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

Applicant Information						
Name [.]	Region: I					
Hamo.						
Date: 9/26/2011	Facility: Salem 1 & 2					
License Level: RO Reactor Type: W						
Start Time:	Finish Time:					
Inst	ructions					
Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. The passing grade requires a final grade of at least 80.00 percent. Examination papers will be collected SIX hours after the examination starts.						
Applicant	t Certification					
All work done on this examination is my o	wn. I have neither given nor received aid.					
	Applicant's Signature					
R	esults					
Examination Value	Points					
Applicant's Score	Points					
Applicant's Grade	Percent					

SALEM 2011 EXAM - REACTOR OPERATOR WRITTEN EXAM KEY

1. С 33. Α 65. В 2. В 34. A 66. D 35. 67. С 3. С Α 68. 4. Α 36. В В 37. 69. С 5. Α D С 6. 38. 70. Α С 7. Α 39. В 71. В 40. 72. В 8. В D 9. С 41. 73. D D 74. 10. D 42. Α D 75. 11. 43. С Α D 12. 44. В С 13. 45. В В 46. 14. С D 15. 47. В A 48. D 16. В Q#49 deleted. the 11/4/11 -49. 17. С A 18. 50. D Α 19. 51. Α А 20. 52. D Α 21. В 53. В 22. A 54. С 23. 55. Α D 24. В 56. D 25. 57. D Α 26. С 58. Α 27. В 59. С 28. В 60. В 29. С 61. С 62. 30. D Α С 31. 63. Α 32. D 64. В

RO SkyScraper	SRO S	kyscraper	RO Sy	stem/Evolution List	SRO System/Ev	olution List Outline	Changes		
Question Topic	RO 1					· · · · · · · · · · · · · · · · · · ·]
During at-power	operation	n, a control	bank rod d	rops fully into the core wi	thout causing	a reactor trip.			
Which of the foll	lowing is t	he basis fo	or recording	the group step counter r	eading prior to	o attempting to recover	the dropped ro	d?	
a. Allows the	e bank ov	erlap unit to	o be reset	to its proper value after the	ne recovery.				
b. Documer	nt that the	rod insertio	on limit has	not been violated during	the recovery.				
			hara tha dr	anned rad abauld be pag	itioned at the	and of the receiver			
	e operato		nere tre dr	opped rod sriouid be pos	moned at the				
d. Verify op	erability of	f the dropp	ed rod afte	r it has been moved more	e than 10 step	s during the recovery.			
Answer c	Exam L	evel R	Cogr	nitive Level Memory	Fa	cility: Salem 1 & 2	ExamD	ate:	9/26/2011
KA: 000003K30	9	AK3.09	RO Val	ue: 3.0* SRO Value:	3.5* Section	1: EPE RO Group	2 SRO (Group: 2	55.43
System/Evolution	on Title	Dropped	Control Ro	d					003
KA Statement:	Knowled	ge of the re	easons for	the following responses a	as they apply I	o Dropped Control Rod		•	
_	Recording the bank	ig of group	bank posit	ion for dropped rod (refer	ence point us	ed to withdraw dropped	rod to equal h	eight with oth	ier rods in
Explanation of	55.41(6, performi	10) Verifyin	ng the oper	ability of the rod is incorre	ect, but plausi e performed a	ble, since the 10 step m	ovement is the	e SAT criteria	for ank Overlap
	is incorre	ect because	e the overla	ap computer is removed f	rom the circuit is fed from the	t in individual bank selected by P/A converter, and the	ct, and will ren e RIL lo and lo	ain at its cur	rent setting. activate if a
	Group or	ne rod is af	fected but	is not the reason for the	Group Step C	ounter reading			
	Reference	e Title	e das la	Facility Reference	e Number	Reference Section	Page No.	Revision	
Dropped Rod				S2.OP-AB.ROD-0002				10	
								i	
L.O. Number		Obje	ectives						
ABROD2E002									
Material Requir	ed for Ex	amination	33 L						
Question Source	e: Fac	cility Exam	Bank	Question Modification	Method:	Editorially Modified	Used Duri	ng Training I	Program
Question Source	e Comm	ents							
Comment		955263	1. State						
Comment		<u>- 1992 M H (1997</u>)							
·····									

RO SkyScraper	SRO Skyscraper RO Sys	stem/Evolution List SRO System/Ev	olution List Outline C	hanges	
Question Topic	RO 2				
Given the follow	ing conditions:		angra, angra, ang	(h. Mar Maria and	
 Unit 2 is oper 21 SGFP trips The Rx opera EOP-TRIP-1, While perform Response, the Which of the foll 	ating at 100% power. s, and a manual Rx trip is initiate tor confirms the Rx trip during p Rx Trip or Safety Injection. ning the RCS Temperature Cont e RO reports Tavg is ~551° and lowing describes why Tavg is ~5	ed based on lowering SG levels. erformance of the immediate actions trol section of EOP-TRIP-2, Rx Trip stable. 551° F?	of		
a. Reactor	rip Breaker A failed to open.				
b. Reactor 1	rip Breaker B failed to open.		annan an a		
c. Turbine S	teamline Inlet Pressure PT-505	failed at 808 psig prior to the Rx trip.			
d. Turbine S	teamline Inlet Pressure PT-506	failed at 808 psig prior to the Rx trip.			
Answer b	Exam Level R Cogn	itive Level Application Fa	cility: Salem 1 & 2	ExamD	9/26/2011
KA: 000007A20	3 EA2.03 RO Valu	ue: 4.2 SRO Value: 4.4 Section	n: EPE RO Group:	1 SRO (Group: 1 55.43
System/Evolutio	n Title Reactor Trip				007
KA Statement:	Ability to determine and interpr	et the following as they apply to Reac	tor Trip:		
Reactor trip breaker position Explanation of Answers: 55.41(5,6,7) A manual Rx trip is initiated by the Rx Trip Handles. This sends a signal to BOTH Solid State Protection System Trains to open their respective reactor trip breakers. The P-4 signal is developed by the opening of each RTB. One of the functions of the P-4 signal is to arm the steam dumps (Train A) and place them in the Plant Trip mode of operation (Train B), to control RCS Tavg at 547°. Since the reactor trip was confirmed, at least one RTB opened. B is correct because the B P-4 signal not being present would result in the Main steam dumps controlling via the Load Reject Controller, which is designed to maintain Tavg ~ 5° above. programmed Tavg of 547 at no load. Additionally, the MS10s would start to open as steam pressure rose to 1015 psig, so Tavg would be ~551 vs 552 if strictly steam dumps were controlling. A is incorrect because the load reject would arm the steam dumps, and Train B P-4 would place them in Plant Trip Mode and control at 547°. C and D are incorrect because steam dumps would have to be in MS Pressure Control mode for the setpoint on the control console to be the driving system signal. Both C and D are place the if acedidate days not made of stram dump appearing of the setpoint on the control console to be the driving system signal.					
Sa anna an	Reference Title	Facility Reference Number	Reference Section	Page No.	Revision
Reactor Trip Res	ponse	2-EOP-TRIP-2	Bases Doc	14	27

Reference Title	Facility Reference Number	Reference Section	Page No.	Revision
Reactor Trip Response	2-EOP-TRIP-2	Bases Doc	14	27
Reactor Protection System Steam Dump Contro	221059			13

Objectives

STDUMPE008

STDUMPE007

		System/Evolution List	VEvolution List Outline Cl	nanges
Question Topic	c RO 3			
Given the follov	ving conditions:		······································	n Millionen en en rechte ble einen eine Millionen eine Anders Billionen einen Millionen einen Alfrichten einen
 Unit 1 is ope Spent Fuel P Pool Manipu PZR spray d PZR level is The CRS end The crew ide PORV Block A RCS leakraight Identified Le 	rating at 100% power. Pool fuel moves are being per ulations. emand lowers. rising very slowly. ters S1.OP-AB.PZR-0001, P entifies 1PR2, PZR Power Op < Valve. ate performed identifies the U eak Rate as 0.1 gpm.	formed IAW S1.OP-IO.ZZ-0010, Spe ressurizer Pressure Malfunction. erated Relief Valve, is leaking and shu Jnidentified Leak Rate as 0.07 gpm, an	nt Fuel uts 1PR7, nd the	
Which of the fo	llowing is required?			
Assume 1PR2	cannot be restored to an OP	ERABLE condition.		
a. Enter TS	SAS 3.4.5 for 1PR2, and main	ntain power to the 1PR7.		
h Immodia	tely suspand maxament of ir	radiated fuel LAW S1 OP 10 77 0010		
D.				
c. Within or	ne hour initiate action to plac	e the unit in Hot Shutdown within the n	iext 6 hours.	
	AS 3.4.7.2 for Reactor Cools	ant System identified leakage, and be i	n Hot Standby within the next	6 nours.
Answer a	Exam Level R C	ognitive Level Memory	Facility: Salem 1 & 2	ExamDate: 9/26/2011
KA: 000008G2	39 2.2.39 RO	Value: 3.9 SRO Value: 4.5 Sec	tion: EPE RO Group:	1 SRO Group: 1 55.43
System/Evolution	on Title Pressurizer Vapo	or Space Accident		008
KA Statement:	-			
	Knowledge of less than or	equal to one hour Technical Specificat	on action statements for syste	ems.
Explanation of Answers:	55.41(10) B is incorrect ber says stop moving fuel for a specific TSAS which applie valve IAW TSAS 3.4.3 acti- within the allowable 4 bour TSAS 3.4.7.2 action b.	cause there is no requirement to stop r ny Abnormal Procedure entry. C is inc s, and fits with the other one hour requ on a for excessive seat leakage. D is ir time, so a SD is not required, but the	noving fuel for this condition, r correct but plausible, since TS uirements. A is correct becaus incorrect because the source o MODE and time are correct if	nor is there a general caveat that 3.0.3 is used when there is no se power is maintained to the block of the leakage has been isolated the leakage were not isolated IAW
······				
Solom Task Sa	Reference Title	Facility Reference Number	Reference Section	Page No. Revision
3 3 BITL 1 000 5 67]	3/4.3	
Pressurizer Pres	ssure Malfunction	S1 OP-AB PZR-0001		
Pressurizer Pres	ssure Malfunction	S1.OP-AB.PZR-0001		

ABPZR1E002 FLUNCYE002 Objectives

RO SkyScraper	SRO S	kyscraper	RO Syst	em/Evolution List	RO System/Evo	olution List Outline (Changes		
Question Topic	RO 4								
Given the follow	ving condit	ions:						Male	
 Unit 2 is oper 23 AFW pur A 1,000 gpm The Rx does Operators su and initiate a NO AFW pur 	rating at 10 ap is C/T. LOCA occontrip fro loccessfully Safety Inje mps autom	00% power. curs. om either R: open the P ection. natically sta	x Trip handl ZR Heater I rt.	e, nor do the Reactor Tr Bus Infeed breakers 2E6	ip Breakers o D and 2G6D	pen.	bo MINIM IM		
status, and the	reason wh	y that minir	num is requ	ired IAW 2-EOP-LOCA-	1, Loss of Re	actor Coolant?			
a. ONE MD	AFW pum	p must be s	started to er	nsure sufficient heat rem	oval.				
	DAFW purr	ips must be	e started to	ensure sufficient heat re	moval.				
C. ONE MD	AFW pum	p must be s	started to pr	event primary to second	ary leakage.				
d. TWO ME	DAFW purr	nps must be	e started to	prevent primary to secor	ndary leakage				
Anewor 2	Exam		Cogni		n Fa	cility: - Salem 1 & 2	– ExamD	ate: - 9	9/26/2011
KA: 000009K3	28	EK3.28	RO Valu	e: 4.5 SRO Value:	4.5 Section	EPE RO Group:	1 SRO	Group: 1 55	5.43
System/Evolution	on Title	Small Bre	ak LOCA			· · · · · · · · · · · · · · · · · · ·			009
KA Statement:	Knowled Manual E	ge of the re ESFAS initia	asons for th ation require	e following responses a ements	s they apply t	o Small Break LOCA:			
Answers:	the Heat required and D rea knowledg required RTBs'.	Sink CFST to ensure a ason is the <u>se to arrive</u> during FRS	at the corres	st one SG NR level is res heat sink is available. T LBLOCA, not a SBLOCA <u>ct basis for the correct fl</u> 4E4 lbm/hr AFW flow is	stored. Additi The distracters A. The distinct ow required required, and	ast 2224 form in now will ionally, for a small to inte s all contain either 2 pum tion must be made that TWO AEW pumps is pla the Rx did not initially tri	ermediate size aps or the inc a SBLOCA is ausible becau ip from the tri	bed LOCA, this flow orrect reason, or b occurring, and ap se two AEW pum p handles or open	w is both. C pply that ing the
	Reference	a Title		Facility Reference	Number	Reference Section	Page No.	Revision	
Loss of Reactor	Coolant B	asis Docum	nent	2-EOP-LOCA-1			12	28	
							<u> </u>]		
								l	
LOCA01E009		Obje	ctives						
Material Requir	ed for Exa	amination							
Question Source	:e: Fac	ility Exam E	Bank	Question Modification	Method:	Concept Used	Used Duri	ng Training Prog	iram
	ce Comme	ents Visio	on Q80803	Used the concept of "wh	y" AFW flow	is required, and added "I	now much" ar	nd made it an ope	rational
Question Source		type	question in	stead of a simple "Why i	srequired	1?"			

RO SkyScraper	SRO Skyscraper RO	System/Evolution List SRO Sys	stem/Evolution List Outline	Changes
Question Topic	RO 5			
Given the follow	ing conditions:			
 Unit 2 has expension The crew has preparing for It has been 3 The control rown have been ta Of the following, 	perienced a LBLOCA. performed actions in respor the transfer to Hot Leg Reci hours since the SI actuation pom crew is reviewing the EC iken up to this point.	ise to the LBLOCA, and now is rculation. occurred. DPs performed to ensure all actions hich the control room has NOT dire	s required acted an NEO to perform durin	g the EOP's?
a. Reset the	e 2MS52, 23 AFW pump trip	valve.		
b. Minimize	d CCW heat load by isolating	non safety related components.		
c. Cleared a	and tagged 21SJ44 and 22S	144, CONT SUMP SUCT VALVES	breakers.	
d. Removed	d control power from pumps t	aking suction from the Containmer	nt Sump.	
Answer d	Exam Level R Co	gnitive Level Memory	Facility: Salem 1 & 2	ExamDate: 9/26/2011
KA: 000011G10	08 2.1.8 RO	alue: 3.4 SRO Value: 4.1 S	Section: EPE RO Group	1 SRO Group: 1 55.43
System/Evolutio	on Title Large Break LOC	A		011
KA Statement:	·			
	Ability to coordinate person	nel activities outside the control roo	om.	
Explanation of Answers:	55.41(10,4) LOCA-1 step 1 control power from pumps to power from any pumps taking is so important that automatic established _SG NR levels	7 sends operator to close CC37 to aking suction form containment is ng suction from RWST after it is de tic pump trips should be defeated. will be above 9%. The S.144 break	SFP and CC48 to evaporator. wrong, but plausible because apleted. It is plausible if operat 2MS52 will be reset at step 19 cers are opened and C/T at step	(mimimize CCW heat loads)Removing LOCA-5 has operators remove control tor thinks keeping pumps in recirc mode 9 of LOCA-1 after CLR has been an 18 of LOCA-3
	Reference Title	Facility Reference Numb	per Reference Section	Page No. Revision
Loss of Reactor	Coolant	2-EOP-LOCA-1		
Transfer to Cold	Leg Recirculation	2-EOP-LOCA-3		29
L.O. Number	Objectives			
Question Source		Question Medification Metho		Used During Training Program
Question Source	e Comments		<u></u>	
Comment				

ROS	SkyScraper	SRO S	Skyscraper	RO Syste	m/Evolution List	SRO System/E	volution Lis	t Outline C	hanges			
Ques	tion Topic	RO 6		81 1 1 1 11 1 mmmmmmmmmmmmmmmmmmmmmmmmm		Protocol III The after Recording and a con-					Access 7 67 67 7	
Whic	h of the fol	lowing va	lidated conditio	ons will, by	itself, require tripping	the affected	RCP(s) IA	W S1.OP-AB.R	CP-0001, R	eactor C	oolant	Pump
Abho	rmany, w	inout dela	y ?									
а.	#1 Seal I	_eakoff flo	w >6 gpm.									1
b.	Seal Wa	ter Outlet	temperature 1	75°F.						··		
					· · · · · · · · · · · · · · · · · · ·	,						
C.	ALL char	rging pum	ps out of servic	ce for 7 m	inutes.			turne-				
d.	OHA D-2	2, 13 RC	P BRG CLG W	TR FLO L	O, received 2 minutes	ago.		****				
Answ	er a	Exam L	evel R	Cogniti	ve Level Memory	[acility:	Salem 1 & 2	Exam	Date:		9/26/2011
KA:	000015K20	07	AK2.07	RO Value	: 2.9 SRO Value:	2.9 Sectio	n: EPE	RO Group:	1 SRO	Group:	1	55.43
Syste	m/Evolutio	on Title	Reactor Coo	lant Pump	Malfunctions						·	015
KA St	atement:	Knowled	ge of the interr	relations b	etween Reactor Coola	int Pump Mal	functions	and the following	g:			
Evola	nation of	RCP sea	als C is incorrect b		no loss of charging pur	nos and her		lection flow is n	ot a RCP tri		since	thermal
Answ	ers:	barrier fl	ow is still estat	blished. A	B.CVC will not direct s	stopping the f	RCPs eith	er. A is correc	t because #	#1 Seal L	.eakoff	flow of
		console	digital indicatio	on reads "	OVER", but the bar gra	aph indication	n shows it	> 6gpm. D is in ethologic for D-22 i	correct bec	ause the	e ARP f RP reg	or D-22
	-96	temp in	addition to the	alarm, sir	ice even with the alarm	in there cou	Id still be	a substantial am	ount of coo	ling flow.	. The n	ormal flow
		temp is	190°F.			=	-to gpm.				or night	
		Referenc	e Title		Facility Reference	e Number	Refere	nce Section	Page No.	Revis	ion	
React	tor Coolant	Pump Ab	onormality		S1.OP-AB.RCP-0001	- z				15		
Loss	of Chargin	g			S1.OP-AB.CVC-0001][[7		
]				tions .]		
L.O. N	Number		Obiecti	VAS								
ABRO	CP1E003		Object									
Mater	rial Requir	ed for Ex	amination									
Ques	tion Sourc	:e: Fa	cility Exam Bar	nk C	uestion Modification	Method:	Editorial	y Modified	Used Dur	ing Trai	ning P	rogram
Ques	tion Sourc	ce Comm	ents Added	"without d	elay" to stem to ensure	e choice c is	incorrect.					
						14.100	ri en l'Essaitar					
Comr	ment			sene of a second		111122						
]												
					- <u> </u>						•••••	

RO SkyScraper	SRO Skyscraper RO Syst	tem/Evolution List Outline Changes				
Question Topic	RO 7					
During a total los degrees?	ss of charging event, what is the	reason for closing the RCP seal injection isolation valves if RCP seal inlet temperature rises to 225				
a. The RCP	seals and shafts may be damag	ged due to thermal shock when a charging pump is started.				
b. To prever	nt steam formation in the Therma	al Barrier from impacting CCW system when a charging pump is started.				
c. To prever	It steam binding of the charging	pumps due to RCP seal leakoff flashing to steam when a charging pump is started.				
d. The RCP	Thermal Barrier heat exchanger	rs may rupture due to thermal shock and water hammer when a charging pump is started.				
Answer a	Exam Level R Cogni	itive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2011				
KA: 000022K10	1 AK1.01 RO Valu	ie: 2.8 SRO Value: 3.2 Section: EPE RO Group: 1 SRO Group: 1 55.43				
System/Evolutio	n Title Loss of Reactor Cool	ant Makeup 022				
KA Statement:	Knowledge of the operational in Consequences of thermal shoc	nplications of the following concepts as they apply to Loss of Reactor Coolant Makeup: the to RCP seals				
Explanation of Answers:	planation of swers: 55.41(10,7) AB.CVC provides guidance in Att 3 and CAS 5.0 to isolate RCP seal injection if any seal inlet temp is greater than or equal to 225°F. This guidance is consistent with the guidance contained in LOPA-1, basis document, page 32, which states, "Isolating the RCP seal injection lines prepares the plant for recovery while protecting the RCPs from seal and shaft damage that may occur when a charging pump is started as part of the recovery. With the RCP seal lines isolated, a centrifugal charging pump can be started in the normal charging mode without concern for cold seal injection flow thermally shocking the RCPs." B is incomposite to the plausible since starting the movement of hot water in the seal area past the thermal barrier might be dtermined to cause stear formation in the Thermal Barrier. C is incorrect but plausible since the high temperature in the seal area on an extended loss of s cooling may cause flashing in the seal area, and the gas could be transported back to CVCS system, but is not why the seals area isolated. D is incorrect but plausible because the CCW thermal barrier return is isolated for this reason during a LOPA.					
	Reference Title	Facility Reference Number Reference Section Page No. Revision				
Loss of Charging		S2.OP-AB.CVC-0001				

	a Tacinty Reference Hamber	Reference dection	r age no.	Revision
Loss of Charging	S2.OP-AB.CVC-0001			9
Loss of Power Accident	2-EOP-LOPA-1			26

Objectives

LOPA00E003

RO SkyScraper	SRO Skyscraper RO System/Evolution Lis	st SRO System/Evolu	tion List Outline Cha	nges		
Question Topic	RO 8					
Given the follow	ving conditions:					
 Unit 2 is in M The reactor h 23 RCP is in 21 RHR loop 22 RHR loop RHR HX inlet RCS pressure ALL MS-10's 	IODE 4 exiting a forced outage. has been shutdown for 96 hours. service. b is in service supplying shutdown cooling. b is aligned for ECCS. t temperature is 290°F and stable. re is 325 psig and stable. s are set for 200 psig in AUTO.					
The NCO trips 2	21 RHR pump due to indications of cavitation.					
With NO operate	tor action, determine how long it will take for MO eat added to RCS is decay heat	DE 3 will be reached?				
a. < 14 min	nutes.					
b. 15-19 mi	inutes.					
c. 20-25 mi	inutes.					
a. > 20 mm	iutes.					
Answer b	Exam Level R Cognitive Level	Application Facil	lity: Salem 1 & 2	ExamDate: 9/26/2011		
KA: 000025K10	01 AK1.01 RO Value: 3.9 SRO	Value: 4.3 Section:	EPE RO Group:	1 SRO Group: 1 55.43		
System/Evolution	on Title Loss of Residual Heat Removal Sys	tem		025		
KA Statement:	Knowledge of the operational implications of the Loss of RHRS during all modes of operation	ne following concepts as t	they apply to Loss of Resid	dual Heat Removal System:		
Explanation of Answers:	of 55.41(10)The HUR will be determined using Attachment 5 of AB.RHR-1, page 2, with PZR level (RCPs are running). The 96 hour mark is 4 days, and the HUR will be ~3.8- 3.9°/minute. 60 degrees of temp change are needed to get from 290 to 350 (Mode 3) 60/3.8=15.8 minutes. 4°/minute would yield 15 minutes, but 4°/ minute is clearly above where the lines intersect on the graph. If the after core reload line is used this was a forced outage, not a refueling outage per stem), then the HUR would be 2.7/2.8 deg/min,					
	candidate uses the first page of attachment wi would use ~0.31° which would give over 3 hou correct Attachment 5 to make question harder	thout checking to see if it irs. Modified distracters to	is for the right conditions make all plausible. Provi	as stated in the stem, then they ded Attachment 4 in addition to		
10 - XX 483	Reference Title Facility R	eference Number	eference Section	age No. Revision		
Loss of RHR	S2.OP-AB.RI	HR-0001				

L.O. Number ABRHR1E005 Objectives

RO SkyScraper	SRO Skyscraper RO	System/Evolution List SRO System/Evolution	volution List Outline C	Changes			
Question Topi	Question Topic RO 9						
Given the follow	ving conditions:						
- Unit 2 is in N	IODE 3, NOP, NOT, returning	from a refueling outage.					
- ALL CCW pu during the ou	imps trip due to a faulty electritage.	rical relay which was replaced on all CCV	W pumps				
Which of the fo reason it must	llowing identifies an action that be performed?	at must be performed IAW S2.OP-AB.CO	C-0001, Component Coolir	ng Abnormality, and the correct			
a. Stop all	RCPs to prevent seal package	e damage.					
b. Initiate S	urge Tank makeup as level d	rops due to system pressure decay to m	aintain tank level.				
c. Isolate le	etdown and swap charging pu	mp suction to the RWST to ensure RCP	seal injection is maintaine	əd.			
d. Place 23	charging pump in service sin	ce it is a significantly smaller heat load o	on the CCW system than 2	21 charging pump.			
Answer C	Exam Level R Co	gnitive Level Memory F	acility: Salem 1 & 2	ExamDate: 9/26/20)11		
KA: 000026G1	32 2.1.32 RO V	alue: 3.8 SRO Value: 4.0 Sectio	n: EPE RO Group:	1 SRO Group: 1 55.43			
System/Evoluti	on Title Loss of Compone	nt Cooling Water		026			
KA Statement:	Ability to explain and apply a	all system limits and precautions.					
Explanation of Answers:	55.41(4,7,10) A is incorrect still receiving seal injection f cooling to the letdown and s Exchanger) leads to a rising Coolant Purpose Seals D is i	because while RCPs will be stopped, it is low from charging system. C is correct l eal water return heat exchangers (in add VCT temperature, which ultimately resu procrect because charging pump heat lo	s because there is no bear because in a total loss of C dition to the loss of cooling ults in the loss of RCP seal and is actually greater with	ring cooling flow. The seal package CCW scenario where the loss of to the Thermal Barrier Heat I injection, and failure of the Reactor 23 charging pump. The centrifugal	is		
	for a loss of all the pumps.	The stem states the pumps tripped from	an electrical fault, not beca	M/U is initiated if a leak is present, no ause a system leak made them trip.			
	Reference Title	Facility Reference Number	Reference Section	Page No. Revision			
Component Coo	ling Abnormality	S2.OP-AB.CC-0001					
	1						
ABCC01E004 Objectives							
Material Requir	ed for Examination						
Question Source	e: New	Question Modification Method:		Used During Training Program			
Question Source	e Comments						
Comment							

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO System/Evolution List Outline Changes	
Question Topic	RO 10		
Given the follow	ing conditions:		
 Unit 1 is open 13 Main Turbi The PZR Mastrony to the Government 	ating at 100% power. ine Governor Valve fails ster Pressure Controller or Valve closure occurs	ls shut. r output fails as is at 2235 psig before any response rs.	
Which of the foll	owing will occur natural	ally in the Pressurizer to help limit the magnitude of the resulting pressure transient on the primary system	<u>m?</u>
a. An outsur	ge cools the PZR. This	s allows some steam to condense to water and limits the resulting pressure increase in the RCS.	
b. An insurg	e of water heats the PZ	ZR. More liquid then flashes to steam helping to limit the resulting pressure drop in the RCS.	, and the second s
c. An outsur the RCS.	ge causes the steam s	space to expand in the PZR. This allows some liquid to flash to steam and limits the resulting pressure d	rop in
d. An insurg the RCS.	e of water compresses	s the steam space in the PZR. Steam is condensed to water helping to limit the overall pressure increase	e in
Answer d	Exam Level R	Cognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/2	26/2011
KA: 000027A10	3 AA1.03	RO Value: 3.6 SRO Value: 3.5 Section: EPE RO Group: 1 SRO Group: 1 55.4	43
System/Evolutio	n Title Pressurizer	Pressure Control Malfunction	27
KA Statement:	Ability to operate and / Pressure control when	/ or monitor the following as they apply to Pressurizer Pressure Control Malfunction:	
Explanation of Answers:	55.41() A is incorrect is incorrect because an insurge would occur, b rising RCS pressure fr PZR, which acts to lim	It because the outsurge cause lower pressure in the PZR, which causes more flashing to restore pressure in outsurge occurs, and if an insurge occurs it would be of colder water, not hotter. C is incorrect because but the action is correct. D is correct because the governor valve closing would cause an insurge based from the load reject. The insurge compresses the steam bubble, which cause condensing of the steam in the pressure rise	re. B se an on the n the
	Reference Title	Facility Reference Number Reference Section Page No. Revision	
PZR Pressure ar	d Level Control Lesson	n Plan NOS05PZRP&L-09 9	
		<u></u>	
L.O. Number	Objecti	lives	
Material Require	ed for Examination		
Question Sourc	e: Facility Exam Ba	ank Question Modification Method: Editorially Modified Used During Training Progra	am 🖂
Question Sourc	e Comments 7/17/02	2 Braidwood NRC Exam, Vision Q73426	
Comment			

RO SkyScraper	SRO Skyscraper	RO Syste	m/Evolution List	SRO System/Ev	olution List	Outline C	hanges		
Question Topic	RO 11								
Given the follow	ing conditions:								
 Unit 1 is oper 12 charging p A manual Rx The Rx does 	ating at 100% powe ump is in service. trip is initiated after not trip, and can NC	r. 11BF19 fails s T be tripped fi	shut. rom the control roo	om.					
Which of the foll completed in 1-E Assume Safety	owing would be an EOP-FRSM-1, Resp Injection is not actua	expected contronse to Nucle ated.	rol console indicati ar Power Generati	ion for the Chargir ion?	ng Pumps afte	r the Rapid I	Boration Init	iation steps ł	nave been
11 Charging Pur	mp 12 C	harging Pump) 13 Cł	narging Pump					_
a. STOP, S	TART, STOP.							Normania and a second a second a	
b. STOP, S	TART, START.								
C. START, S	START, START.								
d. START, S	START, STOP.								
Answer d	Exam Level R	Cogniti	ve Level Mem	ory Fa	cility: Saler	m 1 & 2	ExamD	late:	9/26/2011
KA: 000029A20	4 AA2.04	RO Value	3.2* SRO Valu	le: 3.3* Section	n: EPE R	O Group:	1 SRO C	Group: 1	55.43
System/Evolutio	n Title Anticipat	ed Transient V	Vithout Scram						029
KA Statement:	Ability to determine	and interpret	the following as the	ney apply to Antici	pated Transier	nt Without S	cram:		
Explanation of Answers:	55.41(10) D is corr stem and would on procedure starts O and thinks the pro procedure directs of PDP charging pum	ect because F ly be started if NLY one centr cedure just ne tarting of either p is plausible	RSM-1 has operative in the contribution of the contributication of the contribution of the contribution of	tor start 11 and 12 al charging pump imp, and stops the entrifugal charging ging pumps and r bed in other EOPs	charging pum could is operate PDP. B is pla pump in oper equires stopping and ABs.	nps. 13 chai ting. A is pl ausible if the ration. C is p ng 13 chargi	rging pump i lausible if th e candidate s plausible if t ing pump - S	is not operati e candidate I sees 13 PDP he candidate Stopping the	ng from hinks the is in service thinks the operating
	Reference Title		Facility Refere	ence Number	Reference S	ection	Page No.	Revision	
Response to Nuc	lear Power Genera	ion	1-EOP-FRSM-1					22	
L.O. Number	Obj	ectives							
Material Require	d for Examination								
Question Sourc	e: New	Q	uestion Modifica	tion Method:			Used Durir	ng Training I	Program
Question Sourc	e Comments								
Comment									
Nerros									

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes						
Question Topic	RO 12						
Given the follow	ing conditions:						
 Salem Unit 2 The reactor is Control rods a No additional If a Source Rang or later than if the 	is performing a Rx startup by control rods. s critical at 3000 cps in the source range. are withdrawn to raise power. operator action is taken and a reactor trip eventually occurs. ge Nuclear Instrument Discriminator voltage was lost immediately after the rod pull was complete, would a reactor trip occur so ne loss of voltage did not occur, and why?	ooner					
The Rx would tri	ip						
a. later. The	erecovery period of the instrument following the rod pull becomes longer.						
b. sooner. T	The recovery period of the instrument following the rod pull becomes shorter.						
c. sooner. T	The gamma level is added to the neutron level.						
d. later. The	e gamma level is deducted from the neutron level.						
Answer c	Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/	26/2011					
KA: 000032K10	AK1.01 RO Value: 2.5 SRO Value: 3.1 Section: EPE RO Group: 2 SRO Group: 2 55.	.43					
System/Evolutio	on Title Loss of Source Range Nuclear Instrumentation 0	32					
KA Statement:	Knowledge of the operational implications of the following concepts as they apply to Loss of Source Range Nuclear Instrumer Effects of voltage changes on performance	ntation:					
Explanation of Answers:	55.41(1,6) SR discriminator "screens out" gamma radiation at low power levels because it is not proportional to Rx power. If i voltage was lost, the SR NI would see all those extra gammas, and would indicate a higher power level. This would bring the to the trip level sooner than if the voltage had not been lost. D is incorrect because the gamma radiation is added, not deduc is incorrect because the trip would come sooner. The Pulse Amplifier has 3 functions: to amplify the signal output from the Breamp, to eliminate or "discriminate acainst" unwanted noise and camma pulses and to permit testing.	this SR NI ted. A					
	The BF3 Proportional Counter used in the SR produces pulses proportional to the energy of the ionization reaction in the chamber. A neutron will react with the B10 in the BF3 gas, to produce a large pulse. A gamma will react with the gas to produce a smaller pulse. The Discriminator portion of the Pulse Amplifier acts as a gate, to pass the large magnitude neutron pulses, and to reject the smaller amplitude gamma pulses. Because of its design, it will eliminate any pulses smaller than a neutron pulse, and so removes noise pulses, too.						
	Reference Title						
Excore Nuclear I	Instrumentation Lesson Plan NOS05EXCORE-09						

L.O. Number

Objectives

EXCOREE005

RO SkyScraper SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes								
Question Topic	Question Topic RO 13							
Given the follow	ving conditions:							
 Unit 1 is perfet Reactor power The low power Intermediate service IAW Predict what will 	 Unit 1 is performing a unit startup. Reactor power is 11%. The low power trips have NOT been blocked. Intermediate Range (IR) Channel I N35 previously failed and was removed from service IAW S1.OP-SO.RPS-0001, Nuclear Instrumentation Channel Trip / Restoration. Predict what will occur if the High Voltage Power Supply for IR Channel II N36 fails. 							
a. The reac	a. The reactor will trip on high IR flux. b. The reactor will NOT trip, 1N36 indication will drop to zero.							
c. The reac	tor will NOT trip, but OHA F-25 SR FLUX HI will annunciate.							
d. Both Sou	urce Range channels will automatically energize, and the reactor will trip on high SR flux.							
Answer b	Exam Level Cognitive Level Comprehension Facility: Salem 1 & 2 ExamDate: 9/26/2011							
KA: 000033A20	AA2.01 RO Value: 3.0 SRO Value: 3.5 Section: EPE RO Group: 2 SRO Group: 2 55.43							
System/Evolution	on Title Loss of Intermediate Range Nuclear Instrumentation 033							
KA Statement:	Ability to determine and interpret the following as they apply to Loss of Intermediate Range Nuclear Instrumentation:							
Explanation of Answers:	55.41(7) This is a valid K/A match because the candidate is required to understand the relationship between where power is in the power range, the level at which automatic re-energization of the SR channels would occur from the IRNI's failing low and/or having their bistables tripped because of the channel failure, and what the significance of the 11% power in the power range has on NI automatic operation. This question requires knowledge of what levels in the 3 nuclear instruments would be present at 11% power range power i.e. that the SR will be above the trip setpoint if they were to re-energize, which is one of the distracters, what the IR							
	will read if they fail low and how that affects the SR instrumentation, and the P-10 permissive, which automatically blocks SR energization with Rx power >10% in the power range. Loss of Instrument power (high voltage DC 300-1500) to N36 will cause its indication to go low. The rx will NOT trip, because the automatic energization of P-10 permissive at 2/4 PRNI at 10% will already have occurred. (Stem 11% power). This will prevent the SRNIs from automatically reenergizing when the second IRNI channel lowers less than 7x10-11Amps. F-25 will not annunciate, and if it did it would trip the Rx.							
	Reference Title Facility Reference Number Reference Section Page No. Revision							
RPS Nuclear Ins	strumentation Permissives and 221053 8							
Nuclear Instrume	entation Channel Trip / Restorati S1.0P-SO.RPS-0001							
Overhead Annunciators Window F S1.0P-AR.ZZ-0006								

Objectives

EXCOREE007

EXCOREE009

EXCOREE010

RO SkyScraper	SRO S	Skyscraper RO S	system/Evolution List SRO System/E	volution List Outline	Changes	
Question Topic	RO 14	1				
Which of the follo Rupture?	owing ide	entifies why the RCS	is depressurized during the response to	o a SGTR IAW 2-EOP-SC	GTR-1, Steam Generator Tube	
a. Maximize	boron inj	jection rate and refill	the PZR.			
b. Maximize	boron in	ection rate and mini	mize subcooling.			
[]	īka.		21200000000000000000000000000000000000			
c. Terminate	e primary	-to-secondary leaka	ge and refill the PZR.			
d. Terminate	primary	-to-secondary leakage	ge and reduce secondary plant contami	nation.		
Answer c	Exam L	evel R Co	nitive Level Memory	acility: Salem 1 & 2	ExamDate: 9/26/	2011
KA: 000038K10	2	EK1.02 RO V	alue: 3.2 SRO Value: 3.5 Section	on: EPE RO Group:	1 SRO Group: 1 55.43	
System/Evolutio	n Title	Steam Generator	Tube Rupture		038	
KA Statement:	Knowled	lge of the operationa	I implications of the following concepts	as they apply to Steam G	Generator Tube Rupture:	
	Leak rat	e vs. pressure drop				
Explanation of Answers:	55.41(5, the prim	10) RCS depressuri ary to secondary lea	zation is done to eliminate the pressure kage. RCS pressure is actually reduce	difference between the R ed to LESS than ruptured 3	CS and the ruptured SG, which sto SG pressure to allow backfill of the	ps
Tagan an initial of the Galler Galler	RCS (PZ transpor	ZR)from that SG. W t to the secondary p	hile secondary plant contamination will ant, it is not WHY the depressurization	be reduced by stopping the stop	he leakage into the SG and its injection distracters are plausible	
v.	hecause remains	as RCS pressure lo adequate.	wers ECCS injection flow capability ris	es_and can provide more	boron injection to ensure SDM	
Steam Generator	Tube R		Pacility Reference Number	Reference Section		
Jacobian (1997)						
L.O. Number		Objectives				
SGTR01E007						
The second						
Material Require	d for Ex	amination				
Question Source	e: <u>Ne</u>	W	Question Modification Method:		Used During Training Program	
Question Source	e Comm	ents				
Comment	-					
with the later of						

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO System/Evolution List Outline Changes	
Question Topic	RO 15		
Which of the follow the Main Turbine i	wing identifies an au nlet with NO operat	tomatic action and its correct initiating coincidence which will occur if a Main Steam piping rupture occurs at or action?	
a. Main Stean	nline Isolation. 1/2	High Steam Flow on 2/4 SGs, with 2/4 RCS loops <543°F.	
b. Main Stean	nline Isolation. 2/4	High Steam Flow on 2/4 SGs with 2/4 Steamline pressure <600 psig.	
c. Safety Inje	ction. 2/3 detectors	on 1/4 SG 100 psig lower than corresponding detectors on 2/3 remaining SGs.	
d. Safety Inje	ction. 2/3 detectors	on 1/4 SG 100 psig lower than corresponding detectors on 1/3 remaining SGs.	뤼
Answer a	Exam Level R	Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/20	11
KA: 000040K201	AK2.01	RO Value: 2.6* SRO Value: 2.5 Section: EPE RO Group: 1 55.43	
System/Evolution	Title Steam Lin	e Rupture	
KA Statement:	Knowledge of the int	errelations between Steam Line Rupture and the following:	
	/alves	pline lactorian ecours as described in A. P is incorrect because the High steam Flow establishes is 1/2, ast	븍
Answers: 2	2/4. C is incorrect b	hine isolation occurs as described in A. B is incorrect because the high steam Flow coincidence is 1/2, not ecause there will be no Safety Injection on SG D/P because the rupture is downstream of the MSIVs and ALL	
0	coincidence for the r	emaining SGs.	
Re	eference Title	Facility Reference Number Reference Section Page No. Revision	
RPS Steam Gener	ator Trip Signals	221056	
Licensed Operator	Fluency List	NOS05FLUNCY 7	
L.O. Number			
FLUNCYE002		tives	
······································	<u></u>		
Material Required	for Examination		
Question Source	New	Question Modification Method; Used During Training Program	
Question Source	Comments		
Comment			
h <u>(</u> <u>, , , , , , ,)</u> <u>, , , , , , , , , , , , , , , , , , ,</u>	<u> </u>		

RO SkyScraper SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes								
Question Topic RO 16								
Given the follow - Unit 2 is oper - Main Conden - Operators sta 3% per minu Condenser V - Condenser ba Of the following, Assume the Mai a. BOTH SC	Given the following conditions: - Unit 2 is operating at 100% power. - Main Condenser backpressure begins to rise at 2 "Hg every 5 minutes. - Operators start available vacuum pumps and initate a Turbine load reduction at 3% per minute in an attempt to stabilze vacuum IAW S2.OP-AB.COND-0001, Loss of Condenser Vacuum. - Condenser backpressure continues to rise. Of the following, which will occur FIRST if NO OTHER operator action is taken, and why? Assume the Main Turbine does NOT trip at any time. a. BOTH SGFPs will trip to prevent damage to the SGFP blading.							
b. Interlock c. SGFP Ma d. Interlock	C-9 will block Steam Dump opera Ister Speed Controller output will C-7 will arm the Steam Dumps to	ation to prevent damaging the conder lower to 50 psid to ensure Permissiv	e P-14 does not actuate. Rod Insertion Limit does	not occur dur	ing the down power.			
Answer b	Exam Level R Cognit	tive Level Application Fa	cility: Salem 1 & 2	ExamD	ate: 9/26/2011			
KA: 000051K30	1 AK3.01 RO Value	e: 2.8* SRO Value: 3.1* Section	: EPE RO Group:	2 SRO G	iroup: 2 55.43			
System/Evolutio	n Title Loss of Condenser Va	acuum			051			
KA Statement:	Knowledge of the reasons for the Loss of steam dump capability up	e following responses as they apply t upon loss of condenser vacuum	o Loss of Condenser Vac	uum:				
Explanation of Answers:	Explanation of Answers: 55.41(4) Control Grade Interlock C-9 energization allows Steam Dump operation by unblocking steam dumps at 20" vacuum rising. It also blocks the steam dumps at 20" vacuum lowering, which equates to 10" Hg backpressure. The condensers are not designed to operate at any pressure. Control Grade interlock C-7 arms the steam dumps on a 5% / minute ramp. The action is correct but the setpoint would not be reached with a 3% per minute ramp. The assumption stated in the stem is required since the Main Turbine would trip at around the same vacuum the steam dumps would block, and the candidate could think Control Grade C-7 would actuate on the large load rejection caused by the Turbine trip if load were less than 49% and the reactor did not trip to place steam dumps in plant trip controller. A is incorrect because the SGFP trip is at 0" vacuum. C is incorrect because SGFP speed will lower, but not to 50 psid, which is the bottom end of its control band, and would not be expected to be at that level until at very low power.							
	Reference Title	Facility Reference Number	Reference Section	Page No.	Revision			
Loss of Condens	er Vacuum	S2.OP-AB.COND-0001			15			
Licensed Operate	or Fluency Lesson Plan	NOS05FLUNCY-07			07			

.

L.O. Number

Objectives

ABCONDE004

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes
Question Topic	RO 17
Given the follow	ing conditions:
- Unit 2 is oper - BOTH SGFP	ating at 35% power with both SGFPs in service. s trip simultaneously.
Which of the foll	lowing describes the actions required in S2.OP-AB.CN-0001, Main Feedwater/Condensate System Abnormality, and why?
a. Trip the F	Ex and manually start 21 and 22 AFW pumps to maximize SG inventory.
	Rx to ensure only decay heat and RCP heat are being added to the RCS. AFW pumps will automatically start.
d. Trip the N	Nain Turbine to ensure only decay heat and RCP heat are being added to the RCS. AFW pumps will automatically start.
Answer c	Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2011
KA: 000054K30	AK3.01 RO Value: 4.1 SRO Value: 4.4 Section: EPE RO Group: 1 SRO Group: 1 55.43
System/Evolution	on Title Loss of Main Feedwater 054
KA Statement:	Knowledge of the reasons for the following responses as they apply to Loss of Main Feedwater:
[Reactor and/or turbine trip, manual and automatic
Answers:	power is <49% (P-9). The Loss of Main Fed is NOT one of those cases, since SG inventory would quickly be depleted without the removal of steam demand from the Main Turbine. For a loss of feed, the rx is tripped to ensure the only heat being added to the RCS is decay and RCP pump heat, which minimizes the amount of heat removal required from the SG's, and allows AFW system to restore SG inventory. Additionally, AFW pumps will have auto started upon the trip of both SGEPs, so manually starting them is not possible nor required, since the procedure knows they will already be running.
	Perference Title
Main Feedwater/	Condensate System Abnormalit S2.OP-AB.CN-0001
L.O. Number ABCN01E003	Objectives
Material Require	ed for Examination
Question Sourc	e: New Question Modification Method: Used During Training Program
Question Sourc	e Comments
Comment > >>>	

RO Sk	vScraper	SRO Sk	vscraper	RO Syst	em/Evolution List SRO Syst	em/Evoluti	on List Outline C	Changes		
Questi	on Topic	RO 18								
Given	the followir	na conditio	ons:							
- Unit - All 3 - 12 c - A los	 Unit 1 is operating at 100% power. All 3 Chillers have power, and are operating as expected for temperature conditions. 12 chilled water pump is in service. A loss of all off-site power occurs. 									
Which	Which of the following identifies how the loss of off-site power will affect chiller and chilled water pump operation? Chillers will have their 460V breaker closed by their respective SEC, and Chilled Water Pump(s) will be operating.									
a.	ALL, 11 a	nd 12.								
b.	ALL, ONL	Y 12.								
с.	NO, 11 ar	nd 12.								
d.	NO, ONL	Y 12.				_				
Answer	r a	Exam Le	velR	Cognit	ive Level Application	Facilit	y: Salem 1 & 2	Exam	Date:	9/26/2011
KA: 00	00056A108	3	A1.08	RO Value	2.5* SRO Value: 2.5 Se	ction:	EPE RO Group:	1 SRO	Group: 1	55.43
System	/Evolution	n Title	Loss of Off	-Site Powe]	056
KA Stat	tement:	Ability to c	perate and	/ or monito	or the following as they apply to	Loss of C	Off-Site Power:	11 1 111111111111111111111111111111111		
		HVAC chil	ll water pun	np and unit						
Answer	rs:	start. The permissive	e SEC will c	lose the Ch like the EC	n reclose the chiller 460 volt br niller 460V breakers and start bo CAC interlock start, where the s	eakers on oth Chillec andby pu	a MODE II (Blackou i Water Pumps seque mp (11) starts only if	t) SEC Initial entially to sa the dedicate	tisfy the Chilled pump (12)	fails to start.
	R	eference	Title		Facility Reference Number	Re	ference Section	Page No.	Revision	
Chilled	Water Sys	stem Lesso	on Plan		NOS05CHLWAT			23,34	10	
No 1 &	2 Units Co	ontrol Area	AC Chilled	Water P	228031				13	
Safegu	ards Emer	gency Loa	iding Seque	ence	203668				6	
L.O. NU CHLW/	ATE008		Objec	tives						
Materia	al Require	d for Exa	mination							
Questi	on Source	: New		in or a starting	Question Modification Method			Used Duri	ng Training	Program
Questio	on Source	Commer	nts							
Comm	ent									

RO SkyScraper	SRO Skyscraper RO Sys	tem/Evolution List SRO System/E	volution List Outline (Changes
Question Topic	RO 19			
The operating cre Auxiliary Building	w has entered S2.OP-AB.RAD and Fuel Handling Building Ve	-0001, Abnormal Radiation, due to R ntilation controls to HEPA PLUS CH	MS alarms on the plant vo ARCOAL IAW their respec	ent. Operators have shifted both the ctive procedures.
Which statement valve on a Waste	describes the change, if any, ir Gas Decay Tank (WGDT)?	the release rate resulting from shifti	ing the ventilation systems	s, if the problem is a stuck open relief
a. None – the	WGDT relief valves discharge	to the plant vent.		
b. The release	e rate is reduced by passing th	rough the Auxiliary Building Ventilation	on System.	
c. The release	e rate is reduced by passing th	rough the Fuel Handling Building Ver	ntilation System.	
d. None – the	WGDT relief valves discharge	to the Auxiliary Building Ventilation	exhaust fan suction plenu	m.
Answer a	Exam Level R Cogni	tive Level Comprehension F	acility: Salem 1 & 2	ExamDate: 9/26/2011
KA: 000060K202	AK2.02 RO Valu	e: 2.7 SRO Value: 3.1 Sectio	n: EPE RO Group:	2 SRO Group: 2 55.43
System/Evolution	Title Accidental Gaseous	Radwaste Release		060
KA Statement:	(nowledge of the interrelations	between Accidental Gaseous Radwa	aste Release and the follo	wing:
Explanation of 5	Auxiliary building ventilation sys	(205240 sheet 2 E-7) combine in	ate a single header and ar	2 to (205222 choot 1 C 2) which in
Answers:	ne FHB Ventilation exhaust do	wnstream of the exhaust fans. It the	in flows to the plant vent (2	205337 sheet 1, G-11 into the plant
	A – Release is detected by Pla	nt Vent Monitors but does not pass t	hrough ventilation (B), (C)	, (D) Flowpath is not through filters nor
<u>_</u>				
Re	erence Title	Facility Reference Number	Reference Section	Page No. Revision
Waste Disposal - 0	Gas	205340-2		36
Aux Bldg, EDG Ro	om, and Fuel Handling Bldg v	205322-1		25
Auxiliary building V	'entilation	205337-1		40
L.O. Number	Objectives			
ABRAD1E004	States (1988)			
Material Required	for Examination		10.114.111	
Question Source:	Facility Exam Bank	Question Modification Method:	Direct From Source	Used During Training Program
Question Source	Comments Q78133			
Comment				
J				
			······	

RO SkyScraper	SRO Skyscraper RO Sy	stem/Evolution List SRO System/Ev	olution List Outline C	hanges				
Question Topic	Question Topic RO 20							
Given the follow	ving conditions:							
 Unit 2 is ope 21 Charging #4 SW Bay h Bay Leak. All #2 SW Ba Which of the fo 	 Unit 2 is operating at 65% power. 21 Charging pump is in service. #4 SW Bay has been isolated due to a bay leak IAW S2.OP-AB.SW-0003, Service Water Bay Leak. All #2 SW Bay pumps trip. Which of the following describes an action that will be performed in S2.OP-AB.SW-0005, Loss of All Service Water, and why? 							
a. Isolate C	VCS letdown. This prevents re	sin damage in the CVCS demineralized	s when letdown temperat		136°.			
	VCS letdown. This prevents he	ating of the fluid in the VC1 to a tempe	erature which will cause a	loss of NPS	H to the charging pumps.			
c. Swap ch extends	arging to 23 charging pump if it the time available to perform a c	is available. This allows lowering RCP controlled shutdown of the plant.	seal injection flow below t	he minimum	stop for the 2CV55 and			
d. Swap ch	arging to 23 charging pump if it	is available. This maintains seal injecti	on flow to the RCPs, which s rising $>225^{\circ}$	h allows suf	ficient time to install			
Answer d	Exam Level R Cogr	itive Level Memory Fa	cility: Salem 1 & 2	ExamD	Date: 9/26/2011			
KA: 000062A20	06 AA2.06 RO Val	ue: 2.8* SRO Value: 3.1* Section	n: EPE RO Group:	1 SRO (Group: 1 55.43			
System/Evoluti	on Title Loss of Nuclear Ser	vice Water			062			
KA Statement:	Ability to determine and interp	et the following as they apply to Loss	of Nuclear Service Water:					
s	The length of time after the los	s of SWS flow to a component before	that component may be d	amaged				
Answers:	cooling to the Thermal Barriers 136°F. C is incorrect because trip the Rx, there will be no con Displacement nump is made to maintained by the PDP until te	a swap to the PDP is made since it is ntrolled shutdown. D is correct becaus ecause the PDP is cooled by CCW or mporary cooling hoses to the CCP's c	alizers are automatically b cooled by CCW, and an i e the basis document stat bt.SW. This means seal in an be installed from the D	ypassed on mmediate ad piection flow M system.	high temperature at ction in AB.SW-005 is to transfer to the Positive eshould be able to be			
	Reference Title	Facility Reference Number	Reference Section	Page No.	Revision			
Loss of All Servi	ce Water	S2.OP-AB.SW-0005			4			
L.O. Number Objectives ABSW04E004								
Question Source	e: New	Question Modification Method:		Úsed Duri	ng Training Program			
Question Source	ce Comments							
Comment								

ROS	SkyScraper	SRO Skyscraper	RO System/Evolution I	List SRO Syst	em/Evolution L	ist Outline Ch	anges	
Ques	tion Topic	RO 21						
Giver	n the follow	ing conditions:						1
- Ur - A 1	iit 2 is in M otal loss o	ODE 3, NOT and NOP all Control Air occurs.						
Whic	h of the fol	owing describes the ba	asis for transferring the	charging pump su	ction to the R	WST IAW S2.OP-A	B.CA-0001, Loss	of Control Air?
								Ĩ
a.	The quar	tity of water required to	maintain PZR level du	uring the RCS cool	down will be g	reater than the cap	acity of the CVCS	S makeup system.
b.	The RCS faster rat	must be borated to CS	D conditions, and RW	ST water is at a hig	her concentr	ation than the VCT,	, so boron will be a	added to RCS at a
C.	If a centri achieve (fugal charging pump is SD boron concentration	running, its recirc line on.	back to the VCT w	ill short circui	t any boron addition	and raise the tim	e required to
d.	CVCS let induction	down will be isolated, a to the CVCS charging	and VCT makeup is una header.	available. This wo	uld cause a ra	pid depletion of VC	T level and subse	equent air
Answ	er b	Exam Level R	Cognitive Level	Memory	Facility:	Salem 1 & 2	ExamDate:	9/26/2011
KA:	000065K30	8 AK3.08	RO Value: 3.7 SR	O Value: 3.9 Se	ection: EPE	RO Group:	1 SRO Group:	1 55.43
Syste	m/Evolutio	n Title Loss of Inst	rument Air					065
KA St	atement:	Knowledge of the rea	sons for the following re	esponses as they a	pply to Loss (of Instrument Air:		
Expla	nation of	Actions contained in t	s document states "Pr	ent air	a cooldown	the RCS must be b	orated to cold shu	Itdown conditions
Answ	ers:	Without Control Air, th commences will depe charging pump suctio	n is transferred to the F	e RCS inventory. Ince in the PZR. Du RWST early in the e	Thus, the amore to the slow e to the slow event. This end	bunt of boron that carries in level, this manual that any additional $(MO)/(s)$ to the	an be added befor ay become limiting lition to the RCS is RWST on to be	g. Therefore, the s at RWST
		C is incorrect because plausible. PZR level concern.	while the recirc line do will actually be rising du	bes go back to the le to the loss of lete	VCT, it is not down, and los	the basis for the tras s of PZR inventory	ansfer. A is inco during the cooldo	rrect but wn is not a
		Reference Title	Facility	Reference Numbe	er Refere	nce Section	Page No. Revis	sion
Loss	of Control A	Nir	S2.OP-AB.C	CA-0001			16	
]		
L.O. N	lumber 01E002	Objec	ives					
Mater	ial Requir	ed for Examination						
Ques	tion Sourc	e: Previous 2 NRC	Exams Question Mo	dification Method	Direct F	rom Source	Used During Trai	ning Program
Ques	tion Sourc	e Comments	DT RO NRC Exam Aug	ust 2008				
Comr	nent							
		remainmenter a Prant (2 - Part)	and a statement of the second s	an de la construcción de las	nen metrinining 2			

RO SkyScraper	SRO Skyscraper RO Sy	stem/Evolution List SRO System/Ev	olution List	hanges							
Question Topic	RO 22										
Given the followin	g conditions:										
 The Unit 2 oper 2-EOP-FRCC- The crew is unated of the crew is the cr	rating crew is responding to ar 1, Response to Inadequate C able to re-initiate ECCS flow. els are ~5%. os can be started. ermocouples indicate >1200F.	n Inadequate Core Cooling condition IA ore Cooling.	AW								
Prior to opening the second	Prior to opening the PZR PORVs in an attempt to lower CET temperatures, how should RCPs be utilized? a. RCPs will NOT be started since possible rupture of hot SG tubes could occur .										
b. RCPs will N	NOT be started at this point si	nce they are required later in the proce	dure.								
c. Start ONLY	one RCP in any RCS loop. C	Continue operation of ONLY one RCP	until core exit thermocoupl	es are less than 1200 deg.							
d. Start one R available R	CP in an available RCS loop. CPs are running or CETs are	If core exit thermocouples remain > 1	200F, start another RCP i	in an available loop. Continue until all							
Answer a	Exam Level R Cogn	itive Level Application Fa	cility: Salem 1 & 2	ExamDate: 9/26/2011							
KA: 000074K201	EK2.01 RO Valu	ue: 3.6 SRO Value: 3.8 Section	n: EPE RO Group:	2 SRO Group: 2 55.43							
System/Evolution	Title Inadequate Core Co	oling		074							
KA Statement:	Knowledge of the interrelations	between Inadequate Core Cooling an	d the following:								
Explanation of Answers:	5.41(10) With SG WR levels lirects operators to step 23. S here are none. No RCPs can	at ~5%, there is no secondary heat sin tep 25 caution states that RCP's are o be started. It is NOT because that th	k. At step 13/14 of FRCC- nly to be started in loops of ey will be needed later in p	-1, no SG level and no AFW flow with SG NR levels >9%, of which procedure.							
Recorded to Incide	eference Title	Facility Reference Number	Reference Section	Page No. Revision							
L.O. Number	Objectives										
Material Required	for Examination										
Question Source:	Facility Exam Bank	Question Modification Method:	Editorially Modified	Used During Training Program							
Question Source	Comments VISION Q 7344 status and SG	 Choices modified to remove extrar WR levels in stem. 	neous info. Removed RVL	IS level in stem. Added AFW pp							
Comment											
											

RO SkyScraper	SRO S	kyscraper R	O Syst	em/Evolution List	SRO System/Ev	olution List	Outline C	hanges		
Question Topic	RO 23	}								
Given the follow	ing conditi	ions:			444449446 <u>4444</u>		·			
 Unit 2 is performing 2-EOP-LOCA-2, POST LOCA COOLDOWN AND DEPRESSURIZATION. 22 Charging Pump has been stopped. Conditions are met for stopping one Safety Injection (SI) Pump. 										
Which of the foll	owing ide	ntifies the SI pum	ip to b	e stopped and the rea	ason for the sel	ection?				
a. 21 SI Pump to ensure ECCS injection flow if any single vital bus failure occurs.										
b. 22 SI Pur	mp to ensi	ure ECCS injection	on flow	if any single vital bus	s failure occurs.					
c. 21 SI Pur	mp to ensi	ure one full train o	ofinjeo	cting ECCS equipmer	nt is maintained	in service.				
d. 22 SI Pur	mp to ensi	ure one full train o	of injec	cting ECCS equipmer	nt is maintained	in service.				
Answer	Exam L	evel R C	ognit	ive Level Memor	y Fa	cility: Sale	m 1 & 2	Exam	Date:	9/26/2011
KA: 00WE03K1	01	EK1.1 RO	Value	3.4 SRO Value:	4.0 Section	n: EPE F	O Group:	2 SRO	Group: 2	55.43
System/Evolution	on Title	LOCA Cooldow	n and	Depressurization						E03
KA Statement:	(A Statement: Knowledge of the operational implications of the following concepts as they apply to LOCA Cooldown and Depressurization:									
Evaluation of		ents, capacity, an		tion of emergency sy	stems.					
Answers:	22 charg stopped flow if a l because vital buss	ing pump is powe is because"Ba loss of one train o there are 2 ECC: ses. (LOCA-2 bas	ered fro alancir occurs. S. train ses do	om "C" vital bus. So ng the load between E " Salem specific ER s nowered from 3 vita cument page 39)	is 22 SI pp. Th ECCS trains inc G deviation cha al bussesThe	is means 21 S reases the pro nges " alterna intent of the si	l pump shou bability that te ECCS tra en is best m	uld be stopp there will st ins" to "alten net by startin	ed. The reas ill be some Ro rnate vital bus og equipment	on it is CS injection ses" on alternate
	Reference	e Title	(lace	Facility Referen	ce Number	Reference S	ection	Page No.	Revision	
Post-LOCA Cool	down and	Depressurization	۱	2-EOP-LOCA-2		l			25	
						<u> </u>				
L.O. Number		Objectives								
Material Require	ed for Exa	amination			<u></u>	<u> </u>	1010-800-0			
Question Sourc	e: Pre	vious 2 NRC Exa	ms C	Question Modification	on Method:	Editorially Mo	lified	Used Duri	ng Training F	Program
Question Sourc	e Comme	ents Salem 8/2	008 NI	RC Exam RO Q21. N	Aodified stem to	given the fol	lowing cond	itions" type	format from a	runon type
Comment										
								-		

RO SkyScraper	SRO Skyscraper RO Sys	tem/Evolution List SRO System/Evo	olution List Outline C	hanges					
Question Topic	RO 24								
Given the follow	ing conditions:		<u></u>						
- Unit 2 is atter - 2-EOP-LOCA - The source o	npting to identify and isolate a L -6, LOCA Outside Containment f the water is backleakage from	DCA outside containment. has just been entered. the 23 cold leg injection line.							
Assuming that a while using 2-E	ny valves required to be operate DP-LOCA-6?	ed during LOCA-6 operate correctly, w	hich of the following leak	locations would NOT be isolated					
					1				
a. On the valve inlet flange on 22SJ49, RHR DISCH TO COLD LEGS.									
b. On the va	alve outlet flange on 21SJ49, RF	R DISCH TO COLD LEGS.							
c. Between	the 2RH20, RHR HX BYP VALV	E and the 2RH26, HOT LEG ISOL V.	ALVE.						
d. Between	the 2RH2, RHR COMMON SUC	T VALVE, and 22RH4, RHR PMP SU	CT VALVE.						
Answer b	Exam Level R Cogn	tive Level Comprehension Fa	cility: Salem 1 & 2	ExamDate: 9/26	/2011				
KA: 00WE04A	02 EA1.2 RO Valu	e: 3.6 SRO Value: 3.8 Section	n: EPE RO Group:	1 SRO Group: 1 55.43					
System/Evolution	Don Title LOCA Outside Conta	inment		E04	F				
KA Statement:	Ability to operate and / or moni	tor the following as they apply to LOC/	A Outside Containment:						
Evenlagedtage of	Operating behavior characteris	tics of the facility.	2 2 D L 1 0 D 2 D L 2 0 1 00	d 2200410a 200426 21 and	<u> </u>				
Answers:	22SJ49s. Using drawing 2053 valves closed. The only location valves. The stem statement of close fully when operated	32-SIMP, it shows that any leak betwee in which wouldn't be affected by those proper valve operation was inserted to	en the RH1/2 and the SJ4 valve being closed in the o preclude a candidate fro	49s will be isolated with the above downstream/outlet side of the S. om assuming a leaking valve may	€ J49 / not				
(<u></u>					<u> </u>				
	ontainment	2-FOR-LOCA-6	Reference Section						
RHR Simplified		205332-SIMP							
L.O. Number	Objectives	···		· · · ·]				
Material Requir	ed for Examination								
Question Source	e: Facility Exam Bank	Question Modification Method:	Direct From Source	Used During Training Program	n 🗆				
Question Sourc	e Comments J-ROC21								
Comment									

RO S	kyScraper	SRO Skyscraper RO S	vstem/Evolution List SRO	System/Evolution Li	st Outline Cl	nanges	
Quest	tion Topic	RO 25		and a second			
Given	the followir	ng conditions:					
- Uni - 11 - RV Re	it 1 has exp RHR pump /ST level is circulation.	erienced a LBLOCA. is C/T electrically by it's 4KV 14.8', and operators are perfe	breaker only. orming 1-EOP-LOCA-3, Trans	sfer to Cold Leg			
Which	n_of the follo	wing conditions will prevent to	ransfer to CL recirc, and caus	se the crew to go to	1-EOP-LOCA-5,	Loss of Emergend	cy Recirculation?
a.	12SJ44, C	ont Sump Suct Valve, does N	NOT open when its Sump Aut	o Arm PB is depre	ssed.		
b.	1RP4 Lock	out Switch for 12RH4, RHR I	Pump Suction, is stuck in "Lo	ocked Out" position	ı.		
C.	12SJ44 op	en PB is depressed before th	ne 12RH4 close PB is depress	sed.			
d.	12RH4 car	NOT be closed from control	room OR locally.				
Answe	er d	Exam Level R Cog	nitive Level Application	Facility:	Salem 1 & 2	ExamDate:	9/26/2011
KA:	0WE11K20	1 EK2.1 RO Va	lue: 3.6 SRO Value: 3.9	9 Section: EPE	RO Group:	1 SRO Group	1 55.43
Syster	n/Evolution	Title Loss of Emergency	Coolant Recirculation				E11
KA Sta	itement:	Knowledge of the interrelation Components, and functions o	ns between Loss of Emergence of control and safety systems,	cy Coolant Recircu including instrume	lation and the follo intation, signals, in	owing: hterlocks, failure m	nodes, and
Explar Answe	nation of ers:	55.43(7) A is incorrect becaus signal will remain to the SJ44 opening. B is incorrect bec closed, the 12SJ44 cannot be knowledge of the unit differen	se Unit 1 SJ44 valves do not even though it is interlocked ause there is no lockout switc opened, and recirc cannot b ace since Unit 2 has the Semi	have auto swap fur to not open until th ch for RH4s on RP e established, and -Auto Swapover of	nction like unit 2 ha ne RH4 is shut, and 5. D is correct be procedure directs RHR suction to C	as. C is incorrect d there is no locko cause if the 12RH transition to LOC containment Sump	t because the close but to prevent it 14 cannot be A-5. This tests and Unit 1 does
,						PTIIN	
	R	eference Title	Facility Reference Nu	umber Refere	nce Section	Page No. Revi	sion
No. 1	Init 125.14	4 12RH4 and 1RH1	211507-1			35	l
				[
L.O. N LCA3U RHR0	umber J1E004 00E006	Objectives					
Materi	al Require	d for Examination					
Quest	ion Source	Facility Exam Bank	Question Modification Me	ethod: Editorial	ly Modified	Used During Tra	ining Program
Quest	ion Source	Comments Vision Q1224	56, removed step number from	m distracter C sinc	e it is a non-existe	ent step	
Comm	nent						

RO SkyScraper SRO Skyscraper RO S	System/Evolution List Outline Changes	
Question Topic RO 26		
Given the following conditions:		
 Unit 2 has experienced an event which has A MSLI has been performed. 	s resulted in 24 SG pressure rising to 1115 psig.	
How many SG Safety Valves will be open on 2	24 SG if pressure remains at 1115 psig, and all safety valves operate when expectec?	
a . 5		
b. 4		
c. 3		
d. 2		
Answer C Exam Level R Cog	ognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2	2011
KA: 00WE13A102 EA1.2 ROV	/alue: 3.0 SRO Value: 3.2 Section: EPE RO Group: 2 SRO Group: 2 55,43	
System/Evolution Title Steam Generator	Overpressure E13	1
KA Statement: Ability to operate and / or mo	onitor the following as they apply to Steam Generator Overpressure:	
Explanation of 55.41(4,7) Each SG has 5 sa	safeties, with lift setpoints of 1070, 1100, 1110, 1120, and 1125 psig.	
Answers:		
Reference Title	Facility Reference Number Reference Section Page No. Revision	
I O Number		
FRHS00E009 Objectives		
STMGENE008		
Material Required for Examination		
Question Source:	Question Modification Method: Used During Training Program	
Question Source Comments		
Comment		
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RO SkyScraper SRO Skyscraper RO Sys	tem/Evolution List SRO System/Ev	olution List Outline C	hanges
Question Topic RO 27			
Given the following conditions:	ан талан т		
 Salem Unit 2 experienced a LOCA with failed Containment pressure peaked at 18 psig, and Containment radiation level is 1.1 E5 R/hr and The TSC has not given the control room any the EOPs. 	fuel. I is currently 3 psig and slowly lowerir d rising very slowly. direction on use of Adverse numbers	ig. while in	
Which of the following describes how containme Adverse numbers in effect because	ent conditions will affect use of "Adver	se" numbers while in the E	EOP's?
a. ARE; containment pressure rose above	4 psig.		
b. ARE; radiation levels have reached thei	r threshold.		
c. ARE NOT; the TSC has not provided an	y direction yet.		
d. ARE NOT; they reset on lowering conta	inment pressure and the radiation thre	eshold has not been reach	ed.
Answer b Exam Level R Cogn	tive Level Memory Fa	cility: Salem 1 & 2	ExamDate: 9/26/2011
KA: 00WE16A202 EA2.2 RO Valu	e: 3.0 SRO Value: 3.3 Section	n: EPE RO Group:	2 SRO Group: 2 55.43
KA Statement: Ability to determine and interror	at the following as they apply to High	Containment Padiation:	
Adherence to appropriate proce	edures and operation within the limitat	ions in the facility's license	e and amendments
Explanation of Answers: 55.41(9,12,10) Adverse contain reaches 1E5 R/hr. The Adverse radiation. The conditions in ste being exceeded.	ment numbers are used when contain e condition resets when containment m are such that Adverse numbers ha	nment pressure reaches 4 pressure lowers less than ve are in effect based on t	psig or containment radiation level 4 psig, but does NOT reset on high the containment radiation threshold
Reference Title	Facility Reference Number	Reference Section	Page No. Revision
Use of Procedures	OP-AA-101-111-1003		3
L.O. Number Objectives PROCEDE004			
Material Required for Examination			
Question Source: New	Question Modification Method:		Used During Training Program
Question Source Comments Similar to NRC exam.	Exam questions from Sept 2001 Cool	k exam, Nov. 2002 Salem	n exam, Dec 2002 Beaver Valley
Comment			

RO SkyScraper	SRO	Skyscraper	RO Syst	em/Evolution List	SRO System/Ev	olution List	Outline Cha	inges			
Question Topic	RO 2	28									1
Given the follow	ving cond	litions:									
 Unit 2 is operating at 100% power. A failure in the automatic Rod Control circuit causes Bank D Control rods to step in at 72 steps per minute. Control rods insert 20 steps before the RO places rod control in manual and rod motion stops. 											
Which of the following describes the initial effect of the rod insertion with NO other operator action?											
a. OHA E-8, ROD INSERT LMT LO will annunciate.											
b. RCS pre	b. RCS pressure will lower and PZR spray valves will shut.										
c. Main Ge	nerator M	/W load will l	ower and go	overnor valves will r	not throttle open.						
d. RCS terr	perature	will lower to	the RC Loo	ps Tavg-Tref Devia	tion alarm setpoir	nt of 1.5°F.					
Answer b	Exam	Level R	Cognit	ive Level Appli	cation Fa	acility: Salem	1&2	Examl	Date:		9/26/2011
KA: 001000K30)2	K3.02	RO Value	3.4* SRO Valu	e: 3.5 Section	n: SYS RC) Group:	2 SRO	Group:	2	55.43
System/Evolution	on Title	Control Ro	od Drive Sys	stem							001
KA Statement:	tatement: Knowledge of the effect that a loss or malfunction of the Control Rod Drive System will have on the following:										
Explanation of Answers: 55.41(5) A is incorrect because the RIL for 100% power is ~170 steps on Bank D, so 20 steps of insertion from 230 steps (ARO) will not cause this alarm. C is incorrect because Main Generator load will lower due to lower steam pressure, but it will not remain lower since the Governor valves will automatically open to restore Turbine Steamline pressure to the value corresponding to 100% power. B is correct because the rod insertion will cause a lowering of RCS pressure sufficient to full close the Spray valves, which are normally ~ 6% open due to maintaining one group of PZR B/L beaters in manual ON. D is incorrect because while temperature will											
p	1										
Continuous Rod	Motion	ce Title		Facility Refer		Reference Se	ction	Page No.	Revisio	on:	
Overhead Appur		/indow E		S2.0P-AB.R0D-0		 		1	10	4	
Control Console	CC2			S2.OP-AR.ZZ-000	12	 	3	6	35		
L.O. Number ABROD3E003 RODS00E019		Obje	ctives								
Material Require	ed for Ex	kamination									
Question Source	e: Ne	ents		Question Modifica	tion Method:		Ŭ	sed Duri	ng Traini	ing Pro	ogram
Comment					and a second						

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes										
Question Topic	RO 29										
Given the follow	ing conditions:										
 Unit 2 was operating at 100% power when a 500 KV grid disturbance caused a Rx trip. 2H 4KV Group bus deenergized upon the Rx trip. 21 AFW tripped immediately upon starting. SGBD flow is zero from all SGs. All radiation monitors indicate as expected following a Rx trip. 											
During performa	ance of EOP-TRIP-2, Reactor Trip Response, the RO reports that 21 SG NR level is reading 8% higher than the other SGs.										
Which of the fol	lowing identifies what has occurred?										
a. A tube ru	pture has occurred on 21 SG.										
b. Loss of 2	3 MAC Panel has caused SGFPs to supply uneven feed flow to the SGs.										
c. 21 SG is	steaming less than the other generators since its RCP is no longer running.										
d. The loss	of 21 AFW pump has caused Pressure Override Protection circuit activation on 22 AFW pump.										
Answer C	Exam Level Cognitive Level Comprehension Facility: Salem 1 & 2 ExamDate: 9/26/2011										
KA: 003000K30	N2 K3.02 RO Value: 3.5 SRO Value: 3.8 Section: SYS RO Group: 1 SRO Group: 1 55.43										
System/Evolution	On Title Reactor Coolant Pump System 003										
KA Statement:	Knowledge of the effect that a loss or malfunction of the Reactor Coolant Pump System will have on the following: S/G										
Explanation of Answers:	55.41(5) The loss of 2H bus, which supplies power to 21 RCP, will cause the steaming rate in that SG to go down. With AFW flow the same to all SGs, the level in 21 SG will rise markedly, as it will not be steaming. A tube rupture would be indicated if there were no other reason for the level rise, as the diagnostic step asks if SG NR level is rising uncontrollably. In this instance, it is not uncontrolled, since it is the natural reaction of the reduced steaming rate. SGBD flow was included in the stem to lend support to the SGTR distracter if the candidate does not realize the AEW nump auto start isolated blowdown. 23 MAC name is nowered from										
	a different Group bus, and SGFP flow has been isolated by FWI at 554° Tavg following the trip anyway. The pressure override circuit only affects 2 SGs, in this case 21 and 22, and would be seen equally on each SG, and in the opposite direction since it acts to reduce flow to raise discharge pressure. The 2R15 Condenser Air Ejector would NOT be indicating normal, it would be elevated if there were a SGTR, since following a Rx trip from 100% power there will be demand on the steam Dumps and steam flow would be cocuring to the condenser, which will still be sampled from the R15.										
	Reference Title Facility Reference Number Reference Section Revision										
1 Unit 4160V Bu	ses One Line 203001 31										

Objectives

RCPUMPE016

Question Topic RO 30 Given the following conditions: . - Unit 2 is operating at 100% power. . - 2CC190, RCP THERM BAR CC OUTLET V, fails shut. Which one of the following describes the effect on RCP temperatures, if any, as a result of this failure? ALL RCP a. lower motor bearing temperatures will rise.
Given the following conditions: - Unit 2 is operating at 100% power. - 2CC190, RCP THERM BAR CC OUTLET V, fails shut. Which one of the following describes the effect on RCP temperatures, if any, as a result of this failure? ALL RCP a. lower motor bearing temperatures will rise.
 Unit 2 is operating at 100% power. 2CC190, RCP THERM BAR CC OUTLET V, fails shut. Which one of the following describes the effect on RCP temperatures, if any, as a result of this failure? ALL RCP a. lower motor bearing temperatures will rise.
Which one of the following describes the effect on RCP temperatures, if any, as a result of this failure? ALL RCP a. lower motor bearing temperatures will rise.
ALL RCP a. lower motor bearing temperatures will rise.
a. lower motor bearing temperatures will rise.
a. lower motor bearing temperatures will rise.
b. motor winding temperatures will rise.
c. #1 seal leakoff temperatures will rise.
d, bearing temperatures will remain the same.
Answer d Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/201
KA: 003000K604 K6.04 RO Value; 2.8 SRO Value; 3.1 Section; SYS RO Group; 1 S5.43
System/Evolution Title Reactor Coolant Pump System 003
KA Statement: Knowledge of the of the effect of a loss or malfunction on the following will have on the Reactor Coolant Pump System: Containment isolation valves affecting RCP operation
Explanation of Answers: 55.41(3) The CCW line supplying the RCPs is a single line supplying both bearing cooling and Thermal Barrier cooling. Once the line inside containment splits, the CCW from the Thermal Barriers has its own, separate return line, which is isolated by the 2CC190 (inside containment) and 2CC131 (outside containment.) The Thermal Barrier CCW flow acts to cool reactor coolant flowing upwards through the thermal barrier upon a loss of seal injection flow. With normal seal injection, the loss of CCW to the thermal barrier would not affect any RCP components.
Reference Title Facility Reference Number Reference Section Page No. Revision
Unit 2 Component Cooling 205331-3 35
L.O. Number Objectives RCPUMPE004 Image: Comparison of the second secon
Material Required for Examination
Question Source: Facility Exam Bank Question Modification Method: Direct From Source Used During Training Program
Question Source Comments
Comment

RO SkyScraper SRO Skyscraper RO S	vstem/Evolution List SRO System/Evo	lution List Outline C	hanges							
Question Topic RO 31										
Given the following conditions:										
 Unit 2 is operating at 100% power. VCT level transmitter 2LT-112 fails low. 										
Which of the following identifies how this failur	e affects the CVCS System with NO ope	erator action?								
VCT auto makeup										
a. starts. 2CV35 will modulate to keep actual level VCT level between 77 and 87%.										
b. starts. 2CV35 remains shut until VCT le	evel reaches 87%.									
c. will not initially start. 2CV35 retains its n	nodulation capability.									
d. will not initially start. 2CV35 loses its mo	odulation capability.									
Answer a Exam Level R Cog	nitive Level Application Fa	sility: Salem 1 & 2	ExamDate:	9/26/2011						
KA: 004000K605 K6.05 RO Va	lue: 2.5 SRO Value: 2.5 Section	SYS RO Group:	1 SRO Group	: 1 55.43						
System/Evolution Title Chemical and Volu	me Control System			004						
KA Statement: Knowledge of the of the effect	t of a loss or malfunction on the following	will have on the Chemic	cal and Volume Co	ntrol System:						
Explanation of Answers: 55.41(3,5) The LT-112 inputs "trip open" of CV35 at 87% le remains available. B is incor makeup WILL occur.	to the auto makeup control, and failing l vel. The second VCT level transmitter L rect because the LT114 WILL modulate	ow will initiate an auto ma T-114 provides modulation starting at 77% level. C	akeup. The LT-11: on of CV35 betwee and D are incorre	2 also provides en 77-87% and ct because an auto						
Reference Title	Facility Reference Number	Reference Section	Page No. Revi	sion						
Control Console 2CC2	S2.OP-AR.ZZ-0012		11,12 35							
CVCS Lesson Plan	NOS05CVCS		37,39							
L.O. Number Objectives CVCS00E015										
Material Required for Examination										
Question Source: Facility Exam Bank	Question Modification Method:	ditorially Modified	Used During Tra	ining Program						
Question Source Comments Vision Q45690)									
Comment										

RO S	RO SkyScraper SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes													
Ques	tion Topic	RO 3	32											
Given	Given the following conditions:													
- Un - 21 - 22 - Th	 Unit 2 is operating at 100% power. 21 RHR pump is C/T to repair an oil leak. 22 SG Main Steamline ruptures in containment. The crew trips the Rx, initiates a MSLI, and initiates a Safety Injection. 													
30 m	30 minutes after the Rx was tripped, which of the following locked in alarms would be consistent with plant conditions?													
а.	a. OHA E-5, SR DET VOLT TRBL.													
b.	ОНА С-5.	21 CFC		FLO TF	RBL.									
с.	Console a	alarm RV	NST CH	I III (IV)	LEVELL	.0.								
d.	Console a	alarm CO	CW OUT	FLET FL	LOW LO	for 21 RHR I	HX.							
Angur		Exam	Loval	B	Cognit	ive I evel	Compre	hension	Faci	ity:	Salem 1 & 2	Evam	afe:	9/26/2011
				<u> </u>] [PO Value		Q Value:							1 55.43
Syster	n/Evolutio	o n Title	2.4.40 Resid	dual Hea	at Remov	al System	O value.	<u> 4.2</u> 3e	cuon.	1313	KO Group.	3R0 1	Group.	
KA St	atement.	in the				al oyotom								
		Ability to	o verify	that the	alarms a	re consister	t with the	plant cond	litions.					
Explai Answe	Explanation of Answers: 55.41(7,10) D is correct because the CCW lo flow alarm would be present since the RHR HX CCW flow isolation valve CC16 will be shut, so the CCW lo flow alarm will be locked in, as it normally is. A is incorrect because the SR will energize 20 minutes following a trip. E-5 would be in alarm until the SR energized, then clear. B is incorrect because it indicates the CFCU is running in low speed, which it would be following a SEC signal. C is incorrect because RWST level will not be at 15.2' when the initiating casualty is a single SG blowing down in containment. RHR is a system which provides both RCS cooling and ECCS functions. Knowledge of normal operating conditions (alarm is locked in with the pump O/S) and that the CC16s (cooling to the RHR HX) are normally closed													
e ort		Reference	ce Title	1970-713		Facility	Reference	ce Numbe	r R	eferen	ce Section	Page No.	Revision	
Overh	ead Annun	ciator W	/indow E		<u></u>	S2.OP-AR	ZZ-0005						19	
Contro	oi Console	2CC1				S2.OP-AR	ZZ-0011						57	
İ	<u> </u>					[
L.O. N RHR0	lumber 00E008	ed fór E	xaminal	Objecti	Ves									
Quest	ion Sourc	e: Ne	ew		 	Question M	odificatio	n Method	<u>.</u>			Used Duri	ng Training	Program
Quest	ion Sourc	e Comm	nents		2		<u>18 8 195</u>	<u></u>	<u>w</u>		49-699 4894	<u>18.28* 6 m</u>		
Comn	nent													
													_	

RO S	kyScraper	SRO Sky	scraper	RO Syste	em/Evolution I	.ist SRO S	vstem/	Evolution L	ist Outline	Change	S E		
Ques	tion Topic	RO 33											
Unde	r which of t	he following	g Unit 2 co	nditions wo	uld an autom	atic start of the	stand	by CCW p	ump be expecte	ed?			
а.	a. RWST level reaches 15.2' while during a LOCA.												
b.	b. SW system pumps in service are reduced from 3 to 2.												
c	CCW svs	tem is split	durina ope	erations in t	he EOP netw	/ork							
d.	2RH20, E	YPASS VA	LVE is op	ened to rais	e total RHR	system flow with	h 21 F	HR loop o	perating in Shut	down Co	oling mode).	
Answe	er a	Exam Lev	vel R	Cognit	ive Level	Application		Facility:	Salem 1 & 2	Ex	amDate:		9/26/2011
KA:	05000K10	1 K	1.01	RO Value	3.2 SR	O Value: 3.4	Sect	on: SYS	RO Group	: 1 S	RO Group): 1	55.43
Syster	n/Evolutio	n Title	Residual H	leat Remov	al System	· • •		e					005
KA Sta	atement:	Knowledge CCWS	e of the phy	ysical conne	ections and/o	r cause-effect r	elation	nships betw	veen Residual H	leat Rem	oval Syste	m and t	he following:
Explar	nation of	55.41(7) A	t 15.2' RW	ST level on	Unit 2, the 2	1 and 22CC16	valves	s will auton	natically open in	anticipat	ion of plac	ing the F	RCS on cold
Answe	ers:	reached, th	ne large ne SI signa	(~8,000) gr al would hav	e been rese	t, restoring auto	matic	operation	of the pumps au	to start c	ircuit at 70	psig sys	stem
		CCW flow	would rem	incorrect be	he through the	e CCW HX's a	nd aut	omatic SV	in LOCA-3 occur	nen to m	aintain SM	Lsysten to CLP	1 flow
		performed,	, and does	not add to	system flow	nor reduce syste	em pro	essure. D	is incorrect bec	ause ope	ration of th	e RH20	increases
[13 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1												J
Transf	er to Cold	eq Recircu	litle		Facility	Reference Num	nber	Refere	nce Section	Page	No. Rev	ision	
						<u> </u>				 			
			1		·								
1 O N	umber		668e-22										
CCW	000E008		Objec	tives									
RHR0	00E008												
Materi	al Require	d for Exan	nination										
Quest	ion Sourc	e: New			Question Mo	dification Meth	nod:			Used	During Tra	aining P	rogram
Quest	ion Sourc	e Commen	ts										
A		N			7								
Comn	nent	9449 - 1889 (1999) 944 (1999) - 1999 (1999) 1											
;													

Question Topic RO 34 Given the following conditions: . During a SBLOCA in MODE 1, a Safety Injection signal is actuated successfully. RCS pressure is 2,000 psig and lowering slowly. Which of the following describes how the Safety Injection pumps are prevented from overheating? a. A portion of discharge flow is recirculated back to the RWST. b. Injection flow from the RWST into the RCS passes through the pump. c. Injection flow from the RWST into the RRS passes through the pump. d. A small portion of discharge flow is recirculated to the suction of the pump through a Recirculation Flow HX. Answer a Exam Level R Cognitive Level Application Yestern/Evolution Title Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: Recirculation of minimum flow through pumps Station of Stating Explanation of Stating Stating and return to the RWST and callenge on the RWST and callenge on the RWST. 006 KA Statement: Knowledge of Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: Recirculation of minimum flow through pumps
Given the following conditions: - During a SBLOCA in MODE 1, a Safety Injection signal is actuated successfully. - RCS pressure is 2,000 psig and lowering slowly. Which of the following describes how the Safety Injection pumps are prevented from overheating? a. A portion of discharge flow is recirculated back to the RWST. b. Injection flow from the RWST into the RCS passes through the pump. c. Injection flow from the RWST into the RHR system passes through the pump. d. A small portion of discharge flow is recirculated to the suction of the pump through a Recirculation Flow HX. Answer a Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/ KA: 006000K406 K4.06 RO Value: 3.1 Section: SYS RO Group: 1 5543 System/Evolution Title Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: Recirculation of minimum flow through pumps Explanation of minimum flow through pumps 554 (8) Each SI pump has an orificed 1 1/2" line of its pump discharge piping, which connect into a common 2" line. The common line passes through 2 normally open and deactivated MOVs (SJ67 and SJ68) and return to
During a SBLOCA in MODE 1, a Safety Injection signal is actuated successfully. RCS pressure is 2,000 psig and lowering slowly. Which of the following describes how the Safety Injection pumps are prevented from overheating? a. A portion of discharge flow is recirculated back to the RWST. b. Injection flow from the RWST into the RCS passes through the pump. c. Injection flow from the RWST into the RHR system passes through the pump. d. A small portion of discharge flow is recirculated to the suction of the pump through a Recirculation Flow HX. Answer a Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/ KA: 006000K406 K4.06 RO Value: 2.7; SRO Value: 3.1 Section: SYS RO Group: 1 SRO Group: 1 55.43 System/Evolution Title Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: Recirculation of minimum flow through pumps Explanation of 5.41(8) Each SI pump has an orificed 1 1/2" line off its pump discharge piping, which connect into a common 2" line. The common line passes through 2 normally open and deactivated MOV's (SJ67 and SJ68) and return to the RWST. The flow throug the pump cools it until the shutoff head for the SI pumps ~1560 psig is reaches as RCS pressure lowers during the LOCA. B is
Which of the following describes how the Safety Injection pumps are prevented from overheating? a. A portion of discharge flow is recirculated back to the RWST. b. Injection flow from the RWST into the RCS passes through the pump. c. Injection flow from the RWST into the RHR system passes through the pump. d. A small portion of discharge flow is recirculated to the suction of the pump through a Recirculation Flow HX. Answer a Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/ KA: 006000K406 K4.06 RO Value: 2.7 SRO Value: 3.1 Section: SYS RO Group: 1 55.43 System/Evolution Title Emergency Core Cooling System 006 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: Recirculation of minimum flow through pumps Explanation of Answers: S5.41(8) Each SI pump has an orificed 1 1/2" line off its pump discharge piping, which connect into a common 2" line. The flow through the pump cools it until the shutoff head for the SI pump and deactivated MOVs (SJ.67 and SJ.68) and return to the RWST. The flow through the pump cools it until the shutoff head for the SI pump and deactivated MOVs (SJ.67 and SJ.68) and return to the RWST. The flow through the pump cools it unti
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a. A portion of discharge flow is recirculated back to the RWST. b. Injection flow from the RWST into the RCS passes through the pump. c. Injection flow from the RWST into the RHR system passes through the pump. d. A small portion of discharge flow is recirculated to the suction of the pump through a Recirculation Flow HX. Answer a Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/ KA: 006000K406 K4.06 RO Value: 2.7 SRO Value: 3.1 Section: SYS RO Group: 1 55.43 System/Evolution Title Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: Recirculation of minimum flow through pumps 55.41(8) Each SI pump has an orificed 1 1/2" line off its pump discharge piping, which connect into a common 2" line. The flow through pumps ~1560 psig is reaches as RCS pressure lowers during the LOCA. B is
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Answer a Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/. KA: 006000K406 K4.06 RO Value: 2.7 SRO Value: 3.1 Section: SYS RO Group: 1 S6.43 System/Evolution Title Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: 006 Explanation of 55.41(8) Each SI pump has an orificed 1 1/2" line off its pump discharge piping, which connect into a common 2" line. The common line passes through 2 normally open and deactivated MOVs (SJ67 and SJ68) and return to the RWST. The flow through the pump cools it until the shutoff head for the SI pumps ~1560 psig is reaches as RCS pressure lowers during the LOCA. B is
KA: 006000K406 K4.06 RO Value: 2.7 SRO Value: 3.1 Section: SYS RO Group: 1 SRO Group: 1 55.43 System/Evolution Title Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: 006 Explanation of Answers: 55.41(8) Each SI pump has an orificed 1 1/2" line off its pump discharge piping, which connect into a common 2" line. The common line passes through 2 normally open and deactivated MOVs (SJ67 and SJ68) and return to the RWST. The flow through the pump cools it until the shutoff head for the SI pumps ~1560 psig is reaches as RCS pressure lowers during the LOCA. B is
System/Evolution Title Emergency Core Cooling System 006 KA Statement: Knowledge of Emergency Core Cooling System design feature(s) and or interlock(s) which provide for the following: 006 Recirculation of minimum flow through pumps Recirculation of minimum flow through pumps 006 Explanation of Answers: 55.41(8) Each SI pump has an orificed 1 1/2" line off its pump discharge piping, which connect into a common 2" line. The common line passes through 2 normally open and deactivated MOVs (SJ67 and SJ68) and return to the RWST. The flow through the pump cools it until the shutoff head for the SI pumps ~1560 psig is reaches as RCS pressure lowers during the LOCA. B is
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Incorrect but plausible if the 2,000 psig condition in the stem is ignored, as it is the normal flowpath when RCS pressure lowers to shutoff head of the numps. C is incorrect but plausible if injection flowpath is thought to join the RHR injection flow path, as it is where ECCS accumulators also join RHR system into RCS cold legs. D is incorrect but plausible, since there is no recirculation cooler, but other pumps (specifically AFW) have recirculation coolers. Reference Title
Unit 2 Safety Injection 205334-1 58
ECCS Simplified Drawing 205350-SIMP 4
L.O. Number Objectives ECCS00E008 Objectives Material Required for Examination Image: Comparison of the second
Question Source: New Question Modification Method: Used During Training Program
Question Source Comments
RO S

Quest
Which
a
b.
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RO SkyScra	per	SRO S	kyscraper		RO System	/Evolution L	ist	SRO Syste	m/Evolu	tion Li	st Outline (Chan	qes			
Question To	opic	RO 36) 													
Given the fo	llowing	g condit	ions:													
 Unit 2 is of An intersynthematical endersity Heat Exclosion CCW Control 	operatir /stem I nanger nsole A	ng at 6 leak de : Alarm S	5% power. velops bet SURGE TA	ween NK LE	the CCW EVEL HI-L	system an .O alarms c	d the Spe on 2CC1.	nt Fuel P	ool							
Which of the	e follow	ving de	scribes the	actio	n reguired	I IAW S2.C	P-AR.ZZ	-0011 Co	ntrol Co	nsole	2CC1?					
						•										
a. Open	local v	valves :	2CC145 O	R 2C0	C146, CC	M/U VALV	ES to rest	tore CC s	urge tar	nk leve	el.					
b. Open	2DR1	07, MA	KE UP TO	0 00 8	SURGE TA	ANK from t	he Contro	I Room to	restore	e CC s	surge tank level.					
c. Close	2CC1	49 CC	SURGE T	K VE	NT to prev	ent CCW f	rom being	; introduc	ed into	the ve	entilation system					
d. Drain	the CO	CW sur	ge tank fro	om loc	cal drain va	alve to a 55	i gallon di	rum to pre	event ov	erflov	ving tank to the i	n-ser	vice WH	IUT.		
Answer b	E	Exam L	evel R		Cognitive	e Level	Application	n	Facil	ity:	Salem 1 & 2		ExamD	ate:		9/26/2011
KA: 008000	K408		K4.08	R	O Value:	2.9 SRC) Value:	2.7 Se	ction:	SYS	RO Group:	1	SRO (Group:	1	55.43
System/Evol	ution	Title	Compon	ent Co	ooling Wat	ter System										008
KA Statemer	nt: K	nowled	ge of Com	poner	nt Cooling	Water Sys	tem desig	n feature	(s) and	or inte	erlock(s) which p	rovid	e for the	e followir	ng:	
Evolopation	0	peratio	n of the su	irge ta	ank, includ	ing the ass	iociated v	alves and	control	S	In this case, the	\$ED		ho ot o	lower	
Answers:	th th va	an the ne ques alve. T	CCW syst tion requir he local m	em, s es the anual Actua	o the leak operator valves are	will be OU to know that e normally 4 02 not 4 (T of the C at CCW s aligned with N8Worr	CW syst urge tank ith one of <u>ting is co</u>	em. Th makeu them o	is cau p is pe pen se 4 02	ises surge tank I erformed from th o that remote op and that's what	evel t e cor eratio	o go DC ntrol con on can fi <u>ale plan</u>	OWN. T sole by Il the CO	he se openi CW su	cond part of ng the M/U irge
	Ref	ference	e Title			Facility I	Reference	e Numbe	R	eferei	nce Section	Pa	ge No.	Revisi	on	
Component	Cooling	g Water	r		20	05331-1								52		
Control Cons	ole 2C	C1		_	S	2.OP-AR.Z	Z-0011			_]		57		
										_]				
L.O. Numbe	08 12		Obj	ective	es											
Material Rec	uired	for Ex	amination	Ì.												
Question Sc	ource:	Fac	ility Exam	Bank	Qu	estion Mo	dification	Method	Dir	ect Fr	om Source	Use	ed Durir	ng Train	ing P	rogram
Question Sc	ource C	Comme	ents VIS	ION (250370											
Comment																

RO SkyScraper SRO	Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes
Question Topic RO 3	37
Given the following cond	ditions:
 Unit 2 was operating a Plant conditions devee At 1,100 psig during t and 2PR2, PZR POR The pressurizer POR' the valves. 2PR1 and 2PR2 were RCS pressure is bein SI accumulators. The RCS cooldown of Which of the following d conditions? 	at 75% power. Iop which required a shutdown and depressurization. the depressurization, intermittent loss of shut indication for the 2PR1 RVs, was observed. V block valves 2PR6 and 2PR7 were shut, with power maintained to a placed in manual. Ig maintained at 800 psig due to problems with isolating the continues to below 312°F. Rescribes the effect if the operator were to arm the Pressurizer Overpressure Protection System (POPS) under these
a. 2PR6 and 2PR7	would OPEN; 2PR1 and 2PR2 would OPEN
b. 2PR6 and 2PR7 c. 2PR6 c. 2PR6 and 2PR7 c. 2PR6 c. 2PR	would OPEN; 2PR1 and 2PR2 would remain CLOSED would remain CLOSED; 2PR1 and 2PR2 would OPEN would remain CLOSED; 2PR1 and 2PR2 would remain CLOSED Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/2011 A4.03 RO Value: 3.8 Pressurizer Pressure Control System 010 to manually operate and/or monitor in the control room: 010
KA Statement: Ability PORV	and block valves
Explanation of Answers:	7) With pressure above 375 and temperature < 312, arming POPS would cause the PR1,2,5,6 to open, regardless of the AL selected for PR1 and 2.
Referen	ce Title Facility Reference Number Reference Section Page No. Revision
PR1,2 PZR PORVs	

L.O. Number

Objectives

RO SkyScraper SRO Skyscraper, RO System/Evolution List SRO System/Evolution List Outline Changes
Question Topic RO 38
Given the following conditions:
 Unit 2 is operating at 100% power. I&C Technicians are in the middle of performing PZR Pressure Channel II (two) calibration IAW S2.IC-CC.RCP-0018, 2PT-456 PRESSURIZER PRESSURE PROTECTION CHANNEL II.
What would be the effect on RCS pressure if the controlling PZR pressure channel instrument were to fail LOW, with no operator action?
RCS pressure will
a. rise until ONE PORV opens.
b. lower until the Rx trips on OT / DT.
c. rise until the Rx trips on High PZR Pressure.
d. lower until the Rx trips on Low PZR pressure.
Answer c Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/201
KA: 010000K301 K3.01 RO Value: 3.8 SRO Value: 3.9 Section: SYS RO Group: 1 SRO Group: 1 55.43
System/Evolution Title Pressurizer Pressure Control System 010
KA Statement: Knowledge of the effect that a loss or malfunction of the Pressurizer Pressure Control System will have on the following: RCS
Explanation of Answers: S5.41(7) PZR pressure controller will see a low pressure condition from the failed instrument. This will cause spray values to close fully, and all PZR heaters to energize. C is correct becasue actual RCS pressure will rise in response to the heaters being on, and will continue to rise until reaching the Rx trip setpoint. With Channel II O/S, the automatic function of 2PR2 has been rendered inoperable (Note prior to Step 2.5 of procedure) will be shut, so PR2 cannot control RCS pressure. PORV actuation is on 2/2 channels (1.83 for PR1, 284 for PR2). Since one of the control channels (Lor III) is failed low, its PORV cannot open. A is incorrect.
because neither PORV will act to lower pressure. Sprays will not open due to the minimum demand from the MPC. B is incorrect because pressure would rise, but plausible because OT/DT would actuate first to trip the Rx on lowering pressure. D is incorrect because pressure would rise, but plausible because it is a low pressure trip, and operator would also have to know that OT/DT would act first on lowering pressure.
Reference Title Facility Reference Number Reference Section Page No. Revision

Reference Title	Facility Reference Number	Reference Section	Page No.	Revision
Pressurizer Pressure Malfunction	S2.OP-AB.PZR-0001	Attachment 2	22	18

L.O. Number

Objectives

RO SkyScraper SRO Skyscraper RO Syst	tem/Evolution List Outline Changes
Question Topic RO 39	
For each of the listed PZR heaters, identify their	460V bus power supply.
11 control group	
11 B/U group NORMAL	
11 B/U group EMERGENCY	
12 B/U group NORMAL	
12 B/U group EMERGENCY	
a. E, G, C, E, A.	
b. G, G, C, E, A.	
C. E. E. A. G. C.	
d. G, E, A, G, C.	
Answer b Exam Level R Cognit	tive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2011
KA: 011000K202 K2.02 RO Value	e: 3.1 SRO Value: 3.2 Section: SYS RO Group: 2 SRO Group: 2 55.43
System/Evolution Title Pressurizer Level Cor	ntrol System 011
KA Statement: Knowledge of bus power supplie	es to the following:
PZR heaters	ntain the possible busses, but in incorrect orders
Answers:	main the possible busses, but in incorrect orders.
Reference Title	Facility Reference Number Reference Section Page No. Revision
No. 1 Unit 1GP 480V bus PZR heaters controlle	203347-1 . 13
No 1 Unit Backup Group 11	203348-1 9
No 1 & No 2 Units Group 12/22 backup groups	247992-1 3
L.O. Number	
PZRP&LE005	
Material Required for Examination	
Question Source: Facility Exam Bank	Question Modification Method: Direct From Source Used During Training Program
Question Source Comments 0801 C39	
2	
Comment	

RO SkyScraper	SRO	Skyscraper	RO SV	/stem/Evolu	tion List	SRO System/Ev	olution Lis	Outline	Changes			
Question Topi	ic RO 4	0										
Which of the fo Safety Injection	ollowing id n, followin	entifies wł g a LOCA	ıy a Safety lı ?	njection sig	gnal on Unit 2 i	is reset early i	n the EOP	s after transitions	on out of I	EOP-	TRIP-1, R	x Trip or
SI is reset beca	ause											
a. the Phar criteria f b. it allows 15.2'. c. the Phar d. it allows	se A signa have been s operators se A signa s operators	al must be met, and to regain al must be	reset to allo Phase A car control over reset to allo control over	w the ECC nnot be res plant equi	S pumps suct set until the SI pment and pre g of the SGs a pment and res	ion valves to t signal is rese events any equ nd RCS, and store a sustain	pe realigne Lipment fro Phase A compre	ed from the RV om automatica annot be reset essed air supp	/ST to the lly reposit until the ly to conta	e VCT tioning SI sig	after SI t g when RV gnal is rese	ermination WST reaches et.
nswer d	Exam	Level R	Cogi	nitive Leve	el Memory		acility:	Salem 1 & 2	Ex	amDa	ate:	9/26/201
(A: 012000G4	406	2.4.6	RO Val	lue: 3.7	SRO Value:	4.7 Section	n: SYS	RO Group	1 5	RO G	roup:	1 55.43
vetem/Evoluti	ion Title	Reactor	Protection	System	<u>61.961.2113</u>		in the second s					012
ystern/Lvoluti			1101001011	oystem		,						
A Statement:	Knowle	dae of EO	P mitigation	strategies								
	allow co because which w	ontrol of ai e the rease <u>dil repositi</u>	r operated er on and the P on the S.111	quipment i Phase A res 3 crossove	n containment set logic is inco r valves and the	e Number	g and letd correct be X outlet van	own valves, P2 cause it does r alves automation	ZR PORV not remov	rs, etc	c.) A is wr standing ' are "arm Revision	ong both 'S" signal ed" at nower
Reactor Protect	tion Signa	Safequar	ds actuation	221057							22	i T
oss of Reactor	r Coolant	Bases Dor		2-FOP	I OCA-1		 _		18		28	<u> </u>
							 					Ī
O. Number		Ot	jectives									
Aaterial Requi	red for E	caminatio	n		······································							
Question Sour	ce: Ne	ЭW		Question	n Modification	n Method:			Used I	Durin	g Trainin	g Program
	ce Comm	ients										
Question Sour	Ce Comm	التمسينة										

RO SkyScraper	SRO Skyscra	per RO System	m/Evolution List	RO System/Evo	lution Lis	t Outline C	hanges		
Question Topic	RO 41								
During a power	ascension from	an initial power lev	el of 4%, Permissive F	2-10 does not	actuate	when expected.			
Which of the foll power?	lowing describes	s the effect of this r	malfunction on the Rea	actor Protectio	n Syster	n if the power as	cension wer	e to continue	e to 14% Rx
									1
a. A valid O	T/DT signal wou	Id NOT trip the Rx	•				¥		
							1411		
b. High Stea	am Flow Safety	Injection will remai	n blocked.						
c. The low p	power Rx trips co	ould NOT be block	ed until P-13 energized	d during Main	Turbine	startup.			
d. A Loss of	f Off-Site power	would NOT initially	cause the Reactor Pr	otection Syste	m to trip	the Rx.			
	E		Comparate			Color 1 8 0			0/26/20111
				3.5 Soction					55.43
System/Evolutio	n Title Read	ctor Protection Sys	tem	3.5 Section	<u> 313</u>	KO Group.		310up.	012
KA Statement:	Knowledge of F	Reactor Protection	System design feature	e(s) and or inte	erlock(s)	which provide fo	or the followi	na:	
· · · · · · · · · · · · · · · · · · ·	Automatic or m	anual enable/disa	ble of RPS trips			W			
Explanation of Answers:	55.41(7) C is ir Rx trips (which	are different from	the "low power trips can the "low power" trips) a (which is not actuated	NOT be block are not unbloc	ed until : ked until turbine i	P-10 is actuated P-7 is actuated, s pot opline at 1	. D is correct which gets	t because the tron the tron the tron the tron the tron the tron tron to the tron tron tron to the tron tron tron tron tron tron tron tron	e "at power"
	pumps will hav	e been secured, an	nd while the loss of off	site power wil	Cause a	a loss of the SG	Ps, the SG:	s will not shr	ink to the lo
	unblocked >54	3 (P-12.)	bio.						
	Reference Title		Facility Reference	Number	Referer	ce Section	Page No.	Revision	
RPS logic			221053					8	
RPS logic		<u> </u>	221054					10	
[.	······						
L.O. Number		Objectives							
RXPROTE028									
RXPROTE027									
Material Require	ed for Examina	tion 🖇							
Question Sourc	e: Facility E	xam Bank Q	uestion Modification	Method:	Direct Fro	om Source	Used Duri	ng Training	Program
Question Sourc	e Comments	0801 C41							
Comment									
		<u>» (* , tr , t</u>							

RO SkyS	Scraper	SRO	skyscraper	F	RO System	/Evolution List	SRO System/Ev	olution List Out	line Changes		
Question	n Topic	RO 4	2								
Given the	e followi	ng condi	tions:					48%			
- Unit 1 - Power - 11 SG - 12 SG - ALL A	Rx pow r is being GFP is in GFP is la GFV pun	rer is 8.1 g raised service tched ar nps are a	%. slowly in p supplying Id at idle s aligned for	reparat FW to S peed. normal	tion for rol SGs. Il standby	lling the Main Turl operation.	pine.				
11 SGFP	rtips.										
Which of	f the foll	owing de	scribes th	e effect	t, if any, t	this will have on th	e AFW pumps v	with NO operator ac	tion?		
a. Th	ne MDA	FW pum	ps and the	TDAF	W pump \	will start when SG	levels drop to th	ne lo lo level setpoir	it.		
b. Th	ne MDA	FW pum	ps will star	rt when	11 SGFP	P trips. The TDAF	W pump will star	t when SG levels lo	wer following the	Rx trip.	
c. AL SC	LL AFW GFP.	pumps	vill remain	in stan	ndby. Suf	fficient steam will	be supplied throu	ugh the 11-14MS18	S, MS STOP BYP	VALVES to supp	bly 12
d. AL He	LL AFW eating S	pumps team Sy	vill remain stem.	in stan	ndby. 12 :	SGFP will remain	in service since	at this power level i	t is being supplied	d with steam from	the
Answer	а	Exam I	evel R		Cognitive	e Level Applic	ation Fa	cility: Salem 1 8	2 Exam	Date:	9/26/2011
KA: 0130	000A10	4	A1.04	RC	D Value:	3.4 SRO Value	3.6 Section	n: SYS RO Gr	oup: 1 SRO	Group: 1	55.43
System/E	volutio	n Title	Enginee	red Saf	fety Featu	ures Actuation Sys	stem				013
KA Staten	ment:	Ability to controls	predict an including:	nd/or m	nonitor cha	anges in paramet	ers associated w	ith operating the En	gineered Safety I	eatures Actuation	n System
Explanati Answers:		55.41(4, step 5.4 operator the sour an oper MDAFW	7,8)D is in .10), and action so ce of FW ating_SGE / pumps is	icorrect 12 SGF speed is lost, a P at 8% a trip c	t because P will not will not be and the S <u>6 power</u> h of BOTH S	the operating SG provide sufficient e raised. A is co GS continue to sto out the speed will. SGFPs.	FP(s) will be pla discharge press rrrect because th eam. C is incor not rise on 12 SC	ced on Main steam sure at 1100 rpm (id le MDAFW pumps a rect because the Ma GEP B is incorrect	supply prior to ex le speed), and the and TDAFW will s S18s could provid because the auto	ceeding 5% powe stem states with tart on Io Io level le sufficient steam start signal for the	r (IOP-3, i no in SGs as i flow to pe
	F	Referenc	e Title			Facility Referen	nce Number	Reference Section	n Page No.	Revision	
RPS AFW	V Pump	s Start U	p		22	21064		1		8	
L.O. Num AFW000E	iber §		Ob	jective	S						
Material F	Require	d for Ex	amination	<u> </u>							
Question	Source	e: Fa	cility Exam	Bank	Que	estion Modificati	on Method:	Editorially Modified	Used Dur	ing Training Pro	gram
Question	Source	e Comm	ents Vis rer	ion Q8 nains th	85462. Mo he same.	odified stem from Enhanced distrac	MSLI to trip of op	perating SGFP with	other SGFP latch	ed. Correct answ	ver
	t										

RO SkyScraper	SRO SI	kyscraper	RO Syste	em/Evolution	List SRO Syste	m/Evolution Lis	t Outline C	hanges		
Question Topic	RO 43									
Given the follow	ing conditi	ions:								
 Unit 2 is oper A RCS leak c The operating When the SI 	ating at 4% auses PZI g crew initiated	% power duri R pressure a ates a Rx trip , a loss of off	ng a startu Ind level to p and Safe f-site powe	p. lower rapid ty Injection. r occurs.	ly.					
One minute afte expected, if no f	r the loss urther ope	of off-site por erator action i	wer, which is taken?	of the follow	wing describes a cor	dition which i	ndicates a failure	of equipme	nt to actua	te as
a. NO CCW	pumps ar	re running.								
b. 24 SW pt	ump runnir	ng and 23 SV	N pump sto	opped.						
c. Charging	Systems	SI Flowmete	r reads 100) gpm.						
d. 21 ABV S	Supply Far	n running, 22	2 ABV Sup	ply Fan NO	T running.					
Answer c	Exam L	evel R	Cognit	ive Level	Comprehension	Facility:	Salem 1 & 2	Exam	ate:	9/26/2011
KA: 013000A40)1	A4.01	RO Value	4.5 S R	O Value: 4.8 Se	ction: SYS	RO Group:	1 SRO	Group:	1 55.43
System/Evolution	on Title	Engineered	Safety Fea	atures Actua	ation System					013
KA Statement:	Ability to ESFAS-in	manually op nitiated equip	erate and/coment whic	or monitor in th fails to ac	the control room:					
Explanation of Answers:	55.41(7) on B 4KV locked ou flowmete flow throu did not st A shows	CCW pump / bus, and or ut, and is what is BIT flow. ugh the BIT w troke full ope Accident Loa	s are not sindy one pun at causes t 2 centrifu would be sind ads and Bla	tarted during np per bus i he B bus se gal charging gnificantly h han 2 charg ackout load	g MODE III (Acciden s started. 23 receive quence not complet g pumps should have ligher _ Either there if ing pumps started. s respectively.	t plus Blackon s power from e to occur on started, and s a problem w TRIP-1 page	ut). 24 SW pump B bus also. 22 / every SI initiation even if RCS pre- ath the flownath 1, and TRIP-2 p	b is designat ABV Supply n. The Char ssure were r <u>i.e. S.112 an</u> age 2 flowch	ed as the l Fan is adm ging system formal, wh <u>d.S.I13 Bl</u> narts, page	Lead SW pump ininistratively ns SI ich its not, the <u>Foutlet valves</u> 1, each Table
	Reference	Title		Facility	Reference Numbe	Referen	nce Section	Page No.	Revision)
Rx Trip or Safety	/ Injection			2-EOP-TR	IP-1			F1	27	
Rx Trip Respons	e			2-EOP-TR	IP-2			F1	27	-
]		
L.O. Number SEC000E004		Objec	tives							
Material Require	ed for Exa	amination 😪								
Question Sourc	e: Nev	N		Question M	odification Method			Used Duri	ng Trainin	g Program
Question Sourc	e Comme	ents						,		
Comment										

RO SkyScraper	SRO Skyscraper RO	System/Evolution List SRO Sys	stem/Evolution List Out	tline Changes	J
Question Topic	RO 44				
Given the followin	g conditions:				
 Salem Unit 1 is A small LOCA A loss of off-sit NONE of the C 	operating at 100% power. (300 gpm) occurs, and a Rx e power occurs when the M FCUs start in Low Speed.	trip and Safety Injection are initia ain Turbine trips.	ted.		
How will the failur	e of the CFCUs affect conta	inment instrumentation readings?			
Containment	will be reading	than it would be ex	pected to read with all CF	CUs in service	
a. Pressure;	lower.				
b. Radiation;	higher.				
c. Dew Point;	lower.				
d. CFCU Lea	k Detection; higher.				
Answer b	Exam Lovel P. Co		Facility: Salem 1 8	2 Exan	nDate:9/26/2011
KA: 022000K302	K3.02 RO V	alue: 3.0 SRO Value: 3.3 S	Section: SYS RO Gr	roup: 1 SRC	D Group: 1 55.43
System/Evolution	Title Containment Cool	ing System			022
KA Statement:	Knowledge of the effect that	a loss or malfunction of the Conta	inment Cooling System w	ill have on the fo	ollowing:
	Containment instrumentation	n readings			
Answers:	particulate matter from the a ack of cooling function prov higher temperature in contai coils during an accident, not	tmosphere so that offsite doses d ded by the CFCU will cause the p nment. D is incorrect because the lower	o not exceed the limits set ressure to rise. C is incor e leak detection system wi	t by 10CFR100. rect because the Ill rise as conden	A is incorrect because the Dew Point will rise due to isation occurs on its cooling
R	eference Title	Facility Reference Num	Reference Section	Page No	o. Revision
Containment and	Support Lesson Plan				
Containment Vent	lation Operation	S2.OP-SO.CBV-0001			32
L.O. Number	Objectives				
Material Required	I for Examination				
Question Source	New	Question Modification Metho	od:	Used Du	uring Training Program
Question Source	Comments				
Comment					
		<u>。 1999</u> - (1997 - 19	<u>/////////////////////////////////////</u>		

RO SkyScraper	SRO Skyscraper RO Sys	tem/Evolution List SRO System/Evo	olution List Outline C	hanges	
Question Topic	RO 45				
Given the following	g conditions:				
 Unit 1 has experience Control room of Containment pr 	erienced a LOCA. perators have progressed to th ressure was 4.5 psig when the	e point where the SEC has been rese SECs were reset.	t.		
Which of the follow accident?	wing describes the containmen	t spray system response should a hi-ł	ni containment pressure s	ignal be gene	erated at this point in the
a. would realig	gn for spray, the CS pumps wo	uld be started by the SEC.		11	
b. would reali	on for spray, the CS pumps wo	uld have to be manually started.			
<u>د</u>					
c. must be ma	anually realigned for spray, the	CS pumps would be started by the S	EC.		
d. must be ma	anually realigned for spray, the	CS pumps would have to be manual	y started.		
Answer b	Exam Level R Cogni	tive Level Application Fa	cility: Salem 1 & 2	ExamDa	ate: 9/26/2011
KA: 026000A301	A3.01 RO Valu	e: 4.3 SRO Value: 4.5 Section	: SYS RO Group:	1 SRO G	iroup: 1 55.43
System/Evolution	Title Containment Spray S	ystem	<u>المن من م</u>		026
KA Statement:	Ability to monitor automatic ope	rations of the Containment Sprav Svs	tem includina:		
F	Pump starts and correct MOV p	ositioning			
Explanation of 5 Answers:	55.41(7) The SEC controller op controls the CS pumps, not the SEC is reset it will not start the	erates the CS pumps at 2 different po CS valves. The valves realign on the CS pumps since the sequencer is no	int in the sequence UNTII hi-hi cont pressure signa longer active.	L the SEC is n I whenever it	reset. The SEC ONLY is received, but once the
Re	eference Title	Facility Reference Number	Reference Section	Page No.	Revision
RPS Safeguards A	Actuation Signal	221057			22
Safeguards Emerg	ency Loading Sequence	203668			6
SEC Lesson Plan	(CS pump start seq explanati	NOS05-SEC000		17	6
L.O. Number CSPRAYE008 CSPRAYE009	Objectives				
Material Required	for Examination				
Question Source:	Facility Exam Bank	Question Modification Method:	Direct From Source	Used Durin	g Training Program
Question Source	Comments VISION Q80567			<u>6</u>	
Comment					
······					

RO S	ikyScraper	SRO Skyscraper	RO System/Evolution List	SRO System/Evolution List Out	line Changes
Ques	tion Topic	RO 46			
Which	n of the follo	owing identifies the co	incidence required for manual C	ontainment Spray actuation?	
a. b.	1/2 keysw 2/2 keysw 1/2 keysw	itches on BOTH safe itches on BOTH safe itches on EITHER sa	guards trains. guards trains. feguards train.		
d.	2/2 keysw	itches on EITHER sa	feguards train.		
Answe	er d	Exam Level R	Cognitive Level Memory	Facility: Salem 1 &	2 ExamDate: 9/26/2011
KA:	26000A40	1A4.01	RO Value: 4.5 SRO Value:	4.3 Section: SYS RO Gr	oup: 1 SRO Group: 1 55.43
Syster	n/Evolutio	n Title Containme	nt Spray System		026
KA Sta	atement:	Ability to manually op	perate and/or monitor in the contro	bl room:	
Explar Answe	nation of ers:	55.41(7) Salem has t keyswitches turned s would occur if it were keyswitches on EITH Reference Title	wo safeguards trains, either of wi imultaneously to the operate posi inadvertently actuated without it ER train. Facility Reference	hich performs its safety related fun- tion to activate containment spray, being required. Either train of safe Reference Section	ction. Containment Spray requires 2/2 , due to the severe consequences which eguards will perform actuation. 2/2
RPS S	afeguards	Actuation Signal	221057		22
L.O. N CSPR	umber AYE008	Objec	tives		
Materi	al Require	d for Examination			
Quest	ion Source	Facility Exam B	ank Question Modification	n Method: Concept Used	Used During Training Program
Quest	ion Source	Comments	IN 61822 concept used.		
Comm	hent				

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO System	Evolution List Outline	Changes	
Question Topic	RO 47				
Of the following Spent Fuel Poo	, which one describes ?	how the Spent Fuel Pool level will be lowered	if required, IAW S1.OP-S	O.SF-0001, Fill and Trans	fer of the
-					
a Gravity d	rained to the RWST				
b. Pumped	with Spent Fuel Pool	Cooling pump to RWST.			
c. Pumped	with Refueling Water	Purification pump to in service CVCS HUT.			
d Drained	via the Spent Fuel Po	ol Skimmer loop to the Drain Header to the in			
Answer b	Exam Level R	Cognitive Level Memory	Facility: Salem 1 & 2	ExamDate:	9/26/2011
KA: 033000K10	05 K1.05	RO Value: 2.7* SRO Value: 2.8* Sect	ion: SYS RO Group	2 SRO Group:	2 55.43
System/Evolutio	on Title Spent Fue	el Pool Cooling System			033
KA Statement:	Knowledge of the pr RWST	nysical connections and/or cause-effect relation	nships between Spent Fue	I Pool Cooling System and	d the following:
Explanation of Answers:	55.41(8,13,4) The R gravity drain TO the RWST is done by m the RWST. The oth	WST normal level is ~41'. The puts the water RWST, although it will work coming FROM th anipulating valves within the SFP Cooling syster re method is to drain it to the CVCS HUT. The	level at 141'. The Spent F e RWST to the SFP. Trans tem, and pumping the wate Refueling Water Purificati	Fuel Pool is ~128'. There sferring water from the SF er with the Spent Fuel Poo on pump cannot take a su	can be no P to the I pumps to uction on the
	performed by proce	tem, but it could physically discharge to the SF dure, and it would drain to the Fuel Handling B	P system Draining via th ldg sump, not the CVCS H	<u>e SEP Skimmer Loop can</u> IUT.	not he
	Reference Title	Eacility Deference Number	Peference Section	Page No Povision	
Fill and Transfer	of the Spent Fuel Po	ol S1.0P-S0.SF-0001			
Unit 1 Spent Fue	el Cooling	205223		26	
Tank Capacity D	ata	S1.OP-TM.ZZ-0002			
L.O. Number					
SFP000E010		ctives			
Material Require	ed for Examination				
Question Sourc	e: New	Question Modification Method:		Used During Training	Program
Question Sourc	e Comments				
Comment					
9.112-14 N					

RO S	kyScraper	SRO	Skyscraper	RO Syst	em/Evolution	List	SRO Syste	m/Evolutic	on List	Outline C	hange	s		
Quest	ion Topic	RO 4	8						_		-			
Unit 2	is perform	ning a pla	ant startup to f	full power.										
Predic	t the Stea	m Gener	ator Narrow F	Range Leve	els for the fo	llowing RE	ACTOR p	ower leve	els.					
Assun	ne a norm	al power	ascension.											
10% F	REACTOR	Power =	=% NR I	evel.										
60% F	REACTOR	Power =	= % NR I	evel.										
1														
a.	38.5%.	46%.												
b.	38.5%.	44%.												
C.	33%.	46%.												
d.	33%. 4	4%.							<u></u>					
Answe	er d	Exam	Level	Cognit	ive Level	Memory		Facilit	y : S	alem 1 & 2	Ex	amDate:		9/26/2011
KA: 0	35000A10	1	A1.01	RO Value	a: 3.6 SF	RO Value:	3.8 Se	ction:	SYS	RO Group:	2 8	RO Grou	p: 2	55.43
Systen	n/Evolutio	on Title	Steam Gen	erator Sys	tem									035
KA Sta	tement:	Ability to	predict and/	or monitor	changes in	parameter	s associat	ed with o	peratir	ng the Steam G	Senerato	or System	control	s including:
Explan Answe	nation of ers:	55.41(4) 44%. O based o HDPs p) SG NR level on Unit 1 only, on RX power, i ut in service a	is program 20-100 it r not Turbine at 50% pow	nmed so tha ises from 44 power, and /er.	at as Turbir 4-48. On U 4 uses Unit	ne power r Jnit 2. A i t 1 ramp fr	ises from s incorrec om 20-10	0-209 ct but)0 (cal	% (Turbine stea plausible if can culated at 60%	amline ir didate ti power.	nlet press hinks prog turb pow	ure) it ri gramme er =Rx	ses from 33- d level is power after
		Referenc	e Title		Facility	Referenc	e Numbe	r Ref	ferenc	e Section	Page	No. Re	vision	
Main F	eedwater/	Condens	ate System A	bnormalit	S1.OP-AB.	.CN-0001					21	18	1	
Main F	eedwater/	Condens	ate System A	bnormalit	S2.OP-AB.	.CN-0001					21	26	1	
L.O. N STMG ADFW	umber ENE007 CSE015		Objec	tives										
Materi	al Require	ed for Ex	amination											
Questi	ion Sourc	e: Ne	W		Question M	odificatio	n Method				Used	During T	aining	Program
Questi	ion Sourc	e Comm	ents											
Comm	ient .								,					

RO SkyScraper	SRO Skyscraper RO Sv	stem/Evolution List SRO System/Evolution List	Outline Changes
Question Topic	RO 49		
Given the follow	ing conditions:		
- Unit 2 is oper - 24MS167, Ma	ating at 50% power. ain Steam Isolation Valve Fast (Close PB is depressed on the control console.	
Which of the fol	lowing describes SG pressures	5 minutes after the PB is depressed with NO oth	er operator action?
Main Steamline	Pressure in 21-23 loops is		
		/	
a. lower bec	cause of the increased steam flo	ow from 21-23 SGs ONLY.	
b. higher be	cause Hi Steamline Flow Safet	y Injection signal has occurred.	
c. higher be	cause a Steamline Delta Press	ure Safety Injection signal has occurred.	
d. lower bec	cause of the increased steam flo	ow from 21-23 SGs AND the steam flow from 241	MS10.
Answer a	Exam Level R Cogn	itive Level Comprehension Facility: S	alem 1 & 2 ExamDate: 9/26/2011
KA: 039000A10	6 A1.06 RO Val	ie: 3.0 SRO Value: 3.1 Section: SYS	RO Group: 1 SRO Group: 1 55.43
System/Evolution	Main and Reheat St	eam System	039
KA Statement:	Ability to predict and/or monito including:	r changes in parameters associated with operati	ng the Main and Reheat Steam System controls
Explanation of Answers:	55.41(5) The closure of the 24 from 24 loop, and the increase maintain first stage pressure of Steamline flow SI would not or pressure (600 nsig) or Lo Io T	MS167 will cause its pressure to rise. The 3 oth d steam flow from each loop will lower steam he optant. The steamline D/P SI signal is on one of the because even if the high steamline FLOW where (543) neither of which would be present	aer loops will have to make up for the loss of flow ader pressure as the MT governer valves open to SG LOWER tha all the others not higher. The High ere present, it is coincident with LOW steam
	Reference Title	Facílity Reference Number Reference	Page No. Revision
L.O. Number MSTEAME015	Objectives	Q#49 deleted. Ar	11/4/11
Question Sour	e. New	Question Modification Method:	Used During Training Program
Question Source	e Comments		
Latelatelatelatelae merch			
Comment			
	····		

RO S	kyScraper	SRO	Skyscraper	RO Syste	m/Evolution	List	SRO System/Ev	olution List	Outline C	hanges		
Quest	tion Topic	RO 50	0									
Given	the followi	ng condi	tion:									Ī
- Uni plar	it 2 is prepa nt heatup.	aring to c	open the 21-2	24MS167s,	Main Stea	m Isolation	Valves during	а				
Which Rehea	n of the foll at, Turbine	owing ide Bypass	entifies why t Steam Warn	the 21-24MS nup?	57s, SG DF	RAIN VALVE	ES are opened	d before op	ening the MS1	67s IAW S2	.OP-SO.MS-0	001, Main,
1												
a.	Ensures a	vacuum	n pathway to	the Main Co	ondenser is	available fr	ee of potentia	al loop seal	S.			
b.	Removes	any coll	ected corros	ion products	or impuriti	es to ensur	e Main Turbin	e blading i	s not impinged.			1
c.	Preheats	suscepti	ble compone	ents such as	steam trap	os prior to e	xposing them	to full syst	em temperature	e.		
d.	Prevents	pressuriz	zed steam fro	om forcing re	esidual wat	er in the pip	bing to cause	water ham	mer on downstr	eam compo	nents.	
Answe	d	Exam	Level	Cogniti	ive Level	Memory	F	acility:	Salem 1 & 2	Exam	Date:	9/26/2011
KA: 0	39000K50	1	K5.01	RO Value	2.9 S	RO Value:	3.1 Sectio	n: SYS	RO Group:	1 SRO	Group: 1	55.43
System	n/Evolutio	n Title	Main and	Reheat Stea	m System							039
KA Sta	atement:	Knowled	dge of the op	erational im	plications	of the follow	ing concepts	as they ap	oly to the Main a	and Reheat	Steam Syster	n: [
		Definitio	n and cause	s of steam/v	vater hamr	ner	0.50/		10/-1			
Answe	ers:	during c incorrect shut. B	to oldown wor to because the is incorrect	uld be transp le vacuum p because whi v steam line	orted dow ath would l ile it remov	nstream, who be from the re anything i ed, and wou	nere it would in condenser ba n the condens uld be cold wa	mpact inner ck through sed steam	turbine control in the piping, it rm/hot	and stop va is not the re	lades if not re lves which wo ason why. C	moved. A is build be is incorrect
		Referenc	e Title	2720 D I	Facilit	y Referenc	e Number	Referen	ce Section	Page No.	Revision	
Main,	Reheat, Tu	rbine by	pass Steam	Warmup.	S2.OP-SC	D.MS-0001	<u></u>			14	22	
L.O. N MSTE WATH	AME013		Obje	ctives								
Materi	ial Require	d for Ex	amination	<u></u>			un television			· · · · · · · · · · · · · · · · · · ·]
Quest	ion Sourc	e: Ne	W		Question N	lodification	n Method:			Used Duri	ng Training I	Program
Quest	tion Sourc	e Comm	ents									
Comm	nent											
I												

SRO Skyscraper	RO System/Evolution List SRO System/Evolution	stem/Evolution List Outline 0	Changes	
RO 51				
ng conditions:	ann an Anna an		\sim	the
ating at 100% power)umps are in MS Pre n Turbine Steamline	ssure Control - AUTO, set at 1005 psig. Inlet Pressure Channel, fails LOW.	(As ope	sume no trator action	
owing identifies how	the Main Steam Dumps will respond to the	is failure prior to any Reactor Pr	otection System response?	
np valves will]
iut throughout the ev	ent.			
pen and then modul	ate in the closed direction in response to lo	owering Tavg.		
pen and remain ope	n until they automatically shut when Tavg	lowers to 543 °F		
main shut, then mod	ulate open as steam pressure rises from t	he load reduction.		
Exam Level R	Cognitive Level Application	Facility: Salem 1 & 2	ExamDate:	9/26/2011
3 K6.03	RO Value: 2.7 SRO Value: 2.9	Section: SYS RO Group:	2 SRO Group: 2 5	5.43
n Title Steam Du	Imp System and Turbine Bypass Control			041
Knowledge of the of Control:	the effect of a loss or malfunction on the	following will have on the Steam	Dump System and Turbine B	ypass
different steam pres the steam dumps w However, when PT- correspondingly, se	sure detector (PT-507, Steam Header Pre- ill remain closed. 100% power steam pres 505 fails low, this causes automatic rod in condary side steam pressure.	essure, not PT-505 Steamline In ssure is ~ 800 psig, and it would sertion at maximum rate, which	let Pressure) rises above 1005 rise as a load reduction occur will lower RCS temperature, a	psig, red.
Reference Title	Facility Reference Num	ber Reference Section	Page No. Revision	
Management (1997)				
Cbje	ctives			
Obje	ctives]
Obje	Ctives	>d:	Used During Training Prog	ram
Obje	ctives	od:	Used During Training Prog	ram
	RO 51 ng conditions: ating at 100% power. numps are in MS Prent Turbine Steamline bwing identifies how np valves will ut throughout the event throughout throughout the event throughout throughout the event throughout thro	RO 51 ang conditions: ating at 100% power. humps are in MS Pressure Control - AUTO, set at 1005 psig. n Turbine Steamline Inlet Pressure Channel, fails LOW. powing identifies how the Main Steam Dumps will respond to the np valves will ut throughout the event. pen and then modulate in the closed direction in response to lead the nodulate open as steam pressure rises from the pen and remain open until they automatically shut when Tavg main shut, then modulate open as steam pressure rises from the Steam Dump System and Turbine Bypass Control K6.03 RO Value: 2.7 SRO Value: 2.9 1 n Title Steam Dump System and Turbine Bypass Control Knowledge of the of the effect of a loss or malfunction on the Control: Controller and positioners, including ICS, S/G, CRDS 55.41(5,6.7) When the Main Steam Dumps are placed in MS respond to a deviation from its setpoint, which in the stern is set different steam pressure detector (PT-507, Steam Header Pressure detector (PT-507, Steam dumps will remain closed. 100% power steam pressure. Reference Title Facility Reference Numinp Control Q	RO 51 ing conditions: atting at 100% power. inumps are in MS Pressure Control - AUTO, set at 1005 psig. in Turbine Steamline Inlet Pressure Channel, fails LOW. powing identifies how the Main Steam Dumps will respond to this failure prior to any Reactor Pr inp valves will ut throughout the event. pen and then modulate in the closed direction in response to lowering Tavg. pen and remain open until they automatically shut when Tavg lowers to 543 °F main shut, then modulate open as steam pressure rises from the load reduction. Exam Level R Cognitive Level Application Facility: Salem 1 & 2 3 K6.03 RO Value: 2.9 Section: SYS RO Group: n Title Steam Dump System and Turbine Bypass Control Knowledge of the of the effect of a loss or malfunction on the following will have on the Steam Control: Control Control in the steam pressure detector (PT-507, Steam Header Pressure, not PT-505 Steamline In the steam dumps will remain closed. 100% power steam pressure is ~ 800 psig, and it would However, when PT-505 fails low, thic rauses automatic rod insertion at maximum rate, which correspondingly, secondary side steam pressure.	RO 51 ng conditions: tring at 100% power. umps are in MS Pressure Control - AUTO, set at 1005 psig. n Turbine Steamline Inlet Pressure Channel, fails LOW. owing identifies how the Main Steam Dumps will respond to this failure prior to any Reactor Protection System response? np valves will ut throughout the event. pen and then modulate in the closed direction in response to lowering Tavg. pen and then modulate open as steam pressure rises from the load reduction. Exam Level R Cognitive Level Application Facility: Salem 1 & 2 is K6.03 RO Value: 2.9 Sa K6.03 RO Value: 2.9 Stam Level Stam Dump System and Turbine Bypass Control Imple Steam Dump System and Turbine Bypass Control Knowledge of the of the effect of a loss or malfunction on the following will have on the Steam Dump System and Turbine Bypass Control Imple Steam Pressure as eas eas the pressure is a 1005 psig. That is, util Steam Pressure as eas eas the optic. Statio: 1.00% power steam pressure techtor /F1-505. Steam Header Pressure, not P1-505. Steam Flate Pressure, not p1-505. Steam Pressure is a 800 psig. That is, util Steam Pressure as eas eas dout reduction occur howere with remain closed. Controli: 1.00% power steam pressure

RO SkyScraper SRO Skyscraper RO Sys	stem/Evolution List SRO System/Evolution List Outline Chan	ges
Question Topic RO 52		
Given the following condition:		
 Unit 2 is performing actions to prepare the Ma Main Steam header is currently depressurized 	ain Turbine for operation. d.	
Which of the following actions, if performed whe	en directed IAW the appropriate procedure, would cause all the Main	a Turbine Stop Valves to open?
 a. The NCO selects LATCH at the TURBINIE b. The NCO selects TRIP RESET at the TU c. The NEO at the Front Standard places the d. The NEO at the Front Standard places the Answer a Exam Level R Cogn KA: 045000A406 A4.06 RO Value 	E PROTECTION Bezel. JRBINE E-H CONTROL & STATUS panel. The RESET-NORMAL-TRIP lever in the RESET position. The Vacuum Trip Latch Handle in the LATCHED (up) position.	ExamDate: 9/26/2011
System/Evolution Title Main Turbine Genera	ator System	045
KA Statement: Ability to manually operate and	i/or monitor in the control room:	1
Explanation of Answers: 55.41(4,10) The actions are all Intentionally left procedure out performed. With all other cond MS28 stop valves. If the steam	I contained in the Turbine Latching procedure, S2.OP-SO.TRB-0003 of stem as it was too leading. All the actions are contained in the pr ditions being performed, depressing the latched PB with the steam h m header were pressurized, it would not open the valves.	, Main Turbine Latching. rocedure, and are required to be leader depressurized will open the
Reference Title	Facility Reference Number Reference Section Pa	ige No. Revision
Main Turbine Latching	S2.OP-SO.TRB-0003	
	۱ <u> </u>]
L.O. Number MNTURBE008 Dbjectives		
Material Required for Examination		
Question Source: New Question Source Comments	Question Modification Method:	ed During Training Program
Comment		

RO SkyScraper	SRO Skyscraper RO Sy	stem/Evolution List SRO S	vstem/Evolution List Out	line Changes	
Question Topic	RO 53				
Given the follow	ing conditions:		**************************************		
 Unit 2 is oper Power was re 21 Condensa The Condens 	ating at 80% power, steady stat duced 2 days ago when 21 Cor te Pump remains O/S. ate Polisher is in service with fu	e. Idensate Pump tripped. Il flow.			
Which of the foll 0001, Main Feed	lowing identifies the initial conce dwater/Condensate System Abr	rn if 22 Condensate Pump we ormality, in response to that	ere to trip, and the action whi concern?	ch would be performed IAW	S2.OP-AB.CN-
a. Lowering	SG NR level. Open 21-23CN10	8 Polisher Bypass Valves.	·		
b. Lowering	SGFP suction pressure. Open	21-23CN108 Polisher Bypass	S Valves.		
d. Lowering	SGFP suction pressure. Initiat	e rapid load reduction at up to	15% / min to <30% power.		
Answer b	Exam Level R Cogn	itive Level Memory	Facility: Salem 1 &	2 ExamDate:	9/26/2011
KA: 056000A20	4 A2.04 RO Val	Ie: 2.6 SRO Value: 2.8*	Section: SYS RO Gr	oup: 1 SRO Group:	1 55.43
System/Evolution	on Title Condensate System				056
KA Statement:	Ability to (a) predict the impact correct, control, or mitigate the Loss of condensate pumps	s of the following on the Cond consequences of those abno	ensate System and (b) base rmal operation:	d on those predictions, use p	rocedures to
Explanation of Answers:	55.41(4,10)The limit per AB.Cl above, the power limitation is 3 and the BF19s will open, which the HP heater strings are bypa <30% not 49% which is the li	N for 2 cond pump and 3 HDP 80%. SGFP suction pressure a will tend to restore level but a ssed in an effort to restore su mit for tripping the MT vs_bay	's in service is 85%power. V will rapidly lower. SG NR lev degrade SGFP suction press ction pressure. A load reduc ing to trip the Rx, and at up to	When the second pump trips vels will lower, but the SGFP sure more. The polisher is by tion will be performed, but it to 5% per minute not 15%	as in the stem will speed up bassed, then will be to
	Reference Title	Facility Reference Nur	nber Reference Sectio	n Page No. Revision	
Main Feedwater/	Condensate system Abnormalit	S2.OP-AB.CN-0001		10 26	
					Ī
L.O. Number ABCN01E004	Objectives				
		O			Disaria I
Question Source	e Comments				
Comment					

RO SkyScraper	SRO Skyscraper RO Syste	em/Evolution List SRO System/Ev	olution List Outline C	hanges	
Question Topic	RO 54				
Given the follow	ing conditions:				
 Unit 1 is open Both SGFPs 11BF19 fails 11BF19 cann Which of the foll 11 SG NR level 	ating at 40% power during a power are in service. shut with valve demand remaining ot be opened from the control roc owing describes how 11 SG NR I will The crew will	er ascension. g normal. om. level will be affected, and what action 	n should the control room	crew take?	
a. lower. Re	educe power IAW OHA G-15 ADF	FCS TROUBLE to establish feed der	mand within the capacity o	f 11BF40. ailable on op	eration of 11BF40.
c. lower. Tr >16%. d. remain w 0% to en:	ip the Rx IAW S1.OP-AB.CN-000 ithin 5% of program. Lower 11B sure malfunction cannot reopen v	01 Main Feedwater/Condensate Syst	tem Abnormality based on CN-0001, Main Feedwater/	inability to n Condensate	naintain 11 SG NR level
Answer C	Exam Level R Cognit	ive Level Application Fa	acility: Salem 1 & 2	ExamD	9/26/2011
KA: 059000A21	2 A2.12 RO Value	a: 3.1* SRO Value: 3.4* Sectio	n: SYS RO Group:	1 SRO (Group: 1 55.43
System/Evolutio	Main Feedwater Syste	em			059
KA Statement:	Ability to (a) predict the impacts to correct, control, or mitigate th Failure of feedwater regulating v	of the following on the Main Feedwa e consequences of those abnormal ralves	ter System and (b) based operation:	on those pre	edictions, use procedures
Explanation of Answers:	55.41(5,7,10) The valve trim for remains shut. From 7-8% powe is well beyond the capacity of th lower power to within the capaci ADECS trouble alarm <u>A is plau</u> 8% to prevent a Rx trip setpoint	the BF19 and BF40 show that from r, the BF19 opens from 0-1.8% with e BF40 to maintain programmed SG ty of the BF40, and there is no direct sible because it has the right effect from being reached. B is incorrect b	0-7% power, the BF40 op the BF40 opening fully. V i NR level in that loop. Ins tion to do so in either the A but there is insufficient tim but plausible if candidate th	ens from 0-7 Vith the sterr ufficient time ARP for prog the to perform hinks the BF	70% while the BF19 indicating 40% power, it e would be available to ram deviation of the a power reduction to 7- 40 has sufficient capability
	to maintain SG NR level at 40% faulted valve is prudent, but is n	steam demand. D is incorrect but p ot directed to be perfored, as well as	a incorrect SG NR level tre	the demand end.	signal to an already
	Reference Title	Facility Reference Number	Reference Section	Page No.	Revision
Main Feedwater/	Condensate system Abnormalit	S1.OP-AB.CN-0001		12	18
Control Console	1CC2	S1.OP-AR.ZZ-0012			34

L.O. Number	
ADFWCSE012	
·	J

Objectives

RO SkyScraper SRC	Skyscraper RO S	vstem/Evolution List SRO System/Ev	olution List Outline C	hanges		
Question Topic RO	55					
Given the following con	ditions:	40. (Y/)		<u></u>		
 Unit 2 tripped from 10 Neither MDAFW purt Total AFW flow is 23 SG NR level on all S 	00% power. np started or could be s E4 lbm/hr. Gs is 14% and rising sl	started. lowly.				
Which of the following of FEED - S/G LEVEL CO	lescribes the effect on NTROL VALVES?	23 AFW pump when the PO lowers AFV	N flow to the SGs by throi	tling shut th	e 21-24AF11,	AUX
a. speed demand w	/ill lower to maintain sta	able discharge pressure.				
b. speed demand w	/III raise to maintain sta	ble discharge pressure.				
c. discharge pressu	ire will lower and remain	in lower.				
d. discharge pressu	ire will rise and remain	higher.				
Answer d Exam	Level R Cog	nitive Level Comprehension Fa	cility: Salem 1 & 2	ExamD	ate:	9/26/2011
KA: 061000K503	K5.03 RO Va	lue: 2.6 SRO Value: 2.9* Section	I: SYS RO Group:	1 SRO (Group: 1	55.43
System/Evolution Title	Auxiliary / Emerger	cy Feedwater System				061
KA Statement: Knowle Pump	edge of the operational head effects when con	implications of the following concepts a trol valve is shut	s they apply to the Auxilia	ry / Emerge	ncy Feedwate	r System:
Explanation of Answers: require incorre	5,4) 23 AFW pump Ter are throttled shut, the ed of the turbine. A and ect because discharge	ry Turbine has its governor set to maint discharge pressure of the pump will rise d B are incorrect because speed deman pressure will rise.	ain a certain speed, not d , and remain at the new h d will remain constant, an	scharge pre igher pressu d discharge	ssure. As the ire as less wo pressure will i	AF11 rk is ise. C is
Referer	ice Title	Facility Reference Number	Reference Section	Page No.	Revision	
Auxiliary Feedwater Sys	tem operation	S2.OP-SO.AF-0001		19	35	
In Service Testing - 23 A	VEM Pump	S2.OP-ST.AF-0003			48	
AFW System Lesson PI	an	NOS04AFW0000		38-39	9	
AFW000E004	Objectives					
Material Required for E	Examination					
Question Source:	lew	Question Modification Method:		Used Duri	ng Training P	rogram
Question Source Com	ments					
Comment						

RO SkyScrape	er SRO Skysc			(emic volutio				هر أيجسمه	outime of	unges			
uestion Top	RO 56												
Given the follo	owing conditions	:								•		**	
 Unit 2 is op 2C Vital 4K Power is lo Prior to res 	berating at 100% V Bus is aligned st to 2C Vital 12 toring power to t	power. I to 24SP 5 VDC Bu he 2C DC	T (breake is. Bus, 24	er 24CSD cl I SPT is dee	osed). energized.								
	rollowing describ	es trie sta	atus of 20	4KV Vital	Bus for the	se conditi	ions?						
a. Energiz	zed from the 2C	EDG.											
b. Deene	rgized with all in-	feed brea	ikers tripp	ped.									
c. Energi	zed from 23SPT	(breaker	23CSD c	losed).									
		(
d. Deene	rgized with in-fee	ed breake	r 24CSD	closed.									
nswer d	Exam Leve	R	Cogni	tive Level	Compre	hension	Facility:	Salen	n 1 & 2	Exan	nDate:		9/26/2011
(A: 062000K	(103 K1.0)3	RO Valu	e: 3.5 S	RO Value:	4.0 S	ection: SYS	5 R	O Group:	1 SRC) Group:	1	55.43
system/Evolu	tion Title A.C	C. Electric	al Distrib	ution									062
(A Statement	: Knowledge o	f the phys			Var aquaa i	offect rola	tionshine het		.C. Electrica	l Distribu	tion and t	he follo	wina
xplanation o	DC distributio	power is	required t	o operate re	elays and o	ontacts fo	or the 4KV vit	al bus t	preakers. W	hen DC (ower is lo	ost, brea	akers will
Explanation o	DC distribution f 55.41(7) DC remain "as is EDG output I interlock which Reference Tit	power is i ". The EE preaker is ch require	required t OG breake both infe	o operate ro er can not c er SPT's in Facilit	elays and c lose onto th s open. Th feed break	ontacts for ne bus ev e cther (2 er to be o	or the 4KV vit en though it i 23) SPT cann pen.	al bus t s deene ot close	preakers. Wergized beca e its infeed b	hen DC (use one reaker to Page No	oower is lo of the inte the bus b	ost, brea rlocks t ecause	akers will o shut the it has an
Explanation c Answers: C 4160 VAC	DC distribution f 55.41(7) DC remain "as is EDG output I interlock which Reference Tit Emergency Dies	power is i ". The EE preaker is ch require le	required to G breake both infe	o operate ro er can not c ed breaker: er SPT's in Facilit 203036	elays and c lose onto th s open. Th feed break y Referenc	ontacts for ne bus ev e other (2 er to be o	or the 4KV vit en though it i 23) SPT cann pen. Refere	al bus t s deene ot close	preakers. W ergized beca e its infeed b ection	hen DC r use one reaker to Page Nc	oower is lo of the inte the bus b Revisi	ost, brea rlocks t ecause	akers will o shut the it has an
Explanation c Answers: IC 4160 VAC	DC distribution f 55.41(7) DC remain "as is EDG output l interlock which Reference Tit Emergency Dies	power is i power is i ". The EE preaker is ch require le	required t OG breake both infe is the oth	o operate ro er can not c ed breakers er SPT's in Facilit 203036	elays and c lose onto th s open. Th feed break	ontacts fo ne bus ev e cther (2 er to be o	er Refere	al bus t s deene ot close	ection	hen DC g use one reaker to Page Nc	bower is lo of the inte the bus b . Revisi	ion	akers will o shut the it has an
Explanation c Answers:	DC distribution f 55.41(7) DC remain "as is EDG output I interlock which Reference Tit Emergency Dies	power is i power is i ". The ED preaker is ch require le	required t DG breake both infe is the oth	o operate ro er can not c ed breakers er SPT's in 203036	elays and c lose onto th s open. Th feed break y Referenc	ontacts for ne bus ev e cther (2 er to be o	er Contraction of the second s	al bus t s deene ot close	ection	hen DC r use one reaker to Page Nc	bower is lo of the inte the bus b 	ion	akers will o shut the it has an
Explanation c Answers: IC 4160 VAC	DC distribution	on power is i ". The ED preaker is ch require le sel Gener	required t OG breake both infe s the oth ator	o operate ro er can not c erd breakers er SPT's in 203036	elays and c lose onto th s open. Th feed break	e ontacts for ne bus ev e other (2 er to be o	er Refere	al bus t s deene ot close	ection	hen DC r use one reaker to Page Nc	bower is lo of the inte the bus b	ion	akers will o shut the it has an
Explanation c Answers: IC 4160 VAC O. Number DCELECE013 Atterial Requ	DC distribution	power is i power is i ". The EE preaker is ch require le sel Gener Object	required t DG breake both infe s the oth ator	o operate ro er can not c ed breakers er SPT's in 203036	elays and c lose onto th s open. Th feed break y Reference	e ontacts for ne bus ev e other (2 er to be o	er Refere	al bus t s deene ot close	ection	hen DC r use one reaker to Page Nc	power is lo of the inte the bus b . Revisi	ion	akers will o shut the it has an
Explanation c Answers: IC 4160 VAC IC 4160 VAC IC ELECE013 DCELECE013 Atterial Required Question Sou	DC distribution	Description power is is in The EE poreaker is ch require le sel Gener Object Description S 2 NRC	ives	o operate ro er can not c er can not c er SPT's in Facilit 203036	elays and c lose onto the s open. The feed breake y Reference	n Methoc	er Refere	al bus t s deene ot close ence Se	ereakers. Wergized beca e its infeed b	hen DC r use one reaker to Page Nc	ring Train	ing Pr	akers will o shut the it has an
Explanation c Answers: IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC	DC distribution f 55.41(7) DC remain "as is EDG output I interlock which Reference Tit Emergency Dies interlock which compare the second second interlock which regency Dies interlock which interlock	on power is i ". The EE preaker is ch require sel Gener ie Object odject	ives	o operate ro er can not c er SPT's in Facilit 203036 20000000000	Profit Cause-4 elays and c lose onto the s open. The feed breaked y Reference y Reference ing longer	n Method	er Refere Refere d: Editoria	al bus t s deens ot close ence Se lince Se lince Se lince Se lince Se lince Se	ereakers. Wergized beca e its infeed b ection	hen DC r use one reaker to Page Nc Used Du val distrac	ring Train	ion i	akers will o shut the it has an ogram ed places as found
Explanation c Answers: IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC	DC distribution f 55.41(7) DC remain "as is EDG output I interlock which Reference Tit Emergency Dies interlock which interlock which	Don power is i ". The EE preaker is ch require sel Gener Del Gener Sel Sener Sel Sener Sel Sener Sel Sener Sel Sener	required t DG breake both infe s the oth ator ives	o operate ro er can not c er can not c er SPT's in 203036	elays and c lose onto the s open. The feed breake y Reference y Reference ing longer	n Method	er Refere Refere d' breaker" a Idd "breaker" a Idd words to	al bus t s deene ot close ence Se unce Se unce Se unce Se unce Se unce Se unce Se	ereakers. Wergized because its infeed because its i	hen DC i use one reaker to Page Nc Vsed Du Used Du nal distrac	ring Trair	ion	akers will o shut the it has an ogram
Explanation c Answers: IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC	DC distribution	Description power is is power is constructed power is construct	ives	ections and o operate re- er can not c bed breakers er SPT's in 203036 20305 20505 20505 20505 20505 200	ior cause- elays and c lose onto the s open. The feed breaked y Reference y Reference ing longer	n Method	di "breaker" a di ded words to	al bus t s deens ot close ence Se lince Se lince Se lince Se lince Se lince Se	ified	hen DC r use one reaker to Page NC	ring Train	ion ing Pr style	akers will o shut the i it has an ogram ogram
Explanation c Answers: IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC	DC distribution f 55.41(7) DC remain "as is EDG output I interlock which Reference Tit Emergency Dies interlock mich interlock mich interlock mich Previou irce Comments	ation ation power is i power is compared with the end of the end o	ives	o operate ro er can not c er can not c er SPT's in 203036 2000 2000	Vir Cause-i elays and c lose onto the s open. The feed breake y Reference y Reference in Cause-i iodification ugust 2008 eing longer	n Methoc	br the 4KV vit en though it is 23) SPT cann pen.	al bus t s deene ot close ence Se unce	ereakers. Wergized beca e its infeed b ection	hen DC r use one reaker to Page Nc Used Nc	ring Trair	ion ing Pr I swapp	akers will o shut the it has an ogram ed places as found
Explanation c Answers: IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC IC 4160 VAC	DC distribution	Depresentation	ives	o operate ro er can not c er can not c er SPT's in 203036 20305 2005 20	Profit Cause-4 elays and c lose onto the s open. The feed breaked y Reference y Reference ing longer	n Method	er Refere er Refere er Editoria d "breaker" a ided words to	al bus t s deene ot close ence Se lly Mod nd "close lessen	ereakers. Wergized beca e its infeed b ection	hen DC r use one reaker to Page Nc Used Du nal distraction nd make	ring Train	ion i	akers will o shut the it has an ogram ed places as found

	Question Topic RO 57 Which of the following choices identifies an adverse effect of a ground on a 125VDC bus/battery, and the method in which operators perform groun isolation IAW S2.OP-SO.125-0004, 125VDC Ground Detection?
Which of the following choices identifies an adverse effect of a ground on a 125VDC bus/haltery, and the method in which operators perform ground solution IAW S2.0P-S0.125-004. 125VDC Ground Detection? A ground a. on the bus causes a higher level of current to flow in the system. Individually deenergize each load on the bus, then re-energize if that load if not the source of the ground. b. on the bus causes a higher level of current to flow in the system. Transfer to the backup battery charger to determine if the US charger is the cause of the ground. c. on the bus causes a voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charger to determine if the US charger is the cause of the ground. d. on the bus causes a of the ground. flow in the system. Transfer to the backup battery charger to determine if the US charger is the cause of the ground. d. on the bus causes of the ground. flow is a social within the bus cause of the ground. d. on the bus causes an inject level. Memory is painting is a social within the bus cause of the ground. d. on the bus causes and the bus. then re-energize if that load is not the source of the ground. flow is ground. d. In the bus causes of the ground. flow is ground. flow is ground. d. In the bus causes and use of the ground. flow is ground. flow is ground. determine if t	Which of the following choices identifies an adverse effect of a ground on a 125VDC bus/battery, and the method in which operators perform groun isolation IAW S2.OP-S0.125-0004, 125VDC Ground Detection?
A ground a. on the bus causes a higher level of current to flow in the system. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. b. on the battery associated with the bus causes a higher level of current to flow in the system. Transfer to the backup battery charger to determinent the IS Charger is the cause of the ground. c. on the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charger to to determinent if the IS Charger is the cause of the ground. d. on the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. a. So the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. a. So the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-encergize if that load is not the source of the ground. a. So the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the battery outcomes a battery current is present. So these are plausible distracters. The bus voltage is higher frame to battery charger if bus voltage is low, and battery current is present, so these are plausible distracters. The bus voltage is higher frame to battery charger if bus voltage is low. And battery current is present, so these are plausible distracters. The bus voltage is higher frame to battery charger if bus voltage is low and battery current is present. So these are plausible distracters. The bus voltage is higher than the battery voltage, so a ground on	
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a. on the bus causes a higher level of current to flow in the system. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. b. of the battery associated with the bus causes a higher level of current to flow in the system. Transfer to the backup battery charger to determine if the I/S charger is the cause of the ground. c. on the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charger to determine if the I/S charger is the cause of the ground. c. on the bus courses voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charger to determine if the I/S charger is the cause of the ground. c. on the bus reasons voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. c. on the bus reasons voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. c. on the bus reasons voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. c. on the bus reasons the re-energize if that load is not the source of the ground. c. on the function Title [D.C. Electrical Distribution Title [D.C. Electrical Distribution Title [D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or miligate the consequences of these abnormal operator. C. condes counds cound detection counds co	
a. on the bus causes a higher level of current to flow in the system. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. b. on the butery associated with the bus causes a higher level of current to flow in the system. Transfer to the backup battery charger to determine if the IS charger is the cause of the ground. c. on the butery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charger to determine if the IS charger is the cause of the ground. c. on the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. c. on the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. c. on the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. c. on the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the battery bus causes at solar the bus, then re-energize if that load is not the source of the ground. c. Ground Cause bus, then re-energize if that load is not the source of the ground. c. Excercise of the ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators isolate individual loads. The ARP for low battery voltage has operators. c. Ground Detection S2.OP-CA 125-0004 isolatery would not cause bus current to rise. c. C. C. Electrical Distribution c. Electrical Detection S2.OP-CA 125-0	
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b. on the battery associated with the bus causes a higher level of current to flow in the system. Transfer to the backup battery charger to determine if the I/S charger is the cause of the ground. c. in the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charger to determine if the I/S charger is the cause of the ground. d. on the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deengize each load on the bus, then re-energize if that load is not the sociator of the ground. nexwer a Exam Level R Cognitive Level Memory [Facility:] Salem 1 & 2 ExamDate: 9/26/20 A: 063300A201 A2.01 RO Value: 2.5 SRO Value: 3.2.7 Section: SYS RO Group: 1 SNA ystem/Evolution Title D.C. Electrical Distribution 0633 Statement: Ability to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictors, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds xplanation of states individual loads. 55.41(7) The ground detection procedure to correct, and battery corrent is present, so these are plausible distacters. The bus voltage is how, and battery cound is present, so these are plausible distacters. The bus voltage is higher than the battery v	a. on the bus causes a higher level of current to flow in the system. Individually deenergize each load on the bus, then re-energize if that load not the source of the ground.
C on the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charge is the cause of the ground. G In the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. In the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. Inswer is the voltage is bus to be come unreliable due to the excessive current flow. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. Individually deenergize each load on the bus, then re-energize if that load is not the source of the ground. Inswer is is the voltage is Data to the voltage is Data to the source of the ground. Individually to the source of the ground. Inswer is it is the voltage is Data to the vo	b. on the battery associated with the bus causes a higher level of current to flow in the system. Transfer to the backup battery charger to determine if the I/S charger is the cause of the ground.
[d] on the battery associated with the bus cueses voltage reading on the bus to become unreliable due to the excessive current flow. Individually, inswer a Inswer a Exam Level R Cognitive Level Memory [Facility:] Salem 1 & 2 ExamDate: 9/26/20 A: 063000A201 A 2.01 RO Value: 2.5 SRO Value: 3.2 Section: SYS RO Group: 1 56:3 A: Doc. Electrical Distribution .063 A Statement: Ability to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds xplanation of to be standby battery charger if bus voltage is low, and battery current is present, so these are plausible distracters. The bus voltage is higher than the battery voltage, so a ground on the battery would not cause bus current to rise. ZODC Ground Detection S2.OP-SO.125-0004 13 ZODC Ground Detection S2.OP-SO.125-0004 13 Window Alarm Response S2.OP-AR.ZZ-0002 35 Objectives S2.OP-AR.ZZ-0002 35 Objectives S2.OP-AR.ZZ-0002 35 Objectives S2.OP-AR.ZZ-0002 35	c. on the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Transfer to the backup battery charg to determine if the I/S charger is the cause of the ground.
aswer a Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/20 A: D63300A201 A2.01 RO Value: 2.5 SRO Value: 3.2" Section: SYS RO Group: 1 SRO 43 9/26/20 A: DC. Electrical Distribution 063 063 063 063 A: Statement: Ability to (a) predict the impacts of the following on the D. C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds 063 xplanation of inswers: Is 5.41(7) The ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators inswers workage is how voltage is brigher than the battery voltage, so a ground on the battery would not cause bus current to rise. Is reference Title Facility Reference Number Reference Section Page No. Revision 25/OC Ground Detection S2.OP-SO 125-0004 13 13 Window Alarm Response S2.OP-AR ZZ-0002 35 35 Objectives Objectives 0 13 13 Usetion Source: Previous 2 NRC Exams Question Modification Method;<	d. on the battery associated with the bus causes voltage reading on the bus to become unreliable due to the excessive current flow. Individua deenergize each load on the bus, then re-energize if that load is not the source of the ground.
A: D63000A201 A2.01 RO Value: 3.2' Section: SYS RO Group: 1 SRO Group: 1 56/43 ystem/Evolution Title D.C. Electrical Distribution 063 A Statement: Ablity to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds xplanation of newers: 55.41(7) The ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators transfer to the standby battery charger if how so voltage is to so these are plausible distracters. The bus voltage is higher than the battery voltage, so a ground on the battery would not cause bus current to rise. 25VDC Ground Detection \$2.0P-SO.125-0004 13 Window Alarm Response \$2.0P-AR.ZZ-0002 35 ONumber Objectives 35 CELECE008	Answer a Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2
ystem/Evolution Title D.C. Electrical Distribution 063 A Statement: Ability to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds Statement: Ability to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds Grounds xplanation of inswers: B5 41(7) The ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators transfer to the standby battery charger if bus voltage, so a ground on the battery would not cause bus current to rise. Reference Title Facility Reference Number Reference Section Page No. Revision 25VDC Ground Detection S2.OP-S0.125-0004 13 35 Window Alarm Response S2.OP-AR.ZZ-0002 35 35 Objectives S2 Objectives 35 Aterial Required for Examination Question Modification Method; Editorially Modified Used During Training Program Nuestion Source Previous 2 NRC Exams Question Modification Method; Editorially Modified Used During Training Program	CA: 063000A201 A2.01 RO Value: 2.5 SRO Value: 3.2* Section: SYS RO Group: 1 SRO Group: 1 55.43
A Statement:: Ability to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Grounds Statement:: xplanation of inswers: S5.41(7) The ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators transfer to the standby battery charger if bus voltage is low, and battery current is present, so these are plausible distracters. The bus voltage is higher than the battery voltage, so a ground on the battery would not cause bus current to rise. Reference Title Facility Reference Number Reference Section Page No. Revision S2.0P-S0.125-0004 13 Window Alarm Response S2.0P-AR.ZZ-0002 35 OV. Number Objectives Vicindow Alarm Response S2.0P-AR.ZZ-0002 35 Interial Required for Examination Interial Required for Examination Interial Required for Examination Interial Required for Examination New for "J" ILOT RO Exam - August 2008 Reordered distracters based on length of answer. comment Interial Required Modification Method; Editorially Modified Used During Training Program	ystem/Evolution Title D.C. Electrical Distribution 063
Grounds xpfanation of nswers: 55.41(7) The ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators fransfer to the standby battery charger if bus voltage is low, and battery current is present, so these are plausible distracters. The bus voltage is higher than the battery voltage, so a ground on the battery would not cause bus current to rise. Reference Title Facility Reference Number Reference Section Page No. Revision 25VDC Ground Detection S2.0P-S0.125-0004 13 35 Window Alarm Response S2.0P-AR.ZZ-0002 35 Objectives Objectives CELECE008 Objectives Window Source: Previous 2 NRC Exams Question Modification Method; Editorially Modified Used During Training Program Nuestion Source: New for "J" ILOT RO Exam - August 2008 Reordered distracters based on length of answer. :	Ability to (a) predict the impacts of the following on the D.C. Electrical Distribution and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:
xplanation of nswers: Is 51(7) The ground detection procedure has operators isolate individual loads. The ARP for low battery voltage has operators transfer to the standby battery current is present, so these are plausible distracters. The bus voltage is higher than the battery voltage, so a ground on the battery would not cause bus current to rise. Reference Title Facility Reference Number Reference Section Page No. 25VDC Ground Detection \$2.0P-SO.125-0004 13 Window Alarm Response \$2.0P-AR.ZZ-0002 35 Objectives 0 0 CELECE008 0 0 Interview of the standby battery current is plausible distracters. 13 Number 0 0 OBjectives 35	Grounds
Reference Title Facility Reference Number Reference Section Page No. Revision 25VDC Ground Detection \$2.OP-SO.125-0004 13 30 Window Alarm Response \$2.OP-AR.ZZ-0002 35 0. Number Objectives OCELECE008 0 14terial Required for Examination	bus voltage is higher than the battery voltage, so a ground on the battery would not cause bus current to rise.
25VDC Ground Detection S2.OP-S0.125-0004 13 3 Window Alarm Response S2.OP-AR.ZZ-0002 35	Reference Title Facility Reference Number Reference Section Page No. Revision
Window Alarm Response SZ.OP-AR.22-0002 35 .0. Number Objectives OCELECE008	125VDC Ground Detection S2.0P-SO.125-0004
.O. Number Objectives DCELECE008	3 Window Alarm Response [S2.0P-AR.ZZ-0002] [35
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Question Source: Previous 2 NRC Exams Question Modification Method: Editorially Modified Used During Training Program Question Source Comments New for "J" ILOT RO Exam - August 2008 Reordered distracters based on length of answer. Image: Comment in the second	Material Required for Examination
Question Source Comments New for "J" ILOT RO Exam - August 2008 Reordered distracters based on length of answer. Comment	Question Source: Previous 2 NRC Exams Question Modification Method: Editorially Modified Used During Training Program
Comment	Question Source Comments New for "J" ILOT RO Exam - August 2008 Reordered distracters based on length of answer.
	Comment
	Comment

RO SkyScraper	SRO Skyscraper RO Sys	tem/Evolution List SRO System/Evolution List Outlin	e Changes	
Question Topic	RO 58			
Given the follow	ing conditions:	n 1997-yan ya ku sa k		
 Salem Unit 1 A 500 KV grid During the ele Which of the foll 	is in MODE 3, NOT, NOP. I disturbance causes a SEC MC ectrical bus realignment, the 2A owing describes how this will af	DE II actuation. 4KV vital bus to 460VAC bus breaker trips. fect 2A EDG operation, if NO corrective action is taken?		
2A EDG will				
a. run until 2	22 Diesel Fuel Oil Storage Tank	is empty.		
b. trip becau	use its fuel oil supply pressure w	as lost when the EDG Fuel Oil Pumps lost power.		
c. trip becau	use its lube oil supply pressure v	vas lost when the EDG Lube Oil pumps lost power.		
d. run until i	ts Fuel Oil Day Tank empties du	e to the loss of power to the Diesel Fuel Oil Transfer Pumps	5.	
Answer a	Exam Level R Cogn	itive Level Application Facility: Salem 1 & 2	Examl	Date: 9/26/2011
KA: 064000K20	2 K2.02 RO Valu	e: 2.8* SRO Value: 3.1 Section: SYS RO Grou	p: 1 SRO	Group: 1 55.43
System/Evolutio	n Title Emergency Diesel G	enerators		064
KA Statement:	Knowledge of bus power suppl Fuel oil pumps	ies to the following:		
Explanation of Answers:	55.41(7,8) A is correct because supplies fuel oil to all three ED operation as the second pump the cross connect is always sh C is incorrect because while th starting, the Lube Oil pumps fo	e there are 2 Diesel Fuel Oil Transfer pumps, powered from Gs. The loss of power to 2A DFO xfer pump, even if selecte has power from 2B bus, and will start on lo level. The DFO ut. B is incorrect because the EDG Fuel Oil Pumps are shaft ere is an electric Pre-Lube numn which is in operation when r operation are shaft driven mechanical pumps. D is incorrect	A and B Vital 2 d as the Lead F STs have cross t mounted, med the EDG is shi tot because the	30V, each of which Pump, will not affect EDG connect capability, but chanically driven pumps. utdown to facilitate EDG re is still power to one
	DFO xfer pump, which will fill a	II the EDG Day tanks based on level signals.		·
	Reference Title	Facility Reference Number Reference Section	Page No.	Revision
1 & 2 Units Diese	el Engine Auxiliaries	205241-1		42
1 & 2 Units Diese	el Generator Fuel Oil	211306		
Fuel Oil		211307		22
L.O. Number EDG000E013 EDG000E005	Objectives			
Material Require	ed for Examination			
Question Sourc	e: New	Question Modification Method:	Used Duri	ng Training Program
Question Sourc	e Comments			
Comment				

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes						
Question Topic	RO 59						
Given the followi	ng conditions:						
 Unit 2 is opera the control roo The NEO sent Disposal Gas Local indicatio 	 Unit 2 is operating at 100% power when OHA C-1 GAS ANLY TRBL is received in the control room. The NEO sent to investigate reports local alarm B-3 OXYGEN HIGH/LOW on Waste Disposal Gas Analyzer PNL 110 is in alarm. Local indication for in service Waste Gas Decay Tank (WGDT) O2 concentration is 4.1%. 						
IAW Tech Specs	s, which choice describes a required action, and why?						
a. Place the	Standby GDT in service and commence preparations to release the affected GDT.						
b. Place the below 2%	second Waste Gas Compressor in service to raise the total volume of gas in the WGDT in order to dilute the O2 concentration to						
c. Reduce th of the GD	ne oxygen concentration of the in service WGDT without delay to prevent potential releases of radioactive materials due to explosion T.						
d. Immediate	ely suspend all additions to the in service WGDT since the O2 concentration is above the 2% required to sustain combustion when n hydrogen.						
Answer C	Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2011						
KA: 071000K504	4 K5.04 RO Value: 2.5 SRO Value: 3.1 Section: SYS RO Group: 2 SRO Group: 2 55.43						
System/Evolutio	n Title Waste Gas Disposal System 071						
KA Statement:	Knowledge of the operational implications of the following concepts as they apply to the Waste Gas Disposal System: Relationship of hydrogen/oxygen concentrations to flammability						
Explanation of Answers:	xplanation of nswers: 55.41(13) Tech Spec 3.11.2.5 requires the O2 concentration in the waste gas holdup system to be <2%. The action for 2-4% O2 is to reduce the O2 concentration to <2% in 48 hours.						
	release. C is the correct answer because the Tech Spec REQUIRES the reduction of O2 from >4% to less than 2% without delay. Also, the bases section for this tech specs describes that a potential explosion and release of radioactive materials from this explosion would not be IAW GDC 60, 10CFR50 Appx.A. Distracter D is incorrect because the TS states to immediately stop additions to the WG HU system.						
R	Reference Title Facility Reference Number Reference Section Page No. Revision						

Reference little	Facility Reference Number	Reference Section	Page No.	Revision
Salem Tech Specs		3.11.2.5	3/4 11-15	282
]	

L.O. Number WASGASE009 Objectives

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO System/Evolution	on List Outline C	hanges	
Question Topi	c RO 60				
Which of the fo setpoint?	llowing Area Radiation	n Monitors (ARM) will cause a ventilation system align	nment change when it	t reaches its High Radiation	Alarm
a. 2R52, L b. 2R9, N c. 2R32A, d. 2R44A,	quid PASS Room. ew Fuel Storage. Fuel Handling Crane. Containment High Ra	nge.			
Answer b	Exam Level R	Cognitive Level Memory Facilit	y: Salem 1 & 2	ExamDate:	9/26/2011
KA: 072000K4	03 K4.03	RO Value: 3.2* SRO Value: 3.6* Section:	SYS RO Group:	2 SRO Group: 2	55.43
System/Evoluti	on Title Area Rad	ation Monitoring System			072
KA Statement:	Knowledge of ARM Plant ventilation sys	system design feature(s) and or interlock(s) which proteins	ovide for the following]:	
Explanation of Answers:	55.41(11) B is corr incorrect but plausib it only has alarm ligi expected in that are since other bigh rad systems (VC5 and V Reference Title	ect because it realigns FHB ventilation through the ci- le because its auto function is to prevent Fuel Crane nt outside the PASS room which activates, but plausil a of the aux building following an accident. D is incorr lation alarms associated with bi rad levels in containen /C6 auto closure)	narcoal filters and star motion except in dow ble because of the hig rect since it has no au ment perform automat	rts both FHB Exhaust fans. mward direction. A is incom gh radiation levels which wo utomatic function, but is plan tic actions to isolate ventilat Page No. Revision	C is rect since uld be usible ion
S2.OP-AB.RAD	-0001	Abnormal Radiation	achment 5 RMS cha	16-18 28	
hannan					
L.O. Number RMS000E005	Obje	ctives			
Material Requi	red for Examination				
Question Sour	ce: New	Question Modification Method:		Used During Training Pr	ogram
Question Sour	ce Comments		0.94 July 10.94		
Comment					

ROS	SkyScraper	SROS	Skyscraper	RO Sv	stem/Evolution List	SRO System/Ev	olution List Outline	Changes		
Ques	tion Topic	RO 6	1							
Giver	the follow	ing condi	tions:							
- Bo - 2R - BC	th Salem L 1B-1, Unit 0TH Salem	Inits are o 2 Intake I units Co	operating Duct Rad ntrol Area	at 100% pow Monitor Cha Ventilation (ver. nnel 1 loses power. CAV) systems remain	in Normal Mo	de.			
Whic	h of the foll	owing ide	entifies the	e status of th	e CAV systems, and h	ow will the Cont	rol Rooms respond to th	ne loss of pow	er?	
The C	CAV system	ns								
a.	are desig Action Pr	ned to re ogram ac	main in No	ormal Mode o	upon a loss of power to and repair the power su	o a single duct r	adiation monitor. No ac d, with no specific time	tions other the limitation.	an normal Co	rective
b.	are desig status wit	ned to re hin its all	main in No owable Ac	ormal Mode ction Time, o	upon a loss of power to r CAV must be placed	o a single duct r in Accident Pre	adiation monitor. The 21 ssurized (AP) Mode on I	R1B-1 must b BOTH Units.	e restored to	operable
C.	should ha Control A	ive swap rea Venti	ped to AP lation Ope	Mode. Initiat eration.	te AP Mode of operatio	on by depressing	initiating pushbutton or	n 2RP2 IAW S	2.0P-SO.CA	V-0001,
d.	should ha	ive swapp DP-SO.C/	ped to AP AV-0001.	Mode. Initia	te AP Mode of operation	on by aligning ir	dividual system compor	nents to their	correct positio	ins on 2RP2
Answe	erc	Exam L	evel R	Cogn	itive Level Applica	ition Fa	cility: Salem 1 & 2	Exam	Date:	9/26/2011
KA:	073000A20	1	A2.01	RO Valu	ue: 2.5 SRO Value	2.9* Section	: SYS RO Group	: 1 SRO	Group: 1	55.43
Syster	n/Evolutio	n Title	Process	Radiation N	Ionitoring System					073
KA Sta	atement:	Ability to use proc	(a) predic cedures to or failed po	ct the impact correct, con	s of the following on th trol, or mitigate the cor	e Process Radi	ation Monitoring System hose abnormal operation	and (b) base n:	d on those pr	edictions,
Explar Answe	nation of ers:	55.41(7) plausible Mode. C incorrect system	Any R1B because is correct t because	channel losi the Tech Sp because ma Individual co	ng power will automati bec for R1B says if one anual initiation of AP M omponents are not alig	cally initiate Acc channel is inop lode is accompl ned, still plausib	ident Pressurized Mode erable, you have 14 day shed by depressing the le if the candidate thinks	e on BOTH Ur ys to restore b Accident pus s the failure ha	its. B 's inco efore placing hbutton on Ri as affected th	rrect but CAV in AP 22. D is e whole
		Referenc	e Title		Facility Referen	ce Number	Reference Section	Page No.	Revision	
Contro	l Area Ver	tilation O	peration		S2.OP-SO.CAV-000)1		6,23	38	
Salem	Tech Spe	cs					3.3.3.1	3/4 3-38	282	
L.O. N RMS0	lumber 00E003	ed for Ex	Ob	jectives						1
0.000	ion Source				Question Medification	m Mothod		Lies David	an Training '	
Quest	ion Sourc	e: <u> Nev</u> e Commo	ents			on Method:		Used Duri		rogram
Comm	nent									

RO S	kvScraper	SRO S	skyscraper	RO Sys	tem/Evolution List	SRO System/E	volution List	Outline C	hanges		
Quest	ion Topic	RO 62	2								
Given	the follow	ing condi	tions:						ф.,		
- Uni - 1B - 13 - 1A	t 1 is oper EDG is ru and 16 SV 4KV Vital	ating at 2 nning in p V pumps bus beco	5% power. barallel with are in servic mes deener	station pow e, 11 SW p gized due t	er on 1B 4KV Vital Bu pump is in AUTO. o a Bus Differential si	us. gna!.	f elles des				
										ps which will	
a.	11, 10.										
D.											
C.	13, 16.						,				
d.	15, 16.										The second s
Answe	r a	Exam L	evel R	Cogni	tive Level Applica	ition F	acility:	Salem 1 & 2	ExamD	Date:	9/26/2011
KA: 0	76000K20	1	K2.01	RO Valu	e: 2.7* SRO Value	2.7 Section	n: SYS	RO Group:	1 SRO (Group: 1	55.43
Systen	n/Evolutio	on Title	Service W	ater Syster	n						076
KA Sta	tement:	Knowled	lge of bus po	ower suppli	es to the following:						
Answe	rs:	loading. to where SW pur why it is any of th would st	A bus is loc the auto pu ps, one in a not listed in the choices. rip busses a	ked out on mp (11) wo uto, and the any of the There can b nd load the	Bus Differential (deen ould start. Only one S e rest in manual. 12 <u>choices</u> 14 SW pump be confusion about the primary SW pump or	ergized), and t W pump is alig SW pump would would not sta e running EDG n each bus.	he loss of 7 aned for AU and the loss and the los	16 SW pump wo TO which is the art unless 11 pu us never loses ss of A vital bus	ing that bus ould cause h normal at p imp did not o nower_which causing a M	eader pressu ower configu on a SEC init h is why it isr 10DE II (Blac	re to lower ration for the lation, that is <u>b't listed in</u> okout), which
		Referenc	e Title		Facility Referen	ce Number	Referen	ce Section	Page No.	Revision	
Service	e Water Pi	ump Ope	ration		S1.OP-SO.SW-000	1]			26	
Unit 1	4KV Vital	Buses Or	ne line		203002]			34	
L.O. N SWBA	umber YSE005		Obje	ctives							
Materi	al Require	ed for Ex	amination								
Questi	on Sourc	e: Fac	cility Exam E	lank	Question Modification	on Method:	Significan	tly Modified	Used Duri	ng Training	Program
Questi	on Sourc	e Comm	ents J-RC	C61 Chan	ged which pump is in	auto (11 instea	ad of 15) ar	nd that makes a	different cho	bice correct.	
Comm	ent										

RO	SkyScraper	SRO Skyscraper	RO System/Evolu	tion List SI	RO System/	Evolution Li	st Outline C	hanges		
Ques	tion Topic	RO 63							· · · · · · · · · · · ·	
Giver	n the follow	ing conditions:		9						
- All - Th (E	3 Station A le NORMAL CAC) has b	Air Compressors have b cooling water supply to seen lost.	ecome unavailab o the Unit 1 Emer	e. gency Control Ai	r Compre	sor				
Desc	ribe the sta	tus of the Unit 1 ECAC								
Oper	ation of the	Unit 1 ECAC								
а.	can conti	nue since cooling water	will automatically	swap to Service	e Water th	ough a ch	eck valve.			
b.	can conti	nue since cooling water	will automatically	swap to Demine	eralized W	ater throug	h a check valve.			
C.	must be o	liscontinued until coolin	g water can be m	anually aligned t	hrough a s	pool piece	from Service Wa	ater.		
d.	must be o	liscontinued until coolin	g water can be m	anually aligned t	hrough a s	pool piece	from Deminerali	zed Water.		
Answ	er c	Exam Level R	Cognitive Leve	Application		Facility:	Salem 1 & 2	Exam	Date:	9/26/2011
KA:	078000K10	4 K1.04	RO Value: 2.6	SRO Value:	2.9 Secti	on: SYS	RO Group:	1 SRO	Group:	1 55.43
Syste	m/Evolutio	n Title Instrument A	vir System			,				078
KA St	atement:	Knowledge of the phys	ical connections a	and/or cause-effe	ect relation	ships betv	veen Instrument A	Air System a	and the follow	ving:
	·····	Cooling water to comp	ressor				-			
Answ	ers:	Water system, SERVid plausible because it is	CE WATER can b as a backup cooli	e supplied by M ng system for ot	ANUALLY	installing a ns (SI and	a supply and a rei	turn spool p when norma	iece. Demin al cooling is l	water is ost.)
		Reference Title	Fac	ility Reference	Number	Refere	nce Section	Page No.	Revision	
No. 1	& 2 Units C	Chilled Water	205216	-3					58	
Contro	ol Air Syste	m Operation	S1.OP-	SO.CA-0001					13	
							1			
	lumber NRE007	Objecti	ves							
Mater	ial Require	d for Examination								
Quest	tion Sourc	e: Facility Exam Bar	nk Question	n Modification M	Aethod:	Direct Fr	om Source	Used Duri	ng Training	Program
Quest	tion Sourc	e Comments Vision	Q80700							
Comn	nent									

RO SkyScraper SRC	Skyscraper RO Sy	stem/Evolution List SRO System/E	volution List Outline C	hanges		
Question Topic RO	64					
Given the following con-	ditions:	ANY			an a	
 Salem Unit 1 is opera OHA A-15 FIRE PUM control room. NO other fire system An NEO dispatched to and both fire pumps a Fire Protection reports 	ting at 100% power. P 1/2 RUN, and OHA A alarms are received. o the Fire Pump House re operating. s there are NO fire syste	-23 FIRE PUMP 1/2 TRBL alarm in th reports fire main header pressure is 1 em actuations.	ne 32 psig,			
Which of the following of	hoices identifies the ca	use of the condition described above?	<u>}</u>			
a. Trip of the Fire P	rotection Jockey Pump.					
b. Loss of control p	ower to BOTH Fire Pur	ips.				
c. A fire protection	nose reel is partially ope	ened in the Turbine Building.				
d. Momentary (1 se	cond) drop in Fire Prote	ection header pressure to 70 psig.				I
Answer b Exam	Level R Cogr	itive Level Application F	acility: Salem 1 & 2	Exam	Date:	9/26/2011
KA: 086000A302	A3.02 RO Val	ue: 2.9 SRO Value: 3.3 Section	n: SYS RO Group:	2 SRO	Group: 2	55.43
System/Evolution Title	Fire Protection Syst	em				086
KA Statement: Ability	to monitor automatic op	erations of the Fire Protection System	n including:	-		
Actuat	on of the FPS					
Answers: from # pressu onen.	1 and #2 Misc yard pan re will start the #1 pump re lowers, and the #2 pr and well withing the can	els will cause loss of both battery char o, and the #2 pump has a time delay. ump will not start. Distracter C is wron ability of a single fire pump to supply	rgers. Distracter D is incor Distracter A is incorrect in ng because a hosereel is a without much loss of disch	that the #1 small syste	e a momentary pump will start m load, it is on	drop in as header ly partial;ly
Referen	ce Title	Facility Reference Number	Reference Section	Page No.	Revision	
Fire Pump House Diese	Engine Control	203776			9	
Alarm Response Windov	v A	S1.OP-AR.ZZ-0001				
Fire Protection		205222-4			59	
L.O. Number FIRPROE007 FIRPROE008 FIRPROE009	Objectives					
Material Required for E	xamination	NUM Constant of the State of the	-			
Question Source: F	acility Exam Bank	Question Modification Method:	Direct From Source	Used Duri	ng Training Pr	ogram
Question Source Com	nents Vision Q67854	<u>- 2000 (2000) 1.0452 (2001) 1.0552 (2001) 2.0553</u>		<u> <u> </u></u>		
Comment						

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO Sy	stem/Evolution List Outline C	hanges	
Question Topic	RO 65				
Given the followin	ng conditions:	4		***********************	
 Unit 1 is operal Charging flow r now steady at Computer trend The CRS enter Based on eleva the crew deter Which of the follo 	ting at 100% power. rose 6 gpm from its s 94 gpm. ds show the increase rs S1.OP-AB.RC-000 ated 1R11A indicatio mines a small RCS I wing describes an ac	teady state value of 88 gpm in 10 minute d RCS leakage started 10 minutes ago. 11, Reactor Coolant System Leak. ns coincident with the rise in charging flo eak in containment is occurring. ction that will be performed IAW S1.OP-/	es, and is w, AB.RC-0001 based on the determ	ination of th	e leak location and size,
and why?	ntrifugal charging pu	mp in service to maintain PZR level stab	le.		
b. Place 2 CF setpoint.	CUs in slow speed a	and 2 CFCUs in high speed to prevent co	ontainment pressure from rising to	o the automa	atic Safety Injection
c. Place 2 CF elevated m	CUs in slow speed a noisture levels.	and 2 CFCUs in high speed to minimize t	the rise in containment humidity a	and prevent	equipment damage from
d. Place a ce release fro	ntrifugal charging pu m containment.	mp in service to allow additional flow thro	ough the Mixed Bed Demineralize	ers to minimi	ze the potential off-site
Anewor b	Exam Lovel D	Cognitive Level Memory	Facility: Salem 1 & 2	ExamD	Date: 9/26/2011
KA: 103000A101	A1.01	RO Value: 3.7 SRO Value: 4.1	Section: SYS RO Group:	1 SRO	Group: 1 55.43
System/Evolution	Title Containme	nt System			103
KA Statement:	Ability to predict and/	or monitor changes in parameters assoc	iated with operating the Containn	nent System	controls including:
	Safety Injection and it the right action, the r service if PZR level of incorrect because of would reduce RCS a	ninimize the potential for off-site release eason is wrong. Distracter A is incorrect apport be maintained stable or rising, not the wrong reason for CFCU operation. D ctivity levels, it is performed in AB.RC-2.	s when the leak is in Containmer but plausible, because a centrifu as a pre-emptive action for poss is incorrect as per B above, whil High RCS Activity.	it." C is inco gal charging ible future le e additional	prrect because while it has pomp is placed in the rises C is flow through the demins
R	eference Title	Facility Reference Num	ber Reference Section	Page No.	Revision
Reactor Coolant S	System Leak	S1.OP-AB.RC-0001		13, BASE	9
		·]			
L.O. Number CONTMTE003 ABRC01E003	Objec	tives			
Material Required	d for Examination				
Question Source	Facility Exam B	ank Question Modification Metho	od: Concept Used	Used Duri	ng Training Program
Question Source	Comments Vision	ו Q85538			
Comment					

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO System/I	volution List Outline C	hanges		
Question Topic	RO 66					
Of the following,	which would be consi	dered the FIRST Core Alteration IAW		Anna 4127141424214242142421424214242142		
<u>S2.0P-10,ZZ-000</u>	J7, Cold Shutdown to	Refueling?				
a. When the	first stud (during first	pass of Reactor Head detensioning process)	s detensioned.			
h \\//hen.the			unitaria a constante de la const			
	RPV Head is lifted (1	-2) to check for CRDM drive dis-engagement.				
c. Insertion c	of a camera to the lev	el of the RPV flange prior to fuel movement.				
d Lifting of t	he first fuel hundle in					
Answer d	Exam Level R	Cognitive Level Memory	acility: Salem 1 & 2	ExamD)ate:	9/26/2011
KA: 194001G13	6 2.1.36	RO Value: 3.0 SRO Value: 4.1 Section	on: PWG RO Group:	1 SRO	Group: 1	55.43
System/Evolution	n Title					GENERI
KA Statement:	Knowladge of proceed	lurge and limitations involved in core alteration				1
Explanation of	55.41(10.13) D is cor	rect because "CORE ALTERATION shall be t	s. ne movement of any fuel, s	ources, or re	activity control	l
Answers:	components, within the	he reactor vessel with the vessel head remove	d and fuel in the vessel." A	is incorrect	because it is v	when
	C is incorrect becaus	e "Refueling activities that would constitute a	CORE ALTERATION do NO	DT include the	te movement o	pr
	components, except	when these devices would result in the moven	ent or manipulation of fuel	sources, or	reactivity cont	rol
	components within th	le Reactor Pressure Vessel.				J
R	leference Title	Facility Reference Number	Reference Section	Page No.	Revision	
S2.OP-SO.SF-00	09	Refueling Operations			16	
S2.OP-10.ZZ-000	17	COLD SHUTDOWN TO REFUEL				
SC.MD-FR.FH-00)04				31	
L.O. Number	Objec	tives				
REFUELE012						
IOP007E004						
Material Require	d for Examination					
Question Source	e: New	Question Modification Method:		Used Duri	ng Training P	rogram
Question Source	e Comments	K I WARLING CHERY & MARLING CHERY				
<u>,</u>						
Comment				999 - 446 (B. J. C. 1997) - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
~						
		ann a chur a tha an ann ann an Ann ann an Ann ann an An				

RO SkyScraper	GRO Skyscraper RO Sys	tem/Evolution List SRO System/Ev	olution List Outline C	hanges	
Question Topic	RO 67				
Given the following of	conditions:				1
Given the following of - Unit 2 is operating - Power was reduced level for 2 days. - Operators are pre- automatic rod con- - Tavg-Tref deviation IAW OP-AA-300, Ref Assume this is a nor a. The crew con- b. The crew initian c. The crew initian d. The crew initian KA: 194001G137	conditions: at 66% power. ad when 22 SGFP tripped 2 paring to start a Main Turbin trol to maintain Tavg and A on is 0°F. eactivity Management, how s mal power ascension with a currently initiates the Main T ates a RCS dilution. As soon ates a RCS dilution and wai ates the Main Turbine load a tam Lovel P. Cogn 2.1.37 RO Valu	days ago, and has remained at this ne power ascension using dilution and FD on program. should the power ascension be started il equipment available. Turbine load ascension and a RCS dilution in as the dilution is in progress the Main ts until a RCS temperature rise is deter ascension and waits until a RCS temp itive Lovel Memory Fa te: 4.3 SRO Value: 4.6 Section	d? ution. in Turbine load ascension acted. Then the Main Turb perature lowering is detect acility: Salem 1 & 2 n: PWG RO Group:	is initiated. Dine load asc ed. Then the	ension is initiated. RCS dilution is initiated. Date: 9/26/2011. Group: 1 55.43
System/Evolution Ti	tie		1		GENERI
KA Statement:					
Kno	owledge of procedures, guid	elines, or limitations associated with r	eactivity management.		
Explanation of diluction of dil	41(5,10) Listed under the re tion or boration is required, inge should be seen prior to rence Title	sponsibilities of the Reactor Operator, start with the dilution or boration. The initiating the load change." All the dis Facility Reference Number	, page 8, 4.6.5, "Typically, initial effects (RCS tempe stracters have the correct Reference Section	, during plan erature chan actions in th Page No.	ned load changes where ge) of the reactivity wrong order.
Reactivity Manageme	ent	OP-AA-300		8	4
L.O. Number RXOPERE018 RXOPERE020	Objectives				
Material Required for	or Examination				
Question Source:	New	Question Modification Method:		Used Duri	ng Training Program
Question Source Co	omments				
Comment					

Question Topic RO 68 Given the following conditions: - - On your shift today, a component's normal monthly surveillance item is determined to have been scheduled incorrectly, and it has been 34 days since it was last performed. Which of the following statements describes the status of the affected component? a. The component must be declared INOPERABLE at the time of discovery because the 24 hour time limit allowed past the normal surveillance interval has been exceeded. b. The component remains OPERABLE because Technical Specifications allow a 25% time extension of the normal surveillance interval for surveillance completion, which has not been exceeded. c. The component remains OPERABLE ONLY for the next 24 hours after discovery, during which a SAT surveillance must be performed to ensure OPERABLITY, otherwise the component must be declared INOPERABLE. d. The component must be declared INOPERABLE at the time of discovery ONLY if any redundant structure, system, or component (SSC) is also INOPERABLE for the system in which the affected component is required to be OPERABLE. Answer b ExamDate: 9/26/2011									
Given the following conditions: - On your shift today, a component's normal monthly surveillance item is determined to have been scheduled incorrectly, and it has been 34 days since it was last performed. Which of the following statements describes the status of the affected component? a. The component must be declared INOPERABLE at the time of discovery because the 24 hour time limit allowed past the normal surveillance interval has been exceeded. b. The component remains OPERABLE because Technical Specifications allow a 25% time extension of the normal surveillance interval for surveillance completion, which has not been exceeded. c. The component remains OPERABLE DNLY for the next 24 hours after discovery, during which a SAT surveillance must be performed to ensure OPERABLITY, otherwise the component must be declared INOPERABLE. d. The component must be declared INOPERABLE at the time of discovery ONLY if any redundant structure, system, or component (SSC) is also INOPERABLE for the system in which the affected component is required to be OPERABLE. d. Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate; 9/26/2011									
 On your shift today, a component's normal monthly surveillance item is determined to have been scheduled incorrectly, and it has been 34 days since it was last performed. Which of the following statements describes the status of the affected component? a. The component must be declared INOPERABLE at the time of discovery because the 24 hour time limit allowed past the normal surveillance interval has been exceeded. b. The component remains OPERABLE because Technical Specifications allow a 25% time extension of the normal surveillance interval for surveillance completion, which has not been exceeded. c. The component remains OPERABLE ONLY for the next 24 hours after discovery, during which a SAT surveillance must be performed to ensure OPERABLEITY, otherwise the component must be declared INOPERABLE. d. The component must be declared INOPERABLE at the time of discovery ONLY if any redundant structure, system, or component (SSC) is also INOPERABLE for the system in which the affected component is required to be OPERABLE. Answer b Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/2011 									
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d. The component must be declared INOPERABLE at the time of discovery ONLY if any redundant structure, system, or component (SSC) is also INOPERABLE for the system in which the affected component is required to be OPERABLE. Answer b Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate; 9/26/2011									
Answer b Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate; 9/26/2011									
KA: 194001G212 2.2.12 RO Value: 3.7 SRO Value: 4.1 Section: PWG RO Group: 1 SRO Group: 1 55.43									
System/Evolution Title GENERI									
KA Statement:									
Knowledge of surveillance procedures.									
Answers: interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval." Tech Spec 4.0.3 states that" If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or un to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the									
Surveillance. If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered." A is incorrect because the 25% "Grace Period" (which is 7.75 days for a 31 day monthly surveillance) has not been exceeded. C is incorrect (and different from Distracter A) because the 24 hour time limit is incorrect AND it says it would be applied from time of discovery, not added to the normal surveillance interval. D is incorrect because there is no requirement to check other SSC of that system with regards to how it affects the component which has exceeded its monthly surveillance interval.									
Reference Title Facility Reference Number Reference Section Revision									
Salem Tech Specs 3/4 0-3 279									

L.O. Number TECHSPE014

Objectives

RO SkyScraper SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes												
Quest	tion Topic	RO 69										
Given the following conditions on Unit 2:												
 Reactor power is 75%. A RCS leak rate surveillance indicates the following: Total Corrected Volume leak rate is 4.0 gpm. Leakage to PRT is 2.0 gpm. Leakage to the Reactor Coolant Drain Tank is 1.3 gpm. Total primary to secondary leakage is 0.1 gpm. Which one, if any, of the following Technical Specification leakage limits has been exceeded? 												
a. None.												
b.	b. Identified.											
C.	C. Unidentified.											
d.	d. Primary-to-Secondary.							1				
Answe	r c	Exam Level	R	Cognitive	e Level	Application	<u>וווו</u>	Facility:	Salem 1 & 2	Exam	Date:	9/26/2011
KA: 1	94001G22	2 2.2.22	·	RO Value:	4.0 SRC	Value: 4	.7 Sec	ion: PW	G RO Group:	1 SRO	Group:	55.43
System/Evolution Title												
KA Statement:												
Knowledge of limiting conditions for operations and safety limits.												
Answers: identified, so while it is >1 gpm, its limit is 10 gpm. RCDT leakage is unidentified, so since it is >1 gpm, its limit is exceeded.												
		Reference Title		Facility F	Reference	Number	Refere	nce Section	Page No.	Revision		
Salem Tech Specs							kanduditt	3.4.7.2	2	3/4 4-17	282	
						· · · · ·						
							k					
L.O. Number TECHSPE015 Objectives												
Material Required for Examination												
Question Source: Facility Exam Bank Question Modification Method: Direct From Source Used During Training Program												
Question Source Comments Salem 2002 RO NRC Exam (4 NRC Exams ago)												
Comment												

RO SkyScraper SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes									
Question Topic RO 70									
Which of the following Unit 2 conditions will require entry into an ACTIVE Tech Spec LCO Action?									
With Unit 2 in									
a. MODE 1, 26 SW pump is C/T, ALL other SW pumps remain OPERABLE.									
b, MODE 5, performing a shutdown, 2N32	Source Range NI control power supply fuses blow.								
c. MODE 3, 21AF21 AUX FEED - S/G LEVEL CONTROL VALVE is discovered in the jacked shut position.									
d. MODE 4, 2PR3 PZR Code Safety Valve is declared INOPERABLE with 2PR4 and 2PR5, PZR Code Safety Valves OPERABLE.									
Answer c Exam Level R Cogn	itive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/2011								
KA: 194001G242 2.2.42 RO Valu	ie: 3.9 SRO Value: 4.6 Section: PWG RO Group: 1 SRO Group: 1 55.43								
System/Evolution Title GENERI									
KA Statement:									
Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.									
Answers: are required. An OPERABLE SW loop consists of one pump from each vital bus plus 2 pumps per bay. 3.7.4. SO.SW-0005, Att 2 page 1 of 36. In MODE 3,4,5 only ONE SR is required. 3.3.1.1 Table 3.3-1.6.b. ALL 3 AFW pumps and flow paths are required to be OPERABLE in MODES 1-3. 3.7.1.2									
Reference Title	Facility Reference Number Reference Section Page No. Revision								
Salem Tech Specs									
Service Water System Operation	<u>S2.OP-S0.SW-0005</u> 40								
L.O. Number TECHSPE015 Objectives									
Material Required for Examination									
Question Source: Facility Exam Bank Question Modification Method: Direct From Source Used During Training Program									
Question Source Comments J-ROC69									
Comment									
RO Skys	Scraper	SRO Skyscraper	RO Sys	tem/Evolution List SRO	System/Ev	olution List Outline C	hanges		
--	--	---	---	--	--	--	--	---	
Question	n Topic	RO 71							
Given th	e followir	ng conditions:							
- Units - Unit 2 - A leak - The g - In ord high ra - The w	1 and 2 a 2 has exp k must be general ar ler to read adiation a vorker cur	are at 100% power. erienced several fue e repaired on a pipe ea dose rate in the l ch the location of the area for 2 minutes a rrently has an accum	el pin failure in the Aux. location of t e repair the nd return vi nulated anr	s. Bldg. pipe tunnel. he repair is 600 mrem/hr. worker must transit through a the same path. ual dose of 400 mrem.	a 6 Rem/	hr			
Administ	trative Do	ose Control Level at	PSEG Nuc	lear LLC.	e repairs P			ne Current Annual TEDE	
a. 70	0 minutes	5.							
b. 12	20 minute	ÐS.							
c. 14	40 minute	es.							
d. 16	60 minute	es.							
	<u>F</u>	Exam Lovel	Cogn	tive Level		cility: - Salem 1 & 2	-Exam	Date: - 9/26/2011	
KA : 194	001G304	2.3.4	RO Valu	e: 3.2 SRO Value: 3.7	Section	: PWG RO Group:	1 SRO (Group: 1 55.43	
System/E	Evolution	Title		المستعمل المتعالم المتعالم المستعمل المستعمل المستعمل المستعمل المستعمل المستعمل المستعمل المستعمل المستعمل الم المستعمل المستعمل الم	- <u>Lizze de de la</u>			GENERI	
KA State	ment:	[
		Knowledge of radiati	ion exposu	e limits under normal or emo	ergency c	onditions.			
Answers		LC. Transient expo nrem = 800 mrem., Control Level. 1200 <u>ncorrect - Based on</u> Control Level (2000)	Soure is 400 ADL of 200 mrem /600 Loalculating	mrem (6000mrem/hr x 4/60 0 mrem - 800 mrem = 1200 mrem/hr = 2 hours. A is inco using a one-way transit dos ansit dose.	= Adminis hr). (trans mrem allo prrect, bas se: D is inc	trative Dose Control Leve it to and from the job). (C wable before reaching th sed on using limit of 1500 correct - Based on using t	e is 2000 mr ourrent) 400 i e Annual TE versus corr the Annual T	rem for PSEG Nuclear mrem + (transit) 400 DE Administrative Dose ect ADL (2000); C is EDE Administrative Dose	
	R	eference Title		Facility Reference Nu	mber	Reference Section	Page No.	Revision	
Exposure	e Control	and Authorization		RP-AA-203				5	
ļ									
	nber NE002	Obje	ctives						
Material	Required	I for Examination	<u>.</u>						
Question	n Source	Facility Exam E	Bank	Question Modification Met	hod:	Direct From Source	Used Duri	ng Training Program	
Question	n Source	Comments Visio	n Q44899						
Commen	nt								

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes	
Question Topic	ic RO 72	
Given the follow	wing conditions:	T
- Unit 1 is in M - Unit 2 is at 10 - All Unit 1 & 2 - 21,23 & 26 S - 21 CVCS Mo	Mode 2, with all Shutdown Banks withdrawn. 100% power 2 Circulating Pumps are in service Service Water Pumps are running Ionitor Tank is being released via 22 CCW Hx to the Circulating Water System	ala and a second and
Choose the con	ndition that would require termination of the liquid release.	
a. 21 CCW	V Pump trips.	
b. 11A & 11	1B Circulators trip.	
c. Unit 1 R	Rx trips inadvertently during an instrument calibration.	
d. 23 Servio	ice Water Pump trips and header pressure drops from 115 to 105 psig.	
Answer b	Exam Level R Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/201	1
KA: 194001G3	311 2.3.11 RO Value: 3.8 SRO Value: 4.3 Section: PWG RO Group: 1 SRO Group: 1 55.43]
System/Evolution	ion Title GENERI	
KA Statement:		<u> </u>
	Ability to control radiation releases.	
Answers:	header discharges into the outlet of 11A and 11B circulators. A Unit 1 trip does not constitute an "emergency", so the requirements of OP-SA-106-101-2001 Operating with an Emergency on the Opposite Unit are not applicable. Normal SW header pressure is 105- 125, the SW flow from the remaining 2 pumps in service will maintain flow to the CCHX. Trip of an operating CCW pump would result in an auto start of the standby pump and the CCW system remains in service	-
	Reference Title Facility Reference Number Reference Section Page No. Revision	
RELEASE OF R	RADIOACTIVE LIQUID WASTE S2.OP-SO.WL-0001	-
L.O. Number	Objectives	
Material Requir	ired for Examination	
Question Source	rce: Facility Exam Bank Question Modification Method: Direct From Source Used During Training Program	
Question Source	rce Comments VISION Q119138	
Comment		

RO SkyScraper	SRO	Skyscraper	RO Sys	tem/Evolution List	SRO System/Ev	olution List Outline (Changes		
Question Topi	c RO 7	73							
Given the follow	wing cond	litions:							
 Unit 2 has e Operators h Shock. 	xperience ave entere	ed a steam lir ed 2-EOP-FF	ne break ins RTS-1, Res	ide containment. ponse to Imminent P	ressurized Ther	nal			
Why will the or	perators b	e instructed	to terminate	SI and start a RCP i	f possible?				
a. The soa	ik required	d by FRTS-1	requires Si	to be secured and a	RCP to be runni	ng to provide ability to us	e spray to d	epressurize prim	nary.
b. The soa ensure (k required	d by FRTS-1 utdown marg	requires SI in as the R0	to be secured. A RO	CP should be sta	arted to equalize boron co	oncentration	throughout the	primary to
c. Safety I RCP is	njection flo started to	ow is a signif minimize ter	ficant contril mperature g	outor to any cold leg radient across S/G tu	temperature dec	rease or overpressure co	ndition and	must be termina	ted. A
d. Safety I RCP is	njection flo	ow is a signif provide mixi	ficant contril	outor to any cold leg I and warm reactor c	temperature dec oolant water.	rease or overpressure co	ndition and	must be termina	ted. A
Answer d	Exam	Lével	Cogni	tive Level Memo	ry Fa	cility: Salem 1 & 2	Exam	Date:	9/26/2011
KA: 194001G4	418	2.4.18	RO Valu	e: 3.3 SRO Value	e: 4.0 Section	1: PWG RO Group:	1 SRO	Group: 1	55.43
System/Evolut	ion Title								GENERI
KA Statement:]			(
Explanation of	55.41(1	age of the sp	rrect becaus	s for EOPs.	CP operation is n	of the priority in FRTS-1.	and the soa	k is not the basi	is for
Answers:	termina	ating SI. B is	s incorrect b	ecause the soak is n	ot the basis for t	erminating SI. C is incom	rect becaus	e the SI basis of	orrect but
	cold inc	coming ECCS	S water and	the warm reactor co	olant water, and	therefore decrease the like and subcooling are ac	kelihood of a	PTS condition,	an RCP
	have co	ontributed to	the RCS co	oldown or mat prever	nt a subsequent	reduction in RCS pressur	re."		
	Referen	ce Title		Facility Referen	nce Number 🚿	Reference Section	Page No.	Revision	
Response to Pr	essurized	I Thermal Sh	lock	2-EOP-FRTS-1				25	
]		
]		
L.O. Number									
FRTS00E007		Obje	ctives						
Material Requi	red for E	xamination	34						
Question Sour	ce: O	ther Facility		Question Modificati	on Method:	Editorially Modified	Used Dur	ing Training Pr	ogram
Question Sour	ce Comn	nents 5/30	/2003 Seab	rook NRC exam	<u>, , , , , , , , , , , , , , , , , , , </u>		• <u>Li i</u>		
Comment		<u>28. (29. 262)</u>							
				*					
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RO SkyScraper	SRO Skyscrape	er RO	System/Evolution L	ist SRO Syste	m/Evolution Li	st Outline C	hanges		
Question Topic	RO 74	10 100 10011 1 Jan courses course							
Given the following	g conditions:								
Unit 2 is operating OHA A-7, FIRE PI Panel 2RP5 is che - Zone 59 - Air - Zone 74 - Sn	at 100% powe ROT FIRE, ann ecked and indic and Water Del toke and Fire D	r. unciates. ates the fol luge, Conta Detector, Co	lowing: inment El. 100 Pa ontainment El. 100	nel 335 is lit. I Panel 335 is lit.					
					Pump has a	its started to sur		taction water t	
associated	deluge valves i	n containm	ent.						
b. Dispatch a	NEO to place b	ooth PZR P	ORV breaker keys	witches in EMER	CLOSE.				
c. Dispatch a	NEO to open th	ne associat	ed deluge valves.						
d. Open the 2	FP147 from the	e control ro	om.						
Answer d	Exam Level	R Co	ognitive Level	Memory	Facility:	Salem 1 & 2	Exam	Date:	9/26/2011
KA: 194001G427	2.4.27	RO	alue: 3.4 SRC) Value: 3.9 Se	ction: PWC	B RO Group:	1 SRO	Group: 1	55.43
System/Evolution	Title						•		GENERI
KA Statement:				- <u> </u>					
×	nowledge of "fi	re in the pla	ant" procedures.						
Answers:	ontrol room on PORV breakers is incorrect be	2RP5. C are operate cause the	ed when the fire is Fire Pumps will no	se the deluge valve in the relay room, t have auto started	s are automa but is plausib since the FP	tic and in contain le becasue they 147 has to be op	are in contai	incorrect beca nment where s not an action	use the the fire is.
Re	ference Title		Facility	Reference Numbe	r Refere	nce Section	Page No.	Revision	
No. 1 & 2 Units Fin	e Protection	5.40	205222-2					60	
Overhead Annunci	ators - Window	A	S2.OP-AR.Z	Z-0001			22	51	
Control room fire R	lesponse		S2.OP-AB.F	IRE-0001	[]	7	
L.O. Number FIRPROE004 FIRPROE008		Objectives							
Material Required	for Examinati	on 😽							y and the second se
Question Source:	Facility Exa	am Bank	Question Mo	dification Method	: Editorial	y Modified	Used Duri	ng Training I	Program
Question Source	Comments	Vision Q698 system. Mo	805, modified sten odified choices and	n to make it what v d added valve iden	ould control r tifiers. Replac	oom crew do ins ced dispatching l	tead of what NEO to 147 v	is the status of with going to F	of the FP ORV
Comment									

Finally-section (algo 1) presented

No system tvoudor List							
Question Topic RO 75							
Given the following conditions:							
- An Alert has been declared at Salem, and all required notifications have been made by							
the Primary Communicator. Conditions degrade to the point where a Site Area Emergency is declared.							
Which of the following identifies the PRIMARY method which the Primary Communicator will use to make notifications to the States of De	laware and						
New Jersey, and how long from the SAE declaration do they have to make those notifications IAW Attachment 6, Primary Communicator	Log of the						
	l						
a NETS phones within 15 minutes							
b. NETS phones within 60 minutes.							
c. ESSX phones within 15 minutes.							
d. ESSX phones within 60 minutes.							
	0/26/20111						
Answer a Exam Level R Cognitive Level Memory Facility: Salem 1 & 2 ExamDate:	9/26/2011						
KA: 194001G443 2.4.43 RO Value: 3.2 SRO Value: 3.8 Section: PVVG RO Group: 1 SRO Group: 1							
	GENERI						
KA Statement: Knowledge of emergency communications systems and techniques.							
Explanation of 55.41(10) Salem ECG, lists the communications systems in order of preference. The NETS (Nuclear Emergency							
Answers: Control Telecommunications System) is the primary closed circuit communication system for off-site notifications. The ESSX is closed circuit system, which is used as a backup for NETS. The notifications to the States must be made within 15 min	also a utes of the						
declaration of an Emergency, even if a lower classification emergency is already in progress. The 60 minutes is plausibl candidate thinks the time is less restrictive since an emergency already exists.	e if the						
Reference Title Facility Reference Number Reference Section Page No. Revision							
Emergency Preparedness Training Communication NEPCOMMDTYSC							
L.O. Number Objectives							
GENISSE013							
Material Required for Examination							
Question Source: New Question Modification Method: Used During Training P	rogram						
Question Source: New Question Modification Method: Used During Training P Question Source Comments	rogram						
Question Source: New Question Modification Method: Used During Training P Question Source Comments	rogram						
Question Source: New Question Modification Method: Used During Training P Question Source Comments	rogram						
Question Source: New Question Modification Method: Used During Training P Question Source Comments	rogram						
Question Source: New Question Modification Method: Used During Training P Question Source Comments	rogram						

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

Applicant Information									
Name:	Region: I								
Date: 9/26/2011	Facility: Salem 1 & 2								
License Level: SRO	Reactor Type: W								
Start Time:	Finish Time:								
Ins	structions								
Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination you must achieve a final grade of at least 80.00 percent overall, with 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3 hours if you are only taking the SRO portion. Applicant Certification									
	Applicant's Signature								
	Results								
RO/SRO-Only/Total Examination Value	es/ / Points								
Applicant's Score	/ / Points								
Applicant's Grade	/ / Percent								

SALEM 2011 EXAM – SENIOR REACTOR OPERATOR WRITTEN EXAM KEY

76. (SRO #1) D 77. (SRO #2) А 78. (SRO #3) С 79. (SRO #4) С 80. (SRO #5) D 81. (SRO #6) A 82. (SRO #7) B 83. (SRO #8) D 84. (SRO #9) A 85. (SRO #10) B 86. (SRO #11) B 87. (SRO #12) C 88. (SRO #13) D - Q#89 (SRO #14) deleted. Ros 11/4/11 -89: (SRO #14) C-90. (SRO #15) C 91. (SRO #16) B 92. (SRO #17) D 93. (SRO #18) D 94. (SRO #19) B 95. (SRO #20) C 96. (SRO #21) D 97. (SRO #22) A 98. (SRO #23) B 99. (SRO #24) A 100. (SRO #25) B

RO SkyScraper	SRO Skyscraper RO Sys	tem/Evolution List SRO System/Ev	olution List Outline C	hanges	
Question Topic	SRO 1				
Given the follow	ing conditions:	an an a Annaich ann an an an ann an Annaich an Annaich an an an Annaich an an Annaich Annaich Annaich Annaich A			
 Given the follow Unit 2 is perfored cold Shutdow RCS Tavg is RCS pressure 23 RCP is in 21 Charging performance 23 CCW pume 24 and 2C 4Performance 28 4KV vital 10 24 SPT loses due to faulty performance 28 EDG fails Which of the foll The CRS will 	Ing conditions: priming a RCS heatup and press in to Hot Standby. 210°F. a is 310 psig. service. pump is in service. p is C/T. (V Vital buses are powered from power, and NEITHER 2A nor 2 power, and NEITHER 2A nor 2 power available relay for 23 SPT pocks out on bus differential. to start. owing describes how the contro	urization IAW S2.OP-IO.ZZ-0002, 24 SPT. C 4KV vital buses transfer to alternate	: power		
a. enter S2.	OP-AB.CVC-0001 Loss of Char	ging, and take actions to start 22 char	ging pump prior to 23 RCF	seal packa	ge temperature rising to
the point	where seal injection flow is proh	ibited and 23 RCP trip is required.			
b. enter S2. 5 minutes	OP-AB.RCP-0001. Reactor Coc s after the receipt of OHA's D20-	lant Pump Abnormality, and trip 23 R D23 21(22,23,24) RCP BRG CLG WT	CP TR FLO LO.		
c. enter S2.	OP-AB.CVC-0001, and check 2	2 charging pump has started to supply	adequate seal injection to	o allow conti	nued RCP operation.
نــــــــــــــــــــــــــــــــــــ	ann anna hear an file ann an baar a file ann a				
d. enter S2.	OP-AB.RCP-0001, and trip 23 F	CP based on the loss of seal injection	and thermal barrier flow	to RCPs.	
Answer d	Exam Level S Cogn	tive Level Application Fa	cility: Salem 1 & 2	ExamD	9/26/2011
KA: 000015A21	0 AA2.10 RO Valu	e: 3.7 SRO Value: 3.7 Section	n: EPE RO Group:	1 SRO (Group: 1 55.43 🗸
System/Evolutio	n Title Reactor Coolant Pun	np Malfunctions			015
KA Statement:	Ability to determine and interpr	et the following as they apply to React	or Coolant Pump Malfunc	tions:	
An	When to secure RCPs on loss	of cooling or seal injection			
Explanation of Answers:	55.43(5)The initial electrical line power. With the RCS temperat bus. NO CCW pumps will be r available) charging pump trippe action in AB PCP is to trip PCP	eup, combined with the conditions occ ure < 312°, all charging pumps except unning since the only powered 4KV vi ed, there is no seal injection flow to RC e. B is correct. A is incorrect here	surring in the stem, will res to one are C/T. 21 charging tal bus CCW pump is C/T. CPs and no CCW flow to F use while AP PCP states	ult in only 20 g pump is po . With the or RCP thermal	C 4KV vital bus having wered from 2B 4KV vital nly operating (or barriers. The CAS
	5 minutes of the alarms annun without any time delay. C is i will not have auto started due t charging to available status, th	ciating, go to Attachment 2, Tripping R ncorrect because while AB.CVC will b o its power supply being C/T. D is inc the CAS action of AB.RCP will be the p	CPs, the loss of both sea e entered on the trip of 21 orrect because while the a riority, and seal package t	l injection Al charging pu action will be emperature	ND CCW directs RCP trip imp, 22 charging pump taken to restore a will not stop that action.
	Reference Title	Facility Reference Number	Reference Section	Page No.	Revision
Reactor Coolant	Pump Abnormality	S2.OP-AB.RCP-0001			21
Loss of Charging		S2.OP-AB.CVC-0001			9
				, <u> </u>	1
L.O. Number	Objectives				
ABRCP1E003					

RO_SkyScraper SRO_Skyscraper RO_System/Evolution List Outline Changes								
Question Topic	Question Topic SRO 2							
Given the follow	ing conditions:	dille en anno 1940 (1945). e a an an an Alfred ann an Anna Anna Anna Anna Anna Anna A	***************************************		1			
 Unit 2 is operative for cooling. RHR HX inlet RCS pressure 	 Unit 2 is operating with 21 Residual Heat Removal (RHR) pump and HX in service for cooling. RHR HX inlet temp is 170°F. RCS pressure is 280 psig. 							
 The RO repor NO Overhead Refueling Wa 21 Waste Hol 	 The RO reports that Pressurizer (PZR) level is slowly lowering unexpectedly. NO Overhead Annunciator alarms have been received. Refueling Water Storage Tank (RWST) level is stable. 21 Waste Hold Up Tank level is rising slowly. 							
Which of the fol	lowing identifies the procedure v B.RHR-0001, Loss of RHR. Clo	which will be used and the action(s) ta se 2CV8, RHR Letdown.	aken in that procedure whi	ch will isolate this leak?				
b. S2.OP-A	B.LOCA-1, Shutdown LOCA. C	lose 2CV8, RHR Letdown.						
c. S2.OP-A	B.LOCA-1. Place 22 RHR pum	o and HX in service and isolate 21 RH	HR loop.					
d. S2.OP-A	B.RHR-0001. Place 22 RHR pu	mp and HX in service and isolate 21	RHR loop.					
Answer a	Exam Level S Cogn	itive Level Application F	acility: Salem 1 & 2	ExamDate: 9/26/201	1			
KA: 000025G40	06 2.4.6 RO Valu	ie: 3.7 SRO Value: 4.7 Sectio	n: EPE RO Group:	1 SRO Group: 1 55.43	1			
System/Evolution	Don Title Loss of Residual He	at Removal System		025	_			
KA Statement:								
	Knowledge of EOP mitigation s	trategies.						
Explanation of Answers:	 55.43(5) The 2 AB.LOCA distra 4. With MODE 5 indicated in s the 2CV8 will be isolated and it because it has the wrong actio isolate BOTH loops in an attention 	acters are incorrect because AB.LOC tem, it is the wrong procedure, althou is the correct action for a leak which n, with the right procedure. The actio ant to stop the leak, then continue to t	A is applicable in MODE 3 ugh it has the correct action is causing the WHUT lev on in the AB.RHR is to rem to and identify specifically	3 with Accumulators isolated or MODE on in distracter B. A is correct because el to rise. Distracter C is incorrect nove BOTH loops from service and where the leak is				
	Reference Title	Facility Reference Number	Reference Section	Page No. Revision				
Loss of Residua	Heat Removal	S2.OP-AB.RHR-0001		17				
Shutdown LOCA		S2.OP-AB.LOCA-0001		8				
L.O. Number ABRHR1E005 ABRHR1E004	Objectives							
Material Requir	ed for Examination							
Question Source	e: Facility Exam Bank	Question Modification Method:	Significantly Modified	Used During Training Program				
Question Sourc	e Comments Salem 2003 SF	ONRC Exam. (5 NRC Exams ago)	Modified to include which	procedure to use.				
Comment								
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RO SkyScraper	SRO Skyscraper	RO System/Evolution List	SRO System/Evolution List	Outline Changes	
Question Topic	SRO 3				
Given the follow	ng conditions:			9	
 Unit 2 is operative of the second s	ating at 21% power. s being raised at 10% serve the following: 2ZR HTR ON PRESS 28% and lowering sl s begin stepping out CFCU LK DET HI alar rising at 0.35% per n	6 per hour. LO alarms. owly. in automatic at 8 spm. ms. ninute. orrect procedure and actions w	hich will be performed in that	procedure?	
a. Enter S2. and trip th	OP-AB-RC-0001, Rea the Rx, confirm the Rx	actor Coolant System Leak. If trip, initiate Safety Injection.	VCT level cannot be maintain	ed 11%, swap charging pum	p suction to the RWST
b. Enter S2.	OP-AB.STM-0001, E	xcessive Steam Flow. Trip the	e Turbine, initiate AFW, lower	power to <5%.	
c. Enter S2.	OP-AB.STM-0001. T	rip the Reactor, confirm the Ry	k trip, initiate Main Steamline Is	solation, initiate Safety Inject	ion.
d. Enter S2.	OP-AB-RC-0001. If F	PZR level cannot be maintained	d stable or rising, trip the Rx a	nd initiate Safety Injection.	
Answer e	Exam Lovel S	Cegnitive Level	cation Facility: - Sal	em 1 & 2 - ExamDate	9/26/2011
KA: 000040A20	2 AA2.02	RO Value: 4.6 SRO Valu	e: 4.7 Section: EPE	RO Group: 1 SRO Gro	pup: 1 55,43 🗸
System/Evolutio	n Title Steam Lin	e Rupture	a.4		040
KA Statement:	Ability to determine a Conditions requiring	and interpret the following as th a reactor trip	ney apply to Steam Line Ruptu	re:	
Explanation of Answers:	55.43(5) C is correct while the turbine load described in C above action is incorrect als and rx power was str AND the SRO must taken in that selected	t because the indications in the d increase is at 10% per hour. e. A is incorrect because only is so. B is incorrect because the able <u>SRO level question beca</u> select the appropriate procedure d procedure is required.	e stem are of a steam leak in c AB.STM states that if Rx pow some of the indications preser actions described would be ta use the assessment of conditi re which will address these co	nontainment. Rx power is ris er is rising uncontrollably, tal it in stem would be present f ken if the steam leak were or ons is required to determine inditions. Additionally, knowle	ing at ~21% per hour, ke the actions as or a RCS leak, and the utside containment what is bappening edge of the actions
	Reference Title	Facility Refere	ence Number	Section Page No. R	evision
Excessive Steam	Flow	S2.OP-AB.STM-0	001	9	
Reactor Coolant	System Leak	S2.OP-AB.RC-000	D1		0
L.O. Number ABSTM1E004	Objec	tives			
Material Require	d for Examination				
Question Source	e: New	Question Modificat	tion Method:	Used During	Training Program
Question Source	e Comments				
Comment				,	
				_	

RO SkyScraper	SRO Skyscraper RO Syst	em/Evolution List SRO System	n/Evolution List Outline C	hanges				
Question Topic	SRO 4							
Given the follow	Given the following conditions:							
 21 CVCS More 21 CVCS More Liquid Radware from 21 CVC Which of the foll Release was state 	nitor Tank is in recirc. nitor tank will be released via the aste system IAW S2.OP-SO.WL- S Monitor Tank. owing describes an action which arted, and which would require op	Waste Discharge Cross Connect 0001, Release of Radioactive Liq would result in an unmonitored F perator action to stop the release?	tion to Unit 1 _l uid Waste tadioactive Liquid Release if it	t was performed AFTER the Liquid				
a. Unit 2 CR	S authorizes a tagging request v S authorizes a tagging request v	which results in the 2R18, Liquid V which results in the 1R18, Liquid V	Vaste Disposal Rad monitor lo Waste Disposal Rad monitor lo	osing its power source.				
c. Unit 2 CF	RS authorizes a tagging request v urce.	which results in the 2FR1064, Rac	J Waste Liquid Monitor Pumps	s Discharge flowmeter losing its				
d. Unit 1 CF	RS authorizes a tagging request v urce.	which results in the 1FR1064, Rac	1 Waste Liquid Monitor Pumps	s Discharge flowmeter losing its				
Answer c	Exam Level S Cognit	tive Level Memory	Facility: Salem 1 & 2	ExamDate: 9/26/2011				
KA: 000059G23	6 2.2.36 RO Valu	e: 3.1 SRO Value: 4.2 Sec	tion: EPE RO Group:	2 SRO Group: 2 55.43 ✓				
System/Evolution	Accidental Liquid Rac	Iwaste Release		059				
KA Statement:	Ability to analyze the effect of more analyze the effect of more analyze the effect of more analyze the effect of the second sec	naintenance activities, such as de	graded power sources, on the	status of limiting conditions for				
Explanation of Answers:	55.43(4) The Salem ODCM is a were contained in Radiological 6.8.4.1.g.1, and Table 3.3-12 or so that if the R18 loses power, t stop the flow of water overhoard	a supporting document to the Unit Effluent Tech Specs are now inclu n page 19, the R18 and the FR10 the WL51 will shut, preventing an 1 The Flow recorders (FR1064) a	1 and Unit 2 Technical Speci uded in the ODCM. Using OD 64 required to be operable. T unmonitored release, and no re also required for releases	fications. The previous LCOs that ICM 3.3.3.8, IAW Salem Tech Specs The R18 is interlocked with the WL51 operator action would be required to There is no comparable interlock				
	between the flow recorder and t component was not available, a the 2WL51 IAW step 5.5.9. The cross connect line.	he WL51, so the release would be ind the release is ongoing. Loss of e Unit 1 distracters require knowle	e considered unmonitored bas of the flow recorder during the edge of the flow path for a rele	sed on the fact that a required release requires operators to close ease which is directed through the				
	Reference Title	Facility Reference Number	Reference Section	Page No. Revision				
Salem ODCM				26				
RELEASE OF R	ADIOACTIVE LIQUID WASTE	S2.OP-SO.WL-0001		24				
Waste Disposal	WL51	203679		18				

RO SkyScraper	SRO Skyscraper	RO System/Evolution List SRO System/Evolu	ution List
Question Topic	SRO 5		
Given the followin	g conditions:		
 Unit 1 is opera: 21, 24 and 26 21 and 22 SW The following 0 B-13, 21 S B-14, 22 S B-15, TUR B-48, SW The standby SW 	ting at 100% power. SW pumps are in se header pressures a DHAs annunciate wi W HDR PRESS LO W HDR PRESS LO B AREA SW HDR P /LV RM FLOODED. pump starts automa	rvice. re 108 psig. hin 10 seconds of each other in this order: RESS LO. tically, and OHAs B-13, B-14, and B-15 clear.	
Which of the follo	wing describes the	tatus of the SW system, and which procedure will	provide direct actions which will mitigate the event?
a. A SW leak	upstream of the 2S	1901, TURB LO CLR ST RET V has occurred. S2.	.OP-AB.SW-0002, Loss of Service Water-Turbine Header.
b. A SW leak	upstream of the 2S	T901, TURB LO CLR ST RET V has occurred. S2.	.OP-SO.SW-0001, Loss of Service Water Header Pressure.
c. A SW leak Header.	in the CFCU piping	in the 78' Mechanical Penetration Area has occurr	red. S2.OP-AB.SW-0002, Loss of Service Water-Turbine
d. A SW leak Pressure.	in the CFCU piping	in the 78' Mechanical Penetration Area has occurr	red. S2.OP-SO.SW-0001, Loss of Service Water Header
Answer d	Exam Level S	Cognitive Level Application Faci	ility: Salem 1 & 2 ExamDate: 9/26/2011
KA: 000062A202	AA2.02	RO Value: 2.9 SRO Value: 3.6 Section:	EPE RO Group: 1 SRO Group: 1 55.43
System/Evolution	Title Loss of Nu	uclear Service Water	062
KA Statement:	Ability to determine a	and interpret the following as they apply to Loss of le SWS loss	Nuclear Service Water:
Explanation of Answers:	55.43(5) The leak lo of where the SW val and depending on le procedure would be called for in stem) for	cation could be in the TGA with the conditions in the ve room and what piping is there is needed to answ ak size could cause a restoration of header pressu used. Although AB.SW-1 is entered for all the con r.a.TGA leak, it merely says to go to AB.SW-2 for	the stem except for the SW valve room flooding. Knowledge wer question. The 2ST901 would respond on a TGA leak, ures. If the leak is determined to be in the TGA, the AB.SW-2 nditions in the stem, it does NOT provide direct actions (as the TGA leak
K Loss of SW/ Hoad			
Loss of SW- Turb	ine Header	S2 OP-AB SW-0002	
Overhead Annund	ator Window B		
L.O. Number	Obje	ctives	
Material Require	d for Examination		
Question Source	New	Question Modification Method:	Used During Training Program
Question Source	Comments		
Comment			

RO SkyScraper	SRO Skyscraper	RO System/Evolution List	SRO System/Evolution	List Outline C	hanges		
Question Topic	SRO 6						
Given the follow - Unit 2 is in M - No fuel asser - Rx cavity leve - 21 RHR loop - 22 RHR loop Which one of th	ing conditions: ODE 6 entering a R nblies have been re li is 26' above the P is in service in Shu is O/S and availabl e following would pr	efueling Outage. moved from the Rx. RV flange. tdown Cooling. e. revent initiation of Rx defueling or	n Unit 2?				
a. Loss of C b. Loss of P c. Racking of	Control Air to contair Plant Page capability down the 22 RHR p	ump 4KV breaker.					
d. Only one	of the two SRNI's o	an provide audible indication in t	he Control Room.				
Answer a	Exam Level S	Cognitive Level Memo	ory Facility:	Salem 1 & 2	Exam	Date: 9/26/20)11
KA: 000065G13 System/Evolutio	36 2.1.36 on Title Loss of	RO Value: 3.0 SRO Valu	e 4.1 Section: EP	E RO Group:	1 SRO	Group: 1 55.43	
KA Statement: Explanation of Answers:	Knowledge of proc 55.43(7, 6) The re AUDIBLE indicatio preclude being abl	edures and limitations involved in equirement for SRNI's is BOTH of in in the control room. The manif e to perform core alts. Only ONE	n core alterations. perable and providing VI pulator crane is air powe BHR loop is required to	SUAL indication in red for gripping, so	the Control the loss of a MODE 6, 2	room, with ONE providir air to containment would 2 RHR loops are required	ig
A	to be OPERABLE	when <23' level above the flange					
	Reference Title	Facility Refere	ence Number Refer	ence Section	Page No.	Revision	
Refueling Opera Reac Pene Area	tions & Cont Control Air	S2.OP-IO.ZZ-0107	7		13	42.36	
L.O. Number	Ob	jectives					
Material Require	ed for Examination	i					
Question Source	e: New	Question Modificat	tion Method:		Used Duri	ng Training Program	
Question Sourc	e Comments						
Comment							

RO SkyScrape	SRO Skyscraper	RO System/Evolution List	SRO System/Ev	olution List Outline C	hanges		· · · · · · · · · · · · · · · · · · ·
Question Topi	c SRO 7						
Given the follo	wing conditions:						
 Unit 1 has experienced a large Main Steamline Break (MSLB) inside containment from 100% power. Safety Injection was initiated. MSLI has failed to shut ANY MS167 and they remain open. 11 AFP is C/T. 12 and 13 AFP's tripped after starting. RCS pressure is 700 psig. ALL RCPs have been tripped. Containment pressure is 18 psig and rising. ALL Wide Range SG levels are 35% and dropping. ALL SG pressures are 120 psig and dropping. RCS Tc's have dropped from 540°F to 230°F in 20 minutes. Evaluate the data and select the procedure to be entered and action to be taken upon transition out of 1-EOP-TRIP-1, Reactor Trip Response. a. 1-EOP-FRHS-1, Response to Imminent Pressurized Thermal Shock Conditions; shut all MS10's and steam dump valves. b. 1-EOP-FRHS-1, Response to Loss of Secondary Heat Sink; initiate feed and bleed immediately. c. 1-EOP-FRHS-1, initiate feed and bleed ONLY when 3/4 SG WR levels have dropped <32%.							
d. 1-EOP-		s Actuation and restore n	ormal charging and I	etdown.			
	Eventeral			Colors 1 8 2			0/26/2011
		RO Value: 3.7 SRO V	alue: 4.7 Section	n: EPE BO Group		are:	55.43
System/Evolut	ion Title Loss of Seco	andary Heat Sink					E05
KA Statement:	Knowledge of EOP mit	igation strategies.					
Explanation of Answers: 55.43(5) B is correct because the conditions given in stem would transition to FRHS-1 due to a RED path of no AFW flow and <9% NR level. The Bleed and Feed initiation criteria are when S/G WR levels are <36% (adverse), NOT 32% as in distracter c. Distracters A&D are incorrect because it is a lower priority RED path, though it's action is correct for the procedure.							
Reference Title Facility Reference Number Reference Section Page No. Revision							
Response to Lo	oss of Secondary Heat Sir	nk 1-EOP-FRHS-	1			24	
Response to Im	minent Pressurized Ther	mal Sh 1-EOP-FRTS-	1			25	
Critical Safety F	unction Status Trees	1-EOP-CFST-	1			25	
L.O. Number	Objecti	Ves				<u></u>	

L.O. Number FRHS00E005

Objectives

FRHS00E013

RO SkyScraper SRO Skyscraper RO Sy	stem/Evolution List SRO System/Ev	olution List Outline (Changes	al 18 1981/19 1911111111111111111111111111		
Question Topic SRO 8						
Given the following conditions:						
 A Rx trip and SI were initiated based on a LOCA 1 hour ago. Operators have transitioned out of EOP-TRIP-1, Reactor Trip or Safety Injection. RCS pressure is 350 psig and lowering very slowly. All RCPs are stopped. RCS highest CET is 290°F and lowering very slowly. Rx power is 300 cps and stable. RVLIS Full Range is 95% and stable. 21-23 SG NR levels are 33% and stable, and 24 SG NR level is 0%. Containment radiation levels are 500 mr/hr and stable. Containment pressure is 5 psig and lowering very slowly. Containment Sump level is 46% and stable. Which of the following identifies the highest priority CFST for these conditions, and actions taken in that associated EOP? a. Yellow Path Core Cooling. Isolate ECCS accumulators, depressurize SGs to atmospheric pressure. 						
			-	in effect		
b. Purple Path Containment Environment.		owpath (2005, 2006) an	a return to procedure i	in effect.		
c. Purple Path Containment Environment. expected levels.	Isolate fluid sources from outside cont	ainment which have corro	oborating indications o	f lower than		
PORVs and RPV Head Vents are shut.	Tiow for current RCS conditions as ex	pected of start pumps and	a angn now patris, and			
Answer d Exam Level S Cog	Application Factor	cility: Salem 1 & 2	ExamDate:	9/26/2011		
KA: 00WE07A201 EA2.1 RO Val	ue: 3.2 SRO Value: 4.0 Section	n: EPE RO Group:	2 SRO Group:	2 55.43 🗸		
System/Evolution Title Saturated Core Cod	ling			E07		
KA Statement: Ability to determine and interp	ret the following as they apply to Satur	ated Core Cooling:				
Facility conditions and selection	on of appropriate procedures during ab	normal and emergency o	perations.	2 Javal > 200/		
Explanation of 55.43(5) Core Cooling is the highest priority based on: All RCPs off and no subcooling and CETs <700° with RVLIS level >39%. Answers: 1 The actions in FRCC-3 check first if you need to be in a different procedure (SGTR-4 or AB.RHR-1), then has you reset safeguards, check ECCS flow vs RCS pressure and align valves if less than expected. Then it checks proper PZR PORV and RPV head vents shut. The CFST Tables for subcooling HAVE to be provided since they HAVE to be used to determine subcooling. Purple Path for CF on one to be in a strong or Cent Sump >35% (otherway). The Xellow path for CF on one to determine subcooling.						
correct. FRCE-1 actions are partially correct, in that you would isolate VC5 and 6 and return to procedure in effect, but the conditions for entering FRCE-1 were never met so you wouldn't be in procedure < 15 psig cont pressure.						
Reference Title	Facility Reference Number	Reference Section	Page No. Revisio	on		
Critical Safety Function Status Trees	2-EOP-CFST-1		25			
Response to Saturated Core Cooling conditions	2-EOP-FRCC-3		20			

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes					
Question Topic	SRO 9					
Given the follow	ing conditions:					
 Given the following conditions: Unit 2 was operating at 15% power prior to synchronizing the Main Generator. A Main Steamline rupture occurred that resulted in multiple Steam Generators depressurizing in containment before 2 steam generators could be isolated from the 2 faulted SGs. The 2 faulted SGs Tcolds are reading 270°F and lowering. The intact 2 SG Tcolds are 330°F and stable. RCS pressure is 500 psig and slowly lowering. Containment pressure is 16 psig and slowly lowering. All SG NR levels are <9%. Total AFW flow is 24E4 lbm/hr. Source Range SUR is 0.0 DPM. With CFST's in effect, which of the following identifies the procedure entry required, and actions which will be performed in that procedure? a. 2-EOP-FRTS-1, Response to Imminent Pressurized Thermal Shock Conditions. Maintain AFW flow >22E4 lbm/hr until at least ONE intact 						
b. 2-EOP-F	RSM-2, Response to Loss of Core Shutdown. Energize Source Range channels and verify SR SUR is 0 or negative.					
c. 2-EOP-F	RTS-1. Isolate any faulted SGs, depressurize RCS with ONE PORV to within 100°/hr Cooldown Curve.					
d. 2-EOP-F	RSM-2. Establish AFW flow >44E4 lbm/hr, borate RCS until IR SUR is negative.					
Answer a	Exam Level S Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/2011					
KA: 00WE08A2	201 EA2.1 RO Value; 3.4 SRO Value: 4.2 Section: EPE RO Group: 1 SRO Group: 1 55.43					
System/Evolution	on Title Pressurized Thermal Shock E08					
KA Statement:	Ability to determine and interpret the following as they apply to Pressurized Thermal Shock: Facility conditions and selection of appropriate procedures during abnormal and emergency operations.					
Explanation of 55.43(5) A is correct because the stem conditions result in a PURPLE path on FRTS. Actions for maintaining AFW flow (Step 3.5) and ECCS pump reduction (Step 12) are correct. C is incorrect because depressurizing the RCS to restore conditions within the 100°F/hr curve is performed in FRTS-2 in response to a Yellow Priority Condition. FRTS-1 is entered from either RED or PURPLE conditions, and with SG NR levels <9% (which means you're less than 15% adverse) you are directed to maintain AFW flow > 22E4 Ibm/hr With the SR NIs not energized, IR SLIB is required to be more negative than -0.2 dpm, or a YELLOW path exists for ERSM- 2. The FRTS is a higher priority, and is a PURPLE path. B is incorrect because it is the wrong procedure with the correct actions of that procedure. D is incorrect because it is the wrong procedure, and the actions are performed in FRSM-1.						
	Reference Title Facility Reference Number Reference Section Page No. Revision					

Reference Title	Facility Reference Number	Reference Section	Page No.	Revision
Critical Safety Function Status Trees	2-EOP-CFST-1			25
Response to Imminent Pressurized Thermal Sh	2-EOP-FRTS-1			25
Response to Loss of Core Shutdown	2-EOP-FRSM-2			20

FRTS00E002

RO SkyScraper SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes							
Question Topic SRO 10							
Given the following:							
 Unit 2 is operating at 100% power. 21 SPT is C/T. 							
Time T=0 A Rx trip occurs when the 2H 4KV Group bus loses power. Time T-10 A breaker failure relay actuates for 13KV North ringbus breaker 3-4.							
 Time T-25 The following indications are present: All RCS WR Thot's are 559°F and rising slowly. All RCS WR Tcold's are 549°F and stable. All SG pressures are 1015 psig and stable. All SG NR levels are 39% and stable. PZR level is 23% and rising slowly. 							
Which of the following identifies the action that must be performed?							
a. Lower 21-24MS10 setpoints to establish CET's stable or lowering IAW S2.OP-IO.ZZ-0008, Maintaining Hot Standby.							
b. Lower 21-24MS10 setpoints to establish CET's stable or lowering IAW S2.OP-AB.RC-0004, Natural Circulation.							
c. Lower Main Steam Dump pressure setpoint to stabilize or reduce RCS Thots IAW S2.OP-AB.RC-0004.							
d. Lower Main Steam Dump pressure setpoint to stabilize or reduce RCS Thots IAW S2.OP-IO.ZZ-0008.							
Answer b Exam Level S Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/2011							
KA: 00WE09G411 2.4.11 RO Value: 4.0 SRO Value: 4.2 Section: EPE RO Group: 1 SRO Group: 1 55.43							
System/Evolution Title Natural Circulation Operations E09							
KA Statement:							
Knowledge of abnormal condition procedures.							
Janation of 55.43(5) The breaker failure will cause a loss of 13KV SPTs #2 and #4, and #12 and #22, and 23 SPT. The 23CW bus will lose power and deenergize all "A circulators, but all "B" circulators remain in service and the Main Steam Dumps remain available initially. However, all condenser vacuum pumps lose power, (powered from H,F,G busses) and condenser vacuum will rise to the point where steam dumps are blocked (20" vacuum lowering). This is why SG pressure has risen to 1015 psig vs. the 1005 expected for Steam dumps in operation. 21 SPT being C/C (pormally has period with unit at 100% neuronal literation).							
21 and 22 RCPs. The breaker failure will deenergize 22 SPT causing a loss of the other 2 RCPs. A and B are incorrect because MS10 operation is not the preferred mode of temperature control, and the steam dumps remain available. D is incorrect with right action but wrong procedure. AB.RC-4 is entered on a loss of forced circulation in MODES 3 and 4. The stem shows nat cir is NOT present, so the correct answer has to be increase steam flow, but knowing how is required, with the correct procedure.							
Reference Title Facility Reference Number Reference Section Page No. Revision							
Natural Circulation S2.OP-AB.RC-0004 7							

Objectives

ABRC04E001

ABRCP1E004

RO SkyScraper	SRO Skyscraper RC	System/Evolution List SRO Sy	stem/Evolution List Outline	Changes ,		
Question Topic	SRO 11					
Given the follow	ing conditions:	ан ал Ханан ан Алан ан	96 Kanana ang ang ang ang ang ang ang ang an			
- Salem Unit 1 and level.	has performed a Rx trip and	I SI based on rapidly lowering PZR	pressure			
- The crew has	transitioned to 1-EOP-LOC	A-1, Loss of Reactor Coolant.				
Which of the foll	owing describes why the firs	st several steps of LOCA-1 check f	or reasons OTHER than a LOC/	A for being in LOCA-1?		
LOCA-1 actions	assume					
a. a loss of Secondar	RCS inventory. If the ECCS y Heat Sink could be require	injection flow is due to a Loss of S ed.	econdary Coolant, an unneces	sary transition to FRHS-1, Loss of		
b. a loss of faulted S	RCS inventory. If the ECCS G.	injection flow is due to a Loss of S	econdary Coolant, the event co	ould be terminated by isolating the		
c. a SGTR i Cold Leg	s NOT causing the LOCA con Recirculation would be made	ondition. If the ECCS injection flow le.	is due to a SGTR, an unneces	sary transition to LOCA-3, Transfer to		
d. a SGTR i returning	s NOT causing the LOCA co to LOCA-1 to terminate EC	ondition. If the ECCS injection flow CS flow.	is due to a SGTR, the tube rup	ture must be addressed before		
Answer b	Exam Level S C	ognitive Level Memory	Facility: Salem 1 & 2	ExamDate: 9/26/2011		
KA: 006000G42	22 2.4.22 RO	Value: 3.6 SRO Value: 4.4	Section: SYS RO Group:	1 SRO Group: 1 55.43 🗸		
System/Evolutio	n Title Emergency Core	Cooling System		006		
KA Statement:						
	Knowledge of the bases for	r prioritizing safety functions during	abnormal/emergency operation	IS		
Explanation of Answers:	55.43(5) The Major Action Categories for LOCA-1 are : 1. Check for Subsequent Failure, 2. Monitor Plant Equipment for Optimal Mode of Operation, and 3. Determine optimal Method of Long-Term Plant Recovery. The first item checks that a faulted or ruptured SG is not the reason for ECCS injection, and either fixes it on the spot (faulted) or transitions to another more appropriate procedure. With a faulted SG being the cause of the ECCS flow, LOCA-1 has a "do loop" which will wait until the SG has blown					
performed to do actions which will terminate the primary to secondary leakage, which is not performed in LOCA-1. Additionally, there is no transition from SGTR-1 to LOCA-1. The unnecessary transition to FRHS-1 is plausible because it happens on other procedures (FRCE,LOSC-2) when minimizing AFW flow to SGs when all are faulted. The K/A matches because the logical extension of safety function prioritization is the way the EOPs are ordered when different casualties can have the same indication or system response, but need to be addressed in a certain order.						
	Reference Title	Facility Reference Num	Reference Section	Page No. Revision		
Loss of Reactor	Coolant	1-EOP-LOCA-1				
Steam Generato	r Tube Rupture	1-EOP-SGTR-1		24		
Loss of Secondary Coolant						

Objectives

SGTR01E003 LOSC01E002

RO SkyScraper	SRO Skyscraper RO Sys	tem/Evolution List SRO System/Ev	olution List Outline Changes			
Question Topic	SRO 12					
Given the follow	ing conditions:		an ann an			
- Unit 2 is oper - 2PR1 fails op	ating at 100% power. en and remains open.					
Which of the foll	owing identifies how this affects	the PZR Master Pressure Controller (w IAW S2 OP-AB PZR-0001 Pressu	MPC) response, and what conseque	ences, if any, are		
a. MPC outp	but will LOWER. The unit may c	ontinue to operate indefinitely after the	e initial mitigative actions are comple	eted.		
b. MPC out	out will RISE. The unit may con	tinue to operate indefinitely after the in	nitial mitigative actions are complete	۶d.		
c. MPC out	out will LOWER. A unit shutdow	n will be required if 2PR1 cannot be r	estored to operable status.			
d. MPC out	out will RISE. A unit shutdown w	vill be required if 2PR1 cannot be rest	ored to operable status.			
Answer c	Exam Level S Cogni	tive Level Application Fa	cility: Salem 1 & 2 Exam	Date: 9/26/2011		
KA: 010000A20	3 A2.03 RO Valu	e: 4.1 SRO Value: 4.2 Section	RO Group: 1 SRC) Group: 1 55.43 🗸		
System/Evolutio	n Title Pressurizer Pressure	Control System		010		
KA Statement:	KA Statement: Ability to (a) predict the impacts of the following on the Pressurizer Pressure Control System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:					
Explanation of Answers:	55.43(2) This question is SRO malfunctions. Additionally, whil knowledge of the actions IN that lowers. As pressure lowers due Block valve is shut to isolate the	level because of the Tech Spec know e the question doesn't specifically ask t procedure. The MPC raises output to the open PORV, the output will lov e PORV in AB PZR. Tech Spec 3.4.5	ledge required, and what actions TS what procedure to use (too easy fo when actual pressure rises, and low ver to turn on heaters and close spra action b. if the PORV is not restored	directs for different PORV r AB.PZR), it does require vers as actual pressure ay valves. When the PORV within 72 hours, shutdown		
	is required. A PORV isolation t with power maintained to the Bl	hat DOESN'T require shutdown if not ock valve.	fixed is a leaking PORV, which is is	olated by its Block Valve		
	Reference Title	Facility Reference Number	Reference Section Page No	Revision		
S2.OP-AB.PZR-	0001	Pressurizer Pressure Malfunction				
Salem Tech Spe			3.4.5			
L.O. Number	L.O. Number ABPZR1E002 Objectives					
PZRP&LE010						
Material Require	ed for Examination					
Question Sourc	e:	Question Modification Method:	Used Du	ring Training Program		
Question Sourc	e Comments					
Comment						

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes					
Question Topic	SRO 13					
Given the follow	ing conditions:					
 Unit 2 is open 23 charging p A control circl opening, and Which of the foll 	ating at 100% power. pump is in service. uit malfunction has resulted in the 2CV3, 45 gpm Letdown Orifice Isolation d cannot be shut from the control room. lowing describes the impact this failure will have on operation of the PZR Level Control System, and how will operators respond?					
a. 23 chargi Charging	ing pump speed will rise. Place an additional charging pump in service in response to rising VCT level 1AW S2.OP-SO.CVC-0002, Pump Operation.					
b. 2CV55 w Flow.	ill modulate in the open direction. Isolate letdown and place Excess Letdown in service IAW S2.OP-SO.CVC-0003, Excess Letdown					
c. 2CV55 w 0002.	ill modulate in the open direction. Place an additional charging pump in service in response to rising VCT level IAW S2.OP-SO.CVC-					
d. 23 chargi	ing pump speed will rise. Isolate letdown and place Excess Letdown in service IAW S2.OP-SO.CVC-0003.					
Answer d	Exam Level S Cognitive Level Application Facility: Salem 1 & 2 ExamDate: 9/26/2011					
KA: 011000A20	01 A2.01 RO Value: 3.2 SRO Value: 3.1 Section: SYS RO Group: 2 SRO Group: 2 55.43					
System/Evolution	on Title Pressurizer Level Control System 011					
KA Statement:	Ability to (a) predict the impacts of the following on the Pressurizer Level Control System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:					
Explanation of Answers:	Explanation of Answers: 55.43(5) Letdown orifii are Containment Isolation valves, and will require letdown isolation to isolate the CIV. For long term operation Excess Letdown must be placed in service. The 23 charging pump (PDP) is normally in service at power. The CV55 is placed in manual and open to prevent it from responding to the Master Flow Controller when a centrifugal charging pump is not in service. It has a maximum flow of ~96 gpm. Normally, letdown flow is 75 gpm with one 75 gpm orifice in service. With the 45 gpm					
the CV55 when a centrifugal pump is in service. With a CCP O/S, the CV55 is in Manual open, and will not be affected by PZR level. Transferring to a centrifugal charging pump is a correct choice for an action, but would not be in response to rising VCT level. While starting an additional charging pump would certainly raise charging flow, Salem does not run with a PDP and a centrifugal charging pump is short period of time when transferring between pumps.						
	Reference Title Page No. Revision					
Control Console	CC2 S2.0P-AR.ZZ-0012 35					

Veletetice Hite	acting Reference Number	Reference Section	Fage NO.	Revision
Control Console CC2	S2.OP-AR.ZZ-0012			35



RO SkyScraper	SRO Skyscraper RO Syst	em/Evolution List SRO System/E	volution List Outline	Changes		
Question Topic	SRO 14					
Given the follow	ing conditions:				1	
- Unit 1 is oper - 1PR5, PZR S Which of the fol	 Unit 1 is operating at 100% power. 1PR5, PZR Safety Valve, fails open. 					
that procedure v	which will mitigate the effect of the	event.				
a. 1-EOP-L RCS and	OCA-2, Post LOCA Cooldown ar stop the depressurization when	nd Depressurization. Establish a <10 PZR level reaches 77%.	00°F/hr RCS cooldown te	restore subcooling. De	epressurize the	
b. 1-EOP-T Table C I	RIP-3, Safety Injection Termination of the second s	on. Determine minimum required su	bcooling, then reduce EC	CS pumps to minimum	require per	
c. 1-EOP-L	OCA-2. Establish a continuous	RCS cooldown to restore subcooling	. Depressorize the RCS	ONLY until PZR level is	>25%.	
d. 1-EOP-T	RIP-3. Sequentially stop ECCS	oumps while checking RCS pressure	stable or rising to equali	ze ECCS and break flow	N.	
Answer c	Exam Level S Cogni	tive Level Application	acility: Salem 1 & 2	ExamDate:	9/26/2011	
KA: 013000A20	03 A2.03 RO Value	e: 4.4 SRO Value: 4.7 Sectio	n: SYS RO Group	1 SRO Group:	1 55.43 🗸	
System/Evolution	Engineered Safety Fe	atures Actuation System	and an	adarah dari dan menangkan sebagai kenangkan dan dari dari dari dari dari dari dari dari	013	
KA Statement:	Ability to (a) predict the impacts predictions, use procedures to o	of the following on the Engineered S correct, control, or mitigate the conse	Safety Features Actuation equences of those abnorr	NSystem and (b) based nal operation:	on those	
Explanation of 55.43(5) The PZR Safety failing open will cause a SBLOCA. Pressure will rapidly lower, and a Rx trip will occur, followed shortly by a Low Pressure SI. The Safety Injection will actuate, and break flow will equal ECCS flow at ~ 800 psig. With no subcooling, the transition to TRIP-3 cannot be made, and LOCA-2 will initiate a cooldown/depressurization. The depressurization is ONLY performed until positive control of RCS inventory is established at 25% PZR level, as any continued depressurization may cause a						
The LOCA-2 distracter contains the correct cooldown rate limitation (which is intentionally absent from the correct choice) but the 77% PZR level is wrong. It is the level at which a depressurization in LOCA-5 (step 24.1) would be stopped. Choice B is wrong because wrong procedure and wrong action. Table C is found in LOCA-2. Choice D is wrong because wrong procedure, with correct action for that procedure.						
87757677.27	Reference Title	Eacility Reference Number	Reference Section	Page No Revisio	n	
Post LOCA Coo	down and Depressurization	1-EOP-LOCA-2			<u> </u>	
Safety Injection	Termination	1-EOP-TRIP-3		25		

Q#14 deleted . har 11/4/11

RO SkyScraper	SRO Skyscraper	RO Syst	em/Evolution List SRO System	VEvolution List Outline	Changes	
Question Topi	SRO 15					
Given the follow	ving conditions:					
 Unit 2 is in M Core off-load A fuel assem The mast tut Refueling ca Radiation Pr Which of the for Spent Fuel Poor 	 Given the following conditions: Unit 2 is in MODE 6. Core off-load is in progress and is 2/3 complete. A fuel assembly is in the transfer cart at the Spent Fuel Pool. The mast tube of the manipulator crane is empty. Refueling cavity level begins to drop rapidly, approximately 6 inches per minute. Radiation Protection reports flooding in the lower elevations of containment. 					
a. IMMEDI	ATELY shut the gate	valve. Main	tain the fuel assembly in a horizon	ntal position.	-	
b. IMMEDI	ATELY shut the gate	valve. Trans	fer the fuel assembly to the Fuel	Handling crane and place in	designated p	position.
c. START valve op	he transfer cart mov en limit is lost.	ing to contair	nment, then shut the gate valve w	hen the cart is clear. The fu	el transfer ca	rt will stop when the gate
d. START reaches	he transfer cart mov its normal travel sto	ing to contair	nment, then shut the gate valve w ainment side.	nen the cart is clear. The fu	el transfer ca	rt will continue until it
Answer c	Exam Level S	Cogni	tive Level Memory	Facility: Salem 1 & 2	Exam[Date: 9/26/2011
KA: 034000G4	35 2.4.35	RO Valu	e: 3.8 SRO Value: 4.0 Sec	tion: SYS RO Group:	2 SRO	Group: 2 55.43 🗹
System/Evoluti	on Title Fuel Har	ndling Equipr	nent System			034
KA Statement:						
	Knowledge of loca	auxiliary ope	erator tasks during an emergency	and the resultant operationa	l effects.	
Answers:	(2.4.C) states that while the transfer of cool it	step 3.13 AF the gate valv cart may stop	TER starting the cart to the contai e is not to be closed until the fuel prior to reaching containment, it	nment side. The discussion handling cart is clear of the s acceptable because the w	section of S gate valve pa ater around t	2.OP-AB.FUEL-0002 ath. It also states that he fuel with shield and
	Reference Title		Facility Reference Number	Reference Section	Page No.	Revision
Loss of Refuelir	g Cavity or Spent Fu	uel Pool Lev	S2.OP-AB.FUEL-0002			10
L.O. Number Objectives ABFUE2E002 Objectives						
Material Required for Examination						
Question Source: Facility Exam Bank Question Modification Method: Direct From Source Used During Training Program						
Question Source Comments Vision Q71988						
Comment						

RO SkyScraper	SRO Skyscraper RO Sy	stem/Evolution List SRO	System/Evolution List	e Changes				
Question Topic	SRO 16							
Given the follow	Given the following conditions:							
 Unit 2 is performing a Rx startup. Rx power is currently stable at 6%. 22 SGFP is supplying Main Feed to all S/G's. Steam dumps are controlling Tave in MS Pressure control - Auto at 980 psig. All MS10's are closed in AUTO at 1015 psig. 23TB40 fails 50% open. RCS Tavg lowers to 540.9°F and continues to lower. 								
	bices completes the following s							
a minimum	shutdown margin cannot be as	minutes, the Rx trip breaker	s must be opened within the ne	xt 15 minutes bec	ause			
			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					
b. protective	instrumentation may not operation	ate when expected.			-			
c. calculatio	ns determining adequate DNB	R are no longer valid.						
d. control ro	d worth is calculated only over	the range of programmed Tay	vg.					
Answer b	Exam Level S Cogr	itive Level Memory	Facility: Salem 1 & 2	ExamDa	te: 9/26/2011			
KA: 041000A20	2 A2.02 RO Val	ue: 3.6 SRO Value: 3.9	Section: SYS RO Grou	p: 2 SRO Gr	roup: 2 55.43 🗸			
System/Evolutio	n Title Steam Dump System	m and Turbine Bypass Contr	ol		041			
KA Statement:	Ability to (a) predict the impact predictions, use procedures to	ts of the following on the Stea correct, control, or mitigate t	m Dump System and Turbine E he consequences of those abno	ypass Control an rmal operation:	d (b) based on those			
	Steam valve stuck open							
Explanation of 15.43(2) Tech Spec 3.1.1.4 states that the lowest RGS Lavg must be maintained greater than or equal to 547°F in Modes 1 and 2. Answers: The stem states 6% power, so the unit is in Mode 1 and the TSAS is applicable. The action is to restore Tavg to 541 within 15 minutes or be in Hot Standby in the next 15 minutes. The bases for TSAS 3.1.1.4 list 5 reasons why Tavg is required to be at this temperature. One of them is"ensures the protective instrumentation is within its normal analyzed band". The control rod worth is plausible if the candidate believes that the effect of temperature on control rod worth is significant enough to require a unit.								
shutdown. Minimum shutdown margin applies to control rod position and is not included in the bases for Minimum temp for criticality. DNBR is the bases for maintaining parameters in 3.2.5 (PZR press, RCS Tavg, and RCS total flow rate)								
	Reference Title	Facility Reference Nu	mber Reference Section	Page No.	Revision			
Salem Tech Spe	CS		TSAS 3.1.1.4	3/4 1-6 B	<u> </u>			
Excessive Steam	Flow	S2.OP-AB.STM-0001		16	9			

Objectives

STDUMPE016

RO S	kvScraper	SRO Skyscraper	RO Syst	em/Evolution L	ist SRO Svs	stem/Evo	lution L	st Outline C	hanges		
Quest	ion Topic	SRO 17									I
Given	the followi	ng conditions:									1
- Sal - 2B - 2A - 2A - A C Which	em Unit 2 EDG is su and 2C ED and 2C SE CO2 actuat	is responding to a los pplying 2B 4KV vital to OGs have tripped. CS have been deene ion occurs in 2B EDG powing identifies the el	s of all off-s ous. grgized. groom. ffect the CC	ite power. 02 actuation v	vill have on 2B EI	DG ope	ration, a	and what action(s) will be perf	ormed?	
2B ED											
a.	a. will automatically trip. Deenergize 2B SEC IAW 2-EOP-LOPA-1, Loss of All AC Power.										
b.	will NOT a	automatically trip. De	energize 2	B SEC IAW S	2.0P-SO.DGV-0	001, Die	esel Ge	nerator Area Ven	tilation Oper	ation.	
c.	will autom EOP-LOP	atically trip. Place th A-1.	e 2B Diese	Generator S	upply Fans Emer	rg Bypa	ss of C	02 Shutdown Swi	tch at 2RP5	in Emerge	ncy IAW 2-
d.	will NOT a S2.OP-S0	automatically trip. Pla D.DGV-0001.	ace the 2B [Diesel Genera	ator Supply Fans	Emerg	Bypass	of CO2 Shutdow	n Switch at	2RP5 in En	nergency IAW
Answe	r d	Exam Level S	Cognit	ive Level	Application	Fac	ility:	Salem 1 & 2	Exam	Date:	9/26/2011
KA: 0	64000A22	2 A2.22	RO Value	e: 2.4 SRC	O Value: 2.8* S	Section	SYS	RO Group:	1 SRO	Group:	1 55.43 🗸
System	n/Evolutio	n Title Emergence	y Diesel Ge	nerators							064
KA Sta	itement:	Ability to (a) predict t procedures to correc	he impacts t, c <u>ontrol, o</u>	of the followi r mitigate the	ng on the Emerge consequences o	ency Die f <u>those</u>	esel Ge abnorm	nerators and (b) t al operation:	based on the	ose predicti	ons, use
Explar Answe	nation of ers:	There is no automati EDG Area/control roo plausible if the candi- present with 2 vital b switches remain in A there is an exhaust fa	c EDG trip om supply f date thinks uses deene UTO, an th an for the E	on CO2 actua an. The SEC that the SEC orgized. Bypa ev operate ba DG FO Stora	ation, either in the c deenergization would prevent ar assing the CO2 sl ased on room ten ige area.	EDG of the ur EDG t nutdowr	ontrol r naffecte rip, sind n of the reThe	oom or the EDG a ed SECs/EDGs in ce there would be supply fans allow re is no exhaust f	area. The S stem is to n a standing I s them to re an for the El	SEC does n nake the EI Mode II SE start since DG or Cont	ot control the DG trip C signal their control rol rooms, but
		Reference Title		Facility	Reference Numb	per	Refere	nce Section	Page No.	Revision	
Diesel	Generator	Area Ventilation Ope	eration	S2.OP-SO.	DGV-0001					5	<u>j</u>
											1
]]
L.O. N EDG0	umber 00E008	Objec	ctives								
Materi	al Require	d for Examination	A	10 ⁻							
Quest	ion Sourc	e: New	[Question Mo	dification Metho	d: _			Used Duri	ng Training	g Program
Quest	ion Sourc	e Comments									
Comm	ient										
1											

ROS	SkyScraper	SRO	Skyscra	per	RO Syst	em/Evolution	List	SRO Syste	m/Evolution	n List	Outline C	hanc	qes			
Ques	tion Topic	SRO	18							_						
Giver	the followi	ng condi	itions:							·····						
- Un - 25 - Th OF - 23	 Unit 2 is operating at 100% power. 25 SW pump is INOPERABLE for scheduled maintenance. The appropriate TSAS Tracking entry for TSAS 3.7.4 has been made in OP-SA-108-115-1001, Operability Assessment and Equipment Control Program. 23 SW pump strainer motor fails. 															
Whic	h choice ide	entifies t	ne actio	on that	is required	i to be perfo	rmed and	the Bases	for that ac	ction?						
a.	a. Exit the TSAS Tracking statement for 25 SW pump, and enter TSAS 3.7.4 as an ACTIVE entry due to 1 SW loop being INOPERABLE.															
b.	Exit the T	SAS Tra	cking s	tatem	ent for 25 S	SW pump, a	nd enter T	SAS 3.7.4	as an AC	TIVE ent	try due to 2	SW	pumps	being IN	NOPER	ABLE.
c.	Make a se OPERAB	econd, se ILITY of	eparate the SW) TSAS / syste	S Tracking	entry for 23	SW pump	b. Each 4K	V vital bus	s require	s only one (RABLE	SW pu	mp to e	nsure full
d.	Make a se into active	econd, s e TSAS (eparate 3.7.4 is	TSAS requir	3 Tracking ed since or	entry for 23 nly one OPE	SW pump ERABLE S	W loop wo	other SW uld remain	pump we n.	ere to be de	clare	d INOP	ERABL	E, THE	N entry
Answe	er d	Exam	Level	S	Cognit	ive Level	Memory	/	Facility	: Sale	m1&2		ExamD	Date:		9/26/2011
KA:	076000G23	7	2.2.37	·	RO Value	a: 3.6 SF	RO Value:	4.6 Se	ction: S	YS	O Group:	1	SRO	Group:	1	55.43 🗸
Syster	m/Evolutio	n Title	Servi	ice Wa	ater System	1										076
KA St	atement:	Ability to	o deterr	mine c	perability a	nd/or availa	ability of sa	afety related	d equipme	nt.						1
Expla Answe	Explanation of 55.43(2) Each SW pump must have its strainer operable for the SW pump to be operable. (SO.SW-005, page 97). With 2 SW pumps inoperable on different vital buses AND in different SW bays as described in stem, then BOTH SW loops remain operable. The requirement for 2 operable SW LOOPS are: One operable pump on A bus, One operable pump on B bus, One operable pump on C bus, and 2 operable pumps per bay. The requirement for ONE operable SW loop is 2 operable pumps powered from different vital buses. D is correct because any other SW pump inoperable would not meet the 2 operable pumps per bay.															
		operable be one differen	e SW lo operabl t vital bi	oops. le SW uses ii	C is incorr loop. A an different s	ect because Id B are wro SW bays.	e the base	is is wrong. se entry int	o an active	vere only e Tech S	pec is not r	per v equir	vital bus red for 2	s, then t SW pu	here wo umps in	op on
	i de la composition de la comp	Referenc	e Title:	<u>Itali</u>		Facility	y Referen	ce Numbe	r Refe	erence S	ection	Pag	ge No.	Revis	sion	
Salem	Tech Spe	cs					<u> </u>		3.7.	4		<u> </u>		<u> </u>		
Servic	e Water Sy	/stem Or	peration	<u>ו</u>		<u>S2.0P-S0</u>).SW-0005							40		
														<u></u>		
L.O. N	lumber			Objec	tives											
Mater	ial Require	d for Ex	camina	tion	j											
Quest	tion Sourc	e: Fa	cility Ex	xam B	ank 🤇	Question M	odificatio	on Method	Signif	icantly N	lodified	Use	d Duri	ng Trai	ning P	rogram
Quest	Question Source Comments Vision Q80615. Changed to a "2 and 2" question. Replaced 3 distracters with new distracters. Added bases section to each choice.															
Comm	nent															
1																

RO S	kyScraper	SRO Skyscra	per	RO Syster	n/Evolution	List	SRO Syste	n/Evolution L	ist Outline (Changes			
Quest	Question Topic SRO 19												
Given	Given the following conditions:												
- Uni - Cor - The he - Wh Ba	 Unit 1 is performing a Rx startup IAW S1.OP-IO.ZZ-0003, Minimum Load to Hot Standby. Core burnup is 8560 EFPH. The Estimated Critical Condition calculation performed by BEACON predicts a critical rod height of Control Bank D at 61 steps. When the ICRR value reaches the 0.125, the predicted rod height is 150 steps on Control Bank D. 												
	vvnich of the following identifies the effect, if any, this will have on continuing the startup?												
а.	Continue	the startup with	no addil	tional actio	n required	l.							
b.	Continue	the Rx startup a	and evalu	uate the po	st startup	data for tre	end.			-			
C.	Initiate Ra	pid Boration, in	nsert con	trol rod ba	nks, and r	ecalculate	the ECC.						
d.	Obtain pe	rmission from t	he Reac	tor Engine	er and the	Shift Oper	rations Ma	nager prior t	o continuing with	the startu	p.		
Answe	r b	Exam Level	S	Cognitiv	ve Level	Applicat	ion	Facility:	Salem 1 & 2	Exa	mDate:		9/26/2011
KA: 1	94001G12	3 2.1.23		RO Value:	4.3 SF	RO Value	4.4 Se	tion: PW	G RO Group:	1 SR	O Group:	1	55.43 🗸
Syster	n/Evolutio	n Title											GENERI
KA Sta	tement:												
·		Ability to perfor	rm speci	fic system	and integr	rated plant	procedure	s during all	modes of plant of	peration.		111	
Answe	ers: 400	ECC and the p based on estin deviation to ac evaluation is re Table 1-8 page be slightly CLC	nedicted nated an tions req equired 4 of 5 for OSER to	critical roc d predicted quired for th The 3 dist or burnup 916.9, and	position f position, nat deviation racters are of 8533 EF within 30	from the IC while choc on. For a c all action PH. The 0-400 pcm	RR. The obsing the c deviation of s in IOP for predicted r	candidate wi prrect table f 300-400 per c different dr od height of	Il have to calcula based on core bu cm, the startup m aviations The IR 150 is just below	te the read irnup. The ay continu W at 61 s the 151 v	ctivity (in po by then hav ue and pos tens is 916 value of 52	cm) de ve to aj t startu t 9 pcm 7 pcm,	viation pply that ip data susing so would
-	Constant.	Reference Title		<u>ja s</u> ta 1	Facilit	y Referenc	e Numbe	Refere	ence Section	Page N	o. Revis	ion	
Hot St	andby to N	inimum Load			S2.OP-10.	ZZ-0003					35		
]			
L.O. N	L.O. Number Objectives Objectives												
Mater	ial Require	d for Examina	ition	SRO 19	S1.RE-R	A.ZZ-0016	Curve Bo	ok]
Quest	ion Sourc	e: Previous	2 NRC E	Exams Q	uestion M	lodificatio	n Method	Editoria	lly Modified	Used D	uring Trai	ning P	rogram
Quest	Question Source Comments 08-01 NRC exam. Replaced one distracter. Correct answer remains the same.												
Comn	nent 🔬 🦯												

RO SkyScraper SRO Skyscraper RO Syst	tem/Evolution List Outline Changes									
Question Topic SRO 20										
Given the following Initial Conditions at 0800:										
 Unit 2 is in MODE 5. Containment Purge is in service. 	- Unit 2 is in MODE 5, - Containment Purge is in service.									
At 0830, Containment Purge is stopped to support	port a maintenance visual inspection of purge ductwork inside containment.									
At 1015, a Containment Ventilation Isolation (CV	/I) signal inadvertently actuates due to a rad monitor switch mispositioning.									
At 1030: The duct inspection is complete. Radiation Protection reports containment was not breached in the past 2 hours except to allow entry and exit of workers through the airlock. Chemistry reports there is operational assurance that no radiological changes to containment environment have occurred and requests containment purge be restored.										
a. Yes, because of the CVI signal.	to Plant Vent, is a new containment purge release form required and why?									
b. Yes, because the purge was secured.										
c. No, because the termination was <4 hours	s and there is operational assurance of unchanged radiological conditions.									
d. No, because the termination was <12 hou through containment airlocks.	urs (one shift) and containment has not been breached except as allowed for worker ingress/egress									
Answer c Exam Level S Cogni	itive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2011									
KA: 194001G132 2.1.32 RO Value	ie: 3.8 SRO Value: 4.0 Section: PWG RO Group: 1 SRO Group: 1 55,43									
System/Evolution Title	GENERI									
KA Statement:	evetom limits and processions									
Explanation of Answers: 55.43(4)Procedure S2.OP-SO.WG-0006 allows for reinstatement of purge if of short duration (~4 hours) and containment rad conditions have not changed (P&L 3.3) Short duration is NOT 12 hours, and distracter does not address rad conditions. New effluent permit not always required. Can block CVI signal IAW Att 2, Temporary Termination and Reinstatement of Containment Purge.										
Containment Purge to Plant Vent	S2.OP-SO.WG-0006									

L.O. Number WASGASE011

RO SkyScraper	SRO Skyscraper	RO System/Evolution List	SRO System/Evolution List	Outline Changes						
Question Topic	Question Topic SRO 21									
Given the following conditions:										
 Unit 1 is operat Operators have MANUAL BARF The only Tech is when the LOCI 	 Unit 1 is operating at 100% power. Operators have just satisfactorily completed SC.OP-PT.DG-0001 DIESEL GENERATOR MANUAL BARRING on 1B EDG. The only Tech Spec entered was 3.8.1.1.b for the 1B EDG being declared INOPERABLE when the LOCKOUT SW was C/T in the LOCKOUT position. 									
Which of the follow	wing identifies when	the 1B EDG will be declared OPE	RABLE?							
a. When the A	Acceptance Criteria	in SC.OP-PT.DG-0001 is reviewed	d and signed off as SAT b	by the CRS.						
b. When the L	_OCKOUT SW is re	leased to the IN SERVICE position	n after successful comple	tion of SC.OP-PT.DG-000	01.					
c. When the N	NCO is directed by p	procedure to log the EDGs availab	ility for operability testing	in the Control Room Narr	ative Log.					
d. When the E	EDG has successful nized to the Vital Bu	ly met the acceleration, voltage ar s.	nd frequency Acceptance	Criteria in the ST procedu	ure used for the retest, and					
Answer d	Exam Level S	Cognitive Level Memory	Facility: Sa	alem 1 & 2 Exam	Date: 9/26/2011					
KA: 194001G223	2.2.23	RO Value: 3.1 SRO Value:	4.6 Section: PWG	RO Group: 1 SRO	Group: 1 55.43 ✓					
System/Evolution	Title				GENERI					
KA Statement:										
Explanation of Answers:	55.43(2) The EDG b luring the performar EDG, since it has be requency requireme	ecomes inoperable when the Lock nee of the barring. It cannot be de- en affected by the barring operation ints, AND being synchronized to the	out Switch is placed in th clared operable until it ha on. The requirements are ne vital bus.	e lockout position. The E s proved it meets the request successfully reaching rates and the request successfully reaching rates and the reaching re	DG remains inoperable uirements for an operable ted speed, voltage and					
Re	eference Title	Facility Reference	e Number Referenc	e Section Page No	Revision					
Diesel Generator N	Manual Barring	SC.OP-PT.DG-0001		15	18					
EDG000E010	Obje4	ztives								
Material Required	I for Examination									
Question Source:	Facility Exam E	ank Question Modification	Method: Direct From	n Source Úsed Dur	ring Training Program					
Question Source	Question Source Comments "I" ILOT SRO CERT Exam 11/2006									
Comment										

RO SkyScraper	SRO Skyscraper RO System/Evolution List SRO System/Evolution List Outline Changes
Question Topic	SRO 22
A Hope Creek Sta The employee is a His lifetime expos IAW RP-AA-203, TEDE for the cale	tion employee has received 1900 mrem routine TEDE for the current calendar year, ALL at Hope Creek Station. expected to receive an additional dose of 450 mrem on his current job assignment at SALEM. ure is 5500 mrem. Exposure Control and Authorization, and prior to performing the job, written approval for increasing his dose limit to 3000 mrem ndar year must be received from the work group supervisor and
 a. the RP Man b. the Site Vio c. the RP Man 	nager ONLY.
d. the Station	Manager and Site Vice President.
Answer a	Exam Level S Cognitive Level Memory Facility: Salem 1 & 2 ExamDate: 9/26/2011
KA: 194001G304	2.3.4 RO Value: 3.2 SRO Value: 3.7 Section: PWG RO Group: 1 SRO Group: 1 55.43
System/Evolution	Title
KA Statement:	
1	Knowledge of radiation exposure limits under normal or emergency conditions.
Answers:	5.43(4) A is correct because the approval requirements are: Up to 3,000 mrem- RP Manager; up to 4,000 mrem- RP Manager and Station Manager, >4,000 Site Vice President. Distracters are all some form of combo of each of the positions.
Re	eference Title Facility Reference Number Reference Section Page No. Revision
Exposure Control a	and Authorization
I	
L.O. Number RADCONE002	Objectives
Material Required	for Examination
Question Source	Previous 2 NRC Exams Question Modification Method: Direct From Source Used During Training Program
Question Source	Comments 08-01 Salem ILOT SRO Exam May 2010
Comment	
······	

RO SkyScraper	SRO Skyscraper RO Sy	stem/Evolution List SRO	System/Evolution List Outline (Changes				
Question Topic	SRO 23							
Given the followir	ng conditions:							
 Unit 2 is opera The operating when RMS characteristics 	ting at 100% power. crew entered S2.OP-AB.RC-0 annel 2R31, Letdown Line Mor	002, High Activity in Reactor (itor, went into WARNING.	Coolant System,					
Which of the follo	wing is required to be perform	ed IAW S2.OP-AB.RC-0002,	and why?					
The CRS will	an an an Alfred Constant and Alfred Constant and Alfred Constant and Alfred	ann ann a ann a su dtillinn ann an su dtillinn ann a maisteachadh ann an su dtillinn ann an su dtillinn ann an						
a. direct Rad	ation Protection Technician to	survey the letdown line in the	e vicinity of 2R31 to confirm the su	spected rise in RCS activity.				
b. direct Rad	ation Protection Technician to	take surveys to determine if	radiation levels may have changed	1 access requirements.				
c. direct Cher level chang	mistry Technician to initiate co ges.	nfirmatory sample analysis be	ecause the 2R31 reads in CPM ar	id therefore has no correlation to dose				
d. direct Che	mistry Technician to sample he	ourly for isotopic analysis to d	letermine predominant radiation ha	azard (gamma, neutron, beta, alpha).				
Answer b	Exam Level S Cogn	itive Level Memory	Facility: Salem 1 & 2	ExamDate: 9/26/2011				
KA: 194001G314	2.3.14 RO Valu	ue: 3.4 SRO Value: 3.8	Section: PWG RO Group:	1 SRO Group: 1 55.43 🗸				
System/Evolution	1 Title			GENERI				
KA Statement:								
Answers:	bis correct as described as describers on the second secon	try sampling confirms 2R31 re J is incorrect because the hou	eadings, not survey results. C is in urly isotopic analysis performed is	correct because rising counts does for gamma to determine DEI for				
High Activity in R	eference Title	Facility Reference Nur	mber Reference Section	Page No. Revision				
Thigh Activity in the	eactor occiant System							
L.O. Number ABRC02E003	Objectives							
Material Required	Material Required for Examination							
Question Source	Question Source: Facility Exam Bank Question Modification Method: Editorially Modified Used During Training Program							
Question Source	Comments Vision Q80303	reworded question portion of	stem, added "direct tech" to each	choice.)				
Comment								

RO SkyScraper	SRO Skyscraper	RO System/Evolution	List SRO System/E	volution List Outline O	hanges				
Question Topic	SRO 24								
 Given the following conditions: Unit 2 is in Mode 4 performing a plant cooldown. 21 RHR pump and loop is supplying Shutdown Cooling. 22 RHR pump is aligned for ECCS. A fire is reported in Unit 2 Relay Room. The Operations Department Fire Department Liason who was dispatched to the scene verifies an actual fire is present. Which of the following describes the required action which must be performed? 									
a. Place bot Response b. Place bot	Place both PZR PORVs in manual and shut, and shut their Block Valves when directed in S2.OP-AB.FIRE-0001, Control Room Fire Response. Place both PZR PORVs in manual and shut, and shut their Block Valves when directed in S2.OP-AB.FIRE-0002, Fire Damage Mitigation.								
c. Stop 21 F	RHR pump when direct	ed in S2.OP-AB.FIRE-	0001, Control Room Fire	e Response.					
	Event Level 2		Momony	Colom 1 8 2		0/26/2011]			
Answer a	Exam Level 5			acility: Salem 1 & 2	ExamL	vate: 9/26/2011			
KA: 194001G42	2.4.27	RO Value: 3.4 SR	O Value: 3.9 Sectio	n: PWG RO Group:	1 SRO (Group: 1 35.43			
System/Evolutio	n Title					IGENERI			
KA Statement:	Knowledge of "fire in t	the plant" procedures				1			
Answers:	Explanation or 55.43(5) AB-FIRE-1provideds the actions necessary to minimize the consequences of a fire from impacting plant operations and support equipment. AB.FIRE-2 gets the Rx and MT tripped and all RCPs stopped, initiates actions to achieve hot standby, and then cold shutdown. The stopping of the inservice RHR pump is incorrect but plausible since it would be performed if the fire was in the RHR pump area in AB.FIRE-1. This eliminates the potential for a scenario whereby the spurious operation of the SJ44 valves (due to a fire-induced short) would provide a pathway for a loss of RCS inventory to the containment sump. Operators are directed to close the PORVs in manual and shut the block valves because spurious operation of either PORV could occur priorto any actual constrained by a pathway for a constrained by a constrained by a pathway for a pathway for a loss of RCS inventory to the containment sump. Operators are directed to close the PORVs in manual and shut the block valves because spurious operation of either PORV could occur priorto any actual set of the spurious operation of the spurious operation of the spurious operation of the provide a pathway for a loss of RCS inventory to the containment sump. Operators are directed to close the PORVs in manual and shut the block valves because spurious operation of either PORV could occur priorto any actual spurious operation of the spurious operation of either PORV could occur priorto any actual spurious operation of either PORV could occur priorto any actual spurious operation of the spurious operation of either PORV could occur priorto any actual spurious operation of the								
For	switches for the block	valves.							
	Reference Title	Facility	Reference Number	Reference Section	Page No.	Revision			
Control Room Fil			-IRE-0001						
File Damage Mit			-IRE-0002			4			
L.O. Number Objectives									
Material Required for Examination									
Question Source: New Question Modification Method: Used During Training Program									
Question Sourc	e Comments								
Comment									

RO SkyScraper	SRO Skyscraper	RO System	m/Evolution List	SRO System/Ev	volution List	Outline C	hanges		
Question Topic	SRO 25								
Given the follow	ing conditions:								
 Salem Unit 2 exceeded and After 5 minut no longer bei Conditions fo No emergend Which of the fol 	is experiencing an e d recognized by the o es, the actions taken ng met. r an UNUSUAL EVE by declaration has be lowing identifies the	vent which ha perating crew by the contro NT are preser en made yet. actions require	s resulted in an Al /. I room crew result nt. ed by the Emerger	ERT EAL being in this ALERT E	AL.				
a. Declare a	an ALERT, terminate	the ALERT, c	leclare an UNUSU	IAL EVENT.					
b. Declare a	an ALERT, then redu	ce the Emerg	ency Classificatior	n to an UNUSUAI	EVENT.				
c. Declare a	an UNUSUAL EVEN	r, and make	a non-emergency	After-The-Fact 1	hour report t	o document th	16 ALERT E	AL.	4 Annual State
d. Declare a Data She	an UNUSUAL EVEN eet.	Γ, and ensure	the ALERT EAL v	vhich was presen	t for the 5 m	inutes is comn	nunicated to	o the NRC via	a the NRC
Answer b	Exam Level S	Cognitiv	ve Level Memo	ory F	acility: Sa	lem 1 & 2	Exam[Date:	9/26/2011
KA: 194001G4	38 2.4.38	RO Value:	2.4 SRO Valu	e 4.4 Sectio	n: PWG	RO Group:	1 SRO	Group: 1	55.43 🗹
System/Evolution	on Title			-					GENERI
KA Statement:		a collect for in			line automatic				if required
Explanation of	Ability to take action	Salem ECG	Section Linage 8 or	f 10 Section IV	Ing supportin	fication Guide	(ECG) Use	Subsection	
Answers:	"Short duration e control room indica be made even if no currently applies).S EP.ZZ-0405, EMER	vents that occ tions or the re EAL's are cur corregardless GENCY TER	ur will be assesse ceipt of the inform rrently being excee of the fact that the MINATION – RED	d and emergency ation, indicating t eded, (i.e. actions ALERTEAL no DUCTION - RECO	v classification hat an EAL, have been to longer applie OVERY, desc	ns made, if ap has or had be taken to stabili s. the ALERT cribes how to r	opropriate, v en exceede ize the Plan must still b reduce the E	vithin about 1 d. This class t such that no e declared Emergency C	5 minutes of ification is to b EAL's NC EP- classification if
	the entergency is h	ot being termi	nated. Since the t		iet, the class	incation win be	e reduced, r	lot terminate	<u>u.</u>
	Reference Title	<u>angena</u> i	Facility Refere	ence Number	Reference	Section	Page No.	Revision	
Salem ECG] <u>i</u>			07	
EMERGENCY	ERMINATION – REI	DUCTION -	NC.EP-EP.ZZ-040)5	<u> </u>			6	
]].]]				
L.O. Number ELO_29.e	Obj	ectives							
Material Requir	ed for Examination								
Question Source	e: New	Q	uestion Modifica	tion Method:]	Used Duri	ng Training	Program
Question Source	e Comments								
Comment									