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

Applicant Information	
Name:	
Date:	Facility/Unit: R.E. Ginna
Region: I	Reactor Type: W
Start Time:	Finish Time:

Instructions

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. Examination papers will be collected six hours after the examination starts.

Applicant Certification

All work done on this examination is my own. I have neither given nor received aid.

_____
Applicant's Signature

Results	
Examination Value	_____ Points
Applicant's Score	_____ Points
Applicant's Grade	_____ Percent

EXAM QUESTION HISTORY

Question # C000.1250 RO 1 TIER 1 KA 000007EK2.02 SRO _____ Group 1 Importance 2.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Byron 1 6/29/2000

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R3501C 4.07 List all reactor trips; give setpoint, logic, and basis for each.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-1 Step 2.14.2.2.7/Logic Diagram 33013-1353, Sheet 4

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per P-1 Low Freq of 57.7 is the Trip Set pt. Per Logic diagram 33013-1353 sht 4 under frequency on both 11A and 11B trips both the Rx and RCPs.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 1 C000.1250 (1 point(s))

The unit is operating at 18% power when the following event occurs:

Frequency on Bus 11A and 11B goes to 55 HZ for one (1) second.

Which of the following would be the expected positions for the RCP breakers and the Reactor trip breakers?

RCP Breakers	Reactor Trip Breakers
a) Open	Shut
b) Open	Open
c) Shut	Shut
d) Shut	Open

Answer 1

b) Open Open

EXAM QUESTION HISTORY

Question # C000.1251 RO 2 TIER 1 KA 000008AK1.02 SRO _____ Group 1 Importance 3.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 14 55.43 _____

Learning Objective

RES12C 1.02 Given the notes, cautions, and/or major action categories in ES-1.2, Post LOCA Cooldown and Depressurization, explain the basis for same.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference ES-1.2 Background

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per E-1.2 Background (attached) the depressurization will cause Si flow and RCS inventory to increase.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 2 C000.1251 (1 point(s))

The unit has been operating at 100% power for three months when an accident occurs which causes a Rx trip and SI actuation. While performing actions in E-0, the HCO discovers that a PZR safety valve has failed open.

While performing actions in ES-1.2, Post LOCA Cool Down and Depressurization to depressurize the RCS, which of the following is the expected response of PZR level and SI flow?

a. PZR level decrease/SI flow increase

b. PZR level decrease/SI flow decrease

c. PZR level increase/SI flow increase

d. PZR level increase/SI flow decrease

Answer 2

c. PZR level increase/SI flow increase

EXAM QUESTION HISTORY

Question #	RO	3	SRO	
	TIER	1	Group	1
C000.1252	KA	000011EA1.13	Importance	4.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

RES13C 2.01 Given a set of plant and equipment conditions evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement.(ES-1.3)

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference ES-1.3 Background

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per ES-1.3 Bkgd. Screen plugging will be indicated by RHR currents and flows similar to pump cavitation.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 3 C000.1252 (1 point(s))

Following are large break LOCA, the RHR system has been shifted to Cold Leg Recirculation. Assuming that the "B" sump screens are partially blocked by debris, which of the following describes the symptom that the operators will see from the Control Room.

a. RHR pump motor currents on the PPCS are decreasing and RHR pump flow is decreasing.

b. RHR pump motor currents on the PPCS are oscillating and RHR pump flow is decreasing.

c. RHR pump motor currents on the PPCS and RHR pump flow are oscillating.

d. RHR pump motor currents are decreasing and RHR pump flows are oscillating.

Answer 3

c. RHR pump motor currents on the PPCS and RHR pump flows are oscillating.

EXAM QUESTION HISTORY

Question #	RO	4	SRO	
	TIER	1	Group	1
C000.0919	KA	000015/17AA2.10	Importance	3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C000.0919

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAP03C 1.03 State the reason/basis for the CAUTIONS, NOTES and/or Major Action Categories in AP-CCW.3, Loss of CCW - Plant Shutdown.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference AP-CCW.2 Caution

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: CCW loss criteria is in AP-CCW.2 Caution for step 1

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/17/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 4 C000.0919 (1 point(s))

Which one of the following describes the conditions for considering CCW lost to a RCP as listed in AP-CCW.2, Loss of CCW During Power Operation, requiring that the RCP be secured?

a. CCW return temperature is > 120°F or upper RCP motor bearing temperature exceeds 180°F.

b. CCW flow is interrupted for > 5 minutes or lower RCP motor bearing temperature exceeds 215°F.

c. CCW return flow is low for > 2 minutes or either RCP motor bearing temperature exceeds 180°F.

d. CCW flow is interrupted for > 2 minutes or either RCP motor bearing temperature exceeds 200°F.

Answer 4

d. CCW flow is interrupted for > 2 minutes or either RCP motor bearing temperature exceeds 200°F.

EXAM QUESTION HISTORY

Question # B004.0030 RO 5 TIER 1 KA 000022AA2.01 SRO _____ Group 1 Importance 3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B004.0030

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAP05C 1.02 Recognize the symptoms of AP-CVCS.1, CVCS Leak.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference AP-RCP.1/AP-CVCS.1

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: As per AP-CVCS.1 given symptom are indicitive of a seal injection leak, b and d would not give the effect stated and a would only give indication of the lab seals.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 5 B004.0030 (1 point(s))

During normal 100% power operations, the following conditions occur:

- (B-9) RCP 1A Labyrinth Seal Low Diff Press 15" H_2O, alarms
- (B-10) RCP 1B Labyrinth Seal Low Diff Press 15" H_2O alarms
- (A-4) Regenerative Letdown Outlet Hi Temp 395 degrees F, alarms
- Letdown line flow erratic
- Low pressure letdown line pressure erratic
- "A" RCP seal injection = 0
- "B" RCP seal injection = .5gpm
- Charging line flow = 3 gpm
- R13 and R14 are trending up

Based upon these symptoms, the failure is:

a. "A" RCP thermal barrier leak

b. Charging line leak inside containment downstream HCV-142

c. "A" RCP seal injection line leak

d. Letdown line leak inside containment

Answer 5

c. "A" RCP seal injection line leak

EXAM QUESTION HISTORY

Question #	RO	6	SRO	
	TIER	1	Group	1
B005.0005	KA	000025AA1.09	Importance	3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
X	Modified (Attach original and Modified Questions)
	Original Bank Ginna # B005.0005
	Bank Originating Bank #

10CFR55 Content 55.41 5 55.43

Learning Objective

RAP25C 1.02 Recognize the symptoms of AP-RHR.2, Loss of RHR while Operating at RCS Reduced Inventory Conditions.

Cognitive Level
Memory or Fundamental Knowledge
Comprehension or Analysis X

Technical Reference AP-RHR.2

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Condition given a sign of air ingestion into the RHR pumps at low loop level per AP-RHR.2 the RCS is too cold to produce steam and the electrical conditions and valve failure would not result in oscillating flow.

Verification _____ Date 1-30-04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2-17-04
Exam Developer

Question 6 B005.0005 (1 point(s))

During a plant shutdown to cold shutdown conditions, plant operations was preparing the RCS for loop RTD replacement. As the RCS water level was being lowered, the following conditions occurred:

- A RHR pump in operation
- Flow indication of FI-626 was very erratic
- Safeguards bus 14 current is oscillating
- "B" loop level 10 inches
- Safeguards bus 14 voltage stable at 430 volts
- HCV-626 valve position swinging open and closed
- Core exit thermocouplers are 140°F and increasing
- RCS pressure 0 psig

Which of the following conditions is causing these indications:

a. Steam is forming at the suction of the RHR pump and the resulting cavitation is causing the indications.

b. RHR suction valve MOV-700 was inadvertently closed causing loss of RHR suction.

c. Air is being ingested into the RHR suction due to the low loop level and is causing these indications.

d. An electrical malfunction on Bus 14 has caused current to the "A" RHR pump to oscillate which is causing the flow changes.

Answer 6

c. Air is being ingested into the RHR suction due to the low loop level and is causing these indications.

TC 95-037

EXAM QUESTION HISTORY

Question # C000.1287 RO 7 TIER 1 KA 000026AA1.01 SRO _____ Group 1 Importance 3.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference E-0 Basis

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Trip of a running CCW pump during high heat load conditions will cause the CCW temperature to rise and RCS cooldown rate to decrease due to the decreased ability to CCW to remove heat from RHR.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 7 C000.1287 (1 point(s))

Given the following conditions:

Plant is being cooled down to Cold Shutdown to begin a refueling outage after 496 days of continuous full power operation.
RCS Temp 300°F
RCS Press 350 psig
2 CCW Trains in operation
The "A" CCW pump trips

Which of the following would the operators observe?

a. CCW temperature will increase and RCS cooldown rate will increase

b. CCW temperature will increase and RCS cooldown rate will decrease

c. CCW flow will decrease and CCW temperature will decrease

d. CCW flow will decrease and RCS cooldown rate will increase

Answer 7

b. CCW temperature will increase and RCS cooldown rate will decrease

EXAM QUESTION HISTORY

Question #	RO	8	SRO	
	TIER	1	Group	1
C000.1254	KA	000027AK3.01	Importance	3.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Cook 12/9/2002

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

R1901C 5.02C Given a set of plant conditions, and a failure of one of the following major components in the Pressurizer Pressure and Level Control system, predict the effects on continued plant operation.

a. PRZR PORV
b. PZR Safety
c. PRZR Spray Valve
d. PRZR Proportional Heaters
e. PRZR Backup Heaters

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference LP R1901C

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Trip of all available heaters with the spray valves open will result in decreasing Przr Pressure (T.S. 3.4.9 Basis). The heatup must be stopped since Tech Spec 3.0.4 prevent increasing modes without required LCO being met.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 8 C000.1254 (1 point(s))

Given the following:

Proportional pressurizer heaters are out of service
A heatup of the RCS (currently at 485°F) is in progress
Pressurizer pressure is currently at 700 psig, backup heaters ON and both pressurizer spray valves manually throttled to 5% open

A transformer fault causes a loss of power to the backup pressurizer heaters. What actions are required regarding the pressurizer spray valves and RCS Heatup?

Pressurizer Spray valves....

a. May remain throttled. The heatup may continue because pressure will continue to rise with the RCS heatup.

b. Must be closed and the heatup stopped. Pressure will gradually lower due to the spray bypass and heat losses.

c. Must be closed. The heatup may continue because pressure will continue to rise with the RCS heatup.

d. May remain throttled if pressurizer level is raised to maintain pressure. The heatup should be stopped because pressure cannot be raised.

Answer 8

b. Must be closed and the heatup stopped. Pressure will gradually lower due to the spray bypass and heat losses.

EXAM QUESTION HISTORY

Question #	RO	9	SRO	
	TIER	1	Group	1
C000.1255	KA	000029G2.4.50	Importance	3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

RTA07C 1.01 State the symptoms of an ATWS.
RTA07C 1.02 State the immediate actions to be taken in the event of an ATWS.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference E-0, P-1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: For the given condition, PWR >50 the Rx should have tripped. E-O gives the actions for these conditions.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 9 C000.1255 (1 point(s))

While operating at 70% power, the following alarms are actuated in the order given.

D-24 Turbine Auto Stop
D-12 Pressurizer Hi Pressure
D-4 Pressurizer Hi Level

The following plant conditions exist:

Peak Pressurizer Pressure 2360 psi and decreasing
Pressurizer Water Level 70% and increasing
Rx Power 58%
Turbine Stop Valves Closed
Both Rx Trip Breakers Closed
No operator actions have taken place

Which of the following state the correct response to these conditions:

a. The Reactor should have tripped on High Przr Pressure. The operator should trip the Rx per the Immediate Action of E-0 Rx Trip or SI.

b. The Reactor should have tripped on the Turbine Trip. The operator should implement the Immediate Actions of FR-S.1, Response to Rx Restart/ATWS.

c. The Reactor should have tripped on the Turbine Trip. The operator should trip the Rx per the Immediate Actions of E-0, Rx Trip or SI.

d. The Rx should have tripped on High Przr Pressure. The operator should implement the Immediate Actions of FR-S.1, Response to Rx Restart/ATWS.

Answer 9

c. The Reactor should have tripped on the Turbine Trip. The operator should trip the Rx per the Immediate Actions of E-0, Rx Trip or SI.

EXAM QUESTION HISTORY

Question # C000.1256 RO 10 SRO _____
TIER 1 Group 1
KA 000038EK3.05 Importance 4.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS46, SYS70

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Control of secodary chemisty is for corrosion and deposit control (SYS46)

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/7/04
Operations

Approved for Use _____ Date 2/7/04
Exam Developer

Question 10 C000.1256 (1 point(s))

Which of the following is a reason that Secondary Plant Chemistry for Chlorides, Fluorides and Oxygen must be maintained within limits?

a. When subjected to the radiation in the Steam Generator, oxygen is converted to Nitrogen-16 which is highly radioactive.

b. Oxygen can come out of solution in the condenser causing condenser vacuum problems.

c. These chemicals can result in degradation of the Condensate Polisher Resins.

d. These chemicals can accelerate S/G tube degradation possibly leading to a S/G tube leak or rupture.

Answer 10

d. These chemicals can accelerate S/G tube degradation possibly leading to a S/G tube leak or rupture.

EXAM QUESTION HISTORY

Question # RO 11 SRO _____
TIER 1 Group 1
C000.0646 KA 000054G2.4.6 Importance 3.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C000.0646

10CFR55 Content 55.41 10 55.43 _____

Learning Objective
RFRH1C 1.04 State the Major Action Categories of FR-H.1.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference FR-H.1 Basis

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Per FRH.1 step 2 caution. Immediate Bleed and Feed is required for these conditions.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 11 C000.0646 (1 point(s))

While trying to establish a heat sink using the S/G's (FR-H.1 Response to Loss of Secondary Heat sink) both S/G wide range levels decrease to less than 50 inches indicating a total loss of Heat sink.

What is the next major action used to establish core cooling?

a. If S/G is hot and dry increase feedwater to maximum.

b. Trip RCPs and establish bleed and feed.

c. Start RCP's and initiate bleed and feed.

d. If core exit thermocouple temperatures are decreasing, initiate cooldown not to exceed 100°F/hr by dumping steam.

Answer 11

b. Trip RCPs and establish bleed and feed.

TC # LOR 2002-020

EXAM QUESTION HISTORY

Question # C000.1257 RO 12 TIER 1 KA 000056AK3.01 SRO _____ Group 1 Importance 3.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R0801C 2.04 List the loads (& time delays) that are energized automatically upon the diesels reenergizing the vital buses with no SI.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS08 Table 8.3.2

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See SYS08 table 8.3.2

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 12 C000.1257 (1 point(s))

An SI occurs with a concurrent loss of offsite power. The "A" D/G starts and reenergizes buses 14 and 18. Which of the following are the sequence and time after bus energization that the safeguard loads will energize.

	Equipment	Time
a.	"A" SI Pump	5 sec.
	"C" SI Pump	15 sec.
	"A" RHR Pump	25 sec.
	"A" or "C" Service Water Pump	35 sec.
	"A" CNMT Recirc Fan	45 sec.
	"D" CNMT Recirc Fan	55 sec.
	"A" MDAFW Pump	65 sec.
b.	"A" SI Pump	5 sec.
	"C" SI Pump	10 sec.
	"A" RHR Pump	15 sec.
	"A" or "C" Service Water Pump	20 sec.
	"A" CNMT Recirc Fan	25 sec.
	"D" CNMT Recirc Fan	30 sec.
	"A" MDAFW Pump	35 sec.
c.	"A" SI Pump	5 sec.
	"C" SI Pump	10 sec.
	"A" RHR Pump	15 sec.
	"A" CNMT Recirc Fan	20 sec.
	"D" CNMT Recirc Fan	25 sec.
	"A" or "C" Service Water Pump	30 sec.
	"A" MDAFW Pump	35 sec.
d.	"A" SI Pump	7 sec.
	"C" SI Pump	12 sec.
	"A" RHR Pump	17 sec.
	"A" CNMT Recirc Fan	22 sec.
	"D" CNMT Recirc Fan	27 sec.
	"A" or "C" Service Water Pump	32 sec.
	"A" MDAFW Pump	37 sec.

Answer 12

b.

"A" SI Pump	5 sec.
"C" SI Pump	10 sec.
"A" RHR Pump	15 sec.
"A" or "C" Service Water Pump	20 sec.
"A" CNMT Recirc Fan	25 sec.
"D" CNMT Recirc Fan	30 sec.
"A" MDAFW Pump	35 sec.

EXAM QUESTION HISTORY

Question # RO 13 SRO _____
TIER 1 Group 1
C000.1258 KA 000057AK3.01 Importance 4.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-12 page 13

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Loss of Inst Bus A will cause a Rx Trip when power is <8% (loss of intermediate range N-35) AR-E-14 direct placing bus on maintenance supply

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 13 C000.1258 (1 point(s))

The following plant conditions exist:

A Reactor startup is in progress
Source range channels N31 and N32 indicate 10^4 CPS
Intermediate range channels N35 and N36 indicate 5 X10-11 AMPS

The annunciator E-6 Loss of "A" Inst. Bus has just alarmed.

What actions are required for this condition?

a. Commence a reactor shutdown to insert all control and shutdown banks, AND
Restore power to "A" Inst. Bus from alternate AC power source

b. Verify reactor trip, AND
Isolate Instrument Bus "A" Inverter

c. Commence a reactor shutdown to insert all control and shutdown banks, AND
Isolate Instrument Bus "A" Inverter

d. Verify reactor trip, AND
Restore power to "A" Inst. Bus from alternate AC power source

Answer 13

d. Verify reactor trip, AND
Restore power to "A" Inst. Bus from alternate AC power source

EXAM QUESTION HISTORY

Question #	RO	14	SRO	
	TIER	1	Group	1
C000.1259	KA	000058AA1.01	Importance	3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 4 55.43 _____

Learning Objective

RER20C 2.00 Given a set of plant conditions (and a procedure figure, if needed) evaluate the appropriate parameters and determine the correct course of action.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference ER-FIRE.2

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: ER-FIRE.2 directs the TSC battery be cross tied per the attachment.

The other distractor are not likely to be available due to the fire location

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 14 C000.1259 (1 point(s))

During a Cable Tunnel fire, the normal power was lost to the Battery Chargers supplying the "B" DC Bus. The TDAFW pump DC lube oil pump is needed so that the TDAFW pump can be used to supply water to the Steam Generators. Which of the following techniques does procedure ER-FIRE-2, Alternate Shutdown for Cable Tunnel Fire, use to ensure long term DC supply.

a. The "B" DC Train Battery chargers can be back fed from the TSC Diesel through Bus 15 and the Bus 15-16 cross tie.

b. The "B" DC Train can be cross tied to the "A" DC Train which will still have operable battery chargers.

c. The TSC Battery can be cross tied to the "B" DC Train and the TSC Diesel can supply the TSC Battery Chargers.

d. The "B" DC Train Battery Chargers can be manually reenergized by manually reenergizing MCC "D" and manually closing the Battery Charger Supply Breakers.

Answer 14

c. The TSC Battery can be cross tied to the "B" DC Train and the TSC Diesel can supply the TSC Battery Chargers.

EXAM QUESTION HISTORY

Question # RO 15 SRO _____
TIER 1 Group 1
C000.1260 KA 000065G2.4.31 Importance 3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
X	Modified (Attach original and Modified Questions)
	Original Bank Ginna # C000.0913
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 10 55.43 _____

Learning Objective
RAP10C 1.05 State the Major Action Categories of AP-IA.1, Loss of Instrument Air.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference AP-IA.1

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Refer to AP-IA.1 Attached Caution 1 steps 1 and 2

Verification _____ Date 1/30/64
Exam Developer

Validation _____ Date 2/17/64
Operations

Approved for Use _____ Date 2/17/64
Exam Developer

Question 15 C000.1260 (1 point(s))

With the plant operating at 100% power and all systems aligned for normal operation, the following alarm is received.

Instrument Air Lo Press, 100 PSI (Alarm H-8)

The RO reports that IA header pressure is 75 psi and decreasing slowly. According to AP-IA.1, Loss of Instrument Air, the operators are directed to:

a. Trip the reactor and go to E-0 if S/G levels cannot be maintained at 52%.

b. Commence a rapid plant shutdown if RCP seal injection is isolated.

c. Trip the reactor and go to E-0 if S/G level < 20% and feed flow < steam flow

d. Commence a rapid plant shutdown until standby air compressors can be started to restore IA pressure.

Answer 15

c. Trip the reactor and go to E-0 if S/G level < 20% and feed flow < steam flow

EXAM QUESTION HISTORY

Question #	RO	16	SRO	
	TIER	1	Group	1
C000.1261	KA	W/E05EK2.2	Importance	3.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Surry 1 4/8/1999

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RFRH1C 1.04 State the Major Action Categories of FR-H.1.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference FR-H.1 Basis

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Refer to FR-H.1 Attach Priority is the same as order in the procedure.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 16 C000.1261 (1 point(s))

Which of the following lists the proper order for restoring cooling (by priority) as directed by FR-H.1, Response to Loss of Secondary Heat Sink? (Assume both S/G wide range levels are 200 inches and decreasing slowly)

a. AFW, SAFW, MFW, condensate, feed and bleed

b. AFW, MFW, SAFW, condensate, feed and bleed

c. MFW, AFW, SAFW, condensate, feed and bleed

d. MFW, condensate, AFW, SAFW, feed and bleed

Answer 16

b. AFW, MFW, SAFW, condensate, feed and bleed

EXAM QUESTION HISTORY

Question # B000.0941 RO 17 TIER 1 KA W/E11G2.1.23 SRO _____ Group 1 Importance 3.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B000.0941

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

REC11C 2.01 Given a set of plant and equipment conditions evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement. (ECA-1.1)

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference ECA-1.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

ECA-1.1 Step 4 (pages 6 and 7)

Question Analysis: Refer to table at step 4 of ECA-1.1 only potential answer that meet the table requirements is c.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 17 B000.0941 (1 point(s))

Following a small break LOCA with the RHR pumps inoperable, the operators transition to ECA-1.1, Loss of Emergency Coolant Recirculation. The following plant conditions exist:

RCS Pressure - 150 psig
CNMT Pressure - 55 psig
RWST Level - 26%

Which one of the following is a correct combination of CNMT Recirculation Fans and Containment Spray Pumps to operate under these conditions:

a) 0 Recirc Fans, 2 Spray Pumps

b) 1 Recirc Fan, no Spray Pumps

c) 3 Recirc Fans, 1 Spray Pump

d) 1 Recirc Fan, 2 Spray Pumps

Answer 17

c) 3 Recirc Fans, 1 Spray Pump

EXAM QUESTION HISTORY

Question # RO 18 SRO _____
TIER 1 Group 1
B000.0021 KA W/E12EA2.2 Importance 3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B000.0021

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

REC21C 1.02 Given the notes, cautions, and major actions categories in ECA-2.1, explain the basis of the same.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference A-503.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

_____

_____

Question Analysis: Refer to cooldown rules in A-503.1 pg 35 since >385°F they may start a cooldown @ 100°F/hr

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 18 B000.0021 (1 point(s))

The plant was operating at 100% when an accident occurs causing a Rx trip and Safety Injection. The following cooldown has been observed:

2100 - 535°F
2115 - 495°F
2130 - 464°F
2145 - 435°F
2200 - 415°F

The crew has progressed through ECA-2.1, Uncontrolled Depressurization of both Steam Generators, to the step which directs initiation of a cooldown at a rate not to exceed 100°F/hr.

Which one of the following describes any restrictions on cooldown rate?

a. Cooldown can commence now (2200) but cannot go below 395°F degrees prior to 2215. A 100°F /hr rate can commence at 2215.

b. Cooldown can commence now (2200) at a rate of 100°F per hour with no other restriction.

c. Must soak for one hour. A cooldown rate of 100°F /hr can commence.

d. No cooldown until 2215 when cooldown at a rate of 100°F /hr can commence.

Answer 18

b. Cooldown can commence now (2200) at a rate of 100°F per hour with no other restriction.

EXAM QUESTION HISTORY

Question # RO 19 SRO _____
TIER 1 Group 2
B001.0010 KA 000003AK2.05 Importance 2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B001.0010

10CFR55 Content 55.41 6 55.43 _____

Learning Objective
REC11C 3.00 State the reason or basis for the notes in ER-RCC.1

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference ER-RCC.1

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

_____

_____

Question Analysis: With all rod lift coils in a group disconnected movement of that group will cause a urgent failure alarm.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 19 B001.0010 (1 point(s))

During a plant load increase, with reactor power at 48%, control Bank C group 1 rod G-7 drops. Prior to the drop it was at 230 steps. While restoring the rod, control rod urgent failure alarm occurs.

Which one of the following explains why the alarm actuated?

a. All Bank "C" Group 2 rods lift coils deenergized.

b. All other Bank "C" Group 1 rods lift coils deenergized.

c. Group "C" rod moving with group "D" rods withdrawn.

d. The step counter of the pulse to analog (P/A) converter was not reset to 0.

Answer 19

a. All bank "C" group 2 rods lift coils deenergized.

EXAM QUESTION HISTORY

Question # C011.0015 RO 20 SRO _____
TIER 1 Group 2
KA 000028AK2.02 Importance 2.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C011.0015

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R1901C 5.03C Given a set of plant conditions and an alarming annunciator associated with the Pressurizer Pressure and Level Control system, evaluate plant conditions and determine the appropriate operator response.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-10 Section 3

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

_____

_____

Question Analysis: Per P-10 sections C 2.3.2

_____

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 20 C011.0015 (1 point(s))

Unit is 100% power. A and B Charging Pumps are running with A pump in Auto and a 40 gpm letdown orifice is in service. Level channels 427/428 are selected for control.

Assuming no operator action, which one of the following describes plant response if the PZR level channel LT-427 fails low?

a. Charging flow remains constant. PZR level will be maintained at the 100% power setpoint.

b. Charging flow remains constant. PZR level will be maintained between the letdown isolation and zero power setpoints.

c. Charging flow will rise. PZR level will steadily rise to the reactor trip setpoint.

d. Charging flow will lower. PZR level will steadily rise to the reactor trip setpoint.

Answer 20

d. Charging flow will lower. PZR level will steadily rise to the reactor trip setpoint.

EXAM QUESTION HISTORY

Question #	RO	21	SRO	
	TIER	1	Group	2
B015.0032	KA	000032G2.4.4	Importance	4.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B015.0032

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RER12S 1.1C Recognize/diagnose entry conditions/symptoms to ER-NIS.1, SR Malfunction.
RER12S 1.2C Perform appropriate steps of ER-NIS.1, using the procedure.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference ER-NIS.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
ER-NIS.1

Question Analysis: Low failure of both source range detectors requires action of d. Per ER-NIS.1 step 4.3.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 21 B015.0032 (1 point(s))

The reactor is being shutdown as part of a planned outage. The following conditions exist:

- Core burnup is 8000 MWD/MTU
- Control rods being inserted in manual
- Control Bank C presently @ 122 steps
- N-35 reads 1 E-11 amps and slowly decreasing
- N-36 reads 1.2 E-11 amps and slowly decreasing

The HCO has just observed the source range high volts has energized, however, neither source range has any indicated counts and both source range SUR meters read "0".

Which of the following is the action that must be taken?

a. Trip the reactor, go to E-0, Response to Rx trip or safety injection

b. Defeat the reactor trip for any failed channels by placing the level trip switch in the "BYPASS" position.

c. Pull control rods to maintain power level as necessary to maintain indication on the Intermediate range meters.

d. Open and hold open the reactor trip breakers, borate until greater than or equal to 5% SDM has been achieved.

Answer 21

d. Open and hold open the reactor trip breakers, borate until greater than or equal to 5% SDM has been achieved.

TC 95-062
TC 95-063
Note: Question must be checked against cycle curves

EXAM QUESTION HISTORY

Question # RO 22 SRO _____
TIER 1 Group 2
B000.1003 KA 000037AK3.05 Importance 3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B000.1003

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAP32C 2.01 Given a set of plant and equipment conditions, evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement.(AP-SG.1)

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference AP-SG.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
AP-SG.1 Steps 1-7

Question Analysis: Application of AP-SG.1 step 1-7 attached for monitoring requirements.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04 04 km
Exam Developer

Question 22 B000.1003 (1 point(s))

The plant has been operating with a SGTL of 60 GPD in the "B" SG for the last three months, currently doing four hour leak determinations. PPCS alarm R15A5G3 $\geq$ 75 GPD just alarmed. A review of leak trend shows the following:

- 1300 leak started increasing above 60 GPD
- 1315 65 GPD
- 1330 70 GPD
- 1345 75 GPD and trending up (current time)
- All radiation monitors operable, consistent trend with R15A5G

As per AP-SG.1, which one of the following states the required actions?

a. Continue monitoring at 15 minute intervals.

b. Continue monitoring at one hour intervals.

c. Reduce power to < 50% in one hour and be in Mode 3 in three hours.

d. Be in Mode 3 within 6 hours.

Answer 22

a. Continue monitoring at 15 minute intervals.

EXAM QUESTION HISTORY

Question # B000.0319 RO 23 TIER 1 KA 000068AK2.02 SRO _____ Group 2 Importance 3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B000.0319

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

RAP04C 1.03 State the immediate actions which must be performed any time control room evacuation becomes necessary (assume no fire in the MCB).

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference AP-CR.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Immediate action of AP-CR.1 attaced.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 23 B000.0319 (1 point(s))

The shift supervisor has directed evacuation of the control room due to excessive smoke -- there is no fire in the MCB.

Which one of the following lists the IMMEDIATE ACTIONS required for this evacuation?

a. Verify reactor trip only.

b. Verify reactor trip and turbine stop valves closed.

c. Verify reactor trip and turbine stop valves close, then close both MSIVs.

d. Verify reactor trip, turbine stop valves closed, and trip both RCPs.

Answer 23

b. Verify reactor trip and turbine stop valves closed.

EXAM QUESTION HISTORY

Question # RO 24 SRO _____
TIER 1 Group 2
C006.0079 KA W/E02EA1.1 Importance 4.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C006.0079

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2701C 4.03 List the controls on the MCB used to reset SI and any interlocks associated with resetting SI.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference Logic Diagram 33013-1353 sheets 6 and 8

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per logic drawing 33013-1353 reset of SI requires the sequence to be complete.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 24 C006.0079 (1 point(s))

Which ONE of the following is correct concerning RESET of the safety injection signal following manual SI initiation?

a. Reset can be completed at any time after initiation.

b. Reset cannot be completed until SI sequence timer is complete.

c. Reset cannot be done unless all subsequent "Auto" SI signals are cleared.

d. Reset is not required unless a subsequent "Auto" SI signal occurs.

Answer 24

b. Reset cannot be completed until sequencing is complete.

EXAM QUESTION HISTORY

Question # RO 25 SRO _____
TIER 1 Group 2
C000.1262 KA W/E03G2.1.32 Importance 3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RES12C 1.02 Given the notes, cautions, and/or major action categories in ES-1.2, Post LOCA Cooldown and Depressurization, explain the basis for same.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference ES-1.2 Step 10 Caution

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: The only one of the distractors which can supply enough water to cause the level increase is forming a bubble in the Rx Vessel head.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 25 C000.1262 (1 point(s))

The plant has been operating for three months at 100% power when an RCS leak occurs that requires Rx trip and safety injection. The following plant conditions are observed:

CET Temp - 556°F
RCS Press - 1100 psi
PRZR level - 2% steady
RCP's - off
SI flow - 250 gpm

The crew is performing actions in ES-1.2, LOCA Cooldown and Depressurization when the CRO opens a PORV as directed by procedure. Pressurizer level within 2 minutes increases to 42% before CRO closes the PORV. Which of the following would explain the sudden rise in pressurizer level?

a. Increase in SI flow from 250 gpm to 350 gpm while PORV was open.

b. Przr Level Transmitters are being affected by flow throughout the PORV.

c. Steam bubble forming in the Reactor Vessel head.

d. SI Accumulators injecting while PORV was open.

Answer 25

c. Steam bubble forming in the Reactor Vessel head.

EXAM QUESTION HISTORY

Question # C000.0638 RO 26 TIER 1 KA W/E06EA2.2 SRO _____ Group 2 Importance 3.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C000.0638

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference FR-C.1 Background

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Given conditions will result in more core damage reference FR-C.1

Basis (attached)

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 26 C000.0638 (1 point(s))

Due to deliberate sabotage the plant has experienced a small break LOCA without safety injection available. Technical Support Center personnel feel that an inadequate core cooling situation is being approached (though symptoms have not yet reached critical safety function entry conditions). In order to accomplish a quicker recovery and a less severe transient, they feel actions outside the emergency procedures are justified. They recommend securing steaming and feeding of the steam generators to hasten reaching the point at which the accumulators inject thereby providing ultimate recovery. After evaluating this recommendation, PICK THE CORRECT RESPONSE for this situation from the following:

a. Since the action IS one of the recovery options used in the inadequate core cooling functional recovery procedure and it WILL be effective in causing a less severe transient, then it SHOULD be implemented.

b. Since this action IS NOT one of the recovery options used in the inadequate core cooling functional recovery procedures and it WILL NOT be effective in causing a less severe transient, then it SHOULD NOT be implemented.

c. Despite the fact that this action IS NOT one of the recovery options used in the inadequate core cooling functional recovery procedures, it WILL be effective in causing a less severe transient and therefore SHOULD be implemented.

d. Though this action IS one of the recovery options used in the inadequate core cooling functional recovery procedures, it is LESS EFFECTIVE than other recovery options and therefore SHOULD NOT be implemented first.

Answer 26

b. Since this action IS NOT one of the recovery options used in the inadequate core cooling functional recovery procedures and it WILL NOT be effective in causing a less severe transient, then it SHOULD NOT be implemented.

TC # LOR 2002-007

EXAM QUESTION HISTORY

Question # B000.1006 RO 27 TIER 1 KA W/E15EK1.1 SRO _____ Group 2 Importance 2.8

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
X	Modified (Attach original and Modified Questions)
	Original Bank Ginna # B000.1006
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 8 55.43 _____

Learning Objective

RFRZ2 1.02 Given the notes, cautions and/or major action categories in FR-Z.2, Response to Containment Flooding, explain the basis of the same.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference FR-Z.2 Background

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Service water is the only system which has the capacity to cause flooding and is not isolated by CNMT isolation which would have occurred.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 27 B000.1006 (1 point(s))

Given the following plant conditions:

- A LOCA has occurred
- An ORANGE Path has developed on Containment Critical Safety Function due to Sump B level
- All Auto Actions have occurred and have not been overridden.

In accordance with FR-Z.2, RESPONSE TO CONTAINMENT FLOODING, which one of the following would cause this condition?

a. Service Water Leak in CNMT

b. Fire Protection System Leak in CNMT

c. Component Cooling Water Leak in CNMT

d. Main Feedwater Line Rupture inside CNMT

Answer 27

a. Service Water Leak in CNMT

EXAM QUESTION HISTORY

Question # RO 28 SRO _____
TIER 2 Group 1
C000.1263 KA 003K4.07 Importance 3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Robinson 2 8/24/96

10CFR55 Content 55.41 3 55.43 _____

Learning Objective
R1301C 4.01 Describe the RCP shaft seals including principle of operation.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference S-2.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

Question Analysis: See attached SYS

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 28 C000.1263 (1 point(s))

Given the following plant conditions:

- Crew is currently performing actions of ES-0.1, Reactor Trip Response
- Conditions for starting a RCP are being verified per ATT-15.0, Attachment RCP Start

Which one (1) of the following describes the basis for maintaining a minimum of 220 psid on the RCP seals during RCP startup and operation?

a. Prevents the #1 RCP seal from becoming a "floating" seal.

b. Ensures the #1 RCP seal has proper separation between surfaces.

c. Ensures adequate back pressure is maintained to the #2 RCP seal.

d. Provides for adequate seal cooling flow from the RCS.

Answer 28

b. Ensures the #1 RCP seal has proper separation between surfaces.

EXAM QUESTION HISTORY

Question # C000.1264 RO 29 TIER 2 KA 004K5.27 SRO _____ Group 1 Importance 2.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 4 55.43 _____

Learning Objective

R1601C 2.03 Describe the functions of the Volume Control Tank.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference P-3

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See attached P-3 pg 3 Basis document.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 29 C000.1264 (1 point(s))

According to P-3, Chemical and Volume Control System, during a plant shutdown primary chemist requests that H_2 be secured to VCT and N_2 lined up. Which of the following describes the reason for this request?

a. To maintain proper back pressure on RCP seals and maintain inert environment in CVCS.

b. To adjust H_2 concentration in RCS and cause a controlled crud burst.

c. To reduce O_2 in the vent header during plant shutdown and ensure sufficient NPSH for the charging pumps.

d. To maintain proper RCP seal operation and prevent lifting the VCT relief valve 257 during two charging pump operation.

Answer 29

a. To maintain proper back pressure on RCP seals and maintain inert environment in CVCS.

EXAM QUESTION HISTORY

Question # C005.0059 RO 30 TIER 2 KA 005K6.03 SRO _____ Group 1 Importance 2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions) Original Bank _____ # _____
X	Bank Originating Bank Ginna # C005.0059

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2501C 6.01 Given a set of plant conditions and a failure of one of the following major components in the RHR system, predict how the system will respond.

1. MOV 700, 701, 720, 721 RHR suction/discharge valves
2. MOV 850, 851 CNMT suction valves
3. HCV 133 RHR to CVCS letdown line
4. HCV 624, 625 RHR Hx flow control valves
5. HCV 626 RHR Hx bypass flow control valve
6. MOV 852 Core deluge valves
7. MOV 856 RWST suction valve
8. MOV 857 RHR to SI suction valves
9. MOV 897, 898 SI pump recirc valves

a. RWST
b. RHR Pumps
c. RHR Heat Exchangers
d. Major Valves

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference System Description RGE-25

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per RGE SYS25 CCW cooling of the RHR Hx is not required during injection made therefore d is the correct answer.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 30 C005.0059 (1 point(s))

A layer of corrosion products has built up on the RHR Heat Exchanger Tubes. Assuming that total flow in the Heat Exchangers is not significantly affected, which of the following describes the effect on the various modes of RHR operation?

a. Degradation of RHR in cooling mode only.

b. Degradation of RHR in cooling and injection mode only.

c. Degradation of RHR in cooling, injection and recirculation modes.

d. Degradation of RHR in cooling and recirculation modes only.

Answer 30

d. Degradation of RHR in cooling and recirculation modes only.

EXAM QUESTION HISTORY

Question # RO 31 SRO _____
TIER 2 Group 1
C006.0062 KA 006K1.07 Importance 2.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C006.0062

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2701C 3.14 Describe the cause -effect relationship between the ESFAS and the MFW System.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference Logic Diagram 33013-1353 Sheet 9

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per logic 33013-1353 sht 9 Main Feed Regulating Valve receive a closed signal.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 31 C006.0062 (1 point(s))

Which one of the following valves receives an SI signal to close?

a. Main feed reg valves.

b. SI pump suction from BAST valves.

c. Charging pump suction from VCT valve.

d. SW return from CNMT recirc fan coolers valves.

Answer 31

a. Main feed reg valves.

EXAM QUESTION HISTORY

Question # C006.0082 RO 32 TIER 2 KA 006K2.01 SRO _____ Group 1 Importance 3.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C006.0082

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2601C 4.07 Describe how the "C" SI pump starts under the following conditions:
a. SI Actuation, all buses energized.
b. SI Actuation, Bus 14 de-energized.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference RGE SYS26

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Answer is per SYS26

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 32 C006.0082 (1 point(s))

Which one of the following describes how the C SI Pump starts with an SI actuation and all buses are energized by off-site power.

a. Starts on Bus 14 with no time delay. If Bus 14 breaker fails to close, it starts on Bus 16 after a 2 second time delay.

b. Starts on Bus 14 with a 10 second time delay. If Bus 14 breaker fails to close, it starts on Bus 16 after a 12 second time delay.

c. Starts on Bus 14 with no-time delay. If a fault occurs on the pump and the Bus 14 breaker trips, the Bus 16 breaker will close after a 37 second time delay.

d. Start on Bus 14 after a 7 second time delay. If the Bus 14 breaker fails to close, then the Bus 16 breaker will close after a 30 second time delay.

Answer 32

b. Starts on Bus 14 with a 10 second time delay. If Bus 14 breaker fails to close, it starts on Bus 16 after a 12 second time delay.

EXAM QUESTION HISTORY

Question # C000.1265 RO 33 TIER 2 KA 007A1.01 SRO _____ Group 1 Importance 2.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 3 55.43 _____

Learning Objective

R1401C 1.04 Describe the design features that enable the Pressurizer and Pressurizer Relief Tank System to perform their functions.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference System Description 14

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Level too low in the PRT will result in inadequate cooling of the relief/safety valve discharge which can result in an over pressure of the PRT.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 33 C000.1265 (1 point(s))

Which of the following describes the adverse affects of NOT maintaining the Pressurizer Relief Tank (PRT) within design level band?

a. If the level is too high, the tank will overflow to CNMT sump causing possible false indication of RCS leakage to CNMT.

b. If the level is too low the radioactive gases that leak from the top of the PRZR would not be adequately scrubbed, thus causing subsequent elevated gaseous activity levels inside CNMT.

c. If the level is too high, the sparger pipe will be too far underwater rendering the cooling affect of makeup water ineffective.

d. If the level is too low, there would be insufficient water volume to absorb and condense a design discharge of PRZR safety leading to possible over temperature and overpressure of the PRT.

Answer 33

d. If the level is too low, there would be insufficient water volume to absorb and condense a design discharge of PRZR safety leading to possible over temperature and overpressure of the PRT.

EXAM QUESTION HISTORY

Question # RO 34 SRO _____
TIER 2 Group 1
C000.1266 KA 008A2.02 Importance 3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
_____	Original Bank _____ # _____
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAP02C 1.04 State the Major Action Categories of AP-CCW.2, Loss of CCW During Power Operations.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference AP-CCW.2

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Actions are per AP-CCW.2 step 2 RNO for the given conditions.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 34 C000.1266 (1 point(s))

Given the following conditions:

- The plant is operating at 100% power
- Annunciator A-13, CCW Surge Tank Lo Level < 41.2% is lit
- The crew has opened RMW to CCW surge tank MOV-823 and started a RMW pump
- Component Cooling Water (CCW) surge tank is 41% and lowering

Which one (1) of the following actions is required by AP-CCW.2, Loss of CCW at Power, if CCW Surge Tank level continues to drop.

a. Reduce loads on CCW system, isolate letdown, secure CCW to 1 RCP at a time, start a plant shutdown

b. Isolate letdown, excess letdown, place standby CCW switch in pull-stop and commence an rapid plant shutdown

c. If level < 10%, isolate letdown, excess letdown, and trip the Rx and go to E-0.

d. If level cannot be restored to > 50%, trip the Rx, trip both RCP's and go to E-0.

Answer 34

c. If level < 10%, isolate letdown, excess letdown, and trip the Rx and go to E-0.

EXAM QUESTION HISTORY

Question # C000.1267 RO 35 TIER 2 KA 010A2.02 SRO _____ Group 1 Importance 3.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

R1901C 5.01 Given a set of plant conditions and a failure of one of the following major components in the Pressurizer Pressure and Level Control system, predict how the system will respond.

a. PRZR PORV
b. PZR Safety
c. PRZR Spray Valve
d. PRZR Proportional Heaters
e. PRZR Backup Heaters

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-10

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per P-10 step 2.3.3, PT-449 failed low gives the stated indications

action are per AP-PRZR.1 Abnormal Pressurizer Pressure

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 35 C000.1267 (1 point(s))

Given the following conditions:

- Reactor power is 90%
- Pressurizer level is 46%
- Pressurizer pressure selector switch is in the normal position (430/449)

The operators receive the following alarm:

- F-2, "Pressurizer Hi Pressure - 2310 psi" after a few seconds and additional alarm is received
- F-10, "Pressurizer Low Pressure, 2185 psi"
- Both Przr Spray Valves are full open

What malfunction caused these alarms and what are the operators' actions in response to the alarms?

a. PT-430 Pressurizer Pressure failed High, take manual control of HC-431K and set at approximately 50%, control pressure manually.

b. PT-449, Pressurizer Pressure failed High, take manual control of HC-431K and set at approximately 50%, control pressure manually.

c. PT-430, Pressurizer Pressure failed Low, manually energize B/U heaters and verify spray valves closed.

d. PT-449, Pressurizer Pressure failed Low, take manual control and close spray valves, verify B/U Heaters on.

Answer 35

b. PT-449, Pressurizer Pressure failed High, take manual control of HC-431K and set at approximately 50%, control pressure manually.

EXAM QUESTION HISTORY

Question # C000.1268 RO 36 TIER 2 KA 012K2.01 SRO _____ Group 1 Importance 3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Kewanee 1 12/11/2000

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R3501C 3.02 State which reactor trip breaker coils energize and deenergize on:
a. an automatic trip
b. a manual trip
c. a zirc guide tube interlock reactor trip

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-10, ER-INST.1

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Both Rx trip breakers would open "B" from loss of power (uv trip) and "A" from deenergization of the "B" Rx trip logic relays (both UV and shunt)

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 36 C000.1288 (1 point(s))

Given the following plant conditions:

- The plant is currently at 25% increasing to 100% at 10%/hour
- The electricians are performing maintenance on "B" DC Bus
- Due to a switching error, the DC SUPPLY BREAKER FOR B TRAIN of RPS is inadvertently opened

What is the expected plant response and why?

a. "A" reactor trip breaker only would open due to shunt and UV coil operation on A breaker

b. Both trip breakers would open due to shunt and UV coil operation on A breaker and UV coil operation on B breaker

c. Neither breaker is expected to open due to system design that a single failure should not cause a reactor trip

d. "B" reactor trip breaker only would open due to UV coil operation on the B breaker

Answer 36

b. Both trip breakers would open due to shunt and UV coil operation on A breaker and UV coil operation on B breaker

EXAM QUESTION HISTORY

Question # C000.1288 RO 37 TIER 2 KA 012K6.01 SRO _____ Group 1 Importance 2.8

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R3501C 2.01 State the function of the following components of the Reactor Protection System.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-11, Attachment 2 Position 8

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Defeating P-431 places OTΔT in trip for channel 3, an additional failure of channel 1 OTΔT would cause a Rx trip (2/4 logic). None of the other channels would cause a trip.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 37 C000.1268 (1 point(s))

Given the following conditions:

- The reactor has just tripped
- Prior to the trip, reactor power was at 30% with all systems in their normal lineup
- PRZR pressure channel (PT-431) had previously failed low and was removed form service in accordance with ER-INST.1, "Blue Channel Attachment PRZR Pressure PT-431"
- Investigation showed a Reactor Protection System bistable failure (actuation) precipitated the Reactor trip.

Which of the following bistable failures would have caused the reactor trip?

a. Channel 1 Over Temperature Delta-T 405C Over Temp Trip

b. Channel 2 Turbine Impulse Pressure 486A Turbine Press P13

c. Channel 3 Overpower Delta-T 407A Over Power Trip

d. Channel 4 Nuclear Power Range Instrument Drawers N44A OVERPOWER TRIP HIGH RANGE

Answer 37

a. Channel 1 Over Temperature Delta-T 405C Over Temp Trip

EXAM QUESTION HISTORY

Question #	RO	38	SRO	
	TIER	2	Group	1
C000.1269	KA	013A1.05	Importance	3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2701C 5.02 Be able to explain and apply ESF system limits and precautions of P-1 Reactor Control and Protection Systems, P-2 Reactor Coolant system Precautions and Limitations, and P-7 Safety Injection and Containment Spray Systems.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference P-2

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per P-2 step 2.4, a is the reason for the limitation.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/17/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 38 C000.1269 (1 point(s))

It is stated in O-2.2 and P-2 that pressure must be reduced to less than 1992 psig and SI blocked prior to cooling S/G to less than 514 psig. Reduce pressure and block SI to:

a. Preclude inadvertent SI

b. Ensure RCS conditions remain with P-T limits

c. Allow blocking SI prior to Inadvertent Containment Isolation

d. Preclude inadvertent/low press Reactor trip

Answer 38

a. Preclude inadvertent SI

EXAM QUESTION HISTORY

Question # RO 39 SRO _____
TIER 2 Group 1
C006.0081 KA 013A4.01 Importance 4.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C006.0081

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2601C 4.05 Discuss the automatic operations of MOV 871 A and B, 1C SI pump discharge valves, on a failure of A and/or B SI pumps to start.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference System Description 26

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Answer is per SYS26 (attached) pages 8 and 9.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 39 C006.0081 (1 point(s))

The plant experienced a small break LOCA while in Mode 1. On SI initiation, the "B" SI pump fails to start and cannot be manually started. Which of the following statements describe the response of the "C" SI pump discharge valves? Assume normal initial equipment alignment for power operations, MOV-871A is "C" SI pump discharge to "A" SI pump header and MOV-871B is "C" SI pump discharge to "B" SI pump header.

a. MOV-871A will close, MOV 871B will remain open.

b. MOV-871A and B will remain open.

c. MOV-871B will open, MOV-871A will remain closed.

d. MOV-871B will close, MOV-871A will remain open.

Answer 39

a. MOV-871A will close, MOV 871B will remain open.

EXAM QUESTION HISTORY

Question # C000.1171 RO 40 TIER 2 KA 022G2.4.6 SRO _____ Group 1 Importance 3.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C000.1171

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RFRZ1C 1.01 Briefly describe the general intent of FR-Z.1, Response to High Containment Pressure.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference FR-Z.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Based on FR-Z.1 Basis page 4 and FR-Z.1

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/17/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 40 C000.1171 (1 point(s))

Given the following plant conditions:

- The plant had been operating at 100% power for 350 days
- The plant tripped due to a LOCA in containment
- Containment temperature is 230°F
- Containment pressure is 32 psig

The operators enter FR-Z.1, "Response to High Containment Pressure," based on an Orange path. This procedure directs actions to:

a. Ensure appropriate containment penetrations are isolated and limit containment internal pressure.

b. Mitigate the consequences of exceeding the containment design pressure of 60 psig.

c. Take manual control of containment spray pumps to conserve RWST water inventory.

d. Mitigate the hazard of hydrogen detonation by reducing containment hydrogen concentration.

Answer 40

a. Ensure appropriate containment penetrations are isolated and limit containment internal pressure.

EXAM QUESTION HISTORY

Question #	RO	41	SRO	_____
	TIER	2	Group	1
C026.0028	KA	026A3.01	Importance	4.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C026.0028

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2401C 4.04 State what happens to CS pumps, pump discharge valves MOV 860 A, B, C, D and Sodium Hydroxide Tank discharge valves AOV 836 A, B when Containment Spray is reset.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference P-7

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per P-7 step 2.1.8

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 41 C026.0028 (1 point(s))

Which one of the following sets of valves receives an open signal on a Containment Spray Actuation?

a. MOV 896A and B, RWST outlet to SI and CS pumps, and MOV 860A, B,C, and D, CNMT Spray Pump Discharge Valves.

b. MOV 860A,B,C, and D, CNMT Spray Pump Discharge Valves and HCV 836A and B, CNMT Spray NaOH addition.

c. MOV 896A and B, RWST outlet to SI and CS pumps and MOV 875A and B, and 876A and B, CNMT Spray Charcoal Filter Douse Valves.

d. HCV 836A and B, CNMT Spray NaOH addition and MOV 875A and B, and 876A and B, CNMT Spray Charcoal Filter Douse Valves.

Answer 41

b. MOV 860A,B,C, and D, CNMT Spray Pump Discharge Valves and HCV 836A and B, CNMT Spray NaOH addition.

EXAM QUESTION HISTORY

Question #	RO	42	SRO	
	TIER	2	Group	1
C000.1271	KA	039K1.02	Importance	3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

R4001C 4.01 State how each of the following Main Steam System instruments are used for control and protection.

a. Steam Header Pressure
b. (Deleted per CC, 10/10/92)
c. Steam Flow
d. Steam Generator Level
e. Steam Generator Pressure
f. 1st Stage Pressure

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference ES-0.1 Background

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: For loss of offsite power condenser steam dump will be unavailable (no circ water pumps). Tc will be control by ARV pressure (1050psig) of Tsat @ 1065psia - 552°F.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/19/04
Exam Developer

Question 42 C000.1271 (1 point(s))

Given the following plant conditions:

- Reactor power 100% for the last 90 days
- Steam Dump Mode Selector Switch is selected for Auto Mode (Tavg)
- ARV's in Auto at 1050 psig
- Steam pressure transmitter PT-484 Fails High

A loss of offsite power and a Rx Trip occurs with NO operator actions, RCS Tcold will stabilize at which ONE of the following temperatures?

a. 540°F

b. 547°F

c. 552°F

d. 560°F

Answer 42

c. 552°F

EXAM QUESTION HISTORY

Question #		RO	43	SRO	
		TIER	2	Group	1
C056.0066		KA	056A2.04	Importance	2.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C056.0066

10CFR55 Content 55.41 4 55.43 _____

Learning Objective

R4301C 1.11 Discuss the 3 conditions under which the auto-standby condensate pump will start automatically.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS43

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See SYS43 page 6 and 7

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 43 C056.0066 (1 point(s))

The plant is operating normally at 100% power with condensate pump A in standby, and condensate pumps B and C running. Condensate pump B trips. Which ONE of the following describes plant response?

a. LP feedwater heaters bypass valve closes due to low MFP suction pressure.

b. LP feedwater heaters bypass valve opens due to low feedwater heater levels.

c. Standby condensate pump auto starts when Condensate pump B breaker opens.

d. Standby condensate pump auto starts on low MFP suction pressure.

Answer 43

c. Standby condensate pump auto starts when Condensate pump B breaker opens.

EXAM QUESTION HISTORY

Question # C056.0067 RO 44 TIER 2 KA 059A3.03 SRO _____ Group 1 Importance 2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C056.0067

10CFR55 Content 55.41 4 55.43 _____

Learning Objective

R4301C 1.32 Explain what causes the condensate bypass valve to open when it is in automatic.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference AR-H-17

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per AR-H-17/30 Condensate Bypass Valve opens on low MFW pump suction press < 185psi or low NPSH.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 44 C056.0067 (1 point(s))

Which one of the following causes the condensate bypass valve to open when it is in automatic?

a. Low condensate pump discharge pressure of 200 psig

b. Low MFP suction pressure of 195 psig

c. High hotwell level of 40 inches

d. Low NPSH on a running MFP.

Answer 44

d. Low NPSH on a running MFP.

EXAM QUESTION HISTORY

Question # B035.0006 RO 45 TIER 2 KA 059A4.08 SRO _____ Group 1 Importance 3.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B035.0006

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

R4401C 3.03 Explain how the Main Feed Regulating and Bypass Valves respond to the following when in auto or manual:

a. Reactor trip with Tavg < 554 degrees
b. Steam Generator Level > 85%
c. Safety Injection System
d. Rx trip with Tavg > 554 degrees

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS44

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per T800-003A none of the condition will cause ADFAC to isolate or snap open. Since a Rx Trip will not occur if the power is <50% when the turbine trips.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 45 B035.0006 (1 point(s))

The plant is operating at 48% power when an EHC oil leak results in a turbine trip. With regard to the Main feedwater control valves:

a. The resulting loss of load may result in RCS temperature in excess of 554 F. This will result in a snap open of the FRVs until RCS Tavg in < 554°F or level is > 67%.

b. ADFCS will control as necessary to restore level to 52%.

c. ADFCS will shift the FRVs to manual.

d. The resulting loss of load will result in a shrink of S/G levels and Rx Trip which causes the FRVs to isolate, thus allowing AFW to restore S/G level.

Answer 45

b. ADFCS will control as necessary to restore level to 52%.

EXAM QUESTION HISTORY

Question #	RO	46	SRO	
	TIER	2	Group	1
C061.0026	KA	061K4.01	Importance	4.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C061.0026

10CFR55 Content 55.41 4 55.43 _____

Learning Objective

RER17C 5.0 List the alternate sources of water to the SG's in order of most preferred to least preferred.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference ER-AFW.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See ER-AFW.1 step 3.5

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 46 C061.0026 (1 point(s))

Procedure ER-AFW.1, Alternate Water Supply To The AFW Pumps," provides for alternate sources of water to the SGs. Which of the following lists these sources in their proper order, from most to least preferred?

a. Service water, city fire water, any source of condensate grade water

b. Service water, any source of condensate grade water, city fire water

c. Any source of condensate grade water, service water, city fire water

d. Any source of condensate grade water, city fire water, service water

Answer 46

c. Any source of condensate grade water, service water, city fire water

EXAM QUESTION HISTORY

Question #	RO	47	SRO	
	TIER	2	Group	1
C063.0045	KA	062K3.03	Importance	3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C063.0045

10CFR55 Content 55.41 8 55.43 _____

Learning Objective

R0901C 2.03 State the amount of time that the batteries are designed to last following the loss of all AC.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS09

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See SYS09 pg 2 under these conditions the batteries are good for 4 hrs.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 47 C063.0045 (1 point(s))

A plant trip from full power and loss of all AC power occurred at 1200 hours.
Which of the times listed below is the latest that the batteries will be able to supply adequate voltage to expected DC loads given that the proper loads are shed in accordance with UFSAR assumptions.

a. 1400 hours

b. 1600 hours

c. 2000 hours

d. 2400 hours

Answer 47

b. 1600 hours

EXAM QUESTION HISTORY

Question # B063.0008 RO 48 TIER 2 KA 063A3.01 SRO _____ Group 1 Importance 2.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
X	Modified (Attach original and Modified Questions)
	Original Bank Ginna # B063.0008
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 8 55.43 _____

Learning Objective

R0901C 3.05I Given a list of indications for the instrument bus and DC Power Systems, identify which are available on the MCB.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS09

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: The 1A1 and 1A battery chargers are operated in parallel either can supply full system load.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 48 B063.0008 (1 point(s))

The following plant conditions exist:

- 100% power
- All electrical systems are in their normal alignments
- DC Bus A voltmeter on the Main Control Board indicates 134 volts
- Total 'A' Train battery DC amp load is 80 amps
- "A" Vital Battery Monitor indicates +1 amp
- 1A1 Battery charger main output disconnect is inadvertently opened

.

What voltage will the crew observe on DC Bus "A" voltmeter and what amp load would be indicated on the Vital Battery Monitoring Cabinet for the "A" Battery?

a. 0 volts, 0 amps

b. 0 volts, -80 amps

c. ~ 134 volts, +1 amp

d. ~ 134 volts, -80 amps

Answer 48

c. ~ 134 volts, +1 amp

EXAM QUESTION HISTORY

Question # RO 49 SRO _____
TIER 2 Group 1
C000.1272 KA 064K6.07 Importance 2.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
X	Modified (Attach original and Modified Questions)
	Original Bank INPO # Cook 1 12/9/02
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 8 55.43 _____

Learning Objective

R0801C 4.02 List the basis for the capacity of the air start receivers.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS08

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Reference SYS08 page 4

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 49 C000.1272 (1 point(s))

Given the following:

- One of the air receivers for the "1A" Emergency Diesel Generator (EDG) has been tagged out for maintenance for the last 8 hours.

Which ONE of the following is the minimum number of normal start cycles that are currently available on the 1A EDG?

a. 2 starts

b. 3 starts

c. 4 starts

d. 5 starts

Answer 49

d. 2 starts

EXAM QUESTION HISTORY

Question #	RO	50	SRO	
	TIER	2	Group	1
C000.1273	KA	064A2.06	Importance	2.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 8 55.43 _____

Learning Objective

R0801C 3.02 List the three KW ratings on the generator and applicable time limits.
R0801C 10.03 Explain the basis for the specifications and actions, related to limiting conditions for operations.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS08

Level of Difficulty (from attachment 3) 3

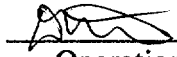
References required on Exam (Attach copy to this attachment)

None

Question Analysis: Per UFSAR table 8.3-2a Diesel Loading decreases by >300kw on recirculation. Since for aa DBA LOCA recirc is expected in ~1hour b is correct.

Verification  Date 2/17/04

Exam Developer

Validation  Date 2/17/04

Operations

Approved for Use  Date 2/17/04

Exam Developer

Question 50 C000.1273 (1 point(s))

The plant has experienced a large break LOCA and a loss of offsite power. Neither emergency diesel started automatically. Following a manual start of 1A EDG and manually loading of Bus 14 and 18 per Attachment 8.5, the HCO observed the following:

- 1A EDG load 2155 kw

Which ONE of the following is the LONGEST amount of time the diesel generator can remain at the above conditions without exceeding the machine ratings and what action would be required to restore loading to within limits.

a. .5 hours, reduce load by stopping redundant equipment

b. 2 hours, no action required loading will decrease as the LOCA progresses

c. 2 hours, reduce loading by stopping redundant equipment

d. Continuous, no action loading is within limits

Answer 50

b. 2 hours, no action required loading will decrease as the LOCA progresses

EXAM QUESTION HISTORY

Question #	RO	51	SRO	
	TIER	2	Group	1
C071.0001	KA	073A1.01	Importance	3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C071.0001

10CFR55 Content 55.41 13 55.43 _____

Learning Objective

R0801C 3.01 List the names of the systems which interface with the Waste Disposal System, and describe the purpose for each interface. To include:

a. CVCS
b. Circulating water
c. CCW
d. House Heating System
e. Ventilation
f. Nitrogen
g. Radiation Monitoring
h. RMW

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-9

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

P-9 Table

Question Analysis: Per P-9 step 4.11 the release is >ODCM requirement since the gas decay tank should have isolated (and hasn't) the operator should isolate the decay tank and notify the SS of exceeding the release limit.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 51 C071.0001 (1 point(s))

A Waste Gas Decay Tank is being released. As the HCO is doing his daily RMS plots, he notices R-14 reading 7.0×10^5 cpm. What are the correct actions concerning the Gas Decay Tank?

a. Terminate the release, have HP resample the Gas Decay Tank that was being released. Notify the SS that a release above release limits has occurred.

b. Terminate the release, have HP resample the Gas Decay Tank that was being released, no release above release limits has occurred.

c. Terminate the release only if R-13 is above the Alarm Setpoint.

d. Terminate the release only if R-14 fails check source and notify HP's.

Answer 51

a. Terminate the release, have HP resample the Gas Decay Tank that was being released. Notify the SS that a release above release limits has occurred.

EXAM QUESTION HISTORY

Question # C076.0002 RO 52 TIER 2 KA 076K4.01 SRO _____ Group 1 Importance 2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C076.0002

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R5101C 1.08 State under what conditions S.W. isolation takes place.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS51

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See SYS51 page 6

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/14/04
Exam Developer

Question 52 C076.0002 (1 point(s))

Under which one of the following conditions will a service water isolation signal be generated?

a. SI signal and emergency diesel generator start

b. Undervoltage on bus 14 or 16 only

c. Emergency diesel generator automatic start and undervoltage on bus 14 or 16

d. SI signal with a normal supply breaker open on Bus 14 or 16

Answer 52

d. SI signal with a normal supply breaker open on Bus 14 or 16

T.C. 94-049

EXAM QUESTION HISTORY

Question # C000.1286 RO 53 TIER 2 KA 076K3.01 SRO _____ Group 1 Importance 3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R2801C 6.03 Given a set of plant conditions and an alarming annunciator associated with the CCW system, evaluate plant conditions and determine the appropriate operator response.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS28

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Closure of the 4615 valve will cause partial loss of cooling to CCW. All other choices will decrease heat load or not change heat load on the system.

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 53 C000.1286 (1 point(s))

Given the following:

- Plant operating at 100% power for last 30 days
- AR-A-21, "Comp Cooling HX OUT HI Temp 100°F was just received

Which ONE of the following would cause this alarm?

a. AOV-754B "CCW from RCP 1B Thermal Barrier' going closed

b. AOV-745 "CCW from EX LTDN HX ISOL VLV" going OPEN

c. MOV-738A "CCW to RHR HX A" going OPEN

d. MOV-4615 "AUX BLDG SW ISOL VLV" going CLOSED

Answer 53

d. MOV-4615 "AUX BLDG SW ISOL VLV" going CLOSED

EXAM QUESTION HISTORY

Question #	RO	54	SRO	
	TIER	2	Group	1
C000.1274	KA	078G2.4.4	Importance	4.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

RAP10C 1.02 Recognize the symptoms of AP-IA.1 Loss of Instrument Air.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference AP-IA.1/Att 11.0

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See table Att-11.0 for failure positions loss of IA is the only failure which will cause all of the indications.

Verification _____ Date 2/17/04
Exam Developer

Validation Douglas G. Peters Date 2/17/04
Operations

Approved for Use _____ Date ~~2/17~~ 2/17/04
Exam Developer

Question 54 C000.1274 (1 point(s))

Given the following conditions:

- 50% power
- Pressure 2260 slowly increasing
- PRZR spray valves closed
- Letdown Orifice Valves closed
- Charging flow decreasing
- Przr Level 54% and increasing

Which one of the following malfunctions would cause these indications?

a. PT-449 Pressurizer Pressure Failed Low

b. LT-428 Pressurizer Level Failed Low

c. Loss of Instrument Air

d. Pressurizer Pressure Master Controller Failure

Answer 54

c. Loss of Instrument Air

EXAM QUESTION HISTORY

Question #	RO	55	SRO	
	TIER	2	Group	1
C103.0016	KA	103K3.01	Importance	3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C103.0016

10CFR55 Content 55.41 9 55.43 _____

Learning Objective

R2101C 5.02 Given a set of plant conditions and a copy of Tech Specs and Tech Spec referenced material (i.e. COLR), by able to apply the Tech Specs to include: LCO, applicability, applying action items, surveillances and the use of basis to aid in application.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference A-3.3 TS 3.6.4

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

T.S. 3.9.3

Question Analysis: Per Tech Spec 3.9.3 no direct path between the CNMT Atmosphere and the outside can exist.

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 55 C103.0016 (1 point(s))

The plant is in Mode 6 and core alterations are in progress. Which ONE of the following conditions will result in a loss of containment integrity?

a. Operation of the Containment Purge and Exhaust System.

b. Movement of maintenance personnel through the personnel air lock doors.

c. Penetration #2 (S/G inspection) has its blind flanges removed and is sealed with fire barrier foam.

d. The "A" S/G secondary manways removed and the associated atmospheric relief valve removed for maintenance.

Answer 55

d. The "A" S/G secondary manways removed and the associated atmospheric relief valve removed for maintenance.

EXAM QUESTION HISTORY

Question #	RO	56	SRO	
	TIER	2	Group	2
C000.1275	KA	002K3.02	Importance	4.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference RTA04C

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Reference LOCA Training Volume 1 pg 16-17

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 56 C000.1275 (1 point(s))

While operating at 100% power, a four-inch diameter small break LOCA occurs on the RCS Cold leg. Comparing plant response with the same size break on the Hot leg, more core uncovery occurs in a:

a. Hot leg LOCA and the core is uncovered for a greater period of time.

b. Cold Leg LOCA and the core is uncovered for a greater period of time.

c. Hot Leg LOCA and the core is uncovered for a shorter period of time.

d. Cold Leg LOCA and the core is uncovered for a shorter period of time.

Answer 56

b. Cold Leg LOCA and the core is uncovered for a greater period of time.

EXAM QUESTION HISTORY

Question # C011.0009 RO 57 TIER 2 KA 011K6.04 SRO _____ Group 2 Importance 3.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C011.0009

10CFR55 Content 55.41 9 55.43 _____

Learning Objective

R1901C 3.01C Explain how each of the MCB Pressurizer Pressure and Level Control System controllers function to maintain pressure and level, including:
a. Inputs
b. Outputs

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-10

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Reference P-10 step 1.1.2 and AR-F-4

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 57 C011.0009 (1 point(s))

Given the following information:

- Reactor power = 98%
- Pressurizer level = 49%
- "A" charging pump is running in AUTO
- The Tavg input to pressurizer level has failed low

Which ONE of the following groups of actions describes the indications the Operator will see? (Assume no operator action)

a. "A" charging pump slows down, backup heaters are energized, pressurizer level begins to decrease, Przr level deviation alarm actuates.

b. "A" charging pump speeds up, backup heaters are deenergized, pressurizer level begins to increase, Przr level deviation alarm actuates.

c. "A" charging pump slows down, backup heaters are energized, pressurizer level begins to increase, Przr level deviaton alarm actuates.

d. "A" charging pump speeds up, backup heaters are deenergized, pressurizer level begins to decrease, Przr level deviation alarm actuates.

Answer 57

a. "A" charging pump slows down, backup heaters are energized, pressurizer level begins to decrease, Przr level deviation alarm actuates.

EXAM QUESTION HISTORY

Question # C001.0071 RO 58 TIER 2 KA 014K4.06 SRO _____ Group 2 Importance 3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C001.0071

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R3101C 1.07 State the conditions and their setpoints that will cause the following MRPI CRT Alarms:

a) Rod Deviation
b) Rod On Bottom
c) Rod Off Top
d) All Control and Shutdown Rods on Bottom

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS31

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Refer to SYS31 pg 11

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 58 C001.0071 (1 point(s))

Which one of the listed alarms would activate (be energized) given the following conditions:

During a normal reactor startup, all Control Bank B rods at 36 steps except one rod that is at 24 steps (MRPI Indication). Step counter for Control Bank B shows 36 steps.

a. MRPI system failure (MCB)

b. Rod Deviation (MRPI CRT)

c. PPCS rod sequence or rod deviation (MCB)

d. Rod bottom rod stop (MCB)

Answer 58

c. PPCS Rod sequence or Rod deviation (MCB)

EXAM QUESTION HISTORY

Question # C000.1276 RO 59 TIER 2 KA 015K2.01 SRO _____ Group 2 Importance 3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Kewaunee 1 9/6/02

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R3301C 3.01 List the Nuclear Instrumentation System Rod Stops, trips and their setpoints and recognize the alarms for each of the following (include coincidence, if applicable):
a. Source Range b. Intermediate Range c. Power Range

R3301C 3.05 Describe or draw a block diagram of the following Nuclear Instruments from the detector to the drawer to the outputs (include setpoints and coincidence):
a. Source Range (RGE-NI-25)
b. Intermediate Range (RGE-NI-25)
c. Power Range (RGE-NI-23)

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-10

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Loss of Inst Bus B will cause N-36 to go into a trip condition. Since power must be >8% to block the trip the Rx will trip and an auto turbine trip will occur.

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 59 C000.1276 (1 point(s))

Given the following plant conditions:

- Reactor power is 7% with a power increase in progress
- The turbine is latched but has not been loaded onto the grid
- All power is then lost to Instrument Bus B

Which ONE of the following describes the effect of these conditions on the plant?

a. An automatic reactor trip will occur and the turbine will trip

b. An automatic reactor trip and safety injection will occur

c. The turbine will trip and the reactor remains at 7% power

d. Both the turbine and reactor remain at 7% power, but several control systems have to be operated in MANUAL

Answer 59

a. An automatic reactor trip will occur and the turbine will trip

EXAM QUESTION HISTORY

Question #	RO	60	SRO	
	TIER	2	Group	2
C000.1289	KA	017K1.01	Importance	3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank Ginna # C011.0009

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R1901C 3.01C Explain how each of the MCB Pressurizer Pressure and Level Control System controllers function to maintain pressure and level, including:

a. Inputs
b. Outputs

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS32

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See SYS32 pg 4

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 60 C000.1289 (1 point(s))

During Post Accident conditions, power is lost to one of the two Core Exit Thermocouples (CETCs) indicating panels. Which of the following describes the effect on the PPCS monitoring of CETCs.

a. The PPCS display of CETCs will not be affected since the PPCS directly monitors the CETC independent of the Display Panels.

b. The PPCS display will not be affected. However, the alarm monitoring functions of the display panels will not be available.

c. Input to the PPCS will be unavailable from the affected channel. Due to the PPCS error checking program, the unaffected CETC will be flagged as questionable data on PPCS.

d. Input to the PPCS will be unavailable from the affected channel. CETCs from the unaffected panel will continue to be displayed normally.

Answer 60

d. Input to the PPCS will be unavailable from the affected channel. CETCs from the unaffected panel will continue to be displayed normally.

EXAM QUESTION HISTORY

Question # C000.1278 RO 61 TIER 2 KA 028A2.03 SRO _____ Group 2 Importance 3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 8 55.43 _____

Learning Objective

R6501C 1.06 Explain why the hydrogen concentration in containment must not exceed 4.1% by volume before a hydrogen recombiner is placed in service.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference SYS65/S-21.2/S-21.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See SYS65 page 4

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 61 C000.1278 (1 point(s))

A LOCA has occurred. In response to a RED path on the CORE COOLING Critical Safety Function Status Tree, FR-C.1, "Response to Inadequate Core Cooling," is currently in progress.

Containment hydrogen concentration is 4.1%

Which of the following states the action that is to be taken in regards to operation of the hydrogen recombiners?

a. Operate the hydrogen recombiner system to reduce the hydrogen concentration

b. Operate the hydrogen recombiners after receiving additional guidance from TSC

c. DO NOT operate the hydrogen recombiners since they could result in ignition of the hydrogen

d. DO NOT operate the hydrogen recombiners since the hydrogen recombiner system will not be effective at this concentration

Answer 61

c. DO NOT operate the hydrogen recombiners since they could result in ignition of the hydrogen

EXAM QUESTION HISTORY

Question # C000.1279 RO 62 TIER 2 KA 029A1.03 SRO _____ Group 2 Importance 3.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ #_____

10CFR55 Content 55.41 9 55.43 _____

Learning Objective

R2101C 5.01 Recognize the components covered by Tech Specs.
R2101C 5.03 Explain the basis for the specifications and actions related to limiting conditions for operations.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference Tech Spec 3.6.4

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

Question Analysis: See Tech Spec B3.6.4 pgs 1-2

Verification _____ Date 2/17/04

Exam Developer

Validation _____ Date 2/14/04

Operations

Approved for Use _____ Date 2/17/04

Exam Developer

Question 62 C000.1279 (1 point(s))

A precaution contained in S-23.2.3, "Containment Mini-Purge System Operation," states:

"Operation of Mini-Purge supply path without opening the exhaust path (depressurization line) may pressurize the containment to 0.4 psig within 10 minutes and should, therefore, be avoided."

What is the high Tech Spec limit on containment pressure and what is the basis for this limit?

a. $\leq$ .4 psig - to ensure CNMT pressure remains less than 60 psig design during steamline break accident inside CNMT

b. $\leq$ .5 psig - to ensure CNMT pressure remains less than 60 psig design limit during large break LOCA accidents

c. $\leq$ 1 psig - to ensure CNMT pressure remains less than 60 psig design limit during steamline break inside CNMT

d. $\leq$ 2 psig - to ensure CNMT pressure remains less than 60 psig design limit during feedline break accident inside CNMT

Answer 62

c. $\leq$ 1 psig - to ensure CNMT pressure remains less than 60 psig design limit during steamline break inside CNMT

EXAM QUESTION HISTORY

Question #	RO	63	SRO	
	TIER	2	Group	2
B045.0008	KA	045A3.04	Importance	3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B045.0008

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAP22C 2.01 Given a set of plant and equipment conditions evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement.(AP-TURB.3)

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference AP-TURB.3

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

AP-TURB.3 Step 1 & 2

Question Analysis: See Ap-TURB.3 Action steps 1-2

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 63 B045.0008 (1 point(s))

The following plant conditions exist:

Rx power 95%

Alarm I-27 Rotor Eccentrity or Vibration Alarm is lit
Turbine Bearing Vibrations

Bearing 1	- 1.2 mils	7 - 2.5 mils
2	- 1.5 mils	8 - 4.5 mils
3	- 2.0 mils	9 - 11.0 mils
4	- 1.7 mils	
5	- 2.8 mils	
6	- 3.0 mils	

The correct operator response is:

a. Trip the turbine, go to AP-TURB.1 Turbine trip without Rx Trip

b. Trip the turbine, go to E-0 Rx Trip or SI.

c. Reduce turbine load to stabilize vibration.

d. Adjust generator hydrogen temperature or turbine lube oil temp or exciter cooling to stabilize vibrations.

Answer 63

d. Adjust generator hydrogen temperature or turbine lube oil temp or exciter cooling to stabilize vibrations.

EXAM QUESTION HISTORY

Question #	RO	64	SRO	
	TIER	2	Group	2
C000.1280	KA	071K5.04	Importance	2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
X	Modified (Attach original and Modified Questions)
	Original Bank INPO # Braidwood 1 10/29/01
	Bank Originating Bank #

10CFR55 Content 55.41 13 55.43

Learning Objective

R0901C 3.05I Given a list of indications for the instrument bus and DC Power Systems, identify which are available on the MCB.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis

Technical Reference CHA-EGSTRM

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See S-3.3B 4.6, Explosive Gas and Storage Tank Radioactivity Monitoring Program for Ginna Station page 1 (B.1.a/b)

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 64 C000.1280 (1 point(s))

Which one of the following is the limit above which action must be taken to reduce Oxygen Concentration in the Waste Gas Decay Tanks?

Hydrogen	Oxygen
a. Unlimited	2%
b. Unlimited	4%
c. 4.1%	5%
d. 4.1%	20%

Answer 64

a. Unlimited 2%

EXAM QUESTION HISTORY

Question #	RO	65	SRO	
	TIER	2	Group	2
C078.0006	KA	079A4.01	Importance	2.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C078.0006

10CFR55 Content 55.41 4 55.43 _____

Learning Objective

R4701C 3.03 Describe the effect to the Instrument and Service Air System if Instrument Air demand exceeds supply and instrument air header pressure starts dropping (assuming no more instrument air compressor supply is available and the service air compressor is running unloaded).

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference SYS47

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Reference SYS47 pg 14-15

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 65 C078.0006 (1 point(s))

Which of the following statements best describes the event when instrument air demand exceeds supply: (Assume the 1C Instrument Air Compressor is in service, systems are split and the Service Air Compressor is running)

a. The service air system starts supplying instrument air at 105 psig and then the Auto instrument air compressor starts at 90 psig.

b. The Auto instrument air compressors start at 105 psig and the emergency diesel driven air compressor starts at 90 psig.

c. When instrument air pressure drops to 100 psig. It takes operator action to start another instrument air compressor.

d. When instrument air pressure drops to 105 psig, the Auto instrument air compressors start and at 90 psig the service air begins to supply instrument air header.

Answer 65

d. When instrument air pressure drops to 105 psig, the Auto instrument air compressors start and at 90 psig the service air begins to supply instrument air header.

EXAM QUESTION HISTORY

Question #	RO	66	SRO	
	TIER	3	Group	
C000.1059	KA	2.1.2	Importance	3.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C000.1059

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAD03C 3.03 State the requirements for licensed operators at the controls in the control room.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference OPS-CONT-RM-CONDUCT

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Reference OPS-CONT-RM-CONDUCT steps 3.1.3 and 3.1.7

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 66 C000.1059 (1 point(s))

Which of the following are acceptable activities for the Control Board operators to be performing at the same time (plant is at power).

a. HCO - Administrative Paperwork
   CO - Performing a Power Range Performance Test

b. HCO - Monitoring the MCB Panels and PPCS
   CO - Eating Lunch

c. HCO - Discussing an In-Plant Task with the Primary AO
   CO - Calculating a Calorimetric

d. HCO - Monitoring the MCB Panels and PPCS
   CO - Reading a Newspaper

Answer 66

b. HCO - Monitoring the MCB Panels and PPCS
   CO - Eating Lunch

EXAM QUESTION HISTORY

Question # B010.0027 RO 67 TIER 3 KA 2.1.31 SRO _____ Group _____ Importance 4.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions) Original Bank _____ # _____
X	Bank Originating Bank Ginna # B010.0027

10CFR55 Content 55.41 7 55.43 _____

Learning Objective

R1901C 3.01C Explain how each of the MCB Pressurizer Pressure and Level Control System controllers function to maintain pressure and level, including:
a. Inputs b. Outputs

R1901C 5.01C Given a set of plant conditions and a failure of one of the following major components in the Pressurizer Pressure and Level Control system, predict how the system will respond.
a. PRZR PORV
b. PZR Safety
c. PRZR Spray Valve
d. PRZR Proportional Heaters
e. PRZR Backup Heaters

R1901C 5.02C Given a set of plant conditions, and a failure of one of the following major components in the Pressurizer Pressure and Level Control system, predict the effects on continued plant operation.
a. PRZR PORV
b. PZR Safety
c. PRZR Spray Valve
d. PRZR Proportional Heaters
e. PRZR Backup Heaters

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference P-10

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

Question Analysis: Reference P-10 section C for plant response

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 67 B010.0027 (1 point(s))

Given the following conditions:

- Reactor power is 50%
- Pressurizer level is 43%
- Pressurizer level selector switch is in the normal position (428/427)

The operators receive the following alarms:

- A-4, "Regen HX Outlet Hi Temp"
- F-4, "Pressurizer Level Deviation"
- F-28, "Pressurizer High Level Channel Alert"

What malfunction caused these alarms and what are the operators' actions in response to the alarms?

a. LT-428 Pressurizer level failed high; take manual control of charging to increase charging speed, select alternate level channel for control.

b. LT-428 Pressurizer level failed high; take manual control of charging to reduce charging pump speed, verify backup heaters on.

c. LT-428 Pressurizer level failed low; take manual control of charging and control pressurizer level, restore letdown.

d. LT-428 Pressurizer level failed low; take manual control of charging and increase charging pump speed, restore proportional and backup heaters.

Answer 67

a. LT-428 Pressurizer level failed high; take manual control of charging to increase charging speed, select alternate level channel for control.

EXAM QUESTION HISTORY

Question # C000.1281 RO 68 TIER 3 KA 2.1.33 SRO _____ Group _____ Importance 3.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # Braidwood 10/29/01

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

R1001C 5.01 Recognize the components covered by Tech Specs.

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference Tech Spec/COLR

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Reference COLR pg 5 Tech Spec 3.4.1

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 68 C000.1281 (1 point(s))

With the unit in Mode 1, which ONE of the following would require LCO entry?

a. RCS Tave at 575°F

b. Pressurizer Pressure at 2200 psig

c. Containment Pressure at 0.85 psig

d. Pressurizer Level at 72%

Answer 68

b. Pressurizer Pressure at 2200 psig

EXAM QUESTION HISTORY

Question # C000.1282 RO 69 TIER 3 KA 2.2.2 SRO _____ Group _____ Importance 4.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # IP-3 3/10/03

10CFR55 Content 55.41 5 55.43 _____

Learning Objective

ROP01C 1.05 Outline the major evolutions performed during O-1.2.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference _____

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: As the Rx pwr increases the RCS will heatup and the ARV will open due to time in core life (850ppm is last half of core life) Tavg increase will insert negative reactivity which will lead core power. Condenser steam dump is unavailable due to the MSIVs being closed.

Verification _____ Date 3/4 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 69 C000.1282 (1 point(s))

The following plant conditions exist during a mid-cycle reactor startup:

- The MSIVs are closed
- The reactor is critical below the point of adding heat (POAH)
- Tavg is at the normal No-Load value
- RCS Boron is 850 PPM
- Bank D at 180 steps
- The RO withdraws control rods 12 steps
- Startup rate is 0.3 DPM

Without further action, which ONE (1) of the following describes the plant response to the rod withdrawal?

When the Point of Adding Heat is reached,

a. Tavg, power level, pressurizer pressure and level will increase until the reactor trips at 10% power.

b. Tavg, power level, pressurizer pressure and level will increase until the condenser steam dumps open to stabilize power at a higher level.

c. Tavg, power level, pressurizer pressure and level will increase until the atmospheric steam dumps open to stabilize power at a higher level.

d. Tavg will increase which will add negative reactivity causing power to decrease, which will drive the reactor sub-critical unless rods are withdrawn further.

Answer 69

c. Tavg, power level, pressurizer pressure and level will increase until the atmospheric steam dumps open to stabilize power at a higher level.

EXAM QUESTION HISTORY

Question #	RO	70	SRO	
	TIER	3	Group	
C300.0331	KA	2.2.33	Importance	2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C300.0331

10CFR55 Content 55.41 2 55.43 _____

Learning Objective

RTH07C 6.03 State four guidelines that must be observed to ensure power distribution stays within limits during the intervals between technical specification surveillance requirements.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference Tech Spec 3.1.4

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See B3.2.1-1 and SYS30 1-4, 26

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 70 C300.0331 (1 point(s))

Which one of the following is the reason for overlap of the rod control banks?

a. Reduce the total step count required for reactor startup

b. Ensures proper operation of each subsequent bank prior to completing travel of the preceding bank.

c. Ensures a symmetric pattern for reactivity change, and reduces rod drop time to ensure reactor shutdown.

d. Provides more uniform rates of reactivity change, and maintains acceptable power peaking.

Answer 70

d. Provides more uniform rates of reactivity change, and maintains acceptable power peaking.

EXAM QUESTION HISTORY

Question #	RO	71	SRO	_____
	TIER	3	Group	_____
C000.1283	KA	2.3.2	Importance	2.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # San Onofre 1/1/00

10CFR55 Content 55.41 12 55.43 _____

Learning Objective

RRC08C 1.02 Identify methods used to keep radiation exposures as low as reasonably achievable.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference _____

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Calculation per points source equation show than ans b is correct

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 71 C000.1283 (1 point(s))

A point source in the Auxiliary Building is reading 500 mrem/hr at distance of two (2) feet. Two options exist to complete rework on a valve near this radiation source.

Option 1: Operator X can perform the assignment in thirty minutes working at a distance of four feet from the point source.

Option 2: Operators Y and Z, who have been trained in the use of a special extension tool can perform the same task in 75 minutes at a distance of eight feet from the point source.

Which of the following options is preferable and consistent with the ALARA program?

a. Option 1 as Xs exposure is 32.25 mrem.

b. Option 1 as Xs exposure is 62.50 mrem

c. Option 2 as the exposure per person is 39.06 mrem

d. Option 2 as the exposure per person is 78.12 mrem

Answer 71

b. Option 1 as Xs exposure is 62.50 mrem

EXAM QUESTION HISTORY

Question #	RO	72	SRO	
	TIER	3	Group	
C000.1284	KA	2.3.11	Importance	2.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank INPO # BV-1 12/1/2002

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

ROP01C 1.05 Outline the major evolutions performed during O-1.2.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference AP-SG.1 Basis TS 3.4.16 Basis

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Question Analysis: Reference Tech Spec B 3.4.16 -3 and -4

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 72 C000.1284 (1 point(s))

The Shift Supervisor has directed the plant shutdown based on RCS specific activity exceeding TS 3.4.16 limits.

In the event of a subsequent SGTR, which one of the following actions is designed to limit the release of radioactivity?

a. RCS is cooled down below 500°F

b. MSIV's are closed

c. SG atmospheric dump valve setpoints are raised

d. Maximum condensate polishers are placed in service

Answer 72

a. RCS is cooled down below 500°F

EXAM QUESTION HISTORY

Question #	RO	73	SRO	
	TIER	3	Group	
B000.0002	KA	2.4.16	Importance	3.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # B000.0002

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

REP50C 1.11 Describe what actions must be taken by the operator if a RED terminus is encountered in a CSF status tree.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis X

Technical Reference A-503.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: See ES-1.3 step 3 Note 1 Basis

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 73 B000.0002 (1 point(s))

During a large break LOCA event, plant conditions have been met to transition to ES-1.3 (Transfer to Cold Leg Recirculation) from E-1 (Loss of Reactor or Secondary Coolant). While performing Step 5 of ES-1.3, the STA informs the Shift Supervisor that he has received a red path status tree on core cooling, and that FR-C.1, Response to Inadequate Core Cooling, should be implemented.

Which one of the following describes the proper procedure under these conditions?

a. Immediately transition to FR-C.1

b. Complete ES-1.3 then transition to FR-C.1

c. Once in ES-1.3, CSFST no longer apply. Continue in ES-1.3. No transition to FR-C.1 should be made.

d. Complete ES-1.3 until on cold leg recirc, then transition to FR-C.1

Answer 73

d. Complete ES-1.3 until on cold leg recirc, then transition to FR-C.1.

EXAM QUESTION HISTORY

Question #	RO	74	SRO	
	TIER	3	Group	
C000.1065	KA	2.4.31	Importance	3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
X	Bank Originating Bank Ginna # C000.1065

10CFR55 Content 55.41 10 55.43 _____

Learning Objective

RAD03C 1.03 Recognize the duties and responsibilities for the control room personnel.

Cognitive Level
Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference OPS-MCB-ANNUNCIATORS

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Question Analysis: OPS-MCB-ANNUNCIATORS step 3.3

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 74 C000.1065 (1 point(s))

Which of the following describes the requirements for the use of Alarm Response (AR) procedures for single alarms.

a. AR procedures shall be referenced for every alarm received during normal operations and unexpected alarms during abnormal or emergency events.

b. AR procedures shall be referenced for unexpected alarms unless the alarm is of a basic nature.

c. AR procedures shall be referenced for all unexpected alarms which involve systems with Tech Spec operability requirements.

d. AR procedures need not be referenced if one of the operators verbalizes the alarm to the control room and states whether it is expected or unexpected.

Answer 74

b. AR procedures shall be referenced for unexpected alarms unless the alarm is of a basic nature.

EXAM QUESTION HISTORY

Question #	RO	75	SRO	
	TIER	3	Group	
C000.1285	KA	2.4.39	Importance	3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

X	New
	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
	Bank Originating Bank _____ # C000.1285

10CFR55 Content 55.41 10 55.43 _____

Learning Objective
RSC01C6.00

Cognitive Level Memory or Fundamental Knowledge X
Comprehension or Analysis _____

Technical Reference EPIP-5.7 page 34

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)
None

Question Analysis: See EPIP-5.7 pg 34 for duty list

Verification _____ Date 2/17/04
Exam Developer

Validation _____ Date 2/17/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 75 C000.1285 (1 point(s))

Due to current plant conditions, the Emergency Coordinator has declared a Site Area Emergency (SAE). You are the Head Control Operator (HCO). From the list below, select the actions that are designated as your responsibilities:

1. Monitor plant parameters to maintain the plant in a safe condition
2. Provide perspective in assessment of plant conditions and actions to be taken for safety of the plant
3. Sound the alarm and make announcements as necessary
4. Check that the Control Room Ventilation System is in recirculation mode
5. Assist the Shift Supervisor in any assessment functions identified
6. When TSC is staffed, requests for RP and maintenance support should go through the TSC

a. 1, 3, 4, 6

b. 1, 2, 3, 4, 6

c. 1, 3, 4, 5, 6

d. All

Answer 75

a. 1, 3, 4, 6

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

Applicant Information	
Name:	
Date:	Facility/Unit: R.E. Ginna
Region: I	Reactor Type: W
Start Time:	Finish Time:

Instructions

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 a 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require an 80.00 percent to pass. You have eight hours to complete the combined examination, and three hours if you are only taking the SRO portion.

Applicant Certification

All work done on this examination is my own. I have neither given nor received aid.

_____
Applicant's Signature

Results	
RO / SRO-Only / Total Examination Values	____ / ____ / ____ Points
Applicant's Scores	____ / ____ / ____ Points
Applicant's Grade	____ / ____ / ____ Percent

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	1
	TIER	1	Group	1
B000.1037	KA	000008AA2.16	Importance	_____

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank INPO # Braidwood 7/17/02

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

RFR00C.2.01 Given a set of plant conditions and a copy of the CSFST's, apply the CSFST.

Cognitive Level

Memory or Fundamental Knowledge	_____
Comprehension or Analysis	✔

Technical Reference F-O.2

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

_____

_____

Answer Analysis: Per F-O.2 for the condition given the is an orange path requiring entry into FR-C.2.

_____

_____

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 1 B000.1037 (1 point(s))

A large vapor space LOCA has occurred. The operating crew has implemented the appropriate emergency procedures and is currently in E-1, Loss of Reactor or Secondary Coolant. The STA is monitoring status trees. The following indications are observed in the Main Control Room:

- Train "A" CETs indicate 720°F
- Train "B" CETs are de-energized
- Thermocouple Map Display on PPCS indicates Average CETs at 730°F
- RVLIS indicates 45%
- RCS pressure is 350 psig
- "A" RCP is running

Core cooling is _____ and will be mitigated by performing _____.

a. INADEQUATE; FR-C.1, Response to Inadequate Core Cooling

b. SATURATED; FR-C.3, Response to Saturated Core Cooling

c. ADEQUATE; E-1, Loss of Reactor or Secondary Coolant

d. DEGRADED; FR-C.2, Response to Degraded Core Cooling

Answer 1

d. DEGRADED; FR-C.2, Response to Degraded Core Cooling

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	2
	TIER	1	Group	1
C000.0808	KA	000011G2.4.4	Importance	4.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # C000.0808

10CFR55 Content 55.41 _____ 55.43 2

Learning Objective

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference A503.1/ES-1.3

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

Answer Analysis: Per A503.1 (and ES1.3 Bkgrd.) RWST level < 28% requires transfer to cold leg recirculation even if you are currently in a red path

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 2 C000.0808 (1 point(s))

Assume the operators have just started a depressurization of the intact S/G's per Step 16 of FR-C.1, Response To Inadequate Core Cooling with the following indications:

- Core exit TCs at 1250°F and decreasing
- SG pressures 900 psig and decreasing
- RWST level just decreased to 27%

Select the appropriate action for the above conditions.

a. Continue in FRC.1 until directed to ES-1.3, Transfer to Cold Leg Recirculation by step 22.

b. Transfer to ES-1.3, Transfer to Cold Leg Recirculation as soon as core exit TC less than 1200 degrees F. Initiate cold leg recirculation, then return to FRC.1 step 16.

c. Complete step 16 ie; SG < 200 psig and Th less than 400 degrees, then transfer to ES-1.3,Transfer to Cold Leg Recirculation. Initiate cold leg recirculation, then return to FRC.1.

d. Immediately transfer to ES-1.3, Transfer to Cold Leg Recirculation while continuing SG depressurization. Initiate cold leg recirculation, then return to FRC.1 step 16.

Answer 2

d. Immediately transfer to ES-1.3, Transfer to Cold Leg Recirculation while continuing SG depressurization. Initiate cold leg recirculation, then return to FRC.1 step 16.

97-043

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	3
	TIER	1	Group	1
B000.1038	KA	000015/17G2.4.30	Importance	3.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43 5

Learning Objective
RAD04C1.03 Given a hypothetical situation, correctly complete any forms/reports required by the procedure.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference O-9.3

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)
O-9.3, EPIP1-0, T.S. 3.4.13

Answer Analysis: As per EPIP1-0 a 11 gpm identified leak does not exceed the classification threshold. Initiation of a plant shutdown required by Tech Specs is 4 hour reportable per O-9.3.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 3 B000.1038 (1 point(s))

The plant was operating at 100% power. The "B" RCP Seal Leakoff Hi Flow annunciator B-18 and the "B" RCP Labyrinth Seal Lo delta P annunciator B-10 were received. The operators entered AP-RCP.1 and are preparing to start a plant shutdown per O-2.1 in accordance with step 4b RNO when annunciator B-4, RCP B Standpipe Hi Level +1 Foot, is received. The HCO reports a calculated leak rate through the #3 seal to be 11 gpm based on CNMT Sump A level increase. Based on the above information, what are the initial reporting requirements for this event?

a. Notify NY State, Monroe and Wayne Counties per EPIP 1-5, UNUSUAL EVENT BASED ON RCS LEAKAGE. Notify the NRC per O-9.3, EVENT CLASSIFICATIONS within one hour.

b. Notify NY State, Monroe and Wayne Counties per EPIP 1-5, UNUSUAL EVENT BASED ON RCS LEAKAGE. Notify the NRC per O-9.3 within four hours of TS Required Shutdown.

c. Notify the NRC per O-9.3 within four hours of TS Required Shutdown.

d. Notify NY State, Monroe and Wayne Counties per EPIP 1-5, ALERT BASED ON RCS LEAKAGE. Notify the NRC per O-9.3, Event Classification, within one hour.

Answer 3

c. Notify the NRC per O-9.3 within four hours of TS Required Shutdown.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	4
	TIER	1	Group	1
B320.0045	KA	000025AA2.07	Importance	3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B320.0045

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

RAP25C2.01 Given a set of plant and equipment conditions evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement. (AP-RHR.2)

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference AP-RHR.2

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Given conditions match the entry condition of AP-RHR.2. AP-RHR.2 action are as listed in distractor C.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 4 B320.0045 (1 point(s))

The plant is in CSD during a refueling outage. Loop level has been lowered. S/G nozzle dam installation is in progress. MCB Annunciator A-20 (RHR Loop Low-Flow - 400 gpm) alarms. The RHR Flow Indicator (FI-626) is fluctuating from 100 gpm to 400 gpm with the "A" RHR pump running. Which action should be taken:

a. Place FCV-626 in manual and reduce RHR flowrate to reduce vortexing as per AP-RHR.1, Loss of RHR

b. Stop "A" RHR pump, raise loop level using a charging pump to loop "A" cold leg, vent RHR suction line, then restart "A" RHR pump, as per AP-RHR.2, Loss of RHR at Reduced Inventory Conditions.

c. Stop "A" RHR pump, raise loop level via gravity feed thru MOV 856, vent RHR suction line, then restart "A" RHR pump as per AP-RHR.2, Loss of RHR at Reduced Inventory Conditions.

d. Stop "A" RHR pump, vent RHR suction piping, then restart A RHR pump, as per AP-RHR.1, Loss of RHR.

Answer 4

c. Stop "A" RHR pump, raise loop level via gravity feed thru MOV 856, vent RHR suction line, then restart "A" RHR pump as per AP-RHR.2, Loss of RHR at Reduced Inventory Conditions.

Ref: 000025 K/A: EK1.01 3.9/4.3

TC # LOR 2003-037
TC # LOR 2003-038

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	5
	TIER	1	Group	1
C000.1017	KA	00003862.4.6	Importance	4.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # C000.1017

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

REP03C1.02 Given the notes, cautions and/or major action categories in E-3, Steam Generator Tube Rupture, explain the basis for notes, cautions and/or major action categories in E-3.

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference E-3 Basis

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per E-3 Basis Depressarization is intended to increase RCS inventory.

Verification _____ Date 1/30/04
Exam Developer

Validation Douglas C. Peterson Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 5 C000.1017 (1 point(s))

Given the following plant conditions:

- Steam Generator tube rupture has occurred with a concurrent loss of offsite power
- All other systems/equipment are available
- The initial cooldown required by E-3 has been completed, and the shift crew is preparing to depressurize the RCS

Which ONE of the following statements is correct regarding the effects of the impending depressurization?

a. Actual liquid mass in the RCS will not change, but indicated PZR level will increase (due to the PZR steam space break phenomenon).

b. Actual liquid mass in the RCS will decrease due to the response of the charging pumps to the probable bubble which will form in the vessel head, but indicated PZR level will increase.

c. Actual liquid mass in the RCS will increase, and both indicated and actual PZR level will increase.

d. Actual mass in the RCS will not change, but indicated PZR level will increase due to the formation of a bubble in the reactor vessel head.

Answer 5

c. Actual liquid mass in the RCS will increase, and both indicated and actual PZR level will increase.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	6
	TIER	1	Group	1
B000.1039	KA	00005862.4.4	Importance	4.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43 2

Learning Objective

_____

_____

_____

_____

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference ER-ELEC.2

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)
None

_____

Answer Analysis: Reference ER-ELEC.2 Vital Battery Monitoring Alarm is the only listed alarm that directly indicates a problem with the DC bus.

_____

_____

Verification _____ Date 1/30/04
Exam Developer

Validation Douglas A. Pate Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 6 B000.1039 (1 point(s))

Which of the following conditions does procedure ER-ELEC.2, Recovery from Loss of A or B DC Train provide the appropriate recovery actions.

a. "A" Battery Voltage - 130 Volts
Battery Charger Failure of PA Inverter Trouble Alarm (J-15)
Vital Battery Monitoring System Alarm (J-31)

b. "A" Battery Voltage - 135 Volts
Safeguards DC Failure Alarm (L-31)
Battery Bank Ground Alarm (J-23)

c. "B" Battery Voltage - 105 Volts
1A or 1 B Battery Undervoltage Alarm (J-21)
Vital Battery Monitoring System Alarm (J-31)

d. "B" Battery Voltage - 105 Volts
Fire has occurred in the Relay Room
Alternative DC supply is needed for the TDAFW DC Oil Pump

Answer 6

C. "B" Battery Voltage - 105 Volts
1A or 1B Battery Undervoltage Alarm (J-21)
Vital Battery Monitoring System Alarm (J-31)

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	7
	TIER	1	Group	1
B000.0380	KA	W/EO5EA2.1	Importance	4.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B000.0380

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

RMC04C1.01 State the indications of a loss of heat sink (red path entry condition to FR-H.1).

Cognitive Level

Memory or Fundamental Knowledge	_____
Comprehension or Analysis	✔

Technical Reference E-O

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: E-O step 16 directs operators to FR-H.1 with these conditions. It is the first tranistion encounter in E-O that requires leaving E-O.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 7 B000.0380 (1 point(s))

Immediately following the completion of the immediate actions of E-0, Reactor Trip or Safety Injection, the following conditions exist:

- RCS pressure - 1780 psig
- Core Exit TCs - 551 degrees F
- S/G pressures - (A,B) - 1000 psig, 400 psig & decreasing
- S/G N.R. levels (A,B) - 0%, 0%
- Containment pressure - 6.3 psig
- Pressurizer level - 6% and decreasing
- Total feed flow to S/G A - 0 gpm
- Total feed flow to S/G B - 100 gpm

Assuming these conditions exist and cannot be improved as you progress through E-0, which one of the following procedures should be entered from E-0?

a. E-1, Loss of Reactor or Secondary Coolant.

b. E-2, Faulted Steam Generator Isolation.

c. ES-1.1, SI Termination.

d. FR-H.1, Response to Loss of Secondary Heat Sink.

Answer 7

d. FR-H.1, Response to Loss of Secondary Heat Sink.

(SRO Transition)

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	8
	TIER	1	Group	2
B015.0002	KA	000032G2.1.32	Importance	3.8

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B015.0002

10CFR55 Content 55.41 _____ 55.43 2

Learning Objective

R3301C6.02 Given a set of plant conditions and a copy of Tech Specs and Tech Spec referenced material (i.e. COLR) be able to apply the Tech Specs. To include: LCO, applicability, applying action items, surveillances and the use of basis to aid in application.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference ER-NIS.1/Tech Spec. 3.3.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per ER-NIS.1 and Tech Spec 3.3.1 both source ranges must be operable to continue startup ER-NIS.1 direct actions of b.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 8 B015.0002 (1 point(s))

The following conditions exist when Source Range Channel N-32 indication drops to < 1.0 cps:

S.R. Channel N-31 = 2 x 10^2 cps
RCS dilution in progress in preparation for startup
Reactor trip breakers closed
Shutdown bank withdrawn

Which one of the following is a required action associated with the inoperability of N-32?

a. Restore within 1 hr or have Rx trip breakers open in next hour

b. Suspend the RCS dilution and any other positive reactivity addition.

c. Within one hour open the reactor trip breakers.

d. No limitation, LCO is satisfied

Answer 8

b. Suspend the RCS dilution and any other positive reactivity addition.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	9
	TIER	1	Group	2
B000.1040	KA	067AA2.15	Importance	3.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43 5

Learning Objective

RAD08C2.04 Describe the duties, responsibilities and authorities (as applicable) of key personnel identified by the procedure.

Cognitive Level

Memory or Fundamental Knowledge	✔
Comprehension or Analysis	_____

Technical Reference A-905

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per A-905 a disconnected fire detection zone requires a continuous fire watch. EPIP-1.13 requires all personnel evacuate the area. A is correct since the required action is to evacuate the area and return as soon as possible.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 9 B000.1040 (1 point(s))

Given the following plant conditions:

- There is welding in progress in the Auxiliary Building in the Charging Pump Room with a continuous fire watch posted. The fire system for Charging Pump Room is disconnected (Z01)
- R-4, Charging Pump Room, radiation alarm is received
- An announcement is made to evacuate the Charging Pump Room

Which ONE (1) of the following describes the actions regarding the maintenance of the fire watch.

a. The fire watch will be instructed to evacuate the area and re-establish the fire watch as soon as possible.

b. The fire watch will be instructed to remain in the area for 10 minutes and inform the control room of conditions in the area.

c. The fire watch will be instructed to secure the fire watch and call security for further instructions.

d. The fire watch will be instructed to remain in the area for 30 minutes and inform the control room of conditions in the area.

Answer 9

a. The fire watch will be instructed to evacuate the area and re-establish the fire watch as soon as possible.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	10
	TIER	1	Group	2
B004.0014	KA	000069AA2.01	Importance	4.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B004.0014

10CFR55 Content 55.41 _____ 55.43 2

Learning Objective

R2101C5.02 Given a set of plant conditions and a copy of Tech Specs and Tech Spec referenced material (i.e. COLR), by able to apply the Tech Specs to include: LCO, applicability, applying action items, surveillances and the use of basis to aid in application.

Cognitive Level	Memory or Fundamental Knowledge	_____
	Comprehension or Analysis	✔

Technical Reference A-3.3, ITS 3.6.3

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

A-3.3, ITS 3.6.3

Answer Analysis: Per A-3.3 AOV 5738 is required to be operable. Having it inoperable requires closing it's alternate isolation valve.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/14/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 10 B004.0014 (1 point(s))

While the plant is operating at 100% power, it is determined that AOV 7478 CNMT mini-purge supply fails to meet leakage requirements. Which one of the following statements is correct concerning continued operation?

a. Close and deactivate AOV 7445 within 1 hr or mode 5 next 36 hrs (mode 3 in 6 hrs)

b. Close and deactivate AOV-7445 within 4 hours or mode 5 next 36 hours (mode 3 in 6 hrs)

c. Close and deactivate AOV 7445 within 24 hours or mode 5 next 36 hours (mode 3 in 6 hrs)

d. Close and deactivate AOV 7445 within 72 hours or mode 5 next 36 hours (mode 3 in 6 hrs)

Answer 10

c. Close and deactivate AOV 7445 within 24 hours or mode 5 next 36 hours (mode 3 in 6 hrs)

TC 97-039

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	11
	TIER	1	Group	2
B000.1045	KA	W/E07G2.4.30	Importance	3.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43 5

Learning Objective

RSC02C3.00 Using the appropriate EPIP procedure and a given set of plant conditions: Classify the event. Outline the requirements to reduce the classification of the emergency event.

RSC02C12.00 Given various hypothetical situations, correctly determine protective action recommendations using EPIP-2.1

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference EPIP-1.0, EPIP-2.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

EPIP-1.0, EPIP-2.1

Answer Analysis: Per EPIP-1.0 Red Path on Core Cooling for > 15 mins is a General Emergency. Per EPIP-2.1 at a General Emergency with 290° wind requires evacuating Wayne 1,2,3 KI plan and sheltering remaining ERPAs.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 11 B000.1045 (1 point(s))

The plant has tripped and had a loss of heat sink. The operator entered FR-H.1, Response to Loss of Heat Sink but was unable to restore Heat Sink or establish Bleed and Feed. A Red Path on Core Cooling occurred and the operator transitioned to FR-C.1, Response to Inadequate Core Cooling, 20 minutes ago. Efforts to restore core cooling have been unsuccessful. The following conditions exist:

- R29/30 CNMT Hi Range Radiation 500 R/hr
- Wind Speed 10 mph
- Wind Direction 290°

Which of the following notifications to the state and counties is correct:

a. Classification - Site Area Emergency; no protective action necessary

b. Classification - Site Area Emergency; notify Wayne County that the site will be evacuated

c. Classification - General Emergency; evacuate Wayne 1, 2, Monroe 1, implement KI Plan, shelter all remaining ERPA's

d. Classification - General Emergency; evacuate Wayne 1, 2, 3, implement KI Plan, shelter all remaining ERPA's

Answer 11

d. Classification - General Emergency; evacuate Wayne 1, 2, 3, implement KI Plan, shelter all remaining ERPA's

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	12
	TIER	1	Group	2
B000.1046	KA	W/E15EA2.1	Importance	3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43__5___

Learning Objective

RFRZ2C1.03 Identify the criteria for each of the FR-Z.2 foldout page items.

Cognitive Level Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference FR-Z.2 Background

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per FR-Z.2 Background CNMT Sump B level > 180 inches indicates in leakage from a system and is not expected post LOCA

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 12 B000.1046 (1 point(s))

Following a Large Break LOCA, the HCO notes that CNMT Sump B level indication for 180 inches is illuminated for both trains. Which of the following statements is correct regarding the 180 inch level.

a. This is a normal post-LOCA indication. The operators need not take any further action.

b. This is an indication of Service Water Leakage into CNMT. The operators will take action per AP-SW.1, SW Leak.

c. This is an indication of unexpected water entering containment. The operators will take actions per FR-Z.2, Response to High CNMT Level.

d. This is an indication of unexpected water entering CNMT. The operators will monitor the level but no action is required until level is > 214 inches indicated on B sump.

Answer 12

c. This is an indication of unexpected water entering containment. The operators will take actions per FR-Z.2, Response to High CNMT Level.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	13
	TIER	2	Group	1
B000.1047	KA	022G2.2.25	Importance	3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43 2

Learning Objective

R2201C6.03 Explain the basis for the specifications and actions, related to limiting conditions for operations.

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference Tech Spec 3.6.5, 3.6.6 Basis

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: T.S. 3.6.6 describe requirement to run Recirc Fans to maintain CNMT temperature < 120°F Tech Spec 3.6.5 Basis discusses that one of the reasons is to prevent exceeding CNMT Temp and Pressure Limit following a DBA Steamline Break.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 13 B000.1047 (1 point(s))

The plant Tech Specs require that sufficient CNMT coolers be in service to limit average containment air temperature to less than 120°F. Which of the following statements describe the basis for this requirement.

a. Higher CNMT temperatures will result in inadequate cooling of safety related motors in CNMT during normal operations.

b. Higher CNMT temperatures may result in exceeding the containment design basis for temperature and pressure following a DBA steam line break.

c. High CNMT temperatures will result in degradation of safety related instrumentation during normal operations

d. Higher CNMT temperatures will result in inadequate cooling of the MRPI coil stacks and excore nuclear instruments following a DBA LOCA.

Answer 13

b. Higher CNMT temperatures may result in exceeding the containment design basis for temperature and pressure following a DBA steam line break.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	14
	TIER	2	Group	1
B000.1048	KA	026A2.03	Importance	4.4

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43__5__

Learning Objective

R2201C6.03 Explain the basis for the specifications and actions, related to limiting conditions for operations.

R2401C9.03 Explain the basis for the specifications and actions, related to limiting conditions for operations.

RMC121.2C State the two (2) systems designed to mitigate a high containment pressure condition.

Cognitive Level Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference TS 3.6.6, TS 3.6.7 Basis

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Failure to provide minimum CNMT cooling during a DBA LOCA will cause CNMT to exceed its design press. (Ref 3.6.7 Basis). The first place in the EOP network for starting spray is E-O step 7.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 14 B000.1048 (1 point(s))

The plant is at 100% power with the "B" and "D" CNMT Recirc Fans out of service. A DBA LOCA occurs and CNMT spray fails to automatically actuate. Which of the following predicts the effects on the CNMT of these malfunctions and what action will the operators take in response?

a. CNMT pressure will exceed 60 psig with no operator action. The operator will start CNMT spray manually per E-0, Reactor Trip or SI.

b. CNMT pressure will remain less than 60 psig with no operator actions. The operator will start CNMT spray per E-0, Reactor Trip or SI.

c. CNMT pressure will exceed 60 psig with no operator action. The operator will start CNMT spray per FR-Z.1, Response to High CNMT pressure on a Red Path.

d. CNMT pressure will remain less than 60 psig with no operator action. The operator will start CNMT spray per FR-Z.1, Response to High CNMT Pressure on an Orange Path.

Answer 14

a. CNMT pressure will exceed 60 psig with no operator action. The operator will start CNMT spray manually per E-0, Reactor Trip or SI.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	15
	TIER	2	Group	1
B000.1041	KA	039G2.2.25	Importance	3.7

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank INPO # Braidwood 7/17/02

10CFR55 Content 55.41 _____ 55.43 2

Learning Objective

R4001C8.03 Explain the basis for the specifications and actions, related to limiting conditions for operations.

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference ITS 3.7.2

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: See ITS 3.7.2 Basis attached.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 15 B000.1041 (1 point(s))

Prior to start up following completion of a refueling outage, the Main Steam Isolation Valves (MSIVs) were tested to ensure a closure time of < 5 seconds and that each MSIV closed to its isolation position on an actual or simulated actuation signal. The Main Steam Non-Return Valves are also tested to verify that they can close.

The basis for performing these surveillances was to limit or mitigate ALL of the following EXCEPT:

a. Accidents that could result in offsite exposures comparable to 10CFR100 limits

b. The potential for uncontrolled RCS cooldown and positive reactivity restart accident

c. A turbine overspeed condition following a generator trip at power

d. Total mass and energy release into containment on a SLB

Answer 15

c. A turbine overspeed condition following a generator trip at power

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	16
	TIER	2	Group	1
C000.1290	KA	063A2.01	Importance	3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41_____ 55.43__5___

Learning Objective

RER07C1.04 Given a set of plant conditions (and a procedure figure, if needed) evaluate the appropriate parameters and determine the correct course of action.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference ER-ELEC.2

Level of Difficulty (from attachment 3) 4

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Reference ER-ELEC.2

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 16 C000.1290 (1 point(s))

Given the following plant conditions:

- 125V DC Bus "A" deenergized due to a ground
- Rx tripped when the "A" DC bus deenergized
- Small break LOCA occurred, RCP Trip Criteria is met
- RCS is cooling down uncontrollably

Which of the following describe the plant response and the necessary actions to mitigate the event.

	SI	RCPs Trip	MSIVs
a.	All equipment starts normally	"A" RCP cannot be tripped from Control Room. Trip by transferring control power per ER-ELEC.2, Response To Loss of A or B DC Bus.	Cannot close A MSIV. from the Control Room. Close locally per E-0, Rx Trip or SI.
b.	"B" Train starts normally. Manually start "A" Train equipment per E-0, Reactor Trip or SI	Both RCPs can be tripped from the Control Room.	Both MSIVs can be shut from the Control Room.
c.	"B" Train starts normally. Manually start "A" Train equipment per E-0, Reactor Trip or SI	"A" RCP cannot be tripped from Control Room. Trip by transferring control power per ER-ELEC.2, Response to Loss of A or B DC Bus.	Cannot close A MSIV. from the Control Room. Close locally per E-0, Rx Trip or SI.
d.	All equipment starts normally.	Both RCPs can be tripped from the Control Room.	Both MSIVs can be shut From the Control Room.

Answer 16

c.	"B" Train starts normally. Manually start "A" Train equipment per E-0, Reactor Trip or SI	"A" RCP cannot be tripped from Control Room. Trip by transferring control power per ER-ELEC.2, Response to Loss of A or	Cannot close A MSIV. from the Control Room. Close locally per E-0, Rx Trip or SI.

B DC Bus.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	17
	TIER	2	Group	2
C033.0036	KA	033A2.03	Importance	3.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
✔	Modified (Attach original and Modified Questions)
	Original Bank Ginna # C033.0036
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

R3601C4.06 Given a set of plant conditions and a failure of one of the following major components in the Spent Fuel Pool cooling and Storage System, predict how the system will respond.

a. "A" SFP Pump

b. "B" SFP Pump

c. Stby SFP Pump (if in use)

d. "A" SFP Heat Exchanger

e. "B" SFP Heat Exchanger

f. Stby SFP Heat Exchanger (if in use)

g. SFP Wier Gate

Cognitive Level

Memory or Fundamental Knowledge	_____
Comprehension or Analysis	✔

Technical Reference ER-SFP.2

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per Sys 36 the "B" SFP pump will trip on low water level. Actions are per ER-SFP.1 to start "A" system.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 17 C033.0036 (1 point(s))

Given the following conditions in the Spent Fuel Pit (SFP):

- It is one week after the completion of the most recent refueling outage
- SFP cooling system "B" in service
- SFP temperature 102°F
- A leak has developed on the inlet to "B" SFP heat exchanger and cannot be isolated without securing the "B" Heat Exchanger
- Annunciator K-29, SFP HI TEMP 115°F HI-LO LEVEL 20" 12", has just energized

Which of the following describes the effect on SFP cooling without operator action and the necessary operator actions to restore SFP cooling.

a. SFP pump "B" will continue to run, resulting in continued loss of inventory. The operator will secure the "B" SFP cooling system and place the "A" SFP cooling system in service.

b. SFP pump "B" will trip on a low level in the SFP. The operators place the "A" SFP cooling system in service and monitor SFP temperature to determine if the standby SFP cooling system will need to be placed in service.

c. SFP pump "B" will continue to run, resulting in continued loss of inventory. The operators will secure the "B" SFP Cooling System and place the "A" SFP cooling system in service and monitor SFP temperature to determine if the standby SFP cooling system will need to be placed in service.

d. SFP pump "B" will trip on a low level in the SFP. The operator will place the "A" SFP cooling system in service. The Standby SFP cooling system will not be needed.

Answer 17

b. SFP pump "B" will trip on a low level in the SFP. The operators place the "A" SFP cooling system in service and monitor SFP temperature to determine if the standby SFP cooling system will need to be placed in service.

TC #99-054

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	18
	TIER	2	Group	2
B000.1049	KA	055G2.1.14	Importance	3.3

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

✔	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
_____	Bank Originating Bank Ginna # B320.0045

10CFR55 Content 55.41_____ 55.43 5

Learning Objective

RAP23C2.01 Given a set of plant and equipment conditions evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement. (AP-TURB.4)

Cognitive Level Memory or Fundamental Knowledge ✔
Comprehension or Analysis ____

Technical Reference AP-TURB.4, Tech Spec 3.4.16

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per AP-TURB.4 Vacuum Problems require notification of Turbine System Engineer. T.S. 3.4.16 requires increased sampling frequency and O-5.1 require notification of the RP if load decrease exceeds 15%/hr.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 18 B000.1049 (1 point(s))

Which of the following events requires the Control Room to notify the on shift RP and the Turbine System Engineer.

a. Turbine Trip performed as part of a Normal (O-2.1) Shutdown

b. Air Ejector Malfunction which results in a rapid 20% power reduction due to loss of vacuum

c. Steam Generator Level Control problem resulting in a rapid 40% power reduction due to loss of feedwater

d. Plant shutdown at 10%/hour to prepare for condenser tube cleaning

Answer 18

b. Air Ejector Malfunction which results in a rapid 20% power reduction due to loss of vacuum

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	19
	TIER	3	Group	_____
B000.1043	KA	2.1.13	Importance	2.9

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
✔	Modified (Attach original and Modified Questions)
	Original Bank INPO # Braidwood 1 10/20/00
_____	Bank Originating Bank _____ # _____

10CFR55 Content 55.41 _____ 55.43 4

Learning Objective

RAD021.02 Identify the restrictions concerning entries into CNMT, or restrictions to operational activities with personnel inside CNMT.

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference A-3

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per A-3 all distractors are false except that security controls access of personnel into CNMT.

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 19 B000.1043 (1 point(s))

The following conditions exist:

- Reactor Power is 85%
- Containment pressure is 0.6 psig
- Containment temperature is 115°F

A containment entry is required to search for a 0.3 gpm UNIDENTIFIED leak inside containment. Which of the following is applicable for this entry?

a. Reactor power must be reduced to < 60% if entry into the Reactor Cavity is required.

b. Security will control entry of personnel into containment

c. A load change may not occur while personnel are inside containment

d. A Containment Entry Checklist is NOT required for this entry

Answer 19

b. Security will control entry of personnel into containment

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	20
	TIER	3	Group	_____
B000.1044	KA	2.1.32	Importance	3.8

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank INPO # Diablo Canyon 1 10/1/02

10CFR55 Content 55.41_____ 55.43 1

Learning Objective

RTH07C4.08 Describe how conditions of overpower and DNB are prevented in the core (both locally and whole core).

Cognitive Level Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference T.S 3.2.1 Basis (pg B3.2.1-1)

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Reference T.S. 3.2.1 Basis pg B3.2.1-1

Verification _____ Date 1/30/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 20 B000.1044 (1 point(s))

During power operation Tech Spec LCO 3.2.1 requires that Heat Flux Hot Channel Factor be maintained within the limits set by the COLR.

How can the operators be assured that Heat Flux Hot Channel Factor is being maintained within limits on a continuous basis?

a. The Heat Flux Hot Channel Factor is controlled by maintaining the core within the limits of AFD, QPTR, and control rod insertion, overlap, and sequencing limits.

b. The Over Temperature Delta Temperature runback will decrease Turbine and Reactor load and prevent exceeding the hot channel factor limits.

c. The Heat Flux Hot Channel Factor is not measurable, but inferred from a power distribution map using the incore detectors. The map is done every 31 days and if within limits it can be inferred that it has been within limits since last performed.

d. The Heat Flux Hot Channel Factor is part of the core design and Westinghouse patterns the core design to ensure Heat Flux Hot Channel Factor will not be violated. No direct monitoring by the operators is required.

Answer 20

a. The Heat Flux Hot Channel Factor is controlled by maintaining the core within the limits of AFD, QPTR, and control rod insertion, overlap, and sequencing limits.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	21
	TIER	3	Group	_____
B310.0032	KA	2.2.17	Importance	3.5

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B310.0032

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

RAD062.4C Describe the SS responsibilities listed in Procedure A-1603.0 and A-1603.1

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference A-1603.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Answer per A-1603.1 pg 7

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 21 B310.0032 (1 point(s))

The shift supervisor determines that emergency maintenance must be started on the "B" SI pump. The corrective actions may commence when:

a. The shift supervisor directs the maintainance and the required documentation may be completed after the maintainance has been completed.

b. The required paper work and approvals are completed.

c. Only with approval of PORC and completion of all paper work.

d. Only after the maintainance scheduler has completed his review and approved.

Answer 21

a. The shift supervisor directs the maintainance and the required documentation may be completed after the maintainance has been completed

Ref. A-1603.1
OBJ. RAD06C.02.04
LP RAD06C

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	22
	TIER	3	Group	_____
HRS35C-06.03-01	KA	2.3.6	Importance	3.1

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # HRS35C-06.03-01

10CFR55 Content 55.41 _____ 55.43 4

Learning Objective

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference S-3.4K

Level of Difficulty (from attachment 3) 2

References required on Exam (Attach copy to this attachment)
None

Answer Analysis: Reference S-3.4K pg 6 (note)

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 22 HRS35C-06.03-01 (1 point(s))

The maximum time that can elapse between a tank being sampled for release and the start of the release is:

a. 1 hour

b. 4 hours

c. 8 hours

d. 12 hours

Answer 22

d. 12 hours

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	23
	TIER	3	Group	_____
C029.0032	KA	2.3.8	Importance	3.2

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # C029.0032

10CFR55 Content 55.41 _____ 55.43 4

Learning Objective

R3801C4.03 Given a set of plant conditions and an alarming annunciator associated with the waste disposal system, evaluate plant conditions and determine the appropriate operator response.

Cognitive Level
Memory or Fundamental Knowledge ✔
Comprehension or Analysis _____

Technical Reference S-4.2.5

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per S-4.2.5, Aux. Bldg. supply fans are not required to release a GDT.

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 23 C029.0032 (1 point(s))

Given the following:

- A gas decay tank (GDT) release is in progress
- The auxiliary building filter switch is in the OUT position
- The 1A and 1B auxiliary building supply fans trip

Which ONE of the following statements is correct concerning the gas release?

a. It may continue with the above given conditions.

b. It must be manually terminated

c. It is automatically terminated by RCV-14 closing

d. It is automatically terminated by the gas decay tank pump tripping

Answer 23

a. It may continue with the above given conditions.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	24
	TIER	3	Group	_____
B000.0297	KA	2.4.22	Importance	4.0

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B000.0297

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

REP50C1.12 Describe what actions must be taken by the operator if an ORANGE terminus is encountered in a CSF status tree.

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference A-503.1

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: Per A-503.1 page 12

Verification _____ Exam Developer Date 1/30/04

Validation _____ Operations Date 2/13/04

Approved for Use _____ Exam Developer Date 2/17/04

Question 24 B000.0272 (1 point(s))

A LOCA has occurred, and the control room operators are performing EOP E-1, Loss of Reactor or Secondary Coolant. The STA is manually monitoring the CSFSTs. He checks the first CSFST and finds that the CSF is satisfied. He checks the second CSFST, core cooling, and determines that an orange path exists. He then checks the remaining CSFSTs and finds that their CSFs are satisfied. He then announces that the operators should exit E-1 and enter FR-C.2, Degraded Core Cooling.

From the choices below, select the correct appraisal of the STA's performance.

a. The STA should have called for the transition from E-1 to FR-C.2 as soon as the orange path on core cooling was diagnosed.

b. The STA should not have called for a transition; E-1 in this instance takes precedence over FR-C.2.

c. The STA should have consulted with the operators because, in this case, it is at their discretion as to whether to continue in E-1 or to enter FR-C.2.

d. The STA handled the CSFST monitoring correctly and made the appropriate recommendation.

Answer 24

d. The STA handled the CSFST monitoring correctly and made the appropriate recommendation.

EXAM QUESTION HISTORY

Question #	RO	_____	SRO	25
	TIER	3	Group	_____
B000.1011	KA	2.4.46	Importance	3.6

Source of Question (Note: Attach question and any subsequent modifications to this attachment)

_____	New
_____	Modified (Attach original and Modified Questions)
	Original Bank _____ # _____
✔	Bank Originating Bank Ginna # B000.1011

10CFR55 Content 55.41 _____ 55.43 5

Learning Objective

REP02C2.01 Given a set of plant and equipment conditions evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement. (E-2)

Cognitive Level
Memory or Fundamental Knowledge _____
Comprehension or Analysis ✔

Technical Reference E-2 Basis

Level of Difficulty (from attachment 3) 3

References required on Exam (Attach copy to this attachment)

None

Answer Analysis: A break in this location will affect only the A S/G therefore only A S/G pressure should be lowering and all TDAFW should be going to the "A" S/G.

Verification _____ Date 2/1/04
Exam Developer

Validation _____ Date 2/13/04
Operations

Approved for Use _____ Date 2/17/04
Exam Developer

Question 25 B000.1011 (1 point(s))

Unit was at 100% power when a trip due to a Feed Line break occurred downstream of "A" Feedwater Inlet Stop Check Valve in the Intermediate Building clean side.

Following the reactor trip, with no operator actions, which one of the following indications will be observed?

a. "A" steamline low pressure alarms. "A" SG pressure is lowering; all TDAFW pump flow will be to "B" SG.

b. "A" steamline low pressure alarms. "A" SG pressure is lowering; all TDAFW pump flow will be to "A" S/G.

c. "A" and "B" steamline low pressure alarms. Both SG pressures are lowering; TDAFW pump flow will be ~ equal to both S/G's.

d. "A" and "B" steamline low pressure alarms. Both SG pressures are stable, TDAFW pump flow will be ~ equal to both S/G's.

Answer 25

b. "A" steamline low pressure alarms. "A" SG pressure is lowering; all TDAFW pump flow will be to "A" S/G.