WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X1 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the minimum RPV water level requirements to assure adequate core cooling during a high power ATWS per SSES Emergency Operating Procedures?

RPV water level must be maintained at or above the:

a. Feedwater sparger elevation

b. MSIV isolation setpoint

c. Top of Active Fuel

d. Minimum Zero Injection Reactor Water Level

Proposed Answer
c. TAF assures ACC during ATWS strategy

Reference(s) EO-000-113 LQ/L17
PP002

Discuss Distracters
a. target lvl to reduce subcooling and power

b. lvl where MSIVs would close

d. only applicable in non-ATWS EO-100-102

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295031	K/A	295031	K/A
EK1.01		EK1.01	
4.6	I-rating	4.7	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to REACTOR LOW WATER: Adequate core cooling

SSES Cross-Reference
Learning Objective(s) # 2625 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - No comments
OPS - No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X2 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 2 the following conditions occur:

- AR-210-E1 MAIN STEAM SRV LEAKING annunciator is in alarm
- AR-210-E2 MAIN STEAM DIV I SRV OPEN annunciator is extinguished
- AR-210-E3 MAIN STEAM DIV II SRV OPEN annunciator is extinguished
- SRV/ADS temperature recorder indicates 295°F for SRV A and ~135°F for the remaining SRVs
- 2C601 Acoustic Monitor red lights are all extinguished
- RPV pressure is 1035 psig and stable

Which one of the following identifies the status of the SRVs and the appropriate actions to be taken for this condition?

a. An SRV is open, initiate an immediate plant shutdown.

b. An SRV is leaking, initiate an immediate plant shutdown.

c. An SRV is open, initiate an AR for engineering to evaluate.

d. An SRV is leaking, initiate an AR for engineering to evaluate.

Proposed Answer

d. correct – leaking indications per AR and paper work for evaluation would be generated

Reference(s)

AR-110-001 E01
TM-OP-083-ST pg. 14

Discuss Distracters

a. incorrect condition, action for open SRV per ON-283-001 would require scram

b. incorrect action for leaking SRV plant shut down not required

c. incorrect condition SRV is not open

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
239002 A2.02	K/A	239002 A2.02	K/A
3.1	I-rating	3.2	I-rating

K&A Statement Ability to (a) predict impacts of the following on the RELIEF/SAFETY VALVES; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Leaky SRV

SSES Cross-Reference
Learning Objective(s) # 10021b , 10240(3) , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:
Review and Validation Comments
TRG - Modified choice **c** and **d** to "initiate a CR for engineering to evaluate"
Modified choice **a** and **b** to "initiate an immediate plant shutdown"
Capitalized Acoustic Monitor in stem conditions

OPS – changed CR to AR

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X3 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

During a Loss of Coolant Accident the following plant conditions exist on Unit 1:

- Drywell pressure is 23 psig and rising.
- Suppression chamber pressure is 15 psig and rising.
- RPV pressure 300 psig and slowly dropping.
- RHR Loop 1A injection valve has been overridden closed.
- RHR Loop 1A inlet pressure to the HX A (PI-E11-1R606A1) is 40 psig and steady.
- RHR pump 1A and 1C have been overridden off.
- RHR Loop 1B is not available.

Containment spray has been directed using Loop 1A. Which one of the following describes the status of RHR Loop 1A pressure and pump restart capability?

a. Normal, a pump can be immediately started for spray operation.

b. Normal, a pump can NOT be immediately started for spray operation.

c. Abnormally low, a pump can be immediately started for spray operation.

d. Abnormally low, a pump can NOT be immediately started for spray operation.

Proposed Answer

d. with loop pressure <50 psig loop must be isolated prior to pump start to re-pressurize loop, normal pressure is ~150 psig

Reference(s)

OP-149-004 section 3.4

TM-OP-049-ST pg. 40

Discuss Distracters

a. loop pressure is low and isolation is required prior to start

b. loop pressure is low

c. isolation is required prior to start

RO		SRO	
2	Tier #	2	Tier #
2	Group #	1	Group #
226001 A4.09	K/A	226001 A4.09	K/A
2.8	I-rating	2.7	I-rating

K&A Statement Ability to manually operate and/or monitor in the control room: Pump discharge pressure

SSES Cross-Reference
Learning Objective(s) # 197d , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Reduced DW pressure from 29 to 23 psig in stem conditions
Deleted "slowly" from stem condition wording for SC pressure trend

OPS – added unit identifier to components and PI # to HX inlet pressure
Changed "Drywell" spray to "Containment"

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X4 Both 3 LOD
X	10CFR55.41.7		
	10CFR55.43		
Memory/Fundamental		X Comprehension/Analysis	

Proposed Question ~~(Refer to Attachment 2)~~

During Unit 1 startup at 10% RTP, Reactor Recirculation loop 1A pump discharge valve (F031A) inadvertently strokes full closed. Which one of the following describes the expected automatic response of the Recirculation system including the RPT breakers?

a. Only A pump drive motor breaker trips, A pump RPT breakers also trip.

b. Only A pump drive motor breaker trips, A pump RPT breakers remain closed.

c. Both A and B pump drive motor breakers trip, both pump RPT breakers also trip.

d. Both A and B pump drive motor breakers trip, both pump RPT breakers remain closed.

Proposed Answer
b. discharge valve interlock trips associated pump drive motor but not RPT bkrs

Reference(s) TM-OP-064C-ST pg. 9

Discuss Distracters
a. RPT bkrs trip on Turbine trip >30% RTP or ATWS signals only

c. discharge valve interlock trips associated pump drive motor and RPT bkrs trip on Turbine trip >30% RTP or ATWS signals only

d. discharge valve interlock trips associated pump drive motor

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
202001	K/A	202001	K/A
A3.07		A3.07	
3.3	I-rating	3.3	I-rating

K&A Statement Ability to monitor automatic operations of the RECIRCULATION SYSTEM including: Pump trips

SSES Cross-Reference
Learning Objective(s) # 2522q , 2558m , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - Reworded stem to solicit correct answer without eliminating choice **c** and **d**. Now asks for Recirc system response including RPT breakers.
Changed wording in stem from "while the associated loop" to "**with** the associated loop".

OPS – Arranged stem to clarify that plant is being started up not pump
Removed reference to discharge bypass valve position
Removed "trip" after RPT

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X5 Both 3 LOD
X	10CFR55.41.7		
	10CFR55.43		
Memory/Fundamental		X Comprehension/Analysis	

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on both units the normal power supply breaker to the "2B" ESS bus spuriously trips and the alternate supply breaker fails to automatically close. Which one of the following describes how this transient will effect the "B" Emergency Diesel Generator and it's associated output breaker to the "2B" ESS bus?

a. Diesel will auto start and the output breaker will auto close on the bus.

b. Diesel will auto start and the output breaker will NOT auto close on the bus.

c. Diesel will remain in Standby and output breaker will auto close on the bus.

d. Diesel will remain in Standby and the output breaker will NOT auto close on the bus.

Proposed Answer

a. DG will auto start and auto close in on bus UV for >0.5 seconds

Reference(s)

TM-OP-004-ST
TM-OP-024-ST

Discuss Distracters

b. auto close interlocks would be met this would be true if interlocks for auto closure were not satified

c. NP diesel auto starts on UV for >0.5 seconds and auto closure interlock is not met with DG not running

d. diesel auto starts on UV for >0.5 seconds this would be true if alternate breaker closed

RO		SRO	
2	Tier #	2	Tier #
2	Group #	1	Group #
262001 K3.02	K/A	262001 K3.02	K/A
3.8	I-rating	4.2	I-rating

K&A Statement

SSES Cross-Reference
Learning Objective(s) # 2260m , 2239f , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:
Review and Validation Comments
TRG - Choice **c** identified as non-plausible

OPS – changed LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

	RO only	SRO only	X6	Both	2 LOD
X	10CFR55.41.7				
	10CFR55.43				
	Memory/Fundamental	X Comprehension/Analysis			

Proposed Question ~~(Refer to Attachment 2)~~

Unit 1 was operating at 100% power when a Feedwater Level Control failure resulted in a Main Turbine trip on High RPV Level. Which one of the following describes the response of the Reactor Recirc System?

a. Both Reactor Recirc Pumps runback to 45% speed.

b. Both Reactor Recirc Pumps runback to 30% speed.

c. All four RPT breakers and both drive motor breakers open.

d. Only the four RPT breakers open.

Proposed Answer
C is correct. RPT breaker opening, causes drive motor breaker to open

Reference(s) TM-OP-064C-ST

Discuss Distracters
A is not correct. Turbine trip >30% power causes EOC/RPT trip.

B is not correct. This would be the response to a total feed flow of <20%, however, EOC/RPT occurs first

D is not correct. They may choose this if they forget that the Drive Motor Breakers open if the RPT opens

RO		SRO	
1	Tier #	1	Tier #
1	Group #	2	Group #
295005 AA1.01	K/A	295005 AA1.01	K/A
3.1	I-rating	3.3	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to MAIN TURBINE GENERATOR TRIP: Recirculation system

SSES Cross-Reference
Learning Objective(s) # 2558k , _____ , _____ , _____

BANK QUESTION (attach question)
X SSES exam bank — Question # AD045/1357/ 2
☐ INPO exam bank — Question # _____
☐ Other facility exam bank — Facility _____
☐ Previous NRC exam — Facility and date of exam _____
☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
☐ SSES exam bank — Question # _____
☐ INPO exam bank — Question # _____
☐ Other facility exam bank — Facility _____
☐ Previous NRC exam — Facility and date of exam _____
☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - None

OPS – changed stem to identify Unit 1
Changed choice a to 45% from 90%

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X7 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

The following post scram conditions exist:

- Automatic scram was initiated on low RPV level
- Both Recirc pumps are tripped
- RPV level is 20 inches and rising slowly
- RPV pressure is 980 psig and stable
- All rods are fully inserted
- RWCU is isolated
- Calculated dome to bottom head drain differential temperature is 160°F

Which one of the following identifies the action to be taken due to vessel thermal stratification per ON-100-101, Scram?

a. Raise level to promote natural circulation, restart a Recirculation pump.

b. Raise level to promote natural circulation, do not restart a Recirculation pump.

c. Do not raise level to promote natural circulation, restart a Recirculation pump.

d. Do not raise level to promote natural circulation, do not restart a Recirculation pump.

Proposed Answer

d. correct – with >145°F DT natural circ is hindered and recirc is not restarted

Reference(s)

ON-100-101
AD045

Discuss Distracters

a. incorrect – would be action if <145°F DT

b. incorrect – level is not raised

c. incorrect - recirc is not restarted

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295006 AA1.04	K/A	295006 AA1.04	K/A
3.1	I-rating	3.2	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to SCRAM: Recirculation system

SSES Cross-Reference
Learning Objective(s) # 1358 , 1365e , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Changed LOD to 2 from 3.
Dropped CAPS on Not and Do in choices b,c and d.
Underlined NOT in choices b,c and d.
Reworded stem conditions to scram on low RPV level and replaced indicated with calculated for diff. Temp. since this value is not indicated

OPS – Changed LOD back to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X8 Both 2 LOD

X 10CFR55.41.6

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

During an RPS failure to scram condition the operator inserts control rods by initiating the ARI function per ON-100-101, "Scram". Which one of the following describes the control rod response as a result of ARI initiation as compared to a normal RPS initiation and the reason for this difference?

a. Control rods would take longer to insert, ARI vents each scram valve individually.

b. Control rods would not take as long to insert, ARI vents each scram valve individually.

c. Control rods would take longer to insert, ARI vents the scram air header and not each scram valve individually.

d. Control rods would not take as long to insert, ARI vents the scram air header and not each scram valve individually

Proposed Answer

c. correct – ARI vent the main header resulting in slower depressurization of header than RPS which vent each scram valve

Reference(s)

ON-100-101
AD045
TM-OP-055-ST

Discuss Distracters

a. incorrect – RPS vent individual scram valves

b. incorrect – rods would take longer to insert and RPS vent individual scram valves

d. incorrect - rods would take longer to insert

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295006 AK1.03	K/A	295006 AK1.03	K/A
3.7	I-rating	4.0	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to SCRAM: Reactivity control.

SSES Cross-Reference
Learning Objective(s) # 1359 , 10034b , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Dropped Cog Lvl to Memory.
Dropped CAPS in choices using Not and underlined not statements

OPS – added "CONTROL" rods to each choice

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X9 Both 3 LOD

X 10CFR55.41.5

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

The following conditions exist during a reactor startup on Unit 2

Reactor power is 4%.
BPV #1 is 100% open.
BPV #2 is 20% open.
EHC pressure regulator "A" output fails high.

Which one of the following describes the plant's direct response to this failure during these plant conditions:

a. All bypass valves will go full open.

b. EHC automatically swaps to the "B" pressure regulator.

c. The MSIVs will automatically isolate.

d. The reactor will automatically scram.

Proposed Answer

a. correct - Even though actual reactor pressure does not increase. EHC thinks it is and opens BPVs to limit the "pressure" change and resultant power increase.

Reference(s) ON-293-001
TM-OP-093L-ST

Discuss Distracters

b. not correct - This is what happens when the in-service regulator fails low.

c. not correct - The MSIVs will not auto close at 861 psig because the Mode Switch is still in S/U at 4% power. The operator must scram the Rx and close the MSIVs.

d. not correct - Because the MSIVs do not auto close, no scram occurs on their closure. This is the reason the reactor is manually scrammed prior to closing the MSIVs.

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295007	K/A	295007	K/A
AK3.06		AK3.06	
3.7	I-rating	3.8	I-rating

K&A Statement Knowledge of the reasons for the following responses as they apply to HIGH REACTOR PRESSURE: Reactor/turbine pressure regulating system operation

SSES Cross-Reference
Learning Objective(s) # 1641c , _____ , _____ , _____

~~BANK QUESTION~~ (attach question)

- X SSES exam bank — Question # SY017A8/05/ 2
- ☐ ~~INPO exam bank~~ — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - None

OPS – changed transmitter to regulator in stem conditions to be consistent

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X10 Both 2 LOD

X 10CFR55.41.1

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2).~~

While operating at 85% RTP the "A" steam line outboard MSIV drifts closed. Which one of the following describes the immediate RPV pressure and power response to this closure?

	RPV Pressure	Power
a.	Rises	Rises
b.	Rises	Lowers
c.	Lowers	Rises
d.	Lowers	Lowers

Proposed Answer

a. correct – closure causes pressure and power to rise due to void coefficient

Reference(s) TM-OP-083-ST

Discuss Distracters

b. incorrect – power rises with void collapse

c. incorrect – pressure rises

d. incorrect – pressure and power rise

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295007 AK2.02	K/A	295007 AK2.02	K/A
3.8	I-rating	3.8	I-rating

K&A Statement Knowledge of the interrelations between HIGH REACTOR PRESSURE and the following: Reactor power

SSES Cross-Reference
Learning Objective(s) # 1651m , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Changed initial power level to 85% from 75% due to concern that at this low of a power level the power excursion would not be noticeable.

OPS - none

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X11 Both 2 LOD
X	10CFR55.41.9		
	10CFR55.43		
Memory/Fundamental		X Comprehension/Analysis	

Proposed Question ~~(Refer to Attachment 2)~~

A scram has occurred on Unit 1 with drywell pressure above the trip setpoint due to a small leak in the containment. An operator is directed to pump down the Drywell floor drain sump for sampling to determine the leak source. The following events are observed during the evolution:

- Drywell Floor Drain pump (1P402A) control switch was taken to RUN
- Inboard (HV-16108A1) and Outboard (HV-16108A2) Drywell floor drain sump isolation valves where noted to be closed
- Drywell Floor Drain pump tripped after 45 seconds

Which one of the following describes the response of the system under these conditions?

a. Response was unexpected, isolation valves should have auto opened after pump start.

b. Response was unexpected, isolation valves should have been open due to a high drywell pressure signal.

c. Response was as expected, isolation valves must be opened manually prior to starting sump pump.

d. Response was as expected, isolation valves did not auto open due to a high drywell pressure signal.

Proposed Answer

d. correct - >1.72 psig isolates valves preventing pump operation for >45 sec. From start signal

Reference(s) TM-OP-076D-ST

Discuss Distracters

a. incorrect – valves will not auto open with isolation signal in

b. incorrect – valves are normally closed and will not auto open with isolation signal in

c. incorrect – valve auto open if isolation signal is not in

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295010	K/A	295010	K/A
AA1.02		AA1.02	
3.6	I-rating	3.6	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to HIGH DRYWELL PRESSURE: Drywell floor and equipment drain sumps

SSES Cross-Reference
Learning Objective(s) # 1932b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Reworded stem to identify the drywell pressure condition still exists to eliminate questions as to the status of PCIS/NSSSS isolation reset status.
Changed LOD from 3 to 2.

OPS – changed tank to sump in stem for consistency, reworded stem to address unit first for consistency
Ops input is that question is good technically but not normally performed with high DW pressure in, leave as is

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X12 Both 3 LOD
X	10CFR55.41.9		
	10CFR55.43		
Memory/Fundamental		X Comprehension/Analysis	

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 1 a small steam leak occurs in the drywell causing an automatic scram and isolation. As drywell pressure approaches 5 psig the PCOP reports that suppression pool level is also rising. Which one of the following explains the observed level response?

As Drywell pressure rises suppression pool level is .....

a. not expected to rise, a downcomer pipe has ruptured.

b. not expected to rise, the vacuum breaker has failed closed.

c. expected to rise, as water is cleared from the downcomer pipes.

d. expected to rise, as the vacuum breakers open to equalize pressure.

Proposed Answer

c. correct – as drywell pressure rises water in downcomer will be displaced into pool causing indicated level to rise.

Reference(s) TM-OP-059-ST

Discuss Distracters

a. incorrect – this is expected, if a downcomer failed level would remain unchanged due to equalization across the floor

b. incorrect – this is expected, vac bkrs are not expected to open until SP pressure is above DW pressure

d. incorrect – level would lower when vac bkrs open

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295010 AK2.01	K/A	295010 AK2.01	K/A
3.2	I-rating	3.3	I-rating

K&A Statement Knowledge of the interrelations between HIGH DRYWELL PRESSURE and the following: Suppression pool level

SSES Cross-Reference
Learning Objective(s) # 10360e , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination ~~will be~~ required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Changed stem wording to remove "interrelationship" wording that could lead the candidate to concluding that the response is expected.

OPS - Changed LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X13	Both	3 LOD
X	10CFR55.41.10				
	10CFR55.43				
Memory/Fundamental		X Comprehension/Analysis			

Proposed Question (Refer to Attachment 2)

Using the attached Heat Capacity Temperature Limit (HCTL) curve from EO-100-103, "Primary Containment Control", select the set of parameters for which Rapid RPV Depressurization is required with initial ATWS power at 4%?

a. Reactor Pressure: 850 psig
Suppression Pool Temperature: 180°F
Suppression Pool Level: 18 feet

b. Reactor Pressure: 650 psig
Suppression Pool Temperature: 190°F
Suppression Pool Level: 15 feet

c. Reactor Pressure: 600 psig
Suppression Pool Temperature: 180°F
Suppression Pool Level: 15 feet

d. Reactor Pressure: 450 psig
Suppression Pool Temperature: 185°F
Suppression Pool Level: 12.5 feet

Proposed Answer
b. correct applying 601-800 psig curve 15 ft. would still be above curve at 190F

Reference(s)
EO-100-103
PP002

Discuss Distracters
a. incorrect – below curve

c. incorrect – below curve

d. incorrect – below curve

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295026	K/A	295026	K/A
EA2.02		EA2.02	
3.8	I-rating	3.9	I-rating

K&A Statement Ability to determine and/or interpret the following as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Suppression pool level

SSES Cross-Reference
Learning Objective(s) # 2621e , 2630 , _____ , _____

BANK QUESTION (attach question)
X SSES exam bank Question # PP002/2680/9
☐ INPO exam bank Question # _____
☐ Other facility exam bank Facility _____
☐ Previous NRC exam Facility and date of exam _____
☐ Previous audit exam Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
☐ SSES exam bank Question # _____
☐ INPO exam bank Question # _____
☐ Other facility exam bank Facility _____
☐ Previous NRC exam Facility and date of exam _____
☐ Previous audit exam Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
EO-100-103 Figure 2 HCTL curve

Review and Validation Comments
TRG - None

OPS – requested change to bank question

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X14 Both 3 LOD

X 10CFR55.41.6

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 1, a loss of control power occurs to the operating CRD pump 1A. Which one of the following identifies the impact this loss will have on pump breaker status and ability to trip on protective trip signals?

	Pump Breaker	Breaker Protective Trips
a.	Remains closed	Able to trip breaker
b.	Remains closed	Not able to trip breaker
c.	Opens immediately	Able to trip breaker
d.	Opens immediately	Not able to trip breaker

Proposed Answer

b. correct – loss of CP will prevent trip coil operation automatically or from the control switch

Reference(s)

ON-102-610
TM-OP-055-ST
TM-OP-002-ST

Discuss Distracters

a. incorrect – breaker trips are lost, would be true for B pump with alt. CP

c. incorrect – loss of CP will not trip pump immediately, but will prevent trip coil operation automatically or from the control switch

d. incorrect - loss of CP will not trip pump immediately, true for Recirc pumps RPT breakers

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295004 AK1.05	K/A	295004 AK1.05	K/A
3.3	I-rating	3.4	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to PARTIAL OR COMPLETE LOSS OF DC POWER: Loss of breaker protection.

SSES Cross-Reference
Learning Objective(s) # 2419g , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

Modified original choices a and b (now c and d) to state breaker opens immediately.
Modified original choices c and d (now a and b) to state breaker remains closed.
Also changed format to column to minimize wording in each choice.

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X15	Both	3 LOD
X	10CFR55.41.10				
	10CFR55.43				
Memory/Fundamental		X Comprehension/Analysis			

Proposed Question (Refer to Attachment 2)

An I&C surveillance test is being performed on the containment isolation logic. The test requires defeating each channel in the auto isolation logic to perform the test. The Technical Specifications allow 6 hours to perform the test (APT).

During the test, the second channel exceeds it's allowable trip setpoint and requires relay replacement. The remaining channels remain operable.

Which one of the following identifies the time that the LCO time should be entered for the INOP channel?

a. At the time the channel failed the test.

b. At the completion of testing on all channels.

c. At the end of the APT for the second channel.

d. At the start of the APT for the second channel.

Proposed Answer
a. correct – Operations is required to immediately enter the LCO action 9.4.13 c.(3)

Reference(s)
NDAP-QA-0722 pg 44-45
AD044A/B

Discuss Distracters
d. incorrect – NP, no actions require starting the LCO action at the start of the APT

c. incorrect – this is allowed if the condition can and will be corrected within the procedure in use, a WO is required to replace the relay

b. incorrect – the test may be continued for the other functions for the remainder of the APT but the LCO action must be entered for the Inop channel

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.2.24	K/A	2.2.24	K/A
2.6	I-rating	3.8	I-rating

K&A Statement Ability to analyze the affect of maintenance on LCO status

SSES Cross-Reference
Learning Objective(s) # 4332 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- X INPO exam bank — Question # 11837/NMPC
- ☐ Other facility exam bank — Facility _____
- X Previous NRC exam — Facility and date of exam NMPC/ 01/20/98
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - none

OPS - Added 'for second channel to choices c and d
Rearranged choices by length a to d, b to c, c to a, b to d

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X16 Both 3 LOD

X 10CFR55.41.8

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

An event occurs during refueling activities that results in the following alarms:

- AR-112 D01, REFUEL FLOOR WALL EXH MON HI RADIATION
- AR-112 F02, REFUEL FLOOR HI EXH HI RADIATION
- AR-106 E03, REFUEL FLOOR HI EXH HI-HI RADIATION
- AR-111 G04, CONTAINMENT ATMOS DIV 1 HI RADIATION

Which one of the following automatic actions prevents the dose to the general public from exceeding 10CFR100 limits under these plant conditions?

a. CREOASS starts.

b. Reactor Building Recirculation System starts.

c. Affected Zone air is filtered through the SBGTS.

d. Primary and Secondary Containment are completely isolated so that no air is released to the environment.

Proposed Answer
c. correct – SGTS starts to filter RB exhaust

Reference(s)

ON-159-002
ST-OP-034-ST
AR-106-001

Discuss Distracters
a. incorrect –starts to limit control room dose not release rad.

b. incorrect – this start provides building air circulation

d. incorrect – NP-PC does not isolate on refuel floor exh rad and SC is not completely isolated

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295017	K/A	295017	K/A
AK1.02		AK1.02	
3.8	I-rating	4.3	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to HIGH OFF-SITE RELEASE RATE: Protection of the general public

SSES Cross-Reference
Learning Objective(s) # 1266d , _____ , _____ , _____

BANK QUESTION (attach question)

X SSES exam bank	Question #	AD045/C 102
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
X Previous NRC exam	Facility and date of exam	SSES 07/10/92
☐ Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐ SSES exam bank	Question #	
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No comments

OPS – reworded correct choice to "affect zone air"
Changed LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X17 Both 2 LOD

X 10CFR55.41.8

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following statements identifies the Emergency Service Water (ESW) System alignment required per ON-054-001, "Loss of ESW" with only three pumps operable? Consider the Diesel Generators and RBCCW/TBCCW heat exchangers only.

	Loop with One Pump	Loop with Two Pumps
a.	RBCCW/TBCCW	Diesels and RBCCW/TBCCW
b.	Diesels and RBCCW/TBCCW	Diesels
c.	RBCCW/TBCCW	Diesels
d.	Diesels and RBCCW/TBCCW	RBCCW/TBCCW

Proposed Answer
c. correct – lineup per ON to ensure adequate cooling to heat exchangers and prevents ESW runout

Reference(s)
ON-054-001
TM-OP-054-ST
AD045

Discuss Distracters
a. incorrect – lineup has loops both loops aligned to RB/TB

b. incorrect – lineup has inop loop aligned to EDGs

d. incorrect - lineup has inop loop aligned to EDGs

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295018	K/A	295018	K/A
AK2.01		AK2.01	
3.3	I-rating	3.4	I-rating

K&A Statement Knowledge of the interrelation between PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER: System loads

SSES Cross-Reference
Learning Objective(s) # 1359 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- X SSES exam bank — Question # AD045/1360/1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – changed format to two column

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X18 Both 2 LOD

X 10CFR55.41.7

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Unit 1 was operating at 78% RTP when A Reactor Recirculation pump speed control signal fails downscale.

Which one of the following describes the expected status of the Scoop Tube Lock circuit and the Reactor Recirculation Pump response due to this failure?

	Scoop Tube Lock Circuit	Pump Speed
a.	Lock initiated	Runback to 0% speed
b.	Lock initiated	Remains at approximately original speed
c.	No lock initiated	Runback to 0% speed
d.	No lock initiated	Remains at approximately original speed

Proposed Answer

b. correct – lockout on signal failure prevents pump speed change

Reference(s) TM-OP-064A-ST

Discuss Distracters

a. incorrect – with lockout initiated pump speed would not change

c. incorrect – would occur if lockout did not initiate

d. incorrect – would be status if failure did not effect scoop tube circuit or speed

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
202002 A3.03	K/A	202002 A3.03	K/A
3.1	I-rating	3.0	I-rating

K&A Statement Ability to monitor automatic operation of the RECIRCULATION FLOW CONTROL SYSTEM including: Scoop tube operation

SSES Cross-Reference
Learning Objective(s) # 2581e , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – Removed "out" from "lock out" to correct to plant terminology

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X19 Both 3 LOD

X 10CFR55.41.10
10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During a reactor startup with a heatup in progress, RPV level was lowered until the AR-101-B17, RX WATER HI-LO LEVEL, alarm cleared (slow flash).

Using the attached ON-145-004, "Reactor Water Level Anomaly, Attachment A", determine which one of the following level values represents approximate RPV water level.

a. -10 inches.

b. 30 inches.

c. 40 inches.

d. 60 inches.

Proposed Answer

b. correct – Attachment A up from 39" to NR intersection look left to ~30" mark for approx level

Reference(s)

ON-145-001
TM-OP-080-ST

Discuss Distracters

a. incorrect – follow from 39" up to Wr intersection look left to ~-10"

c. incorrect - follow from 39" up to SD intersection look left to ~40"

d. incorrect – following 39" from left across to NR intersection and down to ~60"

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
216000	K/A	216000	K/A
K5.10		K5.10	
3.1	I-rating	3.3	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to NUCLEAR BOILER INSTRUMENTATION: Indicated level vs. actual level during vessel heatups and cooldowns

SSES Cross-Reference
Learning Objective(s) # 1480b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017J2/06/ 17
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
x YES NO

Attachment required is:
ON-145-004 Attachment A

Review and Validation Comments
TRG – Removed "in the RPV" from last words of stem.

OPS – Reworded stem to clarify heatup in progress

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only 20 Both 3 LOD

X 10CFR55.41.7

10CFR55.43

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During execution of ON-100-009, "Control Room Evacuation", with control transferred to the Remote Shutdown Panel it is noted that the RCIC system did not automatically initiate when RPV level dropped below –30 inches

Which one of the following describes the response of the RCIC system under these conditions?

a. RCIC has responded properly, manual start from the RSP is required.

b. RCIC has responded properly, local reset of Trip & Throttle valve is required.

c. RCIC has failed to respond properly, manual start from the RSP is required.

d. RCIC has failed to respond properly, local reset of Trip & Throttle valve is required.

Proposed Answer

a. correct auto init is defeated when controls are transferred, controls are provided at RSP

Reference(s) ON-100-009
TM-OP-050-ST

Discuss Distracters

b. incorrect – this action is necessary after overspeed trip

c. incorrect – this function is defeated when controls are transferred

d. incorrect – this function is defeated when controls are transferred and action is necessary after overspeed trip

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
217000	K/A	217000	K/A
2.1.32		2.1.32	
3.4	I-rating	3.8	I-rating

K&A Statement Ability to explain and apply system limits and precautions

SSES Cross-Reference
Learning Objective(s) # 2014k , _____ , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question # SM001C/C 37
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
Modified question to be SRO only

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X21	Both	3 LOD
X	10CFR55.41.8				
	10CFR55.43				
Memory/Fundamental		X Comprehension/Analysis			

Proposed Question (Refer to Attachment 2)

With Unit 1 at 85% RTP a load reject and loss of off-site power occur. Which one of the following identifies the impact this power loss transient will have on the Drywell Cooling Unit Cooler fans with drywell pressure remaining below 1.72 psig?

a. Do not lose power and remain running.

b. Lose power, and remain de-energized.

c. Do not lose power, trip, and then immediately restart.

d. Lose power, and restart when the ESS buses re-energize.

Proposed Answer

d. correct – ESS powered and restart on power restoration provided high DW trip does not occur

Reference(s) TM-OP-073-ST

Discuss Distracters

a. incorrect – ESS buses loss power until EDGs start and close in on bus

b. incorrect – coolers restart on power restoration but would trip if >1.72

c. incorrect - – ESS buses loss power until EDGs start and close in on bus

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
223001 K2.09	K/A	223001 K2.09	K/A
2.7	I-rating	2.9	I-rating

K&A Statement Knowledge of the power supplies to the following: Drywell cooling fans

SSES Cross-Reference Learning Objective(s) # 10708 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017E6/04/ 2
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- X Previous NRC exam — Facility and date of exam SSES 2001#67
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Added drywell pressure condition to stem to qualify isolation status.

OPS – changed LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X22 Both 3 LOD

X 10CFR55.41.9

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 1, oxygen concentration has risen to a value requiring venting and makeup of nitrogen to the drywell. During the evolution, a loss of instrument air to the 2" Drywell Vent to SBGT Bypass valve HV-15711 occurs.

Which one of the following identifies the failure position and drywell pressure/system response to this valve failure?

a. Closed, drywell pressure will rise to the high drywell scram setpoint terminating unit operation.

b. Open, drywell pressure will lower creating a negative pressure in the primary containment.

c. Closed, drywell pressure will rise to the high pressure alarm closing the nitrogen makeup valve.

d. Open, drywell pressure will lower causing the nitrogen makeup valve to regulate open stabilizing pressure.

Proposed Answer

c. correct – Vent valve fails closed on loss of air and Nitrogen valve closes at 1# psig

Reference(s) TM-OP-073-ST

Discuss Distracters

a. incorrect – valve closure at 1# will prevent continued pressurization of PC

b. incorrect – Would be correct if valve was not already full open

d. incorrect - Would be correct if valve was not already full open also nitrogen valve does not regulate

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
223001 K4.03	K/A	223001 K4.03	K/A
3.7	I-rating	3.8	I-rating

K&A Statement Knowledge of PRIMARY CONTAINMENT SYSTEM AND AUXILIARIES design feature(s) and/or interlocks which provide for the following: containment/drywell isolation

SSES Cross-Reference
Learning Objective(s) # 1908a , _____ , _____ , _____

BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017E6/21/ 1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X23 Both 2 LOD

X 10CFR55.41.3

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following describes the purpose and function of the MOV Test Switches associated with various system motor operated valves in the control room?

Operation of these devices to the TEST position.....

a. enables thermal overload protection on the effected MOVs.

b. enables torque switch operation on the effected MOVs.

c. disables thermal overload protection on the effected MOVs.

d. disables torque switch operation on the effected MOVs.

Proposed Answer

a. correct – OL protection normally defeated, switch enables function during normal stroking of valves

Reference(s) OP-AD-001

Discuss Distracters

b. incorrect – torque switch operation is not affected by this device

c. incorrect – this would be true with switch in NORM position

d. incorrect - torque switch operation is not affected by this device

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.1.28	K/A	2.1.28	K/A
3.2	I-rating	3.3	I-rating

K&A Statement Knowledge of the purpose and function of major system components and controls

SSES Cross-Reference
Learning Objective(s) # 10493b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- X INPO exam bank — Question # #822
- ☐ Other facility exam bank — Facility _____
- X Previous NRC exam — Facility and date of exam Grand Gulf 98
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - No Comments

OPS – replaced PICSY monitor with torque switch operation in distracters b and d

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X24 Both 2 LOD

X 10CFR55.41.7

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following high temperature isolation signals is necessary to enable the 1C614, Leak Detection System Panel, HPCI Division 1/2 isolation pushbutton function to allow manual isolation of the system from this back panel?

a. HPCI Pipe Routing Area.

b. HPCI Emergency Cooler.

c. HPCI Equipment Room Area.

d. HPCI Equipment Room Vent Air Delta Temp.

Proposed Answer

a. correct – only pipe routing areas have the 15 min timer function that is also associated with the 1C614 isolation PB

Reference(s) TM-OP-059B-ST

Discuss Distracters

b. incorrect – do not have 15 min timer and PB function

c. incorrect - do not have 15 min timer and PB function

d. incorrect - do not have 15 min timer and PB function

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
223002 K4.03	K/A	223002 K4.03	K/A
3.5	I-rating	3.6	I-rating

K&A Statement Knowledge of PRIMARY CONTAINMENT ISOLATION SYSTEM/NUCLEAR STEAM SUPPLY SHUT-OFF design feature(s) and/or interlocks which provide for the following: Manual initiation capability

SSES Cross-Reference
Learning Objective(s) # 2120g , _____ , _____ , _____

BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017E3/E3/2118/ 1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

Modified stem to clarify that question is about back panel isolation PB not the 1C601 HPCI system isolation pushbutton.

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X25 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

The following conditions exist for the 125 VDC system panel 1D612:

- Ground detection Negative lamp is brightly lit
- Ground detection Positive lamp is dimly lit
- AR-106 A12, 125VDC PANEL 1L610 SYSTEM TROUBLE is in alarm

Which one of the following identifies the system status and necessary actions to be taken for this condition?

a. A ground is indicated on the positive line, notify electrical maintenance.

b. A ground is indicated on the positive line, open all load breakers on 1D612.

c. A ground is indicated on the negative line, notify electrical maintenance.

d. A ground is indicated on the negative line, open all load breakers on 1D612.

Proposed Answer

a. correct - When a ground on the positive line occurs, the negative lamp will brighten and the positive lamp will dim, or go out depending on the severity of the ground requiring EM response

Reference(s)

OP-102-001
AR-106-001
TM-OP-002-ST

Discuss Distracters

b. incorrect – this action would be taken for a loss of 1D614

c. incorrect – this would cause negative lamp to dim and positive to brighten but would be correct action for neg ground

d. incorrect - this would cause negative lamp to dim and positive to brighten and action would be taken for a loss of 1D614

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
263000	K/A	263000	K/A
A2.01		A2.01	
2.8	I-rating	3.2	I-rating

K&A Statement Ability to (a) predict the impacts of the following on the DC ELECTRICAL DISTRIBUTION ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Grounds

SSES Cross-Reference
Learning Objective(s) # 1431c , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # TM-OP-002-OB/1431/ 1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____

☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified stem for **focus** and correcting typo adding "the **system** status and necessary"

OPS – corrected panel # to 612 from 614

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X26 Both 2 LOD

X 10CFR55.41.4

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the concern with operating the Mechanical Vacuum Pump while at power?

MVP operation will result in.....

a. an untreated release to the environment.

b. an unmonitored release to the environment.

c. the build up of excessive hydrogen in the Offgas train.

d. incomplete recombination in the Offgas Treatment Recombiner.

Proposed Answer
a. correct – MVP bypasses Offgas treatment

Reference(s)
TM-OP-043-ST
P&ID M107

Discuss Distracters
b. incorrect – Stack monitors discharge

c. incorrect –concern with out dilution flow

d. incorrect –concern with out Oxygen injection

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
271000	K/A	271000	K/A
K1.01		K1.01	
3.1	I-rating	3.1	I-rating

K&A Statement Knowledge of the physical connections and/or cause-effect relationships between OFFGAS SYSTEM and: condenser air removal system

SSES Cross-Reference
Learning Objective(s) # 1196h , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - No Comments on K1.02 question

OPS – Rad monitor no longer functional replaced K/A to applicable to SSES K1.01

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X27 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

In accordance with ON-070-001, "Abnormal Gaseous Radiation Release/Cam Alarms", if an abnormal gaseous radiation release is in progress, closure of the Turbine Building 676' roll-up doors will prevent...

a. airborne contamination of the other unit's Turbine Building.

b. an uncontrolled airborne release from the Turbine Building.

c. all access to airborne contamination areas in the Turbine Building.

d. unmonitored airborne release from the Turbine Building HVAC system.

Proposed Answer
b. correct – ON bases identifies uncontrolled release path

Reference(s) ON-070-001
AD045

Discuss Distracters
a. incorrect – Would not prevent contamination of the other unit

c. incorrect - Would not prevent personnel from entering airborne contamination areas of the Turbine Building

d. incorrect – TB HVAC is a monitored release path

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.3.11	K/A	2.3.11	K/A
2.7	I-rating	3.2	I-rating

K&A Statement Ability to control radiation releases

SSES Cross-Reference
Learning Objective(s) # 1360 , _____ , _____ , _____

BANK QUESTION (attach question)

☐ SSES exam bank	Question #	
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

X SSES exam bank	Question #	AD045/01/ 2
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
X Previous NRC exam	Facility and date of exam	SSES 2001
☐ Previous audit exam	Facility and date of exam	

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - No Comments

OPS - clarified which doors are being closed
Modified distracters to evaluate unmonitored and uncontrolled and balanced distracters

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | SRO only | X28 Both | 2 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental | X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is in MODE 1 performing a normal unit shutdown. Which one of the following describes the required SBGT train operation and purge valve lineup condition permitted by NDAP-QA-0309, "Primary Containment Control" for purging the containment?

	Required Trains In Operation	Purge Line up
a.	Two	From DW and SC
b.	Two	From DW or SC
c.	One	From DW or SC
d.	One	From DW and SC

Proposed Answer
c. correct – because one train is used and purge from either not both spaces

Reference(s)
NDAP-QA-0309
AD044A
AD044B

Discuss Distracters
a. incorrect – only one train directed and cannot lineup to both

b. incorrect - only one train directed

d. incorrect - purge from either not both spaces

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.3.9	K/A	2.3.9	K/A
2.5	I-rating	3.4	I-rating

K&A Statement Knowledge of the process for performing a containment purge

SSES Cross-Reference
Learning Objective(s) # 4217 , 4216 , 4657 , 4658

BANK QUESTION (attach question)

X	SSES exam bank	Question # AD044/4216/ 1
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - Modified to column format and eliminated number of SBGT trains in lineup to eliminate ability to discount original choices c and d since an inop train would not be aligned to purge.

OPS – changed second column to lineup of DW and/or SC and first to trains in operation

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X29 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following statements identifies the procedure hierarchy from highest to lowest per OP-AD-002, "Standards for Shift Operations" in the event of a procedure conflict?

a. ON-100-101 Scram, EP-DS-003 RPV Level Determination, EO-100-102 RPV Control

b. EO-100-102 RPV Control, ON-100-101 Scram, EP-DS-003 RPV Level Determination

c. EP-DS-003 RPV Level Determination, EO-100-102 RPV Control, ON-100-101 Scram

d. EP-DS-003 RPV Level Determination, ON-100-101 Scram, EO-100-102 RPV Control

Proposed Answer
c. correct – EP-DS are highest followed by symptom-based EOPs and event based procedure

Reference(s)
OP-AD-002
AD044A
AD044B

Discuss Distracters
a. incorrect – identifies event based procedures as highest

b. incorrect – identifies symptom-based and event based above EP-DS

d. incorrect - identifies event based procedures above symptom-based EOPs

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.4.16	K/A	2.4.16	K/A
3.0	I-rating	4.0	I-rating

K&A Statement Knowledge of EOP implementation hierarchy and coordination with other support procedures

SSES Cross-Reference
Learning Objective(s) # 4050 , 4487 , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question # AD044A/XXX/ 1
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Corrected procedure title error in stem

OPS - added procedure number and titles vs. generic terms

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X30 Both	2 LOD
X	10CFR55.41.5			
	10CFR55.43			
Memory/Fundamental		X Comprehension/Analysis		

Proposed Question ~~(Refer to Attachment 2)~~

Given the following conditions AFTER a transient from 90% RTP on Unit 1:

- Reactor Pressure is slightly lower
- Generator MWE is slightly lower
- Indicated Feedwater temperature is lower
- Indicated feedwater flow is greater than indicated steam flow (matched before the transient)

Which one of the following events could have caused this plant response?

a. A stuck open Safety Relief Valve.

b. In service EHC pressure regulator fails low (0 psig).

c. Isolation of extraction steam to one feedwater heater.

d. Rising main condenser backpressure (degrading vacuum).

Proposed Answer

a. correct – SRV steam bypassing feedwater heating gives lowering feed temps and power increase

Reference(s) ON-183-001

Discuss Distracters

c. incorrect – Should not affect level and MWe

d. incorrect - Should not affect level, feed and steam flows

b. incorrect - Backup regulator should control at a slightly higher pressure.

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.4.47	K/A	2.4.47	K/A
3.4	I-rating	3.7	I-rating

K&A Statement Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material –

SSES Cross-Reference
Learning Objective(s) # 1357 , _____ , _____ , _____

BANK QUESTION (attach question)

X SSES exam bank — Question # AD045/1357/ 25
☐ INPO exam bank — Question #
☐ Other facility exam bank — Facility
☐ Previous NRC exam — Facility and date of exam
☐ Previous audit exam — Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐ SSES exam bank — Question #
☐ INPO exam bank — Question #
☐ Other facility exam bank — Facility
☐ Previous NRC exam — Facility and date of exam
☐ Previous audit exam — Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - No Comments

OPS – conditions in stem confusing, added FW temp to stem to clarify with ON symptoms and observations
Changed EHC failure to cause higher pressure

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X31 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Per NDAP-QA-0445, "Fire Brigade", which one of the following individuals can be assigned to assume the role as Fire Brigade Leader in the absence of the Assistant Unit Supervisor?

a. Shift Supervisor (SS).

b. Alternate OSC coordinator.

c. Either Unit Supervisor (US).

d. Either Plant Control Operator Monitor (PCOM).

Proposed Answer

c. correct – The FBL must hold an RO or SRO license and is required to be an individual with an RO or SRO license other than the SS or the PCO required for the unit. The only individual that meets these requirements from those identified in the US

Reference(s)

NDAP-QA-0300/0445
AD044A
AD044B
OP-AD-002

Discuss Distracters

a. incorrect – The SS can not fill per NDAP and unit TS.

b. incorrect - The Alt OSC coord. cannot be assigned as the FBL because this individual does not hold an RO or SRO license

d. incorrect - A Unit PCOM cannot be assigned as the FBL because the FBL is required to be an individual with an RO or SRO license other than the SS or the PCO required for the unit. The PCOM is required. The PCO (extra) could be assigned if FBL assigned

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.4.27	K/A	2.4.27	K/A
3.0	I-rating	3.5	I-rating

K&A Statement Knowledge of fire in the plant procedures

SSES Cross-Reference
Learning Objective(s) # 4023d , 4460d , _____ , _____

BANK QUESTION (attach question)

x	SSES exam bank	Question #	AD044/4023/ 2
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
x	Previous NRC exam	Facility and date of exam	SSES 2001
☐	Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #	
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	

☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – remove reference to NDAP 0300 from stem
Replaced FPE with SS in choice b
Removed Senior from NPO no longer applicable

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X32 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 90% RTP an SRV inadvertently opens and after a minute is reclosed by cycling the control room SRV switch. Two minutes later alarm AR-111 F04, SUPP POOL DIV 1 AVERAGE TEMP HI comes in. Which one of the following actions would be required due to receipt of this alarm?

a. Re-start Division 1 SPOTMOS.

b. Initiate Suppression Pool Cooling.

c. Carry out scram imminent actions.

d. Enter EO-100-103, PC CONTROL.

Proposed Answer
b. correct – step 2.3.1 of AR F04

Reference(s) AR-111-001
TM-OP-059Z-ST

Discuss Distracters
a. incorrect – this would be true if "No Data" were displayed

c. incorrect – this would be correct if SRV would not close and two minutes elapsed

d. incorrect – would be correct if this were a reflash (105F) of alarm window

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295013	K/A	295013	K/A
2.4.31		2.4.31	
3.3	I-rating	3.4	I-rating

K&A Statement Knowledge of annunciators alarms and indications and use of the response instructions

SSES Cross-Reference
Learning Objective(s) # 10509 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG - Modified stem to indicate 88 degrees in pool and that SRV was open for less than two minutes to eliminate c and d as correct answers

OPS – removed SPTMOS indication from stem due to confusion with SPTMOS indicating lights

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X33 Both	2 LOD
X	10CFR55.41.3			
	10CFR55.43			
Memory/Fundamental		X Comprehension/Analysis		

Proposed Question (Refer to Attachment 2)

Which one of the following describes the difference in power response expected between a Reactor Recirculation pump trip due to RPT breaker opening as compared to a trip from opening the drive motor breaker and the reason for this difference?

a. RPT breaker trip would drop power faster due to reduced MG Set coastdown effects.

b. RPT breaker trip would drop power faster due to increased MG Set coastdown effects.

c. Drive motor breaker trip would drop power faster due to reduced MG Set coastdown effects.

d. Drive motor breaker trip would drop power faster due to increased MG Set coastdown effects.

Proposed Answer

a. correct – ATWS RPT breaker trip disconnects pump from MG output causing faster flow drop

Reference(s) TM-OP-064C-ST

Discuss Distracters

b. incorrect – increased coastdown would result in slower power drop

c. incorrect – drive motor brkr allows pump to coastdown with MG set

d. incorrect - drive motor brkr allows pump to coastdown with MG set and increased coastdown would result in slower power drop

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295001 AK3.02	K/A	295001 AK3.02	K/A
3.7	I-rating	3.8	I-rating

K&A Statement Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION: Reactor power response

SSES Cross-Reference
Learning Objective(s) # 10207a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified stem to compare breaker trip response vs. events that could trip breakers

ORG - Replaced MG Set for drive motor in all choices

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X34 Both	3 LOD
X	10CFR55.41.5			
	10CFR55.43			
Memory/Fundamental		X Comprehension/Analysis		

Proposed Question (Refer to Attachment 2)

Unit 1 is operating at 100% RTP with Feedwater level control in automatic, three element control when the operator lowers the Feedwater Level Controller setpoint by 10 inches.

Which one of the following describes the effect this action will have on feedwater flow to the RPV initially and after level has reached the new control setpoint?

Feedwater flow to the RPV will initially.....

a. rise and then return to its original value.

b. rise and stabilize at the new higher value.

c. lower and then return to its original value.

d. lower and stabilize at the new lower value.

Proposed Answer

c. correct – feed flow reduces until level reaches the setpoint then returns to match steam flow near rated since no power change has occurred

Reference(s) TM-OP-045-ST

Discuss Distracters

a. incorrect – this would occur if setpoint were raised

b. incorrect – this would occur if controller demand were raised in manual

d. incorrect – this would occur if controller demand were lowered in manual

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
259002	K/A	259002	K/A
A1.02		A1.02	
3.6	I-rating	3.5	I-rating

K&A Statement Ability to predict and/or monitor changes in parameters associated with operating the REACTOR WATER LEVEL CONTROL SYSTEM controls including: Reactor feedwater flow

SSES Cross-Reference
Learning Objective(s) # 1818a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – Underlined Feedwater flow

Changed LOD 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X35 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the minimum number of Safety Relief Valves (SRV) that must be opened during execution of EO-100-112, "Rapid Depressurization" due to high off site release rates, and the reason for this number of SRVs?

a. 6 SRVs must be opened to allow repressurization of the RPV if flooding becomes required.

b. 4 SRVs must be opened to allow repressurization of the RPV if flooding becomes required.

c. 6 SRVs must be opened to ensure the RPV will depressurize and remain depressurized when required.

d. 4 SRVs must be opened to ensure the RPV will depressurize and remain depressurized when required.

Proposed Answer
d. correct – per EO-000-112

Reference(s)
EO-000-112
EO-100-112
PP002

Discuss Distracters
c. incorrect –this is the number of ADS SRVs directed, not the minimum to remain depressurized .

a. incorrect – this is the number of ADS SRVs directed not the minimum and incorrect bases per EO-000-112

b. incorrect –incorrect bases per EO-000-112

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
218000	K/A	218000	K/A
K3.02		K3.02	
3.6	I-rating	3.5	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the AUTOMATIC DEPRESSURIZATION SYSTEM will have on the following; Ability to rapidly depressurize the reactor

SSES Cross-Reference
Learning Objective(s) # 2598 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- X Other facility exam bank — Facility NMPCU2
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

ORG – changed stem to word from "adverse effects" to "reason for"
Changed reason in old distracters c and d (now a and b)
Modified stem to identify reason for RD

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X36 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment~~ 2)

Which one of the following identifies the reason that Fire Suppression systems are not isolated during execution of EO-100-104, "Secondary Containment Control", step SC/R-1, "WHEN ANY RB AREA RAD EXCEEDS HI ALARM"?

Fire Suppression .....

a. actuation can not be defeated per 10CFR50 Appx. R.

b. piping is not a source of radioactivity addition to the RB areas.

c. header isolation valves cannot be isolated from the control room.

d. isolation is directed when RB area Rad exceeds max safe in two or more areas.

Proposed Answer

b. correct – per EO bases FS is not a source of radioactivity

Reference(s) EO-000-104 SC/R-1
PP002

Discuss Distracters

a. incorrect – the system is can be defeated for testing and hot work under fire watch requirements and Appx. R provides Fire protection program guidance

c. incorrect – not an identified reason, actions would require local manual actions to isolate portion of FP header

d. incorrect – when two or more areas exceed max safe Rapid depress is directed

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295038	K/A	295038	K/A
EK3.02		EK3.02	
3.9	I-rating	4.2	I-rating

K&A Statement Knowledge of the reasons for the following responses as they apply to HIGH OFF-SITE RELEASE RATE: System isolations

SSES Cross-Reference
Learning Objective(s) # 2598 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Discussed comment that choice c is true by plant design but the EOP bases for this step no change to question wording.

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X37 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During the execution of EO-100-103 Primary Containment Control, Suppression Chamber Pressure cannot be maintained within PSL curve.

As a minimum, which of the following actions will be required to perform, and why?

a. Vent the primary containment because the containment has exceeded the Primary Containment Pressure Limit.

b. Vent the primary containment because the containment may be unable to suppress the pressure from an RPV blowdown.

c. Rapidly depressurize the RPV because the containment has exceeded the Primary Containment Pressure Limit.

d. Rapidly depressurize the RPV because the containment may be unable to suppress the pressure from an RPV blowdown.

Proposed Answer
d. correct – exceeding limit requires RD per step PCP-9 due to loss of suppression function (steam in SC)

Reference(s)
EO-000-103
EO-100-103 PCP-9
PP002

Discuss Distracters
a. incorrect – venting is directed based on limit of 65 psig and TSC

b. incorrect – venting is directed based on limit of 65 psig and TSC

c. incorrect – Bases states that PCPL not limiting on PSL at SSES

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295024 EK1.01	K/A	295024 EK1.01	K/A
4.1	I-rating	4.2	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL PRESSURE: Drywell integrity

SSES Cross-Reference
Learning Objective(s) # 2602 , 2604 , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- X Other facility exam bank — Facility NMPCU2
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified answer and distracters to terminology closer to bases document.

OPS – replaced "a pressurized" with "the" in choice c and d

Changed LOD to 3 from 2

Proposed Answer
d. correct - IAW OPS hot box concerning egress points

Reference(s) ON-081-001
AD045

Discuss Distracters
a. incorrect – control structure egress point does not get personnel out of hazard area

b. incorrect – unit 2 also available except CS egress

c. incorrect – this is normal ingress and egress

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.2.30	K/A	2.2.30	K/A
3.5	I-rating	3.3	I-rating

K&A Statement Knowledge of RO duties in the control room during fuel handling such as alarms from fuel handling area/communication with fuel storage facility/systems operated from the control room in support of fueling operations/and supporting instrumentation

SSES Cross-Reference
Learning Objective(s) # 1360 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- X Other facility exam bank — Facility NMPCU2
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X40 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following control rod insertion methods identified in EO-100-113 Sheet 2, "Control Rod Insertion", requires that the scram be reset?

a. Driving Rods.

b. Venting Scram Air Header.

c. Individually Scramming Rods.

d. Vent CRD Overpiston Volume.

Proposed Answer
c. correct – per EO-100-113 Sht. 2 , steps CR-13

Reference(s)
EO-100-113 Sht. 2
PP002

Discuss Distracters
a. incorrect – only requires bypassing of RWM/RSCS

b. incorrect – depressurizes scram air hdr regardless of RPS status

d. incorrect – does not require RPS reset to execute CR-24

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.1.23	K/A	2.1.23	K/A
3.9	I-rating	4.0	I-rating

K&A Statement Ability to perform specific system and integrated plant procedures during different modes of plant operation

SSES Cross-Reference
Learning Objective(s) # 2638 , _____ , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question #	PP002/2680/ 6
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #	
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Dropped cognitive level to Memory

OPS – ended stem at reset. Remainder of stem caused confusion as to procedurally or what might work anyway

Replaced choice d with Vent Overpiston volume since cooling water pressure will not usually work without reset of scram

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

	RO only	SRO only	X41 Both	3 LOD
X	10CFR55.41.4			
	10CFR55.43			
	Memory/Fundamental	X Comprehension/Analysis		

Proposed Question (Refer to Attachment 2)

While operating at 90% RTP on Unit 1 a Feedwater Heater normal level control valve malfunction causes level in the 2B Feedwater heater to rise. The Emergency Dump valve fails to open.

The following alarms have just been received:
- AR-120 B07, FW HTR 2B HI-HI LEVEL
- AR-120 H07, FW LOOP B PANEL 1C102 TROUBLE

Which one of the following identifies the Feedwater Heater string isolation status under these conditions?

a. Should have isolated immediately.

b. Isolates immediately if RPV level drops to 30 inches.

c. Will isolate after 30 seconds if heater level is not lowered.

d. Will isolate after 30 seconds if RPV level drops to 30 inches.

Proposed Answer
c. correct – Hi-Hi lvl isolates string after TD has expired if level is still high-high

Reference(s)
TM-OP-047-ST
AR-120-001
AR-101-001

Discuss Distracters
a. incorrect – this is when AR-101-D12 alarms

b. incorrect – this is when AR-101-D12 alarms and RPV level is not input to isolation circuit it inputs into Recirc runback

d. incorrect – TD is right and RPV level is not input to isolation circuit it inputs into Recirc runback

RO		SRO	
2	Tier #	2	Tier #
2	Group #	3	Group #
256000	K/A	256000	K/A
K5.03		K5.03	
2.6	I-rating	2.7	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to REACTOR CONDENSATE SYSTEM: Heat exchanger level operation

SSES Cross-Reference
Learning Objective(s) # 1852b , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X39 Both	2 LOD
X	10CFR55.41.10			
	10CFR55.43			
Memory/Fundamental		X Comprehension/Analysis		

Proposed Question (Refer to Attachment 2)

During a refueling outage on Unit 2, a Refuel Floor area radiation alarm annunciates in the control room. The PCOM enters ON-081-001, "Fuel Handling Accidents", and directs the Refuel Floor SRO to evacuate the Refuel Floor.

Which one of the following identifies the egress path(s) that should be utilized by personnel on the Refuel Floor?

a. Any egress point.

b. Any Unit 1 egress point only.

c. Normal Unit 2 egress point only.

d. Any egress point except the control structure egress.

X NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified choice d to include another control rod choice to balance distracters and prevent b from being obvious answer (only choice with control rod situation)

OPS – changed distracters to add more plausibility

Proposed Answer

c. correct – rod block will interrupt rod motion thereby limiting reactivity addition during this transient per design

Reference(s) TM-OP-078K-ST

Discuss Distracters

a. incorrect – rod block would not limit the reactivity event since block will not stop a drifting rod due to directional solenoid failures.

b. incorrect – rod block would not limit the reactivity event since block will not stop a scrammed rod motion

d. incorrect – rod block would not limit the reactivity event since block will not stop an uncoupled rod drop

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295014	K/A	295014	K/A
AK3.02		AK3.02	
3.7	I-rating	3.7	I-rating

K&A Statement Knowledge of the reasons for the following responses as they apply to INADVERTANT REACTIVITY ADDITION: Control rod blocks

SSES Cross-Reference
Learning Objective(s) # 1549a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X38 Both 3 LOD

X 10CFR55.41.6

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following conditions results in a ROD OUT BLOCK which successfully stops the reactivity transient?

Assume the center control rod.....

a. drifts from position 00 to 48.

b. scrams from position 24 to 00.

c. is continuously withdrawn from position 00 to 48.

d. becomes uncoupled and drops from position 00 to 48.

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X42 Both 2 LOD

X 10CFR55.41.13

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

A rise in fission product concentration in the Fuel Pool Cooling and Cleanup Spent Fuel Pool system will result if the:

a. cask storage gates are removed.

b. fuel pool average water temperature rises above 110°F.

c. SDHR is in service and pump discharge pressure is 110 psig.

d. filter/demineralizers are bypassed.

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified to column format

OPS - Modified Recirc response to be runback when valves fully close or when level drops in alternating choices.
Modified stem conditions to identify that isolation has not timed out

NRC – removed Recirc circuit in choices to eliminate overlap with other questions (Both 6 and 18)

Proposed Answer
d. correct – concentration will rise without removal by filter

Reference(s)
TM-OP-035-ST
OP-135-001

Discuss Distracters
a. incorrect – part of SSES commitment for heat removal from pool at max heat load

b. incorrect – this temp is identified in OP as possible release of existing fission products to atmosphere

c. incorrect – Normal discharge pressure is confirmed >80 psig. Pump may trip if >200 psig for greater than 1 minute per procedure caution.

RO		SRO	
2	Tier #	2	Tier #
3	Group #	3	Group #
233000	K/A	233000	K/A
K3.05		K3.05	
2.6	I-rating	2.8	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the FUEL POOL COOLING AND CLEAN-UP will have on the following: Fuel pool water fission product concentration

SSES Cross-Reference
Learning Objective(s) # 2204d , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam Facility and date of exam _____

X NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified stem focus to ask for "condition"

OPS – changed choice c valve from "22 feet" to "23 feet"

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X43 Both 3 LOD

X 10CFR55.41.7

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Core reload is in progress on Unit 1. As the PCOM you make the following observations after a fuel bundle has been inserted into the core:

- SRM counts are 250 cps and slowly rising
- SRM period is slightly positive and stable
- All control rods are fully inserted, except 14-15, which is uncoupled for drive repairs

Which one of the following categorizes the present condition and actions that should be directed from the control room?

The indicated conditions are.....

a. abnormal and suspension of core reloading should be directed.

b. abnormal and immediate core unloading near the SRMs should be directed.

c. normal however determination of SRM signal to noise ratio should be directed.

d. normal and continued core reload should be directed per the FACCTAS sheet.

Proposed Answer
a. correct – positive stable period indicates loss of SDM

Reference(s) ON-081-001
AD045

Discuss Distracters
b. incorrect – removals should only be done per a revised FACCTAS

c. incorrect – loss of SDM is not normal and S:N is directed if <3 cps

d. incorrect – loss of SDM is not normal and conduct of SR-100-109 would prevent this

RO		SRO	
2	Tier #	2	Tier #
3	Group #	2	Group #
234000	K/A	234000	K/A
A1.03		A1.03	
3.4	I-rating	3.9	I-rating

K&A Statement Ability to predict and/or monitor changes in parameters associated with operating the FUEL HANDLING EQUIPMENT controls including: Core reactivity level

SSES Cross-Reference
Learning Objective(s) # 1354 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- X Other facility exam bank — Facility NMPCU2
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified choice b to eliminate it as possible option.
Clarified stem focus.

OPS – modified stem to identify "after a bundle" vs. 'last of 648" to make choice d plausible

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X44 Both .2 LOD

X 10CFR55.41.9
10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

With both Units at 100% RTP, work on the Control Room HVAC caused smoke to be generated in the duct work feeding the control room. Operators utilize the Control Structure (CS) smoke removal system aligned to the Control Room to remove the smoke odor.

Which one of the following identifies the resulting Control Structure habitability envelope pressure relative to the Turbine Building area and the operational impact this pressure will have if the SSES Design basis Accident were to occur?

a. Positive pressure in the Control Room could prevent CREOASS dampers from repositioning on initiation.

b. Positive pressure in the Control Room could result in increased air infiltration and radiation dose to the Control Room operators.

c. Negative pressure in the Control Room could prevent CREOASS dampers from repositioning on initiation.

d. Negative pressure in the Control Room could result in increased air infiltration and radiation dose to the Control Room operators.

Proposed Answer

d. correct – OE 12227 identified neg pressure that would cause infiltration

Reference(s)

OE 12227
TM-OP-030-ST
OP-030-002

Discuss Distracters

a. incorrect – smoke removal draws air out of CR causing neg pressure, CREOASS concern on initiatiation is that smoke removal fans will not trip

b. incorrect - smoke removal draws air out of CR causing neg pressure

d. incorrect - CREOASS concern on initiatiation is that smoke removal fans will not trip

2	Tier #	2	Tier #
2	Group #	2	Group #
290003	K/A	290003	K/A
K5.01		K5.01	
3.2	I-rating	3.5	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to CONTROL ROOM HVAC: Airborne contamination (e.g. radiological, toxic gas, smoke) control

SSES Cross-Reference
Learning Objective(s) # 10457c , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Question regarding this as required knowledge discussed K/A "operational impacts" will send to validation with ops for their comment regarding this knowledge.

OPS – changed stem wording to "work" vs. "sheet metal"

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X45 Both 2 LOD

X 10CFR55.41.8

10CFR55.43

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

While operating at 100% RTP on Unit 1, a loss of Non-class 1E 120 VAC control power to the Reactor Building Closed Cooling Water (RBCCW) and Reactor Building Chilled Water (RBCW) crosstie valves occurs.

Which one of the following identifies the alignment of cooling to the Drywell with this loss?

	RBCCW	RBCW
a.	auto open	auto close
b.	auto open	remain open
c.	remain closed	auto close
d.	remain closed	remain open

Proposed Answer Reference(s) TM-OP-014-ST

a. correct – During loss of control power shift RBCW to the "Drywell Cooling" mode.

Discuss Distracters

b. incorrect – RBCCW valve failure.

c. incorrect –RBCW valve failure.

d. incorrect –this is normal lineup.

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
400000 K2.02	K/A	400000 K2.02	K/A
2.9	I-rating	2.9	I-rating

K&A Statement Knowledge of the electrical power supplies to the following: CCW valves

SSES Cross-Reference Learning Objective(s) # 10255 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank Question # _____
- ☐ INPO exam bank Question # _____
- ☐ Other facility exam bank Facility _____
- ☐ Previous NRC exam Facility and date of exam _____
- ☐ Previous audit exam Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank Question # _____
- ☐ INPO exam bank Question # _____
- ☐ Other facility exam bank Facility _____
- ☐ Previous NRC exam Facility and date of exam _____
- ☐ Previous audit exam Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Modified choices to column format
Removed ESW valves
Changed power loss to individual logic power vs. LOOP.

OPS – identified column one and two swapped - corrected

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X46 Both 3 LOD

X 10CFR55.41.7

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2~~)

Which one of the following identifies the reason for the Secondary Containment Isolation that occurs if a High Drywell pressure condition is sensed by the Primary Containment Isolation System (PCIS) logic?

a. To maintain the RB pressure at its normal negative pressure under conditions which indicate an actual release of radioactive materials into the RB.

b. To maintain the RB pressure at its normal negative pressure under conditions which have a potential to release of radioactive materials into the RB.

c. To take the RB pressure from its normal negative pressure to a positive pressure under conditions which indicate an actual release of radioactive materials into the RB.

d. To take the RB pressure from its normal negative pressure to a positive pressure under conditions which have a potential to release of radioactive materials into the RB.

Proposed Answer

b. correct – RB is normally negative and LOCA isolation is for potential release into RB from DW

Reference(s)

TM-OP-034-ST
TM-OP-059B-ST

Discuss Distracters

a. incorrect – bases for High Exh Rad isolation

c. incorrect – CR vent takes space positive and this is bases for High Exh Rad isolation

d. incorrect – CR vent takes space positive

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
295024 EK3.09	K/A	295024 EK3.09	K/A
3.1	I-rating	3.6	I-rating

K&A Statement Knowledge of the reasons for the following as they apply to HIGH DRYWELL PRESSURE: Auxilary building isolation

SSES Cross-Reference
Learning Objective(s) # 2120c , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - No Comments

OPS – swapped + and – in choice c and d to read more plausible

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X47 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

With Unit 1 at 100% RTP, which one of the following identifies the valve position and feedwater flow indication that would be observed if Instrument Air pressure were lost to an operating Reactor Feedwater Pump Recirc Valve (FV-10604)?

a. Valve would fail to full open position and not effect flow to the vessel.

b. Valve would fail to full open position and reduce flow to the vessel.

c. Valve would fail to full closed position and not effect flow to the vessel.

d. Valve would fail to full closed position and reduce flow to the vessel.

Proposed Answer
b. correct – valve fails open on loss of IA and diverts flow from the RPV

Reference(s)
ON-118-001
TM-OP-045-ST

Discuss Distracters
a. incorrect – this would occur if valve were already open

c. incorrect – this would occur if valve failed closed on loss of IA

d. incorrect – NP, if valve were open and then failed closed flow to RPV would rise

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295019	K/A	295019	K/A
AA1.02		AA1.02	
3.3	I-rating	3.1	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR: Instrument air system valves

SSES Cross-Reference
Learning Objective(s) # 10297a , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Corrected typo in answer justification

OPS – Reworded stem to read better
Changed LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X48 Both 2 LOD

X 10CFR55.41.8

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

During a Station Blackout Unit 1 is required per EO-100-030, "Unit 1 Response To Station Blackout", to open 250 VDC Load Center breakers to 1D155 and 1D165. EO-200-030, "Unit 2 Response To Station Blackout", does NOT direct the same actions for 2D155 and 2D165.

Which one of the following explains this difference in actions between the two units?

Unit 2 load centers 2D155 and 2D165.....

a. are supplied from non-1E battery.

b. can be connected to the Blue Max diesel.

c. are supplied from larger capacity batteries.

d. carry vital loads needed to cope with a Station Blackout.

Proposed Answer

a. correct – Unit 2 non vital loads are carried on 2D140 to ensure 4 hour battery capacity

Reference(s)

AD045
EO-100-030
EO-200-030
PP002

Discuss Distracters

b. incorrect – this is true for both units therefore not he reason for the diff

c. incorrect – vital batteries are same design and capacity

d. incorrect – these LCs carry non-vital loads

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295003	K/A	295003	K/A
AK2.01		AK2.01	
3.2	I-rating	3.3	I-rating

K&A Statement Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF A.C. POWER and the following: Station batteries

SSES Cross-Reference
Learning Objective(s) # 1360 , 2679 , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question # PP002/2679/ 3
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – No comments

OPS – corrected LC number for both units
Reworded choice a to read better

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X49 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During an ATWS event on Unit 1, the Suppression Pool temperature has reached 230°F on SPOTMOS indications.

RHR loop B is operating in Suppression Chamber Spray mode.
RHR loop A is operating in Suppression Pool Cooling mode.

Which RHR Loop A or B suction temperature cannot be used to determine Suppression Pool temperature?

a. RHR loop A suction due to exceeding the instrument range.

b. RHR loop A suction due to insufficient flow in the suction piping.

c. RHR loop B suction due to exceeding the instrument range.

d. RHR loop B suction due to insufficient flow in the suction piping.

Proposed Answer

d. ~~b~~. correct – flow must be >5000 gpm for this indication to be used

Reference(s)

EO-000-103
EO-100-103
PP002

Discuss Distracters

a. incorrect – instrument reads to 600°F

c. incorrect – flow would be >5000 gpm in SPC mode

b. ~~d~~. incorrect – instrument reads to 600°F

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295026 EK3.03	K/A	295026 EK3.03	K/A
3.5	I-rating	3.8	I-rating

K&A Statement Knowledge of the reasons for the following responses as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Suppression pool spray

SSES Cross-Reference
Learning Objective(s) # 2598 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Removed reasons for RHR lineups from stem.

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X50 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following describes the operation and concern for operating Reactor Core Isolation Cooling (RCIC) system with Suppression Pool level below 17 feet?

	Operation	Concern
a.	Permitted	Vortex Limit has been exceeded
b.	Permitted	Direct containment pressurization will occur
c.	Not permitted	Vortex Limit has been exceeded
d.	Not permitted	Direct containment pressurization will occur

Proposed Answer
b. correct – <17' may uncover RCIC exhaust

Reference(s)

EO-000-103
EO-100-103
PP002

Discuss Distracters
a. incorrect – RCIC VL is not limiting at any SP level

c. incorrect – RCIC ops is permitted and RCIC VL is not limiting at any SP level

d. incorrect – analysis indicates RCIC will not overpressurize PC and will auto isolate

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295030	K/A	295030	K/A
EA1.02		EA1.02	
3.4	I-rating	3.5	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to LOW SUPPRESSION POOL WATER LEVEL: RCIC

SSES Cross-Reference
Learning Objective(s) # 2627 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified stem for focus

Dropped cognitive level to Memory

OPS – Reformatted into column format

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X51 Both 3 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the component and the concern when drywell temperature reaches 340°F during implementation of EO-100-103, "PC Control"?

High drywell temperature is above the design temperature of the.....

a. Hydrogen Recombiners and could cause a failure to operate.

b. SRVs and could cause failure of the valves to open on high RPV pressure.

c. Primary Containment structure and could cause failure of the containment boundary.

d. Inboard Drywell Spray valves and could cause failure of the valves to open.

Proposed Answer
c. correct – 340 is design temp of PC

Reference(s)
EO-000-103
EO-100-103
PP002

Discuss Distracters
a. incorrect – Hydrogen Recombiners are designed to operate at 1250 degrees F per procedure

b. incorrect – SRV design above 340

d. incorrect – NP, valves located outside PC

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295028	K/A	295028	K/A
EK2.02		EK2.02	
3.2	I-rating	3.3	I-rating

K&A Statement Knowledge of the interrelation between HIGH DRYWELL TEMPERATURE and the following: Components internal to the drywell

SSES Cross-Reference
Learning Objective(s) # 2598 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – changed LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X52 Both 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2~~)

Which one of the following identifies conditions of thermal hydraulic instability in the core following a Recirculation pump trip from 80% RTP per ON-178-002, "Core Flux Oscillations"?

a. RBM "A" flow biased rod block occurs and immediately clears.

b. Peripheral LPRM downscale lights alarm and clear 10 seconds later.

c. APRMs "A, B and C" peak to peak oscillations are approximately 12% and steady.

d. Both Recirculation loop flow peak to peak oscillations are approximately 3% and steady.

Proposed Answer
c. correct – per 3.3.3.a

Reference(s) ON-178-002
AD045

Discuss Distracters
a. incorrect – this may normally occur as flow drops followed by flux dropping

b. incorrect – LPRM indications for oscillations have a 1-5 second period

d. incorrect – core flow has some cycling due to flow noise or may indicate a Recirc problem

RO		SRO	
3	Tier #	3	Tier #
	Group #		Group #
2.4.21	K/A	2.4.21	K/A
3.7	I-rating	4.3	I-rating

K&A Statement Knowledge of the parameters and logic used to assess the status of safety functions including: Reactivity control .....

SSES Cross-Reference
Learning Objective(s) # 1354 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified choices to eliminate original choice a and clarified choices for peak to peak

OPS – no comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	X53	Both	2 LOD
X	10CFR55.41.7		
	10CFR55.43		
Memory/Fundamental	X Comprehension/Analysis		

Proposed Question ~~(Refer to Attachment 2)~~

A Loss of Coolant Accident has occurred on Unit 1 and a Rapid Depressurization has been performed due to low RPV level.

Which one of the following identifies the ability to monitor Hydrogen concentration in the Primary Containment under these plant conditions?

a. H_2/O_2 Analyzer remains aligned for monitoring the drywell and suppression chamber air space.

b. H_2/O_2 Analyzer remains aligned for monitoring the drywell but must be manually aligned to sample the suppression chamber air space.

c. H_2/O_2 Analyzer automatically isolated but can be aligned to sample the drywell and suppression chamber air space immediately after the isolation signal is jumpered.

d. H_2/O_2 Analyzer automatically isolated but can be aligned to sample the drywell and suppression chamber air space after the isolation signal is automatically bypassed.

Proposed Answer
d. correct – step PC/G-1 of EO-100-103

Reference(s)

EO-000-103
EO-100-103
PP002

Discuss Distracters
a. incorrect – normal lineup is drywell only

b. incorrect – this would be condition with no isolation signal

c. incorrect – No ES procedure exists and isolation auto bypass is 10 minute

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
500000 EA1.01	K/A	500000 EA1.01	K/A
3.4	I-rating	3.3	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to HIGH CONTAINMENT HYDROGEN CONTROL: Primary containment hydrogen instrumentation

SSES Cross-Reference
Learning Objective(s) # 2621g , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

Modified stem to reduce unnecessary information

Changed wording in choice a and b to "remains" vs. "is already"

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X54 Both 2 LOD

X 10CFR55.41.7

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the method necessary to determine suppression pool temperature once the Main Control Room has been evacuated per ON-100(200)-009, "Control Room Evacuation"?

To determine temperature in the suppression pool.....

a. I&C must install temporary indicators at the RSP.

b. local temperature indicators in the RHR rooms must be used.

c. suppression chamber pressure is plotted on saturation curve to derive temperature.

d. the RSP indications can be used once instrument transfer switches are placed in EMERG position.

Proposed Answer
d. correct – on RSP once HSS-14901a and 15110A are placed in EMERG when RSP is manned

Reference(s) ON-100-009
AD045

Discuss Distracters
a. incorrect – this is done for RPV level and coolant temp if PICSY is not avail.

b. incorrect – not required by On since they are available on RSP

c. incorrect – this is used to determine RPV coolant temp.

RO		SRO	
1	Tier #	1	Tier #
2	Group #	1	Group #
295016 AA2.04	K/A	295016 AA2.04	K/A
3.9	I-rating	4.1	I-rating

K&A Statement Ability to determine and interpret the following as they apply to CONTROL ROOM ABANDONMENT: Suppression pool temperature

SSES Cross-Reference
Learning Objective(s) # 1365d , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Corrected procedure number error in stem.

OPS – modified choice c wording to say suppression and reworded

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	X55 Both	2 LOD
X	10CFR55.41.10			
	10CFR55.43			
Memory/Fundamental		X Comprehension/Analysis		

Proposed Question (Refer to Attachment 2)

While operating at 100% RTP on both Units, an inadvertent Zone I isolation occurs and operator actions to reset the isolation have failed. The NPO reports that Unit 1 Reactor Building differential pressure indicates downscale (0"inches WG vac with SGTS running.

Which one of the following identifies the Unit 1 procedural execution required due to this loss of Secondary Containment integrity per the attached ON-134-002, "Low RB Differential Pressure"?

a. EO-100-104, "SC Control" must be entered immediately.

b. EO-100-104, "SC Control" must be entered if integrity is not restored within 4 hours.

c. GO-100-004, "Plant Shutdown To Minimum Power" must be entered immediately to be in HOT SHUTDOWN within 6 hours.

d. GO-100-004, "Plant Shutdown To Minimum Power" must be entered if integrity not restored within 10 hours to be in HOT SHUTDOWN within 6 hours.

Proposed Answer
a. correct – uses SC-1 entry from ON-134-002

Reference(s)
ON-134-002
AD045

Discuss Distracters
b. incorrect – this would apply if the isolation could be reset and diff pressure not restored

c. incorrect – this is directed if Zone I or III are OOS for > 4hours not immediately

d. incorrect – this is directed if Zone I or III are OOS for > 4hours not 10 hours (4 plus the 6 to get to Hot S/D)

RO		SRO	
1	Tier #	1	Tier #
3	Group #	2	Group #
295035 EK1.01	K/A	295035 EK1.01	K/A
3.9	I-rating	4.2	I-rating

K&A Statement Knowledge of the operational applications of the following concepts as they apply to the SECONDARY CONTAINMENT HIGH DIFFERENTIAL PRESSURE: Secondary containment integrity

SSES Cross-Reference
Learning Objective(s) # 1358 1365h , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
ON-134-002

Review and Validation Comments
TRG - Modified stem to identify inadvertent isolation.
Modified stem to identify ON entry.
Removed ON condition from choice a and b.

OPS – Modified stem to unit specific and NPO gage values
Modified stem to ask for Unit 1 procedures required

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X56 Both 3 LOD

X 10CFR55.41.7

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the Standby Gas Treatment System response to a high RB pressure signal (positive RB pressure) while the train is operating in response to a LOCA signal start?

a. Fan Inlet Damper FD07551A1 will modulate open in response to the building pressure signal.

b. Fan Inlet Damper FD07551A1 will modulate closed in response to the building pressure signal

c. SGTS makeup OA Damper FD07551A2 will modulate open in response to the building pressure signal

d. SGTS makeup OA Damper FD07551A2 will modulate closed in response to the building pressure signal

Proposed Answer

d. correct – SGTS A(B) Inlet Hdr/Outdoor Diff Press Ctlr PDIC07550A(B) adjusts flow to maintain differential pressure of inlet header to outside pressure at setpoint by adjusting SGTS makeup OA Damper FD07551A2

Reference(s)

OP-070-001
TM-OP-070-ST

Discuss Distracters

a. incorrect – opening would lower RB pressure but this damper controls to a flow setpoint

b. incorrect – closing would raise RB pressure however this damper controls to a flow setpoint

c. incorrect – this damper controls to pressure but opening would result in less flow from the RB and higher pressure

RO		SRO	
1	Tier #	1	Tier #
3	Group #	2	Group #
295035	K/A	295035	K/A
EA1.02		EA1.02	
3.6	I-rating	3.8	I-rating

K&A Statement Ability to operate and/or monitor the following as they apply to SECONDARY CONTAINMENT HIGH DIFFERENTIAL PRESSURE: SBGT/FRVS

SSES Cross-Reference
Learning Objective(s) # 10376e , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____

☐ Previous audit exam

Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only SRO only X57 Both 2 LOD

X 10CFR55.41.7

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Unit 1 was at 100% RTP when a Loss of Coolant Accident occurred. The following plant conditions exist:

- RPV level is –100 inches and slowly rising
- RPV pressure is 190 psig and lowering
- All control rods are full in
- Drywell pressure is 25 psig and lowering

Which one of the following describes the effect a failure of the Primary Containment Isolation System logic to generate an isolation signal to the Reactor Recirculation System will have under these conditions?

a. Recirculation sample lines will not isolate as designed due to low-level.

b. Recirculation sample lines will not isolate as designed due to drywell pressure.

c. Recirculation loop discharge and discharge bypass valves will not isolate as designed due to low-level.

d. Recirculation loop discharge and discharge bypass valves will not isolate as designed due to drywell pressure.

Proposed Answer
a. correct – PCIS L2 signal isolates sample valves HV-1F019 and 20

Reference(s)
TM-OP-059B-ST
TM-OP-064C-ST

Discuss Distracters
b. incorrect – DW pressure signal does not isolate sample

d. incorrect – pump discharge valves isolate from LPCI initiation signal with low RPV pressure

c. incorrect – pump discharge valves isolate from LPCI initiation signal

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
223002	K/A	223002	K/A
K3.14		K3.14	
3.0	I-rating	3.0	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the PCIS/NUCLEAR STEAM SUPPLY SHUTOFF will have on the following: Recirculation system

SSES Cross-Reference
Learning Objective(s) # 2522n , , ,

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question #
- ☐ INPO exam bank — Question #
- ☐ Other facility exam bank — Facility
- ☐ Previous NRC exam — Facility and date of exam
- ☐ Previous audit exam — Facility and date of exam

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question #
- ☐ INPO exam bank — Question #
- ☐ Other facility exam bank — Facility
- ☐ Previous NRC exam — Facility and date of exam
- ☐ Previous audit exam — Facility and date of exam

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Concern that c and d choices can be easily eliminated since they are not containment isolations, will leave as is and receive feedback during ops validation.

OPS – reformatted providing plant parameters to evaluate

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	58 Both	2 LOD
X	10CFR55.41.10		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

A leak in the CS pump suction resulted in Suppression Pool level dropping to 19 feet prior to isolating the leak on Unit 1.

Which one of the following identifies the flow restraint (if any) on the use of RHR Loop 1A to inject into the RPV? The Vortex Limit curve is attached for your use.

a. Any flow rate may result in damage.

b. Flow rates above 7000 gpm may result in damage.

c. Flow rates below 7000 gpm may result in damage.

d. All flow rates are acceptable without damage.

Proposed Answer
d. correct – any flow above 18 feet is acceptable for RHR

Reference(s)

EO-000-103
EO-100-103
PP002

Discuss Distracters
a. incorrect – this would be true with level in pool below 18 feet

b. incorrect – this is flow at 19 feet and CS VL line

c. incorrect – this is reverse of b

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
203000 K6.06	K/A	203000 K6.06	K/A
3.8	I-rating	3.9	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the following will have on the RHR/LPCI INJECTION MODE: Suppression pool

SSES Cross-Reference
Learning Objective(s) # 2630 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
EO-100-103 Vortex Limit figure 7

Review and Validation Comments
TRG – No comments

OPS – verify reading graph correctly

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	59 Both	2 LOD
X	10CFR55.41.7		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 70% RTP on Unit 2 the 'A' Rod Block Monitor Gain Change Unit flux output drops to 0%.

Which one of the following identifies the effect this condition will have on the RBM and Reactor Manual Control System?

	'A' RBM	RMCS
a.	Auto bypass alarm	Applies rod block
b.	Auto bypass alarm	No rod block applied
c.	Downscale alarm	Applies rod block
d.	Downscale alarm	No rod block applied

Proposed Answer

c. correct – with power >30% flux <5% will trip RBM downscale and apply block thru RMCS

Reference(s) TM-OP-078K-ST

Discuss Distracters

a. incorrect – this would occur if input APRM went downscale <30% and block would not be applied with RBM bypassed

b. incorrect – this would occur if input APRM went downscale <30%

d. incorrect – this would occur if power were <30%

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
215002 K3.01	K/A	215002 K3.01	K/A
3.3	I-rating	3.5	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the ROD BLOCK MONITOR SYSTEM will have on the following: Reactor manual control system

SSES Cross-Reference
Learning Objective(s) # 1547c , 1549a , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – No comments

OPS – reworded stem for clarity

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	60 Both	2 LOD
X	10CFR55.41.10			
	10CFR55.43			

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 1 a FW Heater 5B level instrument failure drives the 5B FWH Dump valve full open.

Which one of the following identifies the response of the Feedwater Heater Drain system and action that should be taken to correct?

a. FW heater 5B level will go low, close 5B Dump valve from 1C102.

b. FW heater 4B level will go high, close 5B Dump valve from 1C102.

c. FW heater 5B level will go low, close B Heater string isolation valves from control room.

d. FW heater 4B level will go high, close B Heater string isolation valves from control room.

Proposed Answer

a. correct – dump valve will drop level (to condenser) requiring local closure per AR

Reference(s)

AR-120-001
TM-OP-047-ST

Discuss Distracters

b. incorrect – 4B heater will receive less input with 5B drains diverted to condenser

c. incorrect – isolation valve closure is automatic on 1 or 2 Htr hi-hi level

d. incorrect – – isolation valve closure is automatic on 1 or 2 Htr hi-hi level

RO		SRO	
2	Tier #	2	Tier #
2	Group #	3	Group #
256000	K/A	256000	K/A
A2.09		A2.09	
2.8	I-rating	2.8	I-rating

K&A Statement Ability to (a) predict the impacts of the following on the REACTOR CONDENSATE SYSTEM and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Low feedwater heater level

SSES Cross-Reference
Learning Objective(s) # 1852b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	61 Both	2 LOD
X	10CFR55.41.5			
	10CFR55.43			

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following describes the effect on reactor pressure and power if one Turbine Bypass Valve failed open while operating at 100% RTP on Unit 1?

RPV pressure would drop until....

a. Turbine Control Valves close to restore pressure, reactor power would drop and remain lower than initial power level.

b. Maximum Combined flow limits depressurization, reactor power would drop and remain lower than initial power level.

c. Turbine Control Valves close to restore pressure, reactor power would drop and then return to approximately initial power level.

d. Maximum Combined flow limits depressurization, reactor power would drop and then return to approximately initial power level.

Proposed Answer

c. correct – with BPV opens pressure drops lowering power, throttle pressure change closes TCVs to restore pressure and power will return as steam flow returns to original with ~5% going thru BPV now instead of TCVs

Reference(s)

TM-OP-093L-ST
TM-OP-093E-ST

Discuss Distracters

a. incorrect – as pressure returns to original power will return as void collapse

b. incorrect – MAX COMBINED FLOW will limit electrical signal to TCVs and BPVs to limit flow to ~105%

d. incorrect – MAX COMBINED FLOW will limit electrical signal to TCVs and BPVs to limit flow to ~105%

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
241000	K/A	241000	K/A
K5.03		K5.03	
3.5	I-rating	3.6	I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to the REACTOR/TURBINE PRESSURE REGULATING SYSTEM: Reactor power vs. reactor pressure

SSES Cross-Reference
Learning Objective(s) # 10020a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

X SSES exam bank — Question # SY017A08/C 12

☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

NEW QUESTION

An attachment to the examination ~~will be~~ required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – changed EHC to Turbine in stem

OPS – added reactor to all choices to direct answer to RX power not Generator

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	62 Both	3 LOD
X	10CFR55.41.8		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2)~~

Which one of the following identifies the purpose of the shunt trip breakers 0B565-1A and 0B565-1B associated with DG E?

a. Protect DG E from electrical faults on Unit 1 4KV ESS Buses 1A and 1B.

b. Provide separation between 1E and non-1E distribution when DG E is supplying 0B565.

c. Protect DG E from electrical faults on the Unit 1 4KV ESS Bus 1A and Unit 2 4KV ESS Bus 2B.

d. Provide separation between 1E and non-1E distribution when DG E automatically starts during a LOCA.

Proposed Answer
b. correct – trip on UV

Reference(s) TM-OP-024A-ST

Discuss Distracters
a. incorrect – does not connect DG to ESS Busses

c. incorrect – does not connect DG to ESS Busses

d. incorrect – does not connect DG to ESS Busses and does not auto start on LOCA in test (DG TRIPS)

RO		SRO	
2	Tier #	2	Tier #
2	Group #	1	Group #
262001 K1.01	K/A	262001 K1.01	K/A
3.8	I-rating	4.3	I-rating

K&A Statement Knowledge of the physical connections and/or cause-effect relationships between AC ELECTRICAL DISTRIBUTION and the following: Emergency generators

SSES Cross-Reference
Learning Objective(s) # 2073a , _____ , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question #	SY017G1A/2073/ 2
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #	
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	

☐ Previous audit exam Facility and date of exam _____

NEW QUESTION

An attachment to the examination ~~will be~~ required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – no comments

OPS – change LOD to 3 from 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	63 Both	3 LOD
X	10CFR55.41.13		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2~~)

While operating at 100% RTP the following occur:

- A release occurs on the Refuel Floor 818' elevation
- Refuel floor Wall Exhaust Radiation monitor (RISHH-D12-1K609A) trips
- Refuel floor Wall Exhaust Radiation monitor (RISHH-D12-1K609B) does not trip

Which one of the following identifies the response of the Standby Gas Treatment system and the EOP entry requirement (if any) to these conditions?

a. One train of SGTS starts, EOP entry is required.

b. Both trains of SGTS start, EOP entry is required.

c. One train of SGTS starts, EOP entry is not required.

d. Both trains of SGTS start, EOP entry is not required.

Proposed Answer

a. correct – SGTS response is divisionalized with a monitor starting A train, EO-100-104 entry is met with Zone III HVAC Exhaust Rad above HI-HI alarm

Reference(s)

AR-101-001
TM-OP-070-ST

Discuss Distracters

b. incorrect – only one train starts off a monitor

c. incorrect – EOP entry is required on Hi-Hi Rad

d. incorrect – EOP entry is required on Hi-Hi Rad

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
261000	K/A	261000	K/A
A2.13		A2.13	
3.4	I-rating	3.7	I-rating

K&A Statement Ability to (a) predict the impacts of the following on the STANDBY GAS TREATMENT SYSTEM and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High secondary containment ventilation exhaust radiation

SSES Cross-Reference
Learning Objective(s) # 1954b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # AD045/1357/ 17
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG – no comments

OPS – reworded stem into conditions with one monitor trip and not the other and removed leading wording "valid"

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	64 Both	2 LOD
X	10CFR55.41.7		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the HPCI system response if the Ramp Generator fails to initiate when a Low RPV Level initiation signal is received?

a. Turbine speed remains at 0 RPM.

b. Turbine speed rises and begins to oscillate.

c. Turbine speed rises and stops at 700 RPM.

d. Turbine speed rises to the turbine trip setpoint.

Proposed Answer

a. correct – ramp generator is required to start turbine

Reference(s) TM-OP-052-ST

Discuss Distracters

b. incorrect – this would indicate a control problem during HPCI ops (typically operating <2200 RPM)

c. incorrect – this is indicative of an inverter failure during HPCI ops

d. incorrect – this would occur without ramp function and thus the reason for the interlock for startup

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
206000	K/A	206000	K/A
A3.01		A3.01	
3.6	I-rating	3.5	I-rating

K&A Statement Ability to monitor automatic operations of the HIGH PRESSURE COOLANT INJECTION SYSTEM including: Turbine speed

SSES Cross-Reference Learning Objective(s) # 10368c , 2038h , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # TM-OP-052/2034/ 1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – no comments

OPS – no comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	65 Both	2 LOD
X	10CFR55.41.4		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Residual Heat Removal pump 1A is running in Suppression Pool Cooling with RHR Service Water pump 1A in service.

Which one of the following describes the effect on the RHRSW system if the Loop 1A RHR Manual Initiation pushbutton is armed and depressed?

The running RHRSW pump will....

a. continue to run because the RHRSW LOCA-TRIP is defeated.

b. trip and can be restarted by defeating the RHRSW LOCA-TRIP.

c. trip and can not be restarted with a manual LPCI initiation signal present.

d. continue to run because the manual LPCI initiation signal does not affect the pump circuit.

Proposed Answer
d. correct – Man initiation PB does not effect RHRSW logic

Reference(s)
OP-016-001
TM-OP-016-ST

Discuss Distracters
a. incorrect – Logic is not defeated

c. incorrect- Pump will not trip

b. incorrect – Pump will not trip

RO		SRO	
2	Tier #	2	Tier #
1	Group #	1	Group #
203000	K/A	203000	K/A
A1.09		A1.09	
2.9	I-rating	2.9	I-rating

K&A Statement Ability to predict and/or monitor changes in parameters associated with operating the RHR/LPCI INJECTION MODE controls including: Component cooling water system

SSES Cross-Reference
Learning Objective(s) # 2053b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – identified incorrect answer selected choice c is correct

OPS – reworded and rearranged choices to balance old answer c is now d

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	66 Both	2 LOD
X	10CFR55.41.8		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the design feature of the Residual Heat Removal System to prevent piping damage due to water hammer in the pump discharge line when aligning the system to the Suppression Pool Spray mode?

a. Spray flow is throttled for first 30 seconds.

b. The pump suction is normally aligned to the suppression pool.

c. Interlocks prevent opening the SP spray valve when a LOCA signal is present.

d. Condensate transfer is normally aligned between the inboard and outboard LPCI injection valves.

Proposed Answer

d. correct – keepfill functions to prevent water hammer and is normally aligned to dischrge pipe

Reference(s) TM-OP-049-ST

Discuss Distracters

a. incorrect – this is done for DW spray for initiation limit

b. incorrect – would only flood to SP elevation and actually floods to close pump discharge check valve

c. incorrect – prevents realigning from ECCS mode without operator action S17 LOCA override switch

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
230000 K4.07	K/A	230000 K4.07	K/A
3.1	I-rating	3.2	I-rating

K&A Statement Knowledge of RHR/LPCI: TORUS/SUPPRESSION POOL SPRAY MODE design feature(s) and or interlock(s) which provide for the following: Prevention of water hammer

SSES Cross-Reference Learning Objective(s) # 181o , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____

☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – no comments

OPS – changed a choice to be more plausible and different from choice c

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	67 Both	2 LOD
X	10CFR55.41.4		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

A loss of the preferred power supply for 30 minutes, has resulted in the Instrument AC UPS 1D130 automatically transferring to maintain power to its distribution panels.

Which one of the following describes the UPS operation for re-supplying the UPS loads from the preferred power source?

a. Automatically transfers back from the battery supply on restoration of preferred power.

b. Must be manually transferred back from the battery supply when preferred power is restored.

c. Automatically transfers back to preferred from the alternate supply on restoration of preferred power.

d. Must be manually transferred back from the alternate supply when preferred power is restored.

Proposed Answer

d. correct –battery would discharge and transfer to Alternate and require manual transfer back

Reference(s) TM-OP-017-ST

Discuss Distracters

a. incorrect – AUTO transfers if battery remained energized (short duration loss of AC)

b. incorrect – if on battery it will auto transfer back

c. incorrect – requires manual transfer from alt

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
262002	K/A	262002	K/A
A4.01		A4.01	
2.8	I-rating	3.1	I-rating

K&A Statement Ability to manually operate and/or monitor in the control room: Transfer from alternate source to preferred source

SSES Cross-Reference
Learning Objective(s) # 10175a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # TM-OP-017/10564/ 1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – added time of 5 minutes for preferred power loss

OPS – changed conditions to extended loss to put alternate source in service

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	68 Both	2 LOD
X	10CFR55.41.6		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is at 5% RTP during a reactor startup. During control rod withdrawal the Rod Sequence Control System DIRECTION pushbutton is depressed to illuminate the INSERT portion of the display indicating lamp. When depressed again the indication fails to toggle back to WITHDRAW.

Which one of the following identifies the effect this failure of the DIRECTION pushbutton function will have on the RSCS control rod block functions?

RSCS will.....

a. immediately apply an insert block only.

b. immediately apply an insert and withdrawal block.

c. continue to enforce programmed control rod insert blocks only.

d. continue to enforce programmed control rod insert and withdrawal blocks.

Proposed Answer

d. correct – controls display, and recognizes direction of control rods.

Reference(s) TM-OP-056Z-ST

Discuss Distracters

a. incorrect – this will occur with a rod reaching the insert programmed limit

b. incorrect – this would occur on a fault ie failed RPIS

c. incorrect – both insert and w/d blocks remain in force

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
201004 K6.02	K/A	201004 K6.02	K/A
3.1	I-rating	3.2	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the following will have on the RSCS: rod direction information

SSES Cross-Reference
Learning Objective(s) # 2441b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	69 Both	2 LOD
X	10CFR55.41.4			
	10CFR55.43			

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following describes the effect that a trip of the operating Unit 1, Reactor Building HVAC Zone 1 Supply fan (1V202A) will have on Unit 1 Reactor Building Zone 1 ventilation?

a. Standby Supply fan auto starts maintaining normal ventilation lineup.

b. All Zone 1 Isolation dampers close shifting ventilation lineup to SBGT.

c. Operating Zone 1 Exhaust fan damper modulates maintaining normal ventilation lineup.

d. Both Equipment Compartment Exhaust fans trip shifting ventilation lineup to SBGT.

Proposed Answer

a. correct – fan normally in AUTO starts on low flow

Reference(s) TM-OP-034-ST

Discuss Distracters

b. incorrect – this would occur if stdby fan failed to start

c. incorrect – fan damper does not modulate

d. incorrect – this is portion of isolation response to LOCA/Hi Rad

RO		SRO	
2	Tier #	2	Tier #
2	Group #	1	Group #
290001 K6.01	K/A	290001 K6.01	K/A
3.5	I-rating	3.6	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the following will have on the SECONDARY CONTAINMENT: Reactor building ventilation

SSES Cross-Reference Learning Objective(s) # 1279a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG –

OPS – removed word "trips" from choice c and reworded to damper modulates to maintain normal lineup

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	70 Both	2 LOD
X	10CFR55.41.7			
	10CFR55.43			

Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2~~)

HPCI is operating in CST to CST lineup on Unit 1 for pump vibration data collection.

Which one of the following identifies the HPCI system response if the Manual HPCI System Isolation pushbutton on 1C601 is depressed?

HPCI will.....

a. trip and isolate.

b. trip but not isolate.

c. continue to operate in CST to CST lineup.

d. continue to operate on minimum flow with CST return closed.

Proposed Answer

c. correct – PB only works with initiation signal in

Reference(s) TM-OP-052-ST

Discuss Distracters

a. incorrect – this would occur if initiation signal was present

b. incorrect – Isolation causes a trip but PB would not work without initiation signal

d. incorrect – CST return closes on isolation signal

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295020	K/A	295020	K/A
AK2.06		AK2.06	
3.8	I-rating	3.8	I-rating

K&A Statement Knowledge of the interrelations between INADVERTENT CONTAINMENT ISOLATION and the following: HPCI

SSES Cross-Reference
Learning Objective(s) # 2037m , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – no comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	71 Both	2 LOD
X	10CFR55.41.3		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is in Mode 4 when an inadvertent isolation of the Reactor Water Cleanup System occurs. Which one of the following identifies the ability to determine bottom head stratification using the RWCU bottom head drain temperature indication?

Bottom head drain temperature indication.....

a. can be used but will indicate higher than actual RPV coolant temperature.

b. can be used but will indicate lower than actual RPV coolant temperature.

c. cannot be used because it indicates higher than actual RPV coolant temperature.

d. cannot be used because it indicates lower than actual RPV coolant temperature.

Proposed Answer
b. correct – bottom head drain indicated temperature will be conservatively low when RWCU is not in service

Reference(s) ON-100-101
AD045

Discuss Distracters
a. incorrect – this condition is reversed from actual effect

c. incorrect – ON-100-101 allows use based on conservative indication

d. incorrect – ON-100-101 allows use based on conservative indication

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295020	K/A	295020	K/A
AK1.04		AK1.04	
2.5	I-rating	2.8	I-rating

K&A Statement Knowledge of the operational applications of the following concepts as they apply to the INADVERTENT CONTAINMENT ISOLATION: Bottom head thermal stratification

SSES Cross-Reference
Learning Objective(s) # 1360 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	72 Both	3 LOD
X	10CFR55.41.10		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies a concern of lowering Suppression Chamber pressure below 0 psig during RHR Suppression Chamber Spray operation with containment hydrogen concentration at 4% and rising with Suppression Chamber venting in progress?

a. Suppression Chamber-to-Drywell vacuum breakers could fail open prior to design.

b. Inboard containment vent valves could fail securing the vent line up.

c. Reverse flow through the vent path could deinert the containment.

d. RHR spray flow path could result in an uncontrolled release to the Reactor Building.

Proposed Answer

c. correct – lower internal pressure will result in reverse flow and intake of air into the PC

Reference(s)

EO-100-103
PP002

Discuss Distracters

a. incorrect – vac bkrs open to relieve SP to DW on high SP pressure

b. incorrect – AOV may fail to open if DP or PC pressure is too high

d. incorrect – with high PC pressure or loss of spray flow a flow path could exist

RO		SRO	
1	Tier #	1	Tier #
1	Group #	1	Group #
500000 EK2.06	K/A	500000 EK2.06	K/A
3.0	I-rating	3.4	I-rating

K&A Statement Knowledge of the interrelations between HIGH CONTAINMENT HYDROGEN CONCENTRATION and the following: Wetwell spray system

SSES Cross-Reference
Learning Objective(s) # 2641 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – no comments

OPS – concern on testability of EP-DS bases, revised to related to when spray is used for Hydrogen control

NRC – Modified to ask hydrogen related bases for not spraying below 0 psig.

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	73 Both	2 LOD
X	10CFR55.41.8		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the reason that the "A–D" Emergency Diesel Generator Intercooler TCVs supplied from ESW are normally full open with the controller in OFF?

a. ensures minimum flow for ESW pumps during an auto start of all 4 EDGs.

b. ensures minimum flow for ESW pumps during manual start of any EDG for testing.

c. ensures sufficient heat removal by ESW during an auto start of all 4 EDGs.

d. ensures sufficient heat removal by ESW during manual start of any EDG for testing.

Proposed Answer

a. correct – prevent dead heading either ESW loop on DG auto start when 4 ESW pumps start

Reference(s) TM-OP-024-ST

Discuss Distracters

b. incorrect – when manually starting for testing the TCV is placed in AUTO for that DG

c. incorrect – sufficient heat removal exists with TCV throttling and excess cooling occurs with valve full open but has been evaluated as acceptable

d. incorrect – sufficient heat removal exists with TCV throttling and excess cooling occurs with valve full open but has been evaluated as acceptable

RO		SRO	
1	Tier #	1	Tier #
2	Group #	2	Group #
295018 AK3.06	K/A	295018 AK3.06	K/A
3.3	I-rating	3.3	I-rating

K&A Statement Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF CCW: Increasing cooling water flow to heat exchangers

SSES Cross-Reference Learning Objective(s) # 2072d , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____

- ☐ INPO exam bank
- ☐ Other facility exam bank
- ☐ Previous NRC exam
- ☐ Previous audit exam

Question # _____
Facility _____
Facility and date of exam _____
Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG –

OPS – no comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only	SRO only	74 Both	3 LOD
X	10CFR55.41.10		
	10CFR55.43		

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is at 100% RTP when a sustained loss of steam seal header pressure occurs.

Which actions are required if steam seal pressure cannot be re-established?

a. Scram reactor, close the MSIVs and isolate Offgas system.

b. Scram reactor, close the MSIVs and open the condenser vacuum breakers.

c. Reduce power as necessary to maintain backpressure $\leq$ 5.5 "HgA.

d. Reduce power as necessary to maintain vacuum above the turbine trip setpoint.

Proposed Answer
b. correct – per ON-143-001 step 3.3.9 due to seal cutting damage

Reference(s)

ON-143-001
TM-OP-092-ST
AD045

Discuss Distracters
a. incorrect – Offgas isolation is condition that could cause loss of vac

c. incorrect – Loss of vacuum actions per ON if scram not directed

d. incorrect – not directed as a target during loss of vacuum

RO		SRO	
2	Tier #	2	Tier #
2	Group #	2	Group #
245000	K/A	245000	K/A
K6.01		K6.01	
2.8	I-rating	2.9	I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the following will have on the MAIN TURBINE GENERATOR AND AUXILIARIES: Gland seal

SSES Cross-Reference
Learning Objective(s) # 1358 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – modified stem to identify a sustained loss and removed admission valve rersponse

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only		SRO only	75 Both	2 LOD
X	10CFR55.41.9			
	10CFR55.43			

Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2)~~

Unit 1 is operating at 100% RTP when a steam line rupture occurs in the Reactor Building main steam pipe tunnel.

Which one of the following identifies the radioactive release vent path(s) that would exist if the area blowout panel(s) opened during the event as designed?

Operation of the area blowout panels would cause a release to the .....

a. site environment only.

b. Turbine Building only.

c. Reactor Building and site environment.

d. Turbine Building and the site environment.

Proposed Answer
d. correct – one panel goes to TB the other to the environment

Reference(s) TM-OP-034-ST

Discuss Distracters
a. incorrect – this would be for below grade rooms (RHR/RCIC/HPCI)

b. incorrect – this would be path for TB main steam tunnel without panel actuation

c. incorrect – panels blow out to environment except RB tunnel

RO		SRO	
2	Tier #	2	Tier #
2	Group #	1	Group #
290001 K1.07	K/A	290001 K1.07	K/A
3.0	I-rating	3.1	I-rating

K&A Statement Knowledge of the physical connections and/or cause-effect relationships between SECONDARY CONTAINMENT and the following: Turbine building ventilation (steam tunnel)

SSES Cross-Reference
Learning Objective(s) # 1274o , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – underlined vent and blowout panels to remove confusion regarding leakage through other paths

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X1 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

While operating at 80% RTP a feedwater control malfunction causes RPV level to drop to below the scram setpoint. The following conditions exist 2 minutes after scram initiation:

- RPV level is 20 inches and slowly rising
- APRMs are downscale
- 5 control rods failed to fully insert
- RPV pressure is 960 psig and stable

Given those conditions, which one of the following procedures is required to be implemented in order to control RPV parameters?

a. ON-100-101, "Scram".

b. EO-100-102, "RPV Control".

c. EO-100-113, "Level/Power Control".

d. GO-100-005, "Plant Shutdown to Cold Shutdown".

Proposed Answer

c. correct - Low lvl entry with > one rod not at 00

Reference(s) EO-100-113 LQ1
PP002

Discuss Distracters

a. incorrect - scram with no EO entry condition

b. incorrect - low lvl with < one rod not at 00

d. incorrect - when directed from ON-100-101

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.4.1	K/A
	I-rating	4.6	I-rating

K&A Statement Knowledge of EOP entry conditions and immediate action steps.

SSES Cross-Reference
Learning Objective(s) # 2622 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Changed wording in stem to "the following conditions exist after scram"

OPS – removed word "entry and" from stem

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 2 SRO only | Both | 2 LOD

10CFR55.41

X 10CFR55.43.4

Memory/Fundamental | Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following Reactor Building area radiation conditions would require a Rapid Depressurization during an event on Unit 2 involving extensive fuel failure and a HPCI piping rupture discharging into the Reactor Building per EO-100-104, "Secondary Containment Control"?

a. HPCI Room 11R/hr, RCIC Room 11R/hr, CRD North 9R/hr, CRD South 9R/hr.

b. HPCI Room 11R/hr, RCIC Room 9R/hr, CRD North 11R/hr, CRD South 10R/hr.

c. HPCI Room 9R/hr, RCIC Room 9R/hr, CRD North 11R/hr, CRD South 11R/hr.

d. HPCI Room 9R/hr, RCIC Room 8R/hr, CRD North 9R/hr, CRD South 9R/hr.

Proposed Answer
b. correct – MAX SAFE is RD criteria if two or more areas

Reference(s)
EO-100-104
EO-000-104
PP002

Discuss Distracters
a. incorrect – HPCI and RCIC are one area per EO

c. incorrect – CRD North and south are one area per EO

d. incorrect – no area above MAX SAFE

RO		SRO	
	Tier #	1	Tier #
	Group #	2	Group #
	K/A	295033 EA2.02	K/A
	I-rating	3.2	I-rating

K&A Statement Ability to determine and interpret the following as they apply to HIGH SECONDARY CONTAINMENT AREA RADIATION LEVELS: Equipment operability

SSES Cross-Reference
Learning Objective(s) # 2598 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
Unit 2 EO-100-104 flow chart

Review and Validation Comments
TRG -

OPS – modified to focus on interpret

Modified question per discussion with OPS to utilize Unit 2 flowchart to apply rad criteria which is based on equipment operability and personnel rad exposure

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X3 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.1

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the plant effect and procedure that should be directed for a downscale failure of the "A" narrow range RPV level instrument on Unit 1 as compared to the same failure on Unit 2 while operating at 100% RTP with FWLC in a normal lineup?

	UNIT 1	UNIT 2
a.	ON-100-101 due to low level scram	GO-200-002 unit remains at 100% power
b.	GO-100-002 unit remains at 100% power	ON-200-101 due to low level scram
c.	ON-164-002 due to runback of Recirc	GO-200-002 unit remains at 100% power
d.	GO-100-002 unit remains at 100% power	ON-264-002 due to runback of Recirc

Proposed Answer Reference(s) Plant mod

d. correct – on unit 1 averaged level will drop slightly but remain above L3, unit 2 will receive L3 runback from selected NR

Discuss Distracters

a. incorrect – average input will drop slightly

b. incorrect – NR input to RPS is one out of two twice and FWLC will cause level to go high not low

c. incorrect – average input will drop slightly

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.2.3	K/A
	I-rating	3.3	I-rating

K&A Statement (multi-unit) Knowledge of the design/procedural/ and operational differences between units

SSES Cross-Reference
Learning Objective(s) # _____ , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG -

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X4 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.1

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Unit 1 is at 30% power. It has been determined that multiple ECCS equipment malfunctions have resulted in **NON-COMPLIANCE** with the LCO statements that are applicable in Modes 1, 2 and 3. There are **NO** action statements (conditions) associated with the current combinations of inoperable equipment.

Per Technical Specifications, which one of the following actions is required?

a. Within 1 hour initiate actions to place the plant in Cold Shutdown.

b. Within 12 hours initiate actions to place the mode switch in Startup.

c. Immediately verify operability of redundant ECCS equipment and obtain a Technical Specification interpretation with 12 hours.

d. Within 1 hour verify operability of redundant ECCS equipment and continue operation until a valid Technical Specification LCO exists.

Proposed Answer

a. correct – When there are No applicable LCOs and the existing LCOs are NOT met action must be taken within 1 hour to place the plant in a non-applicable mode, which in this case is mode 4, Cold Shutdown.

Reference(s)

TS 3.0.3/Bases
OP-AD-001
AD044A

Discuss Distracters

b. incorrect – Only one hour is allowed to initiate action and the mode switch must be in Startup within 8 hours

c. incorrect - Operation may not continue without the plant meeting existing LCOs.

d. incorrect - Operation may not continue without the plant meeting existing LCOs

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.1.11	K/A ✓
	I-rating	3.8	I-rating

K&A Statement Knowledge of less than one hour technical specification action statements for systems

SSES Cross-Reference
✓ Learning Objective(s) # 4056b , _____ , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question #	AD044B/4493/ 1
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
X	Previous NRC exam	Facility and date of exam	SSES 2001
☐	Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #	
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

Modified wording in choice c and d to "redundant" ECCS

Changed LOD from 3 to 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X5 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental X Comprehension/Analysis

Proposed Question

Unit 1 was at 100% RTP and Unit 2 was in Shutdown Cooling with 2B RHR pump at 195°F coolant temperature.

- An evacuation of the control room was ordered due to dense smoke. All control room actions were completed prior to evacuation.
- Control was established at the Remote Shutdown panels 13 minutes after the evacuation.

The following events occurred during the evacuation:

- Unit 1 suppression pool temperature is 129°F and rising due to HPCI auto initiation on low-low level and SRV operation.
- Unit 2 coolant temperature has risen to 219°F and rising following RHR pump shutdown.

Which one of the following identifies the highest applicable E-plan classification that is required due to these station conditions? EP-PS-100 is provided for your use.

a. Unusual Event.

b. Alert.

c. Site Area Emergency.

d. General Emergency.

Proposed Answer Reference(s) EP-PS-100 Tab 4

c. correct – SAE per EP-PS-100 TAB 4 EAL 10.3 for Unit 1

Discuss Distracters

a. incorrect – EAL 12.1 is for initiation of Low-low-low ECCS not HPCI on unit 1

b. incorrect – EAL 2.2 for both units, EAL 10.2 for unit 2

d. incorrect – EAL 10.4 if unit 1 pool temp rose to 290F

RO		SRO	
	Tier #	1	Tier #
	Group #	1	Group #
	K/A	295016 2.1.14	K/A
	I-rating	3.3	I-rating

K&A Statement Knowledge of system status criteria which requires the notification of plant personnel.

SSES Cross-Reference
Learning Objective(s) # 5 (EP012) _____ , _____ , _____ , _____

BANK QUESTION (attach question)

	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES NO

Attachment required is:
EP-PS-100 TAB 4

Review and Validation Comments
TRG - Clarified supplied doc to candidate

OPS – No comments

NRC – Added other unit conditions to original question to allow evaluation of other three classifications due to plant parameters

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 6 SRO only | Both | 3 LOD

10CFR55.41

X 10CFR55.43.4

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

An emergency condition exists on site involving both units. The Emergency Plan has been entered and the Shift Supervisor (SS) has assumed the role of Emergency Director. It is determined that normal station exposure limits will be exceeded to perform a search and rescue operation in the Reactor Building for a disabled worker.

Which one of the following meets the required approval(s) to allow an individual to receive an estimated 12,000 mrem to perform this evolution?

a. Only the SS acting as Emergency Director.

b. The Emergency Director in the EOF and the Radiation Protection Coordinator/Recovery Manager.

c. The SS acting as Emergency Director, Radiation Protection Coordinator /Recovery Manager and Dose Assessment Supervisor.

d. The SS acting as Emergency Director, the Emergency Director in the EOF and the Dose Assessment Supervisor.

Proposed Answer
c. correct – all three reqd above 4000 mrem

Reference(s) EP-PS-100-6 Tab 6
EP

Discuss Distracters
a. incorrect – this is for <4000 mrem

b. incorrect – also requires DASU

d. incorrect – also requires RM

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.3.1	K/A
	I-rating	3.0	I-rating

K&A Statement requirements: Knowledge of 10CFR20 and related facility radiation control

SSES Cross-Reference Learning Objective(s) # _____ , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.
YES X NO

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X7 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.3

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

During rounds an operator identifies a component labeling error in the plant on a Control Structure HVAC damper that could lead to misoperation of the damper. The operator hangs a Deficiency Identification Tag on the component label and generates an action request (AR).

Which one of the following individuals is responsible for assigning the priority for this AR per NDAP-QA-0502, "Work Order Process"?

a. Shift Supervision.

b. Functional Unit Manager.

c. NAS Quality Control Services.

d. Work Order Processing Foreman.

Proposed Answer
a. correct – per NDAP SS is responsible to review all AR written by ops to assign the priority

Reference(s) NDAP-QA-0502 4.5.1
AD044A

Discuss Distracters
b. incorrect – responsible for admin implementation and review of NDAP with work groups

c. incorrect – Work package review and tagging quality components until dispositioned

d. incorrect – representing Maint. In WCC clasifies, codes and assigns WOs

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.2.19	K/A ✓
	I-rating	3.1	I-rating

K&A Statement Knowledge of maintenance work order requirements

SSES Cross-Reference
✓ Learning Objective(s) # 4309 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X8 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.6

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

EO-100-113, "Level/Power Control", directs throttling and preventing injection when > 5% power to lower RPV level to –60" to –110".

Which one of the following identifies the expected power response and reason for this response when this action to lower RPV level is taken?

RPV level is lowered to.....

a. uncover the fuel to reduce natural circulation and limit the peak power level to below the fuel thermal limits.

b. uncover the feedwater spargers to reduce subcooling and limit the onset of severe power/flow instabilities.

c. isolate RWCU to prevent boron removal by the system and limit the peak power level to below the fuel thermal limits.

d. trip the operating Recirculation pumps to reduce forced circulation and limit the onset of severe power/flow instabilities.

Proposed Answer
b. correct – lowering of level below –24" will uncover FW spargers and reduce subcooling effect causing power to drop and reducing the probability of oscillations

Reference(s)
EO-000-113
EO-100-113
PP002

Discuss Distracters
a. incorrect – level is not throttled and prevented to below TAF per EO-00-113

c. incorrect – RWCU is isolated when SLC is injected to prevent boron removal

d. incorrect – tripping the pumps will reduce flow and may increase the probability of oscillations

RO		SRO	
	Tier #	1	Tier #
	Group #	1	Group #
	K/A	295031 EA2.02	K/A ✓
	I-rating	4.2	I-rating

K&A Statement Ability to determine and/or interpret the following as they apply to REACTOR LOW WATER LEVEL: Reactor power

SSES Cross-Reference
Learning Objective(s) # ✓ 2621a , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – added RPV to level statements

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X9 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.2

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

The following conditions exist in the Primary Containment following an inadvertent initiation and operation of HPCI while Unit 1 was at 100% RTP:

- Suppression Pool Average temperature indicates 91°F
- Suppression Pool temperature near the HPCI steam exhaust indicates 111°F
- HPCI is now shutdown
- RHR Suppression Pool Cooling is not in service

Which one of the following Technical Specification 3.6.2.1 actions should be entered with the indicated suppression pool conditions?

a. Action A only.

b. Action C only.

c. Action D only.

d. Action A and C only.

Proposed Answer

a. correct – TS is based on average water temperature, given conditions are >90 but below 110 requiring Action A

Reference(s)

TS 3.6.2.1
TM-OP-059-ST

Discuss Distracters

b. incorrect – for temp >105 during testing not inadvertent ops

c. incorrect – for temp >110 average not localized

d. incorrect – Action C would be entered if ave were >105 during testing and then exited when testing ended and Action A would be entered until <90

RO		SRO	
	Tier #	1	Tier #
	Group #	1	Group #
	K/A	295013 AA2.02	K/A ✓
	I-rating	3.5	I-rating

K&A Statement Ability to determine and/or interpret the following as they apply to HIGH SUPPRESSION POOL TEMPERATURE: localized heating/stratification

SSES Cross-Reference
Learning Objective(s) # ✓ 10360k , 289 , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

X YES NO

Attachment required is:
TS 3.6.2.1

Review and Validation Comments
No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X10 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

A loss of coolant accident and high drywell pressure scram has occurred on Unit 1. The following indications are noted for the Traversing In-core Probe system:

- Four of the five system Ball valves on 1C610 indicate closed
- Four of the five shear valve continuity indicators on 1C610 are extinguished
- All three purge on indicating lamps are extinguished on 1C610
- All five in shield lights are illuminated
- The TIP purge supply valve indication on 1C601 indicates closed

Which one of the following identifies the action expected of your shift given these indications for the TIP system in accordance with OP-AD-002, "Standards for Shift Operations"?

a. Immediately close the open Ball valve then notify Shift Supervisor.

b. Immediately fire the shear valve with the lit indicator then notify Shift Supervisor.

c. Notify Shift Supervisor then close the open Ball valve after receiving permission.

d. Notify Shift Supervisor then fire the shear valve with the lit indicator after receiving permission.

Proposed Answer

a. correct – one ball valve has failed to isolate and ensure isolations is an IA per OP-AD-002

Reference(s)

OP-AD-002
ON-100-101
AD044A

Discuss Distracters

b. incorrect – shear valve indicators are normally extinguished, one valve has lost continuity

c. incorrect – OP-AD-002 identifies ensuring isolations as an IA and does not require SS permission

d. incorrect – shear valve indicators are normally extinguished, one valve has lost continuity, however if firing were necessary permission would be required

RO		SRO	
	Tier #	2	Tier #
	Group #	3	Group #
	K/A	215001	K/A
		2.4.49	
	I-rating	4.0	I-rating

K&A Statement Ability to perform without reference to procedures those actions that require immediate operation of system components and controls

SSES Cross-Reference
Learning Objective(s) # 4051 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam

Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Added in shield indication to stem conditions

OPS – Changed all choices to Shift "Supervisor"

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only 11 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.4

Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the condition that would require SSES to restrict site access to only essential personnel per the Emergency Plan?

a. Any Alert declaration.

b. An alert declaration that requires accountability initiation.

c. Any Site Area Emergency declaration.

d. A Site Area Emergency declaration that requires Station Evacuation.

Proposed Answer
d. correct – site access restricted at SAE with evac directive

Reference(s) ED-PS-100

Discuss Distracters
a. incorrect – activation of facilities is at this level

b. incorrect – this happens on all Alerts

c. incorrect – only if Station evac if directed

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.1.13	K/A
	I-rating	2.9	I-rating

K&A Statement Knowledge of facility requirements for controlling vital/controlled access

SSES Cross-Reference
Learning Objective(s) # _____ , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG -

OPS – developed with ops support

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X12 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.2

X Memory/Fundamental Comprehension/Analysis

Proposed Question (~~Refer to Attachment 2)~~

Which one of the following identifies the effect of operating above the Suppression Pool Water Level LCO of 24 feet per the unit Technical Specifications bases?

The Primary Containment could fail as a result of.....

a. exceeding the dynamic loading on the pool walls due to the column of water.

b. excessive pool swell loads during the DBA LOCA due to excessive downcomer submergence.

c. excessive DW to pool differential pressure due to covering the suppression chamber to drywell vacuum breaker pipes.

d. exceeding the containment design pressure due to displaced nitrogen from the suppression pool air space being forced into the DW.

Proposed Answer
b. correct – per bases 3.6.2.2

Reference(s)
TS B 3.6.2.2
TM-OP-059-ST

Discuss Distracters
a. incorrect – SAG concern during PC flooding

c. incorrect – EOP concern with level >43'

d. incorrect – NP, bases of PSL curve and Spray Initiation limit in EOPs

RO		SRO	
	Tier #	1	Tier #
	Group #	2	Group #
	K/A	295029 2.2.25	K/A ✓
	I-rating	3.7	I-rating

K&A Statement Knowledge of bases in technical specifications for limiting conditions for operations and safety limits

SSES Cross-Reference
Learning Objective(s) # ✓ 10361 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

x NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - No comments

OPS – added pool air space to choice d vs. chamber

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X13 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.2

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is in MODE 1. I&C is performing the Quarterly Channel Calibration of ADS, to satisfy SR 3.3.5.1.3. I&C has just determined and notified you that the timer for Div I timed out at 121 seconds and Div II at 105 seconds.

Which of the following identifies the required action, if any, per TS 3.3.5.1?

a. No action is required

b. Within 1 hour declare ADS valves inoperable

c. Restore Div I channel to operable status within 8 days

d. Restore Div I channel to operable status within 96 hours

Proposed Answer
c. correct – per action F.2 with HPCI and RCIC OPERABLE

Reference(s)
TS 3.3.5.1
TM-OP-083E-ST

Discuss Distracters
a. incorrect – action is required

b. incorrect – this is action F.1

d. incorrect – this is action F.2 with HPCI or RCIC INOP

RO		SRO	
	Tier #	2	Tier #
	Group #	1	Group #
	K/A	218000	K/A
		2.1.33	
	I-rating	4.0	I-rating

K&A Statement Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications

SSES Cross-Reference
Learning Objective(s) # 2112 , _____ , _____ , _____

BANK QUESTION (attach question)

X SSES exam bank	Question #	SM001/08/ 1
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐ SSES exam bank	Question #	
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

X YES NO

Attachment required is:
T.S. 3.3.5.1

Review and Validation Comments
TRG - Discussed concern regarding format and possible typo of TS action, no changes to question

OPS – no comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | X14 SRO only | Both | 2 LOD

10CFR55.41
X 10CFR55.43.2

Memory/Fundamental | X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

The following conditions exist:
- Unit 1 is in Mode 5 preparing for a 1A 201 ESS Bus outage
- Unit 2 is at 100% RTP
- ESS transformer 101 trips on a fault condition (0A10306 trips)
- ESS Buses 1A201 and 2A201 transfer to alternate power

Which one of the following identifies the applicable T.S. action conditions, if any, to be entered at Unit 1 and Unit 2 under these conditions?

	Unit 1	Unit 2
a.	No LCO action required	No LCO action required
b.	Condition A of LCO 3.8.2	No LCO action required
c.	No LCO action required	Condition A of LCO 3.8.1
d.	Condition A of LCO 3.8.2	Condition A of LCO 3.8.1

Proposed Answer

c. correct – Both units have lost one off-site circuit unit 1 does not require entry into Mode 5 TS (2 busses) Unit 2 enters TS

Reference(s)

TS 3.8.1
SM017 M-9
TM-OP-003-ST

Discuss Distracters

a. incorrect – unit 2 must enter TS

b. incorrect – unit 2 must enter TS and unit 1 does not require entry into Mode 5 TS (2 busses)

d. incorrect – unit 1 does not require entry into Mode 5 TS (2 busses)

RO		SRO	
	Tier #	1	Tier #
	Group #	1	Group #
	K/A	295003 2.1.33	K/A
	I-rating	4.0	I-rating

K&A Statement Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications

SSES Cross-Reference
Learning Objective(s) # 5317 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

X YES NO

Attachment required is:
Unit 1 TS 3.8.1/3.8.2/3.8.7/3.8.8
Unit 2 TS 3.8.1/3.8.2/3.8.7/3.8.8

Review and Validation Comments
TRG – no comments

OPS – modified stem to place Unit 1 in mode 5

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X15 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.5

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During a failure to scram condition on Unit 1 the following conditions exist:

- APRMs indicate ~6% power
- RPV level is being maintained at -90 inches using HPCI
- RPV pressure is 965 psig with BPVs
- No boron has been injected

Using the attached ES-161-001, "RWCU Blowdown Mode Bypassing Interlocks", which one of the following identifies whythe procedure cannot be used for pressure control during execution of EO-100-113, "Level/Power Control" with these plant conditions?

a. ES is not directed in this flowchart.

b. a pump must be operating to utilize this mode.

c. a RWCU low RPV level isolation signal exists.

d. APRM power is above the capacity of the RWCU heat exchangers.

Proposed Answer
c. correct –ES-161-001 does not bypass L2 isolation

Reference(s)

ES-161-001
EO-100-113
PP006

Discuss Distracters
b. incorrect – ES-161-001 allow operation with no pump at lower flow limit of 175 gpm

d. incorrect – RWCU operated at rated power to accomplish its purpose

a. incorrect – can be used provided boron has not been injected and ES-161-001 conditions are met

RO		SRO	
	Tier #	1	Tier #
	Group #	1	Group #
	K/A	295009 AA2.03	K/A
	I-rating	2.9	I-rating

K&A Statement Ability to determine and/or interpret the following as they apply to LOW REACTOR WATER LEVEL: Reactor water cleanup blowdown rate

SSES Cross-Reference
Learning Objective(s) # 5425 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:
ES-161-001, "RWCU Blowdown Mode Bypassing Interlocks"

Review and Validation Comments
TRG -

OPS – modified stem conditions and choice d now moved to a

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X16 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.1

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

While operating at 100% RTP on Unit 1, EO-100-104, SECONDARY CONTAINMENT CONTROL has been entered due to flooding in the HPCI room to the MAX SAFE level. A leak in the fire suppression system pipe in the area has been identified and isolated but water level has not been restored below the MAX SAFE level.

Which one of the following Technical Specification actions should be entered?

a. T.S. 3.5.1, Action D for HPCI inoperability.

b. T.S. 3.5.3, Action A for HPCI and RCIC inoperability.

c. T.S. 3.5.1, Action E for HPCI and LPCI inoperability.

d. T.S. 3.0.3 for multiple ECCS equipment inoperability.

Proposed Answer

a. correct – HPCI area is separate from other areas and this level indicates that the Aux oil pump is submerged resulting in INOP however stm space is connected on this unit

Reference(s)

ON-169-002
EO-100-104
T.S. 3.5.1
AD045

Discuss Distracters

b. incorrect – RCIC and HPCI are separate areas

c. incorrect – LPCI is in separate area

d. incorrect – 3.0.3 would be directed from Action I if HPCI and more than one ADS INOP

RO		SRO	
	Tier #	1	Tier #
	Group #	2	Group #
	K/A	295036 EA2.01	K/A
	I-rating	3.2	I-rating

K&A Statement Ability to determine and interpret the following as they apply to SECONDARY CONTAINMENT HIGH SUMP/AREA WATER LEVEL: Operability of components in the area

SSES Cross-Reference
Learning Objective(s) # 1358 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
TS 3.5.1

Review and Validation Comments
TRG -

OPS – modified to be Unit 2 due to steam space connection

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only X17 SRO only Both 2 LOD

10CFR55.41

X 10CFR55.43.4

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

The Unit 1 R/B Stack Monitor Panel - Rad Meas. 1C216B (29-818') alarm horn has actuated and Green H light is illuminated.

Which one of the following identifies a source of airborne radioactivity that would result in this panel alarming?

a. Zone 3 Ventilation Exhaust.

b. Zone 2 Ventilation Exhaust.

c. Standby Gas Treatment Exhaust.

d. Unit 1 Turbine Building Ventilation Exhaust.

Proposed Answer
a. correct – Each RB has it's own stack

Reference(s) ON-070-001
AD045

Discuss Distracters
b. incorrect – would alarm U2 stack alarm

c. incorrect – would alarm SBGT stack alarm

d. incorrect – would alarm U1 TB stack

RO		SRO	
	Tier #	1	Tier #
	Group #	2	Group #
	K/A	295034 EA2.02	K/A ✓
	I-rating	4.2	I-rating

K&A Statement Ability to determine and interpret the following as they apply to SECONDARY CONTAINMENT VENTILATION HIGH RADIATION: Cause of high radiation levels

SSES Cross-Reference
Learning Objective(s) # ✓ 1358 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Identified choice B as Non plausible
Discussed indication in stem that MVP could be in operation lending plausibility to choice a

OPS – changed to address RB rad as source vs. RW

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only 18 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the Primary Containment High Range Radiation Monitor (RITS-15720A/B) inoperability condition that requires a special report be submitted to the NRC and the time requirement for that report?

	Monitors INOP	Required Report Time
a.	One for >7 days	14 day
b.	One for > 30 days	30 day
c.	Two for > 7 days	14 day
d.	Two for > 30 days	30 day

Proposed Answer
c. correct – TS 3.3.3.1 Action C/D Table 3.3.3.1-1/F/5.6.7

Reference(s)

TS 3.3.3.1/5.6.7
NDAP-QA-0720
AD044A
TM-OP-079X-ST

Discuss Distracters
a. incorrect – one allowed inop for 30 days before report reqd

b. incorrect – Action A but this would be a 14 day report time

d. incorrect – would Action C but this would be a 14 day report time

RO		SRO	
	Tier #	2	Tier #
	Group #	2	Group #
	K/A	272000	K/A
		2.4.30	
	I-rating	3.6	I-rating

K&A Statement Knowledge of which events related to system operations/status that should be reported to outside agencies

SSES Cross-Reference
Learning Objective(s) # ✓ 4398 , ✓ 4399 , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

X YES NO

Attachment required is:
TS 3.3.3.1

Review and Validation Comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 19 SRO only | Both | 2 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental | Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During removal of a Waste shipping cask from the site, an automobile accident at the site access on Route 11 causes a localized release of airborne contamination. No injuries were involved but the responding security guard received an intake that is approximately 7 times the occupational annual limit. The guard is on site being decontaminated and no other individuals were exposed.

Which one of the following identifies the most restrictive reportability time requirement?

a. 1 hour report

b. 4 hour report

c. 8 hour report

d. 24 hour report

Proposed Answer
a. correct – Attachment E, 5.b.

Reference(s) NDAP-QA-0720
AD044A

Discuss Distracters
b. incorrect – Att F 4. This could be possible if were released to public

c. incorrect – Att G 3. This would be if injured/contaminated and transported offsite

d. incorrect – Att H 2.b. this would be if exposed to 1 occupational annual limit

RO		SRO	
	Tier #	1	Tier #
	Group #	1	Group #
	K/A	295017 2.4.30	K/A
	I-rating	3.6	I-rating

K&A Statement Knowledge of which events related to (high off-site release rates) system operations/status that should be reported to outside agencies

SSES Cross-Reference
Learning Objective(s) # 4398 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
NDAP-QA-0720

Review and Validation Comments
TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 20 SRO only | Both | 2 LOD

10CFR55.41

X 10CFR55.43.4

Memory/Fundamental | Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following shift positions is responsible for directly supervising and directing Radwaste operations per OP-AD-002, "Standards for Shift Operations"?

a. Shift Supervisor

b. Radwaste Supervisor

c. Unit 1 Unit Supervisor

d. Assistant Unit Supervisor

Proposed Answer
d. correct – per OP-AD-002 step 5.9.1.f/g

Reference(s)

OP-AD-002
NDAP-QA-0300
AD044A

Discuss Distracters
a. incorrect – has control room command function

c. incorrect – responsible for control room activities for respective unit and common systems

c. incorrect – this individual got direction from AUS and no longer exists

RO		SRO	
	Tier #	3	Tier #
	Group #		Group #
	K/A	2.3.3	K/A
	I-rating	2.9	I-rating

K&A Statement Knowledge of SRO responsibilities for auxiliary systems that are outside the control room (eg. Waste disposal and handling systems)

SSES Cross-Reference
Learning Objective(s) # 4071 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 21 SRO only | Both | 2 LOD

10CFR55.41

X 10CFR55.43.2

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the required Drywell area temperature instruments needed to determine that Drywell Air Temperature is below the LCO value per Unit Technical Specifications?

a. All four Division 1 temperature instruments can be averaged with the four Division 2 instruments inoperable without using substitute values.

b. At least six of the eight temperature instruments from either Division can be averaged with the remaining two instruments inoperable using substitute values.

c. The two Accident Monitoring temperature instruments can be averaged with all eight non-Accident Monitoring instruments inoperable without using substitute values.

d. At least two of the four Division 1 and two of the four Division 2 temperature instruments can be averaged with the remaining instruments inoperable using substitute values.

Proposed Answer
b. correct – TS bases SR 3.6.1.5.1

Reference(s)
TS 3.6.1.5 B
TM-OP-059Z-ST

Discuss Distracters
a. incorrect – must have at least 6 of 8

c. incorrect – 2 of the 8 are the two Accident monitor instruments per TS 3.3.3.1 PAM

d. incorrect – this total would be below the 6 required

RO		SRO	
	Tier #	1	Tier #
	Group #	2	Group #
	K/A	295012 AA2.01	K/A ✓
	I-rating	3.9	I-rating

K&A Statement Ability to determine and interpret the following as they apply to HIGH DRYWELL TEMPERATURE: Drywell temperature

SSES Cross-Reference
Learning Objective(s) # ✓ 10511 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

X YES NO

Attachment required is:
TS 3.6.1.5 and Bases

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 22 SRO only | Both | 3 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

A total loss of Instrument Air system pressure has occurred on Unit 1 and cannot be restored. The EOPs have been entered and Rapid Depressurization unsuccessfully performed with SRVs requiring alternate depressurization methods to be utilized.

Which one of the following identifies the available systems that should be directed to rapidly depressurize the RPV per EO-100-112, "Rapid Depressurization" with this loss of IA?

a. RCIC and MSL drains.

b. SJAE and MSL drains.

c. RFPT and Available BPV's.

d. RCIC and Available BPV's.

Proposed Answer
a. correct – IA does not prevent use of RCIC or MSL drains

Reference(s)
EO-100-112
EO-000-112
PP002

Discuss Distracters
b. incorrect – OUTBD MSIVs isolate SJAE

c. incorrect – OUTBD MSIVs isolate RFPT and BPV header

d. incorrect – OUTBD MSIVs isolate BPV header

RO		SRO	
	Tier #	1	Tier #
	Group #	2	Group #
	K/A	295019 2.4.6	K/A
	I-rating	4.0	I-rating

K&A Statement Knowledge of symptom based EOP mitigation strategies

SSES Cross-Reference Learning Objective(s) # 2628 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 23 SRO only | Both | 3 LOD

10CFR55.41

X 10CFR55.43.5

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

An explosion in the Off-gas system piping has resulted in a release in the area and a loss of vacuum scram condition. The following conditions exist on Unit 1:

- RPV level is –80 inches and stable
- RPV pressure 1000 psig and stable using SRVs
- Reactor power is 25% RTP and stable
- SLC is injecting
- MSIVs are closed
- No process radiation monitors have alarmed during the event
- Offgas piping is isolated and no longer releasing to atmosphere

Which one of the following identifies the ability to assign ES-184-002, "Reopening MSIVs Bypassing Isolations" to reopen MSIVs and the status of the condenser used to make that decision?

	ES Procedure	Main Condenser
a.	Should be directed	Available
b.	Should be directed	Not available
c.	Should not be directed	Not available
d.	Should not be directed	Available

Proposed Answer
c correct – with offgas isolated no method exists to establish vacuum

Reference(s)
EO-100-113 LQ/P-5
EO-000-113
PP002

Discuss Distracters
a. incorrect – not directed if condenser not available and incorrect assessment

b. incorrect – not directed if condenser not available

d. incorrect – incorrect assessment

RO		SRO	
	Tier #	2	Tier #
	Group #	2	Group #
	K/A	271000 2.4.6	K/A ✓
	I-rating	4.0	I-rating

K&A Statement Knowledge of the symptom based EOP mitigation strategies

SSES Cross-Reference
Learning Objective(s) # ✓ 2680 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

X YES NO

Attachment required is:
EO-100-113 flowchart

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only | 24 SRO only | Both | 2 LOD

10CFR55.41

X 10CFR55.43.4

Memory/Fundamental | Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

With both units at 100% RTP on the back shift it is determined that a jacket water filling operation on the B Emergency Diesel Generator was performed using a contaminated hose. Samples indicate that the jacket water system has been contaminated.

Which one of the following identifies the notification requirement(s) for this condition per OP-AD-002, 'Standards for Shift Operations"?

a. Initiate an AR only.

b. Initiate an AR and complete SSES Emergent Issue Response Checklist only.

c. Complete SSES Emergent Issue Response Checklist and make a 1 hour ENS notification only.

d. Initiate an AR, complete SSES Emergent Issue Response Checklist and make a 1 hour ENS notification.

Proposed Answer
b. correct – step 7.5.2.c.(3)

Reference(s) OP-AD-002
AD044A

Discuss Distracters
a. incorrect – also requires immediate notification of duty manager via checklist

c. incorrect – no reportability required

d. incorrect – no reportability required

RO		SRO	
	Tier #	2	Tier #
	Group #	1	Group #
	K/A	264000 2.1.14	K/A
	I-rating	3.3	I-rating

K&A Statement Knowledge of system status criteria which require the notification of plant personnel

SSES Cross-Reference
Learning Objective(s) # 4037 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – changed CR to AR in choices

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

RO only 25 SRO only Both 3 LOD

10CFR55.41

X 10CFR55.43.2

Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Unit 1 is operating at 100% RTP, when it is reported that the fast acting solenoids on the Main Turbine Bypass valves will not function as designed.

Which one of the following identifies the bases for the required Technical Specification action(s) in this condition?

a. MCPR safety limit may be exceeded during a turbine generator load reject transient unless the MCPR penalty is applied.

b. MCPR safety limit may be exceeded during a feedwater controller failure transient after applying the MCPR penalty.

c. RPV pressure safety limit may be exceeded during a turbine generator load reject transient unless the MCPR penalty is applied.

d. RPV pressure safety limit may be exceeded during a feedwater controller failure transient after applying the MCPR penalty.

Proposed Answer
a. correct – penalty reduces max power to prevent exceeding SL on transient

Reference(s)
TS 3.7.6 B
TS 3.2.2
TM-OP-093E-ST

Discuss Distracters
b. incorrect – penalty is action to allow continued ops

c. incorrect – this SL is associated with TS 3.4.11

d. incorrect – this SL is associated with TS 3.4.11

RO		SRO	
	Tier #	2	Tier #
	Group #	1	Group #
	K/A	241000 2.2.25	K/A ✓
	I-rating	3.7	I-rating

K&A Statement Knowledge of bases in Technical specifications for limiting conditions for operation and safety limits

SSES Cross-Reference
Learning Objective(s) # 10337 ✓ , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X1 RO only SRO only Both 2 LOD

X 10CFR55.41.5

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Which one of the following identifies the required RPV pressure and core flow conditions identified in Technical Specification Safety Limits to allow operation above 25% RTP?

	RPV Pressure	Core Flow
a.	≥ 785 psig	< 10 mlbm/hr
b.	≥ 785 psig	≥ 10 mlbm/hr
c.	< 785 psig	< 10 mlbm/hr
d.	< 785 psig	≥ 10 mlbm/hr

Proposed Answer
b. High flow **and** pressure required

Reference(s) TS 2.1.1.2
TM-OP-062-ST

Discuss Distracters
a. low flow requires ≤ 25% RTP

c. low pressure requires ≤ 25% RTP

d. low flow **or** low pressure requires ≤ 25% RTP

RO		SRO	
3	Tier #		Tier #
	Group #		Group #
✓ 2.2.22	K/A		K/A
3.4	I-rating		I-rating

K&A Statement Knowledge of limiting conditions for operations and safety limits.

SSES Cross-Reference
Learning Objective(s) # ✓ 2616 , _____ , _____ , _____

BANK QUESTION (attach question)

☐ SSES exam bank	Question #	
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐ SSES exam bank	Question #	
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X2 RO only SRO only Both 3 LOD

X 10CFR55.41.6

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is operating at 100% RTP. The following Standby Liquid Control System conditions exist following SLC tank filling:

- SLC tank temperature is 70°F
- AR 107 B03, STANDBY LIQUID TANK HI/LO TEMP is in alarm
- SLC tank level is 5100 gallons
- AR 107 C03, STANDBY LIQUID TANK HI/LO LEVEL is in alarm
- Chemistry sample results after filling indicate that the concentration of the sodium pentaborate solution in the SLC tank is 15.4% by weight

Which one of the following identifies the status of the SLC system according to Technical Specifications?

a. The LCO is satisfied.

b. Tank temperature does not meet the LCO conditions.

c. Tank available volume does not meet the LCO conditions.

d. Sodium pentaborate concentration does not meet the LCO conditions.

Proposed Answer

b. correct - temp is below the value on figure 3.1.7-2 for the given concentration

Reference(s) TS 3.1.7
TM-OP-053-ST

Discuss Distracters

a. incorrect – would be correct if temp was in spec on figure 3.1.7-2

c. incorrect – volume is acceptable per 3.1.7-1 for the given concentration

d. incorrect – conc. is acceptable for the given volume

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
211000	K/A		K/A
2.1.33			
3.4	I-rating		I-rating

K&A Statement Ability to recognize indications for system (SLC) operating parameters which are entry-level conditions for technical specifications.

SSES Cross-Reference
Learning Objective(s) # 10099 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017C3/14/1
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
Technical Specification section 3.1.7

Review and Validation Comments
TRG - Modified stem conditions to identify alarms and conditions that resulted in this configuration (i.e. tank filling) also changed parameters to indicate that tank temperature is the condition that is outside T.S. LCO values.

OPS – changed shift management to supervision

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X3 RO only SRO only Both 2 LOD

X 10CFR55.41.7

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

A Unit 1 startup is in progress. The following conditions exist:

- RPV Temperature (coolant) is 235 °F
- RPV Pressure is 5 psig
- Reactor Power is on IRM Range 8
- Vacuum is being maintained using the mechanical vacuum pump

A rod drop accident occurs causing severe fuel damage and rising reactor coolant activity. Which one of the following identifies the automatic system trip/isolations that will occur as a direct result of this event?

a. Off-gas Isolation and MSIV closure.

b. Off-gas Isolation and Turbine Building HVAC isolation.

c. Reactor scram, MSIV closure and Mechanical Vacuum Pump trip.

d. Reactor scram, Mechanical Vacuum Pump trip and Turbine Building HVAC isolation.

Proposed Answer
c. correct - because MSL High Radiation is a direct input to system logic

Reference(s)
TM-OP-079E-ST
P&ID M-107
TM-OP-58-ST

Discuss Distracters
a. incorrect - Off Gas does not isolate on high radiation

b. incorrect - TB HVAC has no high Radiation Trip circuit

d. incorrect - TB HVAC has no high Radiation Trip circuit

RO		SRO	
1	Tier #		Tier #
2	Group #		Group #
✓ 295017	K/A		K/A
AA1.10			
3.6	I-rating		I-rating

K&A Statement Ability to manually operate and/or monitor the following as they apply to HIGH OFF-SITE RELEASE RATE: RPS

SSES Cross-Reference
Learning Objective(s) # ✓ 1200a , _____ , _____ , _____

BANK QUESTION (attach question)
X SSES exam bank — Question # AD045/1357/ 21
☐ INPO exam bank — Question #
☐ Other facility exam bank — Facility
☐ Previous NRC exam — Facility and date of exam
☐ Previous audit exam — Facility and date of exam

MODIFIED BANK QUESTION (attach question)
☐ SSES exam bank — Question #
☐ INPO exam bank — Question #
☐ Other facility exam bank — Facility
☐ Previous NRC exam — Facility and date of exam
☐ Previous audit exam — Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified choices to use each response twice only
Modified stem for focus

OPS – modified stem conditions to state maintaining vacuum vs. established
Changed stem wording to fuel damage vs. fuel element failure

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X4 RO only | SRO only | Both | 2 LOD

10CFR55.41

X 10CFR55.43.2

X Memory/Fundamental | Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

After the appropriate lineups are verified the PCOP starts the "A" RHR pump in Shutdown Cooling Mode of operation but does not immediately raise flow above 4000 gpm per OP-249-002, "RHR Shutdown Cooling Operation". Which one of the following identifies the concern as a result of this action?

a. Heat exchanger tube vibration could occur.

b. Heat exchanger inlet valve cavitation could occur.

c. Pump impeller and casing overheating could occur.

d. Loss of reactor vessel water inventory could occur.

Proposed Answer
d. correct - min flow opens on low flow after 30 sec TD

Reference(s)
OP-149-002 section 3.1.8
TM-OP-049-ST

Discuss Distracters
b. incorrect – this is the limit on HX RHRSW flow

a. incorrect – this is the limit on 10K gpm RHR flow thru HX

c. incorrect - F007 is closed but not disabled in SDC

RO		SRO	
1	Tier #		Tier #
3	Group #		Group #
295021	K/A		K/A
2.1.32			
3.4	I-rating		I-rating

K&A Statement Ability to explain and apply system (Loss of Shutdown cooling) limits and precautions

SSES Cross-Reference
Learning Objective(s) # 197b , _____ , _____ , _____

BANK QUESTION (attach question)

X SSES exam bank	Question #	SY017C01/C17
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐ SSES exam bank	Question #	
☐ INPO exam bank	Question #	
☐ Other facility exam bank	Facility	
☐ Previous NRC exam	Facility and date of exam	
☐ Previous audit exam	Facility and date of exam	

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - Modified stem wording to eliminate window dressing
Corrected procedure number to reflect Unit 2

OPS – changed to RO only question OLD SRO 2

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X5 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.7

10CFR55.43

X Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

During control rod exercising on Unit 1 three different rod select lights illuminate when rod 30-35 is selected at the rod select matrix.

Which one of the following identifies the Reactor Manual Control System status lamp and control rod block status under this condition?

	Illuminated Lamp	Rod Block Status
a.	Data Fault	Block applied
b.	Data Fault	No block applied
c.	Rod Select Block	Block applied
d.	Rod Select Block	No block applied

Proposed Answer
a. correct – transponder failure, test or scan mode failures light this 1C651 indication and cause a block

Reference(s) TM-OP-056A-ST

Discuss Distracters
b. incorrect - block will occur

c. incorrect – this would light with matrix key in OFF

d. incorrect – this would light with matrix key in OFF and a block will occur

RO		SRO
2	Tier #	Tier #
1	Group #	Group #
✓ 201002 A4.05	K/A	K/A
3.1	I-rating	I-rating

K&A Statement Ability to manually operate and/or monitor in the control room: Rod select matrix

SSES Cross-Reference Learning Objective(s) # ✓2329n , _____ , _____ , _____

BANK QUESTION (attach question)

X	SSES exam bank	Question # SY017K07/C 26
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #
☐	INPO exam bank	Question #
☐	Other facility exam bank	Facility
☐	Previous NRC exam	Facility and date of exam
☐	Previous audit exam	Facility and date of exam

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Corrected choice b to unit terminology

OPS -- Changed to two column format
Changed stem to plant conditions that have occurred here at SSES

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X6 RO only SRO only Both 3 LOD

X 10CFR55.41.6

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

During a reactor startup on Unit 2, an IRM INOP and a resultant IRM B/D/F/H UPSCALE/INOP alarm, rod block and half scram occurs.

I&C determines that IRM drawer "B" has a module unplugged and places the drawer mode switch from OPERATE to the STBY position.

Which one of the following identifies the response of the Rod Block and drawer INOP trip circuit if the INOP INHIBIT pushbutton inside IRM drawer "B" is depressed and held?

	Rod Block	INOP Trip
a.	Clears	Clears
b.	Remains in	Clears
c.	Clears	Remains in
d.	Remains in	Remains in

Proposed Answer

d. correct – PB will only clear block if due to drawer mode switch not in OPER

Reference(s) TM-OP-078B-ST

Discuss Distracters

a. incorrect – this would occur if INOP were due to drawer mode switch only

b. incorrect – INOP would remain in due to module unplugged INOP trip

c. incorrect - rod block would remain in due to module unplugged INOP trip

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
215003 A4.04	K/A		K/A
3.1	I-rating		I-rating

K&A Statement Ability to manually operate and/or monitor in the control room: IRM backpanel switches, meters and indicating lights

SSES Cross-Reference
Learning Objective(s) # 10231b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017102/C 2
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – no comments

OPS – Reworded stem for clarification of conditions
Changed on drawer to inside drawer for PB location in stem

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X7 RO only SRO only Both 3 LOD

X 10CFR55.41.6

10CFR55.43

Memory/Fundamental X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Power accession is in progress with Unit 1 at 10% RTP in Mode 1, when an input LPRM to APRM 'A' fails downscale. The APRM downscale alarm comes in. APRM currently has seven input LPRMs bypassed.

Which one of the following identifies the impact of these conditions on continued rod withdrawal and required actions per plant procedures?

a. A rod block exists. The failed LPRM should be bypassed to clear the rod block.

b. A rod block exists. The failed LPRM and 'A' APRM should be bypassed to clear the rod block.

c. No rod block exists but the failed LPRM should be bypassed to clear the alarm.

d. No rod block exists but the failed LPRM and 'A' APRM should be bypassed to clear the alarm.

Proposed Answer

b. correct – a block exists due to the downscale and an INOP trip will exist once the LPRM is bypassed requiring the APRM be bypassed to allow rod withdrawal

Reference(s)

AR-103-001
TM-OP-078D-ST

Discuss Distracters

a. incorrect – an APRM INOP rod withdrawal block will occur when the LPRM is bypassed

c. incorrect – APRM downscale block now exists

d. incorrect – APRM downscale block now exists

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
215005 A2.03	K/A		K/A
3.6	I-rating		I-rating

K&A Statement Ability to (a) predict the impacts of the following on the AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Inoperative trip (all causes)

SSES Cross-Reference
Learning Objective(s) # 2358j , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # SY017104/C 6
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X8 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.12

10CFR55.43

Memory/Fundamental | X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Given the following conditions:

- Unit 1 is making preparations for performing a procedure on a system in a radiation area with a 150 mr/hour dose rate.
- The appropriate radiological precautions have been taken.
- An HP briefing has been completed.

Using the As Low As Reasonably Achievable (ALARA) guidelines, which of the following methods provides the lowest total dose for completing this procedure?

a. One individual performing the procedure in the area for 35 minutes.

b. Two individuals performing the procedure in the area for 20 minutes.

c. One individual installing shielding in the area for 10 minutes then both performing the procedure for 35 minutes with a reduced dose rate of 7.5 mr/hr.

d. Two individuals installing shielding in the area for 5 minutes then both performing the procedure for 20 minutes with a reduced dose rate of 7.5 mr/hr.

Proposed Answer
d. correct – 30.0 mr total exposure

Reference(s)
NDAP-QA-0625
AD044B

Discuss Distracters
a. incorrect – 87.500 mr total exposure

b. incorrect - 100.000 mr total exposure

c. incorrect – 33.75 mr total exposure

RO		SRO	
3	Tier #		Tier #
	Group #		Group #
✓ 2.3.2	K/A		K/A
2.5	I-rating		I-rating

K&A Statement Knowledge of facility ALARA program

SSES Cross-Reference
Learning Objective(s) # ✓ 4798e , _____ , _____ , _____

BANK QUESTION (attach question)
X SSES exam bank — Question # AD044C/X.A.2.G/ 1
☐ INPO exam bank — Question # _____
☐ Other facility exam bank — Facility _____
☐ Previous NRC exam — Facility and date of exam _____
☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
☐ SSES exam bank — Question # _____
☐ INPO exam bank — Question # _____
☐ Other facility exam bank — Facility _____
☐ Previous NRC exam — Facility and date of exam _____
☐ Previous audit exam — Facility and date of exam _____

☐ **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
Corrected calculation and modified stem for focus

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X9 RO only SRO only Both 2 LOD

X 10CFR55.41.8

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

During operation of Unit 2 with ESS Bus 2A202 out of service a loss of ESS bus 2A203 occurs. It is desired to align RHR to Suppression pool sprays for temperature control.

Which one of the following identifies the available Unit 2 RHR Pump and Loop combinations to support this mode of operation from the control room?

	Available Pump(s)	Available Loop(s)
a.	2A only	2A and 2B
b.	2A and 2D	2A only
c.	2A and 2D	2A and 2B
d.	2D only	2A only

Proposed Answer

b. correct – Pumps have power and loop A valves are powered from ESS bus 2A

Reference(s) TM-OP-049-ST

Discuss Distracters

a. incorrect – D pump is also available and B loop valves are not

c. incorrect – B loop valves are not available

d. incorrect – A pump is also available

RO		SRO	
2	Tier #		Tier #
2	Group #		Group #
✓ 230000 K2.02	K/A		K/A
2.8	I-rating		I-rating

K&A Statement Knowledge of the electrical power supplies to the following: RHR pumps

SSES Cross-Reference Learning Objective(s) # ✓ 10499a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG - Changed question from 233000 K2.02 to 230000 K2.02 and modified question.

OPS – made conditions more realistic to plant conditions (ie. Two ESS buses out of service simultaneously)

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X10 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.3

10CFR55.43

Memory/Fundamental | X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Actual RPV level is rising on Unit 2. Which one of the following describes the operation of the RPV level instrumentation and Feedwater Level Control system to this level transient?

	Level instrument ΔP	RFP Speed Demand
a.	Rises	Rises
b.	Rises	Lowers
c.	Lowers	Rises
d.	Lowers	Lowers

Proposed Answer

d. correct – rising lvl reduces diff pressure between ref. And var. legs this in turn calls for less flow to restore lvl .

Reference(s)

TM-OP-045-ST
TM-OP-080-ST

Discuss Distracters

a. incorrect – this would occur if actual level lowered

b. incorrect – this would occur if actual level lowered and controller failed

c. incorrect – this would occur if actual level raised and controller failed

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓ 259002	K/A		K/A
K5.03			
3.1	I-rating		I-rating

K&A Statement Knowledge of the operational implications of the following concepts as they apply to REACTOR WATER LEVEL CONTROL SYSTEM: Water level measurement

SSES Cross-Reference
Learning Objective(s) # ✓ 10292d , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination ~~will be~~ required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG - No Comments

OPS – modified stem to clarify conditions

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X11 RO only | SRO only | Both | 3 LOD

X 10CFR55.41.4
10CFR55.43

Memory/Fundamental | X Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 1 is operating at 100% RTP with TBCCW pump 1A running and 1B in standby when a loss of power occurred to the running pump MCC. The following alarms come in:

- AR-123 G01, TBCCW PUMP A MOTOR TRIP
- AR-123 G03, TBCCW PUMPS DISCHARGE HEADER LO PRESSURE

Which one of the following identifies the expected response of the system pumps to these conditions if the MCC power is subsequently restored 25 seconds later?

	A Pump would	B Pump would
a.	restart	auto start
b.	remain off	auto start
c.	restart	remain in standby
d.	remain off	remain in standby

Proposed Answer

b. correct – Low pressure will start STBY pump, loss of power for >15 seconds will prevent pump restart on loss of power

Reference(s) TM-OP-015-ST

Discuss Distracters

a. incorrect – this would occur if power were restored within 15 seconds to A pump

c. incorrect – this would occur if pressure did not drop to 65 psig and power were restored within 15 seconds to A pump

d. incorrect – this would occur if pressure did not drop to 65 psig and power was not restored within 15 seconds to A pump

RO		SRO	
2	Tier #		Tier #
2	Group #		Group #
400000 K4.01	K/A		K/A
3.4	I-rating		I-rating

K&A Statement Knowledge of CCWS design feature(s) and or interlocks which provide for the following: Automatic start of standby pump

SSES Cross-Reference Learning Objective(s) # 1733a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X NEW QUESTION

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG – Concern that alarm G03 would clear when pump started

OPS – moved restoration of power to bottom of condition in stem identifying response is after these alarms come in

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X12 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental | X Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

A loss of coolant accident and high drywell pressure scram has occurred on Unit 1.

With the Traversing In-core Probe system in a normal standby line up, which one of the following identifies the status of TIP system during execution of ON-159-002, "Containment Isolation" to verify system response?

	Ball Valve Positions	Purge Isolation Valve Position on 1C601
a.	Closed	Open
b.	Closed	Closed
c.	Open	Open
d.	Open	Closed

Proposed Answer
b. correct – ball and purge valve auto isolate,

Reference(s)

ON-159-001
AD045
TM-OP-078F-ST

Discuss Distracters
a. incorrect – normal line up

c. incorrect – failure to auto isolate during traces

d. incorrect – following isolation with ball valve failure

RO		SRO	
2	Tier #		Tier #
3	Group #		Group #
✓ 215001 A3.03	K/A		K/A
2.5	I-rating		I-rating

K&A Statement Ability to monitor automatic operations of the TRAVERSING IN-CORE PROBE including: Valve operation

SSES Cross-Reference
Learning Objective(s) # ✓ 1357 , ✓ 2316a , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

Modified stem for focus

Changed to column format.

Removed Shear valve indication to remove confusion

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X13 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

EO-100-112, "Rapid Depressurization" step RD-9 asks "ARE ALL ADS VALVES OPEN?"

Which one of the following 1C601 indications are used to determine valve status per this step if the RPV is fully depressurized?

a. SRV OPEN annunciators only.

b. ADS solenoid lights and RPV pressure.

c. Acoustic Monitor red lights and RPV pressure.

d. SRV OPEN annunciators and Acoustic Monitor red lights.

Proposed Answer
b. correct – with RPV depressurized acoustics will not illuminate bases for step RD-9

Reference(s)
EO-000-112
EO-100-112
PP002

Discuss Distracters
a. incorrect – alarms are from acoustic mon.

c. incorrect – acoustic mon. will not indicate at low RPV pressures

d. incorrect –acoustic mon. will not indicate at low RPV pressures

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓ 218000	K/A		K/A
A1.04			
4.1	I-rating		I-rating

K&A Statement Ability to predict and/or monitor changes in parameters associated with operating the AUTOMATIC DEPRESSURIZATION SYSTEM controls including: Reactor pressure

SSES Cross-Reference
Learning Objective(s) # ✓2621c , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
X YES NO

Attachment required is:
EO-100-112 flowchart

Review and Validation Comments
TRG – Maked RO oriented vs. interpreting EOP flow charts

OPS -

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X14 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.10

10CFR55.43

X Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following describes the use of the SSES EOPs when the control room has been evacuated and control established at the Remote Shutdown Panel per ON-100-009, "Control Room Evacuation"?

a. EOP procedures take precedence and provide parameter control bands and strategies, ON-100-009 is entered and executed concurrently.

b. EOP procedures take precedence and provide parameter control bands and strategies, ON-100-009 is exited when the EOP entery condition occurs.

c. Control Room Evacuation procedures take precedence and provide adjusted parameter control bands and strategies, the EOPs are not entered from RSP.

d. Control Room Evacuation procedures take precedence and provide adjusted parameter control bands and strategies, the EOPs are entered but modified per ON-100-009.

Proposed Answer
a. correct – per discussion section

Reference(s) ON-100-109
AD045

Discuss Distracters
b. incorrect – ON is not exited

c. incorrect – not EOP-ON strategy

d. incorrect – not EOP-ON strategy

RO		SRO	
1	Tier #		Tier #
2	Group #		Group #
✓ 295016	K/A		K/A
2.4.6			
3.1	I-rating		I-rating

K&A Statement Knowledge symptom based EOP mitigation strategies.

SSES Cross-Reference
Learning Objective(s) # ✓ 1364 , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
Corrected typos in stem and choices

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

X15 RO only SRO only Both 2 LOD

X 10CFR55.41.11

10CFR55.43

X Memory/Fundamental Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Work is underway in the spent fuel pool to cut old detector tubes and place them into a storage cask for removal. After cutting and moving a detector tube the following alarms are received in the control room:

- AR-101 D05, REFUELING FLOOR AREA HI RADIATION
- AR-101 E05, SPENT FUEL POOL AREA HI RADIATION
- PICSY format RADRX indicates upscale on the Refuel Floor Area and Spent Fuel Pool monitors

Which one of the following describes the ability to determine area radiation levels on the Refuel Floor with this upscale condition?

a. SBGT Exhaust Radiation monitor PICSY display only.

b. Local reading of the Refueling Floor Area Radiation monitor only.

c. Refueling Floor Area High Range Accident monitor PICSY display and HP surveys.

d. Local reading of the Refueling Floor Area High Range Accident Radiation monitor only.

Proposed Answer
c. correct – accident monitor RE-13749 indicates 100 to 1 million mR/hr and is on HiRAD PICSY display

Reference(s)
TM-OP-079B-ST
AR-101-001

Discuss Distracters
a. incorrect – SBGT is not only method since hi range monitors are available and this would be release rad

b. incorrect – local would have same range and is rad hazard

d. incorrect – local would is rad hazard and PICSY is available

RO		SRO
1	Tier #	Tier #
2	Group #	Group #
✓ 295023	K/A	K/A
AA2.01		
3.6	I-rating	I-rating

K&A Statement Ability to determine and interpret the following as they apply to REFUELING ACCIDENTS: area radiation levels

SSES Cross-Reference
Learning Objective(s) # ✓ 1181f , _____ , _____ , _____

BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)
- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

X **NEW QUESTION**

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – No Comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

16 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.8

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies where the Core Spray System injects water into the reactor pressure vessel?

The Core Spray System injects water into the RPV through.....

a. spargers located in the downcomer annulus.

b. spargers located inside the shroud above the core.

c. connections on the "A" and "B" feedwater inlet piping.

d. connections on the "A" and "B" Recirculation system discharge piping.

Proposed Answer
b. correct – two spargers inside shroud for CS to flood RPV during LOCA

Reference(s) TM-OP-051-ST

Discuss Distracters
a. incorrect – This is FW

c. incorrect – This is HPCI

d. incorrect – This is LPCI

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓ 209001 K1.14	K/A		K/A
3.7	I-rating		I-rating

K&A Statement Knowledge of the physical connections and/or cause-effect relationships between LOW PRESSURE CORE SPRAY and the following: Reactor vessel

SSES Cross-Reference
Learning Objective(s) # ✓ 2085I , , ,

BANK QUESTION (attach question)

X	SSES exam bank	Question #	SY017J1/2258/ 3
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #	
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – removed "box" sparger from choice a

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

17 RO only | SRO only | Both | 3 LOD

X | 10CFR55.41.7
10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question (Refer to Attachment 2)

Unit 2 RPV level has dropped to –130 inches due to a Loss of Coolant accident.

Which one of the following identifies the impact of arming and depressing both of the Unit 1 A and B Loop Core Spray Manual Initiation pushbuttons on 1C601?

	Unit 1 Pumps	Unit 2 Pumps
a.	All start	All pumps trip
b.	All start	Only A and C pumps trip
c.	Only A and C start	Only A and C pumps trip
d.	Only A and C start	All remain running

Proposed Answer
c. correct – Both Unit LOCA logic

Reference(s) TM-OP-051-ST

Discuss Distracters
a. incorrect – this would defeat ECCS fucnction design on LOCA unit

b. incorrect – again this condition would cause EDG overload

d. incorrect – condition that would overload EDGs

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
209001	K/A		K/A
A4.05			
3.8	I-rating		I-rating

K&A Statement Ability to manually operate and/or monitor in the control room: Manual initiation controls

SSES Cross-Reference
Learning Objective(s) # 2088a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG – Concern about Unit 2 RPV pressure status

OPS – Changed conditions on Unit 2 to LOCA with pumps running
Modified choice a and d to plausible conditions

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

18 RO only | SRO only | Both 2 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Unit 1 is in Mode 5 and has been shutdown for 20 hours when a loss of RPS bus 'A' occurs. Which one of the following identifies the off-normal procedure entry symptom that would be of concern during this loss?

a. ON-149-001, LOSS OF SHUTDOWN COOLING.

b. ON-155-007, LOSS OF CRD SYSTEM FLOW.

c. ON-164-002, LOSS OF REACTOR RECIRCULATION FLOW.

d. ON-184-001, MAIN STEAM LINE ISOLATION AND QUICK RECOVERY.

Proposed Answer
a. correct – SDC isolation valve closes requiring actions for loss of SDC

Reference(s)
ON-158-001
ON-149-001
AD045

Discuss Distracters
b. incorrect – this ON would not be entered due to RPS loss

c. incorrect – this would be a concern at power with loss of cooling to Recirc pumps

d. incorrect – this would be possible if both RPS A and B were lost

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓ 212000	K/A		K/A
2.4.4			
4.0	I-rating		I-rating

K&A Statement Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures

SSES Cross-Reference
Learning Objective(s) # ✓ 1354 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- X SSES exam bank — Question # AD045/C 145
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

19 RO only | SRO only | Both | 3 LOD

X 10CFR55.41.8

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following is the basis for the size of the 42 gallon accumulator on the six ADS function SRVs?

This accumulator provides sufficient reserve nitrogen for.....

a. one ADS actuation with normal DW pressure and a reactor pressure of 1000 psig.

b. two ADS actuations with normal DW pressure and a reactor pressure of 0 psig.

c. one ADS actuation with maximum DW pressure of 45 psig and a reactor pressure of 0 psig.

d. two ADS actuations with maximum DW pressure of 45 psig and a reactor pressure of 1000 psig.

Proposed Answer

c. correct – one cycle at limiting DP for nitrogen to open with RPV press low and DW pressure high

Reference(s) TM-OP-083E-ST

Discuss Distracters

a. incorrect – this condition is design for smaller non-ADS accumulator

b. incorrect – this condition is not limiting condition for DP with DW at low press, also indicates two cycles

d. incorrect – this condition is not limiting condition for DP with RPV at high press, also indicates two cycles

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓239002 K1.06	K/A		K/A
3.4	I-rating		I-rating

K&A Statement Knowledge of the physical connections and/or cause-effect relationships between SRVs and the following: Drywell instrument air/drywell pneumatics

SSES Cross-Reference Learning Objective(s) # ✓2092c , , ,

BANK QUESTION (attach question)

X	SSES exam bank	Question #	SY017C4/2090/ 1
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	
☐	Previous NRC exam	Facility and date of exam	
☐	Previous audit exam	Facility and date of exam	

MODIFIED BANK QUESTION (attach question)

☐	SSES exam bank	Question #	
☐	INPO exam bank	Question #	
☐	Other facility exam bank	Facility	

☐ Previous NRC exam — Facility and date of exam _____

☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES (x) NO

Attachment required is:

Review and Validation Comments

TRG – corrected air to nitrogen in stem

OPS – no comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

20 RO only	SRO only	Both	2 LOD
X	10CFR55.41.7		
	10CFR55.43		
Memory/Fundamental	Comprehension/Analysis		

Proposed Question ~~(Refer to Attachment 2)~~

Following an automatic scram on Unit 1 from 100% RTP due to closure of the MSIVs, a steam leak developed on the RCIC steam line in the pipe routing area and temperature has exceeded the isolation setpoint for 20 minutes and continues to rise. The RCIC system fails to isolate and all other plant systems respond as designed.

Which one of the following identifies the method(s) available to reduce RPV pressure and commence reactor cooldown per EO-100-102, "RPV Control"?

a. SRVs only.

b. RCIC only.

c. HPCI and RCIC only.

d. SRVs and HPCI only.

Proposed Answer
a. correct – pipe tunnel is shared between RCIC and HPCI

Reference(s)
AR-108-001
AR-114-001
TM-OP-050-ST

Discuss Distracters
b. incorrect – RCIC isolates and trips

c. incorrect – RCIC and HPCI isolate and trip

d. incorrect – HPCI isolates and trips

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
217000	K/A		K/A
K3.03			
3.5	I-rating		I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the REACTOR CORE ISOLATION COOLING SYSTEM will have on the following: Decay heat removal

SSES Cross-Reference
Learning Objective(s) # 2015I , 10441(2) , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES x NO

Attachment required is:

Review and Validation Comments

TRG – Modified to identify temperature high for > 15 min timer

OPS – Added failure to isolate to eliminate recovery or HPCI if temp drops below setpoint

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

21 RO only | SRO only | Both | 3 LOD

x 10CFR55.41.7

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 1 the following annunciator alarms:

- AR-105 B03, EHC & AUX TRIP SYS 125 VDC POWER FAILURE

Which one of the following identifies the effect this failure will have on the EHC/Main Turbine?

a. Loss of electrical speed signal will trip turbine immediately.

b. Mechanical trip solenoid and several turbine trips will be disabled.

c. Turbine operation will not be affected because PMG picks up loads.

d. Loss of power to Master Trip Solenoid Valve trips turbine immediately.

Proposed Answer
b. correct – per AR-105

Reference(s)

AR-105-001
TM-OP-093L-ST
TM-OP-093E-ST

Discuss Distracters
a. incorrect – this would occur if low voltage DC were lost

c. incorrect – this system backs up UPS if >1400 RPM

d. incorrect – powered from low voltage DC supply

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓ 241000	K/A		K/A
K6.02			
2.6	I-rating		I-rating

K&A Statement Knowledge of the effect that a loss or malfunction of the following will have on the REACTOR/TURBINE PRESSURE REGULATING SYSTEM: DC electrical power

SSES Cross-Reference
Learning Objective(s) # ✓ 1641b , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES x NO

Attachment required is:

Review and Validation Comments

TRG – No comments

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

22 RO only | SRO only | Both | 3 LOD

X 10CFR55.41.10

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

While operating at 100% RTP on Unit 1, a loss of coolant accident results in a high drywell temperature and pressure condition.

Which one of the following describes the suppression chamber conditions that exist if suppression chamber pressure reaches 13 psig per EO-100-103, "Primary Containment Control"?

Suppression chamber pressure indicates that.....

a. steam is bypassing the downcomer pipes.

b. downcomer pipe chugging is likely to occur.

c. the chamber design pressure has been reached.

d. the pressure suppression function has been exceeded.

Proposed Answer
b. correct – 13 psig indicates 95% of non-condensable gases are in the SC and chugging is probable

Reference(s)
EO-100-103
EO-000-103
PP002

Discuss Distracters
a. incorrect – this is for exceeding PSL

c. incorrect – this value is 65 psig

d. incorrect – this is for PSL

RO		SRO	
1	Tier #		Tier #
2	Group #		Group #
✓ 295028	K/A		K/A
EA2.05			
3.6	I-rating		I-rating

K&A Statement Ability to determine and interpret the following as they apply to HIGH DRYWELL PRESSURE: Torus/suppression chamber pressure

SSES Cross-Reference
Learning Objective(s) # ✓ 2621f , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments
TRG -

OPS – No comments

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

23 RO only | SRO only | Both | 2 LOD

X 10CFR55.41.4

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies the response of the associated Residual Heat Removal pump 1B unit cooler fan (1V210B) when the RHR pump 1B is manually started for Suppression Pool Cooling from 1C601?

The room Unit Cooler will .....

a. auto start immediately.

b. require manual starting from the ventilation panel.

c. remain in standby and auto start if a high room temperature now occurs.

d. remain in standby and auto start if a LPCI auto initiation signal is now received.

Proposed Answer

a. correct – UC starts on breaker position or room temp (Appx R)

Reference(s) TM-OP-049-ST

Discuss Distracters

b. incorrect – auto start feature exists

c. incorrect – logic is temp or breaker

d. incorrect – logic is temp or breaker

RO		SRO	
2	Tier #		Tier #
3	Group #		Group #
✓ 288000 K4.03	K/A		K/A
2.8	I-rating		I-rating

K&A Statement Knowledge of PLANT VENTILATION SYSTEMS design feature(s) and or interlock(s) which provide for the following: Automatic starting and stopping of fans

SSES Cross-Reference
Learning Objective(s) # ✓181d , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.

YES X NO

Attachment required is:

Review and Validation Comments

TRG -

OPS – Modified stem for clarity

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

24 RO only | SRO only | Both | 2 LOD

X | 10CFR55.41.10

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following identifies a condition requiring Independent Verification or Concurrent Verification per OP-AD-002, "Standards for Shift Operations"?

a. Manipulation of all safety and non-safety related components.

b. Clearing of Blocking on all safety and non-safety related components.

c. Application of Blocking on all safety and non-safety related components.

d. Restoration of installed jumpers, lifted leads, opened states links or removed fuses on all safety and non-safety related components.

Proposed Answer
c. correct – 7.3.1.a

Reference(s) OP-AD-002
AD044B

Discuss Distracters
a. incorrect – step 7.3 note requires STAR

b. incorrect – step 7.3.1.b Safety related only

d. incorrect – step 7.3.2.c.(1) Safety related only

RO		SRO	
3	Tier #		Tier #
	Group #		Group #
✓ 2.1.1	K/A		K/A
3.7	I-rating		I-rating

K&A Statement Knowledge of conduct of operations requirements

SSES Cross-Reference
Learning Objective(s) # ✓4501 , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination ~~will be~~ required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG -

OPS – modified wording in all choices to indicate safety and non-safety related components vs. any wording from OP-AD

WRITTEN EXAMINATION QUESTION WORKSHEET
Attachment 1
(Form ES-401-6 comparable)

25 RO only | SRO only | Both | 3 LOD

X 10CFR55.41.8

10CFR55.43

Memory/Fundamental | Comprehension/Analysis

Proposed Question ~~(Refer to Attachment 2)~~

Which one of the following High Pressure Coolant Injection system Class 1E DC powered motor operated valves is required to re-align from the normal standby lineup to ensure injection during a SBO event?

a. Turbine Stop Valve (FV-15612).

b. Turbine Steam Supply Valve (F001).

c. Turbine Steam Supply Inboard Isolation Valve (F002).

d. Turbine Steam Supply Outboard Isolation Valve (F003).

Proposed Answer
b. correct – normally closed and DC powered

Reference(s) TM-OP-052-ST

Discuss Distracters
a. incorrect – hydraulic valve

c. incorrect – normally open AC powered

d. incorrect – normally open

RO		SRO	
2	Tier #		Tier #
1	Group #		Group #
✓ 206000	K/A		K/A
K2.01			
3.2	I-rating		I-rating

K&A Statement Knowledge of electrical power supplies to the following: System valves (HPCI)

SSES Cross-Reference
Learning Objective(s) # ✓10367a , _____ , _____ , _____

BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

MODIFIED BANK QUESTION (attach question)

- ☐ SSES exam bank — Question # _____
- ☐ INPO exam bank — Question # _____
- ☐ Other facility exam bank — Facility _____
- ☐ Previous NRC exam — Facility and date of exam _____
- ☐ Previous audit exam — Facility and date of exam _____

NEW QUESTION

An attachment to the examination will be required to answer this question.
YES X NO

Attachment required is:

Review and Validation Comments
TRG -

OPS – corrected typo in stem