	Regulatory Commission Site-Specific tten Examination
	Applicant Information
Name:	Region: I
Date: 12/18/2006	Facility: Salem 1 & 2
License Level: RO	Reactor Type: W
Start Time:	Finish Time:
TE	Instructions
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Which of the fo	llowing cho	oices identi	fies the relation	nship betwee	en a Rx trip	and a Turb	oine trip?
A Turbine	trip will ON	LY cause a	a Rx trip if pow	er is < P-9.			
	the second s	بالمردد مادا معربا البذار ويعتعفه فسيتمعهم	rbine trip if Rx	and the second second of the second s	·9.		and the second states of the second states and the
						cafatios	n an
			se a Rx trip to				<u></u>
A Rx trip w	vill ALWAY	S cause a	Turbine trip to	prevent an u	incontrolled	d cooldown	of the RCS.
nswer d Exa	m Level R	Cognitive L	Memory		Salem 1 & 2	Exam Date	
ier: Emergency	and Abnorm	nal Plant Evo	lutions RO Gr	oup 1 SRO	Group 1	Record N	000007K103
	ctor Trip				- 41		
K1. Knowledge	e of the opera	tional implica	ations of the follow	ving concepts a	turbine ston	valve after a r	eactor 3.7 4
K1.03 Reasons	s for closing t	he main turbi	ne governor valve				
Answer inc wil		se a Rx trip A Rx trip. D is	ower level needs ALWAYS causes correct because	a furnine frin		ul uccause a	
			Referen	ce Title			
Rx Trip or Safety	Injection Bas	es Documen	t	n anter un un la lan brechen bankannachter ein der eine Antere		er vere die een die eerste die ee Geboord verste die eerste die eers	
		Juniversity 1.1.2.4 market to MacContent					
-			Learning	Objectives			a s <sup>tal</sup> s <del>a</del> ti <sup>s</sup> talitas
TRP001E022 [	Describe the bas	is for each Step	, Caution, Note, and C		Summary item in	EOP-TRIP-1	
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	Pressurizer Vap	Section .	the second			Record Nu	mber	2
	dge of the opera	ational implicati	ons of the follow	ing cor	cepts as they apply	to Pressurizer	Vapor	
AK1.02 Chan	ge in leak rate v	vith change in p	ressure	n ni san sh	and the second	n an an the second s	3.1	3.7
Explanation of Answer	Distracters a ar	nd d are incorre	ct because the v	whole p	urpose of the depres incorrect because F	surization is to ZR level will b	reduce the	niah
and the second second	6	34	Referenc					
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		otana -						
LOCA02E002	Describe the plan	t response to EOP	Learning Ol			DEPRESSURIZA	TION	
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uestion Source	Other Facility		and a second	Quest	ion Modification Metho	d: Editorially N	lodified	
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Given the fol	lowing conditi	ons:				
_ Linit 2 is o	perating at 10	10% power	and a second			
	j is 573 degre					
- The unit e	xperiences a	SBLOCA.		•	· · · · · · · · · · · ·	an An an
<ul> <li>RCS press</li> <li>Using trans</li> </ul>	sure has drop	ped from NO	P to 1825 psig.	om 614 degrees to	560 dearees.	
- Using iter	lueu uala, lite					
Subcooling h	has gone from	to				
a 39; 64						
64; 39						1941 A. T. (J. 1997) 
<b>6</b> 81;93						
93; 81	in the logical			Mine parameteria in a second design of the second d	· · · · · · · · · · · · · · · · · · ·	
L	xam Level R	Cognitive Level	Application	Facility Salem 1 & 2	Exam Date:	12/11/2006
	ncy and Abnorm			1 SRO Group 1		000009K102
	mall Break LOC				Record Numb	per 3
	dge of the operat	tional implication	ns of the following	concepts as they apply	to Small Break L	.OCA:
EK1.02 Use o	f steam tables		ene letter i nort defenselenenen, di fullamenten i suite energia energia energia energia energia energia energi			3.5 4.2
Answer 📰	Saturation temp	a <u>t 18</u> 40 psia is TAVG of 573 i	624 deg. Highest	deg. Highest CET in st CET in stem is 560. ( CET. 93 is if use 2235	524-560=64. 81	614=39. degrees is pressure and
			Reference Tit	e e		
Steam Tables		5 2592421 (Fr. 1997)				
		and a second	Learning Object	ives		
LOCA01E008	Determine the ind	ications that are mo		r system/component operat	ion for each step in 2-	EOP-LOCA-1
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<ul> <li>Initial RV</li> </ul>	NST level w	as 41.1 feet.	and the second second second	<ul> <li>Methodsky to a strategy to a st</li></ul>	ومرور والافراني		
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ANK CAPAC	Explanation: all available pumps 2x550 2x2600=5200 equating to 3 18.33 minute pumps I/S. I I/S) CITY DATA 3 Identify and du including: (Lic The Control R The function of The effect eac The plant conditioned function	Question stem de ECCS pumps will 0= 1100gpm; SI 2 0 So, 1100+1300 870,000 gallons, a es. Distracter a is Distracter b is the escribe the Control Re ensed Operator & ST toom location of Emer of each Emergency Core C ditions or permissives tion.	escribes the design I be injecting at the 2x650= 1300; RHR 0+4600+5200= 12, and 15.2' level of 15 is the time it would the time if one CS pur Reference Learning Objection oom controls, indication 'A only) rgency Core Cooling System Con Cooling System control h is required for Emergence	n basis LOCA, but wi eir maximum rate. The 1x4600= 4600; and 200gpm total. With t 50,000, you need to p ake to pump in the ein np is used. Distracte Title	ith power. With the flow rates used Containment Sp the initial RWST I bump in 220,000 ntire RWST volur er d is if 16,800 g with the Emergency ndications. dication. ray System compone ontrol Room controls	he RCS at 35 d are: Chargin ray pump flow evel of 41.1' gallons. That' ne with availal pm used (all p used (all p Core Cooling System to perform their	em,
ANK CAPAC ANK CAPAC -EOP-LOCA ECCS00E008	Explanation: all available pumps 2x550 2x2600=5200 equating to 3 18.33 minute pumps I/S. I I/S) CITY DATA 3 Identify and du including: (Lic The Control R The function of The effect eac The plant conditioned function	Question stem de ECCS pumps will 0= 1100gpm; SI 2 0 So, 1100+1300 370,000 gallons, a es. Distracter a is Distracter b is the solution of state escribe the Control Re ensed Operator & ST toom location of Emer of each Emergency Core C ditions or permissives tion.	escribes the design I be injecting at the 2x650= 1300; RHR 0+4600+5200= 12, and 15.2' level of 14 is the time it would to the time if one CS pur Reference Learning Obje com controls, indication 'A only) rgency Core Cooling System cooling System control h is required for Emergence monitored to ensure pro	n basis LOCA, but wi eir maximum rate. The 1x4600= 4600; and 200gpm total. With t 50,000, you need to p ake to pump in the ein np is used. Distracte Title	ith power. With the flow rates used Containment Sp he initial RWST I boump in 220,000 ntire RWST volur er d is if 16,800 g with the Emergency ndications. dication. ray System compone ontrol Room controls peration for each step	he RCS at 35 d are: Chargin ray pump flow evel of 41.1' gallons. That' ne with availal pm used (all p used (all p Core Cooling System to perform their	em,
ANK CAPAC ANK CAPAC -EOP-LOCA ECCS00E008	Explanation: all available pumps 2x550 2x2600=5200 equating to 3 18.33 minute pumps I/S. I I/S)     CITY DATA    3     Identify and de including: (Lic The Control R The function of The function of The function of The function of The plant condinitended funct Determine the	Question stem de ECCS pumps will 0= 1100gpm; SI 2 0 So, 1100+1300 370,000 gallons, a es. Distracter a is Distracter b is the escribe the Control Re- ensed Operator & ST soom location of Emer of each Emergency Core C ditions or permissives tion. e indications that are n	escribes the design I be injecting at the 2x650= 1300; RHR 0+4600+5200= 12, and 15.2' level of 15 is the time it would the time if one CS pur Reference Learning Objet com controls, indication A only) regency Core Cooling System Con Cooling System control h is required for Emergence monitored to ensure pro	n basis LOCA, but wi eir maximum rate. Th X 1x4600= 4600; and 200gpm total. With t 50,000, you need to p ake to pump in the ei- np is used. Distracte Title actives is, and alarms associated rstem control bezels and in ntrol Room control and inco as upon Containment Spi y Core Cooling System C per system/component op	ith power. With the flow rates used Containment Sp the initial RWST I boump in 220,000 ntire RWST volur er d is if 16,800 g with the Emergency ndications. dication. ray System compone ontrol Room controls beration for each step	he RCS at 35 d are: Chargin ray pump flow evel of 41.1' gallons. That' ne with availal pm used (all p used (all p Core Cooling System to perform their	em,

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				1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -			· · · · · · ·	. — 11118
Given the fo	llowing cond	ditions:			· · · · · · · · · · · · · · · · · · ·			Managa ang ang ang ang ang ang ang ang an
		000/		ototo				
	operating at 9, 22 RCP E				4		•	
	p RC flows a				•			
- The red S	START beze	I for 22 RC	CP is illum	inated.				
	or has NOT			in an in color (1999) and an information of the second			· · · · · · · · · · · · · · · · · · ·	
Which of the	e followina io	dentifies w	hat has o	ccurred?		tata ang sa	an an an Araba an Araba. An an Araba an Araba an Araba an Araba	
	¥		the second second second by the second barry	Den entre and	olation val	ve has dev	veloped a leak	· · · · · · · · · · · · · · · · · · ·
🖻 An ATV	VT. The Rx	should ha	ve tripped	l on 1/4 RC	CLoops Lo	Flow <90	%.	
22 RCF	P shaft has s	sheared.						
22 RCF	P shaft has s	seized.	· · · · · · · · · · · · · · · · · · ·	an a	<ul> <li>A state of a state o</li></ul>			nadewa kuta, kuta, natara pari 1999 an
Answer c	Exam Level R	Cognitive	e Level Cor	mprehension	Facility:	alem 1 & 2	Exam Date:	12/11/2006
Tier: Emerge	ency and Abno	rmal Plant E	volutions	RO Group	1 SRO G	roup 1		00015A111
	Reactor Coolar	the second s	and the terms of the second	a an			Record Numb	
· · · · · · · · · · · · · · · · · · ·			the followin	g as they ap	oly to Reacto	r Coolant Pu	ump Malfunction	
AA1.11 RCP							er to open. For	2.5 2.4
	showed the b	reaker is still	closed.	Reference Til	le,, in the second			
Reactor Coola	nt System	and a second			an a			Source 2 Marchanet of the set like and provide the set of the set
Overhead Ann	unciators Win	dow D						
					and an	2 (24428) (1970) (1970) (1978) 	an in search and an	
RCPUMPE008		nd describe the		earning Object		is associated w	ith the Reactor Cool	ant Pump,
	The function of	feach Reactor (	Coolant Pump	Control Room c	ontrol and indic	ation. (License	sed Operator & STA d Operator & STA o	nly)
	Operator & ST.	A only)					ts and operation. (L	
	function. (Lice	nsed Operator &	& STA only)				rols to perform their Operator & STA only	· · ·
								<u> </u>
		na da finanzaria Antonio da finanzaria Antonio da finanzaria						
Material Require	d for Examinatio	n						
Question Source	New				uestion Modif	cation Methoo	F	
Question Source	Comments:			an a		•	and dealer and search a	
				n an	naminging a laga laga laga laga laga laga laga	·	an an an Anna an Anna an Anna an Anna Ann An Anna Anna	esaltine an incension of here's
					•			
·			· -		en e la El a la entre e			
	mber 15, 2006 11	and a second second		Page 5 of	24			

	na na sana ang sana Ang sana ang
Given the fo	ollowing conditions:
	operating at 40% steady state power.
- 23 CVCS	
- 21,23 CC	
- 21,24 SW	
- 22 SVV Pr	Pp in AUTO
A loss of 2A	A 460 Volt Vital Bus occurs. One minute after the loss of bus, with NO OPERATOR
	hich of the following will be observed?
	vn Isolation.
PZR lev	evel dropping ~1% / minute.
	I Console alarm, 21 (22) CC HDR PRESSURE LO.
	313 21 SW HDR PRESS LO, and/or OHA B-14, 22 SW HDR PRESS LO.
	Exam Level R Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11/20
	ency and Abnormal Plant Evolutions RO Group 1 SRO Group 1 000022G421
	pency Procedures / Plan wledge of the parameters and logic used to assess the status of safety functions including: 1. 3.7 4
2.4.21 Know	wledge of the parameters and logic used to assess the status of safety functions including: 1. 3.7 4 ctivity control 2. Core cooling and heat removal 3. Reactor coolant system integrity 4.
Conta	tainment conditions 5. Radioactivity release control.
Answer	Reactor coolant integrity is maintained, however, the RCS is leaking ~ 5 gpm up the shaft of each RCP. This is occurring since the only operating charging pump lost power, and no operator action is taken. Uncorrected this will lead to a loss of PZR level. A is incorrect because the 23 charging pump is powere from 2A 460V bus but does NOT have any UV trip associated with it. The breaker remains closed, with no power supplied. The interlock for isolating letdown requires ALL 3 charging pump breakers to be open, it does not operate on no flow. B is correct because with no letdown isolation and normal letdow flow of 75 gpm, with no charging flow PZR level will drop. A thumbrule is 75 gallons per percent in the PZR at NOT. C is incorrect because 21 CC pump is powered from 2A 4KV bus, and is not affected. D incorrect because no SW pumps will be lost.
898 (s	Reference Title
No. 1&2 Units-	S-CVCS No. 1CV4&2CV4 Letdown Oriface Isolation Valves
CVCS00E006	Learning Objectives LOR NCT Outline the interlocks associated with the following Chemical and Volume Control System components: a) VCT Isolation Valves, CV40 and CV41 b) Letdown Isolation Valves, CV2 and CV277 c) Letdown Orifice Isolation Valves, CV3, CV4 and CV5 d) Centrifugal Charging Pumps
AB460VE001	Describe the operation of the following system as applied to S1/S2.OP-AB.460-0001/2/3: a) 460/230V Vital Bus Distribution
Material Required	ed for Examination
Question Source	Facility Exam Bank Question Modification Method: Direct From Source
Question Source	e Comments: VISION Q71244

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Which of the following describes the situation in which the GREATEST amount of reactivity will be added during the first 5 minutes of boration while performing a Rapid Boration IAW S2.OP-SO.CVC-0008, RAPID BORATION? The Rapid Boration flowpath is aligned.... via the Boric Acid Blender @ EOL. via 2CV175 with the Rx core @ BOL via 2CV174 with the Rx core at 10,000 MWD/MTU. from the RWST with the Rx core at 15,000 MWD/MTU. Exam Date: 12/11/2006 Cognitive Level Application Facility: Salem 1 & 2 Answer b Exam Level R 000024K102 RO Group Tier: Emergency and Abnormal Plant Evolutions 2 SRO Group 2 Record Number 7 024 **Emergency Boration** Knowledge of the operational implications of the following concepts as they apply to Emergency Boration: AK1. AK1.02 Relationship between boron addition and reactor power 3.6 3.9 Explanation of WRITTEN FOR CYCLE 15 Choices a,b, and c all have the same flow rate for boron injection during a Answer rapid boration. The difference in those 3 choices is time in core life which affects Boron worth and RCS boron concentration. The RWST distracter is incorrect because the boron concentration is much less than the BAST's, which is the source of the other 3 methods. Using the REM figures, the differential boron worth is -6.325, -6.725, and -6.9 pcm/ppm respectiveley for a,b, and c. C is correct because it has the highest reactivity worth for the same boron flow rate. **Reference Title** Figures Figures Learning Objectives LOR NCT Given plant conditions, relate the Chemical and Volume Control System with the following, CVCS00E015 Pressurizer Level Control System **RCS Temperature Control** Main Turbine/Generator Reactor Coolant Pump seal injection flows Automatic Control Rod Control VCT Makeup Nuclear Instrumentation **Emergency Core Cooling System** Residual Heat Removal System Component Cooling Water System Pressurizer Pressure Control System Pressurizer including Pressure Relief Tank Waste Gas Waste Liquid Service Water 4 Kv Vital AC System 480 V Vital AC System 240 V Vital AC System 125 VDC System Material Required for Examination S2.RE-RA.ZZ-0012(Q) FIGURES Question Modification Method: Question Source: New Question Source Comments: Developed using 2R15 cycle data Page 7 of 91 Friday, December 15, 2006 11:29:38 AM

Given the following conditions:

- Unit 1 is operating at 100% power.
- A PZR safety valve fails open.

Assuming the safety valve remains open and a Rx trip is performed, which of the following describes RCP operation strategy, and what is the bases for that strategy?

Trip ALL RCPs at RCS pressure of 1350 psig if...

ANY ECCS pump is supplying at least 100 gpm ECCS flow. This prevents depletion of RCS inventory which might lead to severe core uncovery if the RCPs were tripped later in the accident.

ANY Charging or SI pump is supplying at least 100 gpm ECCS flow. This prevents depletion of RCS inventory which might lead to severe core uncovery if the RCPs were tripped later in the accident.

ANY ECCS pump is supplying at least 100 gpm ECCS flow. This prevents formation of a stagnant water volume in the upper head region which may flash and form a steam bubble during subsequent cooldown and depressurization.

ANY Charging or SI pump is supplying at least 100 gpm ECCS flow. This prevents formation of a stagnant water volume in the upper head region which may flash and form a steam bubble during subsequent cooldown and depressurization.

Answer	Exam Level R Cognitive Level Memory	Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier: Emerg	gency and Abnormal Plant Evolutions RO Group	1 SRO Group 1	000027G418
027	Pressurizer Pressure Control Malfunction		Record Number 8
2.4.18 Kno	gency Procedures / Plan wledge of the specific bases for EOPs.		2.7 3.6
Explanation of Answer	With a safety valve open, operators are directed to incorrect because ANY ECCS pump would include pressure is less than 300 psig and the LOCA is La only.	e the RHR pumps. If the R	HR pump is injecting, RCS

**Rx Trip or Safety Injection** 

Westinghouse ERG- RCP Trip/Restart

Pressurizer Pressure Malfunction

	and the second	Learning Objectives
AA000E015	Assess TAA conditions that affect	t heat removal rates

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Material Required for Examination
Question Source: New
Question Modification Method:
Question Source Comments:

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Given the following conditions:	التعدية
	unti
Unit 2 is operating at 100%. Reactor Trip Breaker "A" and Reactor Trip Bypass Breaker "B" are racked in and shut.	
Reactor Trip Breaker "B" is open.	
A feedwater problem has developed, and the CRS directs the RO to trip the reactor.	
The RO depresses the OPEN pushbuttons for the Rx Trip Breakers, but the Rx does NOT trip.	
Assuming no automatic trip demand has been generated, and the RO has NOT attempted a trip b	y
ny other means, which of the following conditions prevented the Rx from tripping?	
Reactor Trip Breaker "A" shunt trip coil did not energize.	
Reactor Trip Breaker "A" UV coll did not de-energize.	
Reactor Trip Bypass Breaker "B" shunt coil did not energize.	5127. 12. a. a.
Reactor Trip Bypass Breaker "B" UV coil did not de-energize.	
inswer a Exam Level R Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11/	2006
ier: Emergency and Abnormal Plant Evolutions RO Group 1 SRO Group 1 000029K200	;
29 Anticipated Transient Without Scram Record Number	\$
K2. Knowledge of the interrelations between Anticipated Transient Without Scram and the following:	• • • • • •
K2.06 Breakers, relays, and disconnects	3.1'
xplanation of The control console PB are only control-function for the Reactor Trip Breakers. The Reactor Trip Bypa	iss
control rods and cause a rx Trip. Distracter "b" is incorrect because the UV coil is not expected to de- energize when the breaker bezel PB is depressed. Distracters "c" and "d" are incorrect because the Bypass Breakers do not have a control function from the 2CC2, only breaker position indication.	
Reference Title	
Reactor Protection System Reactor Trip Signals	
Learning Objectives	
RXPROTE019 Identify and describe the Control Room controls, indications, and alarms associated with the Reactor Protection System,	
including: (Licensed Operator and STA Only)	
<ul> <li>a) The Control Room location of Reactor Protection System control bezels and indications</li> <li>b) The function of each Reactor Protection System Control Room control and indication</li> </ul>	
<ul> <li>c) The effect each Reactor Protection System control has upon Reactor Protection System components and operation</li> <li>d) The plant conditions or permissives required for Reactor Protection System Control Room controls to perform their</li> </ul>	
intended function	
e) The setpoints associated with the Reactor Protection System control room alarms	
	.23. (2013-22
aterial Required for Examination	
uestion Source: New Question Modification Method:	
uestion Source Comments:	
	.1
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			·						
Given the fo	llowing co	onditions:	ter menten i die sone versioneren gewennen.	an a	anta non-sido non intelligio (nel sedenos)		an a	ant and the state are not a set of an Office projection of the set	and the second
- Unit 2 wa	s tripped t	from 100%	power 20 min	utes ano					
		E-9 amps.		aleo ago	•				
		E-11 amps.	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	and and a second se		·····	 	
Which of the result of this			entifies the co	ondition p	resent, and a	ny actior	n(s) perforn	ned as a	3
ntermediate	Range	ll's are indic	ating	· · · · ·			· .		
that N3	5 is under	compensat	ed. Manually	y reset the	e Source Ran	ge NI ch	nannels.	enter an anna an a	and the Table
b. that N3	js over co	mpensated	. Manually re	eset the S	ource Range	NI char	inels.		
correcti	y. Ensure	P-6 is bloc	ked when the	esecond	IR NI channel	l goes b	elow 7E-11	amps.	
Correctly 7E-11 a		Source Ra	nge channels	s reset wh	ien the secon	d IR NI	channel go	es belo	N
Answer a	Exam Level	R Cognitiv	re Level Memor	У	Facility: Salem 1	1 & 2	Exam Date:	12/1	1/2006
ier: Emerge	ncy and Ab	normal Plant E	volutions	RO Group	2 SRO Group	2	0	00032A1	01
32 L	oss of Sour	ce Range Nuc	lear Instrument	ation			Record Numb	er	10
	o operate ar entation:	nd / or monitor	the following as	s they apply	to Loss of Sour	rce Range	Nuclear		
A1.01 Manu	al restoratio	n of power						3.1'	3.4*
	be. This po by the detec overcomper	ints to under o stor which are isated it would	compensation as not "screened c	s the proble out." Distra ale and N3	ng 2E-9 it is over m, since more o oter B is incorrect 5 would read no	of the gam	ma pulses are e if the N36 w	e being s ⁄ere	een
	Inconect be	cause the NSC		ference Title			and the fill of processing the second s	-190 A. ****	a na setel a
eactor Trip Re	esponse			The state of the s			Contraction of the second state	د. به میروندین ا مرز ال توریک	17 (1. 20 A.Z.
· · · · · · · · · · · · · · · · · · ·	en e	in de la <b>MAN</b>						No. Andres	<u> </u>
									and and a second se
EXCOREE010	Instrumentat Source Rang Intermediate Power Range Power Range	points, coincidend ion System includ le High Flux Read Range High Flux e (Low) High Flux e (High) High Flux e High Rate Read	ce, blocks and perm ling the following: xtor Trip Reactor Trip Reactor Trip < Reactor Trip	ning Objective	as tomatic actuations a	ssociated w	ith the Excore Nu	uclear	ала
				· · · · · · · · · · · · · · · · · · ·					
	a ta st		and a second	an i she a marine an	nego galar sugar e dependenti de para de pr	n i na sangangangang T		natarioni ana ao	There are a second and a second area and area and a second area and area and area and a second area and area an
aterial Required		ion							
uestion Source:			<ul> <li>In the problem with the second structure of the second structure</li></ul>		stion Modification		Significantly Mo		
uestion Source	somments:	Modified VISIC and the previou	N Q61948 to differ usly correct answer	ent detector h wrong.	aving different comp	ensation pro	blem, making a	distracter ri	ght
				Furthelis and the state of the	and a second sec	and the bound of the balance	n an	The second s The second se 1	nin internet and
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		7110744111		niulu	/10.
<b>W</b> II <b>U</b> II					

- Unit 1 is performing a Rx startup. With Rx power at 1E-5 amps, 1N35 fails low.

Which of the following, if any, is the Power Range NI reading which will confirm Rx power is actually at 1E-5 amps?

<b>a.</b> 1%.							and the second
<b>b</b> 20%.							
<b>100%</b> .				1			
	s below the P	ower Range	n na sana na mana na m Na mana na mana n	หมาย ของรูปหมาย การการการการการการการการการการการการการก	annar ar an a suisean ar an tha suiseac	an a san an a	an an the second se
L	xam Level R	Sector 24	Application	Facility: Salem	1&2	Exam Date:	12/11/2006
		al Plant Evolution	And the second	2 SRO Group	2	00	00033A201
		iate Range Nuclea				Record Numbe	r11
A2. Ability to		interpret the follow	ving as they appl	y to Loss of Inte	rmediate	Range Nuclear	
		source-range, inte e Range NI indicat					3.0 3.5
	given as 1E-5 a not below the po	AGE 27). Also AV mps, the only ans ower range.	wer is 20%. 1%	would be ~5-6E	-6. 100%	would be 5E-4	. Power is
ot Standby to	Minimum Load		Reference Tit	e		n en l'ha agenere en deze andara a	الم
uclear Detect					· · · · · · · · · · · · · · · · · · ·		
			Learning Object	and the second se			
EXCOREE009	System, including The Control Room The function of ea The effect each E and operation. The plant condition intended function	n location of Excore Nu ach Excore Nuclear Ins Excore Nuclear Instrum ons or permissives requ	iclear Instrumentatio trumentation System entation System cont ired for Excore Nucl	n System control be Control Room control rol has upon Excore ear Instrumentation	zels and ind rol and indic Nuclear Ins System Cor	ications. ation. strumentation Syste ntrol Room controls	m components
					بین دیکھیں جمع کر کہ مکان کے مرکز میں برجان کو ایک مکان کے محکوم کا ایک محکوم کی کا کہ کہ کہ کا کہ	n na serie de la constante de <u>En la constante de la constante</u> En la constante de la constante	en e
	for Examination			uestion Modificatio	in Method		
uestion Source							the state of the s
uestion source	Confillents.		an a san		and an and the second	••••••••••••••••••••••••••••••••••••••	MARCINES STATES AND
				and the second second			

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	N		· · · · · · · · · · · · · · · · · · ·
Which of the RAD MONITO	following describes why rising radiation of the constraints of the con	on levels on 2R19A, STM ( 4, S/G B/D OUTLET ISOL	GEN BLOWDOWN VALVE?
To minim	nize S/G mass loss during a SGTR wi	th a Main Steamline Break	ζ
	nt high alarm on 2R40, RAD MON Co sate Polisher.	ONDENSATE PRCS FILT	ER, from isolating the
To preve S/G's bio	nt backfeeding contamination from 2 wdown lines.	1 S/G to any other S/G thr	ough the unaffected
	ent the spread of contamination from a econdary systems.	a Steam Generator Tube F	Rupture (SGTR) on 21
Answer d E	kam Level R Cognitive Level Memory	Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier: Emergen	cy and Abnormal Plant Evolutions ROG	roup 1 SRO Group 1	000038K303
	eam Generator Tube Rupture	i na	Record Number 12
السمسمسي	ge of the reasons for the following responses	as they apply to Steam Genera	ator Tube Rupture:
	atic actions associated with high radioactivity		3.6* 4.0
lh lh	ncorrect because S/G mass lost to blowdown because the S/G each have its own blowdown he blowdown lines. b is incorrect because th Referen	n line, so backfeeding contamin e polisher does not receive an i	ation is not possible through
Steam Generato	or Tube Rupture		
Steam Generato	or Blowdown Operation		
ABSG01E001	Learning U Describe the operation of the following system as appl a) ADFWCS response to increasing SG level. b) CVCS make-up response to decreasing pressuri c) Radiation Monitor response to increasing SG act	ied to S1/S2.OP-AB.SG-0001: zer level.	
Material Required			
Question Source:	Facility Exam Bank	Question Modification Method:	Direct From Source
Question Source C			A life and segment of the second s

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Given the following conditions:
- Unit 2 is operating at 85% power.
- Rx power is rising slowly.
- RCS Tave is dropping slowly.
- Containment pressure is 0.1 psig and steady.
Which of the following is causing these indications, and what actions are required?
A Main Turbine Governer Valve is slowly failing open, trip the RX IAW S2.OP-AB.STM-0001.
A RCS leak > 10 gpm in the letdown piping OUTSIDE containment, isolate letdown IAW S2.OP-AB.RC-0001, REACTOR COOLANT SYSTEM LEAK.
A normal dilution of 100 gallons was set as 1,000 gallons in the Primary Water Flow Register
and performed. Initiate a rapid Boration IAW S2.OP-SO.CVC-0006, RAPID BORATION.
An inadvertent boration is occurring, place the CVCS Make-up Control in MANUAL and close malfunctioning valves IAW S2.0P-SO.CVC-000, BORON CONCENTRATION CONTROL.
Answer a Exam Level R Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier: Emergency and Abnormal Plant Evolutions RO Group 1 SRO Group 1 000040A202
040 Steam Line Rupture 13
AA2. Ability to determine and interpret the following as they apply to Steam Line Rupture:
AA2.02 Conditions requiring a reactor trip 4.6 4.7
trip the reactor. Distracter b is incorrect because an RCS leak would not cause a power change or Tave change, even though it would cause charging flow to rise. Distracter c is incorrect because the dilution would not cause Tave to lower, it would rise along with Rx power and charging flow as PZR level rose. Distracter d is incorrect because a boration would cause Rx power to lower and charging flow to lower as PZR programmed level dropped while lowering RCS temperature.
Reference Title
Excessive Steam Flow
Learning Objectives
a) Determine the appropriate abnormal procedure. b) Describe the plant response to actions taken in the abnormal procedure. c) Describe the final plant condition that is established by the abnormal procedure.
Material Required for Examination Question Modification Method;
Question Source: New Question Modification Metriod:

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Friday, December 15, 2006 11:29:38 AM

Given the following conditions:	l <del>atora de co</del> rte
<ul> <li>Unit 2 is operating at 100% power when a simultaneous loss of BOTH SGFPs occurs.</li> <li>The Rx is manually tripped.</li> </ul>	
Which of the following choices describes how AFW flow will be controlled after the Immediate Actions of EOP-TRIP-1 are performed, and why?	·
Manually reduce total AFW flow to no less than 22E4 lbm/hr to prevent an excessive RC cooldown.	S
Ensure total AFW flow is no less than 44E4 lbm/hr to prevent an un-needed transfer to F 1, RESPONSE TO LOSS OF SECONDARY HEAT SINK.	RHS-
The Pressure Overide Defeat PBs will be required to be depressed since runout flow can be prevented to the SGs when they shrink and depressurize following the loss of feed.	not
AFW flow from 2 MDAFW pumps is sufficient for decay heat removal following ANY Rx tr only 23 AFW pump flow should be reduced to zero by idling the 23 AFW pump to preven feeding the SGs.	ip, so t over
Answer a Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 Exam Date:	2/11/2006
Tier:         Emergency and Abnormal Plant Evolutions         RO Group         1         SRO Group         1         000054	K303
054 Loss of Main Feedwater Record Number	14
AK3. Knowledge of the reasons for the following responses as they apply to Loss of Main Feedwater:	
AK3.03 Manual control of AFW flow control valves	3.8 4.1
Answer is maintained. 23 AFW pump speed is reduced to idle. The Basis Document for TRIP-2 reference C0542, which provides direction to throttle AFW flow to minimize cooldown from excessive feedw flow. A is correct because it contains both parts of the requirement in TRIP-2. Distracter b is in because 44E4 lbm/hr is the AFW flow required in FRSM-1, and will over cool the RCS. Transfer FRHS-1 would only be required with AFW flow < 22E4 and NR levels all less than 9%. Distract because the setting of the AF21 valves prevents runout. Distracter d is incorrect because leaving 2 MDAFW pumps running at 95% AF21 open (normal setting) would cause an excessive cooldown.	ater correct to er c is
Reference Title	
Reactor Trip Response	a neta te a te a
	an bha a bha an
Learning Objectives           TRP002E002         Describe the plant response to actions taken in the following EOP step sequence(s): 3, 4.1, 5, 6, 8, 10, 16, 19, 20, and	24.1
	n Egel (1997) - 1997 -
Material Required for Examination	
Question Source: New Question Modification Method:	]
Question Source Comments:	an i angina nga nga nga nga
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Given the fo	llowing con	ditions:			n Na kana da katalan kana ang kana katalan katalan katalan katalan katalan Na Katalan kata		· · · · · · · · · · · · · · · · · · ·	
- Unit 2 has	s lost all off	site powe	er.	· · · · · · ·				
	ailed to sta ripped on c	Colline in the growther and a						
- 2C EDG s	started but	its output	breaker tri		Vital bus diffe			
<ul> <li>After isola</li> <li>EDG is succ</li> </ul>	-				of EOP-LOP/ nut.	A-1, Los	s of All AC	Power, 2A
	following o	lescribes	the next a	ction(s) to b	e performed, a	and why	?	
Start 21	or 22 SW	pump to p	provide coo	oling to 2A E	EDG.			
Start 25	or 26 SW	pump to p	provide coo	ling to 2A E	DG.	A		
EDG, st	2 and 24 S art ONE S\ g full flow t	N pump,	and throttle	DR ISO VL open the 2	VS to prevent 2SW20 to rep	water h ressuriz	ammer to the nuc h	he 2A leader prior
EDG, st		ailable SV	/ pumps, a	nd throttle	VS to prevent open the 22SV			
Answer a	xam Level R	Cogniti	ve Level Apr	olication	Facility: Salem 1	1&2	Exam Date:	12/11/2006
	ncy and Abno		Evolutions	RO Group	1 SRO Group	1		00055A106
	tation Blacko				1999 - Maria Angelan ang ing ing ing ing ing ing ing ing ing i		Record Number	er 15
			the second se	g as they app	ly to Station Blac	kout:		
EA1.06 Restor		100 March 100			1 is in getting coo		r flow to the F	4.1 4.5
Answer V I C f	stem of the que where in LOP n the case pr putput breake	A-1 this oc esented ab and start a . The 2 lon	es that SW h curs in <u>relatic</u> ove, power is a SW pump. ger distracter	as just been i on to WHEN th restored PR The operator s would be th	on a steps performe	A. The o ted and p nd the CA which SW	perator needs ower is restore S 14 states to / pumps would	to know ed to the bus. close EDG d be available
	S. State			Reference Title	9	*		and the second second
Loss of All AC F	Power							
				nite of the product of the second	anandaraan) maaraa maada biyaan ayaa ahaa ka k		and the second statement of the second statement of the second statement of the second statement of the second	n Serie ( Andre Serie ( Andr Andre Serie ( Andre Serie (
	2010-00-00-000			earning Objecti				
LOPA00E007	Describe the E	OP mitigation		earning object			a an	Attende of Property
Material Required		n						
Question Source:				Qu	estion Modification	Method:		
Question Source C	omments:		ومجفر برايين والمام ومارد والدار	n allentiti" stjonerským metatoria romani aktorecké s	مر المر المر المر المر المر المر المر ال			en de antide est en antide en a
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Given the f	following co	nditions:		nana na mana na dista ya sa	<ul> <li>Any dependent of the property of the formation of the property of</li></ul>	al anna a suite ann an tha ann an		
<ul> <li>23 charg</li> <li>21 and 2</li> </ul>	ging pump is 24 SW pump	os are in ser	vice.	'er. • • • • • • • • •		· · · · · · · · · · · · · · · · · · ·		· · · ·
- A loss of	T THE SUUKV	switchyard	occurs.					
Which of th status light	•	contains ON	ILY equip	ment that w	vill be running a	s determined	by the	2RP4
	C, 21 CFCI	J, 22 AFP.		and a second				
<b>b.</b> 24 SW	/ pump, 21 (	CC pump, 2	2 Chiller.	n na hada ar hawar a' ng manang na sara si ƙafa na na ang ang	n Anna an Islan a Longon ann an Sugar An Islan Islanda an San San San San San San San San San	n in the second stands produce a second constraint of the second s	w stansward canon	n n Carlor - an anna an ann an ann an 1986, a
25 CF	CU, 23 Rx N	Nozzle Supp	ort Fan,	2 ECAC.	and a second		3	
23 SW	/ pump, 21 /	Aux Bldg Su	pply Fan,	22 Rx Shie	ld Vent fan.		andreas de la composition de la composi La composition de la c	et Barristantyra
Answer b	Exam Level	Cognitive	Level Mer	nory	Facility: Salem 1 &	2 Exam D	ate:	12/11/200
	gency and Abn	ormal Plant Ev	olutions	RO Group	1 SRO Group	1	· · · · · · · · · · · · · · · · · · ·	056A202
	Loss of Off-Si			ani di senera da seria de seri Nomen de seria	nie meeste die meeste in teen oor teelekaarse meeste geneerste de jaar oor oor oor oor oor oor oor oor oor		Number	1
				as they apply	to Loss of Off-Site	Power:		
AA2.02 ESF Explanation of		er status lights	5		n en	ay an a coloren para terrarda en area ana ara dana bara		3.5* 3.6
Answer	This is a MC busses are s bus to preve contains ON the distracte CFCU. For	DE II Blackout stripped, the EI nt overloading LY equipment rs contain 1 co Distracter c it is	t signal, and DGs start at the EDG if that will be mponent w s 25 CFCU.	d the SEC Sec nd energized t all loads were started and in hich is NOT lo For Distract	their respective E quencer number 2 he vital busses, ar to start simultane dicated on 2RP4 a baded during a Bla er d it is the 23 SW	will be used. In nd loads are sec ously. The cor is having their b ckout. For Distr / pump. The 24	this Mod quenced rect answ preaker c racter a in \$ SW pur	e, the vital on to the ver b losed. All t is the 21 mp is
Answer	This is a MC busses are s bus to preve contains ON the distracte CFCU. For selected as	DE II Blackout stripped, the EI nt overloading LY equipment rs contain 1 co Distracter c it is the "Lead" pum	t signal, and DGs start at the EDG if that will be mponent w s 25 CFCU np, and will	d the SEC Sec nd energized t all loads were started and in hich is NOT Ic For Distract start on B vita	uencer number 2 he vital busses, ar to start simultane dicated on 2RP4 a aded during a Bla	will be used. In nd loads are sec ously. The corn is having their b ckout. For Distr / pump. The 24 ip will only start	this Mod quenced rect answ reaker c racter a in 1 SW pur i ff the 23	e, the vital on to the wer b losed. All t is the 21 mp is pump
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Salem 500-4ł	This is a MC busses are s bus to preve contains ON the distracte CFCU. For I selected as t does not sta	DE II Blackout stripped, the EI nt overloading LY equipment rs contain 1 co Distracter c it is the "Lead" pum rt. (Dwg 20366	t signal, and DGs start at the EDG if that will be mponent w s 25 CFCU. pp, and will 58 contains	d the SEC Sec nd energized t all loads were started and in hich is NOT Ic . For Distract start on B vita the tables of I Reference Title e-Line	tuencer number 2 the vital busses, ar to start simultane dicated on 2RP4 a baded during a Blac er d it is the 23 SW I bus. The 23 pur	will be used. In nd loads are sec ously. The corn is having their b ckout. For Distr / pump. The 24 ip will only start	this Mod quenced rect answ reaker c racter a in 1 SW pur i ff the 23	e, the vital on to the wer b losed. All t is the 21 mp is pump
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Salem 500-4 Safeguards E Service Wate SEC000E005 Material Require	This is a MC busses are s bus to preve contains ON the distracte CFCU. For I selected as in does not star V Electrical I mergency Loa or Pump Opera LOR NCT Lis	DE II Blackout atripped, the EI nt overloading LY equipment rs contain 1 co Distracter c it is the "Lead" pum rt. (Dwg 20366 Distribution Sim ading Sequence tion	t signal, and DGs start at the EDG if that will be mponent w s 25 CFCU. p, and will b8 contains plified One e Logic Dia	d the SEC Sec nd energized t all loads were started and in hich is NOT Ic . For Distract start on B vita the tables of I Reference Title e-Line agram	es	will be used. In ad loads are sec ously. The cor- is having their b ckout. For Distr / pump. The 24 p will only start n and the SW p	this Mod quenced rect answ preaker c racter a it 4 SW pur if the 23 pump star	e, the vital on to the wer b losed. All t is the 21 mp is pump
Salem 500-4k Safeguards E Service Wate SEC000E005 Material Require Question Sourc	This is a MC busses are s bus to preve contains ON the distracte CFCU. For I selected as f does not sta V Electrical E mergency Loa r Pump Opera LOR NCT Lis LOR NCT Lis	DE II Blackout atripped, the EI nt overloading LY equipment rs contain 1 co Distracter c it is the "Lead" pum rt. (Dwg 20366 Distribution Sim ading Sequence tion	t signal, and DGs start at the EDG if that will be mponent w s 25 CFCU. p, and will b8 contains plified One e Logic Dia	d the SEC Sec nd energized t all loads were started and in hich is NOT Ic . For Distract start on B vita the tables of I Reference Title e-Line agram	es	will be used. In ad loads are sec ously. The cor- is having their b ckout. For Distr / pump. The 24 p will only start n and the SW p	this Mod quenced rect answ preaker c racter a it 4 SW pur if the 23 pump star	e, the vital on to the wer b losed. All t is the 21 mp is pump
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Given the following	conditions:	n an	na (1999) an		
		•••••	a na 🗙 na sana tang sa sa		
- 1A EDG is set up	for normal standb	by operation.		fails and tring on	<u></u>
- 125VDC breaker	1ADC2AX26, 1A	DIESEL GENERA	TOR UNIT TRIPS	, rails and trips op	en.
- The Emergency s	supply breaker to t	he 1A EDG unit tr	ps has NOT been	r ciosea in yet.	
The EDG will mecha	anically				
start, but will N	OT be capable of t	flashing its field, du	ue to not having a	PMG on the shaft	t
NOT start from	ANY start signal,	since the DUTR m	ust be energized	to allow the EDG t	to start.
start ONLY if th the EDG.	ne Fire Bypass Sw	itches are placed i	n BYPASS, which	allows local starti	ing of
		UL - 050 -4-4			optrol
start ONLY from room start circu		nce the SEC start	circultry is indepe		
Answer b Exam Leve	R Cognitive Lev	el Application	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Emergency and A	Abnormal Plant Evolu	tions RO Group	1 SRO Group 1	0000	58K301
058 Loss of DO	C Power			Record Number	17
AK3. Knowledge of the	e reasons for the follow	wing responses as the	y apply to Loss of DC	Power:	
AK3.01 Use of dc cont				an an an ann an an ann an an ann an an a	3.4* 3.7
		ly start the EDG when	there are NO trip sig	nals present. The DU	TR relay
Answer has to be	ENERGIZED to allow	w the EDG to start. W	hen a trip signal is pr	esent, the DUTR	
DEENER	RGIZES and trips the I	EDG if running, or pre	vents a start if it is se	cured. The control po	wer has a
		, but the stem states the der any circumstances		breaker has not beer	n closed in
yer. The	EDG WIII NOT Start und	Reference Title	an and a second state of the second		
1A & 2A EDG Unit Trip	and Brooker Failure P		and the second		
No. 1 Unit 1AADC Distri			an a	N	
1A & 2A EDG Alarms					
		Learning Objectiv			
DCELECE014 Given a I and STA		e, predict the effect of the D	C Electrical System failure	on the following: (License	Operator
Emergen	ncy Diesel Generators	i	· .		
Compone	ents using DC control powe	) <b>r</b>	an a a a a a a a a a a a a a a a a a a		Na na mana ang sang sang sang sang sang sang sa
Material Required for Exam	ination				
Question Source: New	A 1	Que	stion Modification Metho	od:	
Question Source Comments	5:				
			an an an Arran an Ar Arran an Arran an Arr		
• · · · · · · · · · · · · · · · · · · ·					
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				· · · · · · · · · · · · · · · · · · ·	
				···	 

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Given the following conditions:
<ul> <li>Unit 2 is in MODE 6, with core reload in progress.</li> <li>Containment Purge is in service.</li> </ul>
<ul> <li>Water level over the Rx vessel flange is &gt; 23'.</li> <li>The Spent Fuel Pool Gate Valve is open.</li> </ul>
- The Spent Fuel Fuel Fuel Sale Valve is open.
Which of the following identifies a condition which would require IMMEDIATE suspension of irradiated fuel movement in containment IAW Technical Specifications?
BOTH the inner and outer 100' Airlock doors are opened.
A valid 2R5 alarm is received in the Spent Fuel Handling Building.
22 SG secondary side manway is opened, and the entire Main Steam line is C/T, vented, and drained.
The Containment Coordinator reports that the Equipment Hatch inside door is being held in place with only 3 bolts, but a 4th bolt is available in containment.
Answer C Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier:         Emergency and Abnormal Plant Evolutions         RO Group         2         SRO Group         2         000069A101
069 Loss of Containment Integrity 18
AA1. Ability to operate and / or monitor the following as they apply to Loss of Containment Integrity:
AA1.01 Isolation valves, dampers, and electropneumatic devices. 3.5 3.7
Explanation of Answer Distracter a is incorrect because TSAS 3.9.4.b states that a minimum of one door in each airlock must be CAPABLE of being closed. Distracter b is incorrect because a valid area radiation alarm in the FHB requires suspension of fuel movement in the FHB only, not containment. (S2.OP-IO.ZZ-0010 PAGE 4) C is correct because the secondary side of the SG, when open in containment, will provide a direct path to the outside if the steam line is vented, drained and C/T, because a drain line in the outer penetration area MUST be open to C/T the steam line. Distracter d is incorrect because IAW TSAS 3.9.4.a the equipment hatch door only needs to be CAPABLE of being closed and secured with 4 bolts, which it can be if it is already closed and secured with 3 bolts with a 4th bolt in containment.
Reference Title
Technical Specifications
CONTMTE012         Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures
Material Required for Examination
Question Source: New Question Modification Method:
Question Source Comments:

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		· · · · · · · · · · · · · · · · · · ·					
		ocess Radiation N its process path?	lonitors reac	hing its alarm	setpoir	nt would requ	lire
🖳 2R18- Li	quid Waste I	Disposal.					
2R31- L	etdown Line-	Failed Fuel.					
2R41D-	Plant Vent R	elease Rate.					
d 2R17B-	Component	Cooling Header 2	2.				
Answer b	xam Level R	Cognitive Level Me	mory	Facility: Salem 1	& 2	Exam Date:	12/11/2006
Tier: Emerger	ncy and Abnorm	nal Plant Evolutions	RO Group	2 SRO Group	2	00	00076K201
076 · H	igh Reactor Co	olant Activity				Record Numbe	19
AK2. Knowled	ige of the interre	elations between Higl	n Reactor Cool	ant Activity and th	ne follow	ving:	
AK2.01 Proce	ss radiation mo	nitors	دو الادر <sub>ول</sub> ار ورد <u>مشاهد می</u> وند.	a de Margina e presente como a que e como	ter terture		2.6 3.0
	water will end u RCS.	CEPT the R31, which p in the VCT, and be	pumped from t	he charging pum	ps back	through the reg	gen HX to the
Abnormal Radia	ation				i (i orași de la constante de l La constante de la constante de		
					n an		
			en al anna an ann ann an an an an an an an an	an a	usiyi cixoshin		States and an and an
	All and a second se		Learning Objecti	-		an the second	and the second
ABRAD1E001	a) Radiation n	ration of radiation monitors nonitor response to high ra	diation; including a	actions that occur as a	a result of	the channel in wan	ning or alarm.
ABRC02E001	a) 2R31 Letdo	ration of the following syste own Line Failed Fuel Monit nineralizer Operations	ems as applied to or	S2.OP-AB.RC-0002:		-	
						*****	
Material Required	for Examination						
Question Source:	New		Qu	estion Modification	Method:		
Question Source	Comments:	<u> </u>					

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Given the following conditions:

- Unit 2 experienced a Rx trip and safety injection following a small pipe rupture in containment.
- The crew is performing a cooldown and depressurization IAW EOP-LOCA-2, Post LOCA Cooldown and Depressurization.

Which of the following describes how the cooldown will be performed, and why?

- Dump steam at MAXIMUM rate with the 21-24MS10 Atmospheric Relief Valves. This will minimize the amount of RCS inventory loss.
- Operate the Main Steam Dumps in MS PRESSURE CONTROL AUTO mode and reduce temperature in discrete steps. This will allow the simultaneous reduction of RCS pressure which leads to an overall faster method of reducing break flow.
- Dump steam using 21-24MS10 at a rate to ensure RCS subcooling remains greater than 20 degrees. This will prevent an unwanted transition to FRCC-2, Response to Degraded Core Cooling, which would lead to a RCP start which would raise RCS inventory loss rate.

Operate the Main Steam Dumps in MS PRESSURE CONTROL - MANUAL mode, dump steam at rate not to exceed 100 degree / hr cooldown rate. This will prevent entry into FRTS-1, Response To Imminent Thermal Shock, which would require an 8 hour soak and raise the amount of RCS inventory loss.

Answer	Exam Level R Cognitive Level Memory	Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier: Em	ergency and Abnormal Plant Evolutions RO Group	2 SRO Group 2	00WE03K101
E03	LOCA Cooldown and Depressurization		Record Number 20
EK1 Kn	owledge of the operational implications of the following	concepts as they apply to	LOCA Cooldown and

Depressurization:

EK1.1 Components, capacity, and function of emergency systems.

Explanation of D is correct because at step 10 of LOCA-2, 100 degree limit is stated. The basis is also stated to prevent Answer entry into FRTS. The preferred method of heat removal is stea dumps, and they are available. A and C are wrong because of the rate of temp reduction. B is wrong because the MS dumps are not operated in that manner, and a continual cooldown is prefferred over step changes, which add stresses to RCS components.

3.4

4.0

Reference Title

Post LOCA Cooldown and Depressurization

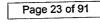
Friday, December 15, 2006 11:29:38 AM

		- 10 C	earning Objectives	100		in the second	and the second second
LOCA02E001	Describe the EOP mitigation	strategy during	POST LOCA COOLDOW	VN AND DEPF	RESSURIZATIO	DN.	
		· · · · · · · · · · · · · · · · · · ·		na in the second		en production and the second sec	ve e la processione
				· · · · · · · · · · · · · · · · · · ·		·	
Material Require	d for Examination			- N - N - N			
Juestion Source	New		Question	Modification	Method:		
Question Source	Comments:			a magazina na sa	and a second	د ماند میں اور دی اور	
анана 1997 - Салана 1997 - Са		· ·		n an an ann an Anna Anna Anna Anna Anna Anna			•
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Given the following cond	A second s					
-	itions:	Allen et de la ser de la transformation de la constantion de la constantion de la constantion de la constantio La constantion de la c	n e infrares i standar sed na da			
- Unit 2 reactor has trip	ned		• • • • • •			
<ul> <li>Multiple SGs are fault</li> </ul>	and a second					
- ALL AFW pumps have		start.				
- RCS Bleed and Feed	• • • · · · · · · · · · · · · · · · · ·	n territori dan bargan tare tiyata at berkar nang	nen en en en elle serven marinenen engenen den handen beginnen en en en en en	ana ang sang sang sang sang sang sang sa	Met Analisanya da sasangkan kani kar dahara jul ni 1. sa	
- All SG WR levels have	e dropped to 7% WF	<b>ર.</b>	ange for son <u>far</u> fineras e es	ter strandstar	ang maning til di til menganga	anna san ng annun nusua.
- CETs are STABLE.	n teo gin di sella internationale di secondaria.					
- Containment pressure	is 0.5 psig.					
Electricians have reporte cubicle and is ready to b				been ins	talled in 2	1 AFP
When establishing flow t	o available SGs, wh	ich of the fo	llowing descrit	es the A	FW feed s	strategy to
restore SG levels?	. waa					
	11. 1977년 41. 1997년 1997년 1997년 11. 1971년 - 1997년 1997년 1997년 11. 1971년 - 1997년 199					
Initiate AFW flow						
at maximum rate un into the NR.	til WR level is greate	er than 15%	, then feed at o	desired r	ate to reco	over levels
at maximum rate un	til WR level is great	er than 11%	then feed at o	desired r	ate to reco	ver levels
into the NR.		-				
at 1.0 - 5.0 E4 lbm/h	nr until WR level is a	reater than	15%, then feed	d at desir	ed rate to	recover
levels into the NR.	Service 19				· •	
at 1.0 - 5.0 E4 lbm/h	ar until W/P lovel is a	reator than	11% then fee	t at dasir	ed rate to	recover
levels into the NR.						
Answer d Exam Level R	Cognitive Level Com	prehension	Facility: Salem 1 8	2 E	kam Date:	12/11/2006
Tier: Emergency and Abnor	mal Plant Evolutions	RO Group	1 SRO Group	1		WE05A101
E05 Loss of Seconda	ary Heat Sink			R	ecord Number	22
EA1. Ability to operate and /	or monitor the following	as they apply	to Loss of Secon	dary Heat	Sink:	
EA1.1 Components, and fur interlocks, failure mo	nctions of control and sa odes, and automatic and	afety systems, I manual featur	including instrum es.			4.1 4.0
EA1.1 Components, and fur interlocks, failure mo	nctions of control and sa odes, and automatic and ith feeding hot SGs is th	afety systems, I manual featur nermal shockin	including instrum es. g the tubes with c	old (70 de	g) AFW. Th	ne FRP will
EA1.1 Components, and fur interlocks, failure mo Explanation of Answer Check the statu	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris	afety systems, I manual featur nermal shockin ing?) to see if	including instrum res. g the tubes with o the AFW flow is e	cold (70 de	g) AFW. Th reducing R(	ne FRP will CS temp
EA1.1 Components, and fur interlocks, failure mo Explanation of Answer The concern w check the statu during natural of AFW in the dow	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con	cold (70 de effective at ry to effect ditions giv	g) AFW. Th reducing R( ively heat up en in the ste	ne FRP will CS temp p the cold em, the CETs
EA1.1 Components, and fur interlocks, failure mo Explanation of Answer The concern w check the statu during natural of AFW in the dow are NOT rising	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11%	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube , so feed flow r	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con nust be initiated y	cold (70 de effective at ry to effect ditions giv vith cautio	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate c	ne FRP will CS temp p the cold om, the CETs of 1-5E4
EA1.1 Components, and fur interlocks, failure mo Explanation of Answer The concern w check the statu during natural of AFW in the dow are NOT rising Ibm/hr, to preve	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube , so feed flow n hes until WR le	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con must be initiated v vel is recovered.	cold (70 de effective at ry to effect ditions giv vith cautio This is ide	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate co ntified as 11	ne FRP will CS temp p the cold m, the CETs of 1-5E4 1% in the
EA1.1 Components, and fur interlocks, failure models Explanation of Answer The concern w check the statu during natural of AFW in the dow are NOT rising Ibm/hr, to preve FRHS. 15% is incorrect becau	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen	afety systems, I manual featur hermal shockin ing?) to see if SG WR level fo it hits the tube , so feed flow r bes until WR le ed if Containment numbers are	g the tubes with of the AFW flow is e or enough invento sheet. In the con must be initiated y vel is recovered. ent pressure is >4 not in effect. Dis	cold (70 de effective at ry to effect ditions giv vith cautio This is ide l psig, whi stracters c	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate of ntified as 11 ch it is not. I and d ares i	the FRP will CS temp p the cold sm, the CETs of 1-5E4 1% in the Distracter b is incorrect
EA1.1 Components, and fur interlocks, failure model Explanation of Answer The concern w check the statuduring natural of AFW in the dow are NOT rising Ibm/hr, to preve FRHS. 15% is incorrect becau because if sub-	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese	afety systems, I manual featur hermal shockin ing?) to see if SG WR level fo it hits the tube , so feed flow r bes until WR le ed if Containment numbers are	g the tubes with of the AFW flow is e or enough invento sheet. In the con must be initiated y vel is recovered. ent pressure is >4 not in effect. Dis	cold (70 de effective at ry to effect ditions giv vith cautio This is ide l psig, whi stracters c	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate of ntified as 11 ch it is not. I and d ares i	the FRP will CS temp p the cold sm, the CETs of 1-5E4 1% in the Distracter b is incorrect
EA1.1 Components, and fur interlocks, failure models Explanation of Answer The concern w check the statu during natural of AFW in the dow are NOT rising Ibm/hr, to preve FRHS. 15% is incorrect becau	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube , so feed flow r bes until WR le ed if Containm at numbers are ent in SG, ther	g the tubes with of the AFW flow is e or enough invento sheet. In the con must be initiated y vel is recovered. ent pressure is >4 not in effect. Dis	cold (70 de effective at ry to effect ditions giv vith cautio This is ide l psig, whi stracters c	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate of ntified as 11 ch it is not. I and d ares i	the FRP will CS temp p the cold sm, the CETs of 1-5E4 1% in the Distracter b is incorrect
EA1.1       Components, and fur interlocks, failure model answer         Explanation of Answer       The concern w check the statu during natural of AFW in the dow are NOT rising Ibm/hr, to prever FRHS. 15% is incorrect becau because if sub- NOT be at max	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese kimum rate.	afety systems, I manual featur hermal shockin ing?) to see if SG WR level fo it hits the tube , so feed flow r bes until WR le ed if Containment numbers are	g the tubes with of the AFW flow is e or enough invento sheet. In the con must be initiated y vel is recovered. ent pressure is >4 not in effect. Dis	cold (70 de effective at ry to effect ditions giv vith cautio This is ide l psig, whi stracters c	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate of ntified as 11 ch it is not. I and d ares i	the FRP will CS temp p the cold sm, the CETs of 1-5E4 1% in the Distracter b is incorrect
EA1.1 Components, and fur interlocks, failure model Explanation of Answer The concern w check the statuduring natural of AFW in the dow are NOT rising Ibm/hr, to preve FRHS. 15% is incorrect becau because if sub-	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese kimum rate.	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube , so feed flow r bes until WR le ed if Containm at numbers are ent in SG, ther	g the tubes with of the AFW flow is e or enough invento sheet. In the con must be initiated y vel is recovered. ent pressure is >4 not in effect. Dis	cold (70 de effective at ry to effect ditions giv vith cautio This is ide l psig, whi stracters c	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate of ntified as 11 ch it is not. I and d ares i	the FRP will CS temp p the cold sm, the CETs of 1-5E4 1% in the Distracter b is incorrect
EA1.1       Components, and fur interlocks, failure model failure model         Explanation of Answer       The concern w check the statu during natural of AFW in the dow are NOT rising Ibm/hr, to prever FRHS. 15% is incorrect becau because if sub- NOT be at max	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese kimum rate.	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube , so feed flow r bes until WR le ed if Containm at numbers are ent in SG, ther	g the tubes with of the AFW flow is e or enough invento sheet. In the con must be initiated y vel is recovered. ent pressure is >4 not in effect. Dis	cold (70 de effective at ry to effect ditions giv vith cautio This is ide l psig, whi stracters c	g) AFW. Th reducing R( ively heat up en in the ste n, at a rate of ntified as 11 ch it is not. I and d ares i	the FRP will CS temp p the cold sm, the CETs of 1-5E4 1% in the Distracter b is incorrect
EA1.1       Components, and fur interlocks, failure model interlocks, failure model answer         Explanation of Answer       The concern w check the statu during natural of AFW in the dow are NOT rising Ibm/hr, to preve FRHS. 15% is incorrect becau because if subs NOT be at max         Loss of Heat Sink Functional I         FRHS00E009       Determine the in	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese timum rate.	afety systems, I manual featur hermal shockin ing?) to see if SG WR level fo it hits the tube , so feed flow r hes until WR le ed if Containment numbers are ent in SG, ther Reference Title	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con nust be initiated y vel is recovered. ent pressure is >4 not in effect. Dis thermal shockin	cold (70 de effective at ry to effect ditions giv vith cautio This is ide psig, whi stracters c g IS a cone	g) AFW. Th reducing R( ively heat up en in the sten, at a rate contified as 11 ch it is not. If and d ares in cern and fee	ne FRP will CS temp p the cold em, the CETs of 1-5E4 1% in the Distracter b is incorrect inding will
EA1.1       Components, and furinterlocks, failure modified interlocks, failtreak, failure modified interlocks, failure m	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese kimum rate.	afety systems, I manual featur hermal shockin ing?) to see if SG WR level fo it hits the tube , so feed flow r hes until WR le ed if Containment numbers are ent in SG, ther Reference Title	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con nust be initiated y vel is recovered. ent pressure is >4 not in effect. Dis thermal shockin	cold (70 de effective at ry to effect ditions giv vith cautio This is ide psig, whi stracters c g IS a cone	g) AFW. Th reducing R( ively heat up en in the sten, at a rate contified as 11 ch it is not. If and d ares in cern and fee	ne FRP will CS temp p the cold em, the CETs of 1-5E4 1% in the Distracter b is incorrect inding will
EA1.1       Components, and furinterlocks, failure modified interlocks, failure modified for the status of the concern with the concern with the concern with the down are NOT rising Ibm/hr, to prevent of the status	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese cimum rate.	afety systems, I manual featur hermal shockin sing?) to see if SG WR level fo it hits the tube , so feed flow r hes until WR le ed if Containment in numbers are ent in SG, ther Reference Title	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con nust be initiated y vel is recovered. ent pressure is >4 not in effect. Dis thermal shockin	cold (70 de effective at ry to effect ditions giv vith cautio This is ide psig, whi stracters c g IS a cone	g) AFW. Th reducing R( ively heat up en in the sten, at a rate contified as 11 ch it is not. If and d ares in cern and fee	ne FRP will CS temp p the cold em, the CETs of 1-5E4 1% in the Distracter b is incorrect inding will
EA1.1       Components, and furinterlocks, failure modification of Answer         Explanation of Answer       The concern we check the statue during natural of AFW in the dow are NOT rising Ibm/hr, to preverse FRHS. 15% is incorrect because if subsections of Heat Sink Functional I         Loss of Heat Sink Functional I         FRHS00E009       Determine the in	nctions of control and sa odes, and automatic and ith feeding hot SGs is th is of the RCS (CET's ris circ. It will also check S wncomer region before i , and WR level is <11% ent shocking the SG tub the adverse number use use adverse containmen stantial level is not prese cimum rate.	afety systems, I manual featur hermal shockin ing?) to see if SG WR level fo it hits the tube , so feed flow r hes until WR le ed if Containment numbers are ent in SG, ther Reference Title	including instrum res. g the tubes with o the AFW flow is e or enough invento sheet. In the con nust be initiated y vel is recovered. ent pressure is >4 not in effect. Dis thermal shockin	cold (70 de effective at ry to effect ditions giv vith cautio This is ide psig, whi stracters c g IS a cone	g) AFW. Th reducing R( ively heat up en in the sten, at a rate contified as 11 ch it is not. If and d ares in cern and fee	ne FRP will CS temp p the cold em, the CETs of 1-5E4 1% in the Distracter b is incorrect inding will

And Andrews and

	Source Comme		odified from how much and why feeding, to how much until to better match K/A.
Question S	ource: Fac	ility Exam Bank	Question Modification Method: Significantly Modified
Material Re	equired for Ex	amination	



Given the following conditions:

- Unit 2 was operating at 100% power.
- A small break LOCA occurred.
- The reactor has tripped and SI has been initiated.
- Numerous ECCS components did not start/reposition as required.

FRCC-2, "Response to Degraded Core Cooling", is entered.

You have been directed to place SI Valves in Safeguards position using Table A, Safeguards Valve Alignment.

Which ONE (1) of the following sets of valves should have automatically opened upon receipt of an SI signal?

2CV40 AND 2CV41, VCT ISOLATION VALVES.

2CV68 AND 2CV69, CHARGING LINE ISO VALVES.

21SJ40 AND 22SJ40, HOT LEG INJECTION VALVES.

2SJ12 and 2SJ13, BIT OUTLET ISOLATION VALVES.

Answer d	Exam Level R Cognitive Level Me	mory	Facility: Salem 1	& 2	Exam Date:	12/11/2006
Tier: Emer	gency and Abnormal Plant Evolutions	RO Group	2 SRO Group	2	0	0WE06K201
E06	Degraded Core Cooling		y go eye a taa aa a gaage entaty y di latke ta su tua die sua	ملائم معاريب بالقاري	Record Number	23
EK2. Know	vledge of the interrelations between Degr	aded Core Co	oling and the fol	owing:	ta na tanàna ny sarahara dia kaominina.	
EK2.1 Co	mponents, and functions of control and s erlocks, failure modes, and automatic an	afety systems d manual featu	, including instru tres.	mentatio	n, signals,	3.6 3.8
Explanation of Answer	Distracter a is incorrect because CV4					

opened to establish hot leg injection/recirc. D is correct because the BIT outlet valves are manually closed at power and receive an open signal on SI.

Reference Title

Robinson 2, 9/27/2004 NRC Exam

Response to Degraded Core Cooling

Sec. 1

RCC00E005	A. EOP-CFST-1, Figure 2 B. 2-EOP-FRCC-1 C. 2-EOP-FRCC-2	pred to ensure proper system/component operation for each step in the following:

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Question Source Comments:

Which of the during perform	e following is t rmance of FR	he reason why CC-3, Respons	the PZR POR se To Saturate	Vs are closed rega d Core Cooling?	ardless of PZF	R pressure
To term	inate the unw	arranted flow o	f RCS invento	ry.		
		<ol> <li>A TABLE A CONTRACT OF A REPORT</li> </ol>	بحكمة جندا الحار لاحجا التنبع فكالحك كالالكمية بالكار	with a constant R	ومستقومه فيكافئه بالمريدة ويصرف فلنحت وحددت متعمقات الأراح	and a second contraction of the second s
			and the second of second se	ORVs closed and I		
The PO	RVs are the o	only source of p	oressure reduc	tion NOT addresse	ed by higher p	priority FRPs.
Answer a	Exam Level R	Cognitive Level	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Emerge	ncy and Abnorn	al Plant Evolution	S RO Group	2 SRO Group 2		00WE07K303
	Saturated Core C			na n	Record Nun	nber24
EK3. Knowle	dge of the reaso	ns for the following	g responses as th	ney apply to Saturated	Core Cooling:	
	oulation of contro gency situations		ain desired opera	ting results during abn	ormal, and	3.8 3.6
Explanation of Answer	A is correct. Th open. There is	e Core Cooling Ba no pressure check	ases document fo	r Step 6 tells operators are all false.	s to close any Po	ORVs that are
1			Reference Titl	e 🦾	an aire anns air	
Response to S	aturated Core C	ooling Conditions		en egi gel gel ann eine an an anna giù la cala		
			Learning Object			
FRCC00E006	A. EOP-C B. 2-EOP-	FRCC-2	n, and note in the foll	owing:	· · · · · · · · · · · · · · · · · · ·	
Material Require	d for Examination					
Question Source	New			uestion Modification Meth	od:	
Question Source	Comments:			ан и нарад бул у та ул ул ул ул ул ул улууна фа (фарта). Каландар улуу наулуулуу на наулуулуу на наулуулуу на		· · · · · · · · · · · · · · · · · · ·
		a tag in		ىرا يىرى دىڭ بىيىلەردە بەرىيىرىدى بىي <u>كەرىپىرىكى بىيىك بىرىكى بىر</u> بىرى تۈرەر يىكىكىك بارىد. بىر		۵۰۰ - ۲۰۰۰ میردند. در استان بید در در میرونی بازی استان (۲۰۰۰ <del>۵۰) کار استان کار کار در ا</del> ر استان کار م

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							···· ·· ·· ·· ··		
Given the fo	ollowing cond	itions:					• .	-	
	tiated a Rx tri pump is C/T.	p and SI due	to a LBLOC	А.	filmer a da socializarien Marshare a second	n			
- Operator	s have transi IR Pump Suc			oss of E	mergency	Recircu	lation, wh	en the	
Sump, failed	d to open wh	en required.							
Which of the	e following ch	oices identifi	es a possibl	e reason	why 12SJ	44 has	not opene	d?	
	nment sump I	and the second						· · · ·	-
b 12SJ49	, RHR CL IN	JECTION, is	open.	<sup>1</sup> More care or constraints whether a second se	<u>i nort i signi i si</u>				
	TO ARM PB		e er en	et Germania – Korpan ant otkolon polyn	Anna Annalas Ing an an				
	RH4, RHR P			ST is no	closed		No. (1996) and a strategic		• * • • •
	Exam Level R	Cognitive Lev			acility: Salem 1	1 & 2	Exam Date:	12/1	1/200
Tier: Emerge	ency and Abnori		The second se	Froup 1	SRO Group	1		00WE11K	
E11 [L	oss of Emerge	ncy Coolant Re	circulation				Record Nur	mber	
	dge of the inter							ving:	
EK2.1 Comp interle	oonents, and fui ocks, failure mo	nctions of contro des, and autom	ol and safety sy atic and manu:	/stems, ind al features	luding instru	mentation	n, signals,	3.6	3
	A is incorrect b 12SJ44 is to pr mean when it w because there opening the SJ correct because containiment su	ess the open Pl as demanded t s no interlock b 44, but no interl the RHR sucti	3. The stem sta o open.Unit 1 c etween the SJ ock. C is incor on from the RV	ates that it does not ha 44 and the rrect becau	did not open ave the AUT( SJ49. The p ise there is n	when real O swapov procedure to auto sv	quired. Requer feature. The closes the vapover on	uired can o B is incorre SJ49 befor Unit 1. D is	niy ect re
			Referen	ice Title			and the second se		1 v.1
	ency Recirculat				<ul> <li>March Company of the second sec</li></ul>				<u> </u>
	And the second second	and the second second		Objectives			Print Print Print		197
LOCA05E005	Determine the in EMERGENCY R	lications that are m	onitored to ensure	proper syste	m/component o	peration for	each step in l	OSS OF	
LOCA05E002	Describe the plar	t response to EOP	actions taken for L	LOSS OF EN	ERGENCY REC	CIRCULATI	ON		
aterial Requirer	for Examination						• ••• • • • • • • • •		
uestion Source:				Questio	n Modification	Method:	Significantly	Modified	
uestion Source		airee Island 4/23/2	004 NRC exam			<b>B</b>			
			n an	e tolenstere soort in oort	nane en e	inne staffen er som som	1. 1997 Marine Colonia Marine Marine	a en a compositor en a composit	
				-					
				•• ••	•	· -			

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During the performance of LOSC-2, Multiple Steam Generator Depressurization, the following plant
condition exists:
- Cooldown rate of the RCS is greater than 100F/hour.
How is the control room crew directed to control feedwater flow?
Feedwater flow is
maximized to all S/Gs until narrow range level in any SG is >9%.
maintained at least 22E4 lbm/hr total until any SG narrow range is >9%.
terminated to all but a single intact S/G, which is fed at no less than 1E4 lbm/hr.
reduced to no less than 1E4 lbm/hr to each S/G with narrow range level less than 9%.
Answer d Exam Level R Cognitive Level Application Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier:         Emergency and Abnormal Plant Evolutions         R0 Group         1         SR0 Group         1         00WE12A102
E12 Uncontrolled Depressurization of all Steam Generators Record Number 26
EA1. Ability to operate and / or monitor the following as they apply to Uncontrolled Depressurization of all Steam Generators:
EA1.2 Operating behavior characteristics of the facility. 3.6 3.7
Explanation of Distracters a and b are incorrect because the feed rate is minimized to keep the tubes wet while Answer Distracters a number of the RCS cooldown. Distracter c is incorrect because ALL SGs are fed at nlt 1E4. D is correct because with a cooldown rate > 100 degrees per hour, feed flow is reduce to nlt 1E4 lbm/hr (minimum measurable feed flow indication corresponding to 25 gpm)
Reference Title
Multiple Steam Generator Depressurization
Learning Objectives LOSC02E003 Determine the indications that are monitored to ensure the proper operation of systems and components in 2-EOP-LOSC-2
Material Required for Examination
Question Source: Other Facility Question Modification Method: Editorially Modified
Question Source Comments: Indian Point NRC Exam 3/10/2003, modified to Salem procedure title and AFW flow units.

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			and the second
Given the following conditions:	gan bara seria da gana da ganasi a nga serian seria seria. Seria kanas	n se na se	an an a sa s
<ul> <li>Unit 2 has been tripped due to a</li> </ul>			
<ul> <li>Operators are performing action</li> </ul>	ns in EOP-TRIP-2, Rea	ctor Trip Response	Э.
The CRS elects to enter FRHS-	2, Steam Generator Ov	verpressure, for a	YELLOW PATH on the
Heat Sink Status Tree.			• · · · · · · · · · · · · · · · · · · ·
Which of the following contains Of affected SG after entering FRHS-2		ould allow steam	release from the
Affected SG pressure is 1130			
Affected SG pressure is 1140	psig; NR level is 77%.		
Affected SG pressure is 1110	psig; NR level is 100%	).	
Affected SG pressure is 1090	psig; NR level is 68%.		
Answer b Exam Level R Cognitive	Memory	Facility: Salem 1 & 2	Exam Date: 12/11/2006
Fier: Emergency and Abnormal Plant E	volutions RO Group	2 SRO Group 2	00WE13A202
E13 Steam Generator Overpres			Record Number 27
EA2. Ability to determine and interpret t			
EA2.2 Adherence to appropriate proce amendments.	dures and operation within I	he limitations in the fa	cility's license and 3.0 3.4
Distracter c is incorrect be would be made back to pro psig.	cause pressure is less than ocedure in effect. Distracter	1125 psig, and NR le d is incorrect becaus	vel is >92% and a transition e pressure is less than 1125
	Reference Title		
Steam Generator Overpressure			a an
	Learning Objectives		
FRHS00E009     Determine the indications that       5	and the second	and the second	for each step in 2-EOP-FRHS-1 thru
			a a sharayan a san ashiri da an
Material Required for Examination			
Question Source: New	Ques	ion Modification Method:	
Ruestion Source Comments:			
			annan annan barandaganan annan Tainif Californi (Californi (Califo
	ter en		
		•	
	anta Antaria Antaria (antaria)		
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Given the fo	ollowing conditions:	
- 11 CVCS	e is in Mode 5, and has just started a heatup to NOT/NOP. S HUT level is 70%. S HUT level is 12% and in service.	n Marina a
	attached tank curves and assuming 50,000 gallons will be letdown from the RCS to t 's, what will be the final level of the CVCS HUTs when the RCS heatup to NOT/NO	
11 CVCS H	IUT 13 CVCS HUT	na stanje
a. 70%	84%	alifendintager -
Þ. 70%	100%	
<b>6</b> 80%	90%	anrotronimeni
<b>d</b> 80%	74%	<u></u>
Answer	Exam Level R Cognitive Level Application Facility Salem 1 & 2 Exam Date: 12/	/11/2006
Tier: Plant S	Systems RO Group 2 SRO Group 2 002000K	407
002 F	Reactor Coolant System Record Number	28
K4. Knowle	edge of Reactor Coolant System design feature(s) and or interlock(s) which provide for the following:	]
K4.07 Contr	traction and expansion during heatup and cooldown 3.	1 3.5
Explanation of Answer	Distracter b will be the result if x and y axis are reversed. Distracter C will be the result if x and y axis reversed and stop filling I/S tank at high alarm setpoint of 90% (provided on graph). Distracter D is balanced distracter to make 2 80% choices and 2 choices without multiples of 10 in the second part choice. IOP-2 step 5.1.14 states that 50,000 gallons of capacity is required for RCS heatup. Initial conditions of 12%=8,000 gallons, +50,000 gallons = 58,000 gallons = 84% from tank curve for CVC HUT.	a t of the
	Reference Title	
Tank Curves		
Cold Shutdown	/n to Hot Standby	موتينية ومنتبته
Minister and State	Learning Objectives	
IOP002E002	detemine if precautions and/or prerequisites are met to perform a plant heatup.	
CVCS00E013	LOR NCT Discuss the procedural requirements associated with the Chemical and Volume Control System, including an explanation of major precaution and limitations in the Chemical and Volume Control System procedures.	
Material Require	ed for Examination S2.OP-TM.ZZ-0002, Rev. 7, Page 7 of 33 CVCS HUT curve	
Question Source	e: Facility Exam Bank Question Modification Method: Direct From Source	
Question Source	e Comments: VISION Q50410	

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Given the fo	llowing condit	ions:				
an a		n an the state of			an an an an Array an	ndig dalam ini den berta dalam d Deleter
- A steam of	generator tube	e rupture occur	red on Unit 2	from 80% power.		
- The contr	oi room opera	itors nave tripp	l cooldown of	nd initiated an S the RCS per EOF	I. 2-SGTR-1 and al	re NOT at
		ng a controlled				ie not at
the target te	mperature.					-
The followin	a indicated na	arameters are	oresent.			
	y maloated pe					
- Runtured	SG pressure	is 985 psig an	d stable.			
· ·	•	2% and rising.				2
	l is 5% and lov				· .	
- All RCP's	are operating	ender in der eine seine sein				
- RCS pres	sure is 1300 j	psig and lower	ing slowly.			
	cooling is 25°					
- High alar	ms are standi	ng on R15 and	the affected I	R19.		· · ·
		tion for the giv				
Verify E	CCS flow est	ablished and to	rip the RCP's.			
Maintai	n operation of	the RCP's and	d continue the	RCS cooldown	per EOP-SGTR-	1.
Trip the	RCP's and tr	ansition to EO	P-SGTR-3, S	GTR with LOCA-S	Subcooled Recov	very.
d. Immedi	ately stop the	cooldown and	depressuriza	tion, and return to	EOP-SGTR-1	step 1.
				·····		the second s
Answerb	Exam Level R	Cognitive Level	Memory	Facility: Salem 1 &	2 Exam Date:	12/11/2006
Answer b Tier: Plant S		Cognitive Level	Memory RO Group	Facility: Salem 1 &	2 Exam Date:	003000G420
Tier: Plant S				Facility: Salem 1 &	2 Exam Date:	003000G420
Plant Sy     003	ystems	Pump System		Facility: Salem 1 &	2 Exam Date:	003000G420
Iler:Plant S003F2.4Emerge	ystems Reactor Coolant I ency Procedures	Pump System / Plan	RO Group	Facility: Salem 1 &	2 Exam Date: 1 Record Num	003000G420
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer	ystems Reactor Coolant I ency Procedures Vedge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fro	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D	of EOP warnings the stem states the stem states the stem states the states th	Facility: Salem 1 &	2 Exam Date: 1 Record Num 5. pressurization is in p ect because the coo or signals are due to	003000G420 ber 29 3.3 4.0 progress, so the Idown is o the ruptured
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer	ystems Reactor Coolant I ency Procedures Vedge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fro	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target	ROIGroup of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary.	Facility: Salem 1 & 1 SRO Group c, cautions, and notes hat the cooldown dep Distracter d is incorre e standing rad monito prrect because subco	2 Exam Date: 1 Record Num 5. pressurization is in p ect because the coo or signals are due to	003000G420 ber 29 3.3 4.0 progress, so the Idown is o the ruptured
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer	ystems Reactor Coolant I ency Procedures Vedge of operation Distracter a is in SGTR-1 CAS ite required to be con generator, not fro transition to SG	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be need	of EOP warnings the stem states the stem states the stem states the states th	Facility: Salem 1 & 1 SRO Group c, cautions, and notes hat the cooldown dep Distracter d is incorre e standing rad monito prrect because subco	2 Exam Date: 1 Record Num 5. pressurization is in p ect because the coo or signals are due to	003000G420 ber 29 3.3 4.0 progress, so the Idown is o the ruptured
Tier: Plant Steam Genera	ystems Reactor Coolant I ency Procedures vledge of operation Distracter a is in SGTR-1 CAS ite required to be con- generator, not fr transition to SG tor Tube Rupture	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be neo	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti	Facility: Salem 1 & 1 SRO Group c, cautions, and notes hat the cooldown dep Distracter d is incorre e standing rad monito prrect because subco	2 Exam Date: 1 Record Num 5. pressurization is in p ect because the coo or signals are due to	003000G420 ber 29 3.3 4.0 progress, so the Idown is o the ruptured
Tier: Plant Steam Genera	ystems Reactor Coolant I ency Procedures vledge of operation Distracter a is in SGTR-1 CAS ite required to be con- generator, not fr transition to SG tor Tube Rupture	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be need	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti	Facility: Salem 1 & 1 SRO Group c, cautions, and notes hat the cooldown dep Distracter d is incorre e standing rad monito prrect because subco	2 Exam Date: 1 Record Num 5. pressurization is in p ect because the coo or signals are due to	003000G420 ber 29 3.3 4.0 progress, so the Idown is o the ruptured
Tier: Plant Steam Genera	ystems Reactor Coolant I ency Procedures vledge of operation Distracter a is in SGTR-1 CAS ite required to be con- generator, not fr transition to SG tor Tube Rupture	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be neo	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti t	Facility: Salem 1 & SRO Group c, cautions, and notes hat the cooldown dep Distracter d is incorre e standing rad monitor porrect because subco	2 Exam Date: 1 Record Num 5. pressurization is in p ect because the coo or signals are due to	003000G420 ber 29 3.3 4.0 progress, so the Idown is o the ruptured
Tier: Plant Steam Genera	ystems Reactor Coolant I ency Procedures Aledge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fr transition to SG tor Tube Rupture tor Tube Rupture	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be neo e Basis Documen	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti t Learning Object	Facility: Salem 1 & SRO Group c, cautions, and notes hat the cooldown dep Distracter d is incorre e standing rad monitor porrect because subco	2 Exam Date: 1 Record Num 3. pressurization is in p ect because the coo or signals are due to poling is adequate p	003000G420 ber 29 3.3 4.0 orogress, so the idown is o the ruptured ber the stem, so
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer Steam Genera Steam Genera	ystems Reactor Coolant I ency Procedures Vedge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fr transition to SG tor Tube Rupture tor Tube Rupture	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be neo e Basis Documen	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti t Learning Object	Facility: Salem 1 & SRO Group , cautions, and notes hat the cooldown dep Distracter d is incorrect e standing rad monitor prrect because subcont the tives	2 Exam Date: 1 Record Num 3. pressurization is in p ect because the coo or signals are due to poling is adequate p	003000G420 ber 29 3.3 4.0 orogress, so the idown is o the ruptured ber the stem, so
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer Steam Genera Steam Genera	ystems Reactor Coolant I ency Procedures Vedge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fr transition to SG tor Tube Rupture tor Tube Rupture	Pump System / Plan onal implications correct because t em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be neo e Basis Documen	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti t Learning Object	Facility: Salem 1 & SRO Group , cautions, and notes hat the cooldown dep Distracter d is incorrect e standing rad monitor prrect because subcont the tives	2 Exam Date: 1 Record Num 3. pressurization is in p ect because the coo or signals are due to poling is adequate p	003000G420 ber 29 3.3 4.0 orogress, so the idown is o the ruptured ber the stem, so
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer Steam Genera Steam Genera Steam Genera	ystems Reactor Coolant I ency Procedures Vedge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fr transition to SG tor Tube Rupture tor Tube Rupture	Pump System / Plan onal implications correct because f em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be next Basis Documen packground information 27	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference Ti t Learning Object	Facility: Salem 1 & SRO Group , cautions, and notes hat the cooldown dep Distracter d is incorrect e standing rad monitor prrect because subcont the tives	2 Exam Date: 1 Record Num 3. pressurization is in p ect because the coo or signals are due to poling is adequate p	003000G420 ber 29 3.3 4.0 orogress, so the idown is o the ruptured ber the stem, so
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer Steam Genera Steam Genera Steam Genera	ystems Reactor Coolant I ency Procedures Aledge of operation Distracter a is in SGTR-1 CAS ite required to be co generator, not fr transition to SG tor Tube Rupture tor Tube Rupture Describe special to 17.2, 21, 25, and 2 d for Examination	Pump System / Plan onal implications correct because i em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be nec a Basis Documen background informatic 27	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference The Learning Object in for the following st	Facility: Salem 1 & SRO Group , cautions, and notes hat the cooldown dep Distracter d is incorrect e standing rad monitor prrect because subcont the tives	2 Exam Date: 1 Record Num 3. pressurization is in pect because the coo or signals are due to poling is adequate p eps 6, 6.1, 7.3, 8, 9, 13,	003000G420 ber 29 3.3 4.0 orogress, so the idown is o the ruptured ber the stem, so 15, 15.3, 16.3,
Tier: Plant Sy 003 F 2.4 Emerge 2.4.20 Know Explanation of Answer Steam Genera Steam Genera Steam Genera Material Require	ystems Reactor Coolant I ency Procedures Aledge of operation Distracter a is in SGTR-1 CAS its required to be con- generator, not fro- transition to SG tor Tube Rupture tor Tube Rupture tor Tube Rupture tor Tube Rupture for Examination	Pump System / Plan onal implications correct because i em to trip RCPs is ontinued to target om intact SGs. D TR-3 won't be nec Basis Documen background informatic 27	RO Group of EOP warnings the stem states the s NOT in effect. temperature. The Distracter c is incon- cessary. Reference The Learning Object in for the following st	Facility:       Salem 1 &         1       SRO Group         a, cautions, and notes         nat the cooldown dep         Distracter d is incorre         e standing rad monito         porrect because subco         the         tives         eps in 2-EOP-SGTR-1: State	2 Exam Date: 1 Record Num 3. pressurization is in pect because the coo or signals are due to poling is adequate p eps 6, 6.1, 7.3, 8, 9, 13,	003000G420 ber 29 3.3 4.0 orogress, so the idown is o the ruptured ber the stem, so 15, 15.3, 16.3,

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Given the fol	lowing cond	ditions:				
- 11 and 12 - 13 CCW p	CCW pum oump is O/S	at NOP/NOT. ps are in servic and in AUTO. It occurs on 1C	е.			
Which of the fault?	following ic	dentifies the CC	W pumps which	will be running 1	minute after the	e vital bus
11 and 1	12.	an an that an				
11 and 1	13.	ander 1995 - Stan Stan Stan Stan Stan Stan Stan Stan	n de la la desta de la dest			
• 12 and 1	13.	n solar and a s		andra an	a de la companya de La companya de la comp	
<b>4</b> 11, 12, a	and 13.	in a state of the second s				
	xam Level R	Cognitive Level	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Plant Sy	rstems		RC Group	1 SRO Group		03000K202
		nt Pump System			Record Numb	er <u>30</u>
		wer supplies to the	following:			
	pumps			v vital busses respe		2.5* 2.6*
	cause the bus powered vital pump has no	busses. 11 and 1	gized. A single 4KV 2 pumps will remain Reference Title	vital bus being deer running. Distracters	are incorrect beca	ause 13 CCW
No. 1 Unit 4160	V Vital Busse	es One Line				
CCW000E005	Component Co	ooling Water Pumps 36, CC-187, CC-118, C		vés ng Water System compor	ents:	
- Alice and						
Material Required			A CONTRACTOR OF A CONTRACTOR O	estion Modification Met	hod:	
Question Source: Question Source	·····			ESUOT MOUNCACION MEL		
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Given the following conditions:
<ul> <li>Unit 1 is operating at 100% power.</li> <li>Operators are transferring CVCS Letdown from 1CV4, LETDOWN ORIFICE ISOLATION VALVE, to 1CV3, LETDOWN ORIFICE ISOLATION VALVE, IAW S1.OP-SO.CVC-0001, CHARGING, LETDOWN, AND SEAL INJECTION.</li> <li>1CV18, LETDOWN PRESSURE CONTROL VALVE, is in MANUAL.</li> </ul>
As the 1CV3 is opened, which of the following identifies how the 1CV18 will need to be adjusted, and how the 1CC71, LTDWN HX CC CONT V will respond as letdown flow changes?
The 1CV18 will be
throttled OPEN as pressure rises, and the 1CC71 modulates open in response to higher temperature.
Introttled CLOSED as pressure rises, and the 1CC71 modulates open in response to higher temperature.
throttled OPEN as pressure lowers, and the 1CC71 modulates closed in response to lower temperature.
throttled CLOSED as pressure lowers, and the 1CC71 modulates closed in response to lower temperature.
Answer a Exam Level R Cognitive Level Application Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier:     Plant Systems     RO Group     1     SRO Group     1
004 Chemical and Volume Control System 3
A4. Ability to manually operate and/or monitor in the control room:
A4.05 Letdown pressure and temperature control valves 3.6 3.1
A is correct because as more system (RCS) pressure is felt as the 2nd orifice is opened, the Pressure Control Valve must be opened to reduce pressure to maintain at NOP of 300 psig. As the letdown flow rises, the temperature control valve must modulate open to maintain setpoint temperature of 100 degrees. The distracters are all incorrect combination of directions for valve movement and system pressure and temperature changes.
Reference Title
CVCS System
Component Cooling System
CVCS00E004         LOR NCT Describe the function of the following components and how their normal and abnormal operation affects the Chemical and Volume Control System:
Letdown/Charging Letdown Isolaiton Valves, CV2, CV277 Regenerative Heat Exchanger Letdown Orifices Letdown Orifice Isolation Valves, CV3, CV4, CV5 Letdown Releif Valve, CV6
Letdown Line Containment Isolation Valve, CV7 RHR Flow Control Valve, CV8 Letdown Heat Exchanger Low Pressure Letdown Control Valve, CV18
Temperature Control Valve, CV21 Demineralizers (Mixed Bed, Cation, and Deborating Inlet Valve to Deborating Demin, CV27 Reactor Coolant Filter
Diversion Valve, CV35

Volume Control Tank           VCT Isolation Valves, CV40, CV41           Chemical Mixing Tank           Charging Pumps (Centrifugal and PD)           Minifuor Recirc. Valves, CV139, CV140           Seal pressure Control Valve, CV71           Chg. Line Containment Isol. Valves, CV68, CV69           Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79           PZR Auxilians Spray Valve, CV75           CCP Flow Control Valve, CV75           CCP Flow Control Valve, CV14           Seal Water Injection Filters           Seal Water Injection Filters           Seal Water Return Relief Valve, CV104           Seal Water Return Bolation Valve, CV164           Seal Water Return Relief Valve, CV116           Seal Water Return Relief Valve, CV116, CV284           Seal Return Cont. Isol. Valves, CV278, CV131           Excess Letdown Isolation Valve, CV132           Excess Letdown Isolation Valve, CV132           Excess Letdown Diversion Valve, CV134           d. Matkeup           Primary Water Makeup Pumps           Boric Acid Brach Tank           Boric Acid Transfer Pumps           Boric Acid Brach Tank           Boric Acid Breder           Boric Acid Breder           Primary Water Makeup Pumps           Boric Acid Breder           Boric
VCT Isolation Valves; CV40, CV41         Chemical Mixing Tank         Charging Pumps (Centrifugal and PD)         Miniflow Recir: Valves, CV13, CV140         Seal pressure Control Valve, CV71         Chg. Line Containment Isol. Valves, CV68, CV69         Charging to Loop 3 Valve, CV77. Loop 4 Valve, CV79         PZR Auxiliary Spray Valve, CV75         CCP Flow Control Valve, CV55         b. RCP Seal Water         Seal Water Injection Filters         Seal Water Return Isolation Valve, CV14         Seal Water Return Rollef Valve, CV14         Seal Water Return Rollef Valve, CV14         Seal Return Cont. Isol. Valves, CV114         Seal Return Filter         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown Isolation Valve, CV132         Excess Letdown Isolation Valve, CV132         Excess letdown Isolation Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Tanks         Boric Acid Fliver         Boric Acid Fliver         Boric Acid Fliver Control Valve, CV179         Bori
Chemical Mixing Tank Charging Pumps (Centrifugal and PD) Minifiow Recirc. Valves, CV139, CV140 Seal pressure Control Valve, CV71 Chg. Line Containment Isol. Valves, CV68 Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79 PZR Auxiliary Spray Valve, CV75 CCP Flow Control Valve, CV75 CCP Flow Control Valve, CV75 Seal Water Return Isolation Valve, CV104 Seal Water Return Relief Valve, CV115 Seal Water Return Relief Valve, CV115 Seal Return Chile Valve, CV114 Seal Water Heat Exchanger c. Excess Letdown Hoat Exchanger c. Excess Letdown Hoat Exchanger Excess Letdown Flow Cotrol Valve, CV132 Excess Letdown Diversion Valve, CV134 d. Makeup Primary Water Storage Tank Primary Water Storage Tank Boric Acid Tanks Boric Acid Tanks Boric Acid Tanks Boric Acid Blender Primary Water Flow Control Valve, CV179 Boric Acid Blender Primary Water Flow Control Valve, CV179 Boric Acid Blender Primary Water Low Control Valve, CV179 Boric Acid Blender Primary Water Storage Control Valve, CV179 Boric Acid Blender Primary Water Flow Control Valve, CV179 Boric Acid Blender Charging Pump Suction Valve, CV179 Boric Acid Blender Primary Water Flow Control Valve, CV179 Boric Acid Plow Control Valve, CV179 Boric Acid Plow Control Valve, CV179 Boric Acid Blender Primary Water Storage Control Valve, CV179 Boric Acid Plow Control Valve, CV175 CVCS00E008 LOR Identify and describe the Co
Charging Pumps (Centrifugal and PD) Minifiow Recirc. Valves, CV199, CV140 Seal pressure Control Valve, CV71 Chg. Line Containment Isol. Valves, CV68, CV69 Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79 PZR Auxiliary Spray Valve, CV75 CCP Flow Control Valve, CV55 b. RCP Seal Water Seal Water Injection Filters Seal Water Return Isolation Valve, CV104 Seal Water Return Relief Valve, CV115 Seal Return Filter Seal Water Heat Exchanger c. Excess Letdown Isolation Valve, CV131 Excess Letdown Isolation Valve, CV132 Excess Letdown Isolation Valve, CV134 d. Makeup Primary Water Storage Tank Primary Water Storage Tank Primary Water Mans Boric Acid Tanks Boric Acid Tanks Boric Acid Tanks Boric Acid Tanks Boric Acid Tanks Boric Acid Bilter Socia Acid Bilter Boric Acid Bilter CVCS00E008 LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Minifiów Recirc. Valves, CV139, CV140 Seal pressure Control Valve, CV77 Chg. Line Containment Isol. Valves, CV68, CV69 Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79 PZR Auxiliary Spray Valve, CV75 CCP Flow Control Valve, CV55 b. RCP Seal Water Seal Water Injection Filtiers Seal Bypass Flow Valve, CV114 Seal Water Return Isolation Valve, CV104 Seal Water Return Relief Valve, CV115 Seal Return Cont. Isol. Valves, CV116, CV284 Seal Return Filter Seal Water Heat Exchanger c. Excess letdown Heat Exchanger Excess Letdown Isolation Valve, CV131 Excess Letdown Diversion Valve, CV132 Excess Letdown Diversion Valve, CV132 Excess Letdown Diversion Valve, CV134 d. Makeup Primary Water Storage Tank Primary Water Makeup Pumps Boric Acid Batch Tank Boric Acid Tanks Boric Acid Tanks Boric Acid Tanks Boric Acid Tilter Boric Acid Tilter Boric Acid Filter Doric Acid Filter Boric Acid Filter Doric Acid Filter Doric Acid Filter Doric Acid Filter Doric Acid Filter Control Valve, CV172 Charging Pump Suction Valve, CV175 CVCS00E008 LOR Identify and describe the Control Room controls, indications, and alams associated with the Chemical and Volume Control
Seal pressure Control Valves, CV71         Chg. Line Containment Isol. Valves, CV68, CV69         Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79         PZR Auxiliary Spray Valve, CV75         CCP Flow Control Valve, CV55         b.       RCP Seal Water         Seal Bypass Flow Valve, CV114         Seal Water Return Isolation Valve, CV104         Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valve, CV116         Seal Return Telief Valve, CV115         Seal Return Belief Valve, CV115         Seal Return Belief Valve, CV116, CV284         Seal Return Filter         Seal Return Filter         Seal Return Disolation Valve, CV134         c.       Excess letdown         Excess letdown Heat Exchanger         c.       Excess letdown Heat Exchanger         e.       Excess letdown Heat Exchanger         Excess letdown Heat Exchanger         Primary Water Storage Tank         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Transfer Pumps         Boric Acid Filter         Bor
Chg. Line Containment Isol. Valves, CV68, CV69         Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79         PZR Auxiliary Spray Valve, CV75         CCP Flow Control Valve, CV55         b. RCP Seal Water         Seal Water Injection Filters         Seal Water Return Isolation Valve, CV104         Seal Water Return Isolation Valve, CV104         Seal Water Return Isolation Valve, CV115         Seal Return Cont. Isol. Valves, CV116, CV284         Seal Return Cont. Isol. Valves, CV278, CV131         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         c. Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Noiversion Valve, CV132         Excess Letdown New Flow Cotrol Valve, CV132         Excess Letdown Plow Cotrol Valve, CV134         d. Matkeup         Primary Water Storage Tank         Primary Water Rokeup Pumps         Boric Acid Batch Tank         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Boric Acid Filter         Boric Acid Filter Storage V175         Cortrol Valve, CV172         Charging Pump Suctio
Charging to Loop 3 Valve, CV77 PZR Auxiliary Spray Valve, CV75 CCP Flow Control Valve, CV75 Seal Water Injection Filters Seal Water Return Relief Valve, CV104 Seal Water Return Relief Valve, CV105 Seal Return Cent. Isol. Valves, CV115 Seal Return Cent. Isol. Valves, CV116, CV284 Seal Return Filter Seal Water Heat Exchanger c. Excess letdown Isolation Valves, CV278, CV131 Excess Letdown Isolation Valves, CV134 d. Makeup Primary Water Storage Tank Primary Water Storage Tank Boric Acid Tanks Boric Acid Tanks Boric Acid Filter Primary Water Flow Control Valve, CV179 Boric Acid Filter Excess Letdown Control Valve, CV179 Boric Acid Filter Primary Water Flow Control Valve, CV179 Boric Acid Filter Primary Water Storage Tank Boric Acid Filter Boric Acid Filter Control Valve, CV179 Boric Acid Filter Primary Water Storage CV172 Charging Pump Suction Valve, CV171 Boric Acid Filter Primary Water Storage CV172 Charging Pump Suction Valve, CV171 Boric Acid Filter Primary Stater Flow Control Valve, CV172 Charging Pump Suction Valve, CV173 Boric Acid Filter Primary Stater Flow Control Valve, CV171 Boric Acid Filter Primary Stater Flow Control Valve, CV172 Charging Pump Suction Valve, CV173 Boric Acid Filter Primary Stater Flow Control Valve, CV174 Control Valve, CV175 CVCS00E008 LOR Identify and describe the Control Room controls, Indications, and alams associated with the Chemical and Volume Control
PZR Auxiliary Spray Valve, CV75         CCP Flow Control Valve, CV55         b. RCP Seal Water         Seal Water Injection Filters         Seal Water Return Isolation Valve, CV104         Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valves, CV116, CV284         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Heat Exchanger         Excess Letdown Flow Cotrol Valve, CV132         Excess Letdown Flow Cotrol Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Blender         Primary Water Flow Control Valve, CV172         Charging Pump Suction Valve, CV171         Charging Pump Suction Valve, CV172         Charging Pump Suction Valve, CV181         Rapid Borate Stop Valve, CV175
CCP Flow Control Valve, CV55         b.       RCP Seal Water         Seal Water Injection Filters         Seal Water Injection Filters         Seal Water Retum Isolation Valve, CV104         Seal Water Retum Relief Valve, CV115         Seal Retum Filter         Seal Water Heat Exchanger         c.       Excess letdown         Excess Letdown Isolation Valve, CV132         Excess Letdown Heat Exchanger         c.       Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown How Cortol Valve, CV132         Excess Letdown How Cortol Valve, CV132         Excess Letdown Diversion Valve, CV134         d.       Makeup         Primary Water Storage Tank         Primary Water Storage Tank         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Blender         Primary Water Flow Control Valve, CV172         Charging Pump Suction Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and al
b. RCP Seal Water Seal Water Injection Filters Seal Bypass Flow Valve, CV114 Seal Water Return Isolation Valve, CV104 Seal Water Return Relief Valve, CV115 Seal Return Cont. Isol. Valves, CV116, CV284 Seal Return Filter Seal Water Heat Exchanger c. Excess letdown Excess Letdown Heat Exchanger Excess Letdown Heat Exchanger Excess Letdown Heat Exchanger Excess Letdown Diversion Valve, CV132 Excess Letdown Diversion Valve, CV132 Excess Letdown Diversion Valve, CV134 d. Makeup Primary Water Storage Tank Primary Water Makeup Pumps Boric Acid Tanks Boric Acid Tanks Boric Acid Tanks Boric Acid Biender Primary Water Flow Control Valve, CV179 Boric Acid Filter Boric Acid Filter Boric Acid Biender Primary Water Storage, CV172 Charging Pump Suction Valve, CV173 Lora Jelow Control Valve, CV174 Charging Pump Suction Valve, CV175 LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Seal Water Injection Filters         Seal Bypass Flow Valve, CV114         Seal Water Return Isoliton Valve, CV104         Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valves, CV116, CV284         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Batch Tank         Boric Acid Bilender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Boric Acid Filter         Boric Acid Filter         Boric Acid Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV181         Rapid Borate Stop Valve, CV175
Seal Bypass Élow Valve, CV114         Seal Water Return Isolation Valve, CV115         Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valves, CV216, CV284         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Storage Tank         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Boric Acid Filter         Boric Acid Flow Control Valve, CV179         Boric Acid Filter
Seal Water Return Relief Valve, CV104         Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valves, CV116, CV284         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Storage Tank         Boric Acid Batch Tank         Boric Acid Transfer Pumps         Boric Acid Tanks         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Primary Water Flow Control Valve, CV172         Charging Pump Suction Valve, CV174         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E
Seal Water Return Relief Valve, CV104         Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valves, CV116, CV284         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         Excess Letdown Heat Exchanger         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Transfer Pumps         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Primary Water Flow Control Valve, CV179         Boric Acid Filter Isolation Valve, CV172         Charging Pump Suction Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Seal Water Return Relief Valve, CV115         Seal Return Cont. Isol. Valves, CV116, CV284         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Fliter         Boric Acid Fliter         Boric Acid Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV185         VCT Makeup Isolation Valve, CV175
Seal Return Cont. Isol. Valves, CV116, CV284         Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Isolation Valves, CV278, CV131         Excess letdown Heat Exchanger         Excess letdown Heat Exchanger         Excess letdown Heat Exchanger         Excess letdown Flow Cotrol Valve, CV132         Excess letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Times         Boric Acid Times         Boric Acid Filter         Boric Acid Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175
Seal Return Filter         Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         Excess Letdown Flow Cotrol Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Storage Tank         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Tank         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Blender         Primary Water Slow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Seal Water Heat Exchanger         c. Excess letdown         Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Flew Cotrol Valve, CV132         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175
<ul> <li>c. Excess letdown</li> <li>Excess Letdown Isolation Valves, CV278, CV131</li> <li>Excess Letdown Heat Exchanger</li> <li>Excess letdown Flow Cotrol Valve, CV132</li> <li>Excess Letdown Diversion Valve, CV134</li> <li>d. Makeup</li> <li>Primary Water Storage Tank</li> <li>Primary Water Makeup Pumps</li> <li>Boric Acid Batch Tank</li> <li>Boric Acid Tanks</li> <li>Boric Acid Tilter</li> <li>Boric Acid Filter</li> <li>Boric Acid Blender</li> <li>Primary Water Flow Control Valve, CV179</li> <li>Boric Acid Filter</li> <li>Boric Acid Filter</li></ul>
Excess Letdown Isolation Valves, CV278, CV131         Excess Letdown Heat Exchanger         Excess Letdown Flow Cotrol Valve, CV132         Excess Letdown Diversion Valve, CV132         Excess Letdown Diversion Valve, CV134         d.         Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Boric Acid Filter         Boric Acid Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Excess Letdown Heat Exchanger         Excess letdown Flow Cotrol Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Tansfer Pumps         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Filter         Primary Water Flow Control Valve, CV172         Charging Pump Suction Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Excess letdown Flow Cotrol Valve, CV132         Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Blender         Primary Water Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Excess Letdown Diversion Valve, CV134         d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
d. Makeup         Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Filter         Boric Acid Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Primary Water Storage Tank         Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Tanks         Boric Acid Times         Boric Acid Times         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV171         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Primary Water Makeup Pumps         Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV171         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Boric Acid Batch Tank         Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV178         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Boric Acid Tanks         Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Boric Acid Transfer Pumps         Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Boric Acid Filter         Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Boric Acid Blender         Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Primary Water Flow Control Valve, CV179         Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Boric Acid Flow Control Valve, CV172         Charging Pump Suction Valve, CV185         VCT Makeup Isolation Valve, CV181         Rapid Borate Stop Valve, CV175         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Charging Pump Suction Valve, CV185 VCT Makeup Isolation Valve, CV181 Rapid Borate Stop Valve, CV175 CVCS00E008 LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
VCT Makeup Isolation Valve, CV181 Rapid Borate Stop Valve, CV175           CVCS00E008         LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
Rapid Borate Stop Valve, CV175           CVCS00E008         LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
CVCS00E008 LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control
System, including:
a) The Control Room location of Chemical and Volume Control System control bezels and indications (N/A NEO)
b) The function of each Chemical and Volume Control System Control Room control and indication (N/A NEO)
c) The effect each Chemical and Volume Control System control has upon Chemical and Volume Control System
components and operation (N/A NEO)
d) The plant conditions or permissives required for Chemical and Volume Control System Control Room controls to perform
their intended function
e) The setpoints associated with the Chemical and Volume Control System control room alarms.
Material Required for Examination
Question Source: New Question Modification Method:
Question Source Comments:

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Given the follow	ing conditions:	an a		ning of an annual language of the state of the
<ul> <li>Unit 1 has exp</li> <li>11 RHR pp is</li> <li>While attempt</li> </ul>	perienced a LBLOC C/T. ting to transfer to Co	old Leg Recirc IAW	1-EOP-LOCA-3, neit HG PUMP X-OVER `	her the 11SJ113 SI VALVE can be opened.
What effect will t	this have on the ope	eration of the CVCS	pumps?	•
11 and 12 C hot legs.	VCS pumps will co	ntinue to operate w	ith their discharge al	gned to the four RCS
11 and 12 C cold legs.	VCS pumps will co	ntinue to operate w	ith their discharge al	gned to the four RCS
One of the Opump.	CVCS pumps will ha	ave to be stopped to	prevent runout of th	e only operating RHR
discharge o	f 12 RHR pump.		neir suction cannot b	e aligned to the
	2 Mar - 1	evel Application	Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier:Plant System005Reside	ns ual Heat Removal Syste	RO Group	1 SRO Group 1	005000K104 Record Number 32
K1. Knowledge o			relationships between Re	
K1.04 CVCS			en e	2.9 3.1
Answer beca	use the CVCS pumps a	re aligned to the cold le	gs. C is incorrect becau	S pump suction. A is incorrect use the affected SJ49 will be
Shut		Reference Title	rect because of the sam	e reason that B is correct.
Transfer to Cold Leg	Recirculation			
		Learning Objectiv	28	
LCA3U1E004 Dete	ermine the indications that are		the state of the s	or each step in 2-EOP-LOCA-3
			an a	
			e e sur a la constante de la co	
Material Required for E				
Question Source: Ne Question Source Comm			stion Modification Method:	
				- ماریخه این
•			s La contrata da tre	
				and a second
Friday, December 15	, 2006 11:29:38 AM	Page 34 of 91		
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	n an			

Given	the	following	conditions
011011	u io	10 no ming	conditions

Salem Unit 2 has experienced a LBLOCA.

All equipment functioned properly EXCEPT 21 RHR pump, which seized 8 hours after SI was initiated. It will take 3 days to repair.

After consultation with the TSC, 21SJ45 RHR TO SI PMPS STOP VALVE was closed, and no other operational action related to 21 RHR pump trip has been taken.

Which of the following identifies the lineup which will be present AFTER the transfer to Hot Leg Recirc is complete?

Containment spray header flow through 21CS36 RHR CS STOP VALVE, Hot Leg Recirc from 21 SI pump through 21SJ40 SJ HDR STOP VALVE, Cold Leg Recirc through 22 RHR pump and 22SJ49 RHR DISCH TO COLD LEGS.

Containment spray header flow through 22CS36 RHR CS STOP VALVE, Hot Leg Recirc from 21 SI pump through 21SJ40 and 22SJ40, Cold Leg Recirc through 22 RHR pump and 21SJ49 RHR DISCH TO COLD LEGS.

NO flow through EITHER containment spray headers, Hot Leg Recirc from 22 SI pump through 22SJ40 SJ HDR STOP VALVE, Cold Leg Recirc through 22 RHR pump and 22SJ49 RHR DISCH TO COLD LEGS.

NO flow through EITHER containment spray headers, Hot Leg Recirc from 22 SI pump through 21SJ40 and 22SJ40, Cold Leg Recirc through 22 RHR pump and 21SJ49.

Answe	r <sub>C</sub> Exam Level	R Cognitive Level	Application	Facility: Sale	em 1 & 2	Exam Date:	12/11/2006
Tier:	Plant Systems		RO Group	1 SRO Grou	up 1	an a	005000K112
005	Residual He	at Removal System		กรุงการสารสารการการ จากสารสารสุดสารสารสาร	elemente e la contrata a de co	Record Num	33 Jer
K1	Knowladge of the	busical compositions		· · · · · · · · · · · · · · · · · · ·			

Knowledge of the physical connections and/or cause-effect relationships between Residual Heat Removal System and the following:

K1.12 | Safeguard pumps

Answer

Explanation of There will be no recirc flow through 21SJ49 because the RH19's were shut in LOCA-3 Also, there will be no spray flow through either spray header because 21CS36 is closed since 21 RHR pump isn't running, and 21CS36 was never opened.

3.1 3.4

The SI Hot Leg recirc is only through one SI pump, 22, and its associated SJ40.

**Reference Title** 

Transfer to Hot Leg Recirculation

Transfer to Cold Leg Recirculation

LOCA04E003	Determine the indications that are monito	red to ensure proper system/component operation for each step in 2-EOP-LOCA-4
LCA3U2E004		red to ensure proper system/component operation for each step in 2-EOP-LOCA-3
aterial Require	d for Examination	
uestion Source	Facility Exam Bank	Question Modification Method: Editorially Modified

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		and a second second Second second second Second second				
Given the fol	lowing condi	tions:				
- The reactor	ent pressure	d and MANUA peaked at, an	L SI initiated suc d is stable at, 3. DCA-1, Loss of R	9 psig.	· · · · · · · · · · · · · · · · · · ·	
		oices identifies R SUCT FRO	s an effect if ECC M RWST?	S injection flow	were lost by in	advertent
Adverse restrictiv	1	t conditions wi	Il exist. The crite	ria for SI flow re	duction becom	eless
		vill be initiated	from the High C ed.	ontainment pres	ssure signal at a	4 psig since
		ent is subjected	ed to a harsher e to lower.	nvironment. A	higher level of i	nstrument
		ntainment will e Phase A iso	be isolated wher lation signal.	the 21/22CA33	30 CONT SUP	INLET
Answer C	xam Level R	Cognitive Level	Comprehension	Facility: Salem 1 & 2	2 Exam Date:	12/11/2006
Tier: Plant Sy	stems		RO Group	1 SRO Group	1	006000K303
006 E	mergency Core	Cooling System		r et ben i son bosse forstander statisser en in en en en en	Record Nun	nber 34
K3. Knowled following		that a loss or ma	alfunction of the Em	ergency Core Cooli	ing System will ha	ve on the
K3.03 Contai	inment	An			1999 - 1997 -	4.2 4.4
Answer ( c l t t r l r	Adverse Conta changed, only the evel is 11% nor the same for the required MASS ook at it strictly manual or autor AUTOMATICAL	inment) only is the ne numbers asso- mally to allow tra- bse 2 numbers, ju is present in the from an absolute natic following SI LY inserted into	ement to use difference because of great ciated with a certain ansition to TRIP for S ust the uncertainty has PZR. Also, 19% (ad- evalue point of view l initiation. C is correct the SMM. D is inco automatic Phase A is	ater instrument inaction amount. For insta SI flow reduction, a as changed to requiverse) is MORE res . B is incorrect because the Adv rrect because the Adv rrect because the F	ccuracies. The crit ance the level requind 19% Adverse. are a higher readin strictive than 11% ause there is no severse Containmen Phase A isolation v	teria haven't irement for PZR The MASS is ng to ensure that (normal) is you econd SI, t values are would have been
			Reference Title	4 T T		the plants, not
Loss of Coolant	Accident				an inin land, and and an an a statistic statistic statistics and a statistic statistics and a statistic statist	
CONTMTE008	Containment Sup Containment Isola	port Systems includir	Learning Objective s and permissives for aung: (Licensed Operator & ation	omatic actuations asso	iclated with the Contain	iment and
			a state of the sta	and a state of the		
Material Required	for Examination		<u>y</u>	an a	na antina <u>a tanan an</u> ang	
Question Source:			Que	stion Modification Me	thod:	
Question Source 0						
				na na sana na s	<ul> <li>A second sec</li></ul>	
Friday, Decemi	ber 15, 2006 11:29	:38 AM	Page 36 of 91			

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discharge is		ank (PRT) ruptu			to rupture at _	psig :	and their
10; hard	piped to the	containment su	imp.				
100; hai	rd piped to th	e containment :	sump.	urtrater son a says			
10; rele	eased directly	to the containn	nent atmosp	here.		n sonna des antes de la companya de	
<b>d</b> 100; rel	eased directl	y to the contain	ment atmos	ohere.			
Answer d	Exam Level R	Cognitive Level	Memory	Facili	Salem 1 & 2	Exam Date:	12/11/2006
Tier: Plant Sy	/stems	<u> </u>	RO Grou	p 1 SF	RO Group 1	· · ·	07000K101
007 P	Pressurizer Reli	ef Tank/Quench Ta	nk System			Record Numbe	r35
		ical connections ar stem and the follow		ect relation	nships between Pro	essurizer Relie	
	ainment system	and a second	en e	an an an an an àr an àr an a			2.9 3.1
Explanation of Answer	The PRT rupturupture pressur	re disks are not har e of 100 psig.	d piped. They	discharge	directly to the cor	tainment atmo	sphere at a
			Reference	Title			T STATE
Reactor Coolar	nt						
	an an air an						
		etpoints, coincidence, b	Learning Obj	Sector States	natic actuations associ	ated with the Pres	surizer and
PZRPRTE009	Pressurizer Relie	etpoints, coincidence, bi ef Tank.		ives for autor			
	1						
							an a
Material Required	d for Examination						
Question Source	: Other Facility			Question M	odification Method:	Concept Used	
Question Source	Comments:	Davis Besse 5/10/2004 I	NRC Exam.	a terre provide la contration d'alors a direction de la contration de la contration de la contration de la cont La contration de la contrat	Ann aine an thaing agus beaglaigh the an Steam - Steam Martin - Steam -	nan ar dat haran kalar takan sa basa	
· · · · · · · · · · · · · · · · · · ·		and the second	<ul> <li>A state of the sta</li></ul>	<ul> <li>International Solution Contraction</li> </ul>	and the second se		やかしまたないかの おおやべて ちきょう しんしち しちしのいろいろい

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Tier:       Plant Systems       R0 Group       1       SR0 Group       1       007000K401         007       Pressurizer Relief Tank/Quench Tank System       Record Number       36         K4.       Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or interlock(s) which provide for the following:       36							
Start a Primary Water Pump and verify 2WR80 and 2WR82 PW TO CONTMT STOP         VALVES cycle to maintain 54-87% during draining/cooling.         © Open the 2WR80 and 2WR82, start a Primary Water Pump, and fill the PRT to the Hi level alarm (89%). Secure the Primary water pump and open the 2PR14 until the lo level alarm is reached (56%), then close the PR14. Repeat sequence as needed.         © Open the 2PR14 to start the RCDT pumps, and open the 2PR15, PRT VENT TO RCDT VENT HDR, which will start the gravity feed through the normally open 2WR80 and 2WR82.         © Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.         Answer       © Control R         © Plant Systems       © Ocroup 1         © OT       Pressurizer Relief Tank/Quench Tank System         © Contot tark cooling       2.6         Examulation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Answer         K4.       Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or interlock(s) which provide for the following:         K4.01       Quench tank cooling       2.6         Pressurizer Relief Tank Quench Tank System design feature(s) and or interlock(s) which provide for the following:       2.6         K4.01       Quench tank cooling       2.6         Pressurizer Relief Tank Quench Tank System design feature(s) and or interlock(s) which provide for the following:       2.6         Reference Title	PRT) tempe	• •					(
alarm (89%). Secure the Primary water pump and open the 2PR14 until the lo level alarm is reached (56%), then close the PR14. Repeat sequence as needed.  Copen the 2PR14 to start the RCDT pumps, and open the 2PR15, PRT VENT TO RCDT VENT HDR, which will start the gravity feed through the normally open 2WR80 and 2WR82.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.  Establish gravity feed and bleed from the PWST by opening 2WR80 and relation 007 Pressurizer Relief Tank/Quench Tank System  Establish gravity feed and bleed from the System design feature(s) and or interlock(s) which provide for the following:  K4.01 Quench tank cooling  Establish of water hammer is pointed out in NOTE prior to step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3, 1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.  Establish and Volume Control Primary Water Recovery  Establish and Volume Control Primary Water Recovery  Establish of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer	Start a	Primary Water Pump and ve	erify 2WR80 an	d 2WR82 PW			ath.
HDR, which will start the gravity feed through the normally open 2WR80 and 2WR82.         Image: Establish gravity feed and bleed from the PWST by opening 2WR80 and 2WR82, and opening 2PR14.         Answer d Exam Level R Cognitive Level Memory Facility Salem 1 & 2 Exam Date: 12/11/2006         Ter: Plant Systems Record Number 36         K4. Knowledge of Pressurizer Relief Tank/Quench Tank System 36         K4. Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or interlock(s) which provide for the following:         K4.1       Quench tank cooling         Explanation of B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title       Pressurizer Relief Tank Operation         Rescor Coolant       Common and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         PZRPRTE012       NCT Discuss the procodural requirements associated with the Pressurizer Relief Tank p	alarm (8	39%). Secure the Primary w	ater pump and	open the 2PR1	4 until the l		
2PR14.         Answer       d       Exam Level       R       Cognitive Level       Memory       Facility? Salem 1 & 2       Exam Date       12/11/2006         Ter:       Plant Systems       RO Group       1       SR0 Group       1       SR0 Group       1       0007000K401         007       Pressurizer Relief Tank/Quench Tank System       Record Number       36         K4.       Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or Interlock(s) which provide for the following:       2.6       2.9         K4.01       Quench tank cooling       2.6       2.9         Explanation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 do not cycle on PRT level.         Reference Title       Pressurizer Relief Tank Operation         Reactor Coolant       Examing Objectives         PZRPRTE012       NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation         Material Required for Examination       Question Modification Method:         Question Source       New							ENT
Tier:       Plant Systems       R0 Group       1       SR0 Group       1       007000K401         007       Pressurizer Relief Tank/Quench Tank System       Record Number       36         K4.       Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or interlock(s) which provide for the following:       36         K4.01       Quench tank cooling       2.6       2.9         Explanation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title       Pressurizer Relief Tank Operation         Reactor Coolant       Examing Objectives         PZRPRTE012       NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation         Material Required for Examination       Question Modification Method:         Question Source       New       Question Modification Method:			om the PWST b	y opening 2WF	80 and 2W	R82, and ope	ning
007       Pressurizer Relief Tank/Quench Tank System       Secord Number       36         K4.       Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or interlock(s) which provide for the following:       2.6       2.9         K4.01       Quench tank cooling       2.6       2.9         Explanation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title         Pressurizer Relief Tank Operation         Reactor Coolant         Chemical and Volume Control Primary Water Recovery         Learning Objectives         PZRPRTE012         NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination       Question Modification Method:         Question Source       New       Question Modification Method:	Answer d	Exam Level R Cognitive Level	Memory	Facility Salem 1	& 2 Exar	n Date: 12/	11/2006
K4.       Knowledge of Pressurizer Relief Tank/Quench Tank System design feature(s) and or interlock(s) which provide for the following:         K4.01       Quench tank cooling       2.6       2.9         Explanation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title         Pressurizer Relief Tank Operation         Reactor Coolant         Chemical and Volume Control Primary Water Recovery         PZRPRTE012         NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source       New         Question Source Comments:	Tier: Plant S	ystems	RO Group	1 SRO Group	1	007000K	401
provide for the following:       2.6       2.9         K4.01       Quench tank cooling       2.6       2.9         Explanation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title       Reference Title         Pressurizer Relief Tank Operation       Reactor Coolant         Chemical and Volume Control Primary Water Recovery       Learning Objectives         PZRPRTE012       NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank, procedures         Material Required for Examination       Question Modification Method:         Question Source       New       Question Modification Method:	007 F	Pressurizer Relief Tank/Quench T	ank System		Reco	ord Number	36
Explanation of Answer       B is correct because gravity feed and bleed of the tank is performed at Step 5.3, Reducing PRT Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title         Pressurizer Relief Tank Operation         Reactor Coolant         Chemical and Volume Control Primary Water Recovery         Learning Objectives         PZRPRTE012         NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source         New         Question Source			uench Tank Syster	n design feature(s	s) and or interl	ock(s) which	
Answer       Temperature by Feed and Bleed. A is incorrect because a Primary Water pump is not required, and the possibility of water hammer is pointed out in NOTE prior to step 5.3.1. C is incorrect because the WR80 and 82 are normally closed valves. D is incorrect because WR80 and 82 do not cycle on PRT level.         Reference Title         Pressurizer Relief Tank Operation         Reactor Coolant         Chemical and Volume Control Primary Water Recovery         Learning Objectives         PZRPRTE012         NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source:         New         Question Source Comments:	K4.01 Quen	ch tank cooling				2.0	6 2.9
Pressurizer Relief Tank Operation Reactor Coolant Chemical and Volume Control Primary Water Recovery   Learning Objectives  PZRPRTE012 NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures  Material Required for Examination Question Source: New Question Source Comments:	Answer	Temperature by Feed and Bleed. possibility of water hammer is po	A is incorrect bea inted out in NOTE	cause a Primary V prior to step 5.3.1	Vater pump is . C is incorrect	not required, and t because the W	/R80
Reactor Coolant         Chemical and Volume Control Primary Water Recovery         Learning Objectives         PZRPRTE012         NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source:       New         Question Source Comments:			Reference Title			2 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
Chemical and Volume Control Primary Water Recovery         Learning Objectives         PZRPRTE012       NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source:       New         Question Source Comments:	Pressurizer Re	lief Tank Operation				a 15 million to the second second	
Learning Objectives         PZRPRTE012       NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source:       New         Question Source Comments:	Reactor Coolar	nt		andra an			than A Friend Star
PZRPRTE012       NCT Discuss the procedural requirements associated with the Pressurizer and Pressurizer Relief Tank, including an explanation of major precaution and limitations in the Pressurizer and Pressurizer Relief Tank procedures         Material Required for Examination         Question Source:       New         Question Source Comments:	Chemical and	Volume Control Primary Water Re	ecovery		n min min habitation in the second and second	ي در اين در اين و در باين در اين و بري و بري و بري و بري و در باين در باين و در بري و اين و در بري و در اين و در بري در اين و در بري و در بر	fartanian - m
Material Required for Examination Question Source: New Question Source Comments:	PZRPRTE012	NCT Discuss the procedural requireme of major precaution and limitations in th	nts associated with the	Pressurizer and Press	surizer Relief Tan ocedures	k, including an expla	nation
Material Required for Examination Question Source: New Question Source Comments:			an an ann an an an ann an ann an ann an				
Question Source:     New     Question Modification Method:       Question Source Comments:							Finance and Ar Ministration
Question Source Comments:	Material Required	for Examination		n de la caracteria de la composición de T			
	Question Source	New		estion Modification I	Vethod:		
	Question Source	Comments:	A CARL AND THE ACCOUNT OF ACCOUNT OF A CARL AND THE ACCOUNT OF A CARL	(a) (m) (m) (a) (b) (b) (b) (b) (b) (b) (b) (b) (b) (b	· · · · · · · · · · · · · · · · · · ·		
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		following	0000	litionor
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CIVEII	1115		00110	

- Unit 1 is operating at 100% power.
- Pressurizer level is dropping slowly.
- CCW Surge tank level is rising slowly.

Radiation Monitor R17A, CCW Process Radiation Monitor is rising.

Which of the following identifies the component which is the source of in-leakage to the CCW system, and what action(s) will prevent the release of radiation to the atmosphere?

RHR Heat Exchanger; 1R41D will swap Aux Bldg Exh ventilation to HEPA plus Charcoal in service.

RCP Thermal barrier heat exchanger; 2CC149 Surge Tank Vent Valve will auto close on rising radiation.

RCP seal water return heat exchanger; 2CC149 Surge Tank Vent Valve will auto close on rising radiation.

Spent fuel pool cooling heat exchanger; 1R41D will swap Aux Bldg Exh ventilation to HEPA plus Charcoal in service.

Answei	b	Exam Level F	Cognitive Level	Application	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier:	Plant S	ystems		RO Group	1 SRO Group 1		008000A204
008		Component C	ooling Water System	n		Record Num	ber 37
A2.	Ability I on thos operati	e predictions	the impacts of the fo , use procedures to	llowing on the Com correct, control, or n	ponent Cooling Wate nitigate the conseque	r System and (b) ences of those ab	based normal
A2.04	PRM	S alarm					3.3 3.5
Explan: Answer		CC16 valves condition. in the therma	s. Also, the R41D do B is correct because al barrier would be ir	es NOT auto swap / the Thermal Barrie nto the CC system.	s will be isolated from ABV, the AB.RAD ha r is exposed to full se C is incorrect becaus of the CCW system.	s operators place al injection press e CCW pressure	e it in that sure, any leak e is higher than
				Reference Title			
Abnor	mal Rad	liation			and an		an independent of the standard standard

			an a	a de la segura de la segura y de la com	
and the second			Learning	Objectives	the second state of the second
ABRAD1E001	Describe t a) Rad	he operation of radiation iation monitor response t	monitors as applied o high radiation; inc	t to S2.OP-AB.RAD-0001(Q): Juding actions that occur as a res	sult of the channel in warning or alarm.
				na na ana amin'ny soratra amin'ny tanàna amin'ny tanàna amin'ny tanàna amin'ny tanàna manjara amin'ny tanàna di	
			and a second		na n
Material Require	d for Examir	nation			
Question Source	New		and the second sec	Question Modification Mel	hod:
Question Source	Comments:				
			ادر از بر به سب بدر میشد را در از	an a	

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	a jaga ta ingenerati a ngana manangana kanangana na ngana		······································					
		n transforma e la contra la Necesión						
			and a stranger of the second s	antina (n. 1997). 1940: Anna Anna Anna Anna Anna Anna Anna Ann				
Which of the following (in percent from normapressure to normal?	choices describes an e al) of correction signal fo	volution which which which which which which which we have a second strain which which we have a second strain which which we	vill require the G ter Pressure Co	REATEST magnitude				
A 1,000 gallon continuous dilution at 90% power @ EOL.								
PZR goes solid a	fter inadvertent SI with A	ALL RCPs trippe	ed.					
A single RCP trip	s while in MODE 3 with	rod control deer	nergized.	E				
A single Main Tu	rbine Governor Valve fai	ls shut in one s	econd at 100%	power.				
Answer d Exam Level	R Cognitive Level Comp	rehension Facili	ty Salem 1 & 2	Exam Date: 12/11/2006				
Tier: Plant Systems		RO Group 1 S	RO Group 1	010000K602				
010 Pressurizer	Pressure Control System			Record Number 38				
K6. Knowledge of the o Pressure Control S	of the effect of a loss or malfu	nction on the follow	ving will have on the					
K6.02 PZR				3.2 3.5				
Explanation of Answer A	ect because at EOL, with very power/pressure. A 1,000 ga Ising figures 13 and 101 of th 3 pcm. B is incorrect becaus o operate the spray valves, Al ontrol system can NOT return ignal applied to it. C is incorr P's. D is correct because the eatup, insurge, and pressure nal to limit the rise.	Ilon dilution at the e REM, the total ar se the SI will isolate ND no motive force pressure to norma rect because the pre e instantaneous (1	normal flowrate of 6 nount of reactivity a e control air to the c for the sprays, (RC al, even though it w ressure pertubation sec) downpower w	2 gpm will take 16 minutes added by the 1,000 gallon containment. With no air CPs tripped), the PZR ill have a 100% pressure will be assuaged by the ill cause a 25% load				
		teference Title						
Reactor Enginneering Man	nual			e na breeze same laran nahi nanana saka la arti e ee la ee dalama ee a				
		rning Objectives						
Control Sys The Control The function The effect e System con The plant of	I describe the Control Room controls item, including: (Licensed Operator & I Room location of Pressurizer Press n of each Pressurizer Pressure and each Pressurizer Pressure and Level nponents and operation. onditions or permissives required for ir intended function.	s, indications, and alarm & STA only) sure and Level Control Sure Level Control System Control I Control System control	System control bezels a control Room control and I has upon Pressurizer I	nd indications. I indication. Pressure and Level Control				
			•					
Material Required for Examina			Addification Method:					
Question Source: New			Comcaton metrou.					
Question Source Comments:		1992 (and and an order of product gradient gradient gradient gradient gradient gradient gradient gradient gradi						
				and a second second Second second second Second second				
		Desc 10 101						
Friday, December 15, 2006	11:29:38 AM	Page 40 of 91		n An an the gradient product of the state Mark and the comparison of the state of t				

Given the following conditions:
<ul> <li>Unit 2 is in MODE 3, NOT/NOP.</li> <li>The North 13KV bus section 6 becomes deenergized, and remains deenergized.</li> </ul>
With NO operator action, which of the following identifies ONLY the Unit 2 PZR heaters which
remain available for PZR pressure control?
21 Backup heaters ONLY.
22 Backup heaters ONLY.
21 Backup heaters and Control Group heaters ONLY.
22 Backup heaters and Control Group heaters ONLY.
Answer b Exam Level R Cognitive Level Application Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier:     Plant Systems     RO Group     2     SRO Group     2     011000K202
011 Pressurizer Level Control System 39
K2. Knowledge of bus power supplies to the following:
K2.02 PZR heaters 3.1 3.2
Explanation of Answer Using drawing 203000-SIMP, when 13KV north ring bus is deenergized, the power to 22 SPT is lost. The Unit Main Generator is not online, so there is no alternate source of power to the F and G 4KV group busses. G bus supplies power to the control group and 21 B/U group of PZR heaters (dwg 601398). This leaves only the 22 B/U heaters powered from E 4KV group bus (601397) available for pressure control. 21 B/U heaters does have a manually transferable power supply to a vital bus, but the question stem specifically says with no operator action. The distracters are wrong because they contain the incorrect heater groups.
Reference Title
Salem 500KV-4KV Electrical Distribution Simplified Oneline
No. 2 Unit Aux Building Penetration Area 2EP-4KV PZR htr. Bus Oneline
No. 2 Unit Aux Building Penetration Area 2GP-4KV PZR htr. Bus Oneline
PZRP&LE005         NCT State the power supply to the following Pressurizer Pressure and Level Control components:         a)         Variable Heaters         b)         Backup Heaters         c)         PORV Block Valves
Material Required for Examination
Question Source:         New         Question Modification Method:
Question Source Comments:

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F	'a	ge	41	of	9	1	

Given the following conditions:		
Given the following conditions.		n na na na mana kana kana kana kana kana
- Unit 1 is operating at 100% po		
- Only 1 is operating at 100% po	AW S1.IC-ST.SSP-009, Solid State Protect	tion System Train B
Functional Test.		
- Rx Trip BYPASS breaker B is	racked in and SHUT.	
- Rx Trip breaker B is racked in		nn fan fundiner úl serendakker for verkrefer verkrefer forskrigter úter forskrigter for som ut sour forste fors I
- OHA A-42, SSPS TRN B TRE	3L is in alarm as expected.	
	n an	na na sana ang ang ang ang ang ang ang ang ang
	는 것이 가지 않는 것이 있는 것이 가지 않는 것이 가지 않는 것이다. 같이 가지 않는 것은 것은 것은 것은 것은 것은 것은 것을 것을 것이다.	
The 48VDC power supply from I	B Vital bus to SSPS Train B Logic Cabine	t becomes deenergized.
Which of the following describes this configuration?	the impact of this power supply becoming	g deenergized while in
	v coils for BOTH Rx Trip Breaker B AND F	Rx Trip BYPASS breaker
become deenergized.		•
<b>b</b> The Rx will trip when the sh	ount trip coils become deenergized for BO	TH Rx Trip Breaker B
AND Rx Trip BYPASS brea	ker.	
		powered from the SSPS
	se the 48VDC supplied to the UV coils is p	Jowered norm the OOL O
Output Bay, not the Logic B	a a ser a	n an
The Rx will NOT trip becaus trip the Rx has not occurred	se the loss of the auctioneered Logic Bay I.	48VDC power supply to
Answer d Exam Level R Cogni	tive Level Application Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier: Plant Systems	RO Group 1 SRO Group 1	012000A207
012 Reactor Protection Syste	em	Record Number 40
	of the following on the Reactor Protection System	n and (b) based on those
predictions, use procedures to c	correct, control, or mitigate the consequences of th	ose abnormal operation:
A2.07 Loss of dc control power		3.2* 3.7
Explanation of A is incorrect because t	he UV coils will remain energized from the redund	ant 48VDC power supply for
Explanation of A is incorrect because the Answer BTB B. The bypass bree	the UV coils will remain energized from the redund eaker receives its UV voltage from the other Train.	ant 48VDC power supply for B is incorrect because the
Explanation of Answer Answer A is incorrect because to RTB B. The bypass breashout trip coils are ener	eaker receives its UV voltage from the other Train. roize to operate. C is incorrect because the UV is	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because t RTB B. The bypass bre shunt trip coils are ener is correct because you	eaker receives its UV voltage from the other Train.	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because t RTB B. The bypass bre shunt trip coils are ener is correct because you	eaker receives its UV voltage from the other Train. gize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because t RTB B. The bypass bre shunt trip coils are ener is correct because you	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because to RTB B. The bypass breashunt trip coils are ener is correct because you to the UV coils which with	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because to RTB B. The bypass breashout trip coils are ener is correct because you to the UV coils which with Reactor Protection System Reactor Tri	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because to RTB B. The bypass breashout trip coils are ener is correct because you to the UV coils which with Reactor Protection System Reactor Tri	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because to RTB B. The bypass breashout trip coils are ener is correct because you to the UV coils which with Reactor Protection System Reactor Tri	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals DC PowerDistribution	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer Answer A is incorrect because to RTB B. The bypass breashout trip coils are ener is correct because you to the UV coils which with Reactor Protection System Reactor Tri	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals DC PowerDistribution	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer       A is incorrect because to RTB B. The bypass breashout trip coils are energing correct because you to the UV coils which with the UV coils which withe UV coils which with the UV coils which withe UV coil	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals DC PowerDistribution	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D
Explanation of Answer       A is incorrect because to RTB B. The bypass breashout trip coils are energing correct because you to the UV coils which with the UV coils which withe UV coils which with the UV coils which withe UV coil	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals DC PowerDistribution Learning Objectives	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D nd C vital busses to lose power
Explanation of Answer       A is incorrect because to RTB B. The bypass breashout trip coils are energing correct because you to the UV coils which with the UV coils which withe UV coils which with the UV coils which withe UV coil	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals DC PowerDistribution	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D nd C vital busses to lose power
Explanation of Answer A is incorrect because to RTB B. The bypass breashout trip coils are ener is correct because you to the UV coils which with Reactor Protection System Reactor Tri Solid State Reactor Protection Train B	eaker receives its UV voltage from the other Train. rgize to operate. C is incorrect because the UV is have to lose both 48VDC power supplies from B a ill trip both the B train breakers. Reference Title ip Signals DC PowerDistribution Learning Objectives Question Modification Metho	ant 48VDC power supply for B is incorrect because the powered from the logic bay. D nd C vital busses to lose power

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Given the following conditions:

- Unit 1 is performing a reactor startup.
- Initial power PRIOR to the startup was 100 cps.
- Rx power is now 4200 cps in the Source Range.

After performing a rod pull, rod motion continues when the RAISE pushbutton is released.

IAW Salem UFSAR, how is the plant protected from this event with NO operator action, and what will be the effect on the margin to Departure from Nucleate Boiling (DNB)?

The Source Range High Neutron Flux Trip will ensure a large margin to DNB is maintained.

The Power Range High Neutron Flux Trip (low setting) will ensure a large margin to DNB is maintained.

The Source Range High Neutron Flux Trip will terminate the event, but NOT before a minimal margin to DNB is reached.

The Power Range High Neutron Flux Trip (low setting) will terminate the event, but NOT before a minimal margin to DNB is reached.

Answer	b	Exam Level	R	Cognitive Level	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier:	Plant	Systems	· · · · · · · ·		RO Group	1 SRO Group 1	0120	000K501
012		Reactor Pro	otectio	on System			Record Number	41
	Knov Syste		opera	ational implications	s of the following c	oncepts as they apply to	the Reactor Prote	ection
K5.01	DN							3.3* 3.8
Explana Answer	tion o	accident) s 15.2.1.3 st	states ates:	: "Reactor trip is a "There is a large	assumed to be initi margin to DNB du	uncontrolled RCCA withd ated by power range neu ring the transient since th degree of subcooling at	tron flux (low setti le rod surface hea	ng)." It flux

**Reference Title** 

Salem Updated Final Safety Analysis Report

		Learning Objectives
TAA000E015	Assess TAA conditions that af	
	1. A	
iterial Required	for Examination	
estion Source:	Facility Exam Bank	Question Modification Method: Significantly Modified
Question Source:		Question Modification Method: Significantly Modified ON Q48702, Replaced 2 of the distracters with 2 new distracters, (PR Flux trips to SR Flux

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Given the following conditions: ANGER .

Unit 1 is operating at 100% power.

PT-948C, Containment Pressure detector Channel II, fails LOW.

Which of the following describes the Safety Injection and Containment Spray actuation coincidences PRIOR to taking any action?

			·····
Safety In	jection- 2/2; Containment Spray- 1/3		Anna an
Safety Ir	jection- 2/3; Containment Spray- 2/3		
Safetv Ir	jection- 2/2; Containment Spray- 2/3		
	jection- 1/3; Containment Spray- 1/3		and a comparison of the second s
			40/14/2020
	cam Level R Cognitive Level Application Facility Salem 1 & 2	Exam Date:	12/11/2006 00K502
Tier: Plant Sy			
المعال للمحمد والمحمد و	ngineered Safety Features Actuation System	Record Number	42
	ge of the operational implications of the following concepts as they apply to t Actuation System:	he Engineered Sa	fety
K5.02 Safety	system logic and reliability		2.9 3.3
á	THREE remaining channels. Safety Injection is normally 2/3 channels re- actuate. Channel II indication feeds Bistable Switches 948C for Spray Initiation.	eading 4 psig, deer on, AND bistable s	switch
Desta Dest 8	Reference Title		
Reactor Prot. &	Process Cont. Systems Safety Injection Interconnections		
	Learning Objectives		
	LOR State the setpoints, coincidence, blocks and permissives for all Reactor Trips and Safety	Injections actuations (	Licensed
RXPROTE012	Operator and STA Only)	injections actuations (	LIGENSEG
	NCT List all Reactor Trips and Safety Injections (Non-Licensed Operator)		
Material Required	for Examination	n in the second state of the second	
Question Source:	New Question Modification Method:		
Question Source	omments:		
· ·			

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Given the following conditions:

- Unit 2 is operating at 100% power.
- A Control Bank control rod drops partially into the core.
- The reactor does NOT trip.

Which of the following describes a condition that will result if the reactor is left in this configuration?

- The flux in the area of the dropped rod will be depressed and cause lodine production to rise. Conversely, other areas of the core will see higher flux generation, causing Xenon burnout rate to lower. As iodine levels in the lower flux areas of the core build up, reversal of the initial situation occurs, and a Xenon oscillation is occurring.
- The Heat Flux Hot Channel factor will rise to a value in excess of the allowed linear heat generation at elevations in the core furthest from the dropped rod. This will cause the Departure from Nucleate Boiling Ratio to drop less than required, and some localized steam blanketing can occur at the extreme edges of the core x-y elevations.
- The depressed flux in the area of the dropped rod causes Xenon to build in at a higher rate. Conversely, the higher flux in other areas of the core causes Xenon burnout rate to rise. As iodine levels in the higher flux areas of the core build up, reversal of the initial situation occurs, and a Xenon oscillation is occurring.
- The radial flux tilt will cause certain areas of the core to burn out faster than others, leading to a condition in which an extended coastdown to refueling would be required due to the inability to maintain AFD within the target band without reducing power to less than 90%.

Answei	c	Exam Level	R	Cognitive Level	Comprehension	Facility: Salem 1	& 2	Exam Date:	12/11/2006
Tier:	Plant	Systems			RC Group	2 SRO Group	2	01	5000K511
015		Nuclear Inst	rument	ation System				Record Number	43
K5.	Know Instru	ledge of the o mentation Sy	perationstem:	onal implication	s of the following co	oncepts as they a	pply to th	ne Nuclear	
K5.11	Axia	al flux imbala	nce, in	cluding long-rai	nge effects		a an a san shan she ya		3.3 3.7
Explana		concern with correct bec power oscil the followin individual c core, and th xenon-135 135 causes decreases reverses th power. (4) 1 on the orde	th hot c ause L lations ontrol burnou s a furth where e initia Repetite r of ab r levels	channel factor is arge thermal re- steps. (1) An in rod movement e, in the iodine- it allows the flu- ner reduction in the flux is low. I situation. Flu- tion of these par out 15 hours. We by a factor of t	es the opposite of his a radial tilt causin eactors with little flue on non-uniform prese itial lack of symmet or misalignment) ca 135 buildup and th x to increase furthe flux. The iodine c (3) As soon as the x decreases in this tterns can lead to y vith little change in hree or more. D is	g a much high flu x coupling betwee ince of xenon-135 ry in the core pow auses an imbalance e xenon-135 abso r, while in the low oncentration incre- odine-135 levels area, and the forr cenon oscillations overall power level incorrect becaus	x at certa en regior 5. The m ver distri ce in fiss orption. ( -flux reg eases wh build up ner low-f moving el, these	ain areas of the s may experie bechanism is do bution (for exa- ion rates within 2) In the high-f ion, the increas here the flux is sufficiently, de lux region incre about the core oscillations ca	e core. C is nce spatial escribed in mple, n the reactor lux region, se in xenon- high and cay to xenon eases in with periods in change the
					Reference Title				
		pecifications-						·····	
Salem	UFSA	R- Rod Clust	er Con	trol Assembly N	Misalignment				. 2.7 State and A. C. 192
<u>·</u>									
- DVOD			offects -	f control and motion	Learning Objectiv n, boration, and dilution		14. 22		and a state of the s
L	ERE019	. l.,			معاديم والعاري والمنام فالمحمول وأراد والأراد والعار	مىلىيە بىلىغى بىلىغى بىلىغى ئىلىكى <u>بىلىنى بىلى</u>	i di seria da segundaria.		and the second
Frid	lay, Dec	ember 15, 2006	11:29:39	9 AM	Page 45 of 9		غریب در معدری محکوم	وهوز ويوني فرانين منطقه مسجر المسيح مريد	ىرىنى بىرىمىيەر تېرىغى ئىرىلىرىنىيەر ئۇيۇ بىلارىتىرىكى ئىرىكىيىلىرىغۇ يېرىكىيىلىرىغۇ تېرىكىيىلىرىغۇ
				gitta da	واليولي فيترك بالمرتجع والمرتجع	i ta a a a a a a a a a a a a a a a a a a			

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Question Modification Method:

Material Required for Examination

Question Source: New

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Given the following conditions:
- A small break LOCA has occurred on Unit 1.
- The RVLIS Summary Page is displaying DYNAMIC RANGE.
- During the subsequent cooldown and depressurization, DYNAMIC RANGE indication remaine
constant at 80% with RCPs running.
Which of the following describes DYNAMIC RANGE response and reason for that response durin
the cooldown and depressurization?
It was lower than 80%. Lowering pressure and rising density creates a RVLIS indication error
It was higher than 80%. Lowering pressure and rising density creates a RVLIS indication err
It was accurate at 80%. RVLIS DYNAMIC RANGE is pressure and temperature compensate
It was accurate at 80%. D/P is an accurate measure of void content, without compensation.
Answer C Exam Level R Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11
Tier:       Plant Systems       RO Group       2       SR0 Group       2       016000A30
016 Non-Nuclear Instrumentation System Record Number:
Explanation of RVLIS is pressure and temperature compensated for accuracy. FSAR Section 5.6.5 page 5.6-6.
Reference Title
Final Safety Analysis Report
Learning Objectives
RVLIS0E008 Identify and describe the Control Room controls, indications, and alarms associated with the Reactor Vessel Level
Instrumentation System, including:
b) The function of each Reactor Vessel Level Instrumentation System Control Room control and indication (N/A NEU)
<ul> <li>c) The effect each Reactor Vessel Level Instrumentation System control has upon Reactor Vessel Level Instrumentation System components and operation (N/A NEO)</li> </ul>
<ul> <li>The plant conditions or permissives required for Reactor Vessel Level Instrumentation System Control Room controls</li> </ul>
e) The setpoints associated with the Reactor Vessel Level Instrumentation System control room alarms
Material Required for Examination
Question Source: Facility Exam Bank Direct From Source
Question Source Comments: VISION Q60901

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Given the following conditions:

- Unit 1 has experienced a Large Break LOCA from 100% power operation.
- Before operators can respond, containment pressure rises to 10 psig.
- Off-site power remains available.

Assuming ALL automatic actions occur as expected, which of the following describes CFCU operation BEFORE operators take any MANUAL actions?

CFCUs running in HIGH speed...

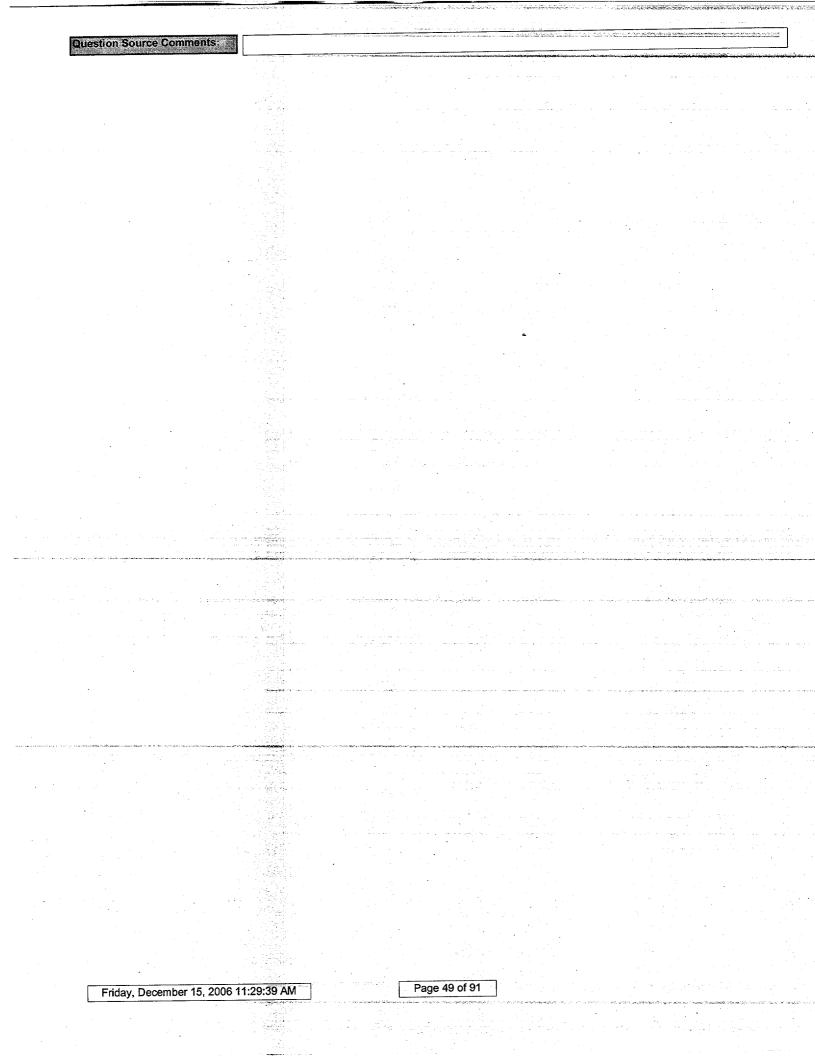
receive a simultaneous HIGH speed STOP signal and a LOW speed START signal, all airflow will be directed through the ROUGHING filters ONLY.

receive a HIGH speed STOP signal, followed 20 seconds later by a LOW speed START signal, all airflow will be directed through the HEPA filters ONLY.

remain in HIGH speed with all airflow directed through the Roughing Filters, all other available CFCUs IMMEDIATELY start in LOW speed with all airflow through the HEPA Filters ONLY.

remain in HIGH speed until their respective Vital Bus EDG is up to speed, then receive a HIGH speed STOP signal, followed 5 seconds later by a LOW speed START signal, all airflow will be directed through theHEPA AND ROUGHING filters.

Answerb	Exam Level R	Cognitive Level	Memory	Facility: Salem	1&2	Exam Date:	12/11/2006
Tier: Plant Sy	vstems	<u>1997</u> 91	R0 Group	1 SRO Group	1	0220	000K402
022	containment Cool	ing System	and a shear many and an	and a second	n a la construction de la construct	Record Number	45
followin	g:	and and the second s	em design feature(s		-	ch provide for the	I
			changes with conta				3.1* 3.4*
Answer	expected. There and the stem stat most equipment i HIGH speed. In incorporated into path in HIGH spe	will be an AUTC tes cont pressure is immediately lo order to protect t the automatic Lo eed is through the	manual action has DMATIC Safety Inject is 10 psig. This we haded onto its vital the motors when sh OW speed start sig e rouging filter, whe g filter is removed	ction when cor ill start the SEC busses. Howe iffing to LOW s nal. (See dwg on the LOW spo	ntainment   C MODE 1 ver, the CF speed, a 20 203673 C- eed breake	pressure reaches sequencer. In M FCUs normally op 0 second time del 1). The normal er is shut, the HE	4 psig, IODE 1, berate in lay is lair flow PA filter is
100 S			Reference Title	,	-	Art and Mark	tin titler a <del>r</del> in t
No. 1& 2 Units	Safeguards Eme	rgency Loading	Sequence	ىنىرىشى سىزىھۇملۇرلەن(ىلار ئىيەتلەردۇرىكى يەر بىلىرىغان يەر بىلىرىغان يەر بىلىرىغان يەر بىلىرىغان يەر بىلىرىغان 		and the second	alan ang alan ang ang ang ang ang ang ang ang ang a
No. 1& 2 Units	Safeguards Eme	rgency Loading	Sequence				
		24-91					
and the second sec	1999 (C. 1997)	line of the					
CONTMTE014		ion/Containment Inte ons Hatch em	inment and Containme agrity	nt Support System	s with the fol	lowing:	
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Material Required	for Examination		<u> </u>				
Question Source:	New		Que	stion Modificatio	n Method:		
Friday, Decem	ber 15, 2006 11:29:3	9 AM	Page 48 of 9	n.			



In addition to pressing the STOP PB on CC1, which ONE of the following identifies ALL required actions for stopping the Containment Spray Pumps following automatic initiation of Containment Spray (CS)?	
Reset Safety Injection and reset associated SEC.	
Reset Containment Isolation Phase B Isolation signal ONLY.	<b>S</b>
Reset Safety Injection Signal, then reset Containment Isolation Phase B.	The Marcalyse
Reset Containment Isolation Phase A, ensure containment pressure less than 14 psig (CS and Phase B initiating signal clear), reset associated SEC	nd
Answer a Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2	2006
Tier:     Plant Systems     RO Group:     1     SRO Group:     1	;
026 Containment Spray System Record Number	46
A4. Ability to manually operate and/or monitor in the control room:	
A4.05 Containment spray reset switches 3.5	3.5
with a standing SI signal input, it is blocked after initiation until the Rx trip breakers have been cycled. Distracter b is incorrect because the Phase B signal is only an AND logic with SEC start signal for STARTING the pump. The pump can be stopped with a standing Phase B signal. Distracter c is incorrect because for the same reason as b. Distracter d is incorrect because Phase A is not associated with Phase B, and there is no automatic Phase B reset.	
Reference Title	
Reactor Protection System Safeguards Actuation Signals	
Reactor Protection System Reactor Trip Signals	
Logic Containment Spray System Containment spray Pumps	
CSPRAYE008         Identify and describe the Control Room controls, indications, and alarms associated with the Containment Spray System, including:           The Control Room location of Containment Spray System control bezels and indications. (Licensed Operator & STA only)           The function of each Containment Spray System Control Room control and indication. (Licensed Operator & STA only)           The effect each Containment Spray System control has upon Containment Spray System components and operation. (Licensed Operator & STA only)	sed
Operator & STA only) The plant conditions or permissives required for Containment Spray System Control Room controls to perform their intended function. (Licensed Operator & STA only) The setpoints associated with the Containment Spray System control room alarms. (Licensed Operator & STA only)	
Material Required for Examination	
Question Source:         Other Facility         Question Modification Method:         Significantly Modified	
Question Source Comments: Beaver Valley-2 2002 NRC RO Exam Question 24, Modified correct answer to reflect Salem logic for Cont Spray pump stop and editorial mod to reflect Salem terminology.	

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Given the following cond	ditions:		and the second	
- A LBLOCA has occur	rred		a na stadada a s	
	The Article State of the State	RE COOLING	Critical Safety Func	tion Status Tree, FRCC-
1, "Response to Inadeq			in progress.	
<ul> <li>Containment hydroge</li> </ul>	en concentration	IS 4.5%.	an a	a serve a state server a serve
Which of the following s	tates the action t	that is to be tak	en in regards to ope	eration of the hydrogen
recombiners?				
Place ONE hydroge	en recombiner in	service to redu	ice the hydrogen co	ncentration.
Place BOTH hydrog	gen recombiners	in service to re	educe the hydrogen	concentration.
DO NOT operate th	e hydrogen reco	mbiners since	they could result in i	gnition of the hydrogen.
DO NOT operate the effective at this con		imbiners since	the hydrogen recom	biner system will not be
Answer c Exam Level R	Cognitive Level	Memory	Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier: Plant Systems		RO Group	2 SRO Group 2	028000A203
	mbiner and Purge (	the second second second devices of the second s	en meneratur era era era era era era era era era er	Record Number 47
A2. Ability to (a) predict th and (b) based on thos those abnormal opera	e predictions, use p	owing on the Hyd rocedures to corre	rogen Recombiner and F ect, control, or mitigate th	Purge Control System ne consequences of
A2.03 The hydrogen air co equipment damage	ncentration in exce in containment	ss of limit flame p	opagation or detonation	with resulting 3.4 4.0
	ep 24 asks if contair service. The opera I2. It also states tha	ting procedure sp	ecifies to place the recor	% to place a SINGLE nbiners in service BEFORE
reaching 1701		Reference Title		and the second second second
Loss of Coolant Accident				and a set of the set o
Hydrogen Recombiner Opera	tion			
		Learning Objectiv		
			and the line of the provide the state of the	
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Material Required for Examination	444			
Question Source: Other Facility Question Source Comments:	4/27/2004 Ginna NRC E		estion Modification Method:	Editorially Modified
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	and a second			
		•		and a start of the
Friday, December 15, 2006 11:2	9:39 AM	Page 51 of 9	1	

and the second second second

in.

<ul> <li>Unit 1 is operating at 100% power.</li> <li>Control room operators are preparing to perform a Containment Pressure Relief IAW S1.OP-SO.CBV-0002, CONTAINMENT PRESSURE-VACUUM RELIEF SYSTEM OPERATION.</li> <li>Containment radiation levels are NORMAL for 100% power operation with no failed fuel.</li> <li>After opening the 1VC5 and 1VC6 to initiate the pressure relief, which choice describes how the espective radiation monitors indication will respond?</li> <li>1R12A - Containment Gas Effluent</li> <li>1R41B - Plant Vent Noble Gas Intermediate Range</li> <li>1R12A rises; 1R41B rises; 1R41D rises.</li> <li>1R12A rises; 1R41B constant; 1R41D constant.</li> <li>1R12A constant; 1R41B rises; 1R41D constant.</li> <li>1R12A constant; 1R41B constant; 1R41D rises.</li> <li>1R12A constant; 1R41B constant; 1R41D rises.</li> <li>IR12A constant; IR41B constant; IR41D rises.</li> <li>IR12A constant; IR41B rises; IR41D rises.</li> </ul>	· · · · · · · · · · · · · · · · · · ·		
Control room operators are preparing to perform a Containment Pressure Relief AW S1.0P- SO. CBV-0002, CONTAINMENT PRESSURE-VACUUM RELIEF SYSTEM OPERATION. Containment radiation levels are NORMAL for 100% power operation with no failed fuel. After opening the 1VC5 and 1VC6 to initiate the pressure relief, which choice describes how the espective radiation monitors indication will respond? IR12A - Containment Gas Effluent IR41B - Plant Vent Noble Gas Intermediate Range IR12A rises; IR41B rises; IR41D rises. IR12A rises; IR41B rises; IR41D rises. IR12A constant; IR41B rises; IR41D constant. IR12A constant; IR41B rises; IR41D constant. IR12A constant; IR41B rises; IR41D rises. IR12A constant; IR41B rises; IR41D rises. IR12A constant; IR41B rises; IR41D rises. IR12A constant; IR41B constant; IR41D rises. IR12A rises ris rises rises rises rises rises rises rises ri	Given the following conditions:		
Control room operators are preparing to perform a Containment Pressure Relief AW S1.0P- SO. CBV-0002, CONTAINMENT PRESSURE-VACUUM RELIEF SYSTEM OPERATION. Containment radiation levels are NORMAL for 100% power operation with no failed fuel. After opening the 1VC5 and 1VC6 to initiate the pressure relief, which choice describes how the espective radiation monitors indication will respond? IR12A - Containment Gas Effluent IR41B - Plant Vent Noble Gas Intermediate Range IR12A rises; IR41B rises; IR41D rises. IR12A rises; IR41B rises; IR41D rises. IR12A constant; IR41B rises; IR41D constant. IR12A constant; IR41B rises; IR41D constant. IR12A constant; IR41B rises; IR41D rises. IR12A constant; IR41B rises; IR41D rises. IR12A constant; IR41B rises; IR41D rises. IR12A constant; IR41B constant; IR41D rises. IR12A rises ris rises rises rises rises rises rises rises ri	Unit 1 is operating at 100% power		an an an ann an an an an an an an an an
SO. GRV-0002, CONTAINMENT PRESSURE-VACUUM RELIEF SYSTEM OPERATION. Containment radiation levels are NORMAL for 100% power operation with no failed fuel. After opening the 1VC5 and 1VC6 to initiate the pressure relief, which choice describes how the espective radiation monitors indication will respond? IR12A - Containment Gas Effluent IR12B - Plant Vent Noble Gas Intermediate Range IR41D - Plant Vent Noble Gas Release Rate IR12A constant; IR41B rises; 1R41D constant. IR12A constant; IR41B constant; IR41D constant. IR12A constant; IR41B constant; IR41D rises. IR12A constant; IR41B rises; IR41D rises ris	Control room operators are preparing to r	erform a Containment Pressur	e Relief IAW S1.OP-
Containment radiation levels are NORMAL for 100% power operation with no failed fuel.  After opening the 1VC5 and 1VC6 to initiate the pressure relief, which choice describes how the espective radiation monitors indication will respond?  IR12A - Containment Gas Effluent IR41B - Plant Vent Noble Gas Intermediate Range IR41D - Plant Vent Noble Gas Release Rate IR12A rises; 1R41B rises; 1R41D rises. IR12A rises; 1R41B rises; 1R41D rises. IR12A constant; 1R41B rises; 1R41D constant. IR12A constant; 1R41B rises; IR41D constant. IR12A constant; IR41B rises; IR41D constant. IR12A rises; IR41D constant; IR41D rises. IR12A rises; IR41D constant; IR41B rises; IR41D rises. IR12A rises; IR41B rises; IR41A rises; IR41B rise; IR41B rise; IR41B rise; IR41B rise; IR41A rises; IR41B rise; IR41A rise; IR41A rise; IR41B rise; IR41B rise; IR41A rise; IR41B rise; IR41A rise;	SO CBV-0002 CONTAINMENT PRESSUR	E-VACUUM RELIEF SYSTEM	OPERATION.
espective radiation monitors indication will respond? IR12A - Containment Gas Effluent IR41B - Plant Vent Noble Gas Intermediate Range IR41D - Plant Vent Noble Gas Release Rate IR41D rises; 1R41B constant; 1R41D constant. IR412A constant; 1R41B constant; 1R41C constant. IR412A constant; 1R41C constant; 1R41C constant. IR412A constant; 1R41D constant. IR412A constant; 1R41B constant; 1R41C constant. IR412A constant; 1R41B constant; 1R41D const	Containment radiation levels are NORMA	L for 100% power operation with	th no failed fuel.
espective radiation monitors indication will respond? IR12A - Containment Gas Effluent IR41B - Plant Vent Noble Gas Intermediate Range IR41D - Plant Vent Noble Gas Release Rate IR41D rises; 1R41B constant; 1R41D constant. IR412A constant; 1R41B constant; 1R41C constant. IR412A constant; 1R41C constant; 1R41C constant. IR412A constant; 1R41D constant. IR412A constant; 1R41B constant; 1R41C constant. IR412A constant; 1R41B constant; 1R41D const		the encourse relief which show	co describes how the
1R12A - Containment Gas Effluent         1R41B - Plant Vent Noble Gas Intermediate Range         1R41D - Plant Vent Noble Gas Release Rate         1R12A rises; 1R41B rises; 1R41D rises.         1R12A rises; 1R41B constant; 1R41D constant.         1R12A constant; 1R41B constant; 1R41D constant.         1R12A constant; 1R41B constant; 1R41D rises.         Immediate Constant; 1R41D rises         Immediate Containment Action revels         Immediate Containment Action	After opening the 1VC5 and 1VC6 to Initiate	the pressure relief, which choice respond?	
1R41B - Plant Vent Noble Gas Intermediate Range         IR41D - Plant Vent Noble Gas Release Rate         IR12A rises; 1R41B rises; 1R41D rises.         IR12A rises; 1R41B constant; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B constant; 1R41D rises.         Reserver       Constant; 1R41B constant; 1R41D rises.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D rises.         IR12A constant; 1R41B rise; 1R41D rises.         IR1       And C are incorect because 1R41B is an intermediate range monitor that normality does not have sample flow through it.	espective radiation monitors indication with		
1R41D - Plant Vent Noble Gas Release Rate         In12A rises; 1R41B rises; 1R41D rises.         In12A rises; 1R41B constant; 1R41D constant.         In12A constant; 1R41B constant; 1R41D rises.         In12A constant; 1R41B rises; 1R41D rises.         In12A constant; 1R41B constant; 1R41D rises.         In12A constant; 1R41B constant; 1R41D rises.         In12A constant; 1R41B constant; IR41D rises.         All Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including:         A1. Ability to predict and/or monitor reage IR41A is an intermediate range monitor finat pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor finate range monitor finat finate dof monitoring range. It's indication will not change duri	1R12A - Containment Gas Effluent	د او بایا استان بیش اظراف این به دارد این با میراند. بیمه کار این این با در این ا در این میرون استان بیش این این این میرون موجود میرون این میرون این این این این این این این این این ای	
IR12A rises; 1R41B rises; 1R41D rises. IR12A rises; 1R41B constant; 1R41D constant. IR12A constant; 1R41B rises; 1R41D constant. IR12A constant; 1R41B rises; 1R41D constant. IR12A constant; 1R41B constant; 1R41D rises. Answer, d FamLevel R Containter level Comprehension Facility: Salem 1 & 2 Kam Date 12/11/2006 IC Containment Purge System Ro Group 2 SRO Group 2 Record Number 48 A1. Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including: A1.02 Radiation levels 3.4 3.4 A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because of the above and the R41D provides the gascous effluent release rate (uCl/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (co/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent. Reference Title CONTMIE012 Discuss the procedural requirement associated with the Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures CONTMIE012 Discuss the procedural requirements associated with the Containment Support Systems procedures CONTMIE012 Discuss the procedural requirements associated with the Containment Support Systems procedures CONTMIE012 Discuss the procedural requirements associated with the Containment Support Systems procedures CONTMIE012 Discuss the procedural requirements associated with the Containment Support Systems procedures CONTMIE012 Discuss the procedural requirements associated with the Containment Support Systems procedures Discuss the procedural requirements associated with the Containment Support Systems procedures C			
IR12A rises; 1R41B constant; 1R41D constant.         IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B constant; 1R41D constant.         IR12A rises; 1000000000000000000000000000000000000		Construction of the second	
IR12A constant; 1R41B rises; 1R41D constant.         IR12A constant; 1R41B constant; 1R41D rises.         Answer       IR12A containment Purge System         System controls including:       IR12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cot/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title       It will NOT         CONTINTEO12       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution an	1R12A rises; 1R41B rises; 1R41D rises	na Tari siya sa kata manaka kata kata kata kata kata kata kata	a na ana ang ang ang ang ang ang ang ang
IR12A constant; 1R41B constant; 1R41D rises.         Answer       Cognitive Level       Comprehension       Facility       Salem 1 & 2       Exam Date:       12/11/2006         Iver       Plant Systems       R       Cognitive Level       Comprehension       Facility       Salem 1 & 2       Exam Date:       12/11/2006         029       Containment Purge System       Record Number       48         A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including:       3.4       3.4         A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including:       3.4       3.4         A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including:       3.4       3.4         A1.02       Redication levels       3.4       3.4         Maswer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the Pressure relief is indication will not change during a pressure relief with normally does not have sample flow through it. It's sample flow will start when the 10 range 1R41A monitor rears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment relation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range	IR12A rises; 1R41B constant; 1R41D c	constant.	
Answer       d       Exam Levell       R       Cognitive Levell       Comprehension       Eaclity       Salem 1 & 2       Exam Date:       12/11/2006         Direr       Plant Systems       RO Group       2       0/29000A102         D29       Containment Purge System       Record Number       48         A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including:       3.4       3.4         A1.02       Radiation levels       3.4       3.4         Explanation of Answer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         CONTINTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         CONTINTE012       Discuss t	1R12A constant; 1R41B rises; 1R41D c	xonstant.	
Image: d       Examination       Complementation       2       SKO Group       2       0290000A102         Containment Purge System       Record Number       48         A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge         System controls including:       3.4       3.4         A1.02       Radiation levels       3.4       3.4         Explanation of Pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow thill start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow         (coc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title         Containment Pressure-Vacuum Relief System operation         Learning Objectives         CONTINTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems procedures         Material Reguired for Examination       Image: System Containment and Containment Support Systems procedures         Previous 2 NRC Exams       Question Modification Method;       Direct From Source <td>1R12A constant; 1R41B constant; 1R4</td> <td>1D rises.</td> <td></td>	1R12A constant; 1R41B constant; 1R4	1D rises.	
Containment Purge System       Record Number       48         A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge System controls including:       3.4       3.4         A1.02       Radiation levels       3.4       3.4         Explanation of Answer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R1B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lor ange 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCl/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Containment Pressure-Vacuum Relief System operation         Learning Objectives         CONTMTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems procedures         Material Required for Examination         Material Required for Examination         Previous 2 NRC Exams       Question Modification Method:       Direct From Source	Answer d Exam Level R Cognitive Level Cor		
A1.       Ability to predict and/or monitor changes in parameters associated with operating the Containment Purge         System controls including:       3.4         A1.02       Radiation levels         Explanation of Answer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCl/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         CONTIMTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Modification Method:         Previous 2 NRC Exams       Question Modification Method:	Tier: Plant Systems	RO Group 2 SRO Group 2	
System controls including:       3.4         A1.02       Radiation levels       3.4         Explanation of Answer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the fo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCl/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title       Image: Containment Pressure-Vacuum Relief System operation         Containment Pressure-Vacuum Relief System operation       Image: Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Image: Containment Pressure Previous 2 NRC Exams         Question Source:       Previous 2 NRC Exams			
A1.02       Radiation levels       3.4       3.4         Explanation of Answer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title       Image: Containment Pressure-Vacuum Relief System operation         Containment Pressure-Vacuum Relief System operation       Image: Containment and Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Image: Previous 2 NRC Exams       Image: Direct From Source	A1. Ability to predict and/or monitor changes in pa	rameters associated with operating the	he Containment Purge
Containation of Answer       A and B are incorrect because 1R12A is sampling containment atmosphere, so it will NOT rise when the pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title         Containment Pressure-Vacuum Relief System operation         Learning Objectives         Containment or major precaution and limitations in the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination         Previous 2 NRC Exams       Question Modification Method:       Direct From Source			3.4 3.4
Answer       pressure relief is started. A and C are incorrect because 1R41B is an intermediate range monitor that normally does not have sample flow through it. It's sample flow will start when the lo range 1R41A monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title       Image: Containment Pressure-Vacuum Relief System operation         Learning Objectives       Image: Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Image: Containment Pressure Previous 2 NRC Exams         Question Modification Method:       Direct From Source		is sampling containment atmosphere	
monitor nears its high end of monitoring range. It's indication will not change during a pressure relief with NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Titie         Containment Pressure-Vacuum Relief System operation         Learning Objectives         CONTMTE012         Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination         Question Source:       Previous 2 NRC Exams	Answer pressure relief is started. A and C are	e incorrect because 1R41B is an inter	mediate range monitor that
NORMAL containment radiation levels. D is correct because of the above and the R41D provides the gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title         Containment Pressure-Vacuum Relief System operation         Learning Objectives         CONTMTE012         Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Modification Method:       Direct From Source	normally does not have sample flow the	rough it. It's sample flow will start where a same start will not change the single start of the second start will not change the second start of the second start will not change the second start of the second start will not change	hen the lo range 1R41A
gaseous effluent release rate (uCi/sec) by combining (product of) the on-range R41A through R41C with plant vent flow (cc/sec). It will rise when the pressure relief is initiated, and also provides automatic termination of release on hi gaseous effluent.         Reference Title         Containment Pressure-Vacuum Relief System operation         Learning Objectives         CONTMTE012         Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Modification Method:       Direct From Source	NORMAL containment radiation level	s. D is correct because of the above a	and the R41D provides the
Image: Constant of the second seco	gaseous effluent release rate (uCi/sec	;) by combining (product of) the on-rai	nge R41A through R41C with
release on hi gaseous effluent.         Reference Title         Containment Pressure-Vacuum Relief System operation         Learning Objectives         Learning Objectives         CONTMTE012         Discuss the procedural requirements associated with the Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Modification Method:       Direct From Source	(cc/sec). It will rise when the pressure	e relief is initiated, and also provides	automatic termination of
Containment Pressure-Vacuum Relief System operation  Learning Objectives  CONTMTE012 Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures  Material Required for Examination  Question Source Previous 2 NRC Exams Question Modification Method: Direct From Source	release on hi gaseous effluent.		
Learning Objectives         CONTMTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Source:         Previous 2 NRC Exams       Question Modification Method:			
CONTMTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination	Containment Pressure-Vacuum Relief System opera	tion	
CONTMTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Source:         Previous 2 NRC Exams       Question Modification Method:			Manual III and I
CONTMTE012       Discuss the procedural requirements associated with the Containment and Containment Support Systems, including an explanation of major precaution and limitations in the Containment and Containment Support Systems procedures         Material Required for Examination       Question Modification Method:       Direct From Source		earning Objectives	provide the second second
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			ningen in sentenen server produktion en senten behaven in star in senten in senten in senten in senten in sente

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Given the following conditions:
- Unit 2 is in MODE 6.
<ul> <li>Fuel movement is in progress in both the containment and Fuel Handling buildings.</li> </ul>
- Operators in containment report lowering Rx cavity level.
<ul> <li>Due to a mis-communication, the Fuel Pool Gate valve is closed with the transfer cart in its way.</li> <li>The Fuel Pool Gate valve cannot be closed further than 40 turns closed.</li> </ul>
Which of the following choices identifies the condition which will happen FIRST if the leak is in the RHR system, with NO other operator action?
Fuel in the Rx vessel will become uncovered.
RHR pumps will cavitate and become air bound.
Fuel in the Spent Fuel Pool racks will become uncovered.
The upper and lower Reactor Cavity will completely drain.
Answer b Exam Level R Cognitive Level Application Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier:         Plant Systems         R0 Group         2         SR0 Group         2         033000K102
033 Spent Fuel Pool Cooling System 49
K1. Knowledge of the physical connections and/or cause-effect relationships between Spent Fuel Pool Cooling System and the following:
K1.02 RHRS
Explanation of B is correct because if the leak is from the RHR system, it will draw the RCS level down into the hot legs
the SFP is on the 89'6" level. The height of all the fuel racks in the SFP is 185 1/4". (VENDOR DWG 316748) These 2 combined is 104'. The spent fuel assembly fits down inside the rack, so it can never become uncovered if 104' of water is in the SFP. Reference Title
Pool Layout for Spent Fuel Storage Racks
Draining the Reactor Coolant System
ABFUE2E001 Describe the operation of the following as applied to S2-OP-AB.FUEL-0002(Q):
a) Fuel Pool b) Spent Fuel Cooling c) Refueling Cavity d) S/G Norzele Dam Seals
b) Spent Fuel Cooling
<ul> <li>b) Spent Fuel Cooling</li> <li>c) Refueling Cavity</li> <li>d) S/G Nozzle Dam Seals</li> </ul>
b) Spent Fuel Cooling c) Refueling Cavity d) S/G Nozzle Dam Seals e) Weir Gate Seals
b) Spent Fuel Cooling c) Refueling Cavity d) S/G Nozzle Dam Seals e) Weir Gate Seals Material Required for Examination
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b) Spent Fuel Cooling c) Refueling Cavity d) S/G Nozzle Dam Seals Weir Cate Seals Material Required for Examination Question Source: New Question Source Comments:

	Given the following conditions:
	<ul> <li>Unit 2 is at 100% power.</li> <li>Surveillance testing is in progress at the turbine front standard.</li> <li>A combination of equipment failure and human error causes an automatic SI signal to be</li> </ul>
	generated only on RPS Train A Reactor Trip Breaker A (RTB A) fails to open, and is stuck in the shut position.
	With NO operator action, which of the following describes how this affects plant operation? The ATWT allows the Rx to remain critical. AMSAC will trip the Main Turbine, the turbine trip causes the Rx to trip
	The ATWT allows the Rx to remain critical, and the Main Turbine remains on-line.
	The SI signal causes the Main Turbine to trip, the turbine trip causes the Rx to trip.
	The SI signal causes the Rx to trip, the Rx trip causes the Main Turbine to trip.
	Answer d Exam Level R Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11/2000
	Tier: Plant Systems RO Group 1 SRO Group 1 039000A401
	039 Main and Reheat Steam System Second Number 50
	A4. Ability to manually operate and/or monitor in the control room:
	A4.01 Main steam supply. valves
- - 	section of the Turbine trips. (221065, D-4) This causes Auto Stop Oil to be dumped from the Main Turbine Stop Valves, and they will shut. Reference Title
	Reactor Protection System Reactor Trip Signals
	Reactor Protection System Turbine Trips, Runbacks & Gen Protection
	Learning Objectives           RXPROTE027         LOR Given a Reactor protection System Failure, predict the effect of the Reactor protection System failure on the following: (Licensed Operator and STA Only)
	<ul> <li>a) Control Rod Drive System</li> <li>b) Main Turbine/Generator</li> <li>c) Engineering Safeguards System</li> <li>d) Reactor Fuel</li> <li>e) Reactor Coolant System</li> <li>f) Containment</li> </ul>
	Material Required for Examination
	Question Source: New Question Modification Methods
	Question Source Comments:
	Friday, December 15, 2006 11:29:39 AM Page 54 of 91
	الله المالية المالية معنية من ومستقدمة من محمد المالية من المحمد المتنظرة من المحمد ومنتقد المحمد ومحمد من محمد المنتقد المحمد المحمد المحمد معنية محمد محمد المحمد المحمد المحمد المحمد ومحمد محمد ومحمد ومحمد ومحمد محمد م

Given the following conditions:

- Unit 2 is operating at 100% power.
- 21 SGFP must be removed from service to repair a small steam leak.

Which of the following is the MAXIMUM Rx power which will allow 21 SGFP to be removed from service IAW S2.OP-SO.CN-0002, STEAM GENERATOR FEED PUMP OPERATION?

75%.			an a			
<b>b.</b> 66%.		an an an Arran an Ar Arran an Arran an Arr				
			an a			
<b>55%</b> .					د در در به در میکند به به میکند به در میکند و در میکند و در میکند و در میکند. میکند و در میکند و در م میکند و در میکند و در م	
<b>d.</b> 35%.		and the second			renewal and the second s	
Answer c	xam Level R	Cognitive Level.	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Plant Sy	stems		RO Group	1 SRO Group 1		59000A103
	lain Feedwater S				Record Numb	
	o predict and/or n controls includin		in parameters asso	ociated with operating the	e Main Feedwa	
A1.03 Power	r level restriction	s for operation of	MFW pumps and	valves.	Latan (ang ang ang ang ang ang ang ang ang ang	2.7* 2.9*
Answer	S2.OP-IO.ZZ-00 design steam flor actual steam pre reason, c is corre because it is the from service. Di runback on a sin	04, POWER OP w is ~15.6E6 lbm ssures at this po ect because it is power level duri istracter b is inco gle sGFP trip is a	ERATION, step 5.1 h/hr. (USFAR Secti wer level would be the highest number org a normal power prrect because it is	r flow must less than or e .12 states the same limi on 10.4, each SG 3.9E6 higher, so this is a cons r that is less than 57.7%, reduction at which a cor the power level at which med. Distracter d is inco the IAW IOP-4.	t. At 100% p ) 9E6/15.6E6= ervative numbe Distracter a i idensate pump the automatic	ower, total 57.7% The er. For that s incorrect is removed Main Turbine
L.		2 2	Reference Title			
Steam Generat	or Feed Pump C	peration	an an an ann an an an an an an an an an	narra in seren grandlar di si in al		
Power Operation	<b>n</b>		n nan anna an an an an Anna Anna Anna A		n (in nissaininininininininininininininininini	
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CN&FDWE013	LOR NCT Discuss explanation of maj	the procedural requi or precaution and lim	Learning Objectiv rements associated wit itations in the Condens	h the Condensate and Feedwa ate and Feedwater System ph	ater System, includ	ling an
CN&FDWE015		lant conditions, relate ndensate System em Exhaust System		eedwater System with the foll		
•	Extraction Steam S Turbine Auxiliary C Auxiliary Feedwate Main Turbine	System Cooling				• • • • • • • • • • • • • • • • • • •
	Control Air System Bleed Steam Demineralized Wa Advance Digital Fe Reactor Coolant S	ter System edwater Control Sys	stem		an a	
	Chemical Addition	System				
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Material Required	for Examination					
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Given the f	ollowing condi	tions:	n marine and a second secon		· · · · · · · · · · · · · · · · · · ·	an a	n an	
<ul> <li>11 charg</li> <li>During a</li> <li>4KV vital bit</li> </ul>	us is inadverte electrical bus		d the SEC	Cloads 1A bus	s in Moo	de 2*.		
initial loss o	of 1A 4KV vital	the second se	g identifie	s the plant co	ndition	5 minutes a	after the	 -
Reacto	or power is >85	5%.			n annan an annan an sa			entri en per
PZR le	evel is rising at	1% per minute.						
C The Ma	ain Turbine wil	have run back to 60	)%.	en alter et en sen en e	(c) a more than the state of	antine in an grant and a single and an an an and an and a single and a sing		من ورند المحمد ولي مي المراجع
PZR B	ackup heaters	have cycled on due	to low pre	essure and rer	nain ON	J	and a state of the	
Answer	Exam Level R	Cognitive Level Applica	An and a state of a state of a	Facility: Salem 1		Exam Date:	12/1	11/20
Tier: Plant S	Systems	a second and the second second and the second s	RO Group	1 SRO Group	1		61000A2	
		ency Feedwater System				Record Numb	er	
A2. Ability based	to (a) predict the	impacts of the following of	on the Auxil	iary / Emergency	/ Feedwa	iter System a	nd (b)	
abnorn	on those prediction nal operation:	ons, use procedures to co	orrect, contr	ol, or mitigate the	e conseq	uences of tho	30	
abnorn A2.04 pum Explanation of	on those prediction nal operation: p failure or impro A is correct beca valves(normally	ons, use procedures to co per operation ause the addition of cold have a 98% demand sign	~70 deg au nal but kept	x feedwater to th closed by Press	e S/G's ti ure Over	hrough the AF	=3.4 =21 ? disch.	13
abnorn A2.04 pum Explanation of	on those prediction nal operation: p failure or improof A is correct because valves(normally Pressure rises a feedwater entering incorrect because because the SE because no chan restarted. (87 g gallons at NOT.) not cause a MT	ons, use procedures to co ber operation ause the addition of cold have a 98% demand sign bove 1150 psig) will caus ng the S/G's lowering. R ise 11 charging pump is p C stripped the operating of ging pumps are running, om charging, 12 gpm sea C is incorrect because runback. D is incorrect b	~70 deg au nal but kept se a positive ceactor powe owered from charging pu then rising al leakoff, 0 both Main fe ecause no	x feedwater to th closed by Press e reactivity additi er will rise to son n "B" vital bus. If mp during its see PZR level would gpm letdown, an eedwater pumps	e S/G's the ure Over on due to ne value f the stud quence a l be corre d thumbr will conti	hrough the AF ride until AFP o temperature greater than 8 ent thinks leto nd that letdow ect after the ch ule of 1% PZI inue to operat	3.4 F21 P disch. of the 35.0%. E down isol wn isolate harging p R level = e, and we	3 is ateo ed ump 75 ould
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	Steam Generators	
Material Required		
Question Source:	Facility Exam Bank	Question Modification Method: Editorially Modified
Question Source C	omments: VISION Q78195, changed	1 1 distracter from "Reactor has tripped" to distracter D.

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Friday, December 15, 2006 11:29:39 AM

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Given the fo	llowing cond	litions:	an a			na n
- A MSLI w	as successf	ul in isolating		leak. EOP-TRIP-2 to 6E	4lbm/hr to ea	ch SG.
						1997 - 1997 -
Which of the operator act	-	escribes how	AFW flow will be	affected if 21 AFW	pump trips w	ith NO
AFW flow w	ill remain the	e same to	and SGs.	and lower to	and SO	80.000
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b. 23,24	21, 22.	2 Day +	na na hunan ina a katana katan dala dala katana na katana katana katana katana katana katana katana katana kata			
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Tier: Plant Sy	ystems		R0 Group	1 SRO Group 1	and the state of the	061000K602
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			s or malfunction on th	e following will have o	n the Auxiliary /	
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(6.02   Pumr	ency Feedwater	System:				26.2
xplanation of Answer	A is correct be 21 AFW pump. rpm, and its dis	cause 21& 22 S . D is incorrect scharge pressu	because when 23 AF re will be ~150-300ps	22 AFW pump, and 2 W pump is taken to idl g, which is insufficient	e speed it is run t to provide flow	e supplied fro ning at ~1100 other than to i
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Given the following condi	itions:					
2C EDG is operating in ST.DG-0014, 2C DIESEL Cumulative run times f While operating at 252 speed control resulting in	GENERATOR for all individual	ENDURANC	E RUN, following a its are less than 1 st, the operator mi	a comp 0% of	olete overh rated.	iaul.
Which choice describes t	the consequenc	es, if any, of c	continued EDG op	peration	n at this KV	V load?
Operation for the remaini	n an Anna an An			•		· · · · · · · · · · · · · · · · · · ·
will not have any adv	A CONTRACTOR OF	Contraction of the second s				
will result in exceeding	ng the 2 hour lo	ad limitation for	or 2C EDG.			
will result in exceedi	ng the 30 minut	e load limitatio	on for 2C EDG			
will result in exceedi			na se			and an and a second second second second
Answer b Exam Level R	Cognitive Level	a service and the second s	Facility: Salem 1 & 2	2	Exam Date:	12/11/2006
Tier: Plant Systems		RO Group	1 SRO Group	1		62000A101
A.C. Electrical D	and the function of the second s		nen en		Record Numbe	
A1. Ability to predict and/or Distribution controls ind	r monitor changes i cluding:	in parameters as	sociated with operatin	ng the A	C. Electrica	1
A1.01 Significance of D/G I ixplanation of Inswer The EDG load for 2 hours, an isteps 5.1.4 and	load limits limitations are ma nd 3100KW for 30 1 5.1.5) With the E	minutes.(Found i EDG operating at	0KW continuous, 2 in the ST for 2C Endu 2800KW for 21 hours	urance ru s, the E	un, CAUTION	N between ed the limit of
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A1.01 Significance of D/G I Explanation of Answer The EDG load for 2 hours, an steps 5.1.4 and 2 hours for ope EDG load limits 22 Diesel Generator Enduran EDG000E012 LOR NCT Given prevent recurren Material Required for Examination Question Source; Facility Exam	load limits limitations are ma nd 3100KW for 30 d 5.1.5) With the E eration between 27 s was <10%, which ice Run	minutes.(Found i EDG operating at 50-2860KW, sinc n would be 12 min Reference Th Learning Objec lustry operating expe	in the ST for 2C Endu 2800KW for 21 hours the stem stated that nutes for this limit. the tives rience, review the OE and	outline a	un, CAUTION DG will exce mulative run	rs, 2860KW N between eed the limit of time for ALL , which could
A1.01 Significance of D/G I Explanation of Answer The EDG load for 2 hours, an steps 5.1.4 and 2 hours for ope EDG load limits 2C Diesel Generator Enduran EDG000E012 LOR NCT Given prevent recurren Material Required for Examination Question Source; Facility Exam	load limits limitations are ma nd 3100KW for 30 d 5.1.5) With the E eration between 27 s was <10%, which ice Run	minutes.(Found i EDG operating at 50-2860KW, sinc n would be 12 min Reference Th Learning Objec lustry operating expe	in the ST for 2C Endu 2800KW for 21 hours the stem stated that nutes for this limit. the tives rience, review the OE and	outline a	un, CAUTION DG will exce mulative run	rs, 2860KW N between eed the limit of time for ALL , which could

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Given the following conditions	e de altre de la composition de la comp St.	ya <b>manduka katu katu katu katu katu katu katu k</b>		
<ul> <li>2C EDG is operating in particular sectors of the sector of the sectors o</li></ul>	NERATOR ENDURANCE Il individual EDG load limi W three hours into the tes	E RUN, following a co ts are less than 10% t, the operator mistak	mplete overhaul. of rated.	3
Which choice describes the c		ontinued EDG operat	ion at this KW load?	
Operation for the remaining 2 will not have any adverse		an a		
	ne 2 hour load limitation fo	or 2C EDG.	an a	tinines .
	ne 30 minute load limitatio	navigue de la prime de la companya de la companya companya de la companya de la companya de la companya de la c		
	a a ser a succession de la companya	na Banda na mangana ang kanang ang ang ang ang ang ang ang ang an	n for the Big of the B	
	ne 2000 hour load limitatio	an provinsi na mana ang ang ang ang ang ang ang ang ang	Exam Date: 12/11	1/2006
	Application	Facility:     Salem 1 & 2       1     SRO Group:     1	062000A10	
Tier:         Plant Systems           062         A.C. Electrical Distrib			Record Number	55
A1. Ability to predict and/or mon	itor changes in parameters as	sociated with operating the	e A.C. Electrical	
Distribution controls includir A1.01 Significance of D/G load I		می از می اور	3.4	3.8
steps 5.1.4 and 5.1.4 2 hours for operation	tions are maximum of: 2600 00KW for 30 minutes (Found i 5) With the EDG operating at between 2750-2860KW, sinc s <10%, which would be 12 mir	n the ST for 2C Endurance 2800KW for 21 hours, the e the stem stated that the	e EDG will exceed the lir	n nit of
	Reference Tit	le		
2C Diesel Generator Endurance Ru	<u>n</u>			
EDG000E012 LOR NCT Discuss the major precaution and li	Learning Object procedural requirements associated w mitations in the Emergency Diesel Ge	ith the Emergency Diesel Gener	rator, including an explanation	of
		nya manjari da kalendar sama sama sama sa kalendar sa kalendar sa kalendar sa kalendar sa kalendar sa kalendar	مر میز ، در در در می ورد و در می می می می می می می ورد و رو و و و و و و و و و و و و و و و	and the second
Material Regulred for Examination		The second s		
Question Source: Facility Exam Bank		uestion Modification Method:	Direct From Source	
Question Source Comments: VISION	I Q63757	nar kanggan teruna mapak terun prototer kanan di kata ana dari kanan dari kanan dari kanan sebahara dari kanan An		n de la compañía
			ente e antinen entre par par par par la tradición de la contra de	
	an a	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · ·
			$\frac{\partial f}{\partial t} = \frac{1}{2} \frac{\partial f}{\partial t} \frac{\partial f}$	

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Siven the fell	owing condition	ne:	a marana arang	an a			
		ЛЮ. С	en e		an a	ata ta ata ata ata ata ata ata ata ata	e. Na series
Units 1 and	d 2 are operat	ing at 100% pow	ver.				
4KV Vital t	ouses 1A and	1C are powered	from 13 SPT	. 1B is power	red from 14 S	PT.	
4KV Vital t	ouses 2A and	2B are powered	from 24 SP1	. 2C is power	ed from 2C E	DG running	g in
arallel with t	he grid.	-					
All other el	ectric system	lineups are norn	nal for full po	wer operation.	reaker 1 6 b	ut it doop N	
	urs which ser	ids a trip signal to	o the North 1	SKV ning bus u	ieakei 1-0, Di	ut it uoes n	
pen.							
Vhich of the	following des	cribes the effect	this will have	on the plant w	ith NO Opera	tor action?	
	eactors will tri	-Owners of himself climate and a large strategy	an a	an a			ومرموطر المريدي
Main Ge	nerator Mwe	output will lower.	<b>an an a</b>	naterijanja Orizan denostati angerijanje operatori odvogani naterijanja Orizan denostati postata dela odvije odvije od o	and a second state of the particular state		tas ta antinen a glata na na gang danga
L			and a second	N= 114			Constantian Marian
2C 4KV	Vital bus will o	leenergize and r	eload in MOI		and the second secon		<b>Niladhimme</b> ri
		attery Chargers				eir power	5 x <sup>3</sup> 40 <sup>-</sup>
supplies	are now ALL	powered from th	e same off-s	te power supp	ly.		
nswer b E	kam Level R	Cognitive Level Ap	plication	Facility: Salem 1 8	2 Exam Da	ate: 12/	/11/200
ier: Plant Sys	stems		RO Group	1 SRO Group	1	062000K	301
	C. Electrical Dis	tribution			Record	Number	
	ge of the effect t	hat a loss or malfun	ction of the A.C	Electrical Distrib	ution will have o	n the	<u> </u>
following				and and an an an and	and and a second se		
0.04	auntona landa	And the second s	<mark>ۅڰڮڡڂڰؿؚڴڰڰڰڞڟڰڰۺۺۺڰڰڰڰ</mark> ڰڰڰڰڰڲڰڲڰڰڰڲڲ	the second s			5 3.
	system loads		· · · · · · · · · · · · · · · · · · ·				
xplanation of	Distracter a is inc	orrect because the	group busses a	re powered from t	heir respective A	APTs, so RCF	Ps wil
xplanation of c	Distracter a is included be deenergized	ed and cause a Rx t	rip. Distracter	c is incorrect beca	ause with the ED	APTs, so RCF OG running, th	Ps wil ne 2C
xplanation of nswer n v N	Distracter a is inc tot be deenergize ital bus will neve IWE output to lo	ed and cause a <u>Rx t</u> er see a UV conditio wer. Distracter d i	rip. Distracter n. B is correct s incorrect beca	c is incorrect beca because the loss ause TSAS 3.8.2.3	ause with the ED of 3 circulators p 3 for DC busses	APTs, so RCF OG running, th per unit will ca in MODES 1	Ps wil ne 2C ause
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C Electrical Di echnical Speci	Distracter a is inc out be deenergized ital bus will never AWE output to lo equires one OPE stribution Simpli fications Given a 13KV Elec 3) failure on the fol	ed and cause a Rx t er see a UV conditio wer. Distracter d i ERABLE battery cha fied One-Line trical System (excludes L owing: (License Operato	rip. Distracter n. B is correct s incorrect beca arger, and if it is Reference Title Learning Objectiv Jnit No. 3) failure, p	c is incorrect beca because the loss ause TSAS 3.8.2.1 not, connect the	ause with the ED of 3 circulators p 3 for DC busses backup battery c	APTs, so RCF OG running, th per unit will ca in MODES 1 harger.	Ps wil ne 2C ause -4
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AC Electrical Di rechnical Speci 13KVACE016	Distracter a is include the deenergize ital bus will never ital bu	ed and cause a Rx t er see a UV conditio wer. Distracter d i ERABLE battery cha fied One-Line trical System (excludes L owing: (License Operato ces	rip. Distracter n. B is correct s incorrect beca arger, and if it is Reference Title Learning Objectiv Unit No. 3) failure, p or and STA only)	c is incorrect beca because the loss ause TSAS 3.8.2. not, connect the ses	ause with the ED of 3 circulators p 3 for DC busses backup battery c 13KV Electrical Sys	APTs, so RCF OG running, th per unit will ca in MODES 1 harger.	Ps wil ne 2C ause -4
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AC Electrical Di echnical Speci 13KVACE016	Distracter a is include the deenergize ital bus will never ital bu	ed and cause a Rx t er see a UV conditio wer. Distracter d i ERABLE battery cha fied One-Line trical System (excludes L owing: (License Operato ces	rip. Distracter n. B is correct s incorrect beca arger, and if it is Reference Title Learning Objectiv Unit No. 3) failure, p or and STA only)	c is incorrect because the loss ause TSAS 3.8.2. not, connect the income the income of	ause with the ED of 3 circulators p 3 for DC busses backup battery c 13KV Electrical Sys	APTs, so RCF OG running, th per unit will ca in MODES 1 harger.	Ps wil ne 2C ause -4
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Given the following conditions:	
<ul> <li>U2 is performing actions to isolate a 125VDC ground on 2A 125VDC bus.</li> <li>An Equipment Operator depresses the local pushbutton for 2A 125VDC bus to read buresistance-to-ground.</li> </ul>	IS
How will this action be noticed in the Main Control Room?	
2A 125VDC bus ground indication will indicate infinity.	
2A 125VDC bus ground indication will indicate zero ohms.	
OHA B-2, 2A 125VDC CNTRL BUS VOLT LO will annunciate.	
Aux Annuciator Alarm 0179 2A 125VDC GROUND FAULT DETECTION will alarm.	
Answer a Exam Level R Cognitive Level Memory Facility Salem 1 & 2 Exam Date:	12/11/2006
	3000A301
063 D.C. Electrical Distribution Record Number	r <u>57</u>
A3. Ability to monitor automatic operations of the D.C. Electrical Distribution including:	······
A3.01 Meters, annunciators, dials, recorders, and indicating lights	2.7 3.1
resistance. B is incorrect because of A above. C is incorrect because operation of the groun doesn't interrupt the voltage indication for the bus and won't actuate the low voltage alarm. because there is no such AAT alarm. However, if the student does not know the correct ans plausible distracter.	D is incorrect
Reference Title	and the second sec
2A 125 Volt Storage Battery Instrument and Alarm Circuit	
OHA B Alarm Response	
Learning Objectives	
DCELECE008         Identify and describe the Control Room controls, indications, and alarms associated with the DC Electrical System The Control Room location of DC Electrical System control bezels and indications. (Licensed Operator & STA only The function of each DC Electrical System Control Room control and indication. (Licensed Operator & STA only The effect each DC Electrical System control has upon DC Electrical System components and operation. (Licensed STA only)           The plant conditions or permissives required for DC Electrical System Control Room controls to perform their inter (Licensed Operator & STA only)	nly) ) sed Operator &
DCELECE007         NCT Identify and describe the local controls and indications associated with the DC Electrical System, including: The location of DC Electrical System local controls and indications. (Licensed Operator & Non-licensed Operator The function of DC Electrical System local controls and indications. (Licensed Operator & Non-licensed Operator The plant and conditions or permissives required for DC Electrical System local controls to perform their intended (Licensed Operator & Non-licensed Operator only) The setpoints associated with the DC Electrical Systems local alarms.	only)
Material Required for Examination	
Question Source: New Question Modification Method:	
Question Source Comments:	(apatra an

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Given the following condit	ions:				
Unit 1 is in MODE 4.	e e da la compositiva de la compositiv En esta de la compositiva de la composit			• • • • •	and a second
An electrical fault cause	es the infeed br	eaker to 1A EI	DG 230V MCC to o	pen.	u si fu fi si segera te pert
er Tech Specs, which of					
The EDG remains OF	PERABLE until	Lube Oil temp	erature drops belov	v 100 deg.	
The EDG remains O			the spectral sector of the sec	محصيصا بتما يستعينه ومؤلما وممارعها والومما كمامه والالاه	
The EDG is INOPER	ABLE due to th	e loss of its Pro	elube pump and Ja	acket Water Hea	iter.
The EDG is INOPER source.	ABLE until 125	VDC control po	ower has been tran	sferred to its alt	ernate
nswer C Exam Level R	Cognitive Level	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
ier: Plant Systems	[17] A. K. Martin, "Proceeding of the second sec	RO Group	1 SRO Group 1	064	4000G222
64 Emergency Diese	el Generators			Record Number	58
2 Equipment Control	and and the structure for the				
.2.22 Knowledge of limiting		the second s	/ limits. where AC power has	and a survey of national stations in the second state of the second state of the second state of the second st	3.4 4.1
125VDC power declared INOP	remains available when the prelube r	through its norma oump and jacket v	DG INOPERABLE. Dis I source. c is correct b vater heater are both in correct because of C a	ecause the EDG w noperable (P&L 3.5	III De
		Reference Title			1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -
A Diesel Generator Operation	)	anten del Talanti de Delles Constanti della por deve e constata della della della della della della della della	ntan Separata da Antonio de Canada de Banda de Separate da Canada de Canada de Canada de Canada de Canada de C		
Technical Specifi	cation action. (License	Operator and STA on	tor operability, examine the	peration of the Emergen	cy Diesel
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Friday, December 15, 2006 11:29	9:39 AM	Page 64 of	91	en e	entre de la competition de la competiti
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Given the following conditions:
<ul> <li>Unit 1 is operating in MODE 1.</li> <li>While performing rounds, an NEO isolated the Air Compressor supply valves to 11A and 11B Diesel Generator Starting Air Receivers in order to perform a blowdown of the tanks for moisture IAW S1.OP-DL.ZZ-0006, PRIMARY PLANT LOGS.</li> <li>BOTH Air Receivers were left isolated.</li> </ul>
Which of the following describes the effect this will have on 1A EDG OPERABILITY IAW Technical
Specifications?
The EDG
remains OPERABLE, since either air start receiver is designed to provide 3 cold starts.
remains OPERABLE, since the Turbo-Boost air receivers can be cross-connected to supply starting air if required.
became INOPERABLE when the Air Compressor supply valve to the second Air Receiver was closed since NO starting air is available to the EDG.
will become INOPERABLE when the "AIR RECEIVER #1 PRESSURE LOW", and "AIR RECEIVER #2 PRESSURE LOW" alarms are actuated at the EDG control panel, since this indicates <190 psig start air available.
Answer a Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 Exam Date:
Tier:     Plant Systems     R0 Group     1     SR0 Group     1     064000K607
064 Emergency Diesel Generators 59
K6. Knowledge of the of the effect of a loss or malfunction on the following will have on the Emergency Diesel Generators:
K6.07 Air receivers 2.7 2.9
A is correct. As shown on dwg 211315, the isolation of air from the compressors to the tanks will not affect the air supply path to the starting air motors. Each Starting air tank IS designed for three cold starts when at 160 psig. Distracter b is incorrect because the EDG remains OPERABLE, but the turbo boost air receivers can NOT be cross connected with the starting air receivers. Distracter c is incorrect because the air "in" to the tank is a separate line from the air "out" of the tank to the EDG. Distracter d is incorrect because the Io pressure alarm is at 182 psig, not 160 psig.
Reference Title
Component Design Basis
Primary Plant Logs
No. 1 Unit-1A Diesel Generator Start and Turbo Boost air System         Learning Objectives         Learning Objectives         EDG000E010       LOR Given a situation dealing with Emergency Diesel Generator operability, examine the situation and apply the appropriate Technical Specification action. (License Operator and STA only)
NCT State the Technical Specification associated with the component, parameters and operation of the Emergency Diesel Generator including the Limiting Condition for Operation(s) (LCO) and the applicability of the LCO(s) (Non-licensed Operator)
Material Required for Examination
Question Source: New Question Modification Method:
Question Source Comments:
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Friday, December 15, 2006 1					

Given the following:
<ul> <li>1 WMHUT is in recirc, a sample has been drawn and is in the process of being analyzed</li> <li>The RWO mistakenly places 1 WMHUT in service</li> <li>One hour later, the RWO realizes his error, and returns 1 WMHUT to recirc</li> </ul>
What effect, if any, will this have on the release preparations for 1 WMHUT IAW S1.OP-SO.WL- 0003, RELEASE OF RADIOACTIVE LIQUID WASTE FROM #1 WASTE MONITOR HOLDUP TANK?
The current sample is invalidated. A new sample must be drawn with no minimum required recirculation.
The current sample is invalidated. The tank will require further recirculation and resampling prior to release.
The release preparations may continue as long as volume added to tank does not exceed 1% of total tank volume ONLY.
The release preparations may continue as long as volume added to tank does not exceed 1% of total tank volume AND double verification of sample analysis is performed.
Answer b Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/200
Filer:         Plant Systems         RO Group:         2         068000A202
068 Liquid Radwaste System Record Number 6
A2. Ability to (a) predict the impacts of the following on the Liquid Radwaste System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:
A2.02 Lack of tank recirculation prior to release
Explanation of Answer S1.OP-SO.WL-0003, Section 5.1, Release preparations, "NOTE Any additions made to 1WMHUT after it is isolated and placed on recirculation for sampling will invalidate the sample analysis and require further recirculation time and resampling". The correct answer b contains these requirements. Distracter a is incorrect because the recirculation time must be reset after additions to the tank have been made. Distracters c and d are incorrect because there is no provision for waiving the recirc and resampling due to low volume of added liquid following initial recirculation and sampling.
Reference Title
RELEASE OF RADIOACTIVE LIQUID WASTE FROM #1 WASTE MONITOR HOLDUP TANK?
Learning Objectives           WASLIQE012         LOR NCT Discuss the procedural requirements associated with the Radioactive Liquid Waste System, including an explanation of major precaution and limitations in the Radioactive Liquid Waste System procedures
Material Required for Examination
Question Source:         Facility Exam Bank         Question Modification Method:         Direct From Source
Question Source Comments: VISION Q69947

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Operators are performing check source testing of Radiation Monitors IAW S1.OP-ST.RM-0001, RADIATION MONITORS - CHECK SOURCES. While performing the check source test for 1R9 -Fuel Storage Area Radiation Monitor, the counts seen by the monitor rise above the Hi Radiation Alarm setpoint. Which of the following describes the consequences of this action? The Fuel Handling Building (FHB) supply and exhaust fans will receive an auto start signal. The FHB Ventilation system will automatically realign the exhaust to flow through #12 Filter Unit. The FHB Hi Radiation Evacuation Horn will sound, but no ventilation system realignment will occur because it is MANUALLY blocked prior to source check testing. The FHB Hi Radiation Evacuation Horn will sound, but no ventilation system realignment will occur because it is AUTOMATICALLY blocked during source check testing. Exam Date: 12/11/2006 Cognitive Level Memory Facility: Salem 1 & 2 Answerb Exam Level R 072000A401 2 SRO Group **RO** Group 2 Tier: Plant Systems 61 Record Number Area Radiation Monitoring System 072 Ability to manually operate and/or monitor in the control room: A4. 3.0\* 3.3 Alarm and interlock setpoint checks and adjustments A4.01 A is incorrect because the fans do NOT receive an auto start signal. B is correct, and c and d are Explanation of Answer incorrect because the check source test does not automatically block an actuation nor does the procedure have the RP1 block switch placed in BLOCK for the test. **Reference Title RADIATION MONITORS - CHECK SOURCES** Learning Objectives Identify and describe the Control Room controls, indications, and alarms associated with the Radiation Monitoring System, RMS000E007 including: The Control Room location of Radiation Monitoring System control bezels and indications. (Licensed Operator & STA only) The function of each Radiation Monitoring System Control Room control and indication. (Licensed Operator & STA only) The effect each Radiation Monitoring System control has upon Radiation Monitoring System components and operation. (Licensed Operator & STA only) The plant conditions or permissives required for Radiation Monitoring System Control Room controls to perform their intended function NCT Describe the function of the following components and how their normal and abnormal operation affects the Radiation RMS000E003 Monitoring System: R1A, Control Room Area Monitor R1B, Control Room Inlet Duct Monitor R5, FHB û SFP Area Radiation Monitor R7, In-core Seal Table Area Radiation Monitor R9, FHB û New Fuel Storage Area Radiation Monitor R10A, Personnel Hatch û Containment Elev 100Æ Area Monitor R10B, Personnel Hatch û Containment Elev 130Æ Area Monitor R11A, R12A, R12B, Containment Particulate, Noble Gas, and Iodine Monitor R13A, B, C D & E CFCU Service Water Monitors R15, Condenser Air Ejector Process Monitor R17A and B, Component Cooling Liquid Monitor R18, Liquid Waste Disposal R19A, B, C, & D, Steam Generator Blowdown Liquid Monitors 1R31A, Letdown Gross Activity Process Monitor 2R31, Letdown Heat Exchanger/Failed Fuel Process Monitor R32A, Fuel Handling Crane Area Radiation Monitor R36, Evaporator and Feed Preheaters Condensate Monitor 2R37, Non-Radwaste Basin Process Monitor R40, Condensate Filter Process Filter Monitor R41A, B, C, & D, Plant Vent Radiation Monitor R44A & B, Containment High Range Area Monitor Page 68 of 91 Friday, December 15, 2006 11:29:39 AM

	R45A, B, C, & D, Plant Vent High Range Radiation Monitor R46A-E, Main Steam Line Process Monitor R47, Electrical Penetration Area Monitor	
	2R52, Liquid PASS Room Area Radiation Monitor R53, N16 Main Steam Line Radiation Monitor	
RMS000E005	NCT Outline the interlocks associated with the following Radiation Monitoring System of	omponents:
	R1B, Control Room Inlet Duct Monitor	
	R5, FHB û SFP Area Radiation Monitor	n na sense a la companya de la comp La
	R7, In-core Seal Table Area Radiation Monitor	ی اور این
	R9, FHB û New Fuel Storage Area Radiation Monitor	
	R10A, Personnel Hatch û Containment Elev 100Æ Area Monitor	
	R10B, Personnel Hatch û Containment Elev 130Æ Area Monitor	
	R11A, R12A, R12B, Containment Particulate, Noble Gas, and Iodine Monitor	n ann an 1979 an 1979 an 1979 ann an Arlanda dh' farinn dha an an dar annan Annan Annan An Anna an 2019 ann an
	R13A, B, C D & E CFCU Service Water Monitors	
	R17A and B, Component Cooling Liquid Monitor	
	R18, Liquid Waste Disposal	•
	R19A, B, C, & D, Steam Generator Blowdown Liquid Monitors	
	R32A, Fuel Handling Crane Area Radiation Monitor	
	R36, Evaporator and Feed Preheaters Condensate Monitor	
	R41D, Plant Vent Radiation Monitor	
1977	2R52, Liquid PASS Room Area Radiation Monitor	
	for Examination	

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Given the fo	ollowing cond	itions:		an a	and the second		
- Unit 1 is	operating at in MODE 5.					n han som som for en for det for statistica som for det som	an marana marana marana marangan Marana marana marangan pan
Unit 2 W	Unit 1.	elease is in pro				CW system via	the cross
2R18 2 RAI	D MONIT LIG	UID WASTE D	JISPOSAL P	RCS RAL	D MON is OPI		ayos too akaoo ah
Which choic	ce identifies t	he AUTOMATI	C action(s) t	hat will ta	ke place if 2R	18 fails HIGH?	· · · ·
🖲 1WL11	5 and 2WL11	15 WASTE DIS	CHARGE H	DR X-CO	NN VALVES N	will shut.	• • • • • • • • • • • • • • • • • • •
<b>2WL51</b>	LIQUID RE	LEASE STOP	VALVE ON	LY will sh	where the second s	n filoso - alexan a filosofia de la constante de la constante de la constante de la constante de la constante A constante para a la constante constante constante de la constante de la constante de la constante de la const	
2WL51	will shut but r	elease will cor	ntinue throug	h 1WL 51			
	AND 1WL51				Ny sola amin'ny sola	ويستنب والمستري والمسترية والمتروية والمترجع والمترجع والمتعاد والمتعادية والمتعادية والمتعادية والمتعادية والم	
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	Systems		Memory R0 Gro		ty: Salem 1 & 2		12/11/200 000K301
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	ioactive effluent						3.6 4.
xplanation of inswer	valves listed at WL51. Distra is incorrect bec	ove will be open. acter b is incorrect	A is correct to t because 2R18 are manually of	because Un 8 will not au operated va	it 2 R18 automat to close the oppo	the opposite unit, ic action affects or osite unit WL51. D d is incorrect beca	nly Unit 2 Vistracter c
	north and a second s	Ť	Reference	Title	1992 - S.H		
		al System No. 1W	/L51 & 2WL51	Liquid Was	te Disch Valves		
	ste Disposal Liq	uid Waste from 22 C	VCS Manifor T	only			
Release of Ra		Waste Irolli 22 C	Learning Ob				
WASLIQE005		supply to the following ble to this lesson	Radioactive Liquic	d Waste Syste	m components:	a de la construcción de la constru Construcción de la construcción de l Construcción de la construcción de	
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		tan tanan sana Sana sana sana sa	an a	n an	<u> </u>	·
Given the fo	llowing cond	litions:				
- Unit 1 is ii - All I Init 1	n MODE 5. circulators a	100% power				
- Unit 2 Wa	ste Liquid ro Init 1.	elease is in p		1 CVCS MT to UNIT 2		a the cross
2R18 2 RAD	MONIT LIC	QUID WASTE	E DISPOSAL P	RCS RAD MON is OF	PERABLE.	
Which choic	e identifies t	he AUTOMA	TIC action(s) t	hat will take place if 2F	R18 fails HIGH	?
1WL11	5 and 2WL1	15 WASTE D	DISCHARGE H	DR X-CONN VALVES	will shut.	
2WL51	LIQUID RE	LEASE STO	OP VALVE ON	LY will shut.	a 1997 na amin'ny fisiana amin'ny fanisana amin'ny fanisana amin'ny fanisana amin'ny fanisana amin'ny fanisana Ny INSEE dia mampiasa amin'ny fanisana amin'ny fanisana amin'ny fanisana amin'ny fanisana amin'ny fanisana amin'	thanker being straken, min den bestehen in den straken beingen beingen beingen beingen beingen beingen beingen
2WL51	will shut but	release will c	continue throug	h 1WL51.		
2WL51	AND 1WL5	1 will shut.			• Control Street Section 2. A section in the set Section 2. Sec	
Answer b	Exam Level R	Cognitive Le	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Plant Sy	/stems		RO Gr	up 1 SRO Group 1	· · · · ·	73000K301
		ion Monitoring	1. 2. The Contract Card Card Press, Landschart With Card.	na never na se na se Na se na s	Record Number	
K3. Knowle the follo		ct that a loss or	malfunction of th	e Process Radiation Monito	oring System will I	
K3.01 Radio	pactive effluen	t releases	an a	n na		3.6 4.2
	WL51. Dist is incorrect be	racter b is incor cause the WL1	rect because 2R1	because Unit 2 R18 autom 8 will not auto close the op operated valves. Distracte huts.	posite unit WL51.	Distracter c
			Referenc		. je pos	an the second second
			1WL51 & 2WL51	Liquid Waste Disch Valves	3	
No. 2 Unit Was						
Release of Rad	dioactive Liqui	d Waste from 2	2 CVCS Monitor			
WASLIQE005	Auxiliary Sump Chemical Drain Reactor Coolar Containment S Padioactive Lize	Tank and Pumps Tank, Laundry and Torain Tank Pump ump Pumps, Conta uid Waste Discharg olation Phase A an	d Hot Shower Tanks, a bs, RCDT Discharge la inment Sump level, a ge Isolation Valve WI	Radioactive Liquid Waste System and their respective pumps solation Valves WL12 and WL13, a nd Containment Isolation Valves V 51 and Liquid Waste Discharge Ra Vaste valves WL12 & WL13, WL1	and PRT Drain Valve   VL16 and WL17 adiation Monitor RA43	35/R18
	77L33, and 77L			• * • • • • • • • • • • • • • • • • • •	****	
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Friday, Decer	nber 15, 2006 11:	34:45 AM	Page	71 of 91		

Given the following conditions:	
<ul> <li>Unit 1 is operating at 100% power.</li> <li>A motor short occurs on 11A Circulator, causing an overload condition on 1CW bus section 1</li> <li>1CW bus section 13 becomes deenergized when its infeed breaker 13CW1AD - #13 STA PV</li> <li>XFMR INFD BKR TRIPS OPEN as expected.</li> <li>OHA K-2, 4KV CW BUSS DIFF OVRLD annunciates, and CRT point 433, CW Swgr Bus</li> <li>Section 13 Overload Trip is received on 1CC1.</li> </ul>	I3. VR
Which of the following describes the effect this will have on the plant, and what actions are requ IAW S1.OP-AB.CW-0001, CIRCULATING WATER SYSTEM MALFUNCTION?	uired
Condenser backpressure will start to rise on BOTH east and west sides. Open the 11/12/13MC62, Turbine Hood Spray Bypass Valves.	
The CW bus cross-tie breaker 1CW8AD, will close after a 15 second time delay. Re-start t affected Circulators after the CW26/126 valves have fully stroked to the closed position.	he
Control rods will begin stepping in as RCS temperature rises due to the loss of Main Turbin load. Steam Generator Blowdown must be isolated due to the loss of 12A and 12B Circulators.	16
Main Turbine load will immediately drop by at least 120MWe. Initiate a power reduction to than or equal to 83% to prevent flashing in the Condensate System as hotwell temperature rises.	
	11/2006
Flant Systems     RO Group     2     075000A2	
075 Circulating Water System Record Number	64
A2. Ability to (a) predict the impacts of the following on the Circulating Water System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:	
	5 2.7
Explanation of Answer Distracter b is incorrect because on a bus overload condition, the CW bus cross-tie receives a lockor signal along with the bus infeed breaker. Distracter c is incorrect because SGBD isolation is not recurses both 12A and 12B condensers are affected. The loss of 13 CW bus will affect the 11A, 12A, 13A circulators. Control rods will begin stepping is as RCS temp rises. Distracter d is incorrect because Main Turbine load will not drop immediately, it will take several minutes before load starts to show the effect from the backpressure change in the condensers, and load will lower slowly. The action of distracter c is correct. A is correct because as temperature rises in the affected condensers, will dro Opening of the hood spray bypass valves is correct.	quired and to ction vith
Reference Title	
Circulating Water System Malfunction	ur strande start
1CW 4KV Bus Operation	Angeletikke
Overhead Annunciators Window K	1949 A 1977
ABCW01E005       a) Determine the appropriate abnormal procedure.         b)       Describe the plant response to actions taken in the abnormal procedure.         c)       Describe the final plant condition that is established by the abnormal procedure.	
	-bariloire.
Material Required for Examination	
Question Source: New Question Medification Method:	<u></u>
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Answer     C     Exam Level     R     Cognitive Level     Completension     Level     C       Tier:     Plant Systems     R0 Group     1     SR0 Group     1     076000A302			na na serie de la composición de la com Composición de la composición de la comp				
Unit 2 is operating at 100% power. A large earthquake 5 miles from the site causes a loss of off-site power. The reactor trips, and a MANUAL Safety Injection is initiated. 2 B EDG output breaker does NOT close. With NO other operator action, which choice contains the system lineup for the Service Water System 5 minutes after the SI? SW260 TURB AREA SW MOV STOP VLV SHUT, 21SW122 CC HX SW INLET VALVE SHUT, 24SW223 CV FANS SW OUTLET V SHUT. 2 SW266 SHUT, 22SW122 OPEN, 25SW223 OPEN. 2 SW260 OPEN, 22SW122 SHUT, 23SW223 OPEN. 2 SW260 OPEN, 21SW122 OPEN, 22SW223 SHUT. 2 SW260 OPEN, 21SW22 SW122 SW260 SW20 SW20 SW20 SW20 SW20 SW20 SW20 SW2	Given the fol	lowing condit	ions:				
System 5 minutes after the SI?  System 5 minutes after the Size of Siz	A large ea The reacto	rthquake 5 m or trips, and a	niles from the MANUAL Sa	afety Injection is	ss of off-site power.		
SHUT, 24SW223       CV FANS SW OUTLET V SHUT.         2SW26       SHUT, 22SW122 OPEN, 25SW223 OPEN.         2SW26       OPEN, 21SW122 OPEN, 22SW223 SHUT.         2SW26       OPEN, 21SW122 OPEN, 22SW223 SHUT.         Plant Systems       B0.00000         2SW26       OPEN, 21SW122 OPEN, 22SW223 SHUT.         Plant Systems       B0.00000         2SW26       Water System         3.       Ability to monitor automatic operations of the Service Water System including:         3.3.       Emergency heat loads         3.3.2       Emergency heat loads         3.3.2       Emergency heat loads         3.3.2       SEVEG will close on a signal from the 2B SEC. In the case presented in the SE DG does not energized 2B 4KV vita bus following a loss of off-site power, (which we B SW 230VAC         MCC) and 2SW26 will remain in its normal position of open. The 21/22SW122s receive a SHUT signal from the "A" and "B" SECs respectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Federes file         SW0NUCE006         NCT Outline the interlocks associated with the following Service Water - Nuclear Header System components: Containment Fan Cell Unit High and Uw Speed Breakes: Containment Fan Cell Unit High and Uw Speed Breakes: Containment Fan Cell Unit High and Uw Speed Breakes: Containment Fan Cell Unit High and Uw Speed Breakes: Containment Fan Cell Unit High an	System 5 mi	nutes after th	e SI?				
2SW26 OPEN, 22SW122 SHUT, 23SW223 OPEN.     2SW26 OPEN, 21SW122 OPEN, 22SW223 SHUT.     2SW26 OPEN, 21SW122 OPEN, 22SW223 SHUT.     2SW26 OPEN, 21SW122 OPEN, 22SW223 SHUT.     2SW26 Mater System     Comprehension     2SW26 Mater System     2SW26 OPEN, 21SW122 OPEN, 22SW223 SHUT.     2SW26 Water System     2SW26 Wat	2SW26 SHUT, 2	TURB AREA 24SW223 C\	SW MOV ST / FANS SW C	OP VLV SHUT, DUTLET V SHUT	21SW122 CC HX S	SW INLET VALVE	
2SW26 OPEN, 21SW122 OPEN, 22SW223 SHUT.      Answer     C     Eam Lavel     R     Genetice Water System     C     Plant System     Poercore     1     Service Water System     R     Corror     Service Water System     R     Corror     Service Water System     R     Corror     R     Service Water System     R     Service Water System     R     Service Water System     R     R     Service Water System     Service Water Interview     Se	2SW26	SHUT, 22SW	122 OPEN, 2	25SW223 OPEN			
Innever       c       Exam Level       R       Cognitive Level       Comprehension       Salem 1.6.2       Exam Date:       12/11/2006         Prior       Service Water System       Record Number       1       0760000A302         Trice       Service Water System       Record Number       6         33.       Ability to monitor automatic operations of the Service Water System Including:       3.7       3.7         33.02       Emergency heat loads       3.7       3.7       3.7         Sympantion       Issued to be a signal from the 2B SEC. In the case presented in the stem, 2B EDG does not energized 2B 4KV vital bus following a loss of off-site power, (which supplies power to the B SW 230/AC MCC) and 2SW26 will remain in its normal position of open. The 21/22SW12zs receive a SHUT signal from the "A" and "B" SEC respectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Reference Title       SW0NUCE005       NCT Outline the interfocks associated with the following Service Water - Nuclear Header System components: Containance Fan Coll Unit High and low Speed Breakers       SW0NUCE005         SW0NUCE005       NCT Outline the interfocks associated with the following Service Water - Nuclear Header System components: Containance Strew Water inter Pressure Control Valve CPCU Mater Cooling Hoo Control Mater         SW0NUCE005       NCT Outline the interfocks associated with the service Water - Nuclear Header System local controls and indications. (Licensed Op	<b>c</b> 2SW26	OPEN, 22SV	V122 SHUT, 2	23SW223 OPEN			
Innever       c       Exam Level       R       Cognitive Level       Comprehension       Salem 1.6.2       Exam Date:       12/11/2006         Prior       Service Water System       Record Number       1       0760000A302         Trice       Service Water System       Record Number       6         33.       Ability to monitor automatic operations of the Service Water System Including:       3.7       3.7         33.02       Emergency heat loads       3.7       3.7       3.7         Sympantion       Issued to be a signal from the 2B SEC. In the case presented in the stem, 2B EDG does not energized 2B 4KV vital bus following a loss of off-site power, (which supplies power to the B SW 230/AC MCC) and 2SW26 will remain in its normal position of open. The 21/22SW12zs receive a SHUT signal from the "A" and "B" SEC respectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Reference Title       SW0NUCE005       NCT Outline the interfocks associated with the following Service Water - Nuclear Header System components: Containance Fan Coll Unit High and low Speed Breakers       SW0NUCE005         SW0NUCE005       NCT Outline the interfocks associated with the following Service Water - Nuclear Header System components: Containance Strew Water inter Pressure Control Valve CPCU Mater Cooling Hoo Control Mater         SW0NUCE005       NCT Outline the interfocks associated with the service Water - Nuclear Header System local controls and indications. (Licensed Op	<b>2</b> SW26	OPEN, 21SV	V122 OPEN, 2	22SW223 SHUT			
Events         Record Number           376         Service Water System         Record Number         Record Number <td< td=""><td>Answer C</td><td>xam Level R</td><td>Cognitive Level</td><td>Comprehension</td><td>Facility: Salem 1 &amp; 2</td><td>Exam Date: 12/11/2006</td></td<>	Answer C	xam Level R	Cognitive Level	Comprehension	Facility: Salem 1 & 2	Exam Date: 12/11/2006	
7/6       Service Water System         3.3       Ability to monitor automatic operations of the Service Water System including:         3.3.02       Emergency heat loads         3.02       By SW26 will close on a signal from the 2B SEC. In the case presented in the stem, 2B EDG does not energized 2B 4KV vital bus following a loss of off-site power (which supplies power to the B SW 230/AC MCC) and 2SW26 will close on a signal from the 7A" and "B" SECs respectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Keternec Title         Auxiliary Building #22 Component Cooling Heat Exchanger         Ao. 2 Unit - Auxiliary Building #21 and 22 CCHX Inlet Confrol         SWONUCEDOE         NCT Outline the interlocks associated with the following Service Water - Nuclear Header System components: Containment Fan Coll Unit High and low Speed Breakers         CFCU More Cooling Flow Control Valve         SWONUCEDOF       NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator aly on-licensed Operator only) <td col<="" td=""><td>ier: Plant Sy</td><td>vstems</td><td></td><td>R0 Group</td><td>1 SRO Group 1</td><td>· · · · · · · · · · · · · · · · · · ·</td></td>	<td>ier: Plant Sy</td> <td>vstems</td> <td></td> <td>R0 Group</td> <td>1 SRO Group 1</td> <td>· · · · · · · · · · · · · · · · · · ·</td>	ier: Plant Sy	vstems		R0 Group	1 SRO Group 1	· · · · · · · · · · · · · · · · · · ·
3.02       Emergency heat loads       3.7[3,7]         Standarding at the second strength of the second strengt of the second strengt of the second strengt of the second strengt	76 S	ervice Water Sy	/stem			Record Number 65	
Stotz       25W26 will close on a signal from the 2B SEC. In the case presented in the stem, 2B EDG does not energized 2B 4KV vital bus following a loss of off-site power, (which supplies power to the B SW 230VAC MCC) and 2SW26 will remain in its normal position of open. The 21/22SW122s receive a SHUT signal from the "A" and "B" SECs respectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Reference Title         Image: Sec SecSectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Reference Title         Image: Sec SecSectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Reference Title         Image: Sec SecSectively. The SEC, while not having vital loads to sequence, still performs its ancillary control functions of closing the SW122.         Reference Title         Image: SW0NUCE006         NCT Outline the Interfocks associated with the following Service Water - Nuclear Header System components: CPCU Motor Cooling Flow Control Valve         SW0NUCE006         NCT Outline the Interfocks Water Water Intel Valve         SW0NUCE007         NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header System Iocal controls and indications. (Licensed Operator & Non-licensed Operator	Ability to	o monitor autom	atic operations of	of the Service Wate	System including:		
energized 2B 4KV vital bus following a loss of off-site power (which supplies power to the B SW 230VAC     MCC) and 2SW26 will remain in its normal position of open. The 21/2SW122s receive a SHLT signal     from the "A" and "B" SECs respectively. The SEC, while not having vital loads to sequence, still     performs its ancillary control functions of closing the SW122.     Reference Title      O. 2 Unit - Auxiliary Building #22 Component Cooling Heat Exchanger     O. 2 Unit - Auxiliary Building #21 and 22 CCHX Inlet Control      Learning Objectives      SWONUCE006     NCT Outline the interfocks associated with the following Service Water - Nuclear Header System components:     Containment Fan Coll Unit High and low Speed Breakers     CFCU Motor Cooling Flow Control Valve     SWONUCE007     NCT Cutiline the interfocks associated with the following Service Water - Nuclear Header System components:     CFCU Service Water Intel Yalve     SWONUCE007     NCT Cutentify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header     System, including:     The location of Service Water Intel Valve     SWONUCE007     NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header     System, including:     The location of Service Water Intel Valve     SWONUCE007     NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header     System, including:     The location of Service Water Intel Valve     SWONUCE007     NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header     System, including:     The location of Service Water Intel Valve     SWONUCE007     NCT identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header     System, including:     The location of Service Water Queet Field System local controls and indications. (Licensed Ope							
No. 2 Unit - Auxiliary Building # 21 and 22 CCHX Inlet Control         Learning Objectives         SW0NUCE006       NCT Outline the interlocks associated with the following Service Water - Nuclear Header System components: Containment Fan Coil Unit High and low Speed Breakers CFCU Service Water inlet Pressure Control Valve CFCU Motor Cooling Flow Control Valve SW Accumulator Building Ventilation fans Chiller Service Water inlet Valve SI Pump Lube Oil Coolers Service Water Inlet Valve SI Pump Lube Oil Coolers Service Water Inlet Valve SW0NUCE007         SW0NUCE007       NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header System, including: The location of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The plant conditions or permissives required for Service Water û Nuclear Header System local controls to perform their intended function. (Licensed Operator & Non-licensed Operator only) The setpoints associated with the Service Water û Nuclear Header System local alarms. (Licensed Operator & STA only)         Material Required for Examination       Cuestion Modification Method::       Editorially Modified         Question Source       Facility Exam Bank       Cuestion Modification Method::       Editorially Modified				Reference Title	9		
SWONUCE006         NCT Outline the interlocks associated with the following Service Water - Nuclear Header System components: Containment Fan Coil Unit High and low Speed Breakers CFCU Service Water Inlet Pressure Control Valve CFCU Motor Cooling Flow Control Valve SW Accumulator Building Vernitation fans Chiller Service Water Inlet Valve SI Pump Lube Oil Coolers Service Water Inlet Valve SI Pump Lube Oil Coolers Service Water Inlet Valve System, including: The location of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The setpoints associated with the Service Water û Nuclear Header System local atoms. (Licensed Operator & Non-licensed Operator only) The setpoints associated with the Service Water û Nuclear Header System local atarms. (Licensed Operator & STA only)           Material Required for Examination         Question Modification Method::         Editorially Modified           Question Source:         Facility Exam Bank         Question Modification Method::         Editorially Modified							
SW0NUCE006       NCT Outline the interlocks associated with the following Service Water - Nuclear Header System components: Containment Fan Coil Unit High and low Speed Breakers CFCU Service Water Inlet Pressure Control Valve SFCU Motor Cooling Flow Control Valve SW Accumulator Building Ventilation fans Chiller Service Water Inlet Valve SI Pump Lube Oil Coolers Service Water Inlet Valve         SW0NUCE007       NCT Identify and describe the local controls, indications, and alarms associated with the Service Water - Nuclear Header System, including: The location of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only) The plant conditions or permissives required for Service Water û Nuclear Header System local controls to perform their intended function. (Licensed Operator & Non-licensed Operator only) The setpoints associated with the Service Water û Nuclear Header System local alarms. (Licensed Operator & STA only)         Waterial Required for Examination       Question Modification Method:       Editorially Modified         Question Source       Facility Exam Bank       Question Modification Method:       Editorially Modified	NO. 2 UNIL - AU	Xillary Building 7				n an	
System, including:         The location of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only)         The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only)         The plant conditions or permissives required for Service Water û Nuclear Header System local controls to perform their intended function. (Licensed Operator & Non-licensed Operator only)         The setpoints associated with the Service Water û Nuclear Header System local alarms. (Licensed Operator & STA only)         Material Required for Examination         Question Source:       Facility Exam Bank         Question Source Comments:       Modified a distracter to even out all the open/shuts.	SWONUCE006	NCT Outline the i Containment Fan CFCU Service W CFCU Motor Coo SW Accumulator Chiller Service W SI Pump Lube Oi	Interlocks associated Coil Unit High and I later Inlet Pressure C bling Flow Control Va Building Ventilation /ater Inlet Valve Il Coolers Service W	d with the following Servi low Speed Breakers Control Valve alve fans /ater Inlet Valve	ce Water - Nuclear Header Sys	a Algenti Algenge av andra andre andre an Algenti Algenge av andre andre andre Algenti Algenge av andre a Algenti Algenti	
The function of Service Water û Nuclear Header System local controls and indications. (Licensed Operator & Non-licensed Operator only)         The plant conditions or permissives required for Service Water û Nuclear Header System local controls to perform their intended function. (Licensed Operator & Non-licensed Operator only)         The setpoints associated with the Service Water û Nuclear Header System local alarms. (Licensed Operator & STA only)         Material Required for Examination         Question Source:       Facility Exam Bank         Question Source Comments:       Modified a distracter to even out all the open/shuts.	SW0NUCE007	System, including The location of S	<b></b>				
function. (Licensed Operator & Non-licensed Operator only) The setpoints associated with the Service Water û Nuclear Header System local alarms. (Licensed Operator & STA only) Material Required for Examination Question Source: Facility Exam Bank Question Source Comments: Modified a distracter to even out all the open/shuts.		The function of S Operator only) The plant condition	ons or permissives r	equired for Service Wate			
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Question Source:       Facility Exam Bank       Question Modification Method:       Editorially Modified         Question Source Comments:       Modified a distracter to even out all the open/shuts.       Editorially Modified		l for Evening tion					
Question Source Comments:       Modified a distracter to even out all the open/shuts.			Bank	(a)	estion Modification Method	Editorially Modified	
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K4.       Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for the field of the fie	ed IAW S1.OP- line does not P seal injection ASS, to allow er pressure CP seals. Date: 12/11/200
<ul> <li>Unit 1 is operating at 100% power.</li> <li>12 charging pump is in service.</li> <li>Normal letdown must be secured to troubleshoot a control problem with 1CV18, PRESURE CONTROL VALVE.</li> <li>Excess letdown has been placed in service.</li> <li>Prior to securing Normal Letdown, which of the following actions MUST be perform SO.CVC-0001, CHARGING, LETDOWN, AND SEAL INJECTION, and why?</li> <li>Fully open 1CV71, CHG HDR PCV, to ensure flashing in the Excess Letdown occur.</li> <li>Fully close the 1CV55, CENT CHG PMP FLOW CONT VALVE, to ensure RC remains above 6 gpm per pump.</li> <li>Place 1CA2015, CONTROL AIR SUPPLY TO CV55 BYPASS VALVE, in BYF the 1CV55 to control flow less than the normal minimum flow position.</li> <li>Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the answer c Rameler R Cognitive Level Memory Counce 1</li> <li>Instrument Air System RC Group 1 SR0 Group 1</li> <li>Instrument Air System design feature(s) and or interlock(s) which provide for reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow to minimize PZR level rise AN the procedure.</li> </ul>	ed IAW S1.OP- line does not P seal injection ASS, to allow er pressure CP seals. Date: 12/11/200
<ul> <li>12 charging pump is in service. Normal letdown must be secured to troubleshoot a control problem with 1CV18, PRESSURE CONTROL VALVE. Excess letdown has been placed in service.</li> <li>Prior to securing Normal Letdown, which of the following actions MUST be perform 50.CVC-0001, CHARGING, LETDOWN, AND SEAL INJECTION, and why?</li> <li>Fully open 1CV71, CHG HDR PCV, to ensure flashing in the Excess Letdown occur.</li> <li>Fully close the 1CV55, CENT CHG PMP FLOW CONT VALVE, to ensure RC remains above 6 gpm per pump.</li> <li>Place 1CA2015, CONTROL AIR SUPPLY TO CV55 BYPASS VALVE, in BYF the 1CV55 to control flow less than the normal minimum flow position.</li> <li>Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the newer c Examines above 6 control memory for a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the newer c Instrument Air System Romery for a low position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the newer of Instrument Air System Romery for a low position of the speed control linkage for 13 charging pump to a low position of prevent exceeding the Tech Spec limit of 40 gpm total flow to the newer of Instrument Air System Romery for a low position of the speed control linkage for 1 second 1 secon</li></ul>	ed IAW S1.OP- line does not P seal injection ASS, to allow er pressure CP seals. Date: 12/11/200
<ul> <li>rior to securing Normal Letdown, which of the following actions MUST be perform O.CVC-0001, CHARGING, LETDOWN, AND SEAL INJECTION, and why?</li> <li>Fully open 1CV71, CHG HDR PCV, to ensure flashing in the Excess Letdown occur.</li> <li>Fully close the 1CV55, CENT CHG PMP FLOW CONT VALVE, to ensure RC remains above 6 gpm per pump.</li> <li>Place 1CA2015, CONTROL AIR SUPPLY TO CV55 BYPASS VALVE, in BYF the 1CV55 to control flow less than the normal minimum flow position.</li> <li>Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the newer c Exam Level R Cognitive Level Memory Facility Salem 1 &amp; 2 Exam ref. Plant Systems RO Group 1 SRO Group 1</li> <li>Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 will lower flow to the RCP will be in excess of the required CVCS flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the</li> </ul>	line does not P seal injection ASS, to allow er pressure RCP seals. Date: 12/11/200
<ul> <li>O.CVC-0001, CHARGING, LETDOWN, AND SEAL INJECTION, and why?</li> <li>Fully open 1CV71, CHG HDR PCV, to ensure flashing in the Excess Letdown occur.</li> <li>Fully close the 1CV55, CENT CHG PMP FLOW CONT VALVE, to ensure RC remains above 6 gpm per pump.</li> <li>Place 1CA2015, CONTROL AIR SUPPLY TO CV55 BYPASS VALVE, in BYF the 1CV55 to control flow less than the normal minimum flow position.</li> <li>Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the rewer c Exam Level R Cognitive Level Memory Facility Salem 1 &amp; 2 Exam Plant Systems RC Group 1 SRO Group 1</li> <li>Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for 4.01 Manual/automatic transfers of control</li> <li>Distracter a is incorrect because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the</li> </ul>	line does not P seal injection ASS, to allow er pressure RCP seals. Date: 12/11/200
<ul> <li>occur.</li> <li>Fully close the 1CV55, CENT CHG PMP FLOW CONT VALVE, to ensure RC remains above 6 gpm per pump.</li> <li>Place 1CA2015, CONTROL AIR SUPPLY TO CV55 BYPASS VALVE, in BYF the 1CV55 to control flow less than the normal minimum flow position.</li> <li>Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the rewer c Exam Level R Cognitive Level Memory Facility Salem 1 &amp; 2 Exam Rever C Exam Level R Cognitive Level Memory Facility Salem 1 &amp; 2 Exam Rever C Exam Level R Cognitive Level Memory 1 SRO Group 1</li> <li>Instrument Air System R Cognitive Level Memory 1 SRO Group 1</li> <li>Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for 14.01 Manual/automatic transfers of control</li> <li>Distracter a is incorrect because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because at step 5.3.2 of the procedure, between the</li> </ul>	P seal injection ASS, to allow er pressure CP seals. Date: 12/11/200
<ul> <li>remains above 6 gpm per pump.</li> <li>Place 1CA2015, CONTROL AIR SUPPLY TO CV55 BYPASS VALVE, in BYF the 1CV55 to control flow less than the normal minimum flow position.</li> <li>Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the newer c Exam Level R Cognitive Level Memory Facility Salem 1 &amp; 2 Exam revel R Plant Systems RO Group 1 SRO Group 1</li> <li>Instrument Air System Ro Group 1 SRO Group 1</li> <li>Instrument Air System design feature(s) and or interlock(s) which provide for the newer of the speed control</li> <li>Distracter a is incorrect because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 will lower flow to the RCP set flow stop will be in excess of the required CVCS flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the</li> </ul>	ASS, to allow er pressure RCP seals. Date: 12/11/200
the 1CV55 to control flow less than the normal minimum flow position. Adjust the position of the speed control linkage for 13 charging pump to a low position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the nswer c Exam Level R Cognitive Level Memory Facility Salem 1 & 2 Exam Plant Systems RO Group 1 SRO Group 1 Record Instrument Air System Record 1 Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for 4. Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for the duced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 will lower flow to the RCP se flow stop will be in excess of the required CVCS flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the	er pressure CP seals. Date: 12/11/200
position, to prevent exceeding the Tech Spec limit of 40 gpm total flow to the         nswer       c       Exam Level       R       Cognitive Level       Memory       Facility       Salem 1 & 2       Exam         Plant Systems       RO Group       1       SRO Group       1       SRO Group       1         78       Instrument Air System       Reco         4.       Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for 1         4.01       Manual/automatic transfers of control         planation of iswer       Distracter a is incorrect because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 will lower flow to the RCP se flow stop will be in excess of the required CVCS flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the	CP seals.           Date:         12/11/200
er:       Plant Systems       RO Group       1       SRO Group       1         78       Instrument Air System       Reco         4.       Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for the function       Reco         4.       Manual/automatic transfers of control       Planation of the colored below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 will lower flow to the RCP se flow stop will be in excess of the required CVCS flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the	
'8       Instrument Air System         *8       Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for the function of swer         *1       Manual/automatic transfers of control         ************************************	
<ul> <li>Knowledge of Instrument Air System design feature(s) and or interlock(s) which provide for 1</li> <li>Manual/automatic transfers of control</li> <li>Distracter a is incorrect because flashing is only a concern on the LETDOWN line w reduced below ~ 60 gpm with normal letdown flow established due to the cooling of Regenerative Heat Exchanger. The Excess letdown HX is only cooled by CCW, the function. Distracter b is incorrect because the CV55 will lower flow to the RCP se flow stop will be in excess of the required CVCS flow to minimize PZR level rise AN the procedure. C is correct because at step 5.3.2 of the procedure, between the</li> </ul>	078000K401
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Serve also

Which of the following events would require the transfer of spent fuel elements to the Spent Fuel Pool to be suspended during MODE 6 refueling operations IAW S2.OP-SO.SF-0009, REFUELING **OPERATIONS?** Fuel Handling Area Rad monitor 2R5 fails low. Only one FHB Supply Fan and 2 FHB Exhaust Fans are running. An SRO over-seeing Spent Fuel Pool manipulations leaves the area under supervision of a qualified Reactor Engineer. 21 Spent Fuel Pool Cooling pump is discovered to have no oil in its pump oil bubbler with 22 Spent Fuel Pool Cooling Pump in service. Cognitive Level Application Exam Level R Facility: Salem 1 & 2 Exam Date: 12/11/2006 Answer d 103000G228 Plant Systems Tier: **RO** Group 1 SRO Group 1 Record Number 67 103 Containment System 2.2 Equipment Control 2.6 3.5 Knowledge of new and spent fuel movement procedures. 2.2.28 Explanation of Distracter a is incorrect because only one of the two FHB area rad monitors are required to be Answer OPERABLE IAW TSAS 3.3.1.1, Table 3.3-6. Distracter b is the complement of fans required to be running to have an OPERABLE FHB ventilation system. Distracter c is incorrect because the requirement for supervision of loads in the Spent Fuel Pool is a SRO OR a Qualified RE. D is correct because in S2.OP-SO.SF-0009, REFUELING OPERATIONS, P&L 3.12 specifically requires suspension of irradiated fuel into the SFP when either 21 or 22 SFP pump becomes INOPERABLE. The loss of all oil in the pump bubbler renders the pump INOPERABLE. Reference Title **Refueling Operations** Technical Specifications Learning Objectives Discuss the procedural requirements associated with the Refueling System, including an explanation of major precaution and REFUELE012 limitations in the Refueling System procedures. (Licensed Operator & Non-licensed Operator only) Given a situation dealing with Refueling System operability, examine the situation and apply the appropriate Technical **REFUELE010** Specification action. (License Operator and STA only) State the Technical Specification associated with the component, parameters and operation of the Refueling System including the Limiting Condition for Operation(s) (LCO) and the applicability of the LCO(s) (Non-licensed Operator) Material Required for Examination Question Modification Method: Question Source: New Question Source Comments:

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	2.1 C 2.1.1 Explanati Answer NRC Ac	tive Li	A is incorrect Maintenance, duties of the L only stood 48 shifts per cale and NO watch hours must be License Log). Duties hours.	luct of operatio because the W specifically sta Unit RO and/or hours of watch endar quarter. hstanding can I e stood at the F Distracter d i nance rements for the fol activity Management ty Practices ker Practices Decision Making ôAt the Controls A n	/CC NCO is ates that the the Unit As Distractore performe O or PO p s incorrect	s not a Lice e quarterly v ssist RO" ( F our of turno er b is incor ed until the l osition. (OP because the Reference Tit	watch requin Plant Opera ver, and ha rect becaus icense is re P-AA-105-10 e WCC RO	rements are tor at Salem s not met the se the 1st cal e-activated. 02, Rev. 7, <i>A</i> position doe	105-102, NRC to be stood by ). As such, the e requirement lendar quarter C is correct Attachment 2, is not count to	Active Lice ''performine individual of 5 12-hou is complet because 40 Reactivatic wards Lice	ense ng th has ur ted, 0 on of
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	2.1 C 2.1.1 Explanati Answer NRC Ac	tive Li	A is incorrect Maintenance, duties of the L only stood 48 shifts per cale and NO watch hours must be License Log). Duties hours.	luct of operatio because the W specifically sta Unit RO and/or hours of watch endar quarter. hstanding can I e stood at the F Distracter d i nance rements for the fol activity Management ty Practices ker Practices Decision Making ôAt the Controls A n	/CC NCO is ates that the the Unit As Distractore performe O or PO p s incorrect	s not a Lice e quarterly v ssist RO" ( F our of turno er b is incor ed until the l osition. (OP because the Reference Tit	watch requir Plant Opera ver, and ha rect becaus icense is re P-AA-105-10 e WCC RO e WCC RO re	rements are tor at Salem s not met the se the 1st cal e-activated. 02, Rev. 7, <i>A</i> position doe	105-102, NRC to be stood by ). As such, the e requirement lendar quarter C is correct Attachment 2, is not count to	Active Lice ''performine individual of 5 12-hou is complet because 40 Reactivatic wards Lice	ense ng th has ur ted, 0 on of

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	Housekeeping/Cleanliness/FME Operator Rounds	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · ·			
	Briefs Human Error Reduction Techniques Log Keeping					- 10 <del>-</del> 1
•	Training Supervisor Involvement			•		
	Accessing Equipment Attachment 1, Shift Briefing Format Attachment 2, Pre-Job Briefing Guide	lines				
	Attachment 3, Pre-Job Briefing Check Attachment 4, Pre-Job Briefing Attachment 5, Human Performance, Attachment 6, Control Room Interacti	klist Top Ten Human Error Trap	5			
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Material Required	for Examination					
Question Source:	Other Facility	Ques	tion Modification Met	nod: Concept Us	ed	

1/19/06 NRC Exam

Beaver Valley

53. 112.1 1992.91

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Question Source Comments:

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Which of the the applicat	e followi	ng set 2 Tech	s of condi	tions wo	uld requ	uire the n State	most rapio	d actior	n in ordei	to comp	oly with
The Un			the second se	and the second sec	states a state of the second states and a state of the second states of	and the second second second second second	and the second	orted as	1.08.		
The Un	nit is in N				1 10 10 10 10 10 10 10 10 10 10 10 10 10	and any other states and by pro-	na na mangangan kara na kara sa kara sa sa sa	an ann an tha an tha sa	10000000000000000000000000000000000000	oump. 2	1 SI
The Un #4, and 0003, S	d operate	ors hav	1 at 6% p ve just ren FER BAY	noved co	3 SW pi ontrol po	ump is ower fre	C/T. A SV om 24-26 \$	V leak I SW pur	nas occu nps IAW	rred in S S2.OP-/	W Bay AB.SW-
A Fuel	Storage	Pool	Verificatio	n has N	OT beer	n perfo	ust been s rmed since oncentratio	e the fu	el assem	bent Fue bly mov	l Pool. ement
Answer	Exam Leve	R	Cognitive I	evel Me	mory		acility: Salem	1&2	Exam Da		12/11/2006
Tier: Generi	c Knowled	dge and	Abilities		RO Gro	oup 1	SRO Group	1			1G111
GENERIC			<u></u>						Record	Number	69
	ct of Oper					aya a san katalon katal	1979 - 2019 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1		in the construction of the second		
						and the desired and the barts	on statement h, it is only a	and the second statement of the		500/	3.0 3.8
	separate since the because than or e fuel mov	BLE IA' vital bu re is or the bor equal to ement i	W TSAS 3.7 usses. 21 a nly an action on requirem 800 ppm wl	7.4. An O nd 22 SW for 1 SW nent for Sp nen the Fu The requi	PERABLI pumps a loop INO pent Fuel uel Pool S rement st	E SW lo re powe PERAB Pool OF Storage <sup>\</sup> tated in 1	4, 2 indepen op consists o red from A v LE in the spo ERABILITY Verification h he COLR is nce)	of at leas ital bus. ec. D in MOD as NOT	t 2 SW pu This puts istracter d E 5 (TSAS been perfo	mps powe the unit in is incorre 3.7.11) is prmed sinc	red from TS 3.0.3, ct greater ce the last
5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1					Referenc	e Title		2. P. T.			
Salem Tech S											
Service Water	r System	Operation	on		and a state of the			and the second second second	Sector in the last sector		
FLUNCYE002	State tho A. B. C. D. E. F. G. H. I. J. K. L. M. N. O. P.	Permis Reacto Safety Contain AFW P SEC M REC M Reactiv Red and TRIP-1 Steami Feedwa Feedwa Key Re Tank T	Injection Inment Isolation Imp Auto Star ode Ops Automatic Actu ity Coefficients I Purple Paths	d Operator F rol Grade In ts ations	terlocks						
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Friday, Dece	mber 15-20	06 11.24	45 AM	and the second sec	Page	80 of 91	]	ه والار معمد وه مود			J
	ander 10, 20				L <u>. 33 (</u>					1, Mar, 4, 4, 4, 4, 4, 1	м. <sub></sub>

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Materi	al Requi	red for	Examin	ation	A

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Question Source Comments:

Question Modification Method:

		and the second	antan ang ang ang ang ang ang ang ang ang a			
				the Unit 1 and Unit		
Unit 1 h the Dem	as the Demine hin System ala	eralized Water irms.	system indica	ations, controls, and	alarms. Un	it 2 only has
	WST has four			n for defense in dept	h considera	tions. Unit 2
If armed level in	l, the Unit 2 R the RWST foll	HR HX CCW ( owing a SI. l	Outlet valves Jnit 1 11/12C0	21/22CC16 will auto C16 must_be manua	matically op ally opened.	en at 15.2' of
d If armed when a opened	Safety Injection	I CROSS-OVE on signal is rec	ER VALVES 2 ceived. Unit 1	1SJ113 and 22SJ1 11/12SJ113 valves	must be ma	anually
Answer c	Exam Level R	Cognitive Level	Memory	Facility: Salem 1 & 2	Exam Date	
Tier: Generic	Knowledge and	Abilities	RO Group	1 SRO Group 1	anna ann an ann ann ann ann ann ann ann	194001G204
GENERIC					Record Nu	mber 70
2.2 Equipm	ent Control	<ul> <li>Description (1997) - Description (1997) - Description (1997)</li> <li>Statistical Control (1997) - Description (1997)</li> <li>Statistical Control (1997) - Description (1997)</li> </ul>			· · · · · · · · · · · · · · · · · · ·	
	-unit) Ability to ex dural actions bet			ard layouts, systems, in	strumentation a	and 2.8 3.0*
Answer	because Unit 1 h	as 2 channels, a C16 will auto ope	nd Unit 2 has for n on S signal an	water alarms, indication ur channels for the auto d 15.2' in RWST on 2/4 be received.	swapover feat	ure. C is correct
3	a series and series of the		Reference T	tie		
Swap to Cold L	eg Recirculation					
				an a		
Metric Constant			Learning Object	tives		and the second
LCA3U1E004	Determine the indi	cations that are mon	itored to ensure prop	er system/component operati	on for each step in	2-EOP-LOCA-3
LCA3U2E004	Determine the indi	cations that are mon	itored to ensure prop	er system/component operati	on for each step in	2-EOP-LOCA-3
Material Require	for Examination	226				
Question Source	New			Question Modification Meth	od:	
Question Source	Comments:					
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	1. 1					

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Given the following con	dition:				
- Unit 2 Reactor Trip B	the state of the second st		in a second second		
Which of the following ic	dentifies the E	ARLIEST time irra	diated fuel may be	moved in the Rx	(?
0001 on November	<sup>-</sup> 15th.				
2001 on November	r 15th.				
0001 on November	r 17th.	an a			
2001 on November	r 17th.				
Answer a Exam Level R	Cognitive Lev	Application	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Generic Knowledge a	and Abilities	RO Group	1 SRO Group 1		001G226
GENERIC				Record Number	<u>71</u>
2.2 Equipment Control					2.5 3.7
2.2.26 Knowledge of refue			111 (O + 454) Mar. 454	h) during movemer	
was made su	I in the reactor pu bcritical by open ening, which is th	essure vessel. A is c ing the Rx trip breake ne minimum time requi	orrect because it is 100 rs. Distracter c is incor ired during the months of	rect because it is 1	68 hours
Distracters b	and d are combi	nations of the other 2 Reference Title	choices.		
Tech Specs		Actes and a second state			
	tana ang sang sang sang sang sang sang sa			n - Contract and State and Stat	
	and a second				
REFUELE012 Discuss the pr	rocedural requiremen	Learning Objecting Experience Learning Objecting to Learning Objecting to Learning Objecting Comparison (Learning Objecting) (Learning) (Learning Objecting) (Learning)	eling System, including an ex	planation of major preca	aution and
limitations in t	he Refueling System	procedures. (Licensed Ope	erator & Non-licensed Operato		
Material Required for Examination	on				
Question Source: New		] [2]	estion Modification Method	1:	
Question Source Comments:					
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A Salem Radiation Worker has received a current year-to-date TEDE dose at Salem of 2,970 mrem. Additionally, he received 1,200 mrem at another plant in the current year. The worker is 45 years old with a total lifetime TEDE dose of 17 REM, and has received any extension necessary for him to reach his CURRENT Salem dose. Which of the following choices describes a situation that is allowed for this worker IAW NC.NA-AP.ZZ-0024 RADIATION PROTECTION PROGRAM, in regards to his future TEDE dose received in the same year? The Radiation Protection Manager authorizes an administrative dose extension to 4,000 mrem. The Radiation Protection Supervisor authorizes an administrative does extension above 3,000 mrem. The Plant Manager authorizes an incremental increase above 4,000 mrem with no Emergency in progress. The Senior Vice President-Site Operations authorizes a Planned Special Exposure which will result in the worker receiving 1,000 mrem Cognitive Level Application Answer d Exam Level R Facility: Salem 1 & 2 Exam Date: 12/11/2006 Tier: RO Group Generic Knowledge and Abilities 1 SRO Group 194001G304 1 GENERIC Record Number 72 2.3 Radiation Control Knowledge of radiation exposure limits and contamination control, including permissible levels in 2.3.4 2.5 3.1 excess of those authorized. Explanation of The Salem administrative dose limit for TEDE is 2,000 mrem per year. A limit of 3,000 mrem per year Answer may be authorized by the Radiation Protection supervisor. A limit of 4,000 mrem per year may be authorized by the Radiation Protection Manager. An incremental limit of up to 4.750 mrem may be authorized by the Plant Manager under Emergency conditions. Salem admin limits apply ONLY to dose received at Salem. However, each nuclear plant is required by 10.CFR.20.1201(f) to reduce the allowable dose by that dose received by the worker anywhere else. In the instance described above, the worker has a total YTD exposure of 4,170 mrem. MOST authorizations provided which would allow an the worker to exceed 5 REM/ yr are illegal. HOWEVER, 10.CFR.20.1206, Planned special exposures, directs that this dose shall be maintained separate from the yearly occupational dose, as long as the special exposure dose plus the occupational dose does not EXCEED the occupational dose numbers found in 1201(a). This means that the 5 REM/yr TEDE dose cannot be exceeded by more than 5 REM TEDE. D is correct because even though the Planned special exposure dose will NOT be added to his occupational dose, and as a result, his occupational dose will not rise above 5 REM for the current year. Distracters a, b, and c are both wrong because it would raise the workers dose limit above 5 REM for the year, which is illegal. **Reference** Title Radiation Protection Program Code of Federal Regulations Learning Objectives RADCONE002 List the following external radiation exposure limits, in accordance with Station Procedures, 10CFR20, and Reg. Guide 8.13: 10CFR20 dose limits for external, internal, and total whole body, skin, extremities, and eyes, as well as extension Α. limits and requirements В. Administrative dose control levels for Category 1 and 2 Workers, as well as extension limits and requirements Reg. Guide 8.13 limits and administrative dose control levels for Declared Pregnant Women C. D. 10CFR20 and Administrative limits for members of the general public and minors E. Category 1 Radiation Worker F. Category 2 Radiation Worker

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- esp Material Required for Examination Question Modification Method: Question Source: New Question Source Comments: وبمحص 

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Given the following conditions:
Unit 2 is operating at 75% power. Unit 1 is operating at 100% power. A MANUAL Rx trip and SI are initiated on UNIT 2 due to a LOCA. At step 15 of 2-EOP-TRIP-1, operators discover the Control Room Ventilation system is in the NORMAL Mode.
Which of the following identifies the actions required IAW EOP-TRIP-1, if any, and why?
<ul> <li>No action is required, NORMAL is the correct post Rx trip alignment.</li> <li>No action is required, since the R1B channels will automatically isolate the Control Room Envelope if outside air radiation levels rise.</li> </ul>
Depress EITHER units Accident Pressurized PB. This will isolate ALL outside air supplied to the Control Room, and habitability requirements will be met.
Depress the Accident Pressurized PB on 2RP2 ONLY. This will allow only a small amount of outside air to mix with recirculated Control Room air, preventing a possible Control Room evacuation.
Answer d Exam Level R Cognitive Level Application Facility: Salem 1 & 2 Exam Date: 12/11/200
ier:     Generic Knowledge and Abilities     RO Group     1     194001G310
SENERIC Record Number 7
.3 Radiation Control .3.10 Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure. 2.9 3.
A is incorrect because a Safety Injection signal is an automatic signal to realign the CAV system to Accident Pressurized. B is incorrect, because while the R1B channels (air intake radiation monitors) will automatically initiate Accident Pressurized on high radiation, but the TRIP-1 procedure explicitly states to Initiate Accident Pressurized. C is incorrect because a small amount (~1100 scfm out of 7700 scfm) will be drawn into the CAV system from the unaffected unit air intake. D is correct because the EOP step requires it, and the FSAR requires control room habitability to be maintained following the most credible accident.
Reference Title
x Trip or Safety Injection Bases Document
ech Specs Bases
CAVENTE002 Describe the design bases of the Control Area Ventilation System. (Licensed Operator & STA only)
Atterial Required for Examination
Question Source: New Question Modification Method:
luestion Source Comments:

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Given the following conditions:	₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩
Unit 2 is operating at 100% power. A release of 21 WGDT is in progress, 2WG41 is OPEN. Containment pressure is 0.21 psid.	an a
Which choice states whether or not a Containment Pressure Relief	may be performed, and why?
Containment pressure relief	
CAN be performed with a WGDT release in progress because simultaneously monitored by the 2R41 monitor.	both releases are
CAN be performed with a WGDT release in progress because Rad Monitor to isolate its specific release path.	each release path has its own
CANNOT be performed with a WGDT release in progress beca isolate both releases on a high radiation signal from either releases	ause the 2R41D does NOT ease path.
CANNOT be performed with a WGDT release in progress beca activity from a fuel element failure and the shortest decay time exceeds 10CFR20 assumptions.	ause the postulated combined of the GDT prior to release
Answer a Exam Level R Cognitive Level Memory Facility: Saler	em 1 & 2 Exam Date: 12/11/200
Generic Knowledge and Abilities         RO Group         1         SRO Group	1 <u>194001G311</u>
GENERIC	Record Number 7
2.3 Radiation Control	
2.3.11 Ability to control radiation releases.	2.7 3.2
A is correct and distracters b and c are incorrect because the R411 VC1-6 on a high radiation signal. The dose is monitored as per FS 10CFR20. The postulated activity has no consequence as long as isolated.	SAR 9.4.1.1.6 to prevent exceeding
Reference Title	
Discharge of 21 Gas Decay Tank to Plant Vent	
Containment Pressure-Vacuum Relief System Operation	
WASGASE011         Identify the differences between Unit 1 and Unit 2 Radioactive Waste Gas Syste           a)         Not applicable to this lesson	em components, parameters, and operation.
Naterial Required for Examination	
Question Source: Facility Exam Bank Question Modificati	
Question Source Comments: Modified a distracter that said you couldn't perform the release b about the postulated off site dose.	because the procedure prohibits it, to the one
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	e	a na sana a mana ili ang si si kang si sa s
(Livon tha t	tollowing	conditions
чиен ше		CATHORNOUS

- Unit 2 is operating at 100% power.
- A release of 21 WGDT is in progress, 2WG41 is OPEN.
- Containment pressure is 0.21 psid.

Which choice states whether or not a Containment Pressure Relief may be performed, and why?

Containment pressure relief...

CAN be performed with a WGDT release in progress because both releases are simultaneously monitored by the 2R41 monitor.

CAN be performed with a WGDT release in progress because each release path has its own Rad Monitor to isolate its specific release path.

CANNOT be performed with a WGDT release in progress because the 2R41D does NOT isolate both releases on a high radiation signal from either release path.

CANNOT be performed with a WGDT release in progress because the postulated combined activity from a fuel element failure and the shortest decay time of the GDT prior to release exceeds 10CFR20 assumptions.

Answer a	Exam Level R	Cognitive Level M	emory	Facility:	Salem 1 & 2	Exam Date:	12/11/2006
Tier: Generic	Knowledge and A	Abilities	RO Group	1 SRO G	iroup 1	Ŀ	194001G311
GENERIC						Record Numb	er 75
2.3 Radiatio	on Control		· · · · · · · · · · · · · · · · · · ·	· · ·			
2.3.11 Ability	y to control radiati	on releases.		······································			2.7 3.2
Aliswei	VC1-6 on a high r	istracters b and c a adiation signal. The ostulated activity ha	e dose is monito	red as per	FSAR 9.4.1.1	.6 to prevent e	exceeding

**Reference Title** 

isolated.

d.

Discharge of 21 Gas Decay Tank to Plant Vent

Containment Pressure-Vacuum Relief System Operation

WASGASE011	LOR NCT Discu major precautior	ss the procedural and limitations in	requirements asso the Radioactive V	ociated with the Radioactive Waste Ga Waste Gas System procedures	as System, including an explanation of
Material Required f	or Examination		· · · · · · · · · · · · · · · · · · ·		
Question Source:	Facility Exam I	Bank		Question Modification Metho	d: Editorially Modified
uestion Source Co		Aodified a distract bout the postulat	ed off site dose.	ouldn't perform the release because th	e procedure prohibits it, to the one
				an an an Araba. An Araba an Araba An Araba an Araba	and a second s

		Alak sa katala sa kat				1	· · · · · · · · · · · ·
Given the f	ollowing cond	litions:	and any approximation of the second	e e contratesta a contactada	a Sere hojeko sere orazo	an an the state of t	in his surprise the
- 21 RHR	in MODE 5. pump is in se ire is reported		down cooling. Dump room.	and a second second Second second second Second second	n provinský spisov stalova nakoval v stalova s stalova nakoval v stalova stalova nakova stalova stalova stalova lázova Argentina (spisova)	n an	
			equired actior E RESPONSI			ed IAW S2.OI	P
At 2RF	2, select FIR	E INSIDE CO	NTROL ARE	A to maintai	n the control	room habitat	ole.
	ooling must b S2.OP-AB.R		in order to tra s of RHR.	nsfer shutdo	own cooling to	o 22 RHR pu	mp.
	and PZR PO		control room				
2RH1,		, 21RH4 and	e containmen 22RH4 to pre				
Answer	Exam Level R	Cognitive Lev	el Memory	Facility:	Salem 1 & 2	Exam Date:	12/11/2006
Tier: Generi	c Knowledge an	d Abilities	RO Gro	up 1 SRO	Group 1	19	4001G427
GENERIC			•			Record Number	76
2.4 Emerg	ency Procedure	s / Plan			•		
	wledge of fire in	the plant proced	lure.				3.0 3.5
Explanation of Answer	Distracter a is i is. for the same re The correct ans	ncorrect becaus Distracter b ason. swer is d becaus mp because the	e PORVs are iso se Fire Inside Co is incorrect beca se S2.OP-AB.FIF e cabling for the s to open.	ntrol Room is use RHR cool RE-1 directs th	not required, fire ing cannot be tra- ne isolation of the	e OUTSIDE con ansferred to the e RCS-RHR fro	trol room other pump m the
6.777 S.			Reference	Title			-
Control Room	Fire Response	11 - 1 - 2 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4		in the second second	· · · · · · · · · · · · · · · · · · ·		
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ABFP1E003	a. Determine b. Describe t	tial plant conditions the appropriate ab ne plant response to ne final plant condit		abnormal proced	lure. I procedure.		
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Material Require	d for Examination						
Question Source	Facility Exam E	Bank		Question Modi	fication Method:	Direct From Sou	rce
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Unit 2 is operating at 100% power.

An interior Control Bank rod drops fully into the core.

A Rx trip signal is not generated, NOR is it required.

Which of the following alarms is NOT consistent with these conditions?

P-250 Computer Alarm.

🔟 OHA E-48, ROD BOTTOM.

🖾 OHA E-24, ROD DEV OR SEQ.

Rod Control NON-URGENT FAILURE 2CC2 Bezel Alarm.

Answer Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2006 Tier: Generic Knowledge and Abilities RO Group SRO Group 194001G446 1 1 GENERIC Record Number 77

2.4 Emergency Procedures / Plan

2.4.46 Ability to verify that the alarms are consistent with the plant conditions.

Explanation of C is incorrect because the alarm is driven by ANY rod more than 12 steps deviation from its group B is incorrect because it is driven by ANY rod being <20 step with Control Bank D > 35 steps. counter. A is incorrect because the P-250 computer will alarm for both the deviation and rod bottom alarms. d is correct because the non urgent failure is driven from the loss of DC power supplies, none of which would cause any rods to drop.

3.5 3.6

#### Reference Title

### Overhead Annunciators Window E

## Control Console 2CC2

Answer"

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Clinitian and a second		Learning Objectives		
RODS00E011	Identify and describe the Control R Systems, including: The Control Room location of Rod STA only) The function of each Rod Control a STA only) The effect each Rod Control and P components and operation (Licens The plant conditions or permissives their intended function (Licensed O The setpoints associated with the F only)	Control and Position Indication S and Position Indication Systems ( osition Indication Systems contro ed Operator & STA only) s required for Rod Control and Po Operator & STA only)	Systems control bezels and in Control Room control and inc ol has upon Rod Control and osition Indication Systems C	ndications (Licensed Operator & dication (Licensed Operator & l Position Indication Systems control Room controls to perform
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Material Required	d for Examination			
Question Source:	New	Questio	n Modification Method:	
Question Source	Commontor			

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Iter:       Generic Knowledge and Abilities       RO Group       1       SRO Group       1       194001G448         GENERIC       Record Number       7         2.4       Emergency Procedures / Plan       2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A is correct. C is incorrect because PORVs and block valves will only be shut in AB.FIRE-001 if fire is in the relay room or control room area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.Fire-2 if fire is in Aux Bldg 64', but the reason is so CSD can be achieved in 72 hours         Reference Title         Fire Damage Mitigation         Explanation of Mitigation         Explanation of Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System procedures. (Licensed Operator only)	Unit 2 is operating at 100% power. A fire has broken out in the 104 panel, and has spread to the overhead. Due to the location of the fire, Fire Protection cannot control the fire. Which of the following identifies an action that will be taken IAW S2.OP-AB.FIRE-0002 FIRE DAMAGE MITIGATION, and why? Place the CVCS cross-connect in service from Unit 1 to supply RCP seal injection. Stop ALL RCP's stopped to ensure only heat being added to RCS is from decay heat. Close both PZR PORVs and block valves to prevent potential loss of RCS inventory and RCS pressure control. Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving and maintaining HSB conditions within 24 hours of the fire event. Reserve a Fave case R Sequence Comprehension Facility of the fire event. Reserve a Reserve and Abilities Reference 1 (Reserve) (R	Unit 2 is operating at 100% power. A fire has broken out in the 104 panel, and has spread to the overhead. Due to the location of the fire, Fire Protection cannot control the fire. Which of the following identifies an action that will be taken IAW S2.OP-AB.FIRE-0002 FIRE AMAGE MITIGATION, and why? Place the CVCS cross-connect in service from Unit 1 to supply RCP seal injection. Stop ALL RCP's stopped to ensure only heat being added to RCS is from decay heat. Close both PZR PORVs and block valves to prevent potential loss of RCS inventory and RCS pressure control. Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving and maintaining HSB conditions within 24 hours of the fire event. Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving and maintaining HSB conditions within 24 hours of the fire event. Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving and maintaining HSB conditions within 24 hours of the fire event. Stop ALL CCW pumps and block valves affect plant and system conditions. The stopped receives / Plan 4.48 Ability to interpret control room indications to verify the status and operation of system, and understrain how operator actions and directives affect plant and system conditions. Stopped in AB.Fire-2 if fire is in Aux Bidg 64, but the reason is so CSD can be achieved in 72 hours. Reference-The REPROCENT REFERCED Discuss the procedural requirements associated with the Fire Protection Disystem, including an explanation of major precaulton and imitations in the Fire Protection System control Room controls, Mater Control System control Room control and Volume Control System control Room controls to perform the relay toom or control room controls, Indeations, and alarms associated with the Chemical and Volume Control System control Room con						
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pressure control.     Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving     and maintaining HSB conditions within 24 hours of the fire event.     Answer     a Exam Level R Cognitive Level Comprehension Beclifty Salem 1 & 2 Exam Date 12/11/200     The Control Record Author Proceedures / Plan     Canner Chowledge and Abilities R0 Group 1 RP Group 1     Tescord Number 7     Cat Emergency Procedures / Plan     Cat AB Ability to interpret control room indications to verify the status and operation of system, and     understand how operator actions and directives affect plant and system conditions.     Criterian Ability to interpret control room indications to verify the status and operation of system, and     understand how operator actions and directives affect plant and system conditions.     Criterian Origin B is incorrect because PCPV's are block valves will only be shut in AB.FIRE-001 if fire is in     the relay room or control room area. (Step 3.18 and 3.19) D is incorrect because CCW pumps will be     stopped in AB.Fire-2 if fire is in Aux Bldg 64', but the reason is so CSD can be achieved in 72 hours.     Reference Title  Fire Damage Mitigation  FIRPROE012 Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution     and imitiations in the Fire Protection System procedures (Licensed Operator only)  CVCS00E005 CVC Identify and describe the Control Room controls, indications, and alamis associated with the Chemical and Volume Control System control bezels and indication (MA NEO)     The effect each Chemical and Volume Control System control base and indication (MA NEO)     The effect each Chemical and Volume Control System control base and indication (MA NEO)     The effect each Chemical and Volume Control System control base control system     or The asther Control Room controls, indications and alamis associated with the Chemical and Volume Control System Control System     orthor asthere control com m	pressure control.         Image: Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving and maintaining HSB conditions within 24 hours of the fire event.         Answer: a	pressure control.         Stop ALL CCW pumps stopped to ensure the CCW system is available to support achieving and maintaining HSB conditions within 24 hours of the fire event.         newer a family the stopped to prevent factors of the fire event.         newer a family the stopped to prevent factors of the fire event.         newer a family to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.         4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.         is correct. C is incorrect because PCPVs are stopped to prevent damage due to potential loss of CCW cooling. A stopped in AB.Fire-2 if fire is in Aux Bidg 64', but the reason is so CSD can be achieved in 72 hours.         Reference Title       Image Mitigation         FIRPROE012       Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precution system procedures. (Licensed Operator only)         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alams associated with the Chemical and Volume Control system control and indication (NA NEO)         0       The control Room location of Chemical and Volume Control System control and indication (NA NEO)         0       The control Room location of Chemical and Volume Control System control and indication (NA NEO)         0       The control Room location of chemi	Stop ALL RC	P's stopped to ensure	only heat being a	added to RCS is fr	om decay hea	t
and maintaining HSB conditions within 24 hours of the fire event.         Answer       a       Exam Level       R       Cognitive Level       Comprehension       Facility?       Salem 1 & 2       Exam Date: 12/11/200         Tier:       Generic Knowledge and Abilities       Ro Group       1       SRO Group       1       194001G448         GENERIC	and maintaining HSB conditions within 24 hours of the fire event.         Anower       a       Exam Level       R       Corputive Level       Comprehension       Eaclify: Salem 1 & 2       Exam Date       12/11/200         Tier:       Generic Knowledge and Abilities       Ro Group       1       SRD Group       1       1940016448         GENERIC	and maintaining HSB conditions within 24 hours of the fire event.         newer       a       Exam Lovell       R       Cognitive Level       Comprehension       Eacility       Salem 1 & 2       Exam Date:       12/11/200         ert       Generic Knowledge and Abilities       © Group       1       BRO Group       1       194001G448         ENERC			valves to prevent	potential loss of	RCS inventory	and RCS
Answer: a Exam Level R Cognitive Level Comprehension Facility: Salem 1 & 2       Exam Date: 12/11/200         Fier: Generic Knowledge and Abilities       R0 Group 1       IsR0 Group 1 <td< td=""><td>Answer:       a. Exam Leviel       R. Cognitive Leviel       Comprehension       Eacling: Salem 1 &amp; 2       Exam Date:       12/11/200         Fire:       Generic Knowledge and Abilities       R0 Group       1       SR0 Group       1       194001G448         GENERIC       Record Number       Image: Comprehension       Record Number       1       194001G448         2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.5         2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.5         Explanation of his correct because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A is correct. 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Cognitive Leviel       Comprehension       Eacling: Salem 1 & 2       Exam Date:       12/11/200         Fire:       Generic Knowledge and Abilities       R0 Group       1       SR0 Group       1       194001G448         GENERIC       Record Number       Image: Comprehension       Record Number       1       194001G448         2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.5         2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.5         Explanation of his correct because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A is correct. 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Reference Title         Examing Objectives         FIRPROE012         Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System Control Room control system Control System Control	Stop ALL CC and maintain	W pumps stopped to e ing HSB conditions wit	ensure the CCW shin 24 hours of th	system is available ne fire event.	e to support ac	chieving
Generic Knowledge and Ablitities       Record Number       7         GENERIC	Element Chrowledge and Ablitities       Record Number         GENERIC	Generic Knowledge and Ablitides     Generic Knowledge and Abl				alandine maarana anda anda adalah dalah kang sebuah kang menerakan kana kana kana kana kana kana kana	Exam Date:	12/11/200
Carrier Control Procedures / Plan         2.4.3       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A system or control room area. (Step 3.18 and 3.19)         Discuss the procedural requirements associated with the reason is so CSD can be achieved in 72 hours.         Reference Title         Fire Damage Mitigation         CVCS00E008       Loss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System control because (NA NEO)         B)       IDSicuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System control because (NA NEO)         B)       IDSI incorrect Room location of Chemical and Volume Control System control because (NA NEO)         B)       The offect each Chemical and Volume Control System control because and indications (N/A NEO)         CVCS00E008       IDSI inclusion in the Size perimissives required for Chemical and Volume Control System Control System control Room controls to perform their indeed function         (a)       The control Room premissives required for Chemical and Volume Control System Control Room controls to perform their indeed function         (b)       The stepoints associated with the Che	Content of the control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.5         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A system or control room area. (Step 3.18 and 3.19) D is incorrect because CCW pumps will be stopped in AB.Fire-2 if fire is in Aux Bldg 64', but the reason is so CSD can be achieved in 72 hours.         Fire Damage Mitigation       Reference Title         Fire Damage Mitigation       Learning Objectives         Fire Damage Mitigation       Learning Objectives         Fire Damage Mitigation       Learning Objectives         Fire Damage Mitigation       CVCS00E008         LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System control bezels and indication (N/A NEO)         B)       The effect each Chemical and Volume Control System control bezels and indication (N/A NEO)         C)       The effect each Chemical and Volume Control System control system Control Room controls to perform their intended function         (d)       The state cach Chemical and Volume Control System control Room controls to perform their intended function         (d)       The state cach Chemical and Volume Control System control Room controls to perform their intended function         (d)       The state cach Chemical and Volume Control System control Room controls to perform their intende	A       Emergency Procedures / Plan         4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         (aderstand how operator actions and directives affect plant and system conditions.       5.3       3.5       3.5         (aderstand how operator actions and directives affect plant and system conditions.       5.5       3.5       3.5         (aderstand how operator actions and directives affect plant and system conditions.       5.5       3.5       3.5         (aderstand how operator actions and directives affect plant and system conditions.       5.5       3.5       3.5         (aderstand how operator actions and directives affect plant and system conditions.       5.5       3.5 <t< td=""><td>Fier: Generic Know</td><td>ledge and Abilities</td><td>RO Group</td><td>1 SRO Group 1</td><td>19</td><td>4001G448</td></t<>	Fier: Generic Know	ledge and Abilities	RO Group	1 SRO Group 1	19	4001G448
2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A source to control room area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.FIRE-001 if fire is in the relay room or control room area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.Fire-2 if fire is in Aux Bldg 64', but the reason is so CSD can be achieved in 72 hours.         Reference Title       Fire Damage Mitigation         FIRPROE012       Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System control system, control and indications (N/A NEO)         System, including:       a)       The Control Room location of Chemical and Volume Control System control and indications (N/A NEO)         b)       The effect ach Chemical and Volume Control System control and indications (N/A NEO)       b)         components and operation (N/A NEO)       control from and under of each Chemical and Volume Control System control and indication (N/A NEO)         c)       the effect ach Chemical and Volume Control System control and indication (N/A NEO)         c)       the effect ach Chemical and Volume Control System control and indication (N/A NEO)         c)       the effect ach Chemical and Volume	2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A system conditions is correct. C is incorrect because PORVs and block valves will only be shut in AB.FIRE-001 if fire is in the relay room or control room area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.FIRE-21 if fire is in Aux Bldg 64', but the reason is so CSD can be achieved in 72 hours.         Reference Title         Fire Damage Mitigation         Learning Objectives         Fire Damage Mitigation         CVCS00E008         Learning Objectives         FIRPROE012         Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System procedure. (Licensed Operator only)         CVCS00E008         LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System control and indication (N/A NEO)         b)       The Control Room location of Chemical and Volume Control System control and indication (N/A NEO)         c)       The defect ach Chemical and Volume Control System control and indication (N/A NEO)         c) <td>4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         (a) and erstand how operator actions and directives affect plant and system conditions.       3.5       3.         (a) and erstand how operator actions and directives affect plant and system conditions.       3.5       3.5         (a) and an an an an an an an an and an an an an an an an an and an an an an and an an an an an and an an an an an an an and an an</td> <td>GENERIC</td> <td></td> <td>an an a</td> <td></td> <td>- Record Numbe</td> <td>r 7</td>	4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         (a) and erstand how operator actions and directives affect plant and system conditions.       3.5       3.         (a) and erstand how operator actions and directives affect plant and system conditions.       3.5       3.5         (a) and an an an an an an an an and an an an an an an an an and an an an an and an an an an an and an an an an an an an and an	GENERIC		an a		- Record Numbe	r 7
2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A survey of the root operator actions and directives affect plant and system conditions.       3.5       3.5         Explanation of Is correct because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A survey of the root opt or opt or opt or area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.FIRE-001 if fire is in Aux Bidg 64', but the reason is so CSD can be achieved in 72 hours.         Reference Title       10         FIRPROE012       Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System procedure. (Learning Objectives         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System control and indication (N/A NEO)         b)       The Control Room location of Chemical and Volume Control System control and indication (N/A NEO)         c)       The deficit and Volume Control System control Room control System co	2.4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         Explanation of Answer       B is incorrect because RCP's are stopped to prevent damage due to potential loss of CCW cooling. A system control room area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.FIRE-001 if fire is in the relay room or control room area. (Step 3.18 and 3.19)       D is incorrect because CCW pumps will be stopped in AB.FIRE-01 if fire is in Aux Bldg 64', but the reason is so CSD can be achieved in 72 hours         Reference Title       Fire Damage Mitigation         Eventing Objectives       Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System procedure. (Licensed Operator only)         CVCS00E008       LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System control and indication (N/A NEO)         a) The control Room location of Chemical and Volume Control System control and indication (N/A NEO)       D) The function of each Chemical and Volume Control System control and indication (N/A NEO)         b) The effect each Chemical and Volume Control System control Room control and indication (N/A NEO)       D) The function of each Chemical and Volume Control System control Room control and indication (N/A NEO)         c) The effect each Chemical and Volume Control System control Room control and indication (N/A NEO)       D) The function	4.48       Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.       3.5       3.         (a) and erstand how operator actions and directives affect plant and system conditions.       3.5       3.         (a) and erstand how operator actions and directives affect plant and system conditions.       3.5       3.5         (a) and an an an an an an an an and an an an an an an an an and an an an an and an an an an an and an an an an an an an and an	2.4 Emergency P	rocedures / Plan	•••• Characterization and a set of the se			
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(Licensed Operator only) CVCS00E008 LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System, including: a) The Control Room location of Chemical and Volume Control System control bezels and indications (N/A NEO) b) The function of each Chemical and Volume Control System control has upon Chemical and Volume Control System components and operation (N/A NEO) c) The effect each Chemical and Volume Control System control Room control system components and operation (N/A NEO) d) The plant conditions or permissives required for Chemical and Volume Control System control Room control system components and operation (N/A NEO) d) The plant conditions or permissives required for Chemical and Volume Control System control Room controls to perform their intended function e) The setpoints associated with the Chemical and Volume Control System control room alarms. 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(Licensed Operator only) CVCS00E008 LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System, including: a) The Control Room location of Chemical and Volume Control System control bezels and indications (N/A NEO) b) The function of each Chemical and Volume Control System control has upon Chemical and Volume Control System components and operation (N/A NEO) c) The effect each Chemical and Volume Control System control Room control system components and operation (N/A NEO) d) The plant conditions or permissives required for Chemical and Volume Control System control Room control system components and operation (N/A NEO) d) The plant conditions or permissives required for Chemical and Volume Control System control Room controls to perform their intended function e) The setpoints associated with the Chemical and Volume Control System control room alarms. Leaterial Required for Examination uestion Source: Facility Exam Bank Leaterial Required for Examination Leaterial Req	2.4.48 Ability to int	erpret control room indicati	ons to verify the state lirectives affect plant	us and operation of sy and system conditior	vstem, and ns.	3.5 3.
Reference Title           Fire Damage Mitigation           Learning Objectives           FIRPROE012           Discuss the procedural requirements associated with the Fire Protection System, including an explanation of major precaution and limitations in the Fire Protection System procedures. (Licensed Operator only)           CVCS00E008           LOR Identify and describe the Control Room controls, indications, and alarms associated with the Chemical and Volume Control System control bezels and indications (N/A NEO) b)           The Control Room location of Chemical and Volume Control System control Bom control and Indications (N/A NEO) b)           The first each Chemical and Volume Control System control has upon Chemical and Volume Control System control has upon Chemical and Volume Control System control Room controls System components and operation (N/A NEO)           O)           Other plant conditions or permissives required for Chemical and Volume Control System Control Room controls to perform their intended function           Other the control system control System control Room controls to perform their intended function           Other the control system control System control Room controls to perform their intended function           Other the control system control System control Room controls to perform their intended function           Other the control system control System control room alarms.								

44041

# U.S. Nuclear Regulatory Commission Site-Specific Written Examination

Applican	t Information
Name:	Region: I
Date: 12/18/2006	Facility: Salem 1 & 2
License Level: SRO	Reactor Type: W
Start Time:	Finish Time:
Instr	ructions
Use the answer <sup>1</sup> sheets provided to docum On top of the answer sheets. The passing 70.00 percent on the SRO section of the e section, and a combined grade of at least be collected EIGHT hours after the exami	examination, 80.00 percent on the RO 80.00 percent. Examination papers will
Applicant	Certification
All work done on this examination is my or	wn. I have neither given nor received aid.
	Applicant's Signature
Re	esults
Examination Value	Points
Applicant's Score	Points
Applicant's Grade	Percent
SRO/RO Combined Score	Points
SRO/RO Combined Grade	Percent

Given the following conditions:	
- Salem Unit 1 has experienced a LBLOCA coincident with numerous equipm	ent failures and
- Salem Unit Thas experienced a LBLOOA confident war hendlose oquip.	na anna 20 an an an ann amhlachanair anna ann ann an anna an anna an Anna an Anna an Anna an an Anna an an Anna Anna Anna
A majority of CETs have exceeded 1200 deg. F.	<pre>construction of the construction of a mass from the construction of the construct</pre>
<ul> <li>1-EOP-LOCA-1 was in progress when a transition to 1-FRCC-1, RESPONS</li> </ul>	E TO INADEQUATE
CORE COOLING was made	an a chu ann an tha malach a chu airte an tarr ann an tar a bhair a chuir an tarr an tarr an tarr an tarr an ta
<ul> <li>1-FRCC-1 has been ineffective at lowering CET temperatures.</li> </ul>	
- The TSC is activated.	· · · · · ·
Which of the following describes how this condition will be addressed?	
Return to Step 1 of FRCC-1 and continue in a "do" loop until any action h	as reduced CET
temperatures less than 1200 deg. F.	
Return to LOCA-1 proedure in effect until transfer to HL recirc is required	while continuing any
available mitigation actions.	
Transition to SAMG-CRG-1 CONTROL ROOM INTIAL RESPONSE FOR	SEVERE
ACCIDENT, since the normal EOP network has been ineffective at protect	ting the core.
Transition directly to SAMG-CRG-2 CONTROL ROOM INTIAL RESPONS	SE FOR SEVERE
ACCIDENT-TSC ACTIVATED since additional protective actions are requ	ired IAW the Guide.
Answer C Exam Level S Cognitive Level Comprehension Facility Salem 1 & 2	Exam Date: 12/11/2006
Tier: Emergency and Abnormal Plant Evolutions RO Group 1 SRO Group 1	000011A208
011 Large Break LOCA	Record Number
EA2. Ability to determine and interpret the following as they apply to Large Break LOCA:	
EA2.08 Conditions necessary for recovery when accident reaches stable phase	3.4* 3.9*
Explanation of 55.43(5) This question is designed to test the candidates ability to determine w	hen the accident can NOT
Answer be recovered from by using the normal EOP network. In this sense it meets the the accident is essentially "non-recoverable" is logically tied to conditions which	h would let a normal
recovery happen. With CET temps >1200 degrees in FRCC, the transition is	made to SAMG-CRG-1 at
step 27. The only way into SAMG-CRG-2 is to enter SAMG-CRG-1 first.	
Reference Title	
Severe Accident Mitigation Guidelines	
Learning Objectives	
FRCC00T001 Given a set of plant conditions, take corrective actions for an inadequate core cooling condition,	in accordance with 2-EOP-
FRCC-1	
Material Required for Examination	an a
Question Source: New Question Modification Method:	
Question Source Comments:	
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	Ciucas the following conditional
	Given the following conditions:
	<ul> <li>Unit 2 is operating at 100% power.</li> <li>21 charging pump is in service.</li> <li>At 0200, an automatic VCT makeup occurs.</li> </ul>
	- At 0400, another auto makeup occurs.
••••	<ul> <li>PZR level and charging flow are stable and have remained constant.</li> </ul>
	Which of the following describes what is occurring, and what procedure should be implemented?
	A > 1 gpm RCS leak, S2.OP-AB.RC-0001, REACTOR COOLANT SYSTEM LEAK.
	2LT-112 has failed to 14%, S2.OP-AR.ZZ-0012, 2CC2 CONTROL CONSOLE Alarm Response.
	A < 2 gpm leak on the 21 charging pump discharge check valve flange, S2.OP-AB.CVC-0001 LOSS OF CHARGING.
و الموادر المراجع المر المراجع المراجع	PZR Master Flow Controller setpoint has drifted high, S2.OP-SO.CVC-0001, CHARGING,
	LETDOWN, AND SEAL INJECTION.
	Answer C Exam Level S Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11/2006
	Tier: Emergency and Abnormal Plant Evolutions R0 Group 1 SR0 Group 1 000022A202
	022 Loss of Reactor Coolant Makeup 2
	AA2. Ability to determine and interpret the following as they apply to Loss of Reactor Coolant Makeup:
	AA2.02       Charging pump problems
	Explanation of Answer       55.43(5)       A is incorrect because both PZR level and charging flow would have changed to compensate for the loss of fluid from the system. B is incorrect because the auto makeup would never stop since it would see 14% level continuously. C is correct because with the leak on the discharge of the pump but upstream of the CV-55, charging flow would remain the same, and PZR level would remain constant. The loss would be seen as VCT level. Using 20 gallons per % in the VCT, and the makeup band of 14-24%, the system is losing 10% every 2 hours, or 200 gallons every 2 hours, or 100 gal/hour, or 1.67 gpm. D is incorrect because charging flow would have risen and PZR level would have gone up.
erre o one nin commune	Reference Title
	Loss of Charging
	Charging letdown and seal in
• • • • •	Learning Objectives
	CVCS00E012 Describe the procedures which govern the operation of the Chemical and Volume Control System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators.
-	
-	Material Required for Examination
	Question Modification Method:
	Question Source Comments:

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- Unit 1 is operating at 100% power when 12 SGFP trip.
- The Main Turbine runs back as expected.
- The RO is unable to initiate a normal boration.
- Operators receive OHA E-16, ROD INSERT LMT LO-LO
- Control Bank D position is 75 steps.
- Reactor power is stable at 64%.
- RCS boron concentration is 650 ppm.

Using the attached REM figures, determine the LEAST amount of time a rapid boration through 1CV175 is required IAW S1.OP-SO.CVC-0008, RAPID BORATION, in order to clear OHA E-16?

		min		
- X2	in.	min		2
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8 minutes.

- 23 minutes.
- 30 minutes.

Answerb	Exam Level S Cognitive Level Application Facility: Salem 1 & 2	Exam Date: 12/11/2006
Tier: Emerg	ency and Abnormal Plant Evolutions RO Group 2 SRO Group 2	000024A205
024	Emergency Boration	Record Number 3
AA2. Ability	to determine and interpret the following as they apply to Emergency Boration:	
AA2.05 Amo	ount of boron to add to achieve required SDM	3.3 3.9
Explanation of Answer	55.43(6) Using REM Figure 14, the RIL at 64% power is 85 steps. The ARP f must be withdrawn at least 2 steps past the limit to clear the alarm. With rods must be withdrawn 12 steps to the 87 step position. Using REM figure 4, the r movement is ~100 pcm. Using REM Figure 13, the differential rod worth for 6 100 pcm/-6.9 pcm.ppm = 14.49, rounded up to 15 ppm. A is incorrect becau chart for a 10 ppm boration. B is correct because IAW chart on page 3 of pro- required for 10 ppm change. Therefore, a 15 ppm change would require 7.5 m would be the least amount of time of the choices presented to inject enough bo it is the amount of boron added if there were 15 steps of control bank misalign because it is the time required if injection was from the RWST.	at 75 steps from stem, rods eactivity from this 12 step 50 ppm is -6.9 pcm/ppm. use it is the time on the cedure 5 minutes are hinutes. So 8 minutes pron. C is incorrect because
	Reference Title	hat a second

Reactor Engineering Manual

Rapid Boration

 Learning Objectives

 CVCS00E012
 Describe the procedures which govern the operation of the Chemical and Volume Control System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators.

 Material Required for Examination
 REM Figures 4,13,18. S1.OP-SO.CVC-0008

 Question Source:
 New

 Question Modification Method:

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- Unit 2 has experienced a LBLOCA.

- While performing Faulted SG Evaluation at Step 1 of 2-EOP-LOCA-1, LOSS OF REACTOR COOLANT, ALL off-site power is lost.

- 2C EDG reenergizes 2C 4KV Vital bus.
  - 2A and 2B EDGs start but BOTH their Vital busses are locked out on Bus Differential.

Which of the following identifies the correct procedure flowpath, starting from when off-site power was lost?

- IMMEDIATELY GO TO LOCA-5, LOSS OF EMERGENCY RECIRCULATION, and refer to S2.OP-AB.LOOP-0001, LOSS OF OFFSITE POWER
- Reset SI and SECs in LOCA-1, start ECCS pumps that stopped when SEC C reloaded in MODE II, GO TO LOCA-3 at 15.2' RWST level, return to LOCA-1.
- Remain in LOCA-1 until transition is required. If LOCA-3 is entered go IMMEDIATELY to LOCA-5, otherwise go directly to LOCA-5, perform in its entirety, transition to IOP-6, HOT STANDBY TO COLD SHUTDOWN.
- Initiate S2.OP-AB.LOOP-0001 while continuing in LOCA-1. At 15.2' RWST level, GO TO LOCA-3, and perform all action up until starting of RHR pumps is required. GO TO LOCA-5, complete applicable actions, and return to LOCA-1.

Answer C	Exam Level S	Cognitive Level	pplication	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Emerg	jency and Abnorm	al Plant Evolutions	R0 Group	1 SRO Group 1	000	0025G416
025	Loss of Residual	Heat Removal Syst	em		Record Number	4
	gency Procedures				an a	
2.4.16 Kno	wledge of EOP im	plementation hiera	rchy and coordir	ation with other support	procedures.	3.0 4.0
Explanation of Answer	2 RHR pumps and and SEC's were LOCA-3, the CA initiate makeup.	re not available. B reset, so the SEC S action to go to LC D is incorrect bec	is incorrect beca s never loaded in DCA-5 should be ause there is no	ntered from LOCA-1 at S iuse the Loss of Offsite m MODE II (Blackout). C performed immediately transition prior to RWS o other even t in progres	power occurred be is correct becaus to conserve RWS T level of 15.2' or	efore the SI se once in ST level and Step 16 of

Reference Title

Loss of Emergency Recirculation

Loss of Reactor Coolant

Transfer to Cold Leg Recirculation

OCA00T005	perform actions for a Loss of Emergency Recirculation IAW EOP-LOCA-5
OCA00T001	perform actions for a loss of reactor coolant IAW EOP-LOCA-1
CA3U2T001	Given a set of plant conditions, perform actions for a Transfer to Cold Leg Recirculation in accordance with 2-EOP-LOCA-3
iterial Require	d for Examination
uestion Source	New Question Modification Method:

- Unit 2 is operating at 100% power with a leaking fuel pin.

 The specific activity of the RCS has been ~ 0.3 uCi/gram DOSE EQUIVALENT IODINE for 1 week.

- A radiation protection technician reports the latest RCS sample indicates that specific activity has jumped to 70 uCi/gram.

- Prior to any action being taken, a 300 gpm tube rupture occurs on 22 SG
- A MANUAL Rx trip and a MANUAL Safety Injection were initiated successfully.
- IMMEDIATELY following the reactor trip, 22MS10, SG Atmospheric Relief Valve failed open.
- Operators cannot enter the affected penetration area to manually isolate the malfunctioning

valve until TWO hours have passed.

Which of the following describes how radiological conditions will be affected by this failure?

A Qualified Radiological Worker inside the Protected Area exposed to the entire release would exceed the Salem Administrative Dose Control limit of 500 DAC-hours (1250 mrem/year CEDE).

A person located at any point on the outer boundary of the low population zone during the entire time of the release may be exposed to more than an acceptable portion of the 25 Rem whole body dose limit.

The malfunctioning MS10 will cause RCS temperature to drop below 500 degrees, which ensures the resulting 2 hour dose at the site boundary will not exceed an appropriately small fraction of 10CFR100 limits.

A person located at any point of the Exclusion Area boundary for the 2 hours immediately following the fission product release may receive more than the 10CFR100 limit of 50 Rem to the thyroid from iodine exposure.

Answerb	Exam Level S	Cognitive Level	Application	Facility: Salem	1 & 2 Ex	am Date:	12/11/2006
Tier: Emerge	ency and Abnorma	I Plant Evolution	RO Group	1 SRO Group	1	0000	38G304
038	Steam Generator	Tube Rupture		-	Re	cord Number	5
2.3 Radiati	on Control		ten in de la seconda provincia de la provincia.		· · · · · · · · · · · · · · · · · · ·	e yo yo na metalawa ta eyong wantegew a	
	vledge of radiation ss of those author		and contaminatio	n control, includi	ng permissibl	e levels in	2.5 3.1
Answer	55.43(4) The bas limits is that in ca Relief valves auto incorrect because for the bases of s mrem/yr CEDE), 10CFR100 limits exposure to a sm cannot be made.	se of a SGTR, the omatic lift setpoint of the above state pecific activity. A and its only a thr assume a LOCA all fraction of tho	the RCS will be be atement, even the A is incorrect bec reshold for monito and the SGTR s ase limits. With the	low the saturatio sented above, th ough the site bou ause the dose co ring, not a contro scenario with spe le failed open atr	n pressure for e MS10 valve ndary part of t ontrol limit is 2 ol limit. B is ecific activity in	r the SG Atmo is failed open the distracter is 00 DAC-hours correct becaus in the RCS is to	ospheric C is s correct s (500 se the o limit
			Reference Titl	e	ж.		
Tech Specs	· · · · · · · · · · · · · · · · · · ·					a na sta filmeði eðjaðurejaði sanna gar er ei farðuregar er	n fri strant er skriver og som er store forsk
Radiation Prot	ection Program		and a second		and a set of the set of the set of the set		hir brain an a' ha' cailte rings a
Code of Feder	al Regulations		· · · · · · · · · · · · · · · · · · ·	·	· · · · · · · · · · · · · · · · · · ·		
64.94			Learning Object			ann i sta	
RADCONE002	List the following e A. 10CFR20 limits and requirement	dose limits for exter	osure limits, in accord nal, internal, and tota	ance with NC.NA-AF whole body, skin, ex	2.ZZ-0024(Q), 10 dremities, and ey	CFR20, and Reg. /es, as well as exte	Guide 8.13: ension
Friday, Decer	mber 15, 2006 11:35:3	4 AM	Page 5 of 3	<b>1</b>	· · ·		

	E. Category F. Category	1 Radiation 2 Radiation	Worker				
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	the	tollowing	conditions:
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- Unit 1 is operating at 100% power.
- A steam leak is identified and the CRS orders the reactor tripped.

Which of the following conditions would require a Safety Injection to be MANUALLY initiated after the Rx trip is attempted, and what procedure would require the Safety injection?

The reactor trips and steam flow only drops to 5%; S1.OP-AB.STM-0001, Excessive Steam Flow.

The reactor trips and containment pressure is rising; S1.OP-AB.STM-0001, Excessive Steam Flow.

The reactor does NOT trip from the Control Room; 1-EOP-FRSM, Response to Nuclear Power Generation.

The reactor does NOT trip until the Rx Trip Breakers are opened from 1CC2; 1-EOP-TRIP-1, Reactor Trip Response.

Answer	Exam Level S	Cognitive Level Ap	oplication	Facility: Salem	1&2	Exam Date:	12/11/2006
Tier: Emerg	ency and Abnorm	nal Plant Evolutions	RO Group	1 SRO Group	1	[	000040A204
040	Steam Line Rupt	ure				Record Numb	er 6
AA2. Ability	to determine and	interpret the followir	ng as they apply	to Steam Line	Rupture:	nin and the and the second	
AA2.04 Con	ditions requiring I	ESFAS initiation				n a an	4.5 4.7
Explanation of Answer	trip. B is correct leak/rupture is lo steam leak/rupture require a Safety control console required for failu	correct because the ct because after the r ocated in containmer ure is NOT isolated. Injection, nor is it a is only significant in ure to trip. If an AUT required in TRIP-1	reactor trip, con nt and is unisola (CAS Step 1.1. wanted occurre that the initial R	ainment pressu ble, and aB.ST C and D). C is i nce. D is incorr x trip demand d	re rising in M requires ncorrect be ect becaus lid not occu	dicates the s a safety inje ecause an A se the Rx trip ur and an EC	team ction if the IWT will NOT from the G call is
4 199 <b>0</b>	Sandara 1998		Reference Title				
Excessive Ste	eam Flow						
Response to	Nuclear Power G	eneration					·

**Reactor Trip Response** 

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Material Required for Examination	

 Question Source:
 New
 Question Modification Method:
 Question Source Comments:

- Unit 1 is operating a 75% power.
- PZR pressure channel II is removed from service for calibration.
- An electrical fault causes the 500 KV switchyard to become deenergized.

- The PZR Master Pressure Controller (MPC) fails low, causing sprays to close and all heaters to energize.

If pressure rises above their lift setpoint, which of the following describes how this will affect PZR PORV operation?

ONLY 1PR1 will open. Since the PORVs are not designed to prevent exceeding RCS design pressure, one OPERABLE PORV is an acceptable plant configuration.

ONLY 1PR2 will open. Since the Rx has already tripped due to the Loss of Off-Site power, the PORVs are not necessary for plant control.

BOTH PORVs will open since the MPC does not control PORV operation. The plant will NOT exceed design parameters since two PORVs have enough relief capacity to prevent exceeding 2485 psig RCS pressure.

Neither PORV will open since the MPC has failed low. The plant will not exceed design parameters as long as the PZR Safety Valves function properly.

Answer a	Exam Level S	Cognitive Level Ap	oplication	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Emerge	ency and Abnorma	al Plant Evolutions	RO Group	1 SRO Group	1	000056A201
056	Loss of Off-Site P	ower			Record Numb	er7
AA2. Ability t	to determine and i	interpret the followir	ng as they apply	y to Loss of Off-Site	Power:	
AA2.01 POR	V controller indica	the second s	an a	······································		3.3* 3.4
Explanation of Answer	channels out for Pressure Rx trip, has the right reas keep RCS press	calibration. The PC not for exceeding c son. C is incorrect t ure less than 2485 c	DRV's are designer design pressure because of (a) a bsig. D is incor	en since it is a 2/2 c gned to prevent PZR a. B is incorrect beca above, and also that rect because the MP te PZR pressure cha	pressure from read ause of (a) above, e 2 PORV's are NOT PC does not directly	ching the High even though it designed to control PORV
Technical Spe	ecifications and Ba	ases		ayın danı tara çora a serinda anı daraşında dara dara dara dara dara dara dara d	ier a namer konflikter er enligteren kigen († 1939) anvere angegere	ni njegodan na ini problem izvis vryska dige
Reactor Prote	ction System PZF	R pressure and level	control			
			Learning Objecti			
PZRP&LE002	Describe the desig	gn bases of the Pressuriz	zer Pressure and L	evel Control system		<ul> <li>A second sec second second sec</li></ul>
		makes and the second	and the second			

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Question Modification Method:

Material Required for Examination

Question Source: New

Question Source Comments:

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Given the following conditions:
<ul> <li>Unit 2 was operating at 100% power when a steam leak upstream of 22MS167 occurred.</li> <li>The Rx was tripped and a MSLI performed successfully.</li> <li>Operators have transitioned out of EOP-TRIP-1.</li> <li>The PO is attempting to open 21-24SS94s, SG B/D Sample Valves, but they will not open.</li> <li>SGBD sample isolation bypass has been RESET.</li> </ul>
Which of the following conditions identifies the reason the valves won't open?
■ 22 SG NR level is <9%.
SI was not reset properly.
Phase A isolation failed to reset.
CA330s have not been reopened.
Answer C Exam Level S Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier:         Emergency and Abnormal Plant Evolutions         RO Group:         1         SRO Group:         1         00WE05A202
E05 Loss of Secondary Heat Sink Record Number 8
EA2. Ability to determine and interpret the following as they apply to Loss of Secondary Heat Sink:
EA2.2 Adherence to appropriate procedures and operation within the limitations in the facility's license and 3.7 4.3 amendments.
Explanation of Answer 55.43(4) SGBD Sample Isolation bypass requires deliberate action to open SG Sample valves to prevent the spread of contamination. For a trip and SI due to a single faulted SG (unisolable) the flow path will go from TRIP-1 to LOSC-1. B is incorrect because the SI will NOT have been reset in TRIP-1, nor will it be reset in LOSC-1. C is correct because the SGBD sample isolation reset will be performed in LOSC-1 (step 6.1) in order to open the SS94's. The step prior to that is RESET PHASE A. This is due to the fact that the blowdown isolation bypass only bypasses the lo-lo level input into the AFW auto start circuit, which closes the SS94's. If the Phase A hasn't been reset, the 94s can not be reopened. D is incorrect because the SS94's supplied air from outside cont
Reference Title
Loss of Secondary Coolant
Learning Objectives
LOSC01E005 Identify possible radioactivity release paths during a loss of secondary coolant event and describe how the actions of 2-EOP-LOSC-1 minimize the potential for a release
Material Required for Examination
Question Source:         Facility Exam Bank         Question Modification Method:         Direct From Source
Question Source Comments:

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Which of the following choices identifies the mitigation strategy of EOP-FRCC-3 RESPONSE TO SATURATED CORE COOLING?
Repressurize the RCS to collapse voids, verify letdown isolation and establish charging.
Establish ECCS Injection flow to maintain minimum RCS subcooling and check for open RCS vent paths.
Verify/ establish PZR level > 17% to restore letdown and PZR heaters, energize heaters to raise RCS pressure.
Establish charging and letdown to stabile PZR level, ensure both PORVs are closed and PORV stop valves open.
Answer: b Exam Level S Cognitive Level Memory Facility Salem 1 & 2 Exam Date: 12/11/2006
Tier:         Emergency and Abnormal Plant Evolutions         RO Group         2         SRO Group         2         00WE07A202
E07 Saturated Core Cooling 9
EA2. Ability to determine and interpret the following as they apply to Saturated Core Cooling:
EA2.2 Adherence to appropriate procedures and operation within the limitations in the facility's license and 3.3 3.9 amendments.
Explanation of Answer 55.43(5) b comes out of the Att. 1 of 2-EOP-FRCC-3 basis document. All distracters are convolutions of other procedures mitigating actions.
Reference Title
Response to Saturated Core Cooling
Examing Objectives           FRCC00E002         Describe the EOP mitigation strategy for the following: A. Response to Inadequate Core Cooling. B. Response to Degraded Core Cooling. C. Response to Saturated Core Cooling Conditions
Material Required for Examination
Question Source: Facility Exam Bank Question Modification Method: Direct From Source
Question Source Comments: VISION Q48662

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Which of the CFST?	e following cho	pices identifies th	ne condition w	hich would res	sult in th	e highest p	priority	
🖪 Rx tripp	ed 15 minute	s ago, 21-23 SG	levels are 4%	6 NR, 24SG le	vel is 80	0% NR.		
Rx is tri 22%.	pped from 10	0% power, IR SU	JR is +0.1 dpi	m, Rx power is	5x10-9	Amps, PZ	R level is	
	Rx trip and SI from 100% power due to LOCA, ALL RCPs stopped, RVLIS Full Range 35%, highest CET in each quadrant reading 600 deg.							
		30% power due 1 ure is 1200 psig.		ure, ALL RCPs	s are sto	opped, RCS	6 Tc's are	
Answer d	Exam Level S	Cognitive Level	lemory	Facility: Salem 1	& 2	Exam Date:	12/11/2006	
Tier: Emerge	ency and Abnorm	al Plant Evolutions	RO Group	1 SRO Group	1	0	0WE08A201	
E08	Pressurized Ther	mal Shock			a i man sann a	Record Numb	er 10	
EA2. Ability t	o determine and	interpret the followi	ng as they apply	to Pressurized T	hermal S	hock:		
	ity conditions and ations.	selection of approp	oriate procedure	s during abnorma	al and em	ergency	3.4 4.2	
Explanation of 55.43(5) A is incorrect because it is a YELLOW priority CFST. B is incorrect because it is a PURPLE path. C is incorrect because it is a PURPLE Path CFST. D is correct because it is the only RED path CFST. The Figure 4A Thermal Shock Limit Curve shows that ant cold leg temperature of 230 deg with pressure > 0 psig is to the left of Limit A. The combination of > 100 deg/hr cooldown rate, and pressure temp to the left of Limit A results in RED path.								
		The second second second	Reference Title	a sugar a				
Critical Safety	Function Status	Trees						
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			Learning Objectiv	/es				
FRTS00E001	State the RED pa	ths for the Thermal Shoo	ck Status Tree			an in the data way to the second s	· · · · · · · · · · · · · · · · · · ·	
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Material Require Question Source	d for Examination			estion Modification	Mothod: **	Editorially Mod	lified	
Question Source		ank anged 2 distracters to m						
wacshon source	Comments.	angeu z uistracters to m				MI GOL.		

Given the following conditions:
- Unit 1 is at 100% power.
- With SSPS testing and troubleshooting in progress a Phase B Containment Isolation signal was
denerated and all related valves closed.
- Before operators could re-open any of the Phase B valves, the operating Charging Pump
breaker tripped on an electrical fault.
Which of the following describes the required operator actions?
Immediately start the other Charging Pump and monitor RCP bearing and seal inlet temps.
Initiate a MANUAL reactor trip and stop all RCP's if Phase B can NOT be reset. RCP's can be
re-started anytime after seal injection has been restored.
Start the other Charging Pump OR restore CCW to the thermal barrier within five minutes or initiate a MANUAL reactor trip.
Initiate a MANUAL reactor trip and stop all RCP's. Cooldown to desired temperature IAW EOP-TRIP-4, NATURAL CIRCULATION COOLDOWN.
Answer d Exam Level S Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/200
Tier:         Emergency and Abnormal Plant Evolutions         R0 Group         1         SR0 Group         1         00WE09A201
E09 Natural Circulation Operations Record Number 1
EA2. Ability to determine and interpret the following as they apply to Natural Circulation Operations:
EA2.1 Facility conditions and selection of appropriate procedures during abnormal and emergency 3.1 3.1
Explanation of Answer 55.43(5) A is incorrect because there is no procedural direction to start another charging pump after a loss of seal injection AND loss of Thermal Barrier Cooling flow. B is incorrect because RCP's cannot be restarted anytime, seal inlet temps must be below the threshold for hot seal. C is incorrect because there is no 5 minute timer for actions. IMMEDIATELY go to Att 2 of AB.RCP to trip Rx and RCPs. D is correct because the actions are correct per AB.RCP, and the cooldown will have to be performed naturally circulated.
Reference Title
Reactor Coolant Pump Abnormality
Natural Circulation Cooldown
Learning Objectives           TRP004T001         Given a set of plant conditions, perform actions for a Natural Circulation Cooldown in accordance with EOP-TRIP-4
ABRCP1E004       Given a set of initial plant conditions: a) Determine the appropriate abnormal procedure.         b)       Describe the plant response to actions taken in the abnormal procedure         c)       Describe the final plant condition that is established by the abnormal procedure.
Material Required for Examination
Question Source:         Facility Exam Bank         Question Modification Method:         Editorially Modified
Question Source Comments: Reworded distracters for psychometric attributes.

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Given the following conditions:
<ul> <li>Unit 2 has experienced a Large Break Loss of Coolant Accident.</li> <li>The Reactor trip and Safety Injection occurred successfully.</li> <li>2-EOP-LOCA-1 LOSS OF REACTOR COOLANT is in effect.</li> </ul>
<ul> <li>PZR pressure is 35 psig.</li> <li>1 CET is reading 900°F, ALL other CET's are reading ~550°F.</li> <li>RVLIS Full Range is reading 74%.</li> <li>Containment pressure is 13 psig.</li> <li>Containment sump level is 62%.</li> <li>R44A radiation monitor is indicating 50 R/hr.</li> </ul>
Which choice identifies a procedural transition that is allowed under these conditions?
FRCI-3, RESPONSE TO VOID IN REACTOR VESSEL.
FRCC-2, RESPONSE TO DEGRADED CORE COOLING.
FRCE-1, RESPONSE TO EXCESSIVE CONTAINMENT PRESSURE.
FRCE-3, RESPONSE TO HIGH CONTAINMENT RADIATION.
Answer d Exam Level S Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier: Emergency and Abnormal Plant Evolutions RO Group 2 SRO Group 2 00WE16A202
E16 High Containment Radiation Record Number 12
EA2. Ability to determine and interpret the following as they apply to High Containment Radiation:
EA2.2 Adherence to appropriate procedures and operation within the limitations in the facility's license and 3.0 3.3 amendments.
Explanation of Answer 55.43.(5) D is correct because the YELLOW path entry requirements are met of 2R44Rad level > 2R/hr and no other FRCE conditions present. Distracter A is incorrect because PZR level will be offscale low with LBLOCA. Distracter B is incorrect because 5 or more CET's are NOT > 700 and RVLIS level is NOT < 39%. Distracter C is incorrect because containment pressure is < 15 psig.
Reference Title
Response to High Containment Radiation
Critical Safety Function Status Trees
Learning Objectives
FRCE00T003 Given a set of plant conditions, take corrective actions for an high containment radiation in accordance with 2-EOP-FRCE-3
Material Required for Examination
Question Source:         Previous 2 NRC Exams         Question Modification Method:
Question Source Comments: "H" NRC SRO Exam June 2004

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Given the following conditions:
Siver the following conditions.
Unit 1 is in Mode 5 with 11 Residual Heat Removal (RHR) pump in service for cooling. The RO reports that Pressurizer (PZR) level is slowly lowering unexpectedly. NO Overhead Annunciator OR Auxiliary Typewriter alarms have been received. Refueling Water Storage Tank (RWST) level is stable. 11 Waste Hold Up Tank level is rising slowly.
Which of the following describes: 1. The effect this would have if NO operator action were to be taken. 2. What procedure and action would terminate this problem.
Eventual caviation and gas binding of 11 RHR pump. Shut 1CV8 IAW S1.OP-AB.RHR-0001, LOSS OF RHR.
Eventual caviation of 11 RHR pump and gas binding of BOTH RHR pumps. Close 1CV132, Excess Letdown IAW S1.OP-SO.CVC-0003, EXCESS LETDOWN FLOW.
Loss of pressure control when the PZR heaters deenergize. Remove 11 RHR Loop from service and put 12 RHR loop in service IAW S1.OP-SO.RHR-0001, INITIATING RHR.
Dilution of the RCS due to CVCS Make-up System repeated auto make-ups. Restore PZR level by performing MANUAL borated make-ups IAW S1.OP-SO.CVC-0006, BORON CONCENTRATION CONTROL.
Answer a Exam Level S Cognitive Level Comprehension Facility: Salem 1 & 2 Exam Date: 12/11/2000
ier: Plant Systems RO Group 1 SRO Group 1 005000A204
105 Residual Heat Removal System.
A2. Ability to (a) predict the impacts of the following on the Residual Heat Removal System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:
A2.04 RHR valve malfunction 2.9 2.9
Explanation of Answer       55.43(5) A is correct because if the leak were to continue, cavitation and gas binding would occur.         AB.RHR-1 addresses the loss of inventory in MODE 5 while NOT at reduced inventory, and has the correct action to close the CV8. B is incorrect because the CV132 is not physically located at an elevation which could provide flow into the WHUT. C is incorrect because pressure control is provided by the RHR pump discharge, and putting the redundant loop in service would just cause it to become gas bound too. D is incorrect because dilution would not occur with blended makeups.         Reference Title
Loss of RHR
RHR system drawing
ABRHR1E005         Given a set of initial plant conditions: a) Determine the appropriate abnormal procedure.           b)         Describe the plant response to actions taken in the abnormal procedure.           c)         Describe the final plant condition that is established by the abnormal procedure.
Material Required for Examination     Question Modification Method:       Question Source:     New
Question Source Comments:

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Given	the	follo	wina	con	diti	ons:
•				~~	~	01101

- Unit 2 is operating at 100% power.
- ALL station Air Compressors trip.
- BOTH Units Emergency Control Air Compressors start.

- 2CC71 LTDWN HX CC CONT VALVE, sensed a low header pressure on its primary air supply, and transferred to its backup supply. When it transferred, the valve diaphragm failed, and the valve moved to its failed position.

- NO other air operated valves have been adversely affected by the air system perturbation.

Which of the following describes the effect this will have on the CVCS system, and what actions are required?

Letdown must be manually isolated due to the inability to control letdown temperature, and Excess Letdown must be placed in service IAW S2.OP-SO.CVC-0003, EXCESS LETDOWN FLOW.

VCT temperature will lower, causing less effective aeration of letdown flow into the VCT through the spray nozzle. Additional RCS lithium control adjustments will be required IAW SC.CH-AP.RC-0106, IMPLEMENTATION OF SALEM LITHIUM CONTROL PROGRAM.

Letdown temperature will rise until OHA E-41, LTDWN HX OUT TEMP HI alarm is received. CVCS Mixed Bed Demineralizers must be removed from service by manually repositioning the 2CV21, LTDWN DM BYP V from Control Console 2CC2 IAW S2.OP-AR.ZZ-0005, OVERHEAD ANNUNCIATORS WINDOW E.

Failure of the 2CC71 will cause the 2CV7, LTDWN HX INLET VALVE, to automatically close due to the OPEN interlock between the two valves. Letdown must be further isolated by closing 2CV2 and 2CV277, LETDOWN LINE ISOL VALVES, IAW S2.OP-SO.CVC-0001, CHARGING LETDOWN, AND SEAL INJECTION.

Answer	Exam Level S	Gegnitive Level	Application	Facility:	Salem 1 & 2	Exam Date:	12/11/2006	
Tier: Plant Systems RO Group 1 SRO Group 1 008000A205							000A205	
008	Component C	ooling Water System	an a	للشيئة فإكرتهم والمرابع المراجع المراجع المراجع	State of the second	Record Number	14	
A2. Ability to (a) predict the impacts of the following on the Component Cooling Water System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:								
A2.05 Effect of loss of instrument and control air on the position of the CCW valves that are air operated 3.3* 3.5								
Explanation of Answer 55.43(5) Lithium production is based on RCS boron concentration. The effect of the 2CC71 failing closed will cause letdown temp through the demineralizers to rise, and also cause VCT temperature to rise. The effect of rising temperature in the demineralizers from the normal inlet temperature up to 136 degrees, which is when the demineralizers are automatically bypassed with CV21, will cause the beds to change their boron affinity, but the effect is negligible. Also, the spray nozzle in the VCT is designed for better H2 absorption to scavenge O2 from Radiolysis. B is incorrect because VCT temperature will rise, not lower, and also because of the discussion above. C is incorrect because the 2CV21 will AUTOMATICALLY reposition when the OHA E-41 is received, and the stem stated no other AOVs were adversely affected. D is incorrect because the interlock works the opposite way, that is, when the CV7 is closed, it closes the CC71. A is correct because the ARP directs the manual letdown isolation and directs excess letdown be placed in service.								
Reference Title								
Overhead Annunciators Window E								
Loss of Control Air								
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CCW000E004	Describe the function and operating characteristics for the following Component Cooling Water System Components: a) CCW Surge Tank
	b) CCW Pumps
	c) CCW Heat Exchangers d) Isolation/Control Valves
	i) CC-190, RCP Thermal Bar Disch Valve
	ii) CC-117 & 118, RCP Cooling Water Inlet Valves iii) CC-136 & 187, RCP Bearing Cooing Outlet Valves
	iv) CC-215 & 113, Excess Letdown Hx CCW Inlet & Outlet Valves
	v) CC-16s, RHR Hx Outlet Isolation Valves
	vi) CC-17 & 18, CCW Pump Suction X-connect Valves vii) CC-3s, CCP Outlet Valves
	viii) CC-30 & 31, CCHX Outlet to Aux. Header (Non-safety Related Header Isolation Valves)
	ix) CC-71, Letdown Temperature Control Valve x) CC-149, Surge Tank Vent Valve
	xi) CC-131, RCP Thermal Barrier Discharge Flow Control Valve
	e) Radiation Monitors
CVCS00E004	Describe the function and operating characteristics for the following Chemical and Volume Control System components: a) Letdown/Charging
	a) Letdown/Charging i) Letdown Isolaiton Valves, CV2, CV277
	ii) Regenerative Heat Exchanger
200	iii) Letdown Orifices iv) Letdown Orifice Isolation Valves, CV3, CV4, CV5
	v) Letdown Releif Valve, CV6
	vi) Letdown Line Containment Isolation Valve, CV7 vii) RHR Flow Control Valve, CV8
	viií) Letdown Heat Exchanger
	ix) Low Pressure Letdown Control Valve, CV18 x) Temperature Control Valve, CV21
	x) Demineralizers (Mixed Bed, Cation, and Deborating
	xii) Inlet Valve to Deborating Demin, CV27
	xiii) Reactor Coolant Filter xiv) Diversion Valve, CV35
	xv) CVCS Holdup Tanks
	xvi) Volume Control Tank xvii) VCT Isolation Valves, CV40, CV41
••• •••	xviii) Chemical Mixing Tank
	xix) Charging Pumps (Centrifugal and PD)
	xx) Miniflow Recirc. Valves, CV139, CV140 xxi) Seal pressure Control Valve, CV71
	xxii) Chg. Line Containment Isol. Valves, CV68, CV69
	xxiií) Charging to Loop 3 Valve, CV77, Loop 4 Valve, CV79 xxiv) PZR Auxiliary Spray Valve, CV75
	xxv) CCP Flow Control Valve, CV55
· · · ·	b) RCP Seal Water
	i) Seal Water Injection Filters ii) Seal Bypass Flow Valve, CV114
	iii) Seal Water Return Isolation Valve, CV104
	iv) Seal Water Return Relief Valve, CV115 v) Seal Return Cont. Isol. Valves, CV116, CV284
	vi) Seal Return Filter
	vii) Seal Water Heat Exchanger c) Excess letdown
n an	<ul> <li>c) Excess letdown</li> <li>i) Excess Letdown Isolation Valves, CV278, CV131</li> </ul>
	ii) Excess Letdown Heat Exchanger
	iii) Excess letdown Flow Cotrol Valve, CV132 iv) Excess Letdown Diversion Valve, CV134
1 - 1 - 2 4 - 1 - 2	d) Makeup
and a second sec	i) Primary Water Storage Tank ii) Primary Water Makeup Pumps
184. B	iii) Boric Acid Batch Tank
	iv) Boric Acid Tanks
ag takan Karaka Agama	v) Boric Acid Transfer Pumps vi) Boric Acid Filter
	vií) Boric Acid Blender
- 1. I	viii) Primary Water Flow Control Valve, CV179
	ix) Boric Acid Flow Control Valve, CV172
•	x) Charging Pump Suction Valve, CV185 xi) VCT Makeup Isolation Valve, CV181
	xi) VCT Makeup Isolation Valve, CV181 xii) Rapid Borate Stop Valve, CV175
CVCS00E006	Describe the interlocks associated with the following Chemical and Volume Control System components:
	a) VCT Isolation Valves, CV40 and CV41
	<ul> <li>b) Letdown Isolation Valves, CV2 and CV277</li> <li>c) Letdown Orifice Isolation Valves, CV3, CV4 and CV5</li> </ul>
	d) Centrifugal Charging Pumps

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Given the following conditions: Unit 1 is in Mode 6. Rx power is 100 cps on both SR channels. The Rx vessel upper internals are being put in place following core reload. Audible count rate indication is lost in the Control Room. Containment audible count rate is NOT lost. BOTH SR channels continue to indicate 100 cps. PRIOR to taking any action IAW S2.OP-AB.NIS-0001, NUCLEAR INSTRUMENTATION SYSTEM MALFUNCTION, which of the following identifies the required action, if any, to be taken IAW Tech Specs? No action is required since redundant audible indication remains available. No action is required since containment audible indication was never interrupted. Suspend CORE ALTERATIONS ONLY. Suspend CORE ALTERATIONS and any positive reactivity additions in progress. Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2006 Exam Level S Answer d 012000G226 SRO Group Tier: Plant Systems RO Group 1 Record Number **Reactor Protection System** 15 012 2.2 Equipment Control 2.5 3.7 2.2.26 Knowledge of refueling administrative requirements. Explanation of 55,43(7) TSAS 3.9.2 states that BOTH SR channels shall be operating EACH with continuous visual Answer indication in the control room, and ONE with audible indication in the containment and control room. The ACTION for one of the monitors INOPERABLE is to suspend core alts and positive reactivity additions. AB-NIS has operators select the other channel, but the stem states that no action have been performed in the AB yet. The TSAS ACTION must be taken since there is no audible indication in the control room. A is incorrect because the channel selector has not been transferred to the other channel yet, and there is no way of knowing if the Audio Count Rate Monitor itself is broken for control room audible indication. B is incorrect because the audible indication is required in both the containment AND the CR. C is incorrect because it encompasses only half the action required by TS. D contains the correct action for TSAS 3.9.2. **Reference Title Technical Specifications** Nuclear Instrumentation System Malfunction Learning Objectives REFUELE010 State the Technical Specifications associated with the components, parameters, and operation of the Refueling System, including: The Limiting Condition(s) for Operation a) The Bases for the LCO(s) b) The applicability of the LCO(s) C) The LCO Action Statement(s) (N/A NEO) ٠d Material Required for Examination Question Modification Method: Significantly Modified Question Source: Facility Exam Bank Modified VISION Q69728 to make a distracter the correct answer and the correct answer into a distracter. Question Source Comments:

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Given the following conditions:
- Unit 2 is in MODE 5.
- OHA C-35 SFP LO Alarms.
- The NEO dispatched to investigate reports SFP level just below the alarm setpoint, and appears
to be stable.
- No leak identification action has been initiated.
Which of the following describes the actions required for this condition?
Dispatch an operator to determine source of leak, and refill the SFP using demineralized water IAW S2.OP-SO.SF-0001, FILL AND TRANSFER OF THE SPENT FUEL POOL.
IMMEDIATELY GO TO S2.OP-AB.FUEL-0002,LOSS OF REFUELING CAVITY OR SPENT
IMMEDIATELY GO TO S2.OP-AB.FUEL-0002,LOSS OF REFUELING CAVITY OR SPENT FUEL LEVEL, to isolate the SFP cooling pumps individually to isolate the most likely source of leakage.
Since occasional SFP low level alarms are to be expected due to the leak on the SFP liner,
refill the SFP using CVCS HUT water if available to maintain boron concentration as high as possible IAW S2.OP-SO.SF-0001.
Monitor 2R5 and 2R32 SFP Area Radiation Monitors, which will initiate 22 HEPA PLUS CHAR mode of FHV IAW S2.OP-AB.FUEL-0002.
Answer a Exam Level S Cognitive Level Memory Facility: Salem 1 & 2 Exam Date: 12/11/2006
Tier: Plant Systems RO Group 2 SRO Group 2 033000A203
033 Spent Fuel Pool Cooling System 16
A2. Ability to (a) predict the impacts of the following on the Spent Fuel Pool Cooling System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:
A2.03 Abnormal spent fuel pool water level or loss of water level 3.1 3.5
Explanation of Answer 55.43(7)(5) A is correct because there is no indication of a leak as per stable SFP level. B is incorrect because with the level just below the setpoint and no leakage indicated, going to AB.FUEL-2 is inappropriate and could cause problems if trying to isolate a phantom leak. C is incorrect since the CVCS HUT is the 3rd preferred source of makeup water to SFP behind demin water and PWST. D is incorrect because the 2R32 does not perform any automatic ventilation function, it stops outward crane movement.
Reference Title
Fill and Transfer of the Spent Fuel Pool
Overhead Annunciator Window C
SFP000E012         Describe the procedures which govern the operation of the Spent Fuel Pool Cooling System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators
Material Required for Examination
Question Source: New Question Modification Method:
Question Source Comments:

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	erating at 80% power with all rating bands when 11MS10,		erable and all p	olant pa	rameters with	n their
action were	e following describes the INI taken initially and all effected ost effective in responding to	d control syste				
	owers, PZR level rises, 11 SG / FLOW.	NR level lowe	ers; S1.OP-AB.	STM-00	001 EXCESSI	VE
	owers, PZR level lowers, 11 S / FLOW.	G NR level ris	es; S1.OP-AB	.STM-0	001 EXCESS	IVE
	ver rises, PZR level rises, 21 VATER/CONDENSATE SYS			B.CN-0	001, MAIN	
	ver rises, PZR level lowers, 1 VATER/CONDENSATE SYS			-AB.CN	-0001, MAIN	
Answerb	Exam Level S Cognitive Level	Comprehension	Facility: Salem 1	& 2	Exam Date:	12/11/2006
Tier: Plant S	ystems	RO Group	2 SRO Group	2	0350	000A201
035	Steam Generator System			······	Record Number	17
A2. Ability predict	to (a) predict the impacts of the foll ions, use procedures to correct, co	owing on the Stea ntrol, or mitigate t	am Generator Sys the consequences	tem and ( of those	(b) based on tho abnormal operat	se ion:
A2.01 Faul	ted or ruptured S/Gs					4.5 4.6
Explanation of Answer	55.43(5) With all control systems open would be to raise steam flow would cause Tave to lower. Tave the auctioneered hi loop, ALL loop corresponding drop in PZR level. AB Steam has specific steps to ac	from that SG, lov (auct hi) is the in os will be affected The higher stean	wer SG pressure, l put to control PZR by any loop Tave flow will cause 2	lower Tc level, an dropping	of that loop. Lov d while 21 loop i , and cause a	vering Tc may not be
		Reference Titl	e			
EXCESSIVE	STEAM FLOW					
			-	<u></u>		
	A COLUMN A COLUMN	Learning Objecti	ves		an an article	
ABSTM1E004	Given a set of initial plant conditions: a) Determine the appropriate abnormal b) Describe the plant response to action c) Describe the final plant condition that	procedure. Instaken in the abnorm	nal procedure.	••••••••••••••••••••••••••••••••••••••	· · · · · · · · · · · ·	
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Material Require	d for Examination					
Question Source		[	estion Modification I	Method:	Editorially Modified	·
Question Source	Comments: Added procedure to choi	ces to make 55.43				

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- Unit 1 is at 90% power steady state
- 14BF19 fails full closed over a period of 1 minute
- All other controls respond as expected

With NO operator action, which of the following responses will be apparent FIRST to the operators, and what procedure will be used to respond to this event?

BF19 DEMAND rises on unaffected SG's. S2.OP-AB.CN-0001, MAIN FEEDWATER / CONDENSATE SYSTEM ABNORMALITY

PZR B/U heaters turn ON in AUTOMATIC. S1.OP-AB.PZR-0001, PRESSURIZER PRESSURE MALFUNCTION.

SGFP Master Speed Controller demand signal rises. S1.OP-AR.ZZ-0012, CONTROL CONSOLE 1CC2 Alarm Response.

Reactor trip at 14% NR level on 2/3 channel on 14 SG, 1-EOP-TRIP-1 REACTOR TRIP OR SAFETY INJECTION

Answer d	Exam Level S	Cognitive Level	Comprehension	Facility: Salem 1 & 2	Exam Date:	12/11/2006
Tier: Plant	Systems		RO Group	1 SRO Group 1	05	9000A212
059	Main Feedwater	System		1999 - 1999 - Tanang Sangkang Pangkang Sangkang Sangkang Sangkang Sangkang Sangkang Sangkang Sangkang Sangkang Sangkang Sangkang Sang	Record Number	18
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	ilure of feedwater r				· · · · · · · · · · · · · · · · · · ·	3.1* 3.4*

55.43(5) B is incorrect because PZR pressure will not be affected when a BF19 fails closed as long as heat transfer in SG is not affected. In actuality, as LESS cold feedwater enters 11 SG, the heat transfer rate will lower, resulting in less heat being transferred from 11 RCS loop. Temp will rise in that loop, which would cause PZR pressure to rise. Heaters will turn off, not on. C is incorrect because SGFP speed control is based on average steam flow, and is lag compensated. Steam flow should not change much, if any. The feed pressure to steam pressure D/P is compared to the D/P reference signal developed from avg. steam flow. With a BF19 failing closed, feed header pressure will rise, and if the size of the feed header pressure rise is large enough, it would act to LOWER SGFP speed to lower feed header pressure, to maintain the proper D/P. A is incorrect because the unaffected SG BF19's will not change position, they are loop controlled, and their parameters will not have changed.

Reference Title

Reactor Trip or Safety Injection

## MAIN FEEDWATER / CONDENSATE SYSTEM ABNORMALITY

a the second	Learning Objectives	
CN&FDWE008	Identify and describe the Control Room controls, indications, and alarms associated with the Condensate and Feedwater System, including: a) The Control Room location of Condensate and Feedwater System control bezels and indications b) The function of each Condensate and Feedwater System Control Room control and indication c) The effect each Condensate and Feedwater System control has upon Condensate and Feedwater System components and operation d) The plant conditions or permissives required for Condensate and Feedwater System Control Room controls to perform their intended function e) The setpoints associated with the Condensate and Feedwater System control room alarms	
CN&FDWE009	State the setpoints for the following automatic actuations associated with the Condensate and Feedwater System:         a)       Condenser Hotwell Makeup and Rejection         b)       Condensate Pump Low Flow Recirculation         c)       Steam Generator Feedwater Pump Recirculation (N/A NEO)         d)       Feedwater Isolation and Feedwater Interlock (N/A NEO)	
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Unit 2 is operating normally at 100% power when 21 SGFP trips.

- The Main Turbine runs back to 60% as expected.

All systems respond as expected to the runback.

 2 minutes after the runback, the PO announces that condenser backpressure is 2.6"Hg and rising at 1.0" every 1 minute.

- The CRS directs entry into AB-LOAD, and commences a 1%/minute load reduction, then directs the unloading rate raised to 3%/min when vacuum continues to degrade.

- With the reactor at 52% power, the Secondary NEO reports that there is a 2" diameter hole in the SGFP exhaust line to 21 condenser, he can hear a loud whistling noise around the hole.

Which actions and procedures which should be performed?

TRIP the reactor, GO TO TRIP-1.

PLACE rods in manual, TRIP the Main Turbine, GO TO AB-TRB.

Continue the load reduction in AB-LOAD until <49% power then TRIP the Main Turbine.

STOP heater drain pumps IAW IOP-4 to reduce rate of vacuum degradation, then TRIP the Main Turbine IAW AB-TRB-1.

Answera	Exam Level S	Cognitive Level	Application	Facility: Salem 1	& 2 Exam Date:	12/11/2006
Tier: Generic	Knowledge and A	Abilities	RO Group	1 SRO Group	1	194001G107
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Question Source: Other Facility Question Modification Method:		f. Integrated Operating Procedure g. In-service Test Procedures h. Operating Procedures			
		f. Integrated Operating Procedures g. In-service Test Procedures h. Operating Procedures i. MMIS Work Standards			
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Aliswei a Lkani Level 5 Degini to Level (Viciniory	5 minutes.
1 hour.  Answer a Exam Level S Cognitive Level Memory Facility: Salem 1 & 2 Exam Date 12/11.  Ter: Generic Knowledge and Abilities RO Group 1 SRO	15 minutes.
Answer       a       Exam Level       S       Cognitive Level       Memory       Facility       Salem 1 & 2       Exam Date:       12/11.         Tier:       Generic Knowledge and Abilities       RO Group       1       IsRO Group       1       194001G22         GENERIC       Record Number       .       .       .       .       .       194001G22         C2.       Equipment Control       .	30 minutes.
Answer       a       Exam Level       S       Cognitive Level       Memory       Facility       Salem 1 & 2       Exam Date:       12/11.         Tier:       Generic Knowledge and Abilities       RO Group       1       IsRO Group       1       194001G22         GENERIC       Record Number       .       .       .       .       .       194001G22         C2.       Equipment Control       .	1 hour.
Generic Knowledge and Abilities       Record Number         GENERIC       Record Number         2.2       Equipment Control         2.2.22       Knowledge of limiting conditions for operations and safety limits.       3.4         Explanation of Answer       55.43(2) A is correct per TS when in MODE 3-5. B is incorrect and is action time for several < 1 hour TS's. C is incorrect and only provides symmetry of choices. D is the action time if in MODES 1-2.	
GENERIC	Tier:         Generic Knowledge and Abilities         R0 Group         1         SR0 Group         1
2.2.22       Knowledge of limiting conditions for operations and safety limits.       3.4         Explanation of Answer       55.43(2) A is correct per TS when in MODE 3-5. B is incorrect and is action time for several < 1 hour TS's. C is incorrect and only provides symmetry of choices. D is the action time if in MODES 1-2.	GENERIC Record Number
Explanation of Answer       55.43(2) A is correct per TS when in MODE 3-5. B is incorrect and is action time for several < 1 hour TS's. C is incorrect and only provides symmetry of choices. D is the action time if in MODES 1-2.         Reference Title         Salem Tech Specs         Learning Objectives         TECHSPE006         Explain the term Safety Limit as it applies to the Technical Specifications, and describe the Safety Limits for Salem Nuclear Generating Station	2.2 Equipment Control
Answer TS's. C is incorrect and only provides symmetry of choices. D is the action time if in MODES 1-2.  Reference Title Salem Tech Specs Learning Objectives TECHSPE006 Explain the term Safety Limit as it applies to the Technical Specifications, and describe the Safety Limits for Salem Nuclear Generating Station	2.2.22 Knowledge of limiting conditions for operations and safety limits. 3.4
Salem Tech Specs         Learning Objectives         TECHSPE006       Explain the term Safety Limit as it applies to the Technical Specifications, and describe the Safety Limits for Salem Nuclear Generating Station	 TS's. C is incorrect and only provides symmetry of choices. D is the action time if in MODES 1-2.
Learning Objectives           TECHSPE006         Explain the term Safety Limit as it applies to the Technical Specifications, and describe the Safety Limits for Salem Nuclear Generating Station	
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Material Required for Examination	
Material Required for Examination	Learning Objectives TECHSPE006 Explain the term Safety Limit as it applies to the Technical Specifications, and describe the Safety Limits for Salem Nuclear
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	Learning Objectives TECHSPE006 Explain the term Safety Limit as it applies to the Technical Specifications, and describe the Safety Limits for Salem Nuclear

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Iter:     Generic Knowledge and Abilities     RO Group     1     194001G306       GENERIC     Record Number     2       2.3     Radiation Control	Disnosal Lig	uid Red Mor	e permit for a	21 Waste Moni	or Tank, it is determi	ned that 2R1	8 Waste
aligned to monitor the release.         Do not approve the liquid waste discharge, secure the lineup, the liquid waste discharge is not permitted until 2R18 is repaired.         Approve the liquid waste discharge and ensure that continuous effluent sampling is conducted throughout the liquid waste discharge.         Approve the liquid waste discharge as long as a second sample was drawn, analyzed, and calculations were second verified prior to the release.         Answer       Approve the liquid waste discharge as long as a second sample was drawn, analyzed, and calculations were second verified prior to the release.         Answer       Exam Level       S       Exam Date:       12/11/200         Term       Generic Knowledge and Abilities       Rol Group       1       194001G306         GENERIC       2.3 (adiation Control       2.1 (adiation Control       2.1 (adiation Control         2.3.6       Knowledge of the requirements for reviewing and approving release permits.       2.1 (adiation Control       2.1 (adiation Control         2.3.6       Knowledge of C. D is incorrect because there is no provision to do manual effluent sampling.       Reference Title         Release of Radioactive Liquid Waste       Kerence Title       Material Required to Examination       Material Required to Examination         Material Required for Examination       Cuestion Sources       Other Facility       Question Middiffication Method       Ediotaly Modified		Liquid Waste	hitor has failed e, what are the	its source chece e required actio	ns, if any, of the Cor	trol Room Su	upervisor?
permitted until 2R18 is repaired.         Approve the liquid waste discharge and ensure that continuous effluent sampling is conducted throughout the liquid waste discharge.         Approve the liquid waste discharge as long as a second sample was drawn, analyzed, and calculations were second verified prior to the release.         Answer       Exam Level       Cognitive Level       Memory       Exam Date       12/11/200         Tet:       Generic Knowledge and Abilities       Ro Group       1       194001G306         GENERIC	Do not a aligned	approve the to monitor the	liquid waste di ne release.	scharge until th	e Unit 1 R18 can be	source check	ed and
throughout the liquid waste discharge.         Approve the liquid waste discharge as long as a second sample was drawn, analyzed, and calculations were second verified prior to the release.         Answer       d       Exam Level       S       Gognitive Level       Memory       Facility       Salem 1 & 2       Exam Date       12/11/200         Ter       Generic Knowledge and Abilities       Ro Group       1       Record Number       2         2.3       Radiation Control				scharge, secur	e the lineup, the liqui	d waste disch	arge is not
calculations were second verified prior to the release.         Answer       d       Exam Level S       Cognitive Level Memory       Facility' Salem 1 & 2       Exam Date:       12/11/200         Tier:       Generic Knowledge and Abilities       RO Group 1       194001G306         GENERIC	Approve through	e the liquid w out the liquid	/aste discharge 1 waste discha	e and ensure th Irge.	at continuous effluer	nt sampling is	conducted
Iter:       Generic Knowledge and Abilities       RO Group:       1       SRO Group:       1       194001G306         GENERIC       Record Number       2         2.3       Radiation Control       2.1       3         2.3.6       Knowledge of the requirements for reviewing and approving release permits.       2.1       3         Explanation of Answer       55.43(4) A is incorrect because Unit 1 monitor cannot be aligned to unit 2 discharges. C is correct because the procedure allows for the release after double sample and double calc have been performed. B is incorrect because of C. D is incorrect because there is no provision to do manual effluent sampling.         Reference Title         Release of Radioactive Liquid Waste         WASLIGE012         Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Material Required for Examination         Question Modification Method:         Editorially Modified	Approve calculat	e the liquid w tions were se	vaste discharge	e as long as a s prior to the rele	second sample was o ase.	irawn, analyz	ed, and
Generic Knowledge and Ablitities       Record Number       2         GENERIC       Record Number       2         2.3       Radiation Control       2.1       3         2.3.6       Knowledge of the requirements for reviewing and approving release permits.       2.1       3         2.3.6       Knowledge of the requirements for reviewing and approving release permits.       2.1       3         Explanation of Answer       55.43(4) A is incorrect because Unit 1 monitor cannot be aligned to unit 2 discharges. C is correct because the procedure allows for the release after double sample and double calc have been performed. B is incorrect because of C. D is incorrect because there is no provision to do manual effluent sampling.         Reference Title         Reference Title         Reference Title         WASLIGE012         Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Material Required for Examination         Question Modification Method:         Cutorially Modified	Answer	Exam Level S	Cognitive Leve	Memory	Facility: Salem 1 & 2	Exam Date:	12/11/2006
SENERCO	lier: Generic	Knowledge ar	nd Abilities	RO Group	1 SRO Group 1		194001G306
2.3.6       Knowledge of the requirements for reviewing and approving release permits.       2.1       3.         explanation of inswer       55.43(4) A is incorrect because Unit 1 monitor cannot be aligned to unit 2 discharges. C is correct because the procedure allows for the release after double sample and double calc have been performed. B is incorrect because of C. D is incorrect because there is no provision to do manual effluent sampling.         Reference Title         Reference Title         WASLIGE012         Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Waterial Required for Examination       Ouestion Modification Method:       Editorially Modified	SENERIC	-				Record Numb	per 23
Interfective         Sequencies         Sequencies <tr< td=""><td>2.3 Radiati</td><td>on Control</td><td>and constant of the Annual Constant State (1997)</td><td></td><td></td><td>and the second data and the second second and the second second</td><td></td></tr<>	2.3 Radiati	on Control	and constant of the Annual Constant State (1997)			and the second data and the second second and the second	
Splanation of inswer       55.43(4) A is incorrect because Unit 1 monitor cannot be aligned to unit 2 discharges. C is correct because the procedure allows for the release after double sample and double calc have been performed. B is incorrect because of C. D is incorrect because there is no provision to do manual effluent sampling.         Reference Title         Learning Objectives         WASLIQE012         Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Question Modification Method:         Describe the procedures which govern the operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Material Required for Examination         Question Modification Method:	2.3.6 Know	vledge of the re	quirements for re	viewing and appro	ving release permits.		2.1 3.1
Learning Objectives         WASLIQE012       Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Material Required for Examination	Release of Ra						
WASLIQE012       Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Material Required for Examination       Editorially Modified         Question Source:       Other Facility							
WASLIQE012       Describe the procedures which govern the operation of the Radioactive Liquid Waste System, including significant prerequisites and precautions associated with each operating procedure which are required to be considered by either Licensed or Non-Licensed Operators         Material Required for Examination       Editorially Modified         Question Source;       Other Facility							
Question Source: Other Facility Editorially Modified	ме	and precautions	s associated with each	orn the operation of the	Radioactive Liquid Waste Syste	em, including signifi ered by either Licen	cant prerequisites sed or Non-
Question Source: Other Facility Editorially Modified	WASLIQE012						nalism son e när men verfasser sinskolister eller ett unstrum transformer son som som en som etter som som som
Question Source; Other Facility Editorially Modified	WASLIQE012			an a sharay a sharadhiyo waxaa da daradhi da a sharadhi da sharadhi ya sharadhi sharadhi ya sharadhi ya sharadh Marada waxaa sharadhi ya sharadhi sharadhi sharadhi ya sharadhi ya sharadhi ya sharadhi ya sharadhi ya sharadhi		9	
Contraction of the second seco	WASLIQE012	<u> </u>		the second se		A LAND OF GRANTER APPLICATION PROPERTY AND	
Question Source Comments: Modified one distracter since the original question had 3 "approve the release" and only 1 "do not approve"		d for Examination	<u> </u>	n an an taon ann an taonachadh an taon Taonachadh an taonachadh an			
	Material Require	Other Facility				······································	
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	Material Require	Other Facility				······································	

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- Unit 2 is operating at 100% power.
- Operators receive OHA G-7, ADFCS SWITCH TO MANUAL.
- The board operator notes both SGFPs Speed Controllers have switched to MANUAL.
- All BF19 and BF40 valves remain in AUTO.
- 21 SGFP speed is lowering slowly, and remains latched.
- All SG NR levels are 40% and dropping slowly

Which of the following describes the procedure which would be most effective in responding to these indications?

S2.OP-AR.ZZ-0007, OVERHEAD ANNUCIATORS WINDOW G to address the SGFP switch to MANUAL.

2-EOP-TRIP-1, REACTOR TRIP OR SAFETY INJECTION, to respond to the Rx trip caused by SG lo-lo level.

S2.OP-AB.CN-0001, MAIN FEEDWATER / CONDENSATE SYSTEM ABNORMALITY, to address the imminent loss of 21 SGFP.

S2.OP-AR.ZZ-0012, CONTROL CONSOLE 2CC2, to respond to the PROGRAM DEVIATION SETPOINT ACTUAL alarms on all SGs.

Answer C Exam Lev	vel S Cognitive Level	Application	Facility: Salem 1 8	& 2	Exam Date: 12	/11/2006
Tier: Generic Knowle	edge and Abilities	RO Group	1 SRO Group	1	1940010	6410
GENERIC					Record Number	24

2.4 Emergency Procedures / Plan

2.4.10 Knowledge of annunciator response procedures.

Explanation of 55.43(5) A incorrect because the ARP would not address the lowering level, and there are no automatic actions besides the swapping to manual of controllers. B is incorrect because the CAS step 4.0 to take manual control of affected controller in AB.CN should preclude having a Rx trip. C is correct because the immediate action contained in AB.CN would trip the malfunctioning SGFP and cause an automatic turbine runback which would allow SG levels to recover, and give operators time to assess the ADFCS failure. D is incorrect because the control console alarm response would only take time away from entering the CN AB.

3.0 3.1

**Reference Title** 

OVERHEAD ANNUCIATORS WINDOW G

MAIN FEEDWATER / CONDENSATE SYSTEM ABNORMALITY

## USE OF PROCEDURES

Answer

Learning Objectives PROCEDE002 Given a list of purposes, select the purpose of the following types of procedures in accordance with NC.NA-AP.ZZ-0001(Q). Nuclear Procedure System: SELECT the purpose of the following types of procedures in accordance with NC.NA-AP.ZZ-0001(Q), Nuclear Procedure System: Abnormal Operating Procedures a. Administrative Procedures b. Alarm Response Procedures C. **Emergency Operating Procedures** e. Integrated Operating Procedures f. In-service Test Procedures g. ĥ. **Operating Procedures** MMIS Work Standards ABCN01E004 Given a set of initial plant conditions: a) Determine the appropriate abnormal procedure. b) Describe the plant response to actions taken in the abnormal procedure. Describe the final plant condition that is established by the abnormal procedure. C) Friday, December 15, 2006 11:35:35 AM Page 29 of 31

Material Required for Examinatio	n is	 	
Question Source: New		Question Modification Method:	
Question Source Comments:			
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- Salem 1 and 2 are operating at 100% power.
- Hope Creek is operating at 100% power.
- Fire Brigade manning consists of 6 qualified personnel, which includes one Fire Brigade Leader.
- A Fire Brigade member falls ill, and is transported off-site by Medical Department personnel.

Which of the following describes the status of the Fire Brigade, and action(s), if any, which are required to be performed IAW NC.FP-AP.ZZ-0001, Fire Protection Organization, Duties, and Staffing?

- The Fire Brigade remains adequately staffed. Only five members are required IAW Salem FSAR. No compensatory measures are required.
- The Fire Brigade remains adequately staffed. The assumption is made that concurrent fires at Salem and Hope Creek are not plausible events. NRC notification of reduced staffing level is required within 2 hours.
  - The Fire Brigade staffing is inadequate. Initiate call-out of qualified personnel to ensure manning is restore to six members within 2 hours, otherwise submit a 24 hour report to the NRC.
- The Fire Brigade staffing is inadequate. Initiate call-out of qualified personnel to ensure manning is restore to six members within 2 hours, otherwise initiate an Action Request and review for licensing commitment violation.

Answer a Exam Level	S Cognitive Lev	el Application	Facility: Salem 1	1&2	Exam Date:	12/11/2006
Tier: Generic Knowledg	ge and Abilities	R0 Group	1 SRO Group	1	1940	01G426
GENERIC					Record Number	25

2.4 Emergency Procedures / Plan

2.4.26 Knowledge of facility protection requirements including fire brigade and portable fire fighting 2.9 3.3 equipment usage.

Explanation of Answer
 55.43(1) A is correct. Per the procedure and the FSAR, 5 fire brigade members are required. No compensatory actions are required by procedure. B is incorrect because there is no assumption made regarding 2 fires at once. C is incorrect because only 5 members are required, and there is not an E-plan NRC notification required. D is incorrect because staffing is adequate. Action is correct.

Reference Title

Fire Protection Organization, Duties, and Staffing?

Salem FSAR

	Learning Objectives
CONDOPE006	Describe the minimum manning Salem Shift Complement for Modes 1-6 in accordance with NC.NA-AP.ZZ-0005(Q), Station Operating Practices
iterial Required	for Examination
estion Source:	New Question Modification Method:
estion Source	Comments:

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