach if not xamination: No	- previously	
Proposed references to be	provided to applicant	5-C71 Obj	(Attach if not xamination: No	previously	
Proposed references to be Learning Objective (As ava	provided to applicant illable): OT-3036-005 Bank# Modified Bank#	5-C71 Obj	(Attach if not xamination: No	previously	provided)
Proposed references to be Learning Objective (As ava Question Source:	provided to applicant illable): OT-3036-005 Bank # Modified Bank # New Previous NRC E	5-C71 Obj X xamX Test	(Attach if not xamination: No F (Note ch	previously	provided)

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QUESTION 70

The following plant conditions exist:

- Reactor Mode Switch is in STARTUP/STANDBY
- Intermediate Range Monitors (IRM) A, C, D, E, and G are on Range 3; all other IRMs are on Range 2
- Source Range Monitor (SRM) A is reading 0.5 cps
- SRMs B and C are reading 8.3 x 10E4
- SRM D mode switch is in STANDBY

A rod block signal has been generated.

Which one of the following has caused the rod block?

A. SRM Upscale

B. SRM Downscale

- C. SRM Detector Wrong Position
- D. SRM Inoperable

		T		·	
		Level:		RO	SRO
Examination O (1)	D	Tier #		2	2
Examination Outline C	ross-Reference	Group	<u>#</u>	1	1
		K/A#		215004 A3	
Proposed Question: S Proposed Answer: See Explanation (Why the distra	e attached ctors are incorrect):	Import	ance Rating	3.6	3.6
A – NO SRMs are upscale (> 1x10E5).				
B – SRM A downscale is by	passed because assoc	ciated IR	Ms A and E are	on Pango 3	
C – No SRMs indicate < 100) cps with their detecto	r not ful	l in.		
Technical Reference(s): SD	0M-C51(SRM)		Reference Atta (Attach if not pi		
Proposed references to be p				e	
Learning Objective (As avail	able): 01-3036-004-C	51(SRM	1) Obj D		
Question Source:	Bank # Modified Bank # New	B-12		nges or attac	h parent)
Question History:	Previous NRC Exal Previous Quiz / Te			· - · · -	
Question Cognitive Level:	Memory or Fundam Comprehension or /		· ·	(C)_	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppe RC&IS given initial SRM cont	er level question): Requirient	uires stu	idents to predict	the response	e of the

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QUESTION 71

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During reactor power operations, the following plant conditions exist:

- Reactor power 75% ٠
- Core flow 70% (73 Mlbm/hr) •
- Total Recirculation drive flow ٠ Recirculation Loops in operation

65% (62 Kgpm) Both

Which one of the following is the APRM Upscale Thermal Power Trip Setpoint?

А.	84.3%
В.	104.6%
C.	106.9%
D.	107.7%

ANSWER: B

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cr	oss-Reference	Group #		1	1
		K/A#	nce Rating	215005	<u>K4.07</u> 3.7
Proposed Question: Se					
Proposed Answer: See	e attached				
Explanation (Why the distract					
A – Scram setpoint for single			0 / 66\M + 64		
C – Scram setpoint for 2 loo		•	•	/0 KIP).	
D – Incorrect to use core flor Technical Reference(s): LCC			Reference A		
C51 (PRM)		, 00111	(Attach if not		
	فصصصا المصصمة اممادة بمعد		amination: M		
Proposed references to be p Learning Objective (As avail		·		one	916
		5-C51 (APF	M) Obj D		attach parent)
Learning Objective (As avail	lable): OT-3036-00{ Bank # Modified Bank #	5-C51 (APF X	M) Obj D		attach parent)
Learning Objective (As avail Question Source:	lable): OT-3036-005 Bank # Modified Bank # New Previous NRC E	5-C51 (APF X X Exam Test lamental Kr	RM) Obj D (Note c 		attach parent)
Learning Objective (As avail Question Source: Question History:	lable): OT-3036-005 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	5-C51 (APF X X Exam Test lamental Kr	RM) Obj D (Note c 	hanges or a	attach parent)

QUESTION 72

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The reactor is shutdown with the following plant conditions:

- Reactor water level 255 inches on Shutdown Range Water Level
- Reactor water temperature
- 120 degrees F
- Reactor pressure 0 psig
- Drywell temperature 110 degrees F

Which one of the following is correct with respect to these plant conditions?

Actual reactor water level will be _____.

A. HIGHER than indicated since the reactor water temperature is LOWER than the calibration conditions for the Shutdown Range Water Level.
B. LOWER than indicated since the reactor water temperature is LOWER than the calibration conditions for the Shutdown Range Water Level.
C. LOWER than indicated since the drywell temperature is HIGHER than the calibration conditions for the Shutdown Range Water Level.
D. HIGHER than indicated since the drywell temperature is HIGHER than the calibration conditions for the Shutdown Range Water Level.

ANSWER: C

		<u> </u>						
		Level:		RO	SRO			
		Tier #		2	2			
Examination Outline Cro	oss-Reference	Group	#	1	1			
		K/A#		216000				
		Importa	ance Rating	3.6	3.8			
Proposed Question: Se	e attached							
Proposed Answer: See	attached							
Explanation (Why the distrac	tors are incorrect):							
A /B – reactor water tempera	ture is at calibratior	n condition	s for SDR.					
D – drywell temperature is higher than calibration conditions, therefore, indicated <u>level</u> will be higher than <u>actual</u> level.								
Technical Reference(s): SDN	1-B21(NBPI)			Attached:				
			(Attach if no	ot previously	provided)			
Proposed references to be provided to applicants during examination: None								
Learning Objective (As availa	able): OT-3036-004	1-B21(NBF	PI) Obj B					
Question Source:	Bank # Modified Bank # New	•	(Note o	changes or a	attach parent)			
Question History:	Previous NRC E Previous Quiz /		·					
Question Cognitive Level: Memory or Fundamental Knowledge Comprehension or Analysis								
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 <u> </u>							
Comments (Why is it an uppe conditions for the SDR level i								

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QUESTION 73

A small break Loss of Coolant Accident (LOCA) has occurred. Per PEI-B13, RPV Control (Non-ATWS), HPCS injection has been secured and the MFP is being used to control RPV water level.

The Unit Supervisor wants to control RPV pressure using RCIC.

Which one of the following is correct concerning the operation of the RCIC System?

A.	RCIC cannot be operated in this mode unless Drywell pressure is less than 1.68 psig.
В.	RCIC should not be operated with a continuous pump flow less than 345 GPM when turbine speed is less than or equal to 2250 RPM due to turbine blade overheating.
C.	RCIC turbine operation less than 2000 RPM should be minimized to prevent cyclic action of the turbine exhaust check valve.
D.	RCIC turbine speed must be maintained greater than 2000 RPM to provide sufficient lubrication for internal pump components.

ANSWER: C

		Level:			RO		SRC
	ł	Tier #		····	2		
Examination Outline C	ross-Reference	Group #			1		
		K/A#			217000) K5.0)6
		Importan	ce Ra	ting	2.7		
Proposed Question: S							
Proposed Answer: See	e attached						
Explanation (Why the distra	ctors are incorrect):						
A - there is no restriction fo	r operation of RCIC wh	en drvwel	press	sure is >	> 1.68 psi	ia.	
B – at < 2250 RPM, RCIC c		-	-			3.	
D – RCIC speed must be m components.	aintained > 1500 RPM		e suttic			CIC ir	nter
Technical Reference(s): SO	I-E51	1	Refere	nce Atta	ached: _	_X	-
Technical Reference(s): SO Proposed references to be p		(Attach	if not p	previously		-
Proposed references to be	provided to applicants o	luring exa	Attach	if not p	previously		-
· ·	provided to applicants o	luring exa	Attach	if not p	previously		-
Proposed references to be	provided to applicants o	luring exa	Attach minat	i if not p on: Nor	previously	/ provi	ideo
Proposed references to be p Learning Objective (As avai	brovided to applicants of lable): OT-3036-003-E Bank # Modified Bank #	luring exa 51 Obj F m	Attach minat	i if not p on: Nor	previously	/ provi	idec
Proposed references to be p Learning Objective (As avai Question Source:	provided to applicants of lable): OT-3036-003-E Bank # Modified Bank # New Previous NRC Exa	luring exa 51 Obj F 	Attach minat	lote cha	previously	/ provi	idec
Proposed references to be p Learning Objective (As avai Question Source: Question History:	provided to applicants of lable): OT-3036-003-E Bank # Modified Bank # New Previous NRC Exa Previous Quiz / Te Memory or Fundam	luring exa 51 Obj F 	Attach minat	lote cha	anges or a	/ provi	ideo
Proposed references to be p Learning Objective (As avai Question Source: Question History: Question Cognitive Level:	brovided to applicants of lable): OT-3036-003-Et Bank # Modified Bank # New Previous NRC Exa Previous Quiz / Te Memory or Fundam Comprehension or . 55.41X 55.43	luring exa 51 Obj F 	Attach minat	lote cha	anges or a	/ provi	ideo
Proposed references to be p Learning Objective (As avai Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	brovided to applicants of lable): OT-3036-003-Et Bank # Modified Bank # New Previous NRC Exa Previous Quiz / Te Memory or Fundam Comprehension or . 55.41X 55.43	luring exa 51 Obj F 	Attach minat	lote cha	anges or a	/ provi	ide

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QUESTION 74

A Loss of Coolant Accident (LOCA) has occurred and Drywell pressure is 2.4 psig. LPCS is operating on minimum flow. LPCI A, B, and C have been overridden off since they were not required to maintain adequate core cooling.

Ten minutes after the initial Drywell break, RPV water level suddenly decreased below RPV Level 1. One hundred (100) seconds later, RPV water level was restored above RPV Level 3.

It has now been five minutes since RPV water level was restored above RPV Level 3 and the Unit Supervisor has directed the Supervising Operator to verify the current status of the Automatic Depressurization System (ADS).

NO operator actions were taken with respect to ADS other than resetting annunciators that had cleared.

Which one of the following is the correct <u>annunciator status</u> that the Supervising Operator should expect to observe?

	ADS A 105 SEC TIME DELAY LOGIC INITIATED	ADS A TIMER 90 SEC & RUNNING	ADS A INSTANTANEOUS <u>LOGIC INITIATED</u>
A.	ON	ON	ON
B.	OFF	ON	OFF
C.	ON	OFF	OFF
D.	OFF	OFF	ON

ANSWER: D

		Level:	· · · · · ·	RO	SRO
		Tier #	·····	2	2
Examination Outline Cr	oss-Reference	Group #		1	1
		K/A# Importance	Doting	218000	<u>A1.05</u> 4.1
Proposed Question: Se	ee attached				I 7.1
		·····			
Proposed Answer: See					
Explanation (Why the distrac	ctors are incorrect):				
A – the 105 and 90 second t above Level 1.	imer annunciators v	vill have cleare	ed when RF	PV level wa	s restored
B-the 90 second timer annur	nciator will have clea	ared when RP	V level was	s restored a	bove Level 3.
C-the 105 second timer annu 3.	unciator will have cl	eared when R	PV level wa	as restored	above Level
Technical Reference(s): SDI	M-B21C (ADS)	R	eference At	tached: _	_x
		(A	ttach if not	previously	provided)
Proposed references to be p	rovided to applican	ts during exan	nination: No	one	
Learning Objective (As available	able): OT-3036-002	2-B21C(ADS)	Obj E		
Question Source:	Bank # Modified Bank # New	#X	(Note cł	anges or a	ttach parent)
Question History:	Previous NRC E Previous Quiz /	·	-		
Question Cognitive Level:	Memory or Fund Comprehension			X (A)	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an upp conditions, and in conjunctio System.					

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QUESTION 75

A Loss of Coolant Accident (LOCA) has occurred and Drywell pressure is 2.2 psig.

Based on these plant conditions, which one of the following describes the operation of the Containment Vacuum Relief Isolation Valves (M17-F015, F025, F035, and F045)?

If a Containment Vacuum Relief Isolation Valve control switch is _____.

A.	placed in OPEN, then the valve will open regardless of Containment pressure.
В.	placed in OPEN, then the valve will open only if Containment pressure is <u>not</u> positive.
С.	placed in CLOSE, then the valve will close regardless of Containment pressure.
D.	placed in CLOSE, then the valve will close only if Containment pressure is negative.

		Level:		RO	SF
		Tier #		2	2
Examination Outline Cro	oss-Reference	Group #	<u> </u>	1	1
		K/A#		223001	
		Importa	nce Rating	3.1	3.
Proposed Question: Se	e allacheu				
Proposed Answer: See Explanation (Why the distrac	. <u></u>				
A – the isolation valves will n			oviete in Cont	ainmont	
C / D– the isolation valves wi LOCA signal.	ill not close if a vac	cuum exists	in Containme	nt concurre	ent witl
Technical Reference(s): SDN	И-М1 7		Reference A	ttached:	_x_
			(Attach if not	nreviously	, provid
		-			
Proposed references to be p	able): OT-3036-00)2-M17 Obj	D	, <u>, , , , , , , , , , , , , , , ,</u>	
	able): OT-3036-00 Bank # Modified Bank New			hanges or a	attach
Learning Objective (As availa	Bank # Modified Bank	#		hanges or	attach
Learning Objective (As availa Question Source:	Bank # Modified Bank New Previous NRC	#	(Note c	hanges or	attach

QUESTION 76

Given the following plant conditions:

- Drywell pressure is 1.3 psig
- Reactor water level is +105 inches
- Main condenser vacuum is 25 inches Hg A
- Reactor pressure is 75 psig

Which one of the following describes the system components that isolated based on these plant conditions?

A.	RWCU isolation valves, MSIVs and MSL Drain isolation valves, RCIC steam supply line isolation valves
В.	MSIVs and MSL Drain isolation valves, NCC Containment & Drywell isolation valves, RWCU isolation valves
C.	RCIC steam supply line isolation valves, Drywell Floor Drain Sump & Containment Drain Sump isolation valves, Reactor Water Sample isolation valves
D.	Reactor Water Sample isolation valves, RWCU isolation valves, MSIVs and MSL Drain isolation valves

ANSWER: D

<u></u>		Level:			RO	SRO		
		Tier #			2	2		
Examination Outline Cro	a Doforance	Group	#		1	1		
Examination Outline Cro	ss-kelerence	K/A#	n		223002			
			ance Rat	ing	3.5	3.5		
Proposed Question: See	e attached							
Proposed Answer: See	attached							
Explanation (Why the distract	ors are incorrect):							
A & C – RCIC stm supply line	isolation condition	not met (i	reactor n	ressure	< 60 psic	1).		
A & C – RCIC stm supply line isolation condition not met (reactor pressure < 60 psig). B – NCC isolation valve isolation conditions not met (RPV level < Level 1 or DW pressure > 1.68 psig).								
Technical Reference(s): SDM	-B21(NS4)		Refere	nce Atta	ached: _	_X		
			(Attach	n if not p	reviously	provided))	
Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-002-B21(NS4) Obj D,E,G,H , OT-3036-003-E51								
Obj D , OT-3036-004-P51/52 Question Source:	Bank # Modified Bank # New	ŧ	1) <	Note cha	anges or a	attach pare	ent)	
Question History:	Previous NRC E Previous Quiz /							
Question Cognitive Level: Memory or Fundamental Knowledge Comprehension or Analysis								
10 CFR Part 55 Content:	55.41X 55.43							
Comments (Why is it an upper level question): Requires student to predict various system isolation responses based on given plant conditions.								

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QUESTION 77

The plant has experienced a Loss of Coolant Accident (LOCA). All ECCS have operated as designed EXCEPT one Drywell pressure transmitter (B21-N094A) that supplies a high Drywell pressure signal to the Division 1 Containment Spray initiation logic. The transmitter has failed downscale (indicates zero).

Ten (10) minutes after the LOCA initiation signal, plant conditions are as follows:

- Drywell pressure 1.9 psig
- Containment pressure 4.1 psig

Which one of the following describes the status of the Division 1 Containment Spray System?

Division 1 Containment Spray System has _____.

- A. automatically initiated.
- B. <u>not</u> automatically initiated but <u>will</u> initiate if the CNTMT SPRAY A MANUAL INITIATION pushbutton is armed and depressed.
- C. <u>not</u> automatically initiated but <u>will</u> initiate if the CNTMT SPRAY A HI DW PRESS BYP keylock switch is placed in BYPASS.
- D. <u>not</u> automatically initiated but <u>will</u> initiate if Containment pressure increases to 7.8 psig.

		- <u>r</u> -		1	
		Level:	. <u>.</u>	RO	SRO
		Tier #		2	2
Examination Outline Cro	ss-Reference	Group #	¥	2	1
		K/A#		226001	
		Importa	nce Rating	2.7	2.8
Proposed Question: See	e attached				
Proposed Answer: See	attached				
Explanation (Why the distract					
A – system has not automatic	ally initiated becaus	se Contair	nment pressur	e is less th	an 8.0 psig.
C – bypassing the DW pressu Containment pressure is less		s greater t	han its setpoir	nt) has no e	effect because
D - system will not automatica	ally initiated until Co	ntainmen	t pressure rea	ches 8.0 p	sig.
Technical Reference(s): SDN	I-E12		Reference A	ttached: _	_x
			(Attach if not	previously	provided)
Proposed references to be pr	ovided to applicants	s during e	xamination: No	one	
Learning Objective (As availa	ble): OT-3036-004	-E12 Obj	F		
Question Source:	Bank # Modified Bank # New		(Note c	hanges or	attach parent)
Question History:	Previous NRC Ex Previous Quiz /				
Question Cognitive Level:	Memory or Funda Comprehension of		nowledges	X_(C)_	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppe in conjunction with the knowl DW pressure transmitter on t	edge of Containmer	nt Spray lo	ogic, determine		

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QUESTION 78

Reactor power is 90%.

Which one of the following describes how an SRV, that was stuck open, is verified closed after its control power fuses have been removed in accordance with ONI-B21-1, SRV Inadvertent Opening/Stuck Open?

- A. Reactor pressure increases.
- B. Main Generator electrical output increases.
- C. Indicated steam flow on the effected steam line decreases.
- D. Both SOLENOID STATUS A (B) red indicating lights on P601 are off

· · · · · · · · · · · · · · · · · · ·		Level:		RO	SRO				
		Tier #		2	2				
Examination Outline Cro	ss-Reference	Group	#	1	1				
		K/A#	neo Detine	239002					
			ance Rating	4.1	4.2				
Proposed Question: See attached									
Proposed Answer: See	attached		<u> </u>						
Explanation (Why the distract	tors are incorrect):		<u> </u>						
A – Reactor pressure will not	•	•		- ,					
C – Indicated steam flow (measured downstream of the SRVs) on the affected steam line will increase because steam flow that was directed through the open SRV in now redirected down the MSL to the Main Turbine.									
D – De-energization of the SRV solenoids does not directly imply that the stuck open SRV closed,									
Technical Reference(s): SDM	1-B21/N11, ONI-B	21-1	Reference Att		_X				
	···		(Attach if not p	previously	provided)				
Proposed references to be pr	ovided to applican	ts during e	xamination: No	ne					
Learning Objective (As availa	able): OT-3036-00	5-B21/N11	Obj D, E, I		<u> </u>				
Question Source:	Bank #	<u></u>							
	Modified Bank a New	#>	(Note ch: K	anges or a	ttach parent)				
Question History:	Previous NRC I Previous Quiz /								
Question Cognitive Level:	Memory or Fund Comprehension			_X					
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43								
Comments (Why is it an uppe	er level question): I	N/A							

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QUESTION 79

The plant is operating at 80% reactor power. Reactor Feed Pump Turbine (RFPT) 'A' and 'B' controllers are in Automatic when the High Pressure Core Spray (HPCS) System inadvertently initiates and injects into the RPV.

Which one of the following describes the response of the Feedwater Level Control System?

Total feedwater flow will ______.

- A. <u>decrease;</u> resulting in a reactor scram on low reactor water level.
- B. <u>increase;</u> reactor water level will stabilize at some level slightly lower than the tape set value.
- C. <u>decrease</u>; reactor water level will stabilize at the same level as the tape set value.
- D. <u>decrease</u>; reactor water level will stabilize at some level slightly higher than the tape set value.

ANSWER: D

		Lauali	· · · · · · · · · · · · · · · · · · ·	RO	SRO
		Level:			
		Tier #		2	2
Examination Outline Cros	s-Reference	Group #	ŧ	1	1
		K/A#		259002 A	
		Importa	nce Rating	3.6	3.5
Proposed Question: See	attached				
Proposed Answer: See a	attached				
Explanation (Why the distracto	ors are incorrect):				
*At 80% power, fdw flow is ap					
A – FDW flow decreases to co on low water level.	mpensate for the	HPCS flow	r; therefore, the	e reactor wil	l not scram
B – FDW flow must decrease HPCS	due to the water l	evel error c	reated by the a	additional w	ater from
C –Additional water from HPC be the same as the tapeset va		el error; th	erefore, the ac	tual water le	evel cannot
Technical Reference(s): SDM	-C34		Reference At	tached:	X
·			(Attach if not	previously p	provided)
Proposed references to be pro	ovided to applican	ts during e	xamination: Nc	ne	
Learning Objective (As availal	ble): OT-3036-006	S-C34 Obj	С		
Question Source:	Bank # Modified Bank : New		(Note ch	anges or a	ttach parent)
Question History:	Previous NRC I Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension		(nowledge s	X_(C)_	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 <u> </u>				
Comments (Why is it an uppe HPCS System will affect the F	er level question): FWLC System and	Requires s d feedwate	tudent to predi r flow.	ct how injec	tion from the

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QUESTION 80

A secondary flowpath associated with the Annulus Exhaust Gas Treatment System (AEGTS) allows a purge path to be established.

Which one of the following describes the purpose of this secondary flowpath?

A. To control Drywell temperature during plant heatup.
B. To control Drywell pressure during plant heatup.
C. To control Drywell airborne radiation levels to allow Drywell entry during plant heatup.
D. To control Drywell hydrogen concentration during a Loss of Coolant Accident (LOCA).

		Level:		RO	SRO
		Tier #	····	2	2
	D C		#	1	2
Examination Outline Cro	ss-Reference	Group : K/A#	#		1 02
			noo Doting	261000 K	
Proposed Question: See Proposed Answer: See Explanation (Why the distract A/C/D – the only purpose for distractor purposes are not di	attached tors are incorrect): this secondary flow	path is for		ure control. T	<u>3.4</u> he
					,
Technical Reference(s): SDN	I-M15		Reference At (Attach if not		_
Proposed references to be pr	ovided to applicant	s during e	xamination: No	one	
Learning Objective (As availa	ible): OT-3036-005	-M15 Obj	В		
Question Source:	Bank # Modified Bank # New	13 		anges or atta	ach parent)
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_X	
10 CFR Part 55 Content:	55.41X 55.43				·····
Comments (Why is it an uppe	er level question): N	I/A			

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QUESTION 81

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The plant is at 15% reactor power. The Control Room Operator is in the process of synchronizing the Main Generator to the grid and is ready to close Generator Breaker S-610-PY-TIE. A malfunction occurs in the turbine control system and turbine speed increases to just below the Main Turbine overspeed trip setpoint.

Which one of the following describes how the plant will respond to this event?

А.	The synchroscope will turn clockwise at a slower rate; Main Generator output voltage will increase.
В.	The synchroscope will turn clockwise at a faster rate; Main Generator output voltage will <u>not</u> change.
C.	The synchroscope will turn counter-clockwise at a faster rate; Main Generator output voltage will decrease.
D.	The synchroscope will turn counter-clockwise at a faster rate; Main Generator output voltage will not change.

		Level:		RO	SRC
		Tier #		2	2
Examination Outline Cre	oss-Reference	Group	#	2	1
		K/A#	<u> </u>	262001	
· · · · · · · · · · · · · · · · · · ·		Importa	ance Rating	3.4	3.4
Proposed Question: Se					
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A/C – Synchroscope will turn generator output voltage doe regulator.	at a faster rate in t s not change beca	the CW dir use it is a f	ection if turbin function of the	e speed inc generator v	reases a oltage
D - Synchroscope will turn at	a faster rate in the	CW direct	ion if turbine s	peed increa	ises
Technical Reference(s): GP	Components Text-	Chapter	Reference A	ttached:	_X
5, IOI-3			(Attach if not	previously	provided
Learning Objective (As availa Question Source:	able): OT-3303-00 Bank # Modified Bank # New			-3046-003-(hanges or a	
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Func Comprehension			X_(C)_	
10 CFR Part 55 Content:	55.41X 55.43		¥	<u>, , , , , , , , , , , , , , , , , , , </u>	
Comments (Why is it an uppe generator synchroscope and speed during generator paral	generator output v	Requires st	udent to predi ed on an incre	ct the respo ase in main	nse of th turbine

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QUESTION 82

The Division 1 Diesel Generator is being operated in parallel with the grid. The Diesel Generator Control Transfer Switch is in the LOCAL position.

Which one of the following describes the response of the Division 1 Diesel Generator if a valid Loss of Coolant Accident (LOCA) signal occurs?

The Division1 Diesel Generator output breaker will _____:

Α.	<u>not</u> trip but the diesel generator trips normally bypassed by a LOCA signal will be bypassed.
В.	<u>not</u> trip and the diesel generator trips normally bypassed by a LOCA signal will <u>not</u> be bypassed.
С.	trip but the diesel generator trips normally bypassed by a LOCA signal will <u>not</u> be bypassed.
D.	trip and the diesel generator trips normally bypassed by a LOCA signal will be bypassed
	· ·

		r			
		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cr	oss-Reference	Group	#	1	1
		K/A#		264000	K4.07
······		Import	ance Rating	3.3	3.4
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):			<u> </u>	
A – DG trips are not bypasse		hile in I	ocal control		
C / D – DG breaker will not tr	ip if a LOCA occurs w	vhile in L	ocal control.		
Technical Reference(s): SDM	I-R43		Reference Atta	ached:	x
			(Attach if not p	reviously p	rovided)
Proposed references to be pr Learning Objective (As availa			······································	e	
	Die). 01-3030-004-R	43/48 C			
Question Source:	Bank # Modified Bank # New	X	(Note cha	nges or att	ach parent)
Question History:	Previous NRC Exa Previous Quiz / Te		 		
Question Cognitive Level:	Memory or Fundam Comprehension or			<u>(C)</u>	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an upper DG output breaker and the DC	r level question): Req 6 trips when operated	uires stu l locally	ident to predict t and a LOCA occ	the respons curs.	se of the

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QUESTION 83

4

With the MG SET TRANSFER switch in the NORM position, RPS Motor Generator Set 'A' tripped off.

A full reactor scram will occur if a low reactor water level is sensed in which of the following RPS trip channel(s)?

- A. Channel 'A'
- B. Channel 'B'
- C. Channel 'C'
- D. Channels 'A' and 'C'

	Level:			RO	SRO
	Tier #			2	2
Examination Outline Cross-Reference	Group a	#		1	1
Examination Outline Cross-Reference	K/A#	т		212000	
		nce Ra	ating		
Proposed Question: See attached Proposed Answer: See attached Explanation (Why the distractors are incorrect) A / C / D – These channel(s) are already in a t scram condition exists in RPS Trip System A. condition must be sensed by RPS channel B c	ripped condi For a full scr	tion du	e to loss		
Technical Reference(s): SDM-C71		•		ached:	
Proposed references to be provided to applica	ints during e				y provided)
Learning Objective (As available): OT-3036-00	05-C71 Obj	D&F			
Question Source: Bank # Modified Bank New	<#		Note cha	anges or	attach parent)
Question History: Previous NRC Previous Quiz					
Question Cognitive Level: Memory or Fun Comprehensio			lge	X	
10 CFR Part 55 Content: 55.41X_ 55.43					
Comments (Why is it an upper level question)	: N/A				

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QUESTION 84

The plant is operating at 100 % reactor power when Recirc Pump Seal Flow Regulator, 1C11-D012A, fails closed.

Which one of the following describes the potential consequence of this condition?

If Reactor Recirculation Pump A operation continues, then the ______.

- A. radioactivity discharged to Radwaste will decrease due to the reduced recirc pump seal purge flow.
- B. possibility of recirc pump seal damage will decrease due to the reduced recirc pump seal purge flow.
- C. possibility of recirc pump seal damage will increase due to the possible ingestion of dirt from an unclean piping system.
- D. possibility of recirc pump seal damage will increase unless the alternate recirc pump seal purge supply from the Condensate Transfer and Storage System can be lined up.

ANSWER: C

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cr	oss-Reference	Group	#	1	2
		K/A#		201001	
		Importa	ance Rating	3.0	3.1
Proposed Answer: See	attached	- 		<u> </u>	
Explanation (Why the distrac	ctors are incorrect):				
A – loss of seal purge flow w	ill increase the amo	ount of radi	oactivity disch	narged to RV	V.
B - loss of seal purge flow w	ill increase the pos	sibility of p	ump seal dam	lage.	
D – Alternate seal purge flow shutdown and depressurized	r from the CTS Sys			+	tor is
Technical Reference(s): SDN	M-B33, SDM-C11(0	CRDH)	Reference A	_	
			(Attach if no	t previously	provided)
Learning Objective (As availa C Question Source:	Bank # Modified Bank #			07-C11(CRI	
С	Bank #	#			
C Question Source:	Bank # Modified Bank # New Previous NRC E	# Exam Test lamental K	(Note c		
C Question Source: Question History:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	# Exam Test lamental K	(Note c	hanges or a	

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QUESTION 85

Reactor Recirculation Pumps 'A' and 'B' tripped off when reactor water level reached Level 2. Preparations are underway to restart Reactor Recirculation Pump 'A' in order to restore forced circulation through the core.

Which one of the following interlocks must be met for Reactor Recirculation Pump 'A' to successfully start and operate in slow speed?

- A. RPV water level is greater than RPV Level 3.
- B. Flow Control Valve 'A' actuator (D004A) is full open.
- C. Differential temperature between reactor steam dome temperature and Reactor Recirculation Pump 'A' suction temperature is greater than 10 degrees F.
- D. Differential temperature between reactor steam dome temperature and Reactor Recirculation Pump 'A' suction temperature is less than 50 degrees F.

ANSWER: D

Examination Outline Cro Proposed Question: See		Tier # Group # K/A# Importance Ra	2	
		Group # K/A#		2
			2	1
Proposed Question: See	e attached	Importance Ra		1 K4.15
Proposed Question: See	e attached		ting 3.1	3.4
Proposed Answer: See	attached	•		
Explanation (Why the distract	ors are incorrect):			
A – RPV level > Level 3 is rec	uired for a fast sp	eed start (will not r	prevent a slow sr	eed start)
				-
B – FCV actuator must be ret			-	
C – Reactor steam dome/pun prevent a slow speed start).	np suction > 10 de	grees F is required	l for a fast speed	start (will not
Technical Reference(s): SDN	И-ВЗЗ	Refere	nce Attached:	_x
		(Attac	n if not previously	(provided)
Proposed references to be pro-		-		
Question Source:	Bank # Modified Bank # New	¢ (1	Note changes or	attach parent,
	Previous NRC E			
Question History:	Previous Quiz /			
Question History: Question Cognitive Level:		amental Knowledg or Analysis	jeX	

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QUESTION 86

Given the following conditions:

- The Reactor Water Cleanup System (RWCU) is operating in the normal mode
- The RWCU LD ISOLATION BYPASS Switches (E31-S1A,B) on panels H13-P632 and P642 have been placed in "BYPASS"

Select the expected effect on the RWCU System.

- A. The RWCU System isolation signal on high non-regenerative heat exchanger outlet temperature is defeated.
- B. The RWCU System isolation from high area temperatures <u>ONLY</u> are defeated.
- C. The RWCU System isolation from high differential flow <u>AND</u> high area temperature are defeated.
- D. The RWCU System isolation signal on low RPV level (Level 2) is defeated.

ANSWER: C

		Level:		RO	SRC
		Tier #		2	2
Examination Outline Cross	-Reference	Group	#	2	2
		K/A#	ance Rating	204000	<u>K1.15</u> 3.2
Proposed Question: See	attached				
Proposed Answer: See at	tached			· ·	=: i
Explanation (Why the distractor	s are incorrect):	<u></u>	<u></u>		
A – This is a G33 isolation signa RWCU LD ISOLATION BYPAS	al, not an E31 isola S Switches.	ition sigr	nal; therefore	, it is not byp	assed by
B - This is only 1 of 3 distinct E	31 isolation signals	S.			
D – This is a B21H isolation signal	0		WCU System	n to isolate, n	iot an E3
Technical Reference(s): SDM-E	31, SDM-G33		Reference	Attached: _	_X
			(Attach if no	ot previously	provided
Proposed references to be prov Learning Objective (As available					Obj D
Question Source:	Bank # Modified Bank # New	_44	6 (Note	changes or a	attach pa
Question History:	Previous NRC Exa Previous Quiz / Te	-		. <u></u>	
	Memory or Fundar Comprehension or			_X_(C)	
	55.41 _X_				
	5.43				

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QUESTION 87

2 2

RHR Loop A has just been placed into the Shutdown Cooling mode of operation using the normal return path. The cooldown rate is excessive. The Unit Supervisor directs you to reduce the cooldown rate.

Which one of the following is the correct action to reduce the cooldown rate?

- A. Throttle close the RHR A HX'S BYPASS VALVE, E12-F048A, and throttle open the RHR A HX'S OUTLET VALVE, E12-F003A, while maintaining a system flowrate of 7000-7100 gpm.
- B. Throttle open the RHR A HX'S BYPASS VALVE, E12-F048A, and throttle close the RHR A HX'S OUTLET VALVE, E12-F003A, while maintaining a system flowrate of 7000-7100 gpm.
- C. Throttle open the RHR A HX'S BYPASS VALVE, E12-F048A, and throttle close the RHR A HX'S OUTLET VALVE, E12-F003A, while maintaining a system flowrate of 2000-7100 gpm.
- D. Throttle ESW flow through the RHR Heat Exchanger using RHR A HX'S ESW OUTLET VALVE, P45-F068A.

		Level:		·····	RO	SRO
Frankis O di G		Tier #			2	2
Examination Outline C	ross-Reference	Group	#	19 1. 19 1. 2 1. 4 .	2	2
		K/A#	D	- 17	205000	
			ance R	ating	3.7	3.7
Proposed Question: S						
Proposed Answer: See	e attached				<u> </u>	
Explanation (Why the distra	ctors are incorrect).					
	•					
A – This action will increase						
C – This is the required flow	rate band when usir	ng the alter	rnate re	turn path	via E12-	F042A
D - Not an approved metho						
		aominate		1-212.		
Technical Reference(s): SO			Defer	A.L		
recinical Nelefence(s). 50	1-112		1	ence Atta		
	•		(Attac	h if not pr	eviously	provided)
Proposed references to be p	provided to applicant	s durina e	xamina	tion:		
		0				
			<u> </u>			· · · · · · · · · · · · · · · · · · ·
Learning Objective (As avail	able): OT-3036-004	-E12 Obj l	B & D,	OT-3046	-000-10a	Obj B
Question Source:	Bank #					
Question Source.	Modified Bank #		70	Alata aka		- 4 1 0
	New	D-,	/3	(ivote cha	nges or a	attach parent)
····						
Question History:	Previous NRC E	xam				
	Previous Quiz /					
Question Cognitive Level	Mamariti		<u> </u>			······
Question Cognitive Level:	Memory or Funda				<u>_</u>	
	Comprehension (or Analysis	;	_X_(U)_	
		· .				
10 CFR Part 55 Content:	55.41 <u>X</u>					
	55.43					
Comments (Why is it an upp	er level question): R	equires stu	udent to	o recogniz	e the cor	rect method
to be used to reduce the coo	ldown rate when in t	the SDC m	ode of	operation		

QUESTION 88

The plant is operating at 100% reactor power. RHR A HX'S BYPASS VALVE, E12-F048A, has failed in the fully open position.

Which mode(s) of RHR Loop A are/is OPERABLE?

А.	Suppression Pool Cooling only
B.	Low Pressure Coolant Injection only
С.	Containment Spray and Suppression Pool Cooling
D.	Containment Spray and Low Pressure Coolant Injection

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cu	ross-Reference	Group	#	2	2
		_K/A#			.33 / 219
		Importa	ince Rating	3.4	4.0
Proposed Question: Se	ee attached				
			· · · · · · · · · · · · · · · · · · ·		
Proposed Answer: See	e attached	•			
Explanation (Why the distra	ctors are incorrect):				
A – The HXs are required fo		bility			
-		•		L:1:L .	
C - The HXs are required fo			ooling Opera	Dility	
D - The HXs are required fo	r Containment Spra	y			
Technical Reference(s): SD	M-E12, Tech Spec	3.5.1.	Reference A	ttached:	х
3.6.1.7, and 3.6.2.3		,			
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		(Attach if not	r previously	provided)
Proposed references to be p	provided to applican	ts durina e:	kamination: N	one	
-		0			
Looming Objective (As and		4 E40 OF		07 000 00	
Learning Objective (As avail OT-3037-001-10 Obj A & B	able): 01-3036-00	4-E12 Obj I	3 & N, 01-30	37-000-09 (Obj A & E
Question Source:	Bank #		· · · · · · · · · · · · · · · · · · ·		
	Modified Bank #	+	(Note a	hanges or st	toob no
,	New	•X		hanges or at	lach pare
·		·^			
Question History:	Previous NRC E	- xam			
account incory.	Previous Quiz /				
Question Cognitive Level:	Memory or Fund	amontol K	owledge	Y	
Question obginitive Level.	Comprehension			_^	
	Comprehension				
10 CEP Port EE Content					· · · · · ·
10 CFR Part 55 Content:	55.41 <u>X</u>				
	55.43				
Comments (Why is it an upp	er level question). N	J/A			
Serunding frank is it an upp		W/7			
	,				

QUESTION 89

Plant conditions are as follows:

- Core offload is in progress
- Refuel Bridge is stationed in the 'cattle chute' (Portable Refueling Shield) between the Reactor Pressure Vessel and the Dryer Storage Pool
- Refuel Bridge grapple is loaded with a new fuel bundle
- Reactor Mode Switch is in the SHUTDOWN position
- All control rods are fully inserted

Which one of the following describes the <u>allowable direction(s)</u> that the Refuel Bridge can travel in (i.e., travel direction will <u>not</u> be prevented by an interlock)?

Α.	The Refuel Bridge can move in either direction.
B.	The Refuel Bridge can move towards the Dryer Storage Pool only.
C.	The Refuel Bridge can move towards the Reactor Pressure Vessel only.
D.	The Refuel Bridge cannot move in either direction

			Level:		RO	SRO		
			Tier #		2	2		
]	Examination Outline Cross-Reference		Group K/A#	#	3	2		
				ance Rating	234000	<u>A3.02</u> 3.7		
	Proposed Question: Se	e attached				<u> </u>		
····								
:								
F				·····				
F	Proposed Answer: See	attached						
E	Explanation (Why the distractors are incorrect):							
1	A / C / D – The Bridge Rev S	Stop 2 interlock will	prevent rev	verse travel of	f the Refuel I	bridge		
10	owards the RPV if the Read	tor Mode Switch is	not in REF	UEL. Forward	travel in the	e direction		
	the Dryer Storage Pool is allowed.							
1 7	Technical Reference(s): SDM-F11/15			Reference Attached: X				
I	i echnical Reference(s): SD	M-F11/15		Reference A	ttached:	X		
	i echnical Reference(s): SD	M-F11/15		ſ				
Ļ			ts during e	(Attach if no	t previously			
Ļ	Proposed references to be p		ts during e	(Attach if no	t previously			
Ļ			ts during e	(Attach if no	t previously			
F		provided to applican	·	(Attach if no xamination: N	t previously			
F	Proposed references to be p	provided to applican able): SYS-5014-0	·	(Attach if no xamination: N	t previously			
F	Proposed references to be p earning Objective (As avail	provided to applican	03-F11/F1	(Attach if no xamination: N 5 Obj E	t previously lone	provided)		
F	Proposed references to be p earning Objective (As avail	able): SYS-5014-00	03-F11/F1	(Attach if no xamination: N 5 Obj E	t previously	provided)		
F	Proposed references to be p earning Objective (As avail Question Source:	able): SYS-5014-00 Bank # Modified Bank # New	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone	provided)		
F	Proposed references to be p earning Objective (As avail	able): SYS-5014-0 Bank # Modified Bank #	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone	provided)		
F	Proposed references to be p Learning Objective (As avail Question Source:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone	provided)		
F	Proposed references to be p earning Objective (As avail Question Source:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone hanges or a	provided)		
F L C	Proposed references to be p Learning Objective (As avail Question Source:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz /	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone	provided)		
	Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone hanges or a	provided)		
F L C	Proposed references to be p Learning Objective (As avail Question Source:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c	t previously lone hanges or a	provided)		
F L ((()	Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c 	t previously lone hanges or a X_(C)_	provided)		
F L C C 1	Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43 er level question): F	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c inowledge s	t previously lone shanges or a X_(C)_	provided)		
F L C C 1	Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): SYS-5014-00 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43 er level question): F	03-F11/F1	(Attach if no xamination: N 5 Obj E (Note c inowledge s	t previously lone shanges or a X_(C)_	provided)		

QUESTION 90

A plant transient resulted in a loss of extraction steam to FDW Heaters 5A and 5B. The Immediate Actions of ONI-N36, Loss of Feedwater Heating, have been completed. All remaining FDW Heaters are in operation. Current reactor power is 90%.

What is the Main Generator MWe limitation based on the current FDW Heater lineup?

The Main Generator Mwe Limitation Table from ONI-N36 is provided below for reference.

Heater	Number of Trains Lost	Side of Heater Lost	RFP Steam Main	Supply Extraction	Basis
1&2	1	Condensate	1125 MWe	1188 MWe	1
5	2	Extraction	938 MWe	1000 Mwe	2
1 & 2, 3, 5, 6	2 Trains of the same heater	Condensate	563 MWe	625 MWe	3

- A. 625 MWe
- B. 938 MWe
- C. 1000 MWe
- D. 1188 MWe

ANSWER: C

		<u> </u>			
ł		Level:		RO	SRO
Frankrik O di G		Tier #		2	2
Examination Outline C	ross-Reference	Group	#	2	2
		K/A#	-	245000	A2.06
		Import	ance Rating	2.9	3.1
Proposed Question: S	ee attached				
Proposed Answer: See	e attached				
Explanation (Why the distra	,				
A – This would be the Gene 5B was lost.	rator Mwe limitation i	f the 'con	densate' side o	f FDW Heat	ers 5A and
B - This would be the Gener	ator Mwe limitation if	the RFP	s were operatin	g on 'Main S	Steam'.
D - This would be the Gener and 2A(B/C) was lost.	ator Mwe limitation if	the 'cond	lensate' side of	FDW Heat	ər 1A(B/C)
Technical Reference(s): ON	I-N36	· · · · · · · ·	Reference Att	ached:	x
			(Attach if not p	previously p	rovided)
Proposed references to be p Learning Objective (As available				· .	
Question Source:	Bank # Modified Bank # New	×	(Note cha	anges or att	ach parent)
Question History:	Previous NRC Ex Previous Quiz / Te			<u> </u>	
Question Cognitive Level:	Memory or Fundar Comprehension or			_(A)	
10 CFR Part 55 Content:	55.41X 55.43			<u> </u>	
Comments (Why is it an uppe current plant conditions, to de	er level question): Re etermine the current N	quires stu ⁄Iain Gen	ident, using a re erator MWe lim	eference tal itation.	ole and

QUESTION 91

The plant is operating at 90% reactor power with both Reactor Feed Pump Turbines (RFPTs) in operation. RFPT 'A' Flow Controller is in MANUAL and RFPT 'B' Flow Controller is in AUTOMATIC. The STARUP FDW PUMP SELECT SWITCH is in the MFP position.

Which one of the following describes the response of the Feedwater System if the speed of RFPT 'A' is slowly decreased?

A. RFPT 'B' flow rate will increase, RFPT 'A' flowrate will decrease, and total feedwater flow will remain the same.
B. RFPT 'B' discharge pressure will slightly decrease, RFPT 'A' discharge pressure will slightly increase, and total feedwater flow will remain the same.
C. RFPT 'B' flow rate will remain the same, RFPT 'A' flowrate will decrease, and total feedwater flow will decrease.
D. RFPT 'B' discharge pressure will slightly increase, RFPT 'A' discharge pressure will slightly decrease, and total feedwater flow will decrease.

ANSWER: A

		Level:		RO	SRO
		Tier # Group #	F	2	2
		K/A#		259001	
		Importa	nce Rating	3.9	3.7
Proposed Question: See					
Proposed Answer: See	attached				
Explanation (Why the distract		٠٠٠٠			·
Pump Laws: Flow is proportic (and pump discharge pressur	onal to Speed. In	crease RFP	Г speed, then	pump flow	increases
B – RFPT B discharge pressu	ure will increase	and RFPT A	discharge pre	ssure will c	lecrease.
C – RFPT B flow will increase decreases.	e; total fdw flow w	vill remain the	e same becau	se RFPT A	flow
D - Total fdw flow remains th	e same				
Technical Reference(s): SDM Text Chapter 2	1-C34, GP Comp	onents	Reference A	-	
			(Attach if not		provided)
Proposed references to be pr Learning Objective (As availa and 13					2 Obj 11, 12
Question Source:	Bank <i>#</i> Modified Ban New	k#81	2 (Note c	hanges or	attach parer
Question History:	Previous NRO Previous Qui		9-006_		
	Memory or Fu Comprehension	indamental K on or Analysi	nowledge s	_X_(C)_	
Question Cognitive Level:	00p. 0				

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QUESTION 92

The plant is operating at 100% reactor power when Division 1 DC Bus ED-1-A is lost. Which one of the following conditions will occur?

- A. RCIC automatically initiates.
- B. Recirculation Pumps 'A' and 'B' trip off.
- C. Division 1 Diesel Generator automatically trips, if running.
- D. Alarm window "ANN PWR SUPPLY FAIL" on H13-P680 energizes.

ANSWER: B

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cr	oss-Reference	Group	and the second	2	2
		K/A#		263000	
		Importa	nce Rating	3.4	3.8
Proposed Question: Se	e aπached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A – RCIC will be inoperable	-				
-			report or a di	abled	
C – DC control power is lost					1)
D – DC Bus D-1-A provide C	Control Room annu	nciator pow	er, therefore,	this alarm wi	ll not occur.
Technical Reference(s): SDI	M-R42 ONI-R42-1		Reference A	ttached [.]	X
			(Attach if not		noviueu)
Proposed references to be p	provided to applicar	nts during e	amination: N	one	
Learning Objective (As avail	able): 01-3036-00	ю-к42 Obj	БĞЕ ————————————————————————————————————		
Question Source:	Bank #				
	Modified Bank	#	(Note c	hanges or at	tach parent)
	New	Y			
		^	·		
Question History:	Previous NRC	^ Exam	·		····
Question History:	· · · ·		·		
Question History:	Previous NRC		·		
Question History: Question Cognitive Level:	Previous NRC Previous Quiz Memory or Fund	/ Test damental K		_X	
	Previous NRC Previous Quiz	/ Test damental K		_X	
Question Cognitive Level:	Previous NRC Previous Quiz Memory or Fun Comprehensior	/ Test damental K		_X	
	Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_	/ Test damental K		_X	
Question Cognitive Level:	Previous NRC Previous Quiz Memory or Fun Comprehensior	/ Test damental K		_X	
Question Cognitive Level:	Previous NRC Previous Quiz Memory or Fun Comprehension 55.41X_ 55.43	/ Test damental K a or Analysis		_X	
Question Cognitive Level: 10 CFR Part 55 Content:	Previous NRC Previous Quiz Memory or Fun Comprehension 55.41X_ 55.43	/ Test damental K a or Analysis		_X	
Question Cognitive Level: 10 CFR Part 55 Content:	Previous NRC Previous Quiz Memory or Fun Comprehension 55.41X_ 55.43	/ Test damental K a or Analysis		_X	

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QUESTION 93

The plant is in a refueling outage and the M14 Containment Vessel and Drywell Purge System (CVDWP) is operating in the Refuel mode. Containment Ventilation Exhaust Radiation Monitor D17-K609C is in alarm due to a Downscale indication. All remaining Containment Ventilation Exhaust Radiation Monitor indications are normal for current plant conditions.

An I&C Technician is troubleshooting D17-K609C when the following alarms are received in the Control Room:

- CNTMT & DW PURGE EXHAUST FAN A FLOW LOW
- CNTMT & DW PURGE EXHAUST FAN B FLOW LOW
- CNTMT PURGE SUPPLY FAN A FLOW LOW
- CNTMT PURGE SUPPLY FAN B FLOW LOW
- DW PURGE SUPPLY FAN A FLOW LOW
- DW PURGE SUPPLY FAN B FLOW LOW

Which one of the following conditions is the cause for the current status of the CVDWP System?

- A. The I&C Technician placed the MODE SWITCH for D17-K609A to the TRIP TEST position.
- B. The I&C Technician placed the MODE SWITCH for D17-K609B to the ZERO position.
- C. The I&C Technician placed the MODE SWITCH for D17-K609D to the ZERO position.
- D. Either D17-K609A <u>or</u> D17-K609D is in an UPSCALE TRIP (HI-HI) condition.

ANSWER: B

		Level:	•	RO	SRO
		Tier #		2	2
Examination Outline Cro	ss-Reference	Group #	<u>t</u>	2	2
		K/A#		272000	
		Importa	nce Rating	3.7	4.1
Proposed Question: See				•	
Proposed Answer: See	attached				
Explanation (Why the distract	ors are incorrect):				
CVDWP isolation dampers iso	plation logic is an '	inbd-outbd'	logic (either	A and D or I	B and C)
A – Channels A and C do not			U (
	-	-			
C – Channels C and D do not	-		;		
D - Channels A and C or Cha	annels C and D do	not satisfy	the isolation	logic.	
Technical Reference(c): SDM		\	Poforonoo /	\ttoohod:	v
Technical Reference(s): SDM	-1VI 14, SDIVI-D177	1	Reference A		
			(Attach if no	t previously	provided)
Learning Objective (As availa	ble): OT-3036-00	3-M14 Obj	F, OT-3036	-004-D17A (Obj D
Question Source:	Bank # Modified Bank ; New	#×	(Note o	changes or a	attach paren
Question History:	Previous NRC I Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_X_(C)	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppe					• •

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QUESTION 94

During normal plant operations, one train of the Control Room HVAC and Emergency Recirculation System (M25/26) is operating in the NORMAL mode and the other train is in Standby. An inadvertent high radiation initiation signal is received.

Which one of the following describes the response of the Control Room HVAC and Emergency Recirculation System?

- A. The operating train will shutdown and the standby train will start in the EMERGENCY RECIRCULATION mode.
- B. The standby train will start in the EMERGENCY RECIRCULATION mode <u>only if</u> the operating train fails to shift to the EMERGENCY RECIRCULATION mode within 30 seconds.
- C. The operating train continues to operate in the NORMAL mode and the standby train will start in the EMERGENCY RECIRCULATION mode.
- D. The operating train will shift to the EMERGENCY RECIRCULATION mode and the standby train will start in the EMERGENCY RECIRCULATION mode.

ANSWER: D

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		Level:	RO	SRO	
		Tier #	2	2	
Examination Outline Cro	oss-Reference	Group #	<u>, 6 6 6 6</u> 2	2	
		K/A#	290003		_
		Importance Ra	ting 2.8	2.8	
Proposed Question: Se	e attached				
					_
Proposed Answer: See	attached				_
Explanation (Why the distrac	tors are incorrect):				
A – The operating train will s	hift to the ER mode	e, it will not shutdov	vn.		
B - There is no time delay fo		to start in the ER n	node based upor	n the failure of	
the operating train to not shif			•		
C - The operating train will s	hift to the ER mode	e, it will stay in the	Normal mode.		
Technical Reference(s): SD	M MORIOR	Defere		V	
Technical Reference(s). SD	101-10125/20	Reiere	ence Attached:	_X	
	W-WZ3/20		nce Attached: h if not previously		
		(Attacl	n if not previousl		
		(Attacl	n if not previousl		
		(Attacl	n if not previousl		
Proposed references to be p	rovided to applican	(Attacl ts during examinat	n if not previousl		
Proposed references to be p Learning Objective (As availa Question Source:	rovided to applican able): OT-3036-00 Bank #	(Attacl ts during examinat 2-M25/26 Obj E _1115_	n if not previousl ion: None	/ provided)	
Proposed references to be p Learning Objective (As availa	rovided to applican able): OT-3036-00 Bank # Modified Bank #	(Attacl ts during examinat 2-M25/26 Obj E _1115_	n if not previousl	/ provided)	
Proposed references to be p Learning Objective (As availa	rovided to applican able): OT-3036-00 Bank #	(Attacl ts during examinat 2-M25/26 Obj E _1115_	n if not previousl ion: None	/ provided)	
Proposed references to be p Learning Objective (As availa	rovided to applican able): OT-3036-00 Bank # Modified Bank # New Previous NRC I	(Attack ts during examinat 2-M25/26 Obj E # (I (I 	n if not previousl ion: None	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source:	rovided to applican able): OT-3036-00 Bank # Modified Bank a New	(Attack ts during examinat 2-M25/26 Obj E # (I (I 	n if not previousl ion: None	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source:	rovided to applican able): OT-3036-00 Bank # Modified Bank # New Previous NRC I Previous Quiz / Memory or Fund	(Attack ts during examinat 2-M25/26 Obj E # (I (I 	n if not previously ion: None Note changes or	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source: Question History:	rovided to applican able): OT-3036-00 Bank # Modified Bank a New Previous NRC B Previous Quiz /	(Attack ts during examinat 2-M25/26 Obj E # (I (I 	n if not previously ion: None Note changes or	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source: Question History:	rovided to applican able): OT-3036-00 Bank # Modified Bank # New Previous NRC I Previous Quiz / Memory or Fund Comprehension	(Attack ts during examinat 2-M25/26 Obj E # (I (I 	n if not previously ion: None Note changes or	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	rovided to applican able): OT-3036-00 Bank # Modified Bank # New Previous NRC I Previous Quiz / Memory or Fund	(Attack ts during examinat 2-M25/26 Obj E # (I (I 	n if not previously ion: None Note changes or	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source: Question History: Question Cognitive Level:	rovided to applican able): OT-3036-00 Bank # Modified Bank a New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X 55.43	(Attack ts during examinat 2-M25/26 Obj E (I (I Test damental Knowledg or Analysis	n if not previously ion: None Note changes or	/ provided)	
Proposed references to be p Learning Objective (As availa Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	rovided to applican able): OT-3036-00 Bank # Modified Bank a New Previous NRC I Previous Quiz / Memory or Fund Comprehension 55.41X 55.43	(Attack ts during examinat 2-M25/26 Obj E (I (I Test damental Knowledg or Analysis	n if not previously ion: None Note changes or	/ provided)	

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QUESTION 95

The plant is operating at 75% reactor power.

MSL B INBD MSIV B21-F022B control switch is in the TEST position. The Control Room Operator depresses the MSL B INBD MSIV TEST pushbutton 1B21H-S3B.

Which one of the following describes the response of MSL B INBD MSIV B21-F022B?

- A. Instrument Air bleeds off the bottom portion of the MSIV air cylinder and the top portion of the MSIV air cylinder is pressurized to stroke the MSIV closed in 3-5 seconds.
- B. Safety-Related Instrument Air bleeds off the bottom portion of the MSIV air cylinder and the top portion of the MSIV air cylinder is pressurized to stroke the MSIV closed in 3-5 seconds.
- C. Safety-Related Instrument Air bleeds off the bottom portion of the MSIV air cylinder causing the MSIV to slowly close.
- D. Instrument Air bleeds off the bottom portion of the MSIV air cylinder causing the MSIV to slowly close.

ANSWER: D

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cr	oss-Reference	Group	#	2	2
		K/A#		300000) K1.05
		Importa	ance Rating	3.1	3.2
Proposed Question: Se	ee aπached				
Proposed Answer: See	attached				
Explanation (Why the distract	ctors are incorrect):				
A – This answer describes the operation. B/C – Safety-Related Inst Ai					closure test
Technical Reference(s): SDI	M-B21/N11		Reference A (Attach if not	-	
Proposed references to be p					
Learning Objective (As avail	able). 01-5050-005	-021/1011	ODJE, 01-30	+0-000-101	
Question Source:	Bank # Modified Bank # New	•	(Note cl	nanges or a	attach paren
Question History:	Previous NRC E Previous Quiz /		······································		· · · · · · · · · · · · · · · · · · ·
Question Cognitive Level:	Memory or Fund Comprehension			X_(C)_	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an upp the MSIVs and the operation				nize the so	ource of air to

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QUESTION 96

Which one of the following would be the control rod movement sequence most likely to cause the phenomenon known as the 'reverse power effect'?

A. 1 or 2 notch withdrawal of a deep control rod.
B. 1 or 2 notch withdrawal of a shallow control rod.
C. 1 or 2 notch insertion of a shallow control rod.
D. 10 or 12 notch continuous withdrawal of a shallow control rod.

ANSWER: B

Examination Outline Cross-Reference Tier # 2 2 Group # 2 3 K/A# 201003 K5.05 Importance Rating 3.0 3.1 Proposed Question: See attached See attached See attached Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect. C - small withdrawal movement of shallow rods, not insertion, causes reverse power effect. C	
Examination Outline Cross-Reference Group # 2 3 K/A# 201003 K5.05 Importance Rating 3.0 3.1 Proposed Question: See attached Importance Rating 3.0 3.1 Proposed Answer: See attached Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Importance Rating 3.0 3.1 Proposed Question: See attached 3.0 3.1 Proposed Answer: See attached 3.0 3.1 Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Proposed Question: See attached Proposed Answer: See attached Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Proposed Answer: See attached Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
Explanation (Why the distractors are incorrect): A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
A – small withdrawal movement of shallow rods, not deep rods, causes reverse power effect.	
V VITAN MANAMATAL NVVCHUR VESIGIUW 1043, NULHSENULE CAUSES REVEISE DOWER AMART	
D – reverse power effect is not observed during continuous rod withdrawal.	
Technical Reference(s): GP Reactor Theory Text, Reference Attached: X	
Chapter 5	
(Attach if not previously provided)	
Proposed references to be provided to applicants during examination: None	
Learning Objective (As available): OT-3301-003-05 Obj 12	
Question Source: Bank # (Note changes or attach parent)	
Modified Bank # (Note changes or attach parent) New X	
Question History: Previous NRC Exam	
Previous Quiz / Test	
Question Cognitive Level: Memory or Fundamental KnowledgeX	
Comprehension or Analysis	
10 CFR Part 55 Content: 55.41 _X	
55.43	
Comments (Why is it an upper level question): N/A	

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QUESTION 97

During refueling operations, a FPCC SURGE TANK A LEVEL HI/LO annunciator is received. The Control Room Operator reports that surge tank level is high. The FPCC SURGE TK FILL FROM CST VALVE, G41-F045, is verified closed.

Which one of the following could be the cause of the surge tank high level?

- A. Removal of the Steam Dryer from the Dryer Storage Pool during RPV re-assembly.
- B. Emergency makeup valve from the Service Water System (P41) is open or leaking by.
- C. Fuel Transfer Tube Drain Tank is pumping down during fuel transfer operations.
- D. FPCC flow to the lower fuel pools was raised due to the increased heat load from spent fuel bundles removed from the reactor.

ANSWER: C

		Level:		RO	SR
		Tier #		2	2
Examination Outline C	ross-Reference	Group	#	2	3
		_K/A#		233000	A2.03
		Importa	ance Rating	2.8	3.0
Proposed Question: S	See attached				
Proposed Answer: Se	e attached				
Explanation (Why the distra	actors are incorrect):				
A – Removal of the Steam	Drver would cause p	ool level to	decrease, the	reby causing	g surge
level to decrease as the wa of the Steam Dryer.	iter in the surge tanks	s is require	d to makeup f	or the displa	ced vol
B – Emergency makeup is t					
D- Shifting FPCC flows sho surge tank level.	uld have no effect or	n FPCC Sy	stem volume,	therefore, no	o effect
Technical Reference(s): SD (D3)	M-G41, ARI-H13-P9	170-1	Reference At	tached:	x
(20)			(Attach if not	previously p	rovideo
Proposed references to be Learning Objective (As avai		•			
U ,					
	D. 1 //				
Question Source:	Bank # Modified Bank # New	X	(Note ch	anges or att	ach pa
	Modified Bank # New Previous NRC E	X xam	(Note ch	anges or att	ach pai
Question Source:	Modified Bank # New	X xam	(Note ch	anges or att	ach pai
Question Source:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda	X xam Test amental Kr	owledge		ach par
Question Source: Question History:	Modified Bank # New Previous NRC E Previous Quiz /	X xam Test amental Kr	owledge	anges or att	ach pai
Question Source: Question History:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda Comprehension of 55.41 _X_	X xam Test amental Kr	owledge		ach pa
Question Source: Question History: Question Cognitive Level:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda Comprehension o	X xam Test amental Kr	owledge		ach pai
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda Comprehension of 55.41X 55.43	X xam Test amental Kr or Analysis	owledge>	(_(C)_	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda Comprehension of 55.41 55.43 er level question): R	X xam Test amental Kr or Analysis	owledge>	(_(C)_	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda Comprehension of 55.41 55.43 er level question): R	X xam Test amental Kr or Analysis	owledge>	(_(C)_	
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp	Modified Bank # New Previous NRC E Previous Quiz / Memory or Funda Comprehension of 55.41 55.43 er level question): R	X xam Test amental Kr or Analysis	owledge>	(_(C)_	

QUESTION 98

Which one of the following load sets will be lost if Bus H11 becomes de-energized?

A.	Hotwell Pump A, Hotwell Pump C, and Condensate Booster Pump A
В.	Hotwell Pump B and Condensate Booster Pump B
C.	Hotwell Pump A, Condensate Booster Pump A, and Condensate Booster Pump C
D.	Hotwell Pump C, Condensate Booster Pump A, and Condensate Booster Pump C

ANSWER: C

		Level:		RO	SRO
		Tier #		2	2
Examination Outline Cros	s-Reference	Group #	£	2	3
		K/A#		256001	
·····		Importa	nce Rating	2.7	2.8
Proposed Question: See	attached				
Proposed Answer: See a	ttached				· · · · · · · · · · · · · · · · · · ·
Explanation (Why the distracto	rs are incorrect):				
A - Hotwell Pump C is powere	d from H12.				
B – Hotwell Pump B and CBP I	B are both power	ed from H1	2.		
D - Hotwell Pump C is powered	·				
D - Hotwell Fullip C is powered					
				2	
Technical Reference(s): SDM-I	N21/61		Reference A	Attached: _	_X
· · ·			(Attach if no	ot previously	provided)
Proposed references to be pro					
Question Source:	Bank # Modified Bank # New	#11 		changes or a	attach parent)
	Modified Bank #	# Exam		changes or a	attach parent)
Question Source:	Modified Bank # New Previous NRC E	# Exam Test Jamental Ki	(Note o	changes or a	attach parent)
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	# Exam Test Jamental Ki	(Note o		attach parent)
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Func Comprehension 55.41X 55.43	# Exam Test damental Ki or Analysis	(Note o		attach parent)
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Modified Bank # New Previous NRC E Previous Quiz / Memory or Func Comprehension 55.41X 55.43	# Exam Test damental Ki or Analysis	(Note o		attach parent)

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QUESTION 99

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Which one of the following core components acts as a partition to force the majority of coolant and moderator flow into the control rod guide tubes, fuel support pieces, and to the fuel assemblies?

A. Baffle plate

B. Core shroud

C. Core plate

D. Control rod guide tube flow orifices

		Level:		RO	I SF
		Tier #		2	2
Examination Outline C	ross-Reference	Group #		3	3
		K/A#		290002	
		Importanc	e Rating	3.1	3.2
Proposed Question: S	ee attached				
Proposed Answer: See	e attached				
Explanation (Why the distra	ctors are incorrect):				
A – Supports the jet pumps	and separates recir	c suction from	i jet pump o	discharge.	
B – Divides the upward core	·		• • •	U = 1	
-				•	
D – Control rod guide tubes	a ao nor nave tiow of	1111-11-11			
-		moos.			
-		moos.			
			eference A	Attached:	x
Technical Reference(s): SI		R	eference A Attach if no	_	_X
Technical Reference(s): SI	DM-B13	R (/	Attach if no	t previously	
	DM-B13	R (/	Attach if no	t previously	
Technical Reference(s): SI	DM-B13	R (/	Attach if no	t previously	
Technical Reference(s): SI Proposed references to be	DM-B13 provided to applican	R (/ its during exar	Attach if no mination: N	t previously	
Technical Reference(s): SI	DM-B13 provided to applican	R (/ its during exar	Attach if no mination: N	t previously	
Technical Reference(s): SI Proposed references to be	DM-B13 provided to applican lable): OT-3036-00 Bank #	R (/ its during exar 2-B13 Obj C8	Attach if no mination: N	t previously	
Technical Reference(s): SE Proposed references to be Learning Objective (As avai	DM-B13 provided to applican lable): OT-3036-00 Bank <i>#</i> Modified Bank ;	R (/ its during exar 2-B13 Obj C8	Attach if no mination: N & D	t previously	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai	DM-B13 provided to applican lable): OT-3036-00 Bank #	R (/ its during exar 2-B13 Obj C8	Attach if no mination: N & D	t previously	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai Question Source:	DM-B13 provided to applican lable): OT-3036-00 Bank # Modified Bank ; New	R (/ its during exar 2-B13 Obj C8 #	Attach if no mination: N & D	t previously	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai	DM-B13 provided to applican lable): OT-3036-00 Bank <i>#</i> Modified Bank ;	R (/ its during exar 2-B13 Obj C8 #	Attach if no mination: N & D	t previously	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai Question Source:	DM-B13 provided to applican lable): OT-3036-00 Bank # Modified Bank : New Previous NRC I	R (/ its during exar 2-B13 Obj C8 #	Attach if no mination: N & D	t previously	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai Question Source:	DM-B13 provided to applican lable): OT-3036-00 Bank # Modified Bank : New Previous NRC I	R (/ its during exar 2-B13 Obj C8 #	Attach if no mination: N & D (Note c	t previously	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai Question Source: Question History:	DM-B13 provided to applican lable): OT-3036-00 Bank # Modified Bank : New Previous NRC I Previous Quiz /	R (/ its during exar 2-B13 Obj C8 # # =xam Test damental Knov	Attach if no mination: N & D (Note c	t previously lone	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai Question Source: Question History:	DM-B13 provided to applican lable): OT-3036-00 Bank # Modified Bank = New Previous NRC I Previous Quiz / Memory or Fund	R (/ its during exar 2-B13 Obj C8 # # =xam Test damental Knov	Attach if no mination: N & D (Note c	t previously lone	provid
Technical Reference(s): SE Proposed references to be Learning Objective (As avai Question Source: Question History:	DM-B13 provided to applican lable): OT-3036-00 Bank # Modified Bank = New Previous NRC I Previous Quiz / Memory or Fund	R (/ its during exar 2-B13 Obj C8 # # =xam Test damental Knov	Attach if no mination: N & D (Note c	t previously lone	provid

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QUESTION 100

How long is the Division 1 battery designed to supply the required Loss of Coolant Accident (LOCA) loads without allowing the final discharge voltage to decrease below the minimum design cell voltage?

The Division 1 battery will supply the LOCA loads (with coincident AC power loss) for a MINIMUM of ______.

NOTE: Selection of duration greater than the minimum design will be an INCORRECT response.

А.	2 hours
B.	3 hours
C.	4 hours
D.	12 hours

ANSWER: A

		Level:		RO	SRO
		Tier #	•	1	
Examination Outline Cro	oss-Reference	Group #	ŧ	2	
		K/A#		295004	A2.03
-		Importa	nce Rating	2.8	
Proposed Question: Se	e attached				
Proposed Answer: See	attached	·····			
Explanation (Why the distrac	tors are incorrect):				
B- 3 hours is the timeframe t			aw ONI-R10		
		Shouling R			
C – There is no basis for 4 h					
C – 12 hours is the time for a discharge state to a fully cha		o restore the	e battery from	design mini	mum
Technical Reference(s): SDI	M-R42, TS LCO 3.	.8.4	Reference /	Attached:	_X
Bases			(Attach if no	t previously	provided)
Proposed references to be p	provided to applicar	nts during e	xamination: N	lone	
Learning Objective (As avail	able): OT-3036-00	06-R42 Obj	B, OT-3037	-001-12 Ob	j B
Question Source:	Bank <i>#</i> Modified Bank New		(Note	changes or a	attach paren
Question History:	Previous NRC Previous Quiz				
		damental k		X	
Question Cognitive Level:	Memory or Fun Comprehension		IS	<u> </u>	
			IS		

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QUESTION 101

A tagging error resulted in the de-energization of 120 VAC Instrument Panel EB-1-A1. The Control Room Operator reports that the SLC A OUT OF SERVICE alarm has annunciated.

If an ATWS occurs that requires boron injection, how would the Standby Liquid Control 'A' subsystem respond when the Control Room Operator places the SLC PUMP A control switch to ON?

А.	Squib Valve 'A' will <u>not</u> fire and SLC Pump 'A' will <u>not</u> start.
В.	Squib Valve 'A' will not fire but SLC Pump 'A' will start.
C.	Squib Valve 'A' will fire but SLC Pump 'A' will not start.
D.	Squib Valve 'A' will fire and SLC Pump 'A' will start.

ANSWER: B

		Level:		RO	SRO
		Tier #		2	
	Df	Group 7	4		
Examination Outline Cro	oss-keierence	K/A#	F	211000	K2 02
			nce Rating	3.1	1
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A – SLC Pump A will start.					
C / D – Squib Valve A will no A1.	t fire because elect	trical power	is lost to the f	iring circui	t from EB-1-
Technical Reference(s): SDM 19(D1), ONI-R25-1, PDB-H		501-	Reference At	-	
			(Attach if not	previously	(provided)
Proposed references to be p	rovided to applican	ts during e	xamination: No	one	
Learning Objective (As availa	able): OT-3036-00	5-C41 Obj	C & D, OT-30)36-002-R	14/15 Obj I
Question Source:	Bank # Modified Bank a New	#	(Note ch	nanges or	attach parent)
Question History:	Previous NRC I Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			X_(C)_	
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43				
Comments (Why is it an uppo System A if the system were					

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QUESTION 102

The reactor is critical and plant heatup/pressurization is in progress when the detector voltage for IRM Channel 'D' decreases to 50% of the normal detector voltage. All other IRMs are OPERABLE.

Which one of the following describes the response of IRM Channel 'D'?

- A. A control rod block and RPS half scram signal are generated.
- B. <u>Only</u> a control rod block signal is generated.
- C. <u>Only</u> a RPS half scram signal is generated.
- D. A control rod block and RPS half scram signal are not generated.

ANSWER: A

		Level:	RO	SRO	
		Tier #	2		
Examination Outline C	ross-Reference	Group # K/A#	215003	K3 03	
		Importance Rati	ng 3.7	1.0.03	
Proposed Question: S	ee attached				
Proposed Answer: Se					
Explanation (Why the distra	actors are incorrect):				
B - A RPS half scram signa	al is also generated.	•			
C – A control rod block sigr	al is also generated				
D – A control rod block and		nal are generated.			
	Ũ	J		· · ·	
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		· · · ·	
Technical Reference(s): SE	0M-C51(IRM)	Referen	ce Attached:	_X	
	·····	(Attach	if not previously	provided)	
Proposed references to be	provided to applican	ts during examinatio	n: None		
Loorning Objective (As ave					
Learning Objective (As ava			. D		
Question Source:	Bank <i>#</i> Modified Bank <i>#</i> New	* (No	ote changes or a	ttach parent)	
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension	amental Knowledge or Analysis	_X_(C)_		
	55.41X				
10 CFR Part 55 Content:	55.43	·			
10 CFR Part 55 Content: Comments (Why is it an up from the IRM channel due t	per level question): F	Requires student to p	predict the respon	nse (output)	

QUESTION 103

The plant is operating at 100% reactor power when a loss of 4160V Bus EH11 occurs. Subsequently, a reactor scram occurs. The Control Room Operator notes that the Rod Control & Information System (RC&IS) indication is blinking ON and OFF on the full core display.

Which one of the following action(s) can the Control Room Operator perform to verify ALL RODS IN using the RC&IS display?

A.	Depress the DATA SOURCE pushbutton to select the operable RC&IS channel.
B.	Depress the RAW DATA and SCRAM VALVES pushbuttons to determine control rod positions.
C.	Depress the ACKN ACCUM FAULT pushbutton to allow the control rods to settle into the full-in position.
D.	Release the DATA MODE pushbutton and select the operable RC&IS channel with the DATA SOURCE pushbutton.

ANSWER: D

	······································	Level:		RO	SRO
		Tier #		2	
Examination Outline Cro	Defemence	Group	#		
Examination Outline Cro	oss-Reference	K/A#	<u> </u>	201005	A4 01
			ance Rating	3.7	7.4.01
Proposed Question: Se Proposed Answer: See Explanation (Why the distrac A – Data Source PB is function B) C – Scram Valves PB has	attached tors are incorrect): onal only when Data	a Mode is	not depressed		
C – Acknowledge Accumulat				dication.	
Technical Reference(s): SDN C11(RCIS)	A-C11(RCIS), SOI-		Reference A (Attach if not		
Proposed references to be pr				one	
Learning Objective (As availa	able): 01-3036-004	-C11(RCI	S) Obj D		
Question Source:	Bank # Modified Bank # New		(Note c	hanges or a	attach parent)
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Fund Comprehension			_x	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppe	er level question): N	I/A			

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QUESTION 104

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Which one of the following describes the interlock associated with the RCIC pump suction valves?

Α.	The suction source will automatically swap from the Suppression Pool to the CST upon a low level in the Suppression Pool.
В.	The suction source will automatically swap from the Suppression Pool to the CST upon a high level in the Suppression Pool.
С.	The suction source will automatically swap from the CST to the Suppression Pool upon a low level in the Suppression Pool.
D.	The suction source will automatically swap from the CST to the Suppression Pool upon a low level in the CST.

ANSWER: D

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		Level:		RO	SRO	
		Tier #		2		
Examination Outline C	ross-Reference	Group # K/A#	·	1 217000	K1 03	
		Importance	Rating	3.6	1.05	
Proposed Question: S	ee attached					
Proposed Answer: See	e attached					\neg
Explanation (Why the distra				<u></u>		-1
A / B – The suction valves of	-			от		
	to not automatically	shift from the SI	P to the C			
C - The suction valves do n					vel in the	
C - The suction valves do n					vel in the	
C – The suction valves do n					vel in the	
C – The suction valves do n					vel in the	
C – The suction valves do n SP.	not automatically shi	ft on low level in	the SP, it			
C – The suction valves do n SP.	not automatically shi	ft on low level in	the SP, it	is a high le	x	
C – The suction valves do n SP. Technical Reference(s): SI	not automatically shir DM-E51	ft on low level in Ref (Att	the SP, it erence Att	is a high le tached: previously j	x	
C – The suction valves do n SP. Technical Reference(s): SI	not automatically shir DM-E51	ft on low level in Ref (Att	the SP, it erence Att	is a high le tached: previously j	x	
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p	not automatically shif DM-E51 provided to applican	ft on low level in Ref (Att ts during exami	the SP, it erence Att	is a high le tached: previously j	x	
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai	not automatically shif DM-E51 provided to applican	ft on low level in Ref (Att ts during exami	the SP, it erence Att	is a high le tached: previously j	x	
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p	DM-E51 provided to applican lable): OT-3036-003 Bank #	ft on low level in Ref (Att ts during exami 3-E51 Obj D	the SP, it erence Att	is a high le tached: previously j	x	
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai	not automatically shif DM-E51 provided to applican ilable): OT-3036-00 Bank # Modified Bank #	ft on low level in Ref (Att ts during exami 3-E51 Obj D	erence Att	is a high le tached: previously j	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai	DM-E51 provided to applican lable): OT-3036-003 Bank #	ft on low level in Ref (Att ts during exami 3-E51 Obj D	erence Att	is a high le tached: previously p ne	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai	DM-E51 DM-E51 provided to applican lable): OT-3036-00 Bank # Modified Bank # New Previous NRC E	ft on low level in Ref (Att ts during exami 3-E51 Obj D # # 	erence Att	is a high le tached: previously p ne	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai Question Source:	DM-E51 DM-E51 provided to applican lable): OT-3036-00 Bank # Modified Bank # New	ft on low level in Ref (Att ts during exami 3-E51 Obj D # # 	erence Att	is a high le tached: previously p ne	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai Question Source: Question History:	not automatically shift DM-E51 provided to applican lable): OT-3036-003 Bank # Modified Bank # New Previous NRC E Previous Quiz /	ft on low level in Ref (Att ts during exami 3-E51 Obj D 4 x Exam Test	erence Att ach if not nation: No	is a high le tached: previously p ne	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai Question Source:	DM-E51 DM-E51 provided to applican lable): OT-3036-00 Bank # Modified Bank # New Previous NRC E	ft on low level in Ref (Att ts during examination 3-E51 Obj D 4 3-E51 Obj D 4 5 Exam Test lamental Knowle	erence Att ach if not nation: No	is a high le tached: previously p ne	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai Question Source: Question History:	DM-E51 DM-E51 provided to applican lable): OT-3036-000 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	ft on low level in Ref (Att ts during examination 3-E51 Obj D 4 3-E51 Obj D 4 5 Exam Test lamental Knowle	erence Att ach if not nation: No	is a high le tached: previously p ne	X provided)	t)
C – The suction valves do n SP. Technical Reference(s): SE Proposed references to be p Learning Objective (As avai Question Source: Question History:	DM-E51 DM-E51 provided to applican lable): OT-3036-000 Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	ft on low level in Ref (Att ts during examination 3-E51 Obj D 4 3-E51 Obj D 4 5 Exam Test lamental Knowle	erence Att ach if not nation: No	is a high le tached: previously p ne	X provided)	t)

QUESTION 105

The plant has under gone a transient that resulted in a Recirculation Flow Control valve runback.

Which one of the following describes the allowable operation of the Recirculation Flow Control Valves, prior to resetting the runback?

The Recirculation Flow Control valves can

A. be closed using LOOP manual operation, however, they can only be opened to the 12% valve position.
B. be closed using LOOP manual operation, however, they can only be opened to the position that they ran back to.
C. <u>not</u> be closed any further because they are at the full closed stop and cannot be re-opened due to a hydraulic lock on the valves.
D. <u>not</u> be closed any further because they are at the full closed stop, however, they can be opened to the 22% valve position.

ANSWER: B

		<u> </u>	· · · · · · · · · · · · · · · · · · ·		
		Level:		RO	SRO
		Tier #		2	
Examination Outline Cri	oss-Reference	Group	#	1	
		K/A#		202002	K2.12 K1,12
		_ Importa	ance Rating	3.7	
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A – FCV runback is to the 17 to the 17% position.	% valve position, th	erefore th	ey could be c	losed and th	ien re-opened
C/D – FCVs can be closed fu	rther than the 17%	runback p	osition.		
Technical Reference(s): SD	М-В33		Reference / (Attach if no	Attached: ot previously	X provided)
Proposed references to be pr	ovided to applicant	s during e	xamination:	None	
Learning Objective (As availa	ble): OT-3036-006	-B33 Obji	Ę		
Question Source:	Bank # Modified Bank # New	X	(Note o	changes or a	ittach parent)
Question History:	Previous NRC E Previous Quiz /				
Question Cognitive Level:	Memory or Funda Comprehension			_X_(C)	
10 CFR Part 55 Content:	55.41X 55.43				
Comments (Why is it an uppe operation with a FCV runback	r level question): R in effect.	equires st	udent to com	prehend the	FCV circuitry

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QUESTION 106

The plant has scrammed due to a loss of off-site power. HPCS and RCIC did not start. When RPV water level reached Level 1, the Control Room Operator reports that the ADS 105-second time delay logic timer is running.

The Unit Supervisor directs the Control Room Operator to inhibit ADS per PEI-B13, RPV Control (Non-ATWS).

Later the Control Room Operator is directed to arm and depress <u>both</u> Manual Initiation pushbuttons for the ADS 'A' subsystem.

Which one of the following is the response of the ADS 'A' subsystem in this situation?

ADS 'A' subsystem will initiate _____.

A. immediately, if any Division 1 low pressure ECCS subsystem pressure permissive is satisfied.
B. in 105 seconds, if any Division 1 low pressure ECCS subsystem pressure permissive is satisfied.
C. immediately, regardless of the Division 1 low pressure ECCS subsystem status.
D. in 105 seconds, regardless of the Division 1 low pressure ECCS subsystem status.

ANSWER: A

		Level:		RO	SR
		Tier #		2	
Examination Outline C	ross-Reference	Group	#	1	
		K/A#		218000	K4 02
			ance Rating	3.8	1.02
Proposed Question: S	see attached				
Proposed Answer: Se Explanation (Why the distra					
B / D – the RPV level and PBs.	•	uirements	are bypassed	by the Manu	ial Initia
C – A Division 2 low press	ure ECCS pump mus	t be runnin	g.		
Technical Reference(s): S[
			Reference A	ttached:	<u>_X</u>
	······	te during o	(Attach if not	previously p	
Proposed references to be Learning Objective (As ava	provided to applican		(Attach if not kamination: No	previously p	
Proposed references to be	provided to applican	-B21C Ob	(Attach if not camination: No	previously p	provideo
Proposed references to be Learning Objective (As ava	provided to applican ilable): OT-3036-002 Bank # Modified Bank #	-B21C Ob	(Attach if not camination: No	previously province	provideo
Proposed references to be Learning Objective (As ava Question Source:	provided to applican ilable): OT-3036-002 Bank # Modified Bank # New Previous NRC E	-B21C Ob	(Attach if not kamination: No j E (Note ch	previously province	provideo

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QUESTION 107

Which one of the following steam loads is supplied steam from the pressure/flow equalizer manifold upstream of the Main Turbine Stop and Control Valves?

- A. Extraction Steam Hot Water Heat Exchanger
- B. Reactor Feed Pump Turbines
- C. Reactor Core Isolation Cooling (RCIC) Turbine
- D. Main Turbine Sealing Steam

ANSWER: B

		Level: Tier #		RO	SRO
Examination Outline Cr	oss Doforman	Group #	<u> </u>	2	
xammation Outline Cr	uss-neierence	K/A#		239001	K1 22
			ce Rating	3.1	
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A – Steam supplied from 9th	stage extraction s	team.			
C – Steam supplied from MS	•		MSIV A.		
D – Steam supplied from Ste					
Fechnical Reference(s): SD Proposed references to be p			Reference A Attach if not	t previously	
earning Objective (As avail	able): OT-3036-00	5-B21/N11(Dbj B		
Question Source:	Bank # Modified Bank New	#		hanges or a	attach parent)
Question History:	Previous NRC I Previous Quiz /		002		
Question Cognitive Level:	Memory or Fund Comprehension		wledge _	_X	·
10 CFR Part 55 Content:	55.41X 55.43				
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QUESTION 108

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Which one of the following describes the operation of the Static Transfer Switch associated with the ATWS UPS Inverter?

- A. The Static Transfer Switch will shift to the alternate (AC) source on an over-current condition and will automatically shift back to the Inverter when the inverter fault has cleared.
- B. The Static Transfer Switch will shift to the alternate (AC) source on an over-voltage condition and will automatically shift back to the Inverter when the inverter fault has cleared.
- C. The Static Transfer Switch will shift to the alternate (AC) source on an over-current condition and will <u>not</u> automatically shift back to the Inverter when the inverter fault has cleared.
- D. The Static Transfer Switch will shift to the alternate (AC) source on an under-voltage condition and will <u>not</u> automatically shift back to the Inverter when the inverter fault has cleared.

ANSWER: A

		Level:	·····	RO	SRO
		Tier #		2	
Examination Outline Cro	oss-Reference	Group	#	2	
		K/A#		262002	K6.03
		Importa	ance Rating	2.7	
Proposed Question: Se Proposed Answer: See Explanation (Why the distrac B – The STS will not switch o C / D – The STS will automat	attached tors are incorrect): on an over-voltage o	condition.			ared.
Technical Reference(s): SDI	M-R14/R15		Reference At (Attach if not		
Proposed references to be pr	ovided to applicant	ts during e	xamination: No	one	
Learning Objective (As availa	able): OT-3036-002	2-R14/15	Obj D		
Question Source:	Bank # Modified Bank # New	ŧ	(Note ch	nanges or al	ttach parent)
Question History:	Previous NRC E Previous Quiz /		·		
Question Cognitive Level:	Memory or Fund Comprehension			_X	····
10 CFR Part 55 Content:	55.41X 55.43		•		
Comments (Why is it an uppe	er level question): N	I/A			

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QUESTION 109

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A Precaution and Limitation in SOI-N64/62, Off-Gas/Condenser Air Removal System, states, "In the event of a loss of dilution steam from SJAE's, initiate an air purge through the operating preheater/recombiner side for at least one hour".

Which one of the following statements is the bases for this Precaution and Limitation?

- A. To prevent damage to the Holdup Line loop seal level indicators due to a rapid change in pressure.
- B. To prevent a hydrogen explosion hazard internal to the system.
- C. To maintain the recombiner inlet temperature below 300 degrees F.
- D. To prevent reverse flow through the recombiners that could result in the introduction of catalyst pellets, fines, or particles into the upstream portion of the system.

ANSWER: B

	•	Level:		RO	SRO
		Tier #		. 2	
Examination Outline C	ross-Reference	Group	<u>#</u>	2	
		K/A#		271000	<u>K6.08</u>
			ance Rating	2.9	
Proposed Question: S					
Proposed Answer: See	e attached		· · · · · · · · · · · · · · · · · · ·		
Explanation (Why the distra	ctors are incorrect):		2		
A – This bases pertains to t	he Precaution which	deals with	openina th	e loop seal fill	valves
C – This is a Precaution wh					
					•
D – An air purge does preve	ent reverse air flow b	out it is not	the bases to	or this Precaul	tion.
Technical Reference(s): S(DI-N64/62		Reference	Attached:	X
	01-110-7/02				
				not previously	provided)
Proposed references to be	provided to applicant	ts during e	xamination:	None	
· · · · · · · · · · · · · · · · · · ·					
Learning Objective (As avai	ilable): OT-3036-003	3-N62 Obj	F		
Learning Objective (As avai	· · · · · · · · · · · · · · · · · · ·			······································	
	Bank #	3	604_	changes or a	ttach parent
	· · · · · · · · · · · · · · · · · · ·	3	604_	changes or a	ttach parent
Question Source:	Bank # Modified Bank # New	#3	604_	changes or a	ttach parent
Question Source:	Bank # Modified Bank # New Previous NRC E	43	604(Note	changes or a	ttach paren
Question Source:	Bank # Modified Bank # New	43	604_	changes or a	ttach paren
Question Source: Question History:	Bank # Modified Bank # New Previous NRC E	#3 #3 Exam Test _99 amental K	04_ (Note	e changes or a	ttach parent
Learning Objective (As avai Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund	#3 #3 Exam Test _99 amental K	04_ (Note		ttach parent
Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	tamental K	04_ (Note		ttach parent
Question Source: Question History: Question Cognitive Level:	Bank # Modified Bank # New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	tamental K	04_ (Note		ttach parent

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QUESTION 110

Control Room HVAC Train 'A' (M25/26) is operating in the Emergency Recirculation mode. A Non-Licensed Operator reports smoke coming from the 'A' Emergency Recirculation Charcoal Filter Plenum and the plenum is glowing red.

Which one of the following describes the method to combat a fire in the 'A' Emergency Recirculation Charcoal Filter Plenum?

- A. The Fire Protection System will automatically initiate the charcoal filter deluge system and fill the charcoal filter plenum with water.
- B. The Fire Protection System will automatically initiate the charcoal filter preaction system and fill the charcoal filter plenum with water.
- C. The Control Room Operator arms and depresses CONT RM EMG RCIRC A CHAR FLTR DELUGE pushbutton (P54-F3180) to manually initiate the charcoal filter deluge system and fill the charcoal filter plenum with water.
- D. The Fire Protection System is manually valved into the deluge system locally, and then the deluge system manual initiation valve is opened locally to fill the charcoal filter plenum with water.

ANSWER: D

		Level:		· · •	RO	SRO
		Tier #			2	
Examination Outline Cr	oss-Reference	Group	#		2	
		K/A#			286000 A	3.04
		Importa	ance Rati	ing	3.2	
Proposed Question: Se	ee attached					
Proposed Answer: See	e attached					
Explanation (Why the distrac	ctors are incorrect):					
A / B – The deluge system f			no autom	natic initi	ation fest	Iro
C – Use of the Control Roor						
Technical Reference(s): SD	DM-P54(WTR), SOI	<u>-</u>	Referer	nce Atta	ched:	X
Technical Reference(s): SD P54(WTR) Proposed references to be p			(Attach	if not pr	eviously p	
P54(WTR)	provided to applican	its during e	(Attach xaminatio	if not pro	eviously p	
P54(WTR) Proposed references to be p Learning Objective (As avail	provided to applican	ts during e 5-P54(WTI	(Attach xamination R) Obj C	if not pro on: Nor & E	eviously p	
P54(WTR) Proposed references to be p Learning Objective (As avail	brovided to applican lable): OT-3036-00 Bank <i>#</i> Modified Bank ;	ts during e 5-P54(WTI # Exam	(Attach xamination R) Obj C	if not pro on: Nor & E	eviously p	 provided)
P54(WTR) Proposed references to be p Learning Objective (As avail Question Source:	provided to applican lable): OT-3036-00 Bank # Modified Bank ; New Previous NRC I	ts during e 5-P54(WTI #	(Attach xamination R) Obj C	if not pro on: Nor & E lote char	eviously p	 provided)

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QUESTION 111

The plant was operating at 45% reactor power when a transient on the First Energy grid caused a fast closure of the Turbine Control Valves for the Perry Main Turbine. The Feedwater Level Control System maintained reactor water level within 10 inches of normal level. Reactor pressure increased slightly but was maintained by the Turbine Bypass Valves.

Which one of the following describes the current plant conditions for this event?

- A. The reactor scrammed and the Reactor Recirculation Pumps tripped off.
 B. The reactor scrammed and the Reactor Recirculation Pumps
- B. The reactor scrammed and the Reactor Recirculation Pumps downshifted to slow speed.
- C. The reactor remained at power with a reduced power due to a Reactor Recirculation flow control valve runback.
- D. The reactor remained at power with a reduced power due to a Reactor Recirculation Pump downshift to slow speed.

ANSWER: B

		Level:		RO	SR
	~ ^	Tier #	ш	2	
xamination Outline Cross-l	Reference	Group	#	2	1/5 05
		K/A#		202001	<u>K5.05</u>
		Importa	ance Rating	3.5	
Proposed Question: See at	tached				
Proposed Answer: See atta	ached			•	
Explanation (Why the distractors			•		
A – The RR Pumps downshift to a	slow, they do	o not trip off.			
C / D – The reactor scrammed be bypassed).	cause react	or power was	s greater than	40% (EOC	-RPT w
уразосиј.					
			1		
Technical Reference(s): SDM-C7	1, SDM-B3	3	Reference A	ttached: _	_X
			(Attach if not	t previously	provid
Proposed references to be provid	ed to applic	ants during e	xamination: N	one	
Learning Objective (As available)	: OT-3036-(006-B33 Obj	j E, OT-3036-	005-C71 C	bj F
Question Source: E	ank #				
	And # Iodified Ban	k#	(Note c	hanges or a	attach
N	lew	`	×		• •
	revious NR				
. F	Previous Qui	z/lest	· · · · · · · · · · · · · · · · · · ·		
		indamental k	(nowledge _		
C	omprehensi	on or Analysi	IS .	X_(C)_	
	5.41 <u>X</u>	_			
	5.41X_ 5.43	-			
55 Comments (Why is it an upper le	vel question): Requires th	ne student to a	inalyze the	initial
55	vel question): Requires th	ne student to a	inalyze the	initial

QUESTION 112

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A HIGH alarm is received on the Gaseous channel of the Drywell Atmosphere Airborne Radiation Monitor, D17-K670.

Which one of the following conditions will occur?

А.	The Containment Evacuation Alarm will activate.
В.	The Plant Emergency Alarm will activate.
С.	The COMB GAS DW PURGE INBD (M51-F090) and COMB GAS DW PURGE OTBD (M51-F110) valves will isolate (if they are open).
D.	The DW PURGE SUPP TRN A FIRST ISOL DAMPER (M14-F055A) and DW PURGE SUPP TRN A SECOND ISOL DAMPER (M14-F055B) will isolate (if they are open).

ANSWER: C

Examination Outline Cross-Reference Iter # 2 K/A# 288000 K1.05 Importance Rating 3.3 Proposed Question: See attached Explanation (Why the distractors are incorrect): A - The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B - ABRM do not activate the Plant Emergency alarm. D - The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X (Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank #647 (Note changes or attach parent) New New			Level:		RO	SRO
K/A# 288000 K1 05 Importance Rating 3.3 Proposed Question: See attached Explanation (Why the distractors are incorrect): A - The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B - ABRM do not activate the Plant Emergency alarm. D - The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X						
Importance Rating 3.3 Proposed Question: See attached Explanation (Why the distractors are incorrect): A – The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B – ABRM do not activate the Plant Emergency alarm. D – The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X	Examination Outline Cr	oss-Reference		¥		
Proposed Question: See attached Proposed Answer: See attached Explanation (Why the distractors are incorrect): A - The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B - ABRM do not activate the Plant Emergency alarm. D - The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X						<u>K1.05</u>
Explanation (Why the distractors are incorrect): A – The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B – ABRM do not activate the Plant Emergency alarm. D – The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X (Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank #647 (Note changes or attach parent) New Question History: Previous NRC Exam99-006 Question Cognitive Level: Memory or Fundamental KnowledgeX 10 CFR Part 55 Content: 55.41X	Proposed Question: Se	e attached				
A - The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B - ABRM do not activate the Plant Emergency alarm. D - The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X (Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank #647 (Note changes or attach parent) New Question History: Previous NRC Exam 99-006 Question Cognitive Level: Memory or Fundamental KnowledgeX 10 CFR Part 55 Content: 55.41X	Proposed Answer: See	attached			<u> </u>	
A - The Containment Atmosphere ABRM (K680) will activate the Containment Evacuation alarm. B - ABRM do not activate the Plant Emergency alarm. D - The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X (Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank #647 (Note changes or attach parent) New Question History: Previous NRC Exam 99-006 Question Cognitive Level: Memory or Fundamental KnowledgeX 10 CFR Part 55 Content: 55.41X	Explanation (Why the distrac	tors are incorrect).				
B – ABRM do not activate the Plant Emergency alarm. D – The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X				to the Contr	vinmont Evo	austion alorm
D - The Containment Ventilation Exhaust PRM will cause the M14 dampers to isolate Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X						cuation aldini.
Technical Reference(s): SDM-D17)ABRM), SDM-M51 Reference Attached:X						
(Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank # Modified Bank #	D – The Containment Ventila	ation Exhaust PRM	will cause	the M14 dam	npers to isola	ate
(Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank # Modified Bank #						
(Attach if not previously provided) Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank # Modified Bank #	Technical Reference(s): SDI		M_M51	Reference	Attached:	
Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank # 647 Modified Bank # 647 (Note changes or attach parent) New Previous NRC Exam	rechnical Reference(s). SDI	$v_{P} \to P_{P} A D E W_{P}, D E$			_	
Learning Objective (As available): OT-3036-005-M51 Obj B, OT-3036-D17 Obj F Question Source: Bank #647 Modified Bank #0etrice (Note changes or attach parent) New (Note changes or attach parent) Question History: Previous NRC Exam Previous Quiz / Test99-006 Question Cognitive Level: Memory or Fundamental KnowledgeX 10 CFR Part 55 Content: 55.41X				I LATTACH IT DO		/ nrovided)
Question Source: Bank # 647 (Note changes or attach parent) Question History: Previous NRC Exam	· · · · · · · · · · · · · · · · · · ·					provided)
Question Source: Bank # 647 (Note changes or attach parent) Question History: Previous NRC Exam	Proposed references to be p	provided to applicar	nts during e			provided)
Question Source: Bank # 647 (Note changes or attach parent) Question History: Previous NRC Exam	Proposed references to be p	provided to applicar	nts during e			provided)
Modified Bank #	- 			xamination: I	None	
Previous Quiz / Test _99-006_ Question Cognitive Level: Memory or Fundamental KnowledgeX Comprehension or Analysis				xamination: I	None	
Previous Quiz / Test _99-006_ Question Cognitive Level: Memory or Fundamental KnowledgeX Comprehension or Analysis	Learning Objective (As avail	able): OT-3036-00 Bank # Modified Bank)5-M51 Obj _64	xamination: I j B, OT-3036	None 6-D17 Obj F	
Comprehension or Analysis 10 CFR Part 55 Content: 55.41X 55.43	Learning Objective (As avail Question Source:	able): OT-3036-00 Bank <i>#</i> Modified Bank New	05-M51 Obj 64 #	xamination: I j B, OT-3036	None 6-D17 Obj F	
Comprehension or Analysis 10 CFR Part 55 Content: 55.41X 55.43	Learning Objective (As avail Question Source:	able): OT-3036-00 Bank # Modified Bank New Previous NRC)5-M51 Obj # Exam	xamination: I j B, OT-3036 	None 6-D17 Obj F	
10 CFR Part 55 Content: 55.41X 55.43	Learning Objective (As avail Question Source:	able): OT-3036-00 Bank # Modified Bank New Previous NRC)5-M51 Obj # Exam	xamination: I j B, OT-3036 	None 6-D17 Obj F	
55.43	Learning Objective (As avail Question Source: Question History:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun)5-M51 Obj #64 Exam / Test _99 damental K	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
55.43	Learning Objective (As avail Question Source: Question History:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun)5-M51 Obj #64 Exam / Test _99 damental K	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
	Learning Objective (As avail Question Source: Question History:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun)5-M51 Obj #64 Exam / Test _99 damental K	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
Comments (Why is it an upper level question): N/A	Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_)5-M51 Obj #64 Exam / Test _99 damental K	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
	Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_)5-M51 Obj #64 Exam / Test _99 damental K	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
	Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	05-M51 Obj #64 Exam / Test _99 damental K n or Analysi	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
	Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	05-M51 Obj #64 Exam / Test _99 damental K n or Analysi	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
	Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	05-M51 Obj #64 Exam / Test _99 damental K n or Analysi	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	
	Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	able): OT-3036-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	05-M51 Obj #64 Exam / Test _99 damental K n or Analysi	xamination: I j B, OT-3036 	None 5-D17 Obj F changes or	2

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QUESTION 113

Hydrogen Igniters are designed to _____.

- A. burn hydrogen while it is at low concentrations and therefore limit the threat to containment integrity caused by low internal pressure.
- B. burn hydrogen while it is at low concentrations and therefore limit the threat to containment integrity caused by high internal pressure.
- C. cause a hydrogen deflagration in order to minimize the threat to containment integrity caused by high temperature.
- D. cause a hydrogen deflagration in order to minimize the threat to containment integrity due to vacuum breaker failure.

ANSWER:B

		Level:		RO	
		Tier#		1	
Examination Outline Cu	ross-Reference	Group	#	1	
		K/A#		500000	Ek
·	·	_ Import	ance Rating	3.3	
Proposed Answer: See					
Explanation (Why the distra-	ctors are incorrect):				
A - The risk to containment	is due to high intern	al (not low) pressure		
C / D The igniters are for a c					
e, e meigniers are for a c		a uchayiai			
Technical Reference(s): SE Document	,			Attached:	~``
Proposed references to be p	provided to applican	ts during e	(Attach if n		pr
Proposed references to be p Learning Objective (As avail			xamination: I	None	
		S-10 Obj C	xamination: 1	None	в
Learning Objective (As avail	lable): OT-3402-006 Bank # Modified Bank ;	8-10 Obj C #	xamination: 1	None 104-M56 Obj	в
Learning Objective (As avail Question Source:	lable): OT-3402-006 Bank # Modified Bank i New Previous NRC E	S-10 Obj C # Exam Test Jamental K	xamination: 1	None 104-M56 Obj	в
Learning Objective (As avail Question Source: Question History:	lable): OT-3402-006 Bank # Modified Bank a New Previous NRC E Previous Quiz / Memory or Fund	S-10 Obj C # Exam Test Jamental K	xamination: 1	None 104-M56 Obj changes or a	в
Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	lable): OT-3402-006 Bank # Modified Bank a New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	5-10 Obj C # Exam Test damental K or Analysi	xamination: 1	None 104-M56 Obj changes or a	в

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QUESTION 114

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Which one of the following inclusive combinations of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning defines the MODE known as 'Cold Shutdown'?

- A. The mode switch is in REFUEL, average reactor coolant temperature is 198 °F, and all reactor vessel head closure bolts are fully tensioned.
- B. The mode switch is in SHUTDOWN, average reactor coolant temperature is 198 °F, and all reactor vessel head closure bolts are fully tensioned.
- C. The mode switch is in SHUTDOWN, average reactor coolant temperature is 198 °F, and some reactor vessel head closure bolts are not fully tensioned.
- D. The mode switch is in SHUTDOWN, average reactor coolant temperature is 208 °F, and all reactor vessel head closure bolts are fully tensioned.

ANSWER: B

Question History: Pre Pre Question Cognitive Level: Mer	hed hed e incorrect): JEL. bolts must be grees (this is	e fully tens definition s during e	sioned (of Hot s (Attac examina	this is de Shutdowr ence Atta h if not p	n). ached: reviously p	Refuel).
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Learning Objective (As available): Question Source: Ba Mo Ne Question History: Pre Pre Question Cognitive Level: Mer	I to applicants	_		tion: Non	e	
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QUESTION 115

You are the Licensed Operator 'At the Controls'. You have requested to be temporarily relieved by another licensed operator for a short break. Since assuming the shift, the following items have started, are in progress, or have been completed:

- 1. The Operations Manager took a ¹/₂ PA Day to play golf.
- 2. Surveillance testing of APRM 'D' is in progress by I&C.
- 3. Reactor power was decreased 5% due to System Dispatcher request.
- 4. The ROD DRIFT annunciator is alarming spuriously and I&C has been notified.
- 5. Preparations for Division 1 Diesel Generator monthly surveillance testing may start next shift.

Which of the above item(s) are REQUIRED to be discussed with the other licensed operator before you can be temporarily relieved?

The correct answer must list all REQUIRED items; a partial list will be incorrect.

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and 5

D. 1, 2, 3, 4, and 5

ANSWER: B

		Level:		RO	5
		Tier #		3	
Examination Outline Cr	ross-Reference	Group	#	Cat 1	
		K/A#		GEN 2.1	.2
			tance Rating	3.0	
Proposed Question: Se	ee attached				
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Proposed Answer: See	e attached				
Explanation (Why the distrac	ctors are incorrect):			· · · · · · · · · · · · · · · · · · ·	
	,	ft alarm	unt ha diase		
A – Does not contain all requ				ssea also).	
C – Div 1 DG preps which m	nay start is not requi	red to be (discussed		
D - OPS Manager and Div 1	DO				
D - OPS Manager and Div 1	DG preps which m	ay start is	not required	to be discusse	ed
	DG preps which m	ay start is	not required	to be discusse	∋d
		ay start is			
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Technical Reference(s): PAI	P-0126		Reference (Attach if n	Attached:	_X_
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QUESTION 116

A surveillance test that will cause the system to become inoperable is scheduled to be performed. Unless otherwise noted in the surveillance test, the system is considered to be inoperable when the ______.

А.	the Supervising Operator signs the "Authorization to Start The Test" block on the Data Package Cover Sheet.
В.	the Unit Supervisor signs the "Authorization to Start the Prerequisites" block on the Data Package Cover Sheet.
C.	the Lead Test Performer annotates the start date/time in the Test Tracking Log.

D. the first surveillance step is actually performed which will make the system inoperable, such as installing a jumper or turning a switch.

ANSWER: B

		Level:		RO	
		Tier #		3	
Examination Outline Cr	oss-Reference	Group #	4	Cat 2	
		K/A#		GEN 2.2	.12
	· · · · · · · · · · · · · · · · · · ·	Importa	nce Rating	3.0	
Proposed Question: Se	ee attached				
Proposed Answer: See	attached				
•	·····				
Explanation (Why the distrac	ctors are incorrect):				
A / C / D – The system is co		erable whe	n the Control	Room Unit S	Supervisor
gives permission to start the	Pre-req's.				
			Deference	ttachad	v
Technical Reference(s) DA	P_1105		I Reterence o		•
Technical Reference(s): PA	\P-1105		Reference A		
Technical Reference(s): PA	\P-1105		(Attach if not		
		nts during e	(Attach if not	t previously	
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Proposed references to be p Learning Objective (As avail Question Source: Question History:	provided to applicar lable): OT-3039-00 Bank # Modified Bank New Previous NRC	98-03 Obj A # Exam / Test damental K	(Attach if noi xamination: N	t previously one hanges or a	provided)
Proposed references to be p Learning Objective (As avail Question Source:	provided to applicar lable): OT-3039-00 Bank # Modified Bank New Previous NRC Previous Quiz	98-03 Obj A # Exam / Test damental K	(Attach if noi xamination: N	t previously one hanges or a	provided)
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	provided to applicar lable): OT-3039-00 Bank # Modified Bank New Previous NRC Previous Quiz	98-03 Obj A # Exam / Test damental K	(Attach if noi xamination: N	t previously one hanges or a	provided)
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level:	provided to applicar lable): OT-3039-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior	98-03 Obj A # Exam / Test damental K	(Attach if noi xamination: N	t previously one hanges or a	provided)
Proposed references to be p Learning Objective (As avail Question Source: Question History: Question Cognitive Level: 10 CFR Part 55 Content:	provided to applicar lable): OT-3039-00 Bank # Modified Bank New Previous NRC Previous Quiz Memory or Fun Comprehensior 55.41X_ 55.43	98-03 Obj A # Exam / Test damental K n or Analysia	(Attach if noi xamination: N	t previously one hanges or a	provided)
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QUESTION 117

In accordance with IOI-9, Refueling, which one of the following statements best describes the reason that personnel performing Core Alterations shall maintain direct communications with the Control Room?

A. Core Alterations are considered to be a change in core reactivity that requires the knowledge and consent of the Operator at the Controls.
B. Core Alterations are considered to be a special infrequently performed tests or evolutions (IPTEs) that require constant communication with the Control Room.
C. To allow the Operator at the Controls to monitor for inadvertent criticality and inform the Refuel Floor of such event.
D. To allow the on-shift Shift Technical Advisor (STA) to perform a shutdown margin check required during Core Alterations.

ANSWER: C

Examination Outline	Cross-Reference	Level: Tier # Group # K/A#	RO 3 Cat 2 GEN 2.2.2	SRO
Proposed Question:	See attached	Importance Rat	ting 2.5	Ľ
Proposed Answer: S				
Explanation (Why the dis	tractors are incorrect):			
A – SRO authorizes the p B – Core Alts are not defi	performance of Core Alts	s, not the Operator	at the Controls.	
D – SDM check is not a C				
Technical Reference(a): //		í		
Technical Reference(s): IC SOI-F15, PAP-0802	DI-9, ORM 6.2.3, SOI-F		ce Attached:X_	
Proposed references to be	Provided to applicants	(Attach in	f not previously prov	ided)
	provided to applicants	during examination	n: None	
	·····			
Learning Objective (As ava 003-F11/15 Obj N	ailable): OT-3037-000-10	6 Obj E, OT-3039	-007-01 Obj C, SY	S-5014-
Question Source:	Bank #			
	Modified Bank # New	(Not	e changes or attach	parent)
Question History:				
and the cory.	Previous NRC Exa Previous Quiz / Te	m st		
Question Cognitive Level:				
energian cognitive revel:	Memory or Fundam Comprehension or J	ental Knowledge Analvsis	X	
		, 		
0 CFR Part 55 Content:	55.41 <u>X</u>			
	00.40			

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QUESTION 118

Given the following plant conditions:

- Reactor power is 50%
- <u>All</u> Turbine Bypass valves fail open
- The MSIVs fail to automatically close
- The MSIVs are manually closed

Prior to MSIV closure, which one of the following combinations of reactor power and reactor pressure would indicate that a Safety Limit violation had occurred?

	Reactor Power	Reactor Pressure
A.	35%	810 psig
B.	30%	775 psig
C.	20%	770 psig
D.	10%	750 psig

ANSWER: B

		Level:		RO	SRO
		Tier #		3	
Examination Outline Cro	oss-Reference	Group K/A#	#	Cat 2	
_			ance Rating	GEN 2.2 3.4	. <u>22</u>
Proposed Question: Se	o attached				_
r roposed Question. De	e allacheu				•
Proposed Answer: See	attached				
Explanation (Why the distract	ors are incorrect):		······································		
A / C / D – The Safety Limit is		or power is	greater than 2	3.8% and m	Pactor
pressure is less than 785 psig	g. The Safety Limit	for each d	stractor is me	t.	
Technical Reference(s): Tech	Specs-Safety Lim	its	Reference Att	ached:	X
			(Attach if not		
Proposed references to be pr	ovided to applicant	s during e			.011404)
		o duning c			
Learning Objective (As availa	ble): OT-3037-007	'-03 Obj A	& C		
Question Source:	Bank #				
· · ·	Modified Bank #		(Note ch	anges or att	ach parent)
	New	X			-
Question History:	Previous NRC E	xam			
-	Previous Quiz /				
		<u>.</u>			
Question Cognitive Level:	Memory or Fund			X	
	Comprehension	or Analysis	·	<u></u>	
10 CFR Part 55 Content:	55.41 _X_			<u> </u>	
	55.43				
Commonto (14/buile it -		1.			·
Comments (Why is it an uppe	r level question): N	/A			

QUESTION 119

Plant startup is in progress at 5% reactor power.

Which one of the following describes the allowable mode of operation <u>and bases</u> for operation of the Containment Vessel and Drywell Purge System (M14)?

A. Refuel mode in order to reduce airborne activity in Containment during RCIC operation.
B. Single Train Drywell Ventilation mode in order to reduce Drywell average air temperature due to steam leaks.
C. Intermittent mode during backwash of RWCU Filter Demineralizer 'A' in order to minimize off-site radiation doses.
D. Intermittent mode during the time that RWCU Filter Demineralizer 'A' is in Hold due to leaks in the RWCU F/D System.

ANSWER: D

Modified Bank #			Level:		RO	SRO
K/A# GEN 2.3.9 Importance Rating 2.5 oposed Question: See attached oposed Answer: See attached rplanation (Why the distractors are incorrect): - Refuel mode operation not allowed in Modes 1, 2, and 3. - Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. - CVDWP should not be run during G36 FD backwashing in order to minimize off-site dose chnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X (Attach if not previously provided) oposed references to be provided to applicants during examination: None arming Objective (As available): OT-3036-003-M14 Obj D, D, G, and I restion Source: Bank # Modified Bank #						
K/A# GEN 2.3.9 Importance Rating 2.5 roposed Question: See attached roposed Answer: See attached planation (Why the distractors are incorrect): - Refuel mode operation not allowed in Modes 1, 2, and 3. - Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. - CVDWP should not be run during G36 FD backwashing in order to minimize off-site dose achnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X (Attach if not previously provided) oposed references to be provided to applicants during examination: None arming Objective (As available): OT-3036-003-M14 Obj D, D, G, and I restion Source: Bank # Modified Bank # Modified Bank # Previous Quiz / Test restion Cognitive Level: Memory or Fundamental KnowledgeX uestion Cognitive Level: Memory or Fundamental KnowledgeX CFR Part 55 Content: 55.41X	Examination Outline Cross-Re	ference		ŧ		
roposed Question: See attached roposed Answer: See attached planation (Why the distractors are incorrect): - Refuel mode operation not allowed in Modes 1, 2, and 3. - Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. - CVDWP should not be run during G36 FD backwashing in order to minimize off-site dose achnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X						<u> </u>
roposed Answer: See attached planation (Why the distractors are incorrect): - Refuel mode operation not allowed in Modes 1, 2, and 3. - Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. - CVDWP should not be run during G36 FD backwashing in order to minimize off-site dose Inchnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X			_ Importa	nce Rating	2.5	L
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planation (Why the distractors are incorrect): - Refuel mode operation not allowed in Modes 1, 2, and 3 Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3 CVDWP should not be run during G36 FD backwashing in order to minimize off-site dose chnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X						
Refuel mode operation not allowed in Modes 1, 2, and 3. Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. OVDWP should not be run during G36 FD backwashing in order to minimize off-site dose chnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X(Attach if not previously provided) oposed references to be provided to applicants during examination: None arming Objective (As available): OT-3036-003-M14 Obj D, D, G, and I restion Source: Bank #Modified Bank #(Note changes or attach parent) NewX (Note changes or attach parent) NewX restion History: Previous NRC Exam revious Quiz / Test restion Cognitive Level: Memory or Fundamental KnowledgeX Comprehension or Analysis CFR Part 55 Content: 55.41X51.43	Proposed Answer: See attacl	hed				
Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. OVDWP should not be run during G36 FD backwashing in order to minimize off-site dose dechnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X (Attach if not previously provided) oposed references to be provided to applicants during examination: None arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank # Modified Bank # (Note changes or attach parent) New uestion History: Previous NRC Exam uestion Cognitive Level: Memory or Fundamental KnowledgeX Comprehension or Analysis I CFR Part 55 Content: 55.41X	Explanation (Why the distractors are	e incorrect):				
Single Drywell Train Ventilation mode operation not allowed in Modes 1, 2, and 3. OVDWP should not be run during G36 FD backwashing in order to minimize off-site dose dechnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X (Attach if not previously provided) oposed references to be provided to applicants during examination: None arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank # Modified Bank # (Note changes or attach parent) New uestion History: Previous NRC Exam uestion Cognitive Level: Memory or Fundamental KnowledgeX Comprehension or Analysis I CFR Part 55 Content: 55.41X	A – Refuel mode operation not allow	ved in Mode	s 1, 2, and	3.		
- CVDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - cvDWP should not be run during G36 FD backwashing in order to minimize off-site dose - compression Source: - Compression or Analysis - compression or Analysis					e 1 2 and 2	
echnical Reference(s): SOI-M14, SOI-G33 Reference Attached:X		•				
(Attach if not previously provided) oposed references to be provided to applicants during examination: None arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank #	C – CVDWP should not be run durir	ng G36 FD b	backwashin	g in order to r	ninimize off-si	te dose
(Attach if not previously provided) oposed references to be provided to applicants during examination: None arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank #						
(Attach if not previously provided) oposed references to be provided to applicants during examination: None arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank #	Technical Reference(s): SOI-M14	SOI-G33		Reference A	ttached X	
oposed references to be provided to applicants during examination: None arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank #						
arning Objective (As available): OT-3036-003-M14 Obj D, D, G, and I uestion Source: Bank #						uvided)
Juestion Source: Bank #	Proposed references to be provided	l to applican	ts during e	amination: N	one	
Juestion Source: Bank #						
Juestion Source: Bank #						
Modified Bank #	Learning Objective (As available): (DT-3036-00	3-M14 Obj	D, D, G, and		
New X Juestion History: Previous NRC Exam Previous Quiz / Test Juestion Cognitive Level: Memory or Fundamental Knowledge Comprehension or Analysis In CFR Part 55 Content: 55.41 55.43	Question Source: Ban	ik #				
Juestion History: Previous NRC Exam Previous Quiz / Test	Mod		#	(Note c	hanges or atta	ich parent)
Previous Quiz / Test		v	_>			
Previous Quiz / Test	Nev					
Comprehension or Analysis CFR Part 55 Content: 55.41X 55.43		vious NRC E	Exam			
Comprehension or Analysis CFR Part 55 Content: 55.41X 55.43	Question History: Prev					
Comprehension or Analysis CFR Part 55 Content: 55.41X 55.43	Question History: Prev					
55.43	Question History: Prev Prev	vious Quiz /	Test	nowledge	_x_	
55.43	Question History: Prev Prev Question Cognitive Level: Men	vious Quiz / nory or Func	Test Jamental K		_X	
	Question History: Prev Prev Question Cognitive Level: Men	vious Quiz / nory or Func	Test Jamental K		_X	
omments (Why is it an upper level question): N/A	Question History: Prevent Prevent Prevent Question Cognitive Level: Menne Communication Content: 10 CFR Part 55 Content: 55.4	vious Quiz / nory or Func prehension 1X	Test Jamental K		_X	
omments (Why is it an upper level question): N/A	Question History: Prevent Prevent Prevent Question Cognitive Level: Menne Communication Content: 10 CFR Part 55 Content: 55.4	vious Quiz / nory or Func prehension 1X	Test Jamental K		_X	
	Question History:Prevent PreventQuestion Cognitive Level:Ment Corr10 CFR Part 55 Content:55.4 55.43	vious Quiz / nory or Func prehension 1X 3	Test Jamental K or Analysis		_X	
	Question History:Prevent PreventQuestion Cognitive Level:Ment Corr10 CFR Part 55 Content:55.4 55.43	vious Quiz / nory or Func prehension 1X 3	Test Jamental K or Analysis		_X	
	Question History:Prevent PreventQuestion Cognitive Level:Ment Corr10 CFR Part 55 Content:55.4 55.43	vious Quiz / nory or Func prehension 1X 3	Test Jamental K or Analysis		_X	
	Question History:Prevent PreventQuestion Cognitive Level:Ment Corr10 CFR Part 55 Content:55.4 55.43	vious Quiz / nory or Func prehension 1X 3	Test Jamental K or Analysis		_X	

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QUESTION 120

Jim Noname, age 37, is a radiation worker at Perry. He has no exposure from any other nuclear facility. Jim's current year-to-date (YTD) radiation exposure (TEDE) is 500 millirem and his lifetime radiation exposure is 15 Rem.

How much more radiation exposure can Jim receive this year before an Increased Dose Control Level Authorization is required?

А.	500 millirem
В.	1500 millirem
C.	3500 millirem
D.	4500 millirem

ANSWER: A

				_	
		Tier #	2. sinesi	3	
Examination Outline Creation	oss-Reference	Group	<u> </u>	Cat 3	
		K/A#		GEN 2.3	<u>3.1</u>
		Importa	ince Rating	2.6	<u> </u>
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
B / C / D – the initial Dose Co exceed this initial DCL and th Control Level would need to	herefore, would not l				
Technical Reference(s): HP	I-B0003		Reference A	ttached:	_x
Technical Reference(s): HP Proposed references to be p		s during e	(Attach if not	t previously	
	able): OT-3039-007 Bank # Modified Bank #	2-01 Obj A	(Attach if not xamination: N	t previously Ione	provided)
Proposed references to be p Learning Objective (As availa	able): OT-3039-007	7-01 Obj / 40 	(Attach if not xamination: N A, B, and C	t previously Ione	provided)
Proposed references to be p Learning Objective (As availa Question Source:	able): OT-3039-007 Bank # Modified Bank # New Previous NRC E	7-01 Obj / 40 	(Attach if not xamination: N A, B, and C 5 (Note c 	t previously Ione	provided)

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QUESTION 121

The plant is operating at 100% reactor power when a piping elbow on the common discharge of the Turbine Building Closed Cooling (TBCC) pumps ruptures. The TBCC SURGE TANK LEVEL LOW alarm is locked in. TBCC Pump discharge pressure indications on panel H13-P870 are extremely low.

Which one of the following describes the immediate operator action(s) to be performed?

- A. Perform a fast reactor shutdown and transfer the Reactor Recirculation Pumps to slow speed.
- B. Perform a fast reactor shutdown and trip the Reactor Recirculation Pumps to OFF.
- C. Restore TBCC surge tank level by manually opening Two Bed M/U Wtr Cont Vlv Bypass Vlv, P44-F503 and reduce the TBCC heat load as soon as possible.
- D. Open TBCC HX SW TCV BYP, P41-F390 if failure of the TBCC heat exchanger outlet temperature control valve, P41-F003 is suspected.

ANSWER: A

		Level:		- F	20	SRO
		Tier #		3		
	D.f	Group #	1		Cat 4	
Examination Outline Cross	-Kelerence	K/A#			Gen 2.4.49	
			nce Rating		.0	I
Proposed Question: See a	attached					
Proposed Answer: See at	ttached					······································
Explanation (Why the distractor	s are incorrect):					
B – Recirc pumps are to be tran		speed. not	tripped off	F.		
• -					tank loval	
C – A fast reactor shutdown is						•
D – Incorrect ONI-P44 immedia	ate action, it is no	ot a temper	ature cont	rol prob	lem.	
Technical Reference(s): ONI-F	244		Reference	ce Attac	hed:X	
			(Attach i	f not pre	eviously pr	ovided)
Proposed references to be prov	vided to applicar	nts during e	xaminatio	n: None	9	
Learning Objective (As availab	le): OT-3036-00)2-P44 Obj	E			
Question Source:	Bank# Modified Bank New	# _42	22 (No	ote chan	iges or atta	ach parent)
Question History:	Previous NRC Previous Quiz		9-003_			
Question Cognitive Level:	Memory or Fun Comprehensior	damental k n or Analys	(nowledge is	, <u> </u>	(C)_	
10 CFR Part 55 Content:	55.41X 55.43					
Comments (Why is it an upper determine that a complete loss the ONI.	level question): s of TBCC exists	Requires s , and then	tudent to perform th	analyze e correc	plant con ct immedia	ditions, ate actions of

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QUESTION 122

The plant is operating at 100% reactor power when a complete loss of Instrument Air occurs.

Which one of the following describes the expected response for the following Feedwater System air-operated valves?

Α.	MFP Full Flow Control Valve (N27-F010) MFP Low Flow Control Valve (N27-F110) MFP and RFP Recirculation Flow Control Valves RFP Seal Injection Valves	Fails as-is Fails closed Fail open Fail open
B.	MFP Full Flow Control Valve (N27-F010) MFP Low Flow Control Valve (N27-F110) MFP and RFP Recirculation Flow Control Valves RFP Seal Injection Valves	Fails as-is Fails as-is Fail close Fail open
С.	MFP Full Flow Control Valve (N27-F010) MFP Low Flow Control Valve (N27-F110) MFP and RFP Recirculation Flow Control Valves RFP Seal Injection Valves	Fails as-is Fails as-is Fail close Fail as-is
D.	MFP Full Flow Control Valve (N27-F010) MFP Low Flow Control Valve (N27-F110) MFP and RFP Recirculation Flow Control Valves RFP Seal Injection Valves	Fails as-is Fails as-is Fail open Fail open

ANSWER: D

		Level:	•	RO	SRO
		Tier #		1	
Examination Outline Cros	ss-Reference	Group #	<u> </u>	2	
		K/A#	nce Rating	295019	<u>AA2.02</u>
······································			nce Rating	3.6	
Proposed Question: See Proposed Answer: See a					
Explanation (Why the distractor	ors are incorrect):				
A - MFP Low Flow Control Va	lve, N27-F110 fai	ils as-is			
B – MFP and RFP Recirculation	on Flow Control V	alves fail o	ben		
C - RFP Seal Injection Valves					
Technical Reference(s): ONI-F	P52		Reference	Attached:	_X
			(Attach if no	ot previously	provided)
Proposed references to be pro	vided to applican	nts durina e	amination: N	Vone	
,					
Learning Objective (As availab	ole): OT-3036-004	4-P51/52 C	bj G, OT-30	36-004-N27	Obj C & D
Question Source:	Bank #				
	Modified Bank	#	(Note	changes or a	ttach parent)
	New	×	·	-	- /
Question History:	Previous NRC I	Fyam			
Question mistory.	Previous Quiz /				
Question Cognitive Level:	Memory or Fund			X	
	Comprehension	or Analysis			
10 CFR Part 55 Content:	55.41X				
10 CFR Part 55 Content:	55.41 <u>X</u> 55.43 <u></u>				
	55.43		·····.		
10 CFR Part 55 Content: Comments (Why is it an upper	55.43	N/A			<u> </u>
	55.43	N/A			

QUESTION 123

During a reactor startup, a single notch control rod withdrawal reduced the reactor period to 45 seconds.

Which one of the following describes the operator action(s) to be taken?

A. Stop control rod withdrawal. Insert control rod(s) in the approved sequence, if necessary, to increase reactor period.
B. Stop control rod withdrawal. Insert cram rod(s), if necessary, to increase reactor period.
C. Control rod withdrawal can continue unless a reactor period of less than 30 seconds is observed.
D. Control rod withdrawal can continue if the reactor period is deemed to be spurious in nature

ANSWER: A

		Level:		RO	SRO
		Tier #		3	
Examination Outline Cr	oss-Reference	Group	#	Cat 4	
		K/A#		GEN 2.4	<u>10</u>
			nce Rating	3.0	l
Proposed Question: Se	ee attached				
Proposed Answer: See	attached				
Explanation (Why the distrat	ctors are incorrect):				
B – Cram rods are not the 'a 04.		. Cram rod	s are inserted	to notch po	sition 00 to
	only allowed during	antinue	o rod withdro	ual for ann	wood tooting
C / D- This shorter period is instructions and is obviously					
is in progress.	spunous in nature.	The quest	ion stem spec	mes mat a r	eactor stan
Technical Reference(s): AR	I-H13-P680-6 (B1)		Reference A	ttached:	_X
			(Attach if not	neviously	nrovided)
					provided)
Proposed references to be p	provided to applican	ts during e	xamination: N	one	
Learning Objective (As avail	able): OT-3036-00	4-C51(SRN	/I) Obj G		
Question Source:	Bank #	_12			
	Maalifiaal Dawley		/ 1 - 4		
	Modified Bank a	#		nanges or a	ttach parer
	New	#	(Note c	nanges or a	ttach paren
Question History:			(Note c.	nanges or a	ttach paren
Question History:	New	 Exam		nanges or a	ttach parer
Question History:	New Previous NRC E	 Exam	(Note c	nanges or a	ttach paren
	New Previous NRC E	Exam Test		nanges or a	ttach paren
Question History: Question Cognitive Level:	New Previous NRC E Previous Quiz /	Exam Test Jamental K	nowledge	nanges or a	ttach paren
	New Previous NRC E Previous Quiz / Memory or Fund	Exam Test Jamental K	nowledge		ttach paren
Question Cognitive Level:	New Previous NRC E Previous Quiz / Memory or Fund Comprehension	Exam Test Jamental K	nowledge		ttach paren
,	New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41 _X_	Exam Test Jamental K	nowledge		ttach parer
Question Cognitive Level:	New Previous NRC E Previous Quiz / Memory or Fund Comprehension	Exam Test Jamental K	nowledge		ttach parer
Question Cognitive Level:	New Previous NRC E Previous Quiz / Memory or Func Comprehension 55.41X_ 55.43	Exam Test Jamental K or Analysis	nowledge _	X_(C)_	
Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp recognize the SRM Short pe	New Previous NRC E Previous Quiz / Memory or Func Comprehension 55.41 55.43 rer level question): F priod alarm setpoint	Exam Test Jamental K or Analysis	nowledge	X_(C)_ /ze plant co	nditions,
Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp	New Previous NRC E Previous Quiz / Memory or Func Comprehension 55.41 55.43 rer level question): F priod alarm setpoint	Exam Test Jamental K or Analysis	nowledge	X_(C)_ /ze plant co	nditions,
Question Cognitive Level: 10 CFR Part 55 Content: Comments (Why is it an upp recognize the SRM Short pe	New Previous NRC E Previous Quiz / Memory or Func Comprehension 55.41 55.43 rer level question): F priod alarm setpoint	Exam Test Jamental K or Analysis	nowledge	X_(C)_ /ze plant co	nditions,

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QUESTION 124

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PEI-B13, RPV Control (ATWS) has been entered due to an ATWS with an MSIV isolation. The following plant conditions exist:

•	Reactor power	10%
٠	Reactor pressure	800 psig
٠	Reactor water level	+115 inches
٠	Suppression Pool temperature	113 °F
٠	Drywell pressure	1.1 psig
•	Number of SRVs open	2

Based on these plant conditions, which one of the following reactor water level bands is required by PEI-B13, RPV Control (ATWS) in order to lower reactor power?

А.	Restore and maintain reactor water level between +185 and +215 inches.
В.	Maintain reactor water level between -25 and $+215$ inches.
C.	Maintain reactor water level between -25 inches and +100 inches.
D.	Maintain reactor water level between -25 and $+25$ inches if reactor power dropped below 4% at a reactor water level of $+25$ inches.

ANSWER: D

		Level:		RO	SRO
		Tier #	a total	3	
Examination Outline Cro	oss-Reference	Group	¢	Cat 4	
		K/A#	nan Datina	GEN 2.4	4.6
			nce Rating	3.1	I
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A – This is the reactor water the reactor is shutdown.	level band specifie	d by PEI-B	13, RPV Con	trol (Non-AT	WS) when
B – This is the reactor water answer to the Override is NO			13, RPV Con	trol (ATWS)	when the
C - This is the reactor water I answer to the Override is NO			3, RPV Cont	rol (ATWS)	when the
Technical Reference(s): PEI-	B13, RPV Control	(ATWS),	Reference A	Attached: _	_X
PEI Bases Document			(Attach if no	t previously	provided)
Proposed references to be pr			xamination: N	lone	
	$\frac{1}{100}$				
Question Source:	Bank <i>⋕</i> Modified Bank <i>≢</i> New	#	(Note c	changes or a	attach parent
Question History:	Previous NRC E Previous Quiz /		·		
Question Cognitive Level:	Memory or Fund Comprehension			_X (A)	
10 CFR Part 55 Content:	55.41X 55.43				

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QUESTION 125

Which one of the following PEI Alternate Injection methods would require the Turbine Building to be accessible in order for plant operators to perform local actions?

- A. CRD Alternate Injection
- B. Condensate Transfer Alternate Injection
- C. Alternate Injection via the FPCC Header using a Hotwell Pump
- D. Alternate Injection via the FPCC Header using the SPCU Pump

ANSWER: C

		Level:	RO	SRO
		Tier #	3	
Examination Outline C	ross-Reference	Group #	Cat 4	
		K/A#	GEN 2.4	.35
······		Importance Rating	3.3	
Proposed Question: S	ee attached			
Proposed Answer: Se	e attached			
Explanation (Why the distra	actors are incorrect):			
A – All required local action		liata Bida		
B - All required local action	s are in the Auxiliary	Bldg		
D - All required local action	s are in the Intermed	iate and Auxiliary Bldgs		
		_		
		· · · · · · · · · · · · · · · · · · ·		
Technical Reference(s): PE	I-SPI 4.3	Reference A	Attached:	х
			t previously p	
Dropood references to be		•		
Proposed references to be	provided to applicant	is during examination: N	ione	
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Learning Objective (As avai	ilable): OT-3402-007	7-16 Obj D		
Question Source:	Bank #			
	Modified Bank #	t (Note c	hanges or at	ach narent)
			manges UI dt	aon parenty
	New	X	-	
		X `		
Question History:	New Previous NRC E	X :xam		
	New	X :xam		
	New Previous NRC E Previous Quiz /	X ixam Test amental Knowledge _	X	
Question History:	New Previous NRC E Previous Quiz / Memory or Fund	X ixam Test amental Knowledge _		
Question History: Question Cognitive Level: 10 CFR Part 55 Content:	New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	X Test amental Knowledge _ or Analysis		
Question History: Question Cognitive Level:	New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	X Test amental Knowledge _ or Analysis		
Question History: Question Cognitive Level: 10 CFR Part 55 Content:	New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	X Test amental Knowledge _ or Analysis		
Question History: Question Cognitive Level: 10 CFR Part 55 Content:	New Previous NRC E Previous Quiz / Memory or Fund Comprehension 55.41X_ 55.43	X Test amental Knowledge _ or Analysis		

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QUESTION 126

MCC-EF1A07, which supplies power to some RCIC components, has been lost. Shortly thereafter, a Loss of Coolant Accident (LOCA) occurred and RPV water level decreased below the RCIC initiation setpoint.

A step in PEI-B13, RPV Control (Non-ATWS) states: "Initiate <u>any</u> of the following which should have initiated: RCIC."

RCIC did <u>not</u> initiate.

Given these plant conditions, can the RCIC System be manually initiated from the Control Room?

- A. Yes; assuming all RCIC valves are in their normal standby lineup.
- B. Yes; all RCIC valves required to be open for RCIC to inject are DC powered.
- C. No; RCIC <u>cannot</u> be lined up for injection from the Control Room if the RCIC Turbine Steam Supply Valve, E51-F045, is closed.
- D. No; RCIC <u>cannot</u> be lined up for injection from the Control Room under any circumstances with a loss of AC power.

ANSWER: A

ů K	ier # Group # JA# mportanc	e Rating	217000	2 1 K6.01 3.5
i	(/A#			
		e Rating	217000	
	nportanc	<u>e kating</u>		3.5
ached				
ched		·		
are incorrect):				
lves (F063/F064) : iated.				
Control Room to	inject du	ring a los	s of AC when	the RCIC
1	1	Reference	Attached:	_x_
		Attach if	not previously	v provided)
,				
			<u></u>	
lodified Bank #	X_	(Note	e changes or	attach par
emory or Fundam omprehension or a	ental Kn Analysis	owledge	_X_(C)_	
	are incorrect): lves (F063/F064) iated. ply Valve (E51-F0 control Room to 1 ed to applicants d coT-3036-003-E ank # lodified Bank # lew revious NRC Example revious Quiz / Test lemory or Fundam omprehension or A	are incorrect): Ives (F063/F064) are AC-p iated. ply Valve (E51-F045) is DC Control Room to inject du 1 [ed to applicants during exa : OT-3036-003-E51 Obj E ank # Iodified Bank # revious NRC Exam Previous Quiz / Test lemory or Fundamental Kn omprehension or Analysis	are incorrect): Ives (F063/F064) are AC-powered v iated. ply Valve (E51-F045) is DC powered Control Room to inject during a loss Control Room to inject during a loss Reference (Attach if in red to applicants during examination: COT-3036-003-E51 Obj D ank # Iodified Bank # IewX revious NRC Exam Previous Quiz / Test lemory or Fundamental Knowledge omprehension or Analysis	are incorrect): Ives (F063/F064) are AC-powered valves and, if i iated. ply Valve (E51-F045) is DC powered and can be control Room to inject during a loss of AC when Control Room to inject during a loss of AC when Reference Attached: (Attach if not previously ed to applicants during examination: None COT-3036-003-E51 Obj D ank # COT-3036-003-E51 Obj D ank # COT-3036-003-E51 Obj D ank # Cot changes or Previous NRC Exam Previous Quiz / Test Cot c

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QUESTION 127

بقوليور الترسمان وا

The plant is in MODE 1. The Division 1 Diesel Generator is in Secured Status. The Division 2 and 3 Diesel Generators are in Standby Readiness.

The on-shift Fire Protection Technician reports the following information for CO₂ storage tank 0P54-A008 for the Diesel Generator Rooms:

- Tank pressure 300 psig
- Tank volume 2000 lbs

Which one of the following statements is correct concerning 0P54-A008?

PAP-1914, Attachment 4 is provided for reference.

- A. 0P54-A008 is OPERABLE because tank pressure and tank volume exceed the minimum requirements.
 B. 0P54-A008 is inoperable because tank volume is less than the minimum tank storage volume requirement.
- C. 0P54-A008 is inoperable because tank pressure is greater than the minimum tank storage pressure requirement.
- D. 0P54-A008 is <u>not</u> required to be OPERABLE because the Division 1 Diesel Generator is in Secured Status.

ANSWER: B

		Level:		RO	SRO
		Tier #			3
Examination Outline Cro	oss-Reference	Group	¥		Cat 4
Examination Outline Cre		K/A#		GEN 2.4.	.25
		Importa	nce Rating		3.7 3.4
Proposed Question: Se	e attached				
Proposed Answer: See	attached				
Explanation (Why the distrac	tors are incorrect):				
A – Tank volume does not ex	ceed the minimum	n tank store	d volume requ	irement of 2	600 lbs.
C – Tank pressure greater th therefore, an actual tank pres	an 275 psig is the ssure of 300 psig n	minimum ta neets the O	ank storage pro PERABILITY (essure requi criteria.	irement;
D – 0P54-A008 is required to OPERABLE.	be OPERABLE w	henever ar	ny diesel gener	ator is requi	ired to be
Technical Reference(s): PAP-1914, Attachment 4			Reference At	tached:	<u>x</u>
			(Attach if not previously provided)		
Proposed references to be p	rovided to applicar	nts during e	xamination: PA	\P-1914, Att	tachment 4
Learning Objective (As availa	able): OT-3039-008	8-03 Obj A	& E		
Question Source:	Bank# Modified Bank New	#		nanges or al	ttach parent)
Question History:	Previous NRC Previous Quiz				
Question Cognitive Level:	Memory or Fun Comprehensior			X_(A)	
10 CFR Part 55 Content:	55.41X 55.43X				
Comments (Why is it an upp decision using available infor	er level question): mation provided.	Requires s	tudent to make	an OPERA	BILITY

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